



# THE INVISIBLE TERRITORY OF ETHNIC MINORITIES IN ARCHITECTURE

SARAH ADEKOYA  
C18358511  
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#### Acknowledgments

I want to sincerely thank Sima Rouholamin, Keiren Obrein and Kevin Donovan who have been helping me during this difficult year, for their unfailing tolerance, wisdom, and inspiration.

I want to express my gratitude to my friends I have made over the past five years for their unending help, generosity, and compassion. I hope the upcoming years are successful for you and the rest of my classmates.

And lastly, I want to express my gratitude to my family for their unwavering support, inspiration, and endurance.

"In architecture, I had absolutely no role model. I'm happy today to be a role model for others that follow." (N. Sklarek.)

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This thesis was inspired by an interest in the lack of black female architects in Ireland and how this can effect the ethnic community in the build environment. In general, life is more difficult for one as a black woman in various aspects inside the architecture industry. In network events or architectural schools, one won't see any other black women. The architecture profession has been unsuccessful in attracting students from a range of ethnic and racial backgrounds. Architecture continues to be primarily a white profession. It is a major problem that black women and BAME individuals are underrepresented, especially in positions of authority. Lack of variety in architecture is a problem that begins with early exposure to or participation in the field. This unfortunately leads to a lack of diverse architects designing our cities, leaving the minorities of the population forgotten about.

Quite frequently, I am one of the few, if not the only, non-white architect in the room or on the job site. While I feel I have never encountered overt prejudice, I have not been immune to cultural stereotypes, subconscious judgments and the microaggressions based only on apparent ethnic traits. I have been mistaken for the "loud and angry black woman" or been asked "where are you from originally" even though I was born and raised in Ireland.

Still today these comments are being repeated. Early December 2022 during a royal reception, a black British charity executive, Ngozi Fulani, was repeatedly questioned where she was "truly" from. What happened at the event is already widely recorded, and tragically, it is something that happens all too frequently.

The first black female architect was Norma Merrick Sklarek (1926–2012). Sklarek broke down boundaries from the start of her profession. She was the first black woman to obtain a license in California in 1962, and the first to be named a fellow of the American Institute of Architects, the professional organization's highest honor, in 1966. Sklarek suffered prejudice in her hunt for work as an architect after graduating from Columbia, applying, and being denied by nineteen firms. When she finally landed a role in a firm, she was given menial tasks such as designing bathroom layouts even though she was more than capable of designing large projects.

"It was unheard of to have an African American female who was registered as an architect. You didn't trot that person out in front of your clients and say, 'This is the person designing your project.'" (N. Sklarek. 2012)

In the last 15 years, the number of black female architects has tripled. Yet four times a fraction of a percent is not much. 113,000 are black architects and 196 are black female architects in the US, 510 in the UK are black architects and less than 1% of that figure are black females. As it stands the figures for black architects in Ireland remains unknown, despite the very fact that the Irish population has become more diverse over the last decade. As Ireland is becoming more diverse, knowing that there are very few black architects in Ireland is both shocking and upsetting. It appears to be so unusual to be black, Irish and a female architect. This is due to the lack of diversity in architecture. The architecture field simply has not seen anyone like me before and it bring up the question of.....

## WHO IS DESIGNING FOR THE ETHNIC MINORITIES OF THE CITY IF THERE ARE NO ETHNIC ARCHITECTS?

Having a built environment that was designed by and for privileged architects makes it difficult to see the difficulties of others. Professor Sarah Schindler writes in The Yale Law Journal, "The exclusionary built environment—the architecture of place—functions as a form of regulation; it constrains the behavior of those who interact with it, often without realizing it."

She then writes, "[It] is characterized by man-made physical features that make it difficult for certain individuals—often poor people and people of colour—to access certain places"

When our architectural teams lack the complete capacity to grasp the demands of the people we design for, we overlook the genuine needs of those people. We continue to function as a profession with a limited picture of what design entails, missing out on opportunities that arise from varied ideas and backgrounds. We must ensure that the communities for which we develop have a beneficial influence. It is our responsibility to question and examine every area of practice through the perspective of diversity. So why have the Courts, judges, and legislator's bodies in charge of enacting and executing anti discrimination legislation—failed to condemn such physical acts of exclusion? According to Sarah Schindler the most obvious issue is that demonstrating the essential intent to discriminate is difficult, particularly in cases involving land use and the built environment.

Diversity challenges us to broaden our ideas about what is right and good for all. The privileged society has long dominated the discipline of architecture. This dominating viewpoint has resulted in a lack of design variety since these people have developed settings that fit them. Incorporating diversity in design entails enhancing the variety of the architects as well as embracing the diversity of the people for whom the design is intended

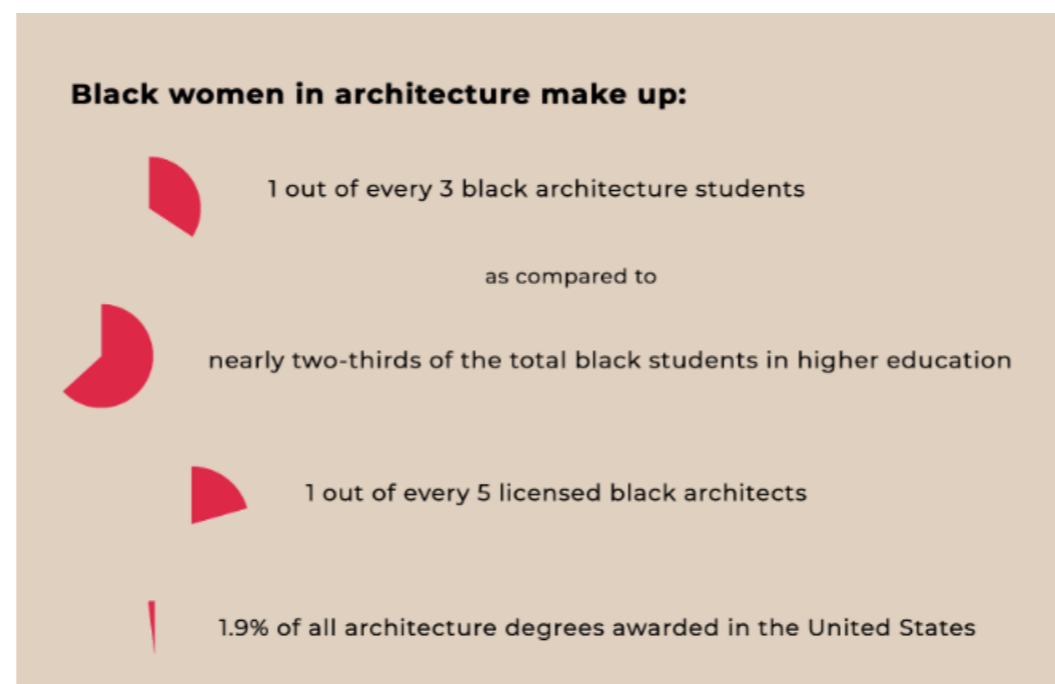


Figure 1: Black women in architecture make up

# THESIS

I started to map out the community of non Irish decent in the Dublin surrounding areas. Dublin has through time developed into a melting pot of many nations and races, adding to its lively and international culture. Middle Eastern and North African residents are particularly noticeable in Dublin. The city's population is diversified since many people and families from nations including Syria, Iraq, Iran, Egypt, Morocco, and Algeria have migrated here. Although white Irish people make approximately 81% of the city's population, making them the biggest ethnic group. The overall population of Dublin is 21% from an ethnic background. As this number is small, these ethnic communities exist and need to be built for.

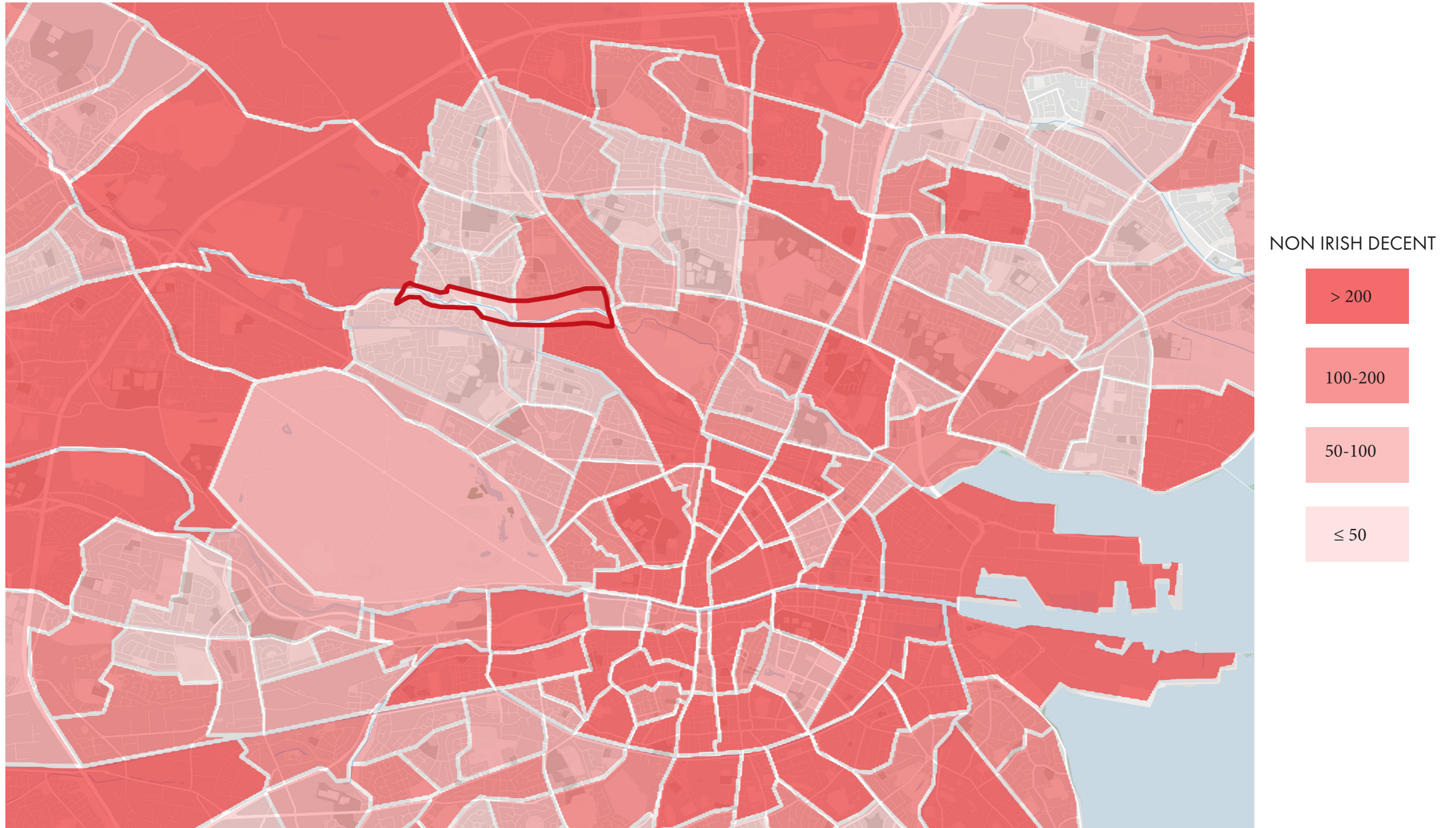


Figure 2: Percentage diversity in Dublin surrounding area

The site given for this year is the Tolka Valley with just under 15% of the area's citizens originating from Africa, Asia, the UK, and other EU countries. (Census 2016) The center area of our site, comprised of both Finglas & Cabra, has the lowest percentage of people born outside of Ireland, while the adjoining site areas (Ashtown & Glasnevin) have higher rates of homes being occupied by international people. With the statistics showing a community consisting of multiple different nationalities, it appears as though this site may not be providing ample opportunities for international citizens to engage with and embrace the various existing cultures of their neighbours and space to bring their own cultures to perspective in the area.

"If we didn't have industrial units as places of worship, the Muslim community of Dublin 15 would have nowhere else to go for their social, cultural and religious needs,". "The Islamic Centre is also a platform which connects the Muslim migrant community with the local service providers". (Umar, S. 2013)

While there are people of various ethnicities and cultures in this vicinity, it appears as though there is a lack of formal opportunity to express aspects of their culture. There are very few examples in the area of where this multi-cultural community is embraced, with a lack of cultural groups and international food stores, and just a handful of restaurants offering Asian and European cuisines. With only a few scattered around the city, residents of the area have to travel long distances to shop for their traditional meals.

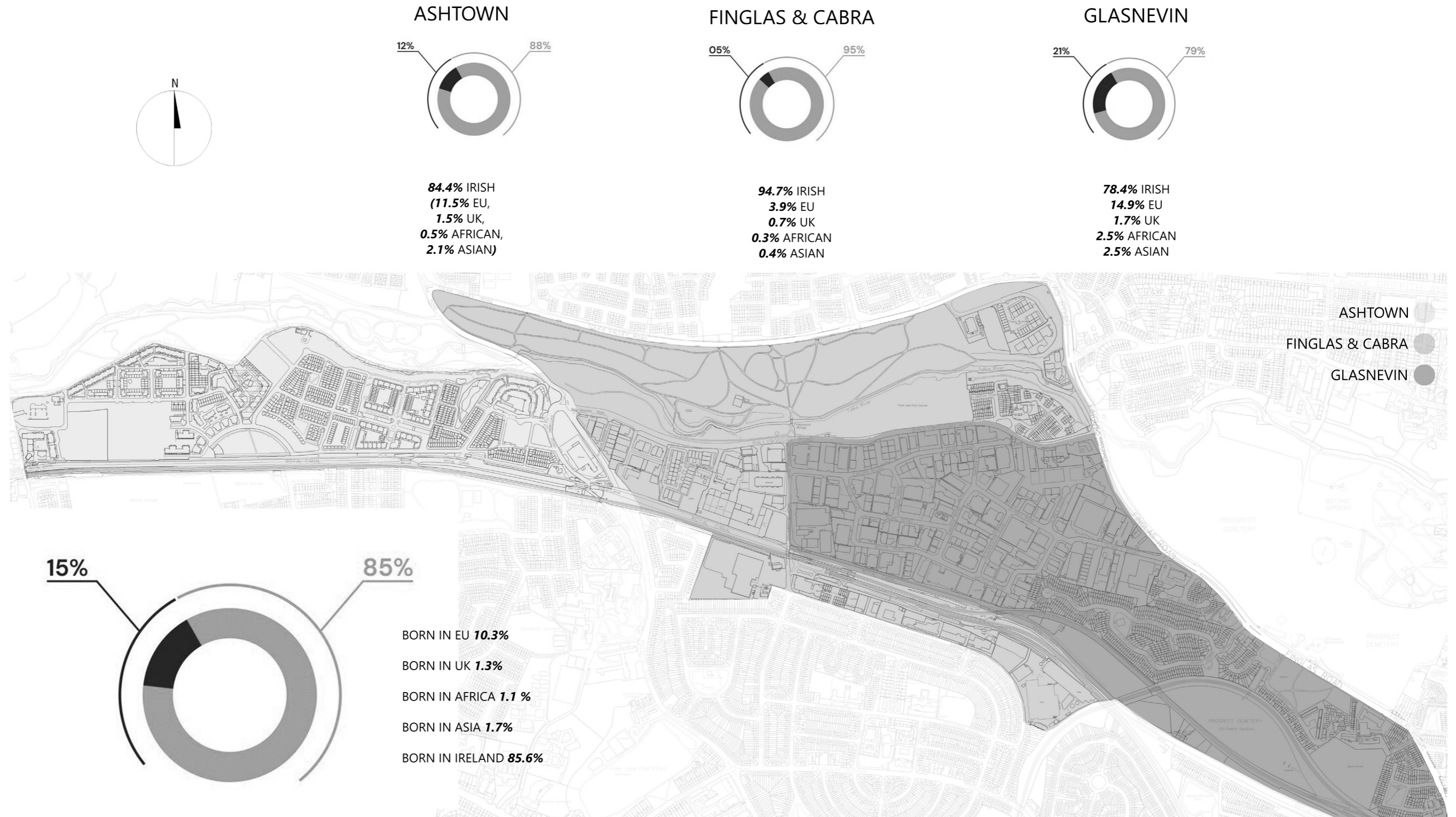


Figure 3: Percentage of nationalities in Ashtown, Finglas & Cabra and Glasnevin

While walking the surrounding areas I noticed the vast amount of churches, majority of them were these beautifully articulated catholic churches. A lot of these churches were the center of design when planning the city. Usually in the center of the town or city and the houses and shops were built around them. However, some Catholic churches, may face challenges in attendance and community engagement in today's society. Given the overabundance of church infrastructure and the drop in church attendance, it has become more frequent for Catholic churches to close in many areas. Although there haven't been many Catholic churches in Ireland that have closed their doors, one building has been destroyed and rebuilt with a considerably smaller church. The parish church of the Annunciation was located on the Cappagh Road in Finglas, in west Dublin. The number of active diocesan priests fell from 3,801 to 1,728, a loss of more than 50%, over the previous 40 years, although the number of parishes has remained mostly unchanged.



Figure 4: Drawing of Christ the King Catholic Church



The place where the combining of different cultures felt most present in our site, was the Dublin Industrial Estate. Dublin Industrial Estate is roughly 4 kilometers from Dublin City Centre. It has a long history and is conveniently located between the City Centre and the M50 Motorway. The Fianna Fáil administration launched The Economic War, a costly conflict with Britain over the payment of land annuities. The Irish government declined to continue paying land annuities and the British responded by imposing duties on a variety of Irish agricultural products. Ireland retaliated by levying duties on British manufactured products and raw materials imported into the country. Éamon de Valera abandoned free trade, followed a protectionist strategy, and sought self-sufficiency beginning in 1932, but the country was not affluent enough to make this work. As a result, the state took control of private interests in the name of the public good. During the 1932's the first Fianna Fail political part was elected and promised to increase the promotion of industrial development. The Economic War began in 1914 and lasted until 1938. It was not until 1973 the Dublin industrial estate emerged. It was designed for industrial operations and trades, but the design allows for a variety of activities to take place under the surface or at different times. One side of the industrial estate is the industrial sector, filled with businesses, repair and hardware shops and the other is culturally diverse churches and food markets.

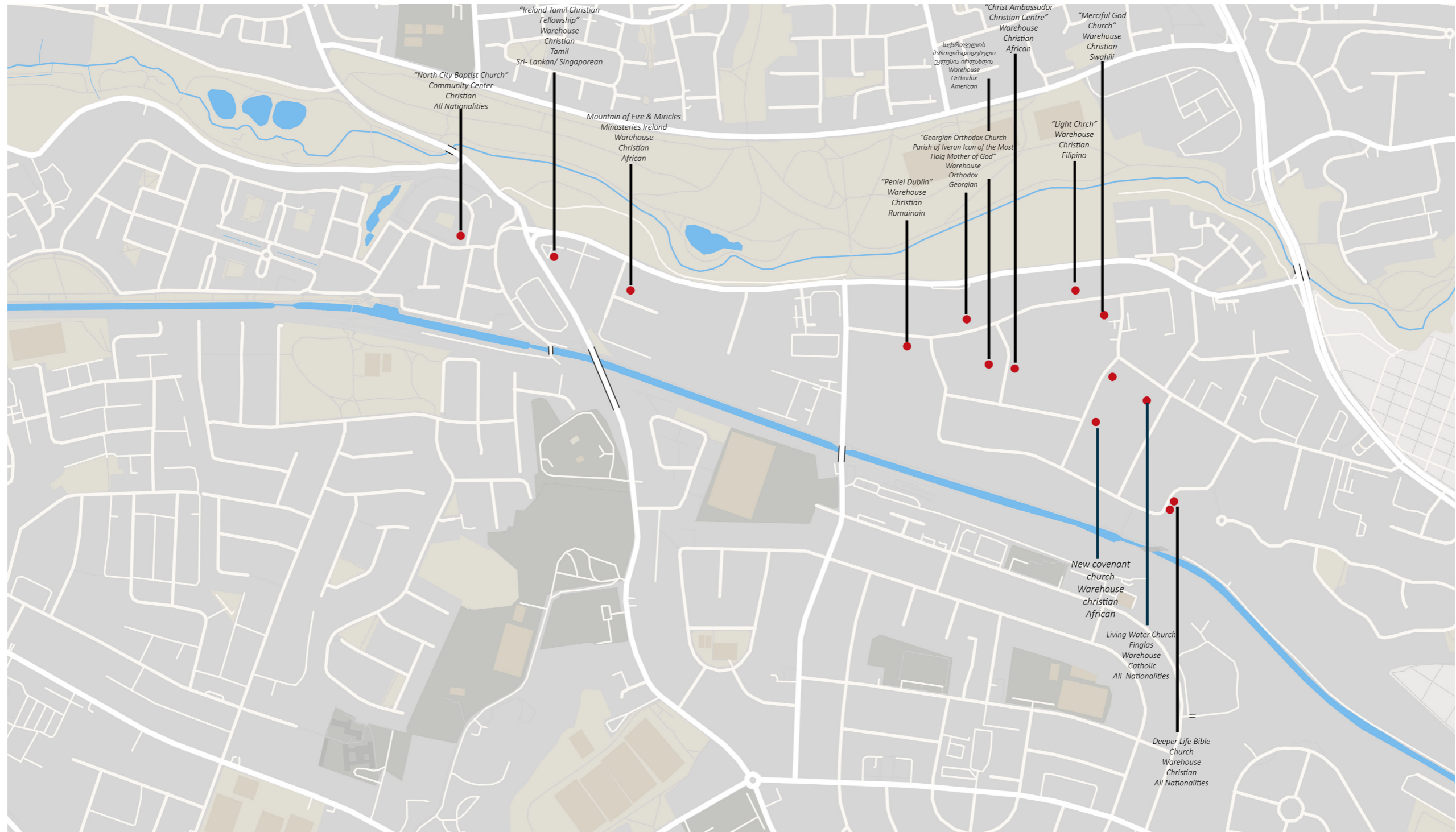


Figure 5: Location of industrial estate churches

# THESIS



Figure 6: Make the invisible, visible

Street grid layouts, one-way streets, the lack of sidewalks and crosswalks, zoning laws and other architectural factors can determine a city's demographics and isolate a neighborhood from its neighbors. In this approach, the exclusionary physical environment, the architecture of a place acts as a type of restriction; it constrains the conduct of individuals who interact with it, frequently without their awareness. These architectural choices result in architectural constraints: architectural characteristics that function to restrict human behavior or obstruct access—the essence of architectural exclusion. This can be seen in the Tolka Valley, how these communities have been excluded from the city and have been made invisible in the industrial estate. The surrounding society has confined migrant communities into industrial estates since these were areas unseen to the rest of population. Many of these churches hold their services in re-purposed warehouses. I noticed 14 different churches and many more gathering on a Sunday in a single industrial estate in Dublin. Migrant Pentecostal, Romanian Evangelical as well as Orthodox Christians and other religious faiths, use these warehouses as places of worship. Some names include: Deeper Life Bible Church, North City Baptist Church, Merciful God Church and The Church of Jesus Christ of Latter-day Saints. These communities and religious groups see the warehouses as temporary solutions. Renting them is economical, however, due to financial restrictions, most groups cannot afford to own property or create purpose-built communities.

According to Andrea Cristea of the Dublin Intercity Faith Forum, finding places of worship may be challenging for migrant populations. "A consultation process is needed to look at this issue. There are no regulations at the moment. There are no policies. And there is very little support. It is a very challenging area." (Cristea. A. 2013)

While a number of locals utilize these warehouse churches, people from other towns also travel here for their Sunday worship. For example, Castleknock has a higher rate of people practicing Orthodox Christianity than other areas near the Tolka Valley, however there are no Orthodox churches in Castleknock, the closest being here in the Dublin Industrial Estate. (Census 2016)

The surrounding towns also do not provide services in languages other than English while there are various religious services held within the industrial estate in different languages (e.g., Romanian, Swahili, Filipino, Tamil), as some people who live outside the area may prefer to worship in their language, they may decide to travel to the industrial estate to avail of this.

After observing families gathering outside these warehouse churches on a Sunday morning to chat after their service has ended, it also became clear that families travel here from different towns, in order to reunite on a Sunday morning and worship together. Once the service is over the people scatter away and leave the area and once again the industrial estate becomes an undiversified area. There is nothing in this area keeping the diversity alive outside the Sunday morning. There is sense of unwelcomeness to the various ethnicities in Tolka Valley.

As the groups who use these warehouse churches are typically in the minority the demand for a permanent place of worship is more difficult to obtain. Warehouses are cheap to rent, can fit from 20-100 people inside depending on size, and are tucked away from society on a Sunday morning. This set-up does not seem as though it is sustainable, with those using these warehouse churches feeling they've been shoved into invisible territory and left to be forgotten about. These warehouses are simply a temporary means until more suitable & permanent places of worship can be provided.

# THESIS

The development plan of the Tolka Valley outlines the area's goals for planning and development. Each zone has a list of approved and prohibited uses. The majority of industrial units are designated high technology or general employment. Place of worship is not permitted in any of these zonings. Using warehouses as places of worship violated the development plan and hence did not comply with planning requirements. The future of the Dublin Industrial Estate is to rezone it for residential units. If this development plan 2022 – 2028 goes ahead, these communities will be forced to leave the area. If migrant communities are unable to use industrial warehouses as places of worship, many of these organizations may struggle to locate adequate facilities.

The use of industrial warehouses as a place of worship is due in part to funding and budgetary restrictions, but also because these worshipping migrant groups are generally hidden in industrial units and hence do not draw notice, and thus planning complaints or objections are unusual. The future use of industrial buildings for church gatherings is an issue that local governments and migrant organizations around the country must explore and handle. This comes back to the root cause of this issue. The lack of diversity in the designers of our city.

By rules and regulations that are intended to keep things in order, they discourage diversity and progress. In terms of aesthetics, the built environment rarely depicts various cultures or provides adequate areas to meet the demands of its diverse users. By creating these regulations that prohibit churches in the industrial estate, a deeper hole is dug for the lack of diversity in Tolka Valley. These rules are pushing every inch of diversity out of the area and leaving them with no other option. The planning board noted out that the industrial estate is designated for job development and is not compatible for community usage, which damage current enterprises. The refusal might have implications for a number of churches that have converted warehouses into places of worship and erode the only place of diversity in the Tolka Valley.

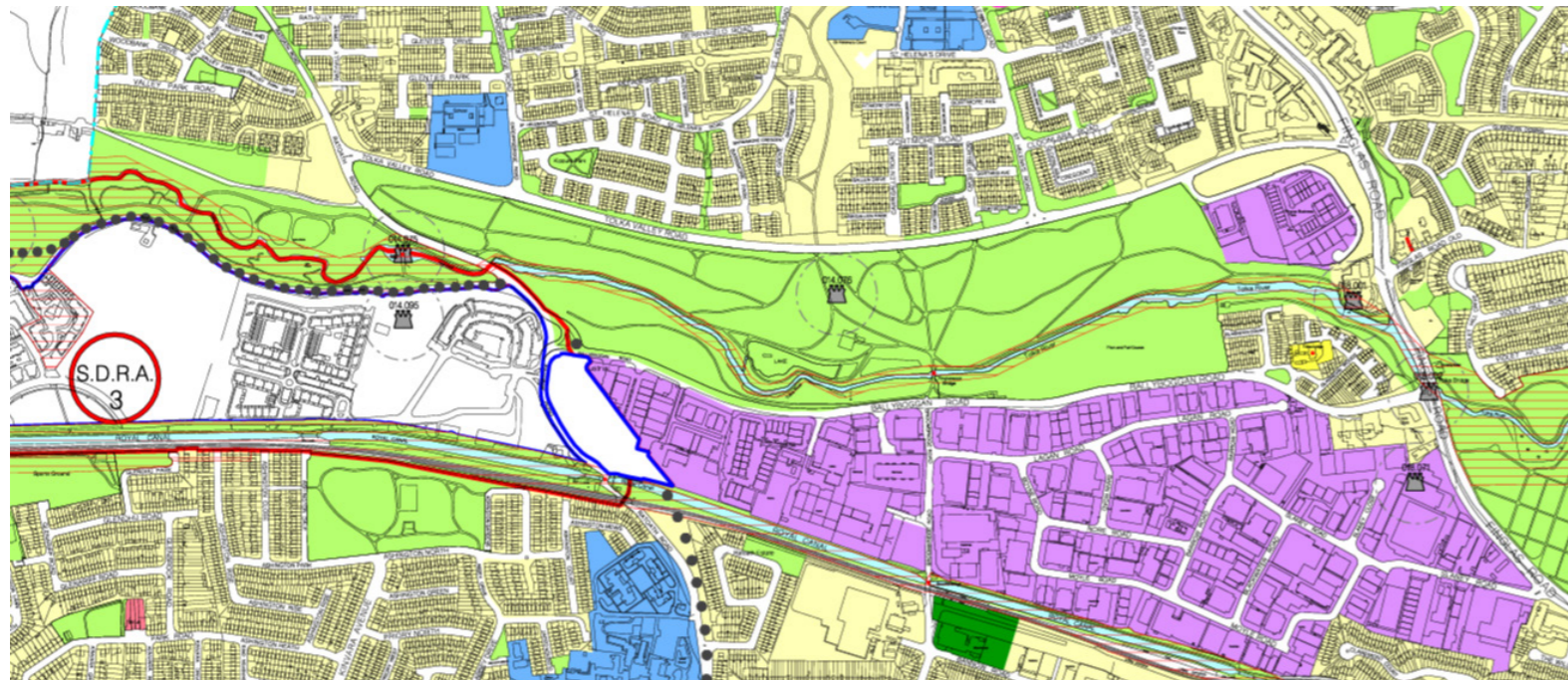
Architecture as a profession suffers from a lack of diversity and in turn Tolka Valley's architecture and citizens suffer because of this. Substantial progress toward equality and diversity will be impossible to achieve without tackling other concerns such as race and class.


Architecture is for everyone. We need designers that reflect society otherwise, us as architects won't succeed. Too often, architecture favors people who fit the profile of those already in positions of privilege rather than those who represent the majority of underprivileged ethnic groups. "What happens when the built environment is nearly entirely designed by and for a single group of people?" (Steele. 2021) We must ask who is representing under-represented racial groups. Who chooses them for these positions? Were they chosen on the basis of merit, nepotism, bias, wealth, or an elite education? When we start asking these questions, we begin to see from one example of the Tolka and my own personal experience that we actually don't have anyone representing these minority communities and have made a percentage of our society invisible and lacking the culture identity of place.

The beauty of architecture is that it impacts everyone's everyday life thus, it does not make sense that the profession does not reflect the population. As a result of greater viewpoints and living experiences, architecture may be more inclusive, vibrant, and responsive. In order to adapt and remain relevant in a fast changing social and cultural environment, architecture must soon break out of its own demographic bubble.

We have come to the realization that architecture is failing at the cultural or societal level because our designers are not diverse. Tolka Valley have been built for one majority of society and architects have forgotten to build for the many minorities in the area.

"The ARB's equality and diversity data for 2020 shows that only 0.9 per cent of qualified architects are black or black British. The RIBA education statistics survey 2018/9 shows that while 8.3 per cent of students applying to study architecture are black, only 1.5 per cent of students successfully completing their architectural education are black." "The AJ race diversity survey 2020 showed that 70 per cent of respondents either agreed or strongly agreed that they are discouraged by the lack of Black, Asian and minority ethnic employees in the profession." (I. Srikan. 2022)



Zone Z7 To provide for the protection and creation of industrial uses and facilitate opportunities for employment creation — — — 

## Z7 – Permissible Uses

Café/tearoom, chemical processing and storage, childcare facility, civic and amenity/recycling centre, cruise shipping and marine services (in port area and ancillary services), data centre, delicatessen, enterprise centre, garage (motor repair/service), general industrial uses, heavy vehicle park, household fuel depot, industry (light), office, open space, outdoor poster advertising, park and ride facility, petrol station, port-related industries and facilities, public service installation, science and technology-based industry, scrap yard, shop (local), storage depot (open), transfer station, transport depot, warehousing.

## Z7 – Open for Consideration Uses

Advertisement and advertising structures, amusement/leisure complex, betting office, boarding kennel, buildings for the health, safety and welfare of the public, car park, car trading, community facility, crematorium, cultural/recreational building and uses, creative and artistic enterprises and uses, media-associated uses, public house, restaurant, shop (factory shop), take-away, training centre.

Figure 7,8,9 : DCC zoning map

In Ireland, the profession of architecture is largely held by white people. You frequently feel like an outsider if you are anything other than this. There isn't enough being done to inform young ethnic people about the many entry points into the field. It's crucial to demonstrate to young people the value of an architectural degree and the variety of careers it may lead to. Simply said, many institutions lack the tools or expertise necessary to provide pupils with the same level of career guidance about design-related fields as they would for more well-known ones. Therefore, those who participate are more likely to come from families with a background in architecture and design.

By visiting schools and discussing career options in architecture and design, practicing architects may play a bigger advocacy role in promoting the field. There is no question that the architecture profession would benefit from more diversity and representation. By bringing in a greater diversity of viewpoints and experiences, as well as a larger talent pool, it enhances the conversation. It is crucial that individuals influencing the built environment reflect the local community. We need to deliberately provide the paths and chances for access into the sector for individuals from lower-income and underrepresented backgrounds if we, as professionals, are going to be serious about fostering more diversity inside the profession. This entails actually hiring and interacting with individuals from such backgrounds.

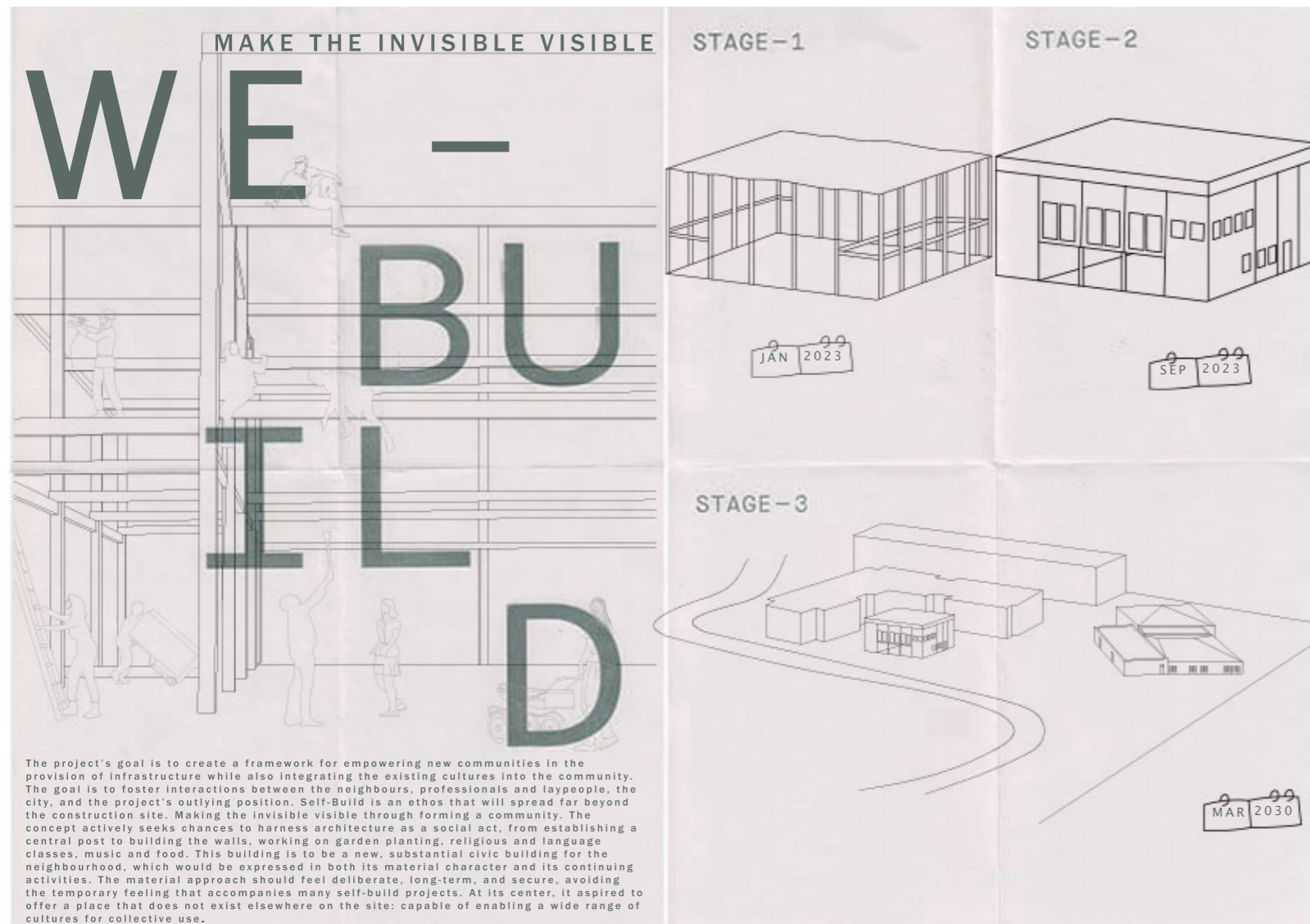


Figure 10: Manifesto

### DCC Letter

The development plan outlines the area's goals for planning and development. Each zone has a list of approved and prohibited uses. Zone 7 which is the majority of the industrial estate are designated high technology or high employment. Place of worship is not permitted in this zone. The use of warehouses as places of worship is in contravention of the development plan and therefore not compliant with planning regulations. From observation, 14 different churches and many more gather on a Sunday in a single industrial estate in Dublin. While the development plan 2022 – 2028 goes ahead, these communities will be forced to leave the area. If migrant communities are unable to use industrial warehouses as places of worship, many of these organizations may struggle to locate adequate facilities. The use of industrial warehouses as a place of worship is due in part to funding and budgetary restrictions, but also because these worshipping migrant groups are generally hidden in industrial units and hence do not draw notice. The future use of industrial buildings for church gatherings is an issue that local governments and migrant organizations around the country must explore and handle.

Each Sunday morning, the estate fills with people from various communities coming together. The industrial estate is the only place in the Tolka Valley where diversity is present, which usually happens on a Sunday because of these churches. The zoning regulations might have implications for a number of churches that have converted warehouses into places of worship and minimize the only place of diversity in the Tolka Valley.

In order to allow diversity to grow in the area I can suggest a change in the zoning regulations allowing for mixed use in the Industrial estate including places of worship. I can suggest as per the zoning plan from the open for consideration list: community/ recreational building, a purpose-built space that allows for the use of both a place of worship and a building for the community. This allows for the building to be used the full seven days during the week while also bringing people into the industrial estate outside the church community.

This provides a space for socializing and exchange while also growing the Tolka Valley community and the wider area. Some examples are St John at Hackney Diocese of London, The Springfield Project, St Christopher's Church Diocese of Birmingham and St. Hilda's, Hartlepool Diocese of Durham are just a few churches, who have developed their space for multi-use. The success of these buildings created a genuine shared space for the community. These projects show how social connections may be formed via community-centered infrastructure, providing for a livelier and more vibrant city. These kinds of communal areas will enable high-quality cities that are home to diverse, interconnected communities.

Many groups, on the other hand, are helping present and aspiring architects of colour in the hopes of turning the tide. These groups unfortunately do not exist in Ireland as of yet. BFA (Black Females in Architecture) is a very successful networking group based in England which has brought black females in architecture together and allows them to share experiences and increase the visibility of black and black mixed heritage women within the architectural profession. Selasi Setufe from BFA states “It’s also problematic that there are many diverse communities, in London for example, where lots of regeneration is going on. But the people working on those schemes are not reflective of the people living in them.” Organizations like as BFA raise awareness of the fact that there are diverse architects and making them known.

According to a Department for Digital, Culture, Media, and Sport (DDCMS) report from 2016, architects are 90% white and 97.5% from 'more advantaged backgrounds.' These are the kinds of statistics that highlight one of BFA's main concerns: that the industry does not reflect the society it serves, and that it is not structured to allow people from lower-income backgrounds, from which a large number of BAME (Black, Asian and minority ethnic) candidates come, to access or survive in it.

“By changing the face of the industry, we seek to enable progressive change to ensure that placemakers & designers reflect the communities that they serve. Through facilitating and creating opportunities for black women to have an active response to the design of our cities, BFA challenges the status quo on who an architect is and what they look like.” (BFA, 2020)

BFA's aim is to serve as that celebratory, inspiring force that recognises not only the ultimate product but also the effort along the way. BFA encourages and supports Black women in the field by organising seminars, meetings, and book clubs to assist students and women in the architectural profession. They have also been actively collaborating with other membership-based organisations, such as the AIA and the Royal Institute of British Architects, to draw up strategies for achieving the maximum degree of diversity. Black Females in Architecture allow you to hear other people's perspectives on how damaging it can be to cities when we lack diversity in our designers and how this in turn can damage communities.

In researching for this paper, there were very few black female architects that I could find from Ireland or even working in Ireland. From talking to Caroline Akiboye, who is one, if not the only black female architect who is practicing in Ireland.

Caroline is a Nigerian British black female architect who studied architecture in north London. Caroline is an ARB (Architects Registration Board) registered architect and RIAI (Royal Institute of the Architects of Ireland) registered member. She and her husband Simon have set up a practice here in Ireland and they are both currently lecturers teaching in Cork Centre for Architectural Education. She too has had some difficulties practicing as a black woman in architecture, such as tradesmen ignoring her and instead addressing her partner, Simon. She never let this discrimination affect her work and insisted that she oversaw meetings from then forward, by this they would have no choice but listen to her.

From this she and Elsie Owusu and a few other black female architects founded the organization The Society of Black Architects (SOBA). It emerged from a need to fully include the contributions of ethnic minority professionals as both providers and consumers of architectural and design services. SOBA was founded as a network to discuss and meet other individuals of colour, as well as to discuss tactics for changing the profession. There were few opportunities or students from diverse backgrounds in the early 1990s, and they did not receive the needed recognition they deserved. SOBA is an opportunity for them to showcase their work and expertise while also looking for partners. It made representation on behalf of practices and those in education/training as appropriate. The dynamic organisation demonstrates the effectiveness of these early initiatives. SOBA is currently a successful multinational internet network “The diversity of the people living in London should be reflected in the architecture industry – we’re not surprised to see women or black people in our city, so nor should we be in the industry. For change to occur, the image of the architect has to change, because it’s a 19th century image in a 21st century culture.” (Owusu. E.2018)

Other efforts like NOMA’s (National Organization of Minority Architects) Project Pipeline, a camp that focuses on introducing black students to architecture, hope to diversify the field and produce more licensed black architects. NOMA is an American based organisation and has as its aim the development of a strong national organisation, strong chapters, and strong members in order to reduce the impact of racism in our profession.-

While the demographics of the designer and the designed for are yet to match the diversity of our country, the few diverse individuals entering the job confront an uphill struggle to transform an industry in which they cannot create the rules. Understanding the nature of the task facing architects and how white privilege has woven itself deep into every part of practice allows for serious dialogue and subsequent change. People with experiences different than those of white men—and now some white women—are left out of conversations about the built environment when diverse perspectives are not represented at the table. Architecture has a history of adapting to the changing needs of the built environment, and as awareness of social and racial inequities grows, architects have a moral obligation to reflect this in their work.

Perkins & Will created an “Inclusion for Architectural Practice” handbook for architectural practices to be more diverse. In recent years, there has been a focus on architects who claim to work for the public benefit yet frequently fall short of that purpose in their personal professions. Any architecture business may create a work atmosphere that promotes justice, equity, diversity, and inclusion. (J.E.D.I). “In this global environment, we are committed to building an organization that reflects the diversity of the communities and clients we serve” (Perkins&Will. 2021) As architects one can acquire clients from various different backgrounds and they expect the same from the profession.

Other efforts like the election of Muyiwa Oki, who will take office as the RIBA’s (Royal Institute of British Architects) youngest and first black president. On September 1, 2022, to September 2025, Oki, 31, will lead the institution, replacing outgoing president Simon Allford. Oki, who was employed at global construction firm Mace, stated that he wants to develop a more inclusive future within the architectural profession and would priorities ensuring that “those who feel disenfranchised and under-represented” are heard. Muyiwa campaign priorities were focused on speaking up for the future architect, to challenge unfairness and change it so the architecture community can flourish. He wants to introduce diversity, equity, and inclusion into the architecture field. He believes that the RIBA aim is to bring architects, the built environment and society together, to advance architecture for the benefit of all of us.

“We can be proud of an election where people of colour, at different stages of their careers, of all identities, can be heard and seen bidding to represent the profession.” (Oki, M. 2022)

Similarly in June 2022 Kimberly Dowdell chosen as AIA’s (American Institute of Architects) First Black Woman President. Dowdell has shown her support for minorities while also stating her want to be the AIA president for all. Her platform is built around four key areas of interest: supporting architects in practice, creating a sense of belonging and ensuring access to the architectural profession and education, addressing climate concerns, and designing for the future while taking into account rapid technological advances.

“I do believe that representation matters, and I would be honoured to demonstrate a new set of possibilities for young women and people of colour in particular.” (Dowdell, K. 2022)

# COMMUNITIES

## 06 TWO MINORITY GROUPS IN THE TOLKA

I identified two minority communities in the Tolka valley, one being the community garden, just at the top of the tolka park. This garden is for people who are out of work due to injury or how have disabilities. These gardens are scattered all around the city. The other minority community is the church community in the Dublin industrial estate. There are 15 of these churches in the industrial estate, all in these small, low ceiling temporary sheds. Every Sunday these churches are filled for their Sunday service bringing life to the industrial estate. What these two community groups have in common is they are both entirely self sufficient, they are not getting help from anyone and everything they have has been built for them by them.

### COMMUNITY GARDEN



Figure 11-20: Community garden

### CHURCH COMMUNITY

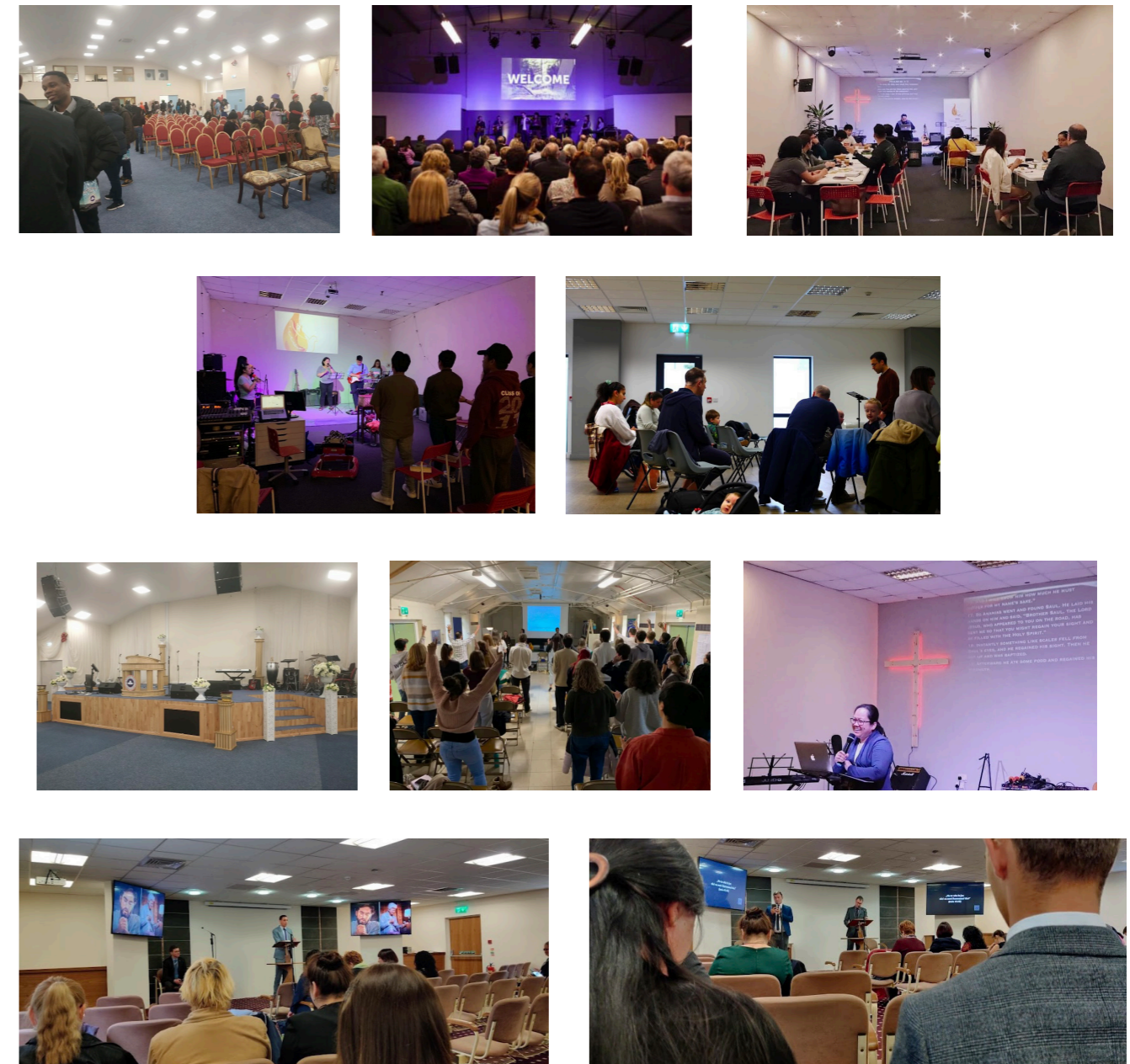
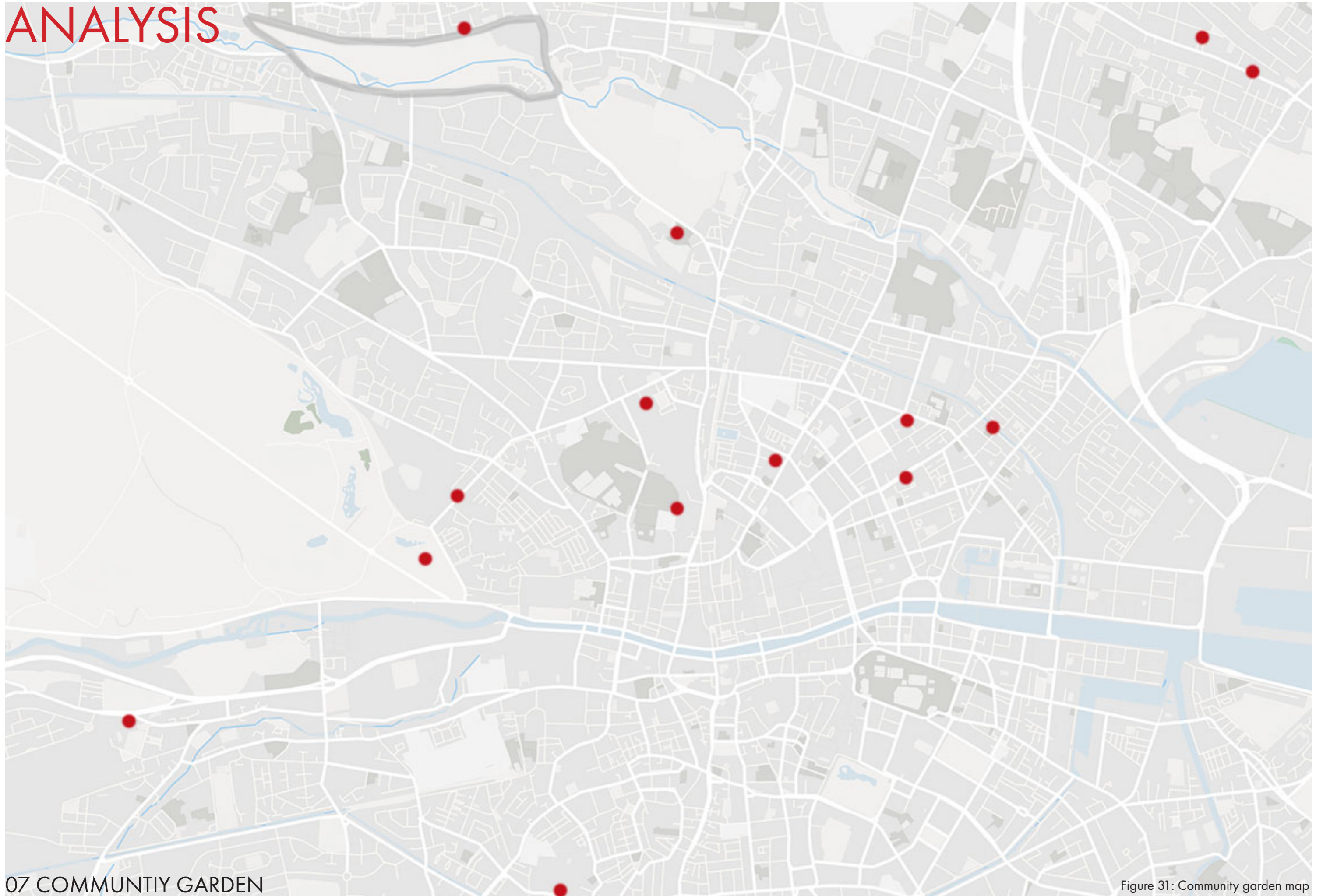


Figure 21 -30: Church community

# ANALYSIS

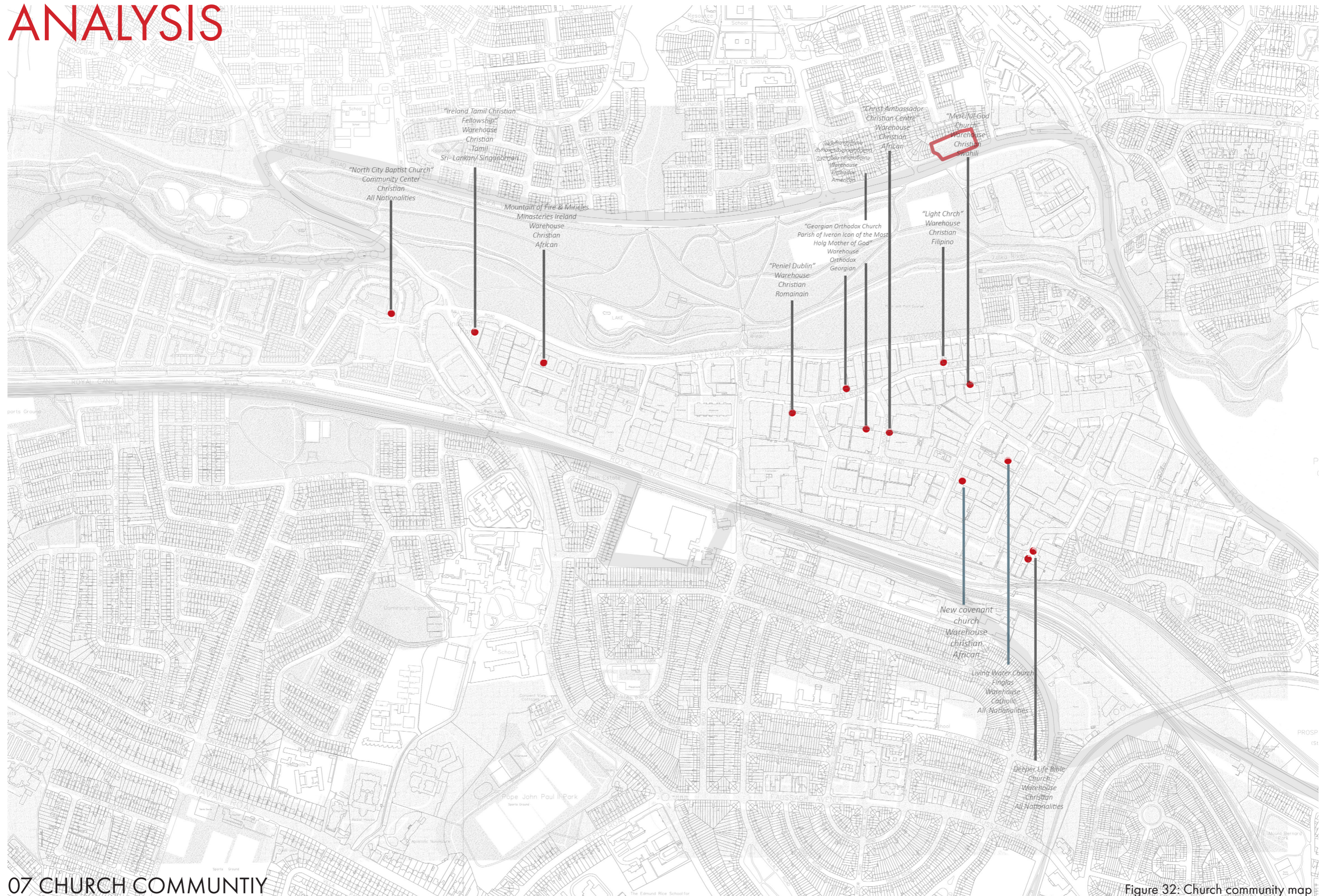


07 COMMUNITY GARDEN

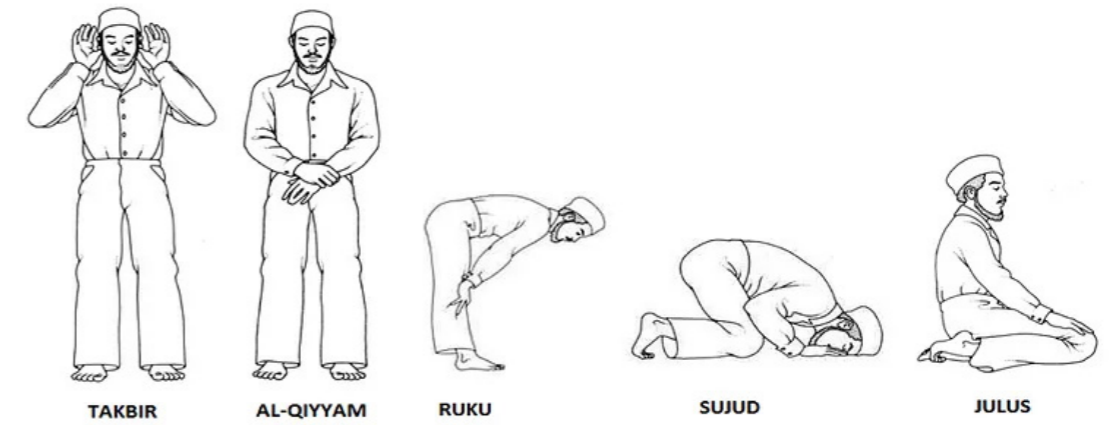
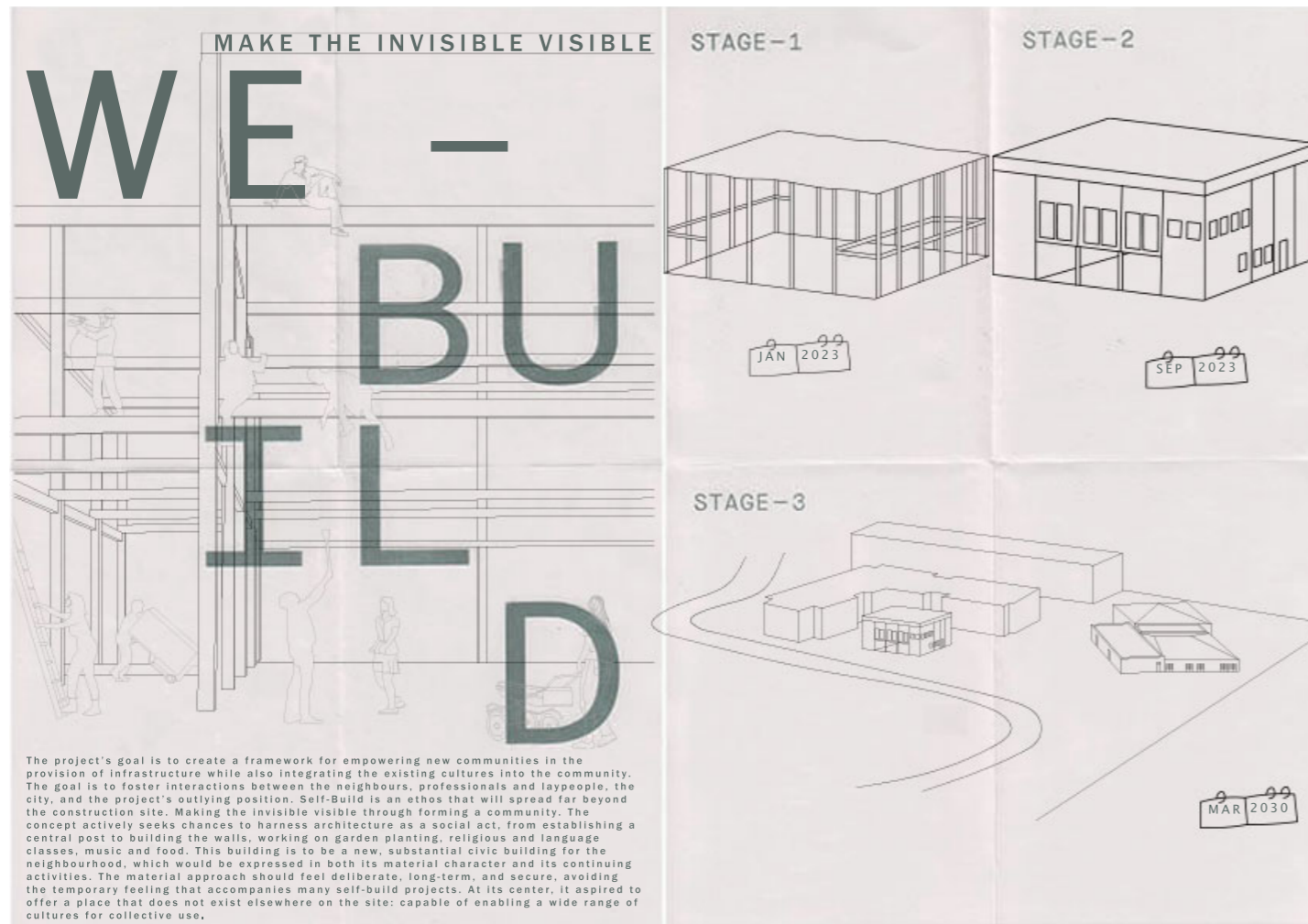
Figure 31: Community garden map



# ANALYSIS



# 08 INSPIRATION



Tadasana Prayer Uttanasana Balasana Vajrasana

Figure 33: Religion and yoga

From looking at these two communities i started to create a brief for myself. I wanted to create a sense of space within the church community in the Tolka Valley as well as inviting people from outside these communities.

The project's goal is to create a framework for empowering new communities in the provision of infrastructure while also integrating the existing cultures into the community. Self-Build is an ethos that will spread far beyond the construction site. Making the invisible visible through forming a community. The concept actively seeks chances to harness architecture as a social act, from establishing a central post to building the walls, working on garden planting, religion and sacred spaces, mindfulness and food.

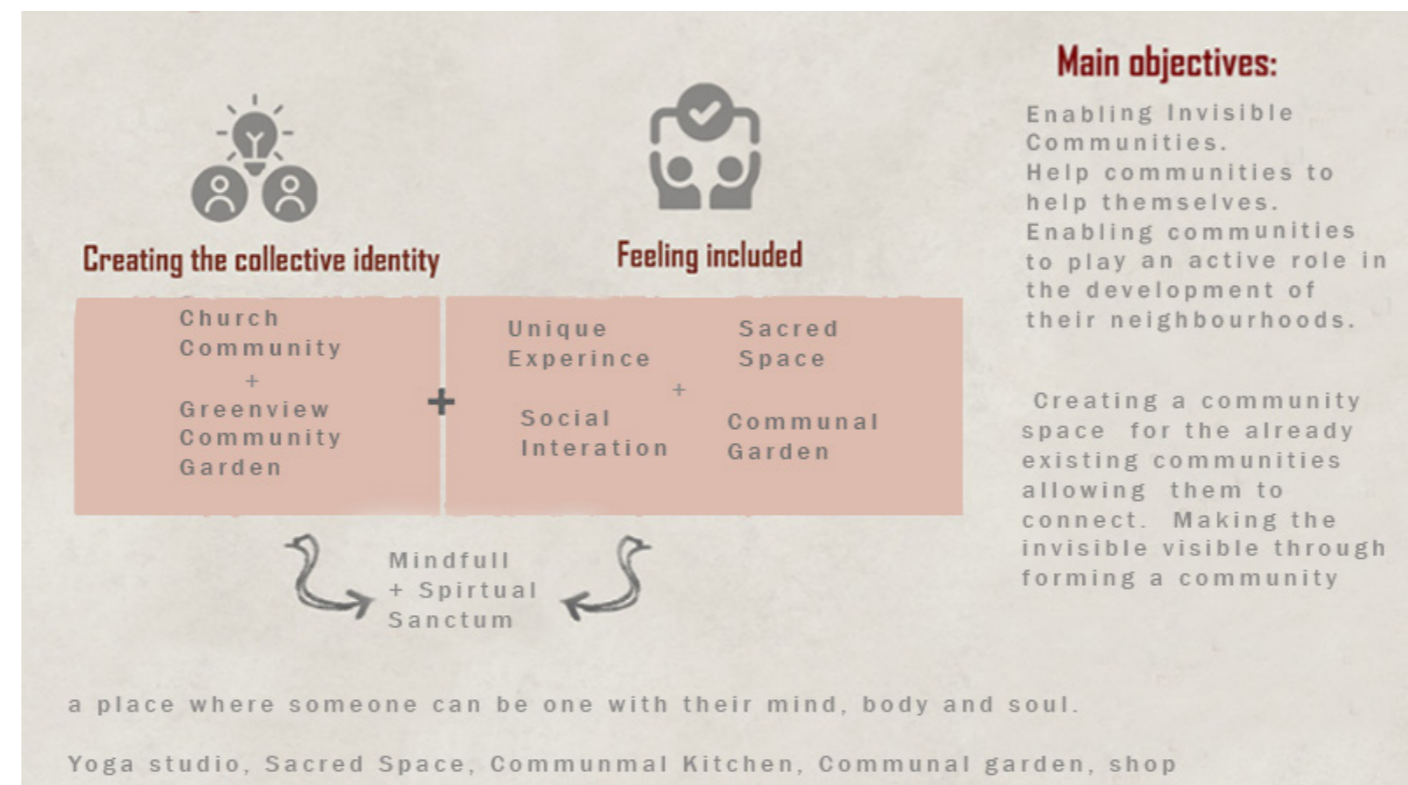


Figure 34: Objectives

The diversity of religious practices and beliefs is evident in the Tolka.

Although there are many different variations between religion and spirituality, they are all united by belief in a power greater than oneself. They both means to achieve happiness, peace and appreciation of life. Religion and spirituality are both important in maintaining the balance between your mind, body and soul.

# 09 BREIF

Objectives:

- Creating a community sacred space for the already existing cultures, allowing the community to connect. Making the invisible visible through forming a community.
- Help communities to help themselves. Enabling communities to play an active role in the development of their neighborhoods. Self-build Community. These communities have been left invisible and excluded, by creating a community of different culture within themselves they will become visible.

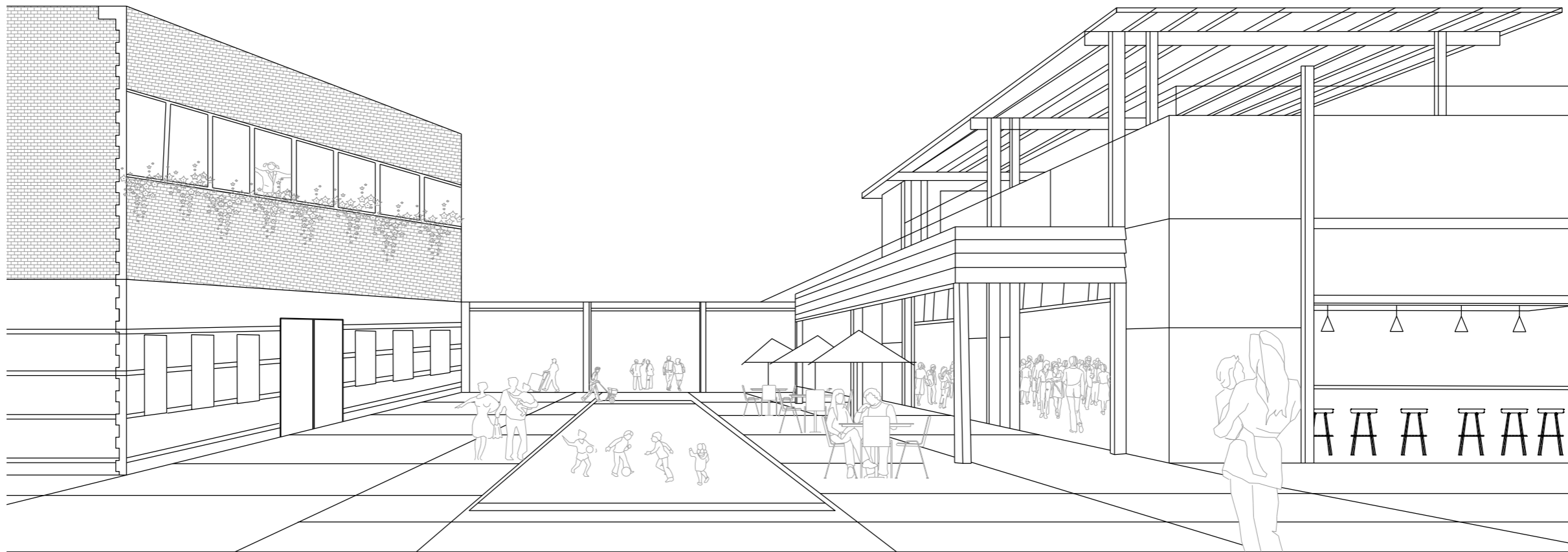


Figure 35: Initial sketch design

# 10 EXISTING SITE LOCATION

When it came to choosing a site, I decided to choose Greenview Community Garden site, just north east of the tolka park. The site consists of 54 allotment plots. The site location is great as it has access to the m50 and has great sunlight. When talking to the church communities, i gathered that the majority do not want a big and flashy space, they want somewhere to bring the community together and have their service. It was also important for me no to exclude these communities within their invisible territory. I wanted the minority to mix in with the majority to give them a sense of place, destroying the separation boundary.

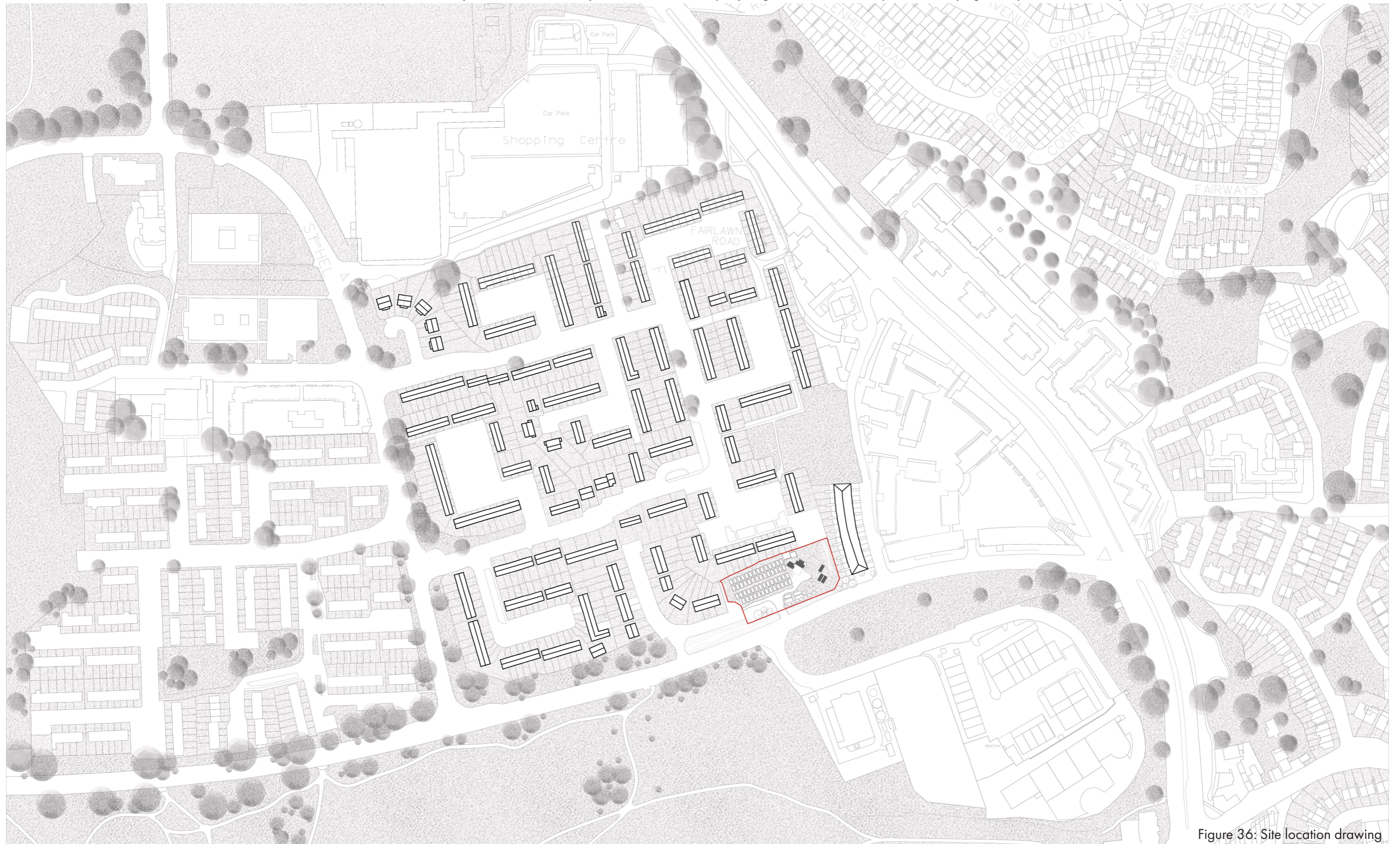


Figure 36: Site location drawing

# 10 EXISTING PLAN



Figure 37: Existing site drawing

# 10 EXISTING SECTION



Figure 38: Existing long section

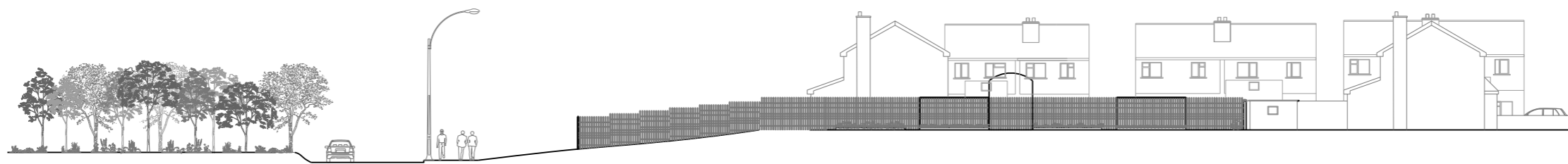


Figure 39: Existing short section

# 10 EXISTING SITE MODEL

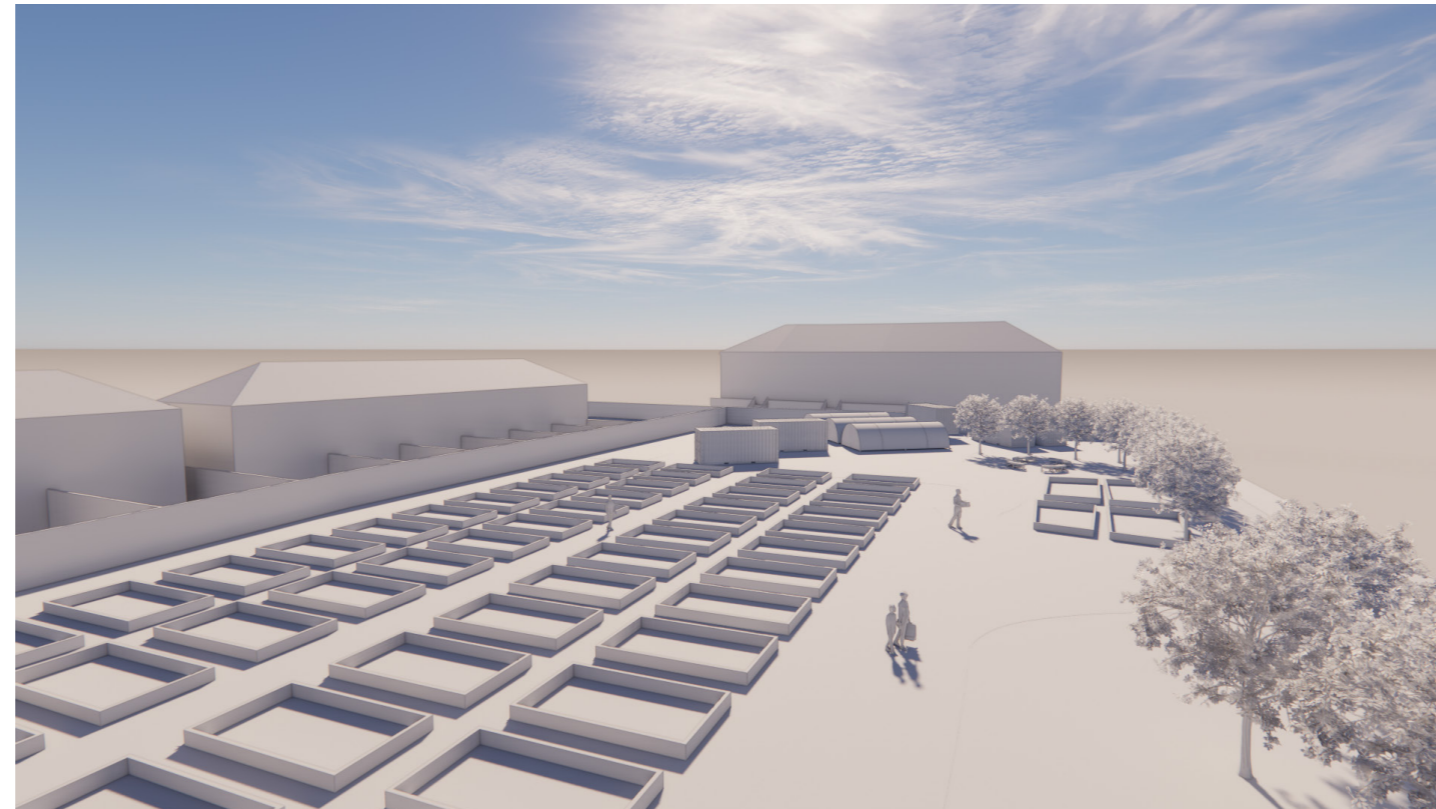
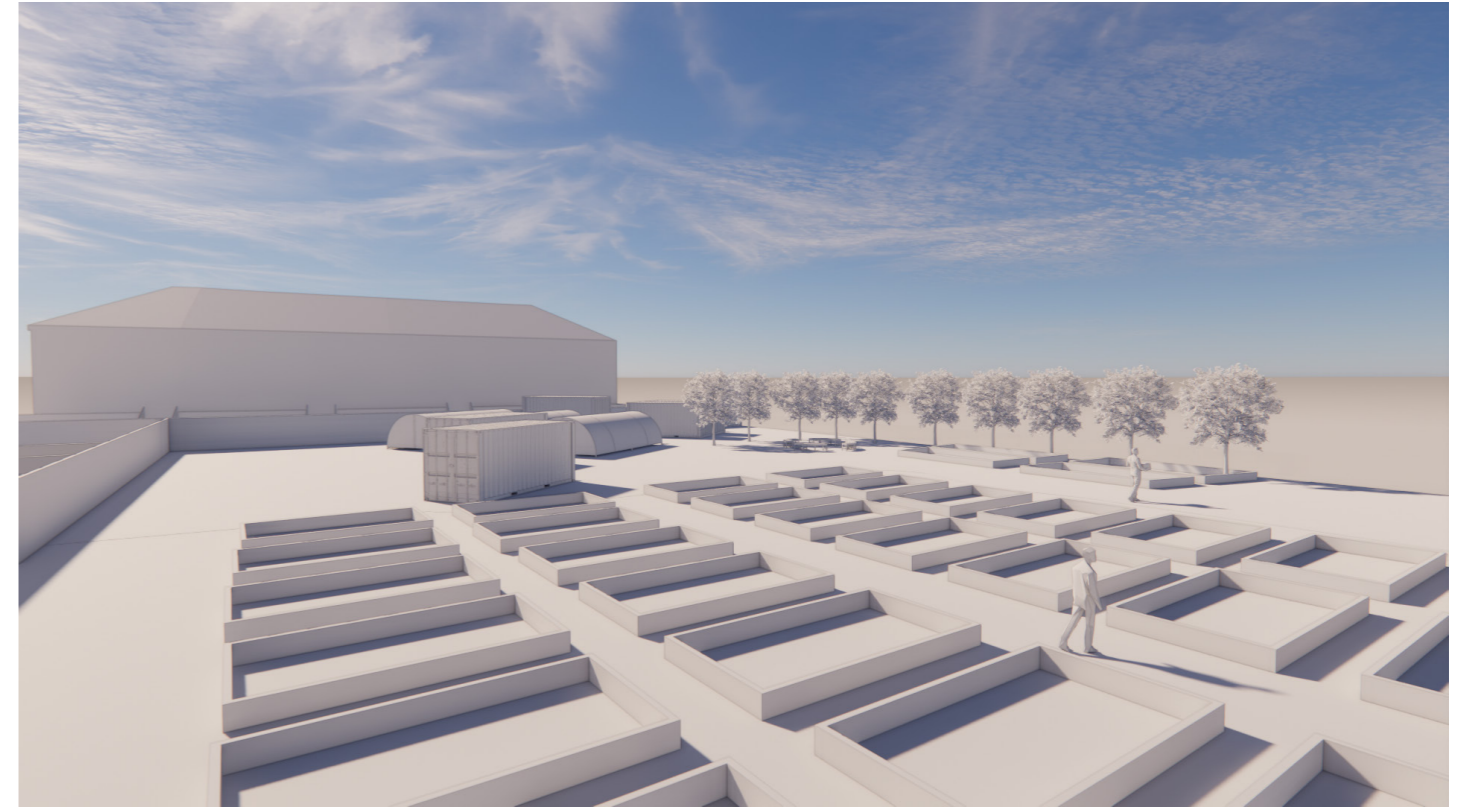
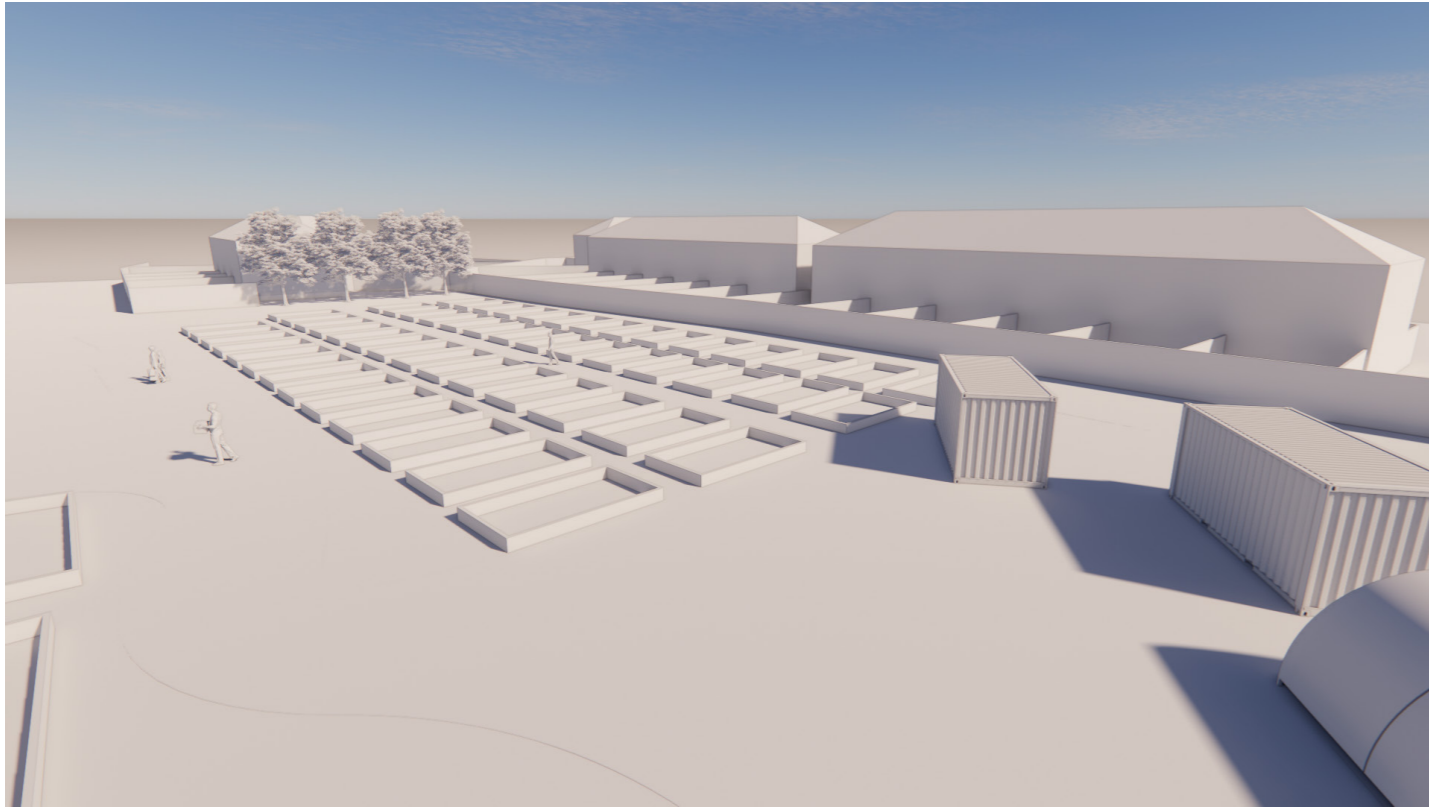


Figure 40 -42 : Existing site model

# 10 EXISTING ANALYSIS

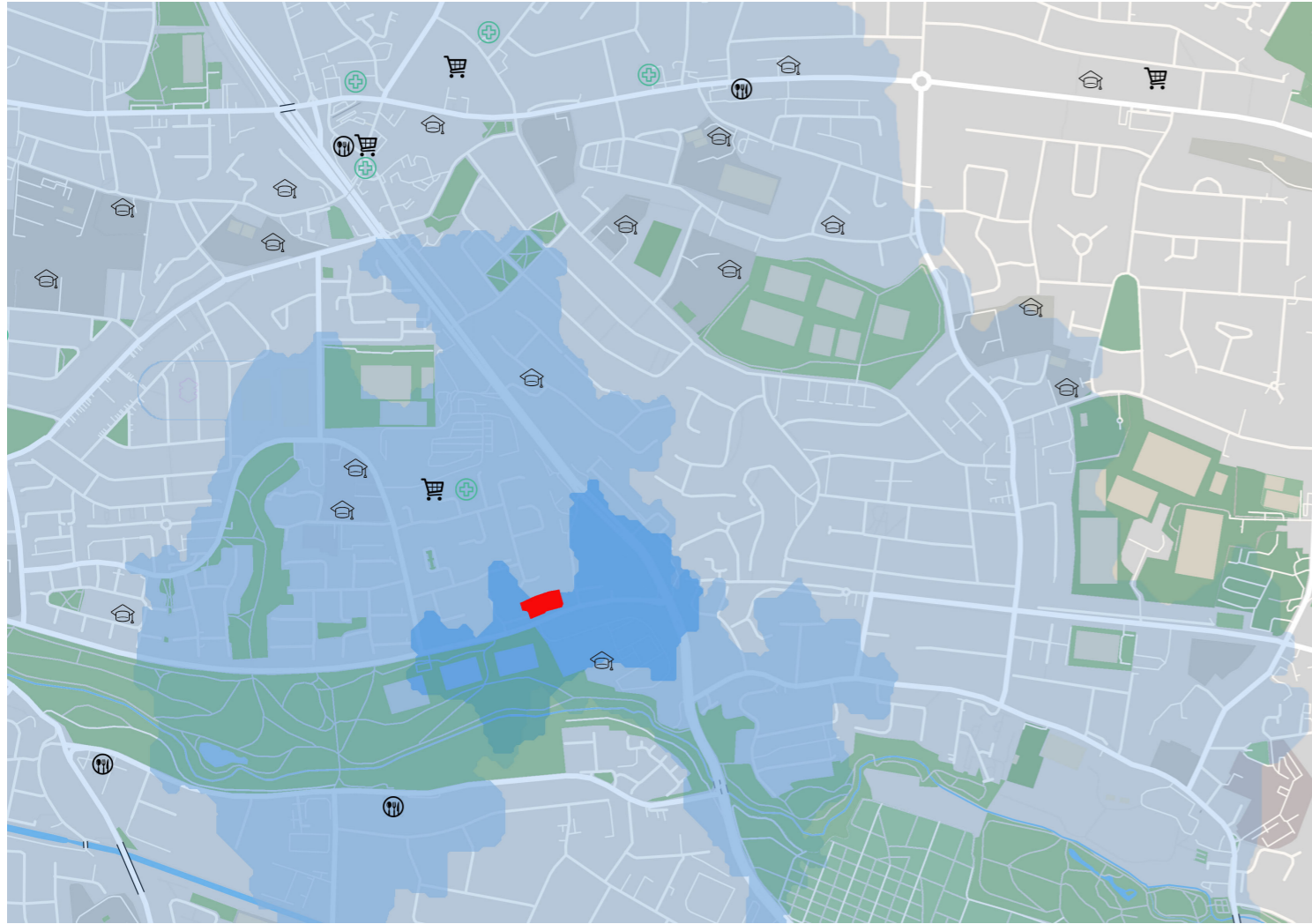


Figure 43 : 5,15,30 minute radius and amenities around site

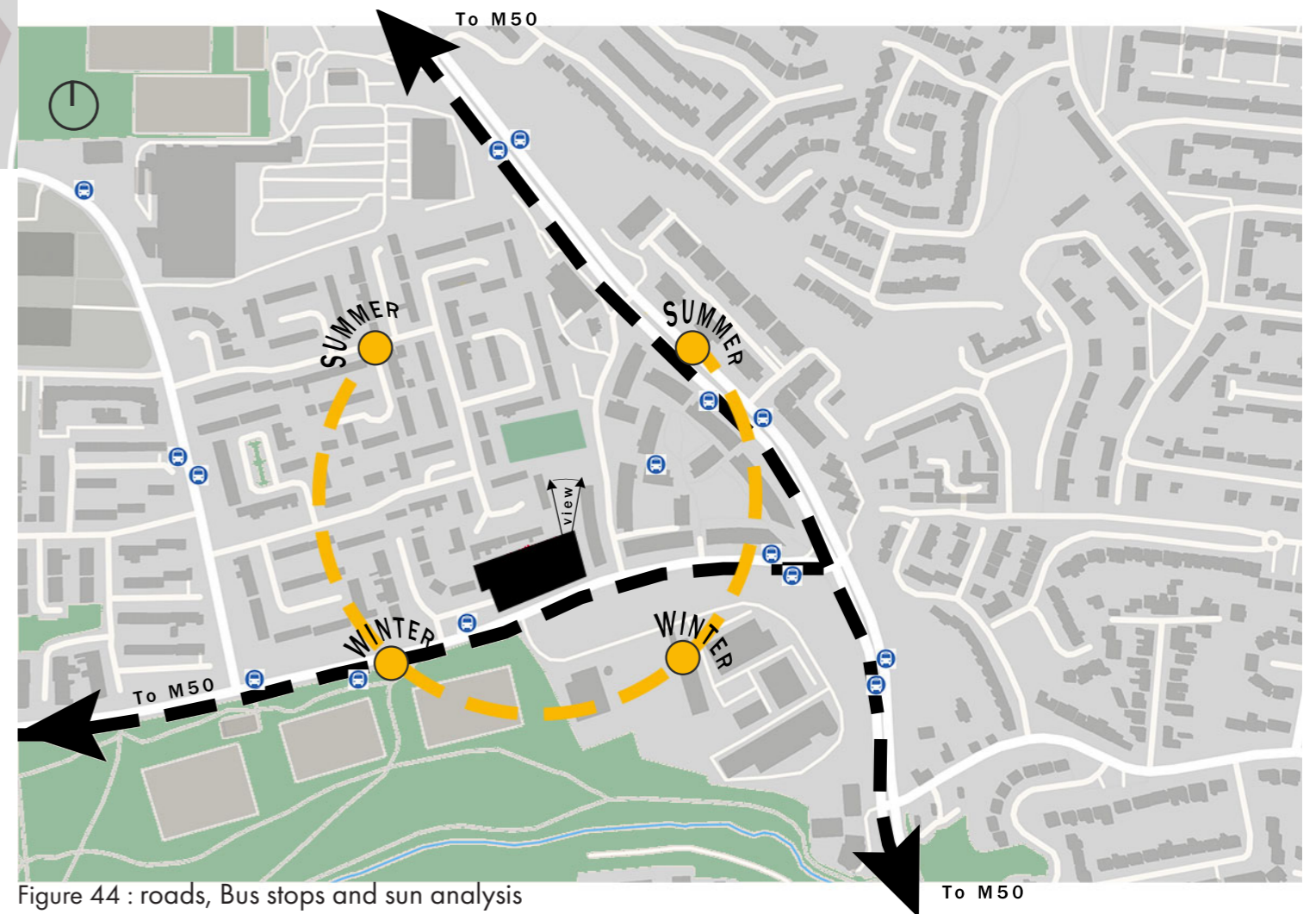


Figure 44 : roads, Bus stops and sun analysis



# 11 PROPOSED CONCEPT

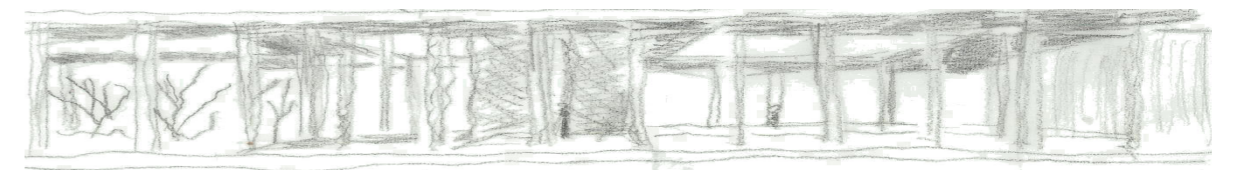
The project's goal is to create a framework for empowering communities in the provision of infrastructure while also integrating the existing cultures into the community. The goal is to foster interactions between the **mind, body and soul**. The concept actively seeks chances to harness architecture as a social act, from establishing a central post to building the walls, **working on garden planting, sacred spaces, mindfulness and food**. Self-Build is an ethos that will spread far beyond the construction site. Making the invisible visible through forming a community.



MEDITATION SPACE



COMMUNITY GARDEN



SACRED SPACE

# 11 PROPOSED INITIAL

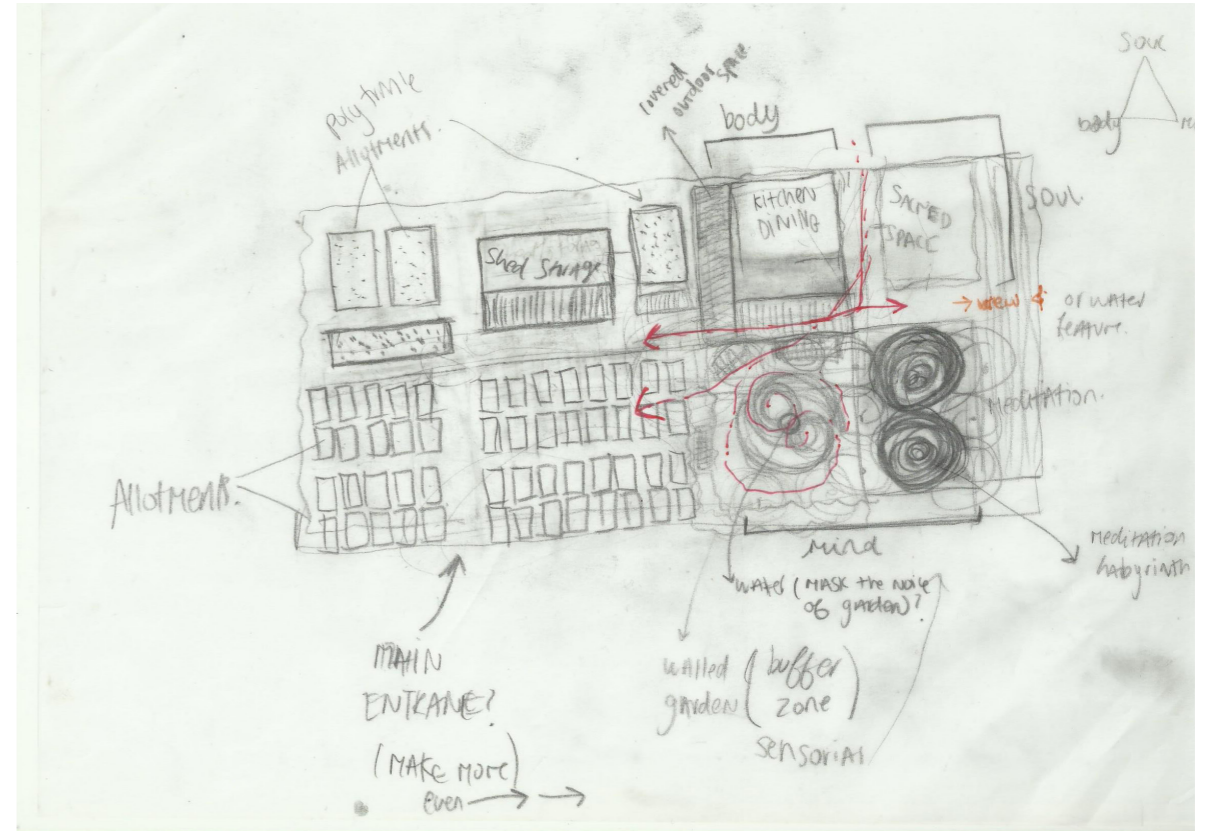
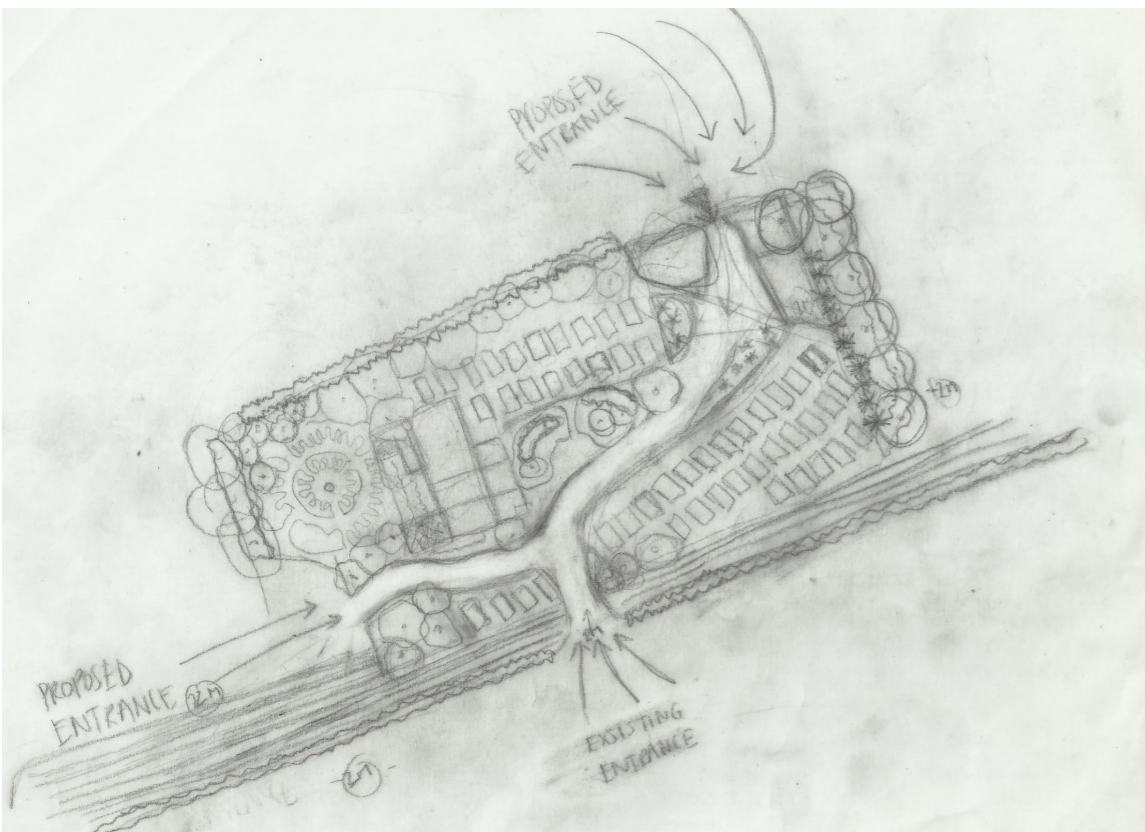
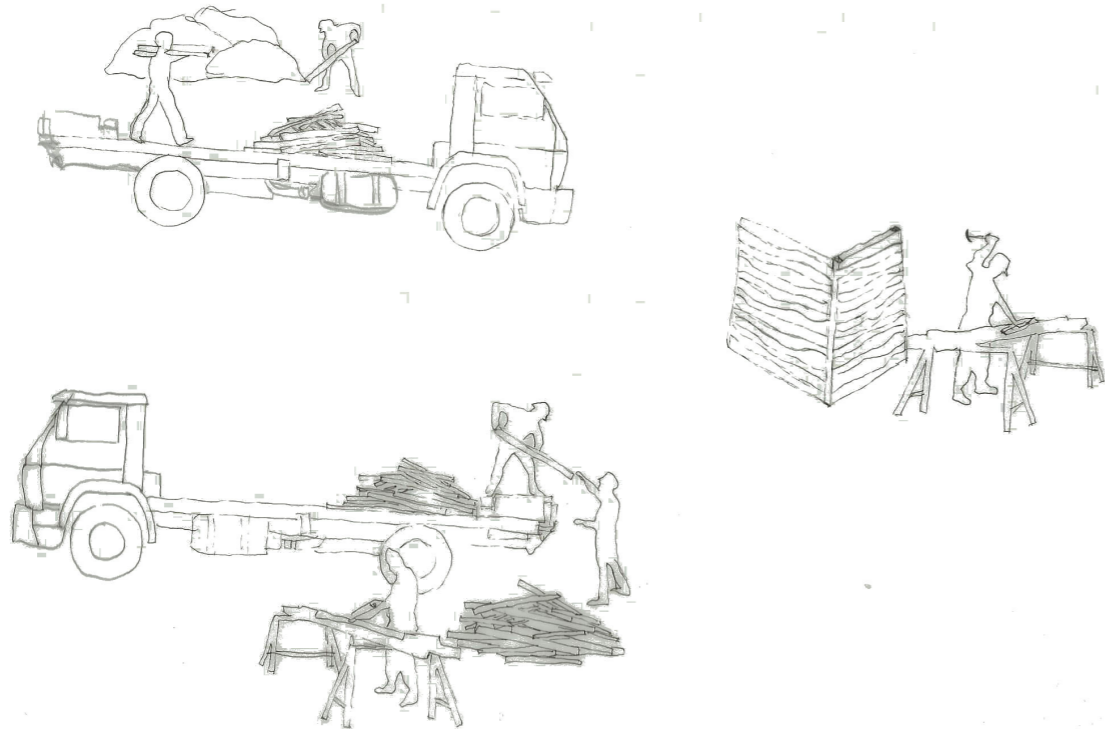
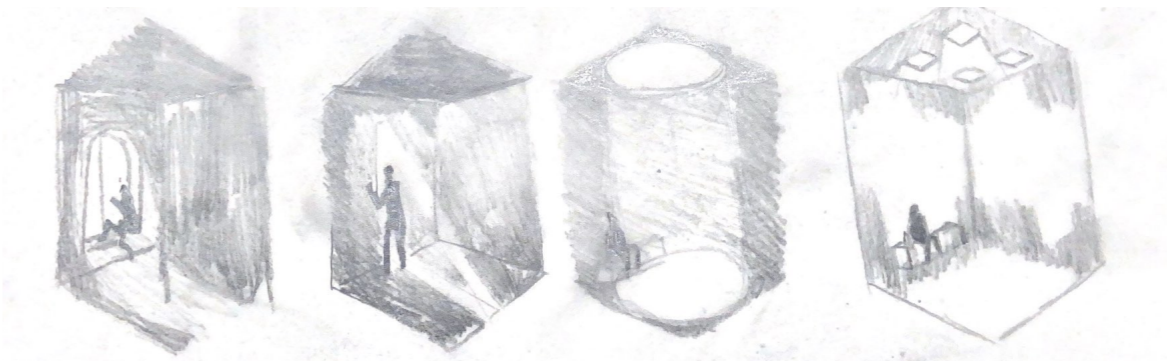
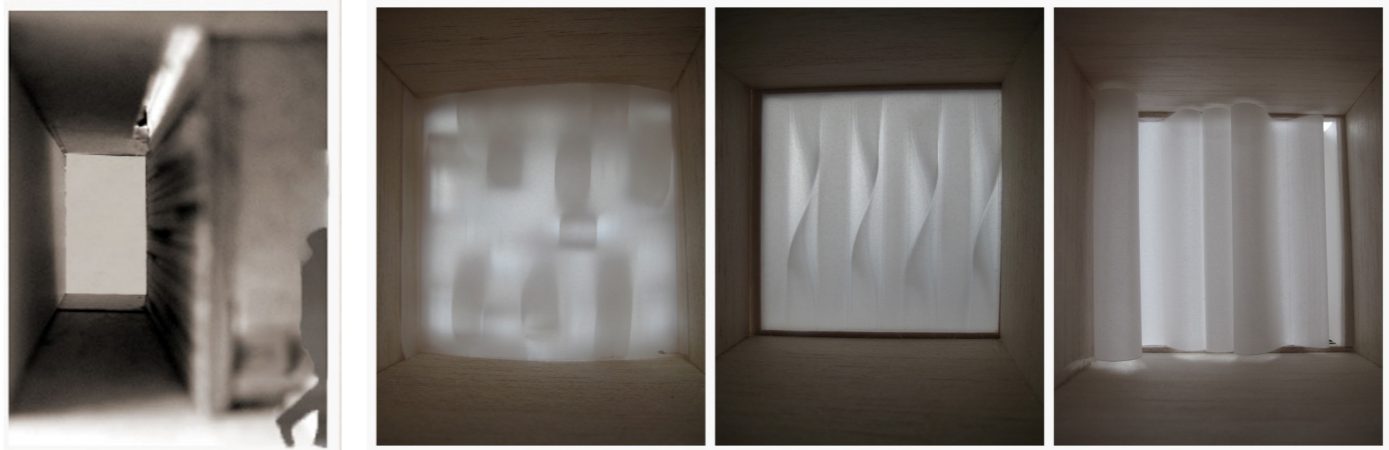


Figure 48 -50 : initial sketch design

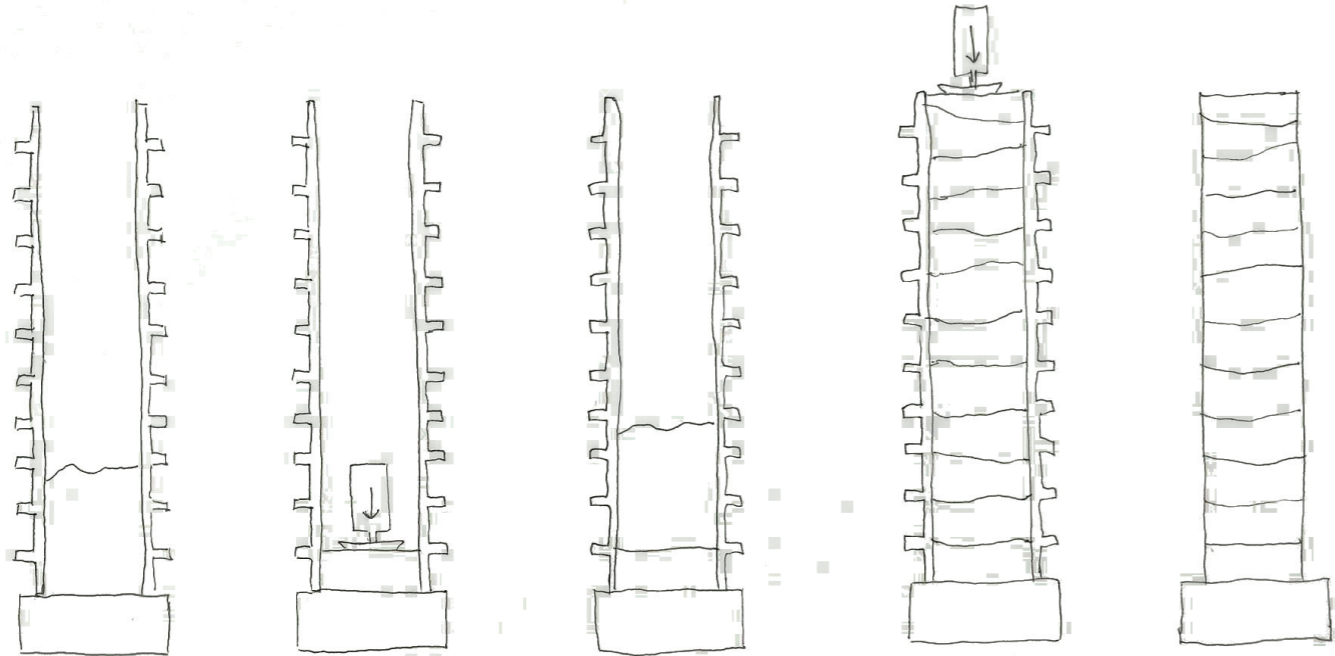
# 11 PROPOSED DEVELOPMENT



SELF BUILD



ZENITAL LIGHT



RAMMED EARTH

These three elements were a major key in my design process. Throughout diverse religious traditions, there are several connections between religion and the idea of light. Light frequently represents goodness, wisdom, illumination, the presence of God, and spiritual awakening. The association between religion and light often represents divine illumination, spiritual awakening, and the pursuit of higher truths.

Self-building can provide a sense of empowerment and identity to minority groups in several ways. By engaging in the process of creating and constructing their own spaces, individuals from marginalized communities can reclaim agency, challenge societal norms, and foster a stronger sense of self.

Figure 51 -53 : development sketches

# 11 PROPOSED SITE PLAN



Figure 54: Proposed site plan

# 11 PROPOSED PLAN - GROUND FLOOR



As the site resides on an existing garden plot, I decided to retain the existing allotments but rearrange them to make it more efficient, which also adds an additional 16 plots to the site. This allows for more people to rent out the allotments creating a more equal turnover. I have also retained the existing poly tunnels on the site while adding one extra, again to make the proposed site more efficient. To the right of the site, I have opened up the wall to allow for a semi-private entrance space to the site which brings you to a courtyard. This then leads you to the sacred space. The sacred space is a double structural space. The inner structure is a rammed earth wall and the outer structure is in CNC prefabricated timber. This creates storage in between the two structures allowing for a multi-use space in the sacred room, for the communities to change between chairs or mats or gardening equipment. The courtyard also leads toward a kitchen/dining space. This space can be used to prepare food that has been grown in the allotment plots. This space can also be rented out to the community when needed. The bottom right of the site is the mediation space. The mediation space creates a safe and inclusive environment for minority groups by providing a platform for their voices to be heard and their concerns to be addressed. It can contribute to the empowerment of these communities. These efforts contribute to creating a more harmonious and thriving environment where all individuals can embrace their identities and contribute to the broader community.

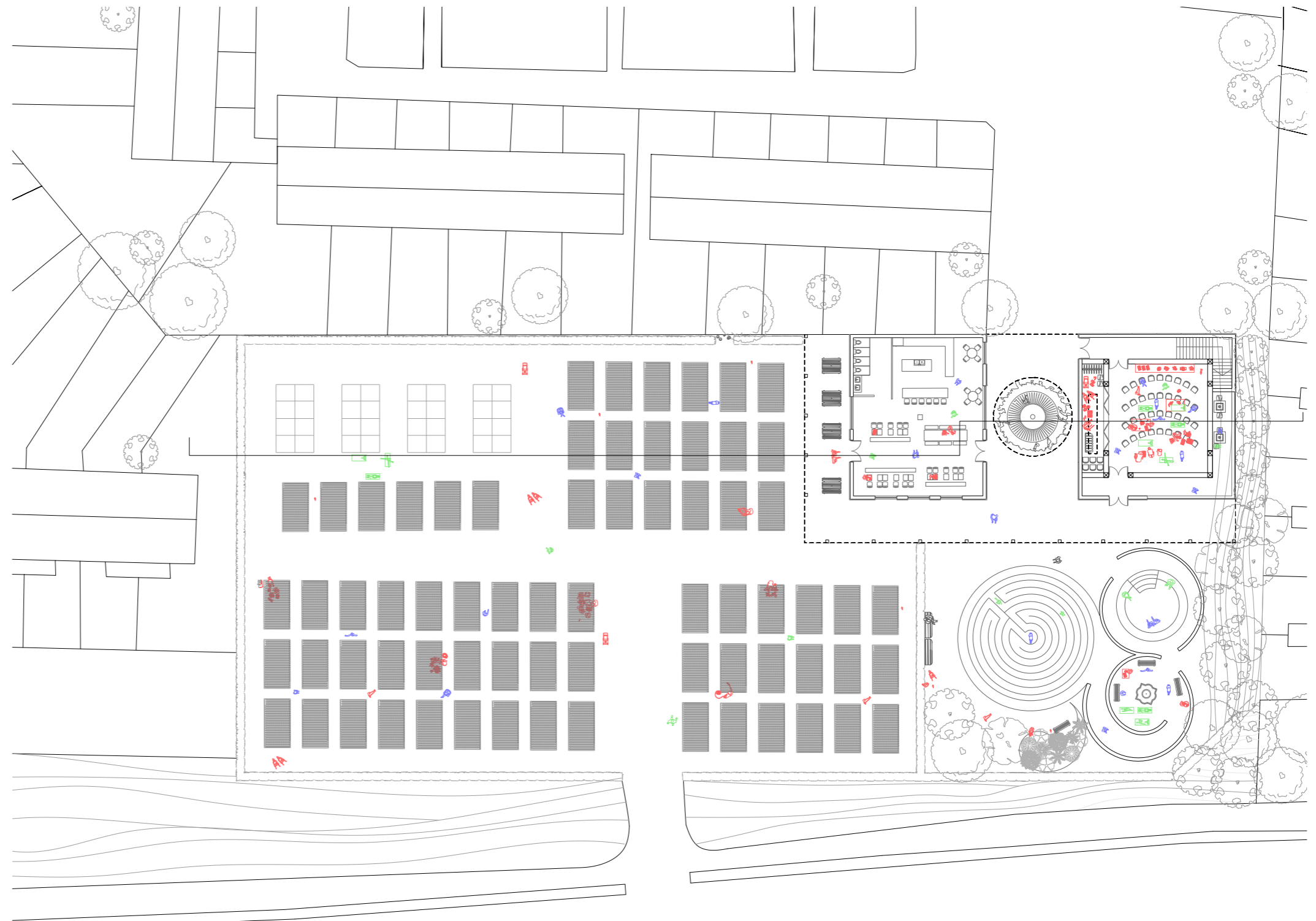


Figure 55: Proposed ground floor plan

# 11 PROPOSED PLAN - FIRST FLOOR



The first floor consists of one multi-use yoga studio. This space can be used as a sacred space if needed. The basis of this design is to allow for the interconnection of communities. I have chosen three different possible uses for the site.

Sacred- Blue  
Mediation-Green  
Garden-Red

These colors how the intergeneration and the overlap that can be used in the site. By creating a purpose built building for these communities, it not only allows the communities to grow and thrive in the space but also makes the invisible, visible through creating a sense of space and place and belonging in the surrounding area.

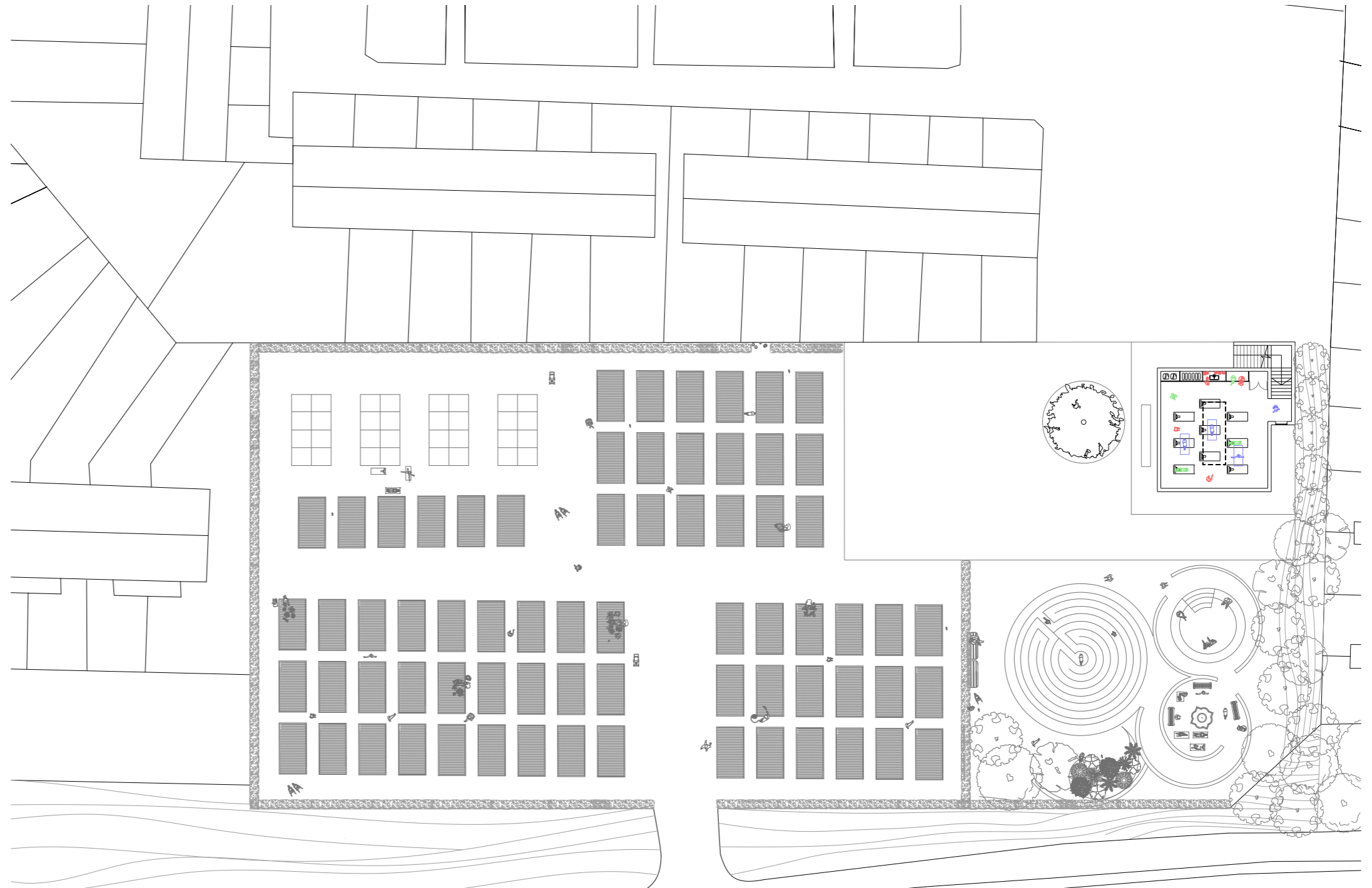


Figure 56: Proposed first floor plan

# 11 PROPOSED SECTIONS

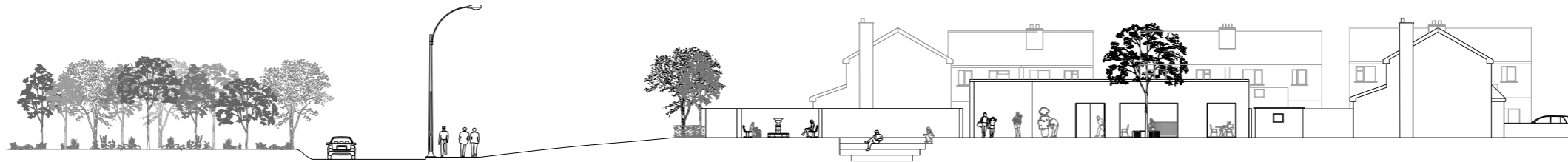


Figure 57: Proposed long section

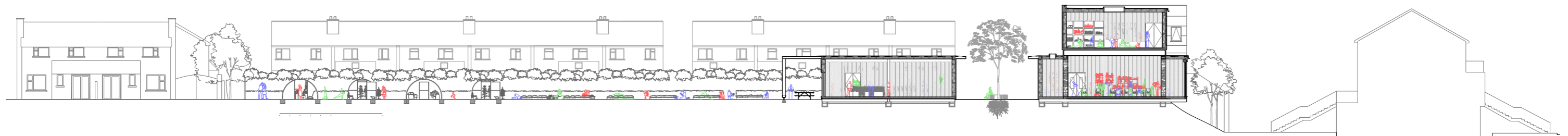


Figure 58: Proposed short section

# 11 PROPOSED DETAIL SECTION

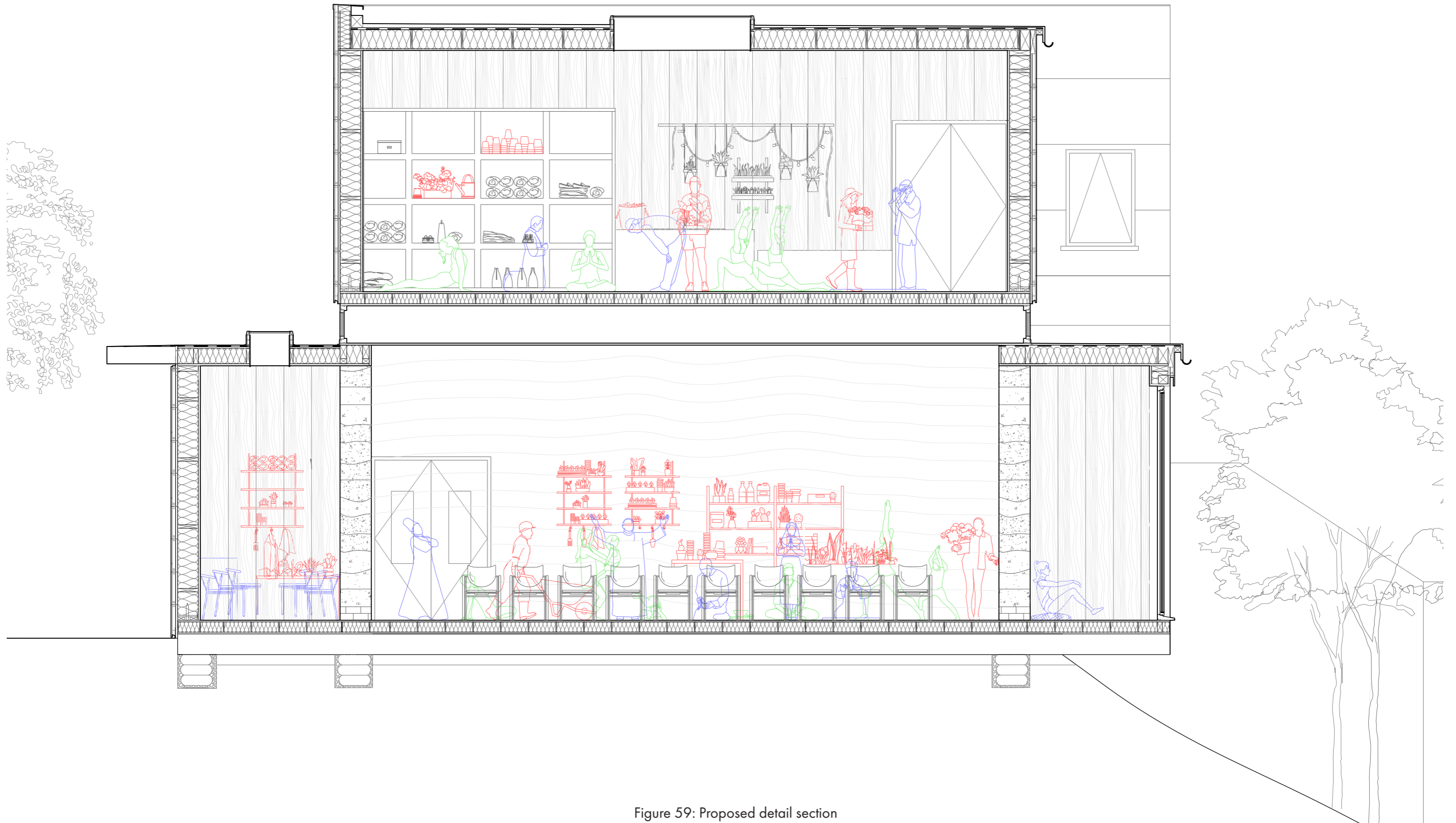


Figure 59: Proposed detail section



# 11 PROPOSED RENDERS

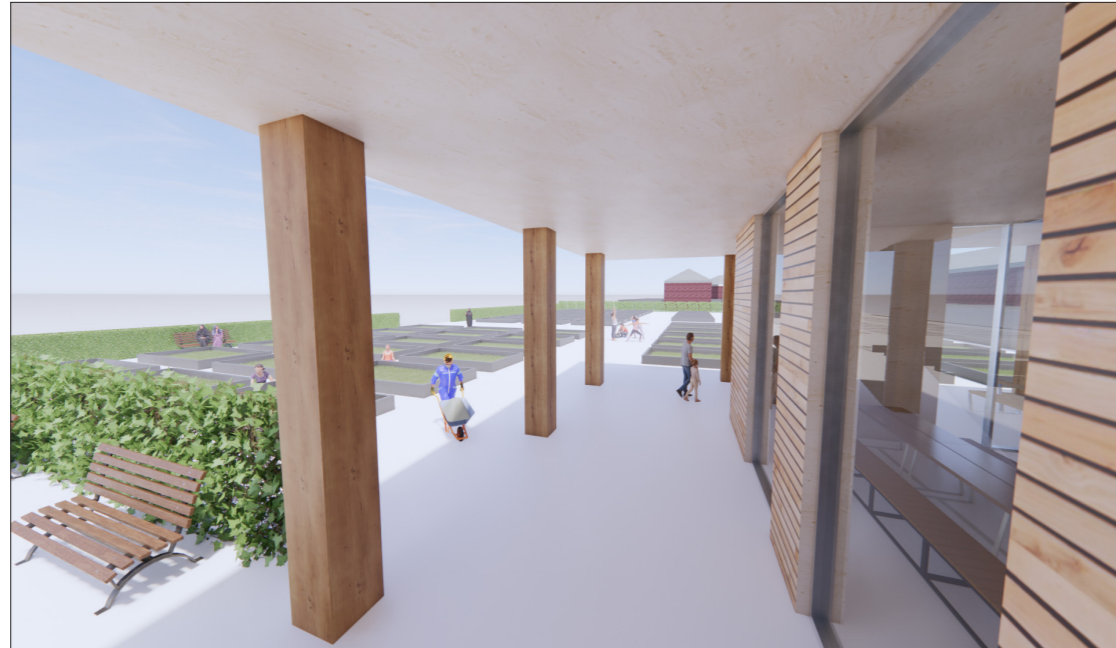


Figure 60 - 63: Proposed renders

# 11 PROPOSED MATERIAL - WIKI HOUSE

The Wiki House system starts with an online platform where users can access a library of house designs contributed by the community. These designs are usually created using computer-aided design (CAD) software. After finalizing the design with the architect and generating the necessary construction files, which are typically in formats compatible with CNC machines. The fabricated components are then shipped to the construction site, where they can be easily assembled using basic hand tools. The components are designed to fit together using interlocking joints or fasteners, eliminating the need for complex construction techniques or specialized skills.

The Wiki House refers to a free and open-source building system that enables communities to create, distribute, and erect their own buildings. Collaborative design with architects are used to increase home accessibility, adaptability, and affordability. The Wiki House concept seeks to democratize housing by giving people and communities the tools they need to actively participate in the planning and construction of their own residences. It makes use of the capabilities of digital fabrication and design technology to speed up construction, lower prices, and improve accessibility while fostering sustainability and innovation in housing solutions.

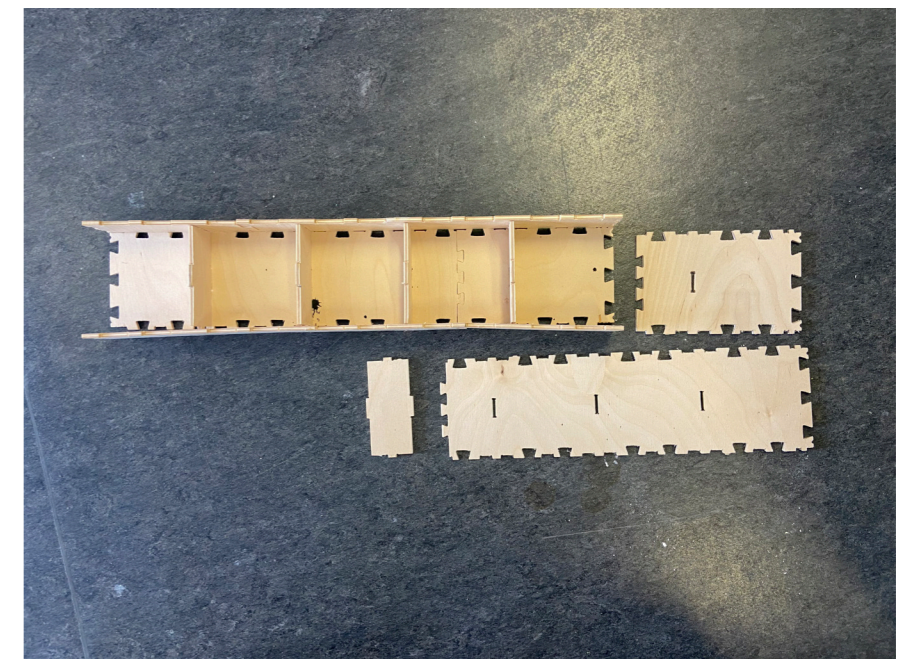
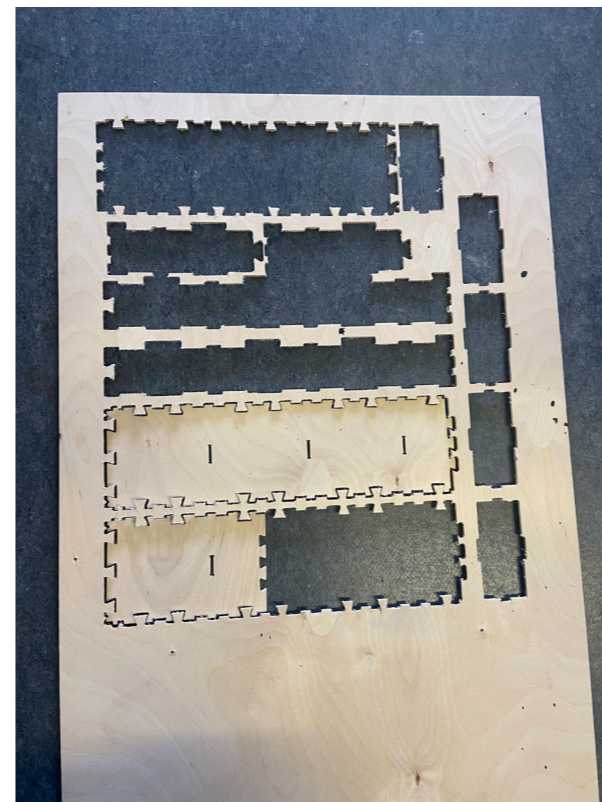
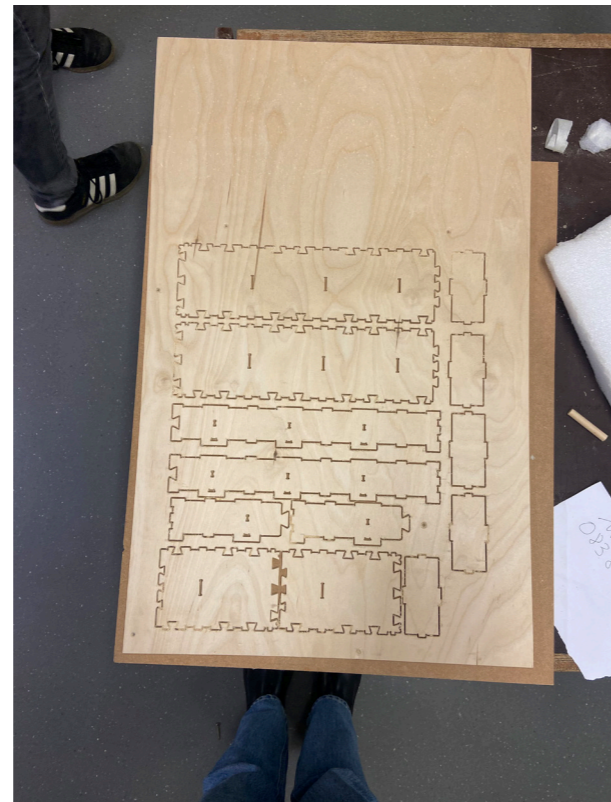
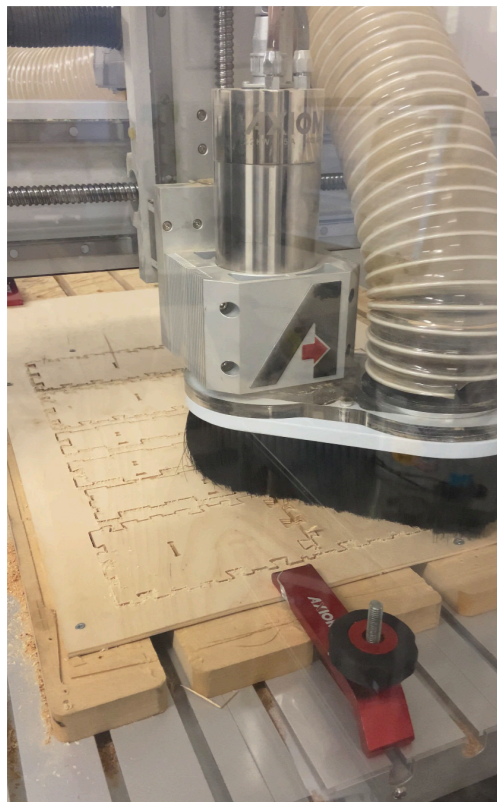


Figure 64 -67: Wiki House model

# 11 PROPOSED MATERIAL - WIKI HOUSE

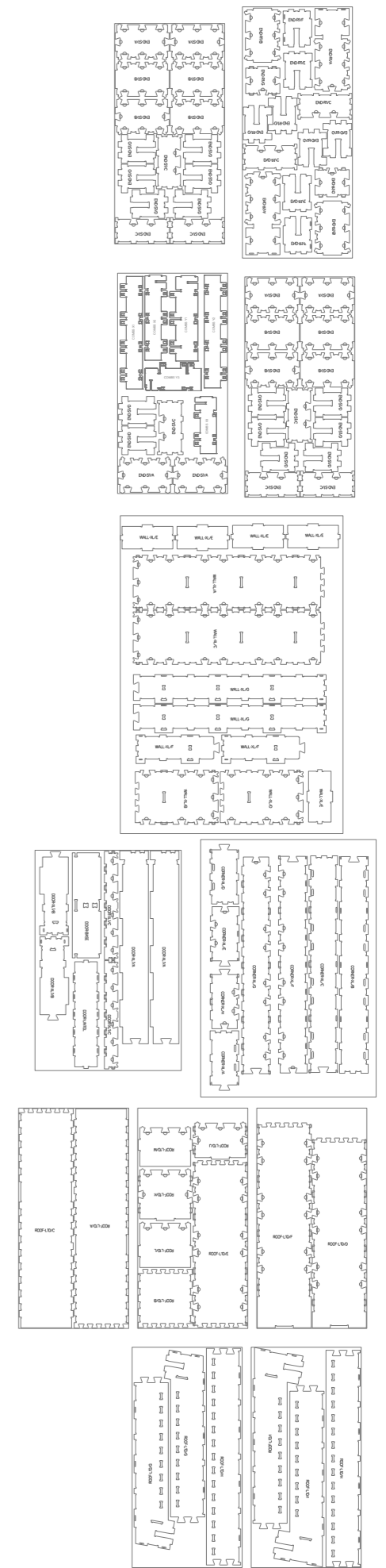
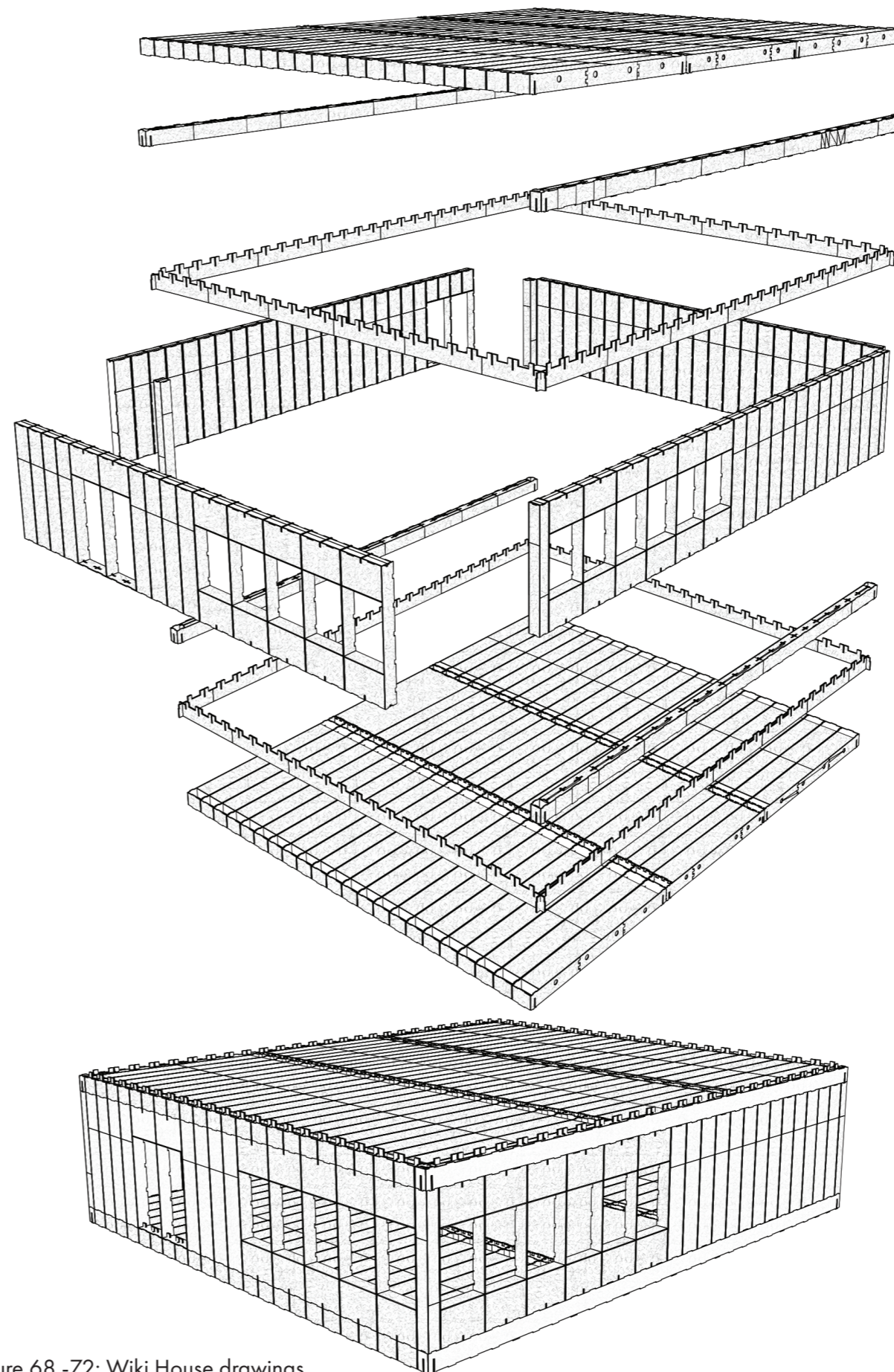
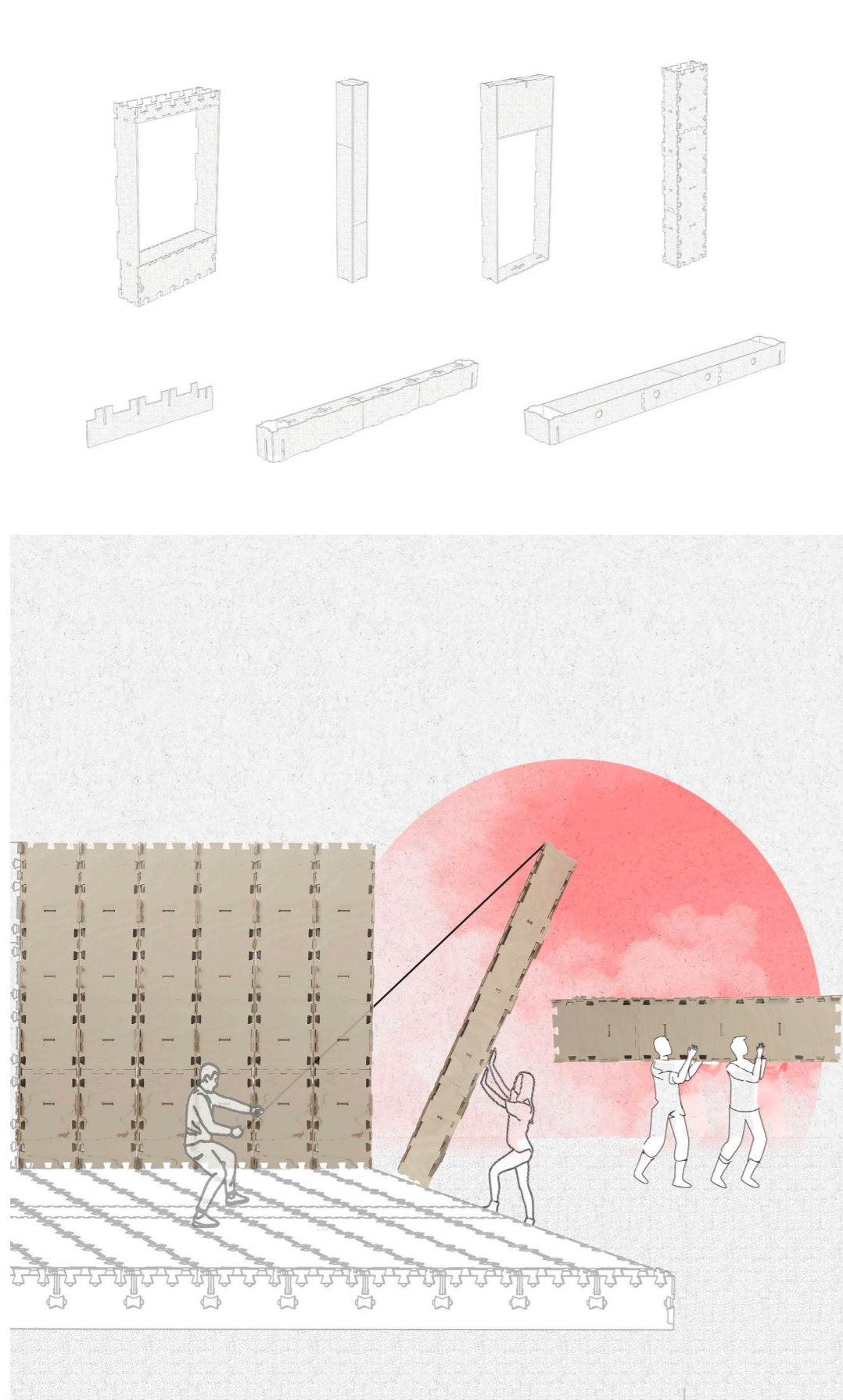


Figure 68 -72: Wiki House drawings

# 11 PROPOSED MATERIAL - RAMMED EARTH'

Rammed earth construction is a building technique that involves compacting layers of earth or soil within a formwork to create a solid, load-bearing wall. It has been used for centuries and is known for its durability, thermal properties, and sustainability.

The formwork is built up to establish the building's intended shape, and moist earth is then poured into this framework at a depth of around 10–25 cm (4–10 inches).

Then, until the wall reaches the proper height, this is crushed using a tamper (either pneumatic or manual). Any exposed walls are sealed when the formwork is taken down to stop water damage.

Rammed earth construction is often built on top of conventional footings or a reinforced concrete basis.

The walls are highly functional once they have dried; you can simply drive a nail or screw into them, and you can mend them if you need to.

## Joints

Walls are built in panels of approximately 3.5m in length with flexible joints to comply with building rules requirements for masonry structures. When a wall consists of more than one panel a recess is built into the end of the first wall. The second wall then moulds into this to lock the walls together for lateral stability. And **this joint is called as tongue and groove joint**. However, if the elements are well linked to a ring beam above and to a plinth below, there is no need of the tongue and groove joint.

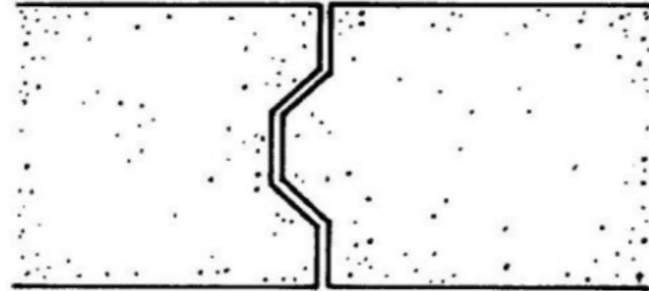


Figure 73 : Rammed earth drawings

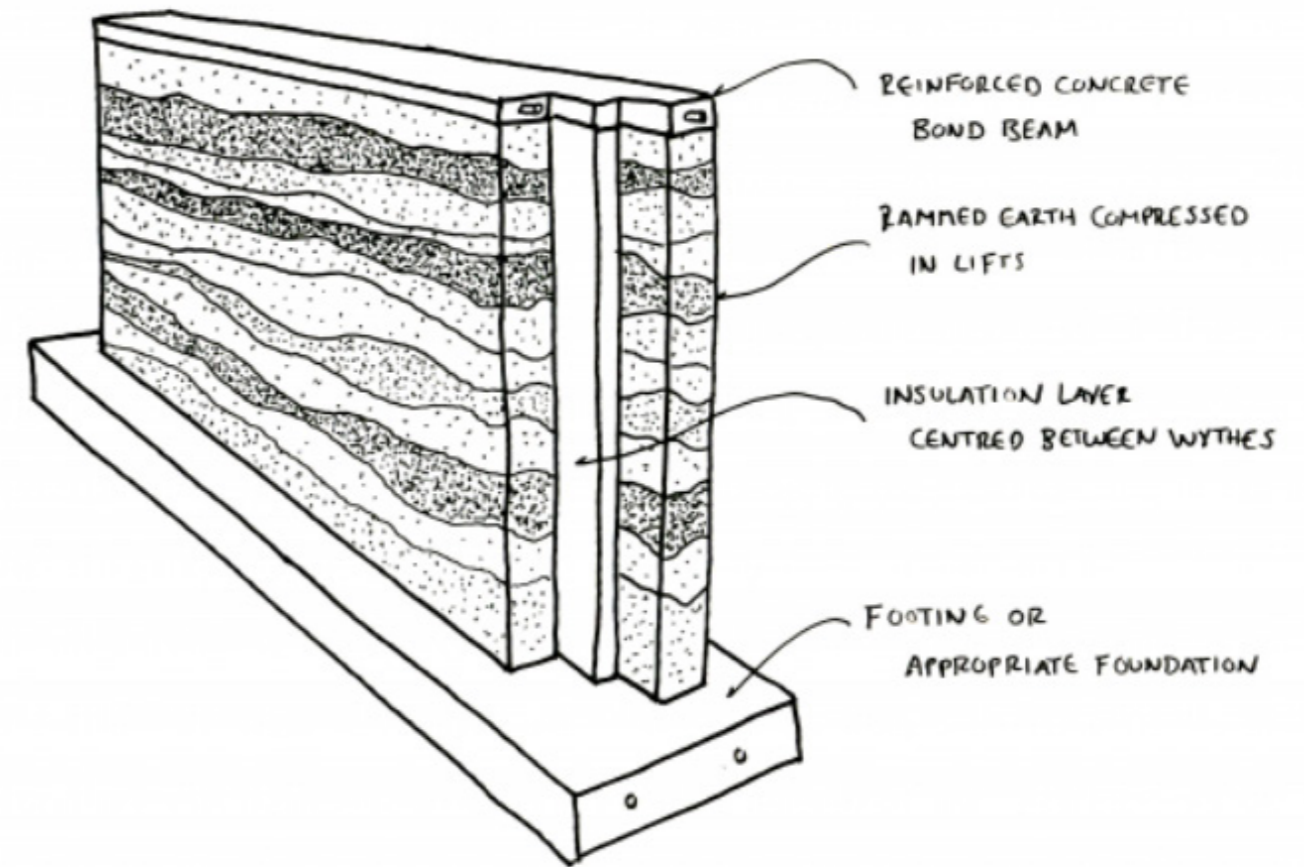


Figure 74: Rammed earth drawings



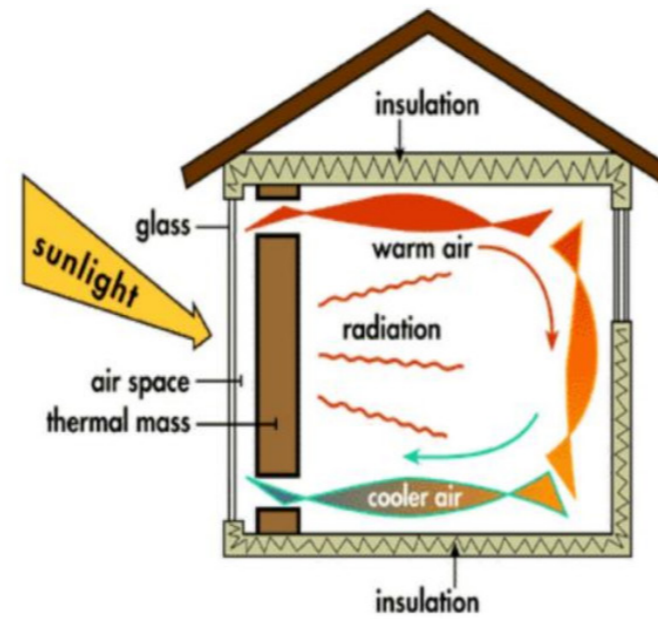
Figure 75: Rammed earth drawings

# 11 PROPOSED MATERIAL - RAMMED EARTH

## Advantages

### Thermal mass

Thermal mass keeps the internal room temperature stable due to the length of time required for heat to transfer through the walls. For eg., a **300mm thick rammed earth wall will take 8-9 hours for heat to transfer through the wall to the other side**. The solar passive building designer needs to ensure that summer sun does not shine directly on any walls but at the same time allow the direct sun on the walls in winter for as long as possible. This will allow the warmth from the sun to be absorbed by the walls in winter when it is needed the most. So, more the thickness of the walls, the higher is the thermal mass and higher the time for transfer of heat from one side to the other. **Insulated rammed earth contains insulation which is placed in such a way to slow the heat transfer even further. This is great in sub-zero temperatures however in warmer temperatures the insulation will have a detrimental effect as it will prevent the warmth of the sun from being stored in the wall.** It also shields from electromagnetic fields & radiations.



### Sustainability

Sustainable for 1000+ years, uses local materials for walls. Uses subsoil, not the topsoil. Its thermal properties lowers the cost for heating and cooling. And the construction cost is comparable to the conventional construction cost. Rammed earth is non-toxic, non-polluting and 'breathes'. This creates safer, more people-friendly buildings. It is very low in embodied energy, and extremely comfortable to live in.



### Fire Resistant

Earth doesn't burn. This is an ideal material for bush settings and leafy suburbs. CSIRO tests showed that a 250mm earth block wall achieved a 4 hour fire resistance rating. A 150mm earth block wall achieved a rating of 3 hrs 41 minutes. The walls are stronger, being 300mm thick and of monolithic rather than block construction (so have no vulnerable mortar joints).

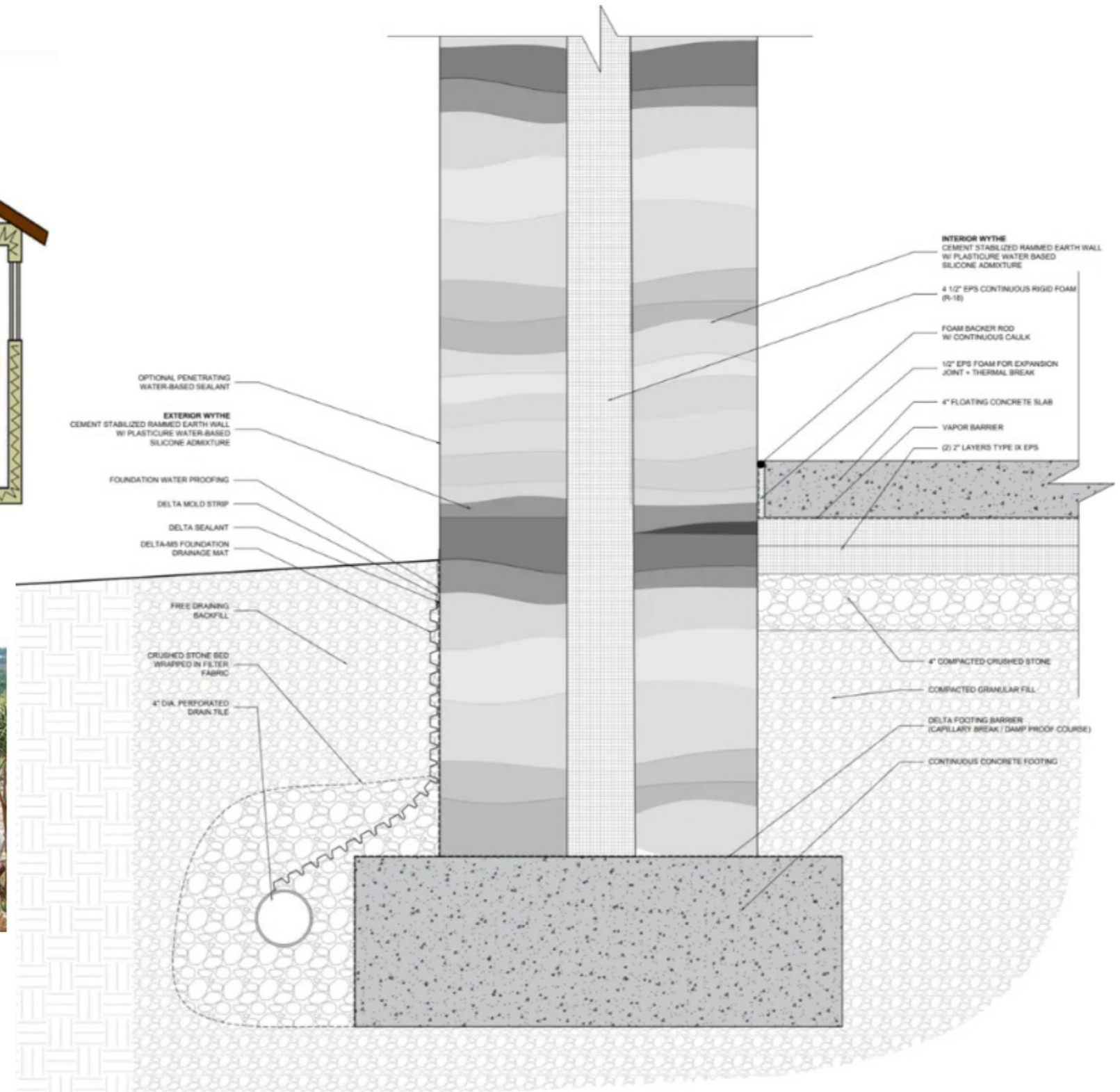


Figure 76 -77: Rammed earth

Figure 78: Rammed earth

# 11 PROPOSED MATERIAL - RAMMED EARTH

I made a small sample of rammed earth to get the soil ratio right. From this sample i was able to determine how much soil to sand to aggregate i need for the sample to be successful. I also added cement to the mix but later realized out that cement is usually not needed.

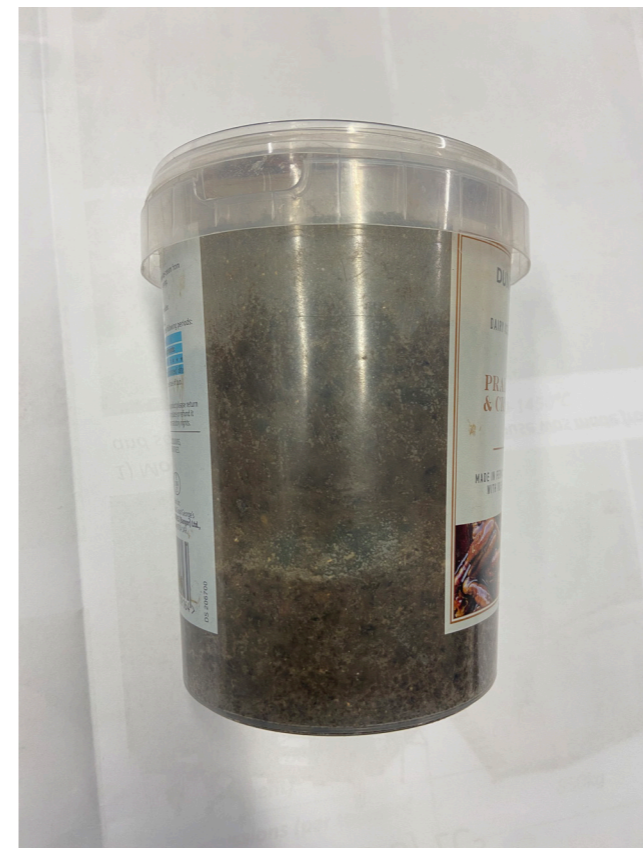
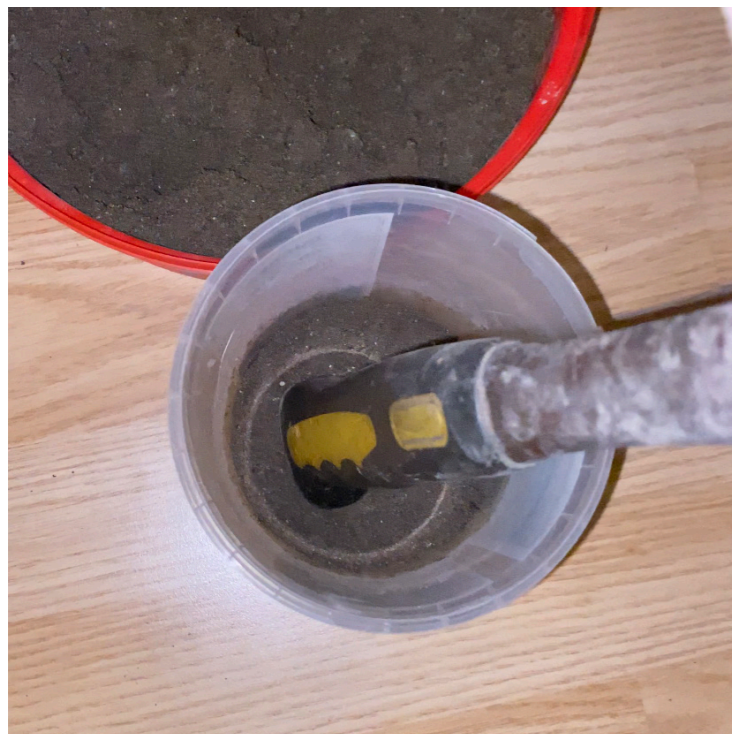


Figure 79 -85: Rammed earth model

# 11 PROPOSED MATERIAL - RAMMED EARTH

I also participated in the rammed earth workshop that was organised by TERRA run by James Matin & Eibhlin Ni Chathasaigh. This workshop was a week long workshop. We learned about soil ratios and how to build a formwork and the actual building of a rammed earth wall. Building a rammed earth wall is very labor intensive but using rammed earth is used as the main form of construction, as it guarantees quick, cheap, and low labor production.

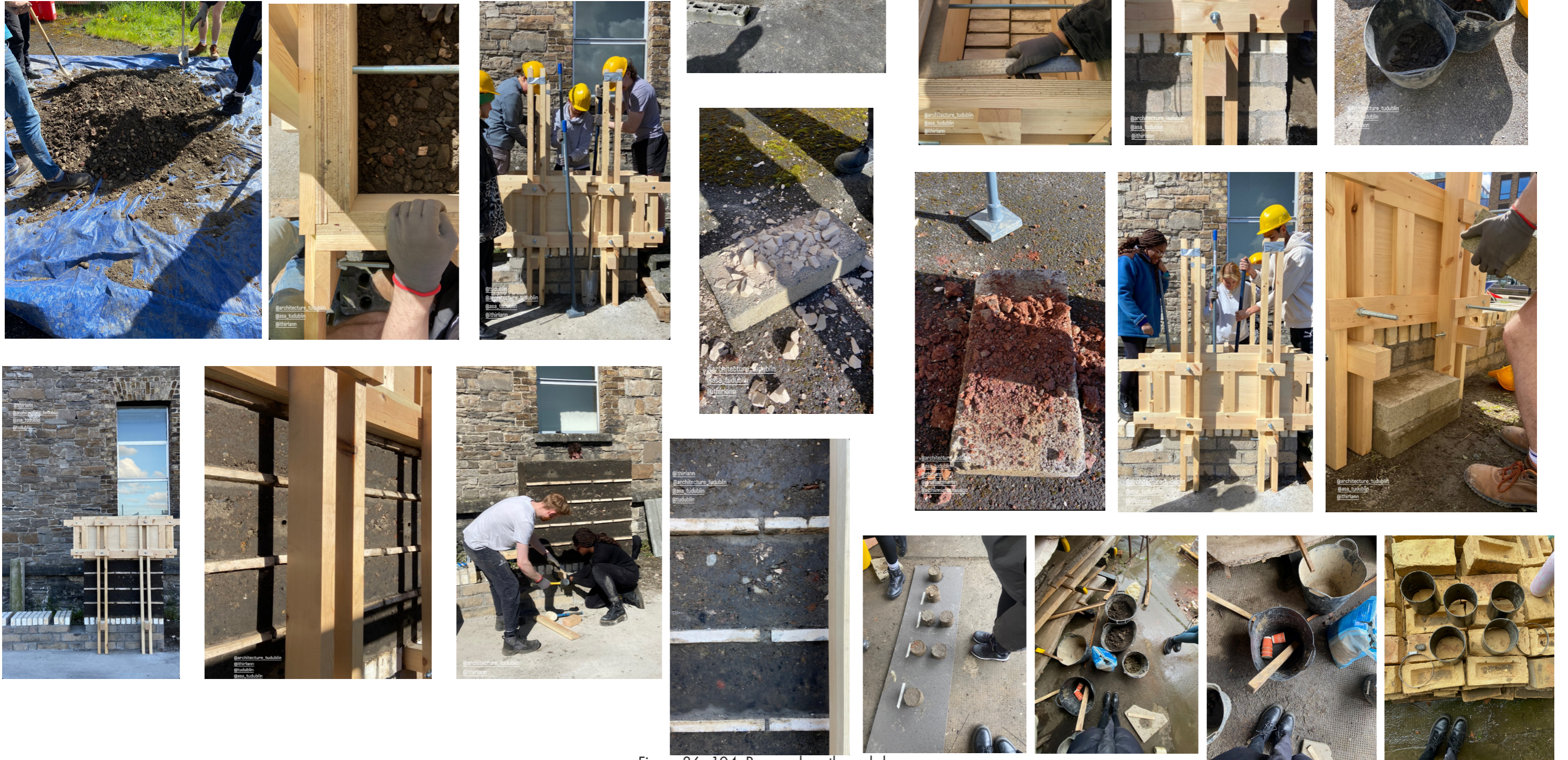


Figure 86 - 104: Rammed earth workshop

# 11 PROPOSED STEP BY STEP GUIDE

The self-build assembly manual diagrammatically breaks down the construction of building components, making it easier for residents to visualise and follow the steps.

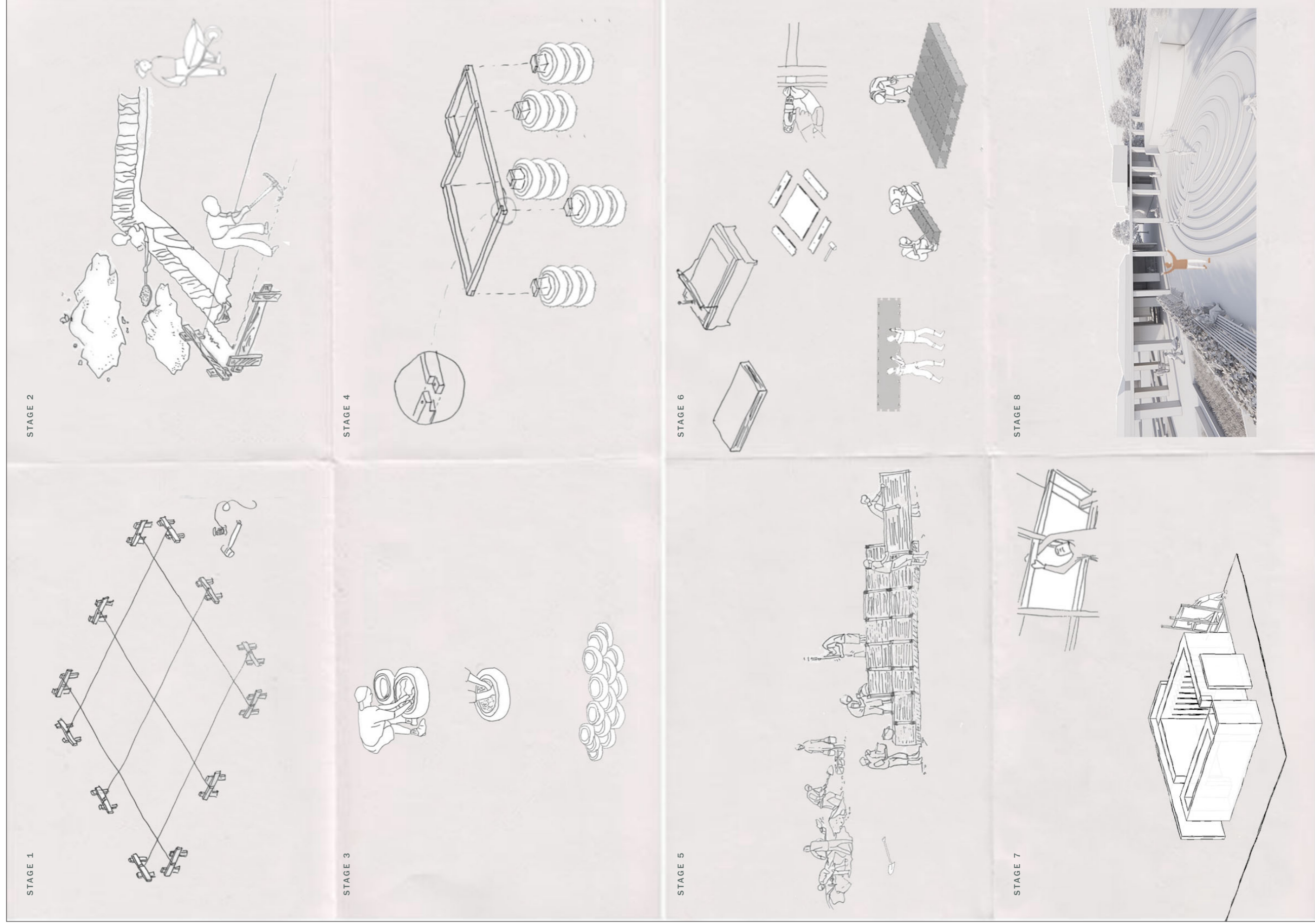


Figure 105: Step by step guide



# 11 PROPOSED STRUCTURAL MODEL

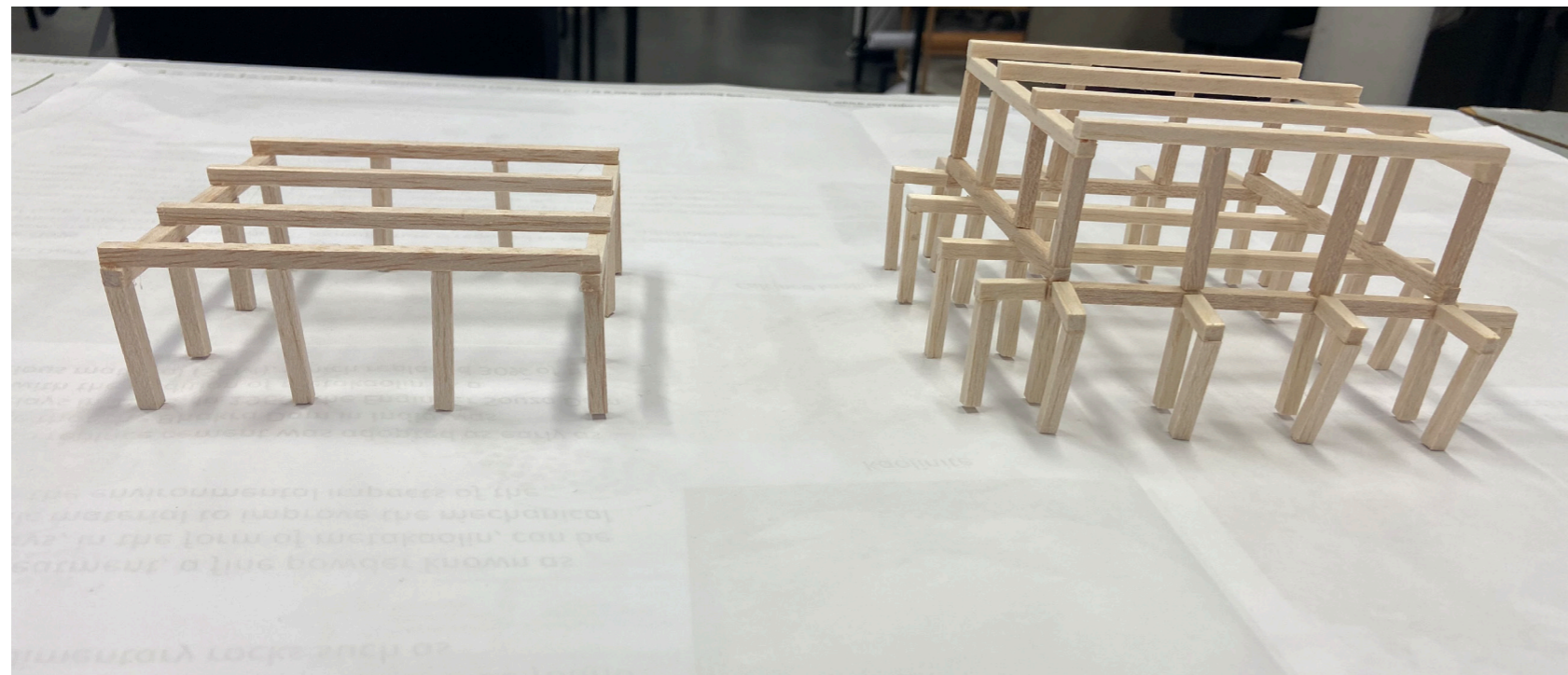
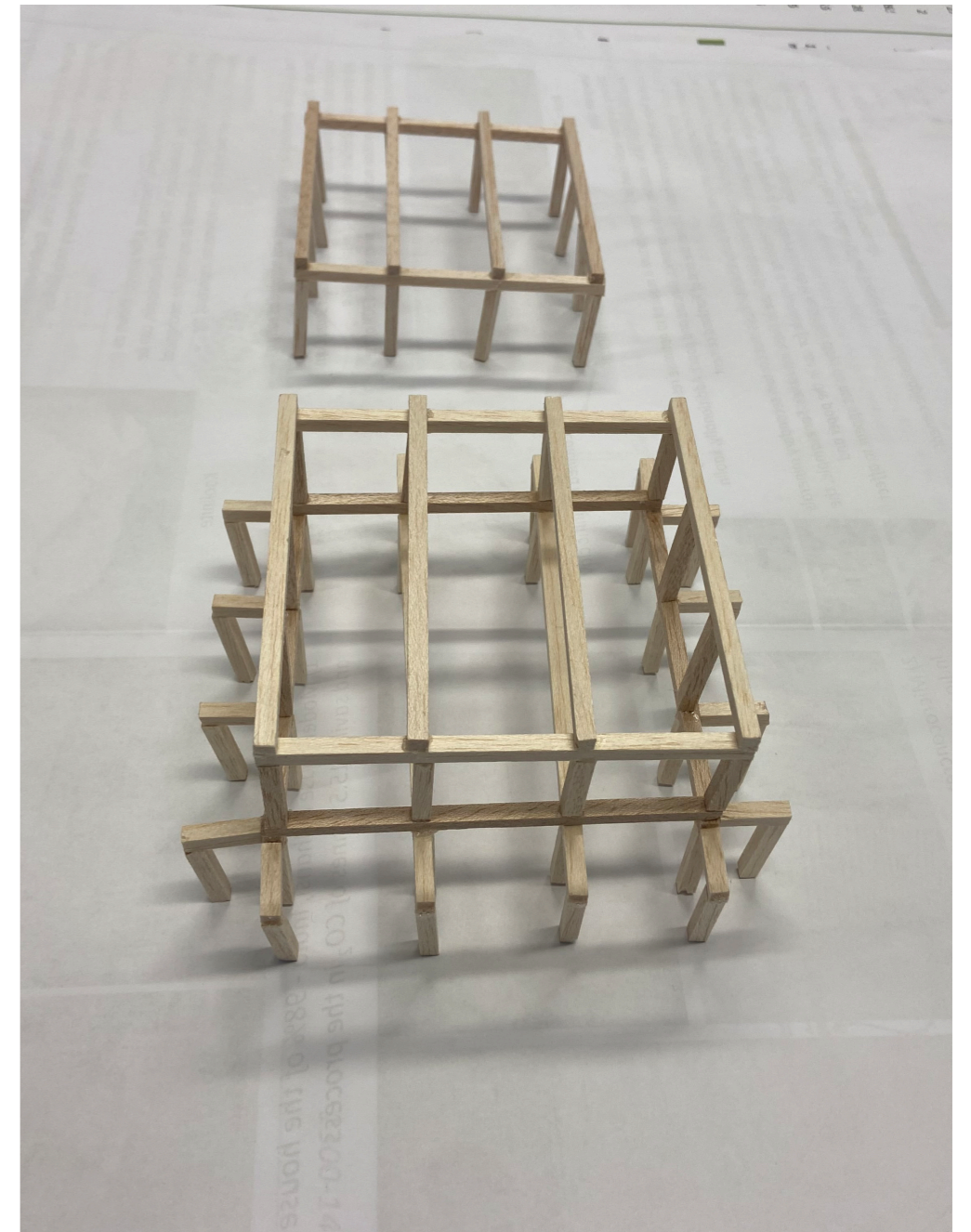
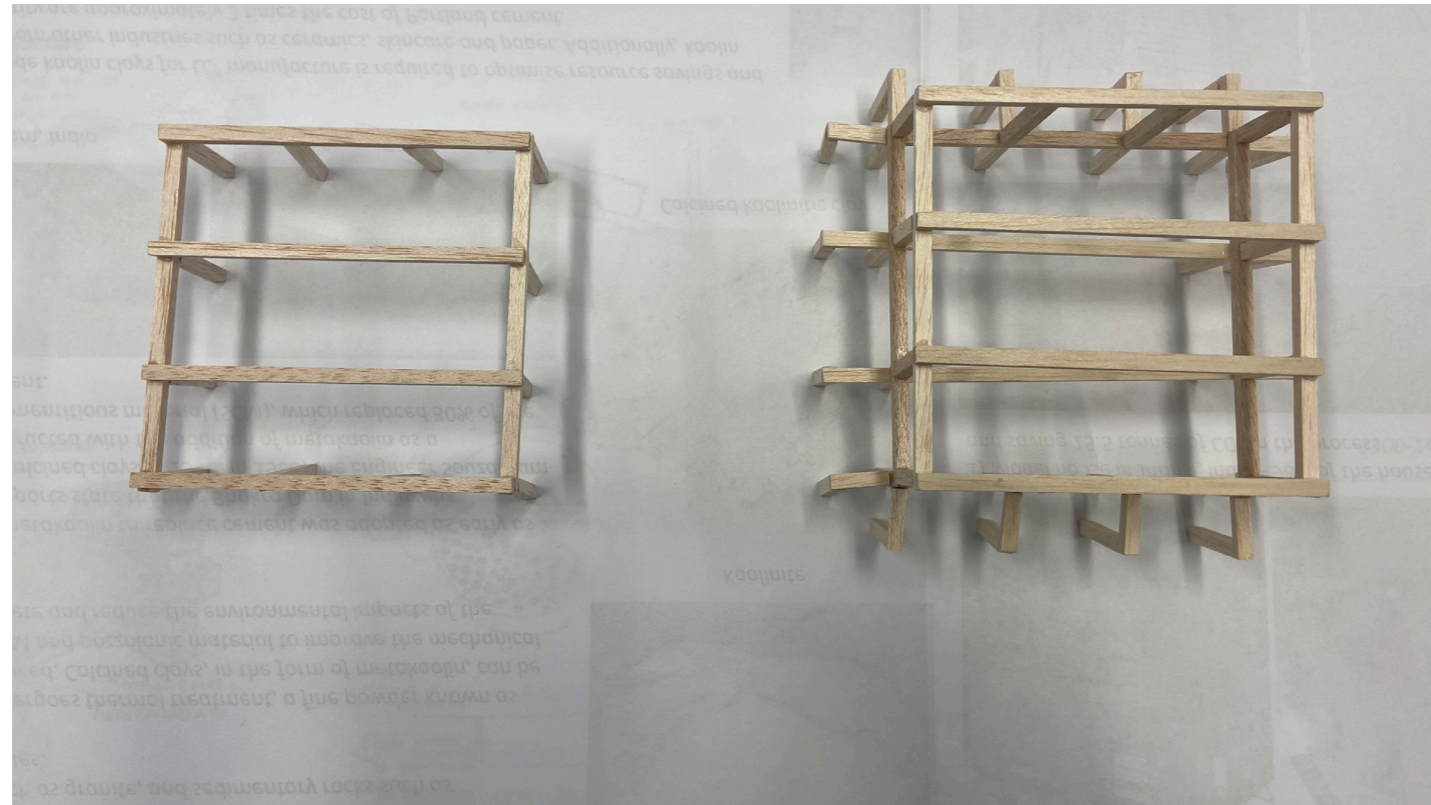


Figure 106 - 108: Structural model

# 12 CONCLUSION

The current lack of true diverse representation in the architecture field requires transformation. Given that majority of ethnic minorities are more likely to originate from disadvantaged homes, we must consider if all people of colour are properly represented in the architecture profession. Without diversity in the architecture field the majority of ethnic minorities will be placed into invisible territory and will be forgotten to be designed for. Representation is important. Diversity, equity, and inclusion are important. And in order to attain these goals for the construction business, genuine action and real change are required. Small changes like the election of Muyiwa Oki and Kimberly Dowdell are super important to these communities as it gives ethnic minorities a voice and sense of place in the built environment.

As architects, our ability to embrace the whole variety of diversity is directly tied to our success as visionaries. To be social visionaries today and in the future, architects must represent and reflect the different human civilizations they serve. We can see how the lack of diversity in the architecture field as impacted the communities in the Tolka, ostracizing them into the territory that is an industrial estate and rendering them invisible. We must cultivate highly developed cultural competence, or the ability to comprehend the cultural components of our communities. The architecture community is suffering from the lack of diversity in the field and without diversity, the profession will fail.

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