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Community of independence: a communal sustainability centre in Soweto

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Community of Independence:

Empowering socio-economic freedom,
a communal reinvention of the Soweto Towers.

To my parents, who provided me with opportunities that were not so easily provided to them. Thank you for your constant support and belief in me. To my supervisor Liale Francis who nurtured me into a direction I previously would not have easily taken. Thank you for your valuable advice. Lastly, to my friends who never left my side even through the darkest of times.

Community of Independence

A communal sustainability centre in Soweto.

by

Jeremia Brynard

Design Dissertation Document in partial fulfilment of the degree of Master's of Architecture (Professional)

in the School of Architecture and Planning.

University of Witwatersrand

Supervisor

Liale Francis

I, Jeremia Brynard 1372814 am a student registered for the course Master of Architecture (Professional) in the year 2021. I hereby declare the following:

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27/09/2021

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ABSTRACT

South Africa is a country with a history that tells a story of struggle, oppression, revolution, and freedom. Over the centuries the people of South Africa have seen many rulers and have known many masters but have now finally obtained freedom through democracy. The township of Soweto is no different as they were once oppressed and marginalized but, through collective strength and determination, rose and obtained their freedom. The people of Soweto have proven that they can empower themselves through means of community, thus making the communities of Ekhaya prime candidates for this dissertation.

This dissertation will question the possibility of affecting tangible social, political, and economic change within an already established and previously oppressed urban landscape through communal empowerment and socio-economic independence.

The proposed intervention targets the communities of Ekhaya through the revitalization of the decommissioned Orlando Power Station within Soweto. The intervention results from the close social, political, and environmental analysis that is the culmination of research done on themes such as community, empowerment, and independence within the context of the Ekhaya communities.

This dissertation is divided into five phases that are representative of the architectural design process: Data Acquisition, Problem Definition, Ideation, Prototyping, Implementation.

The Data Acquisition phase introduces the proposed intervention's site, surrounding context, and initial observations. To reach the communities of Ekhaya research needs to be done in order to identify the optimal location. This phase will depict the existing urban framework of Orlando East and the context surrounding the communities of Ekhaya and the chosen site.

The following phase will attempt to Define The Problems identified within the targeted area of study and initialize an approach towards understanding these problems and how they could be addressed. Once a proper investigation of the target area has been concluded, we will identify areas of concern that require better understanding through further research.

The Ideation phase addresses the identified problems through means of academic research and argumentative deliberation. Here the topics identified in the previous phase will be unpacked and argued to obtain a viable solution to be implemented through means of an architectural intervention.
Following this, the Prototyping phase will aim to conceptually explore the research findings physically to move closer to a design solution. It will be shown how research can be transformed into conceptual models that will later serve as a basis for design.

Furthermore, the Implementation phase will attempt to manifest all previous findings into a physical built form that will be inclusive of community, provide empowerment, and inspire independence.

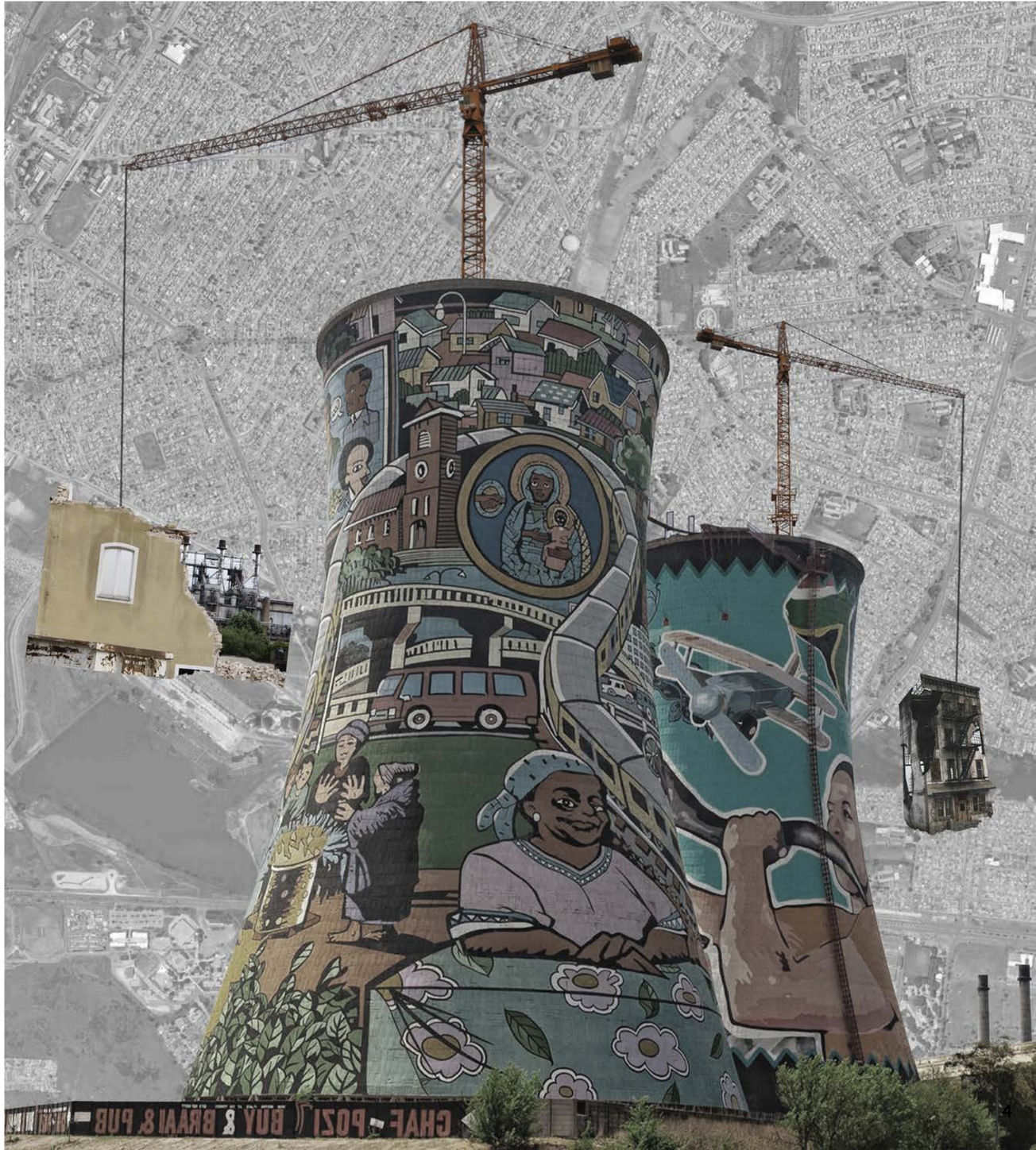


Figure 01
Deconstruction of Ekhaya. (Author, 2021)

DATA ACQUISITION

- Introduction
- Kilpspruit - Soweto - Orlando East
- Development of Ekhaya
- Introduction to site
- Site Analysis

INTRODUCTION

Soweto is a township that was established by force, its people oppressed and marginalized by the apartheid government, and despite all this, rose as one and fought for their freedom. Its people were liberated by their own hands through communal empowerment. This movement brought about the change needed to overthrow the apartheid government.

Whether it is demanded or forced, the process of change invariably leaves a lasting impression on those around it, affecting the people and the social and economic structures associated with them. The communities within Soweto are no exception, once being forcefully subjected to change but eventually standing up and fighting for it instead. These communities represent the very soul of Soweto, bruised, and scarred but ever relentless in their pursuit of change. One such set of communities are those that reside within the Orlando Ekhaya precinct. This area is rich with its history of battles against oppression and marginalization and self-empowerment, independence, and freedom. These are the qualities that are existing within this region and its communities since the Soweto Uprisings. Although still present within a post-apartheid Orlando East, these qualities have not been given the opportunities to benefit the communities of Ekhaya further. Presently, many proposed developments within the Orlando Ekhaya precinct aim to bring about social and economic stability.

This dissertation will explore how a sustainable communal intervention providing empowerment and independence to the communities of Ekhaya can act as a catalyst for permanent change within the Orlando East region. It is important to note that this intervention will not be an isolated initiative but rather an amendment to the current proposals within the Orlando Ekhaya precinct. This amendment will aim to be inclusive of the Ekhaya communities to provide opportunities for community empowerment, independence, and socio-economic growth.

Recent events such as the Covid-19 pandemic, mass riots, and looting sprees that have profoundly affected our countries social and economic stability have forced us to perceive our surroundings differently. We now recognize the need for change within our society and the opportunities presented to us during these times of uncertainty.

When observing an urban landscape such as Orlando East, most would only inspect its surface, taking its imperfections at face value. It is our duty as architects to look past the surface and analyze the body within to respond to it in an educated and appropriate manner. The chosen site to act as a catalyst for change within the communities of Ekhaya is the decommissioned Orlando Power Station. Over the years, many proposals have been made concerning the redevelopment of the old power station, but very few have adequately considered the surrounding communities. These communities have interacted with this site for decades and have witnessed its transformation firsthand. The site, in turn, has had lasting impacts on the communities of Ekhaya from its inception to this day. This is why it is a perfect candidate for this dissertation to explore.



Figure 02
Aerial View of Power Station.
(Moletsane, K. 2021)

KLIPSPRUIT - SOWETO - ORLANDO EAST

At the beginning of the 19th century in 1905, the General Pass Regulations Act was passed, denying all black people the right to vote and restricting them to fixed areas. One such area was a native location situated on the margins of Johannesburg called Klipspruit, declared in the same year of 1905. The government relocated 1358 black people from the slums within Johannesburg to Klipspruit under the guise of improving the squalid conditions of slum dwellers. The promise of better living conditions within Klipspruit was unfounded as the encampment was located less than 300 meters away from the City Council sewerage and was 13 kilometers away from the city where most people worked. It became evident that the relocation to Klipspruit was done to maintain a ‘respectable distance between white and black people, allowing the government control over black people in urban areas.

Over time the population proliferated due to forced removals of black people from the countryside and the great depression. This led to the amendment of the Native Urban Areas Act of 1927, which allowed the government to relocate people without providing alternative accommodation. This led to the first township established within Soweto named Orlando, which boasted around 12000 people. The number of people within Orlando rapidly increased over the years. Eventually, it led to the establishment of other townships surrounding Orlando and, in turn, the division of Orlando into East and West. The relocation of black people to Soweto carried on till 1961, causing overpopulation, unemployment, poverty, and substantial housing issues. All these issues are still relevant today in a post-apartheid Soweto, primarily due to the previous oppression of black people.



Figure 03
Aerial View of Power Station.
(Google Earth, 2021)



Figure 04
Soweto Protest - Fight for Freedom.
(Author, 2021)



Figure 05
Identification of Ekhaya Communities.
(Author, 2021)

DEVELOPMENT OF EKHAYA

During the apartheid era, Soweto was one of the largest townships to be established under governmental rule. Today, the government has identified it as a critical area needing development (CoJ, 2013) through means of capital and infrastructure investments and resource distribution. Soweto has undergone many developments post-apartheid, but whether these developments have had the desired impact on its economic growth is questioned. One such example would be the development of Soweto's tourist sector, where vast amounts of money have been invested in developing historical landmarks. It is not disputed that the history of Soweto and the part it played in the downfall of apartheid should be celebrated and preserved; however, it could be argued that the development of infrastructure is of more importance. The development of Soweto and its infrastructure since the rise of democracy has been valuable and beneficial to its economy. The development of infrastructure within Soweto post-apartheid has been visible; however, it is questioned again (Gotz, 2013) whether these developments are beneficial to not only the economy of Soweto but to its inhabitants as well. Does the development of tourist and commercial attractions benefit the people of Soweto directly? These kinds of developments do provide job opportunities and exposure for local vendors and traders, thus boosting the economy. However, it could be argued that this is short term and small scale when it comes to the empowerment of a community. Rather than providing a limited number of jobs and second-hand exposure to local traders, a new development could be proposed that would provide direct interaction with the community. As well as the means to directly provide exposure to themselves and their businesses..

Soweto boasts a large number of informal traders that are well established within various communities such as Ekhaya. However, current and proposed developments primarily target the expansion of formal retail, especially within the Orlando precinct. These developments fail to address issues such as economic inequalities among the local inhabitants and the private sector. Economic development within Soweto,

especially post-apartheid, should be beneficial to its local inhabitants, aiming to improve their standard of living. The current approach to development within Soweto assumes that implementing large-scale retail developments would be beneficial to all affected by them. One such development is the “Revised Urban Development Framework” proposed by Albonico Sack Metacity in 2015. This proposal depicts a revised urban framework of Orlando Ekhaya, which includes the development context surrounding the Orlando dam and iconic power station.

Furthermore, while the majority of this proposal fits well within the existing framework of Ekhaya, the large scale retail proposal situated within the decommissioned power station site feels isolated from the local communities surrounding it. Instead, this site could be used to promote further community involvement within the redevelopment of the Orlando Ekhaya precinct. The communities of Ekhaya should not only be considered when proposing new development within Orlando but also empowered by it. There is an existing economic and social structure present within these communities that, instead of being overwritten with new developments, could somewhat be enhanced.

However, before any of these concerns within the Orlando Ekhaya precinct can be addressed, the various proposals surrounding it needs to be recognized. Figure 06 highlights the areas around Ekhaya that are also earmarked for large scale development. Most notable would be the development of two major transport stations, Orlando Station and Nancefield Station. These stations would allow for direct access to the proposed precincts and its internal circulation. The Nancefield Station would cater for the major foot traffic from and to the Maponya Mall, as well as the local inhabitants of Klipspruit and Primville. The EKhaya precinct has parts zoned for transportation, which would allow for the precinct to link with the other stations, communal and commercial nodes.

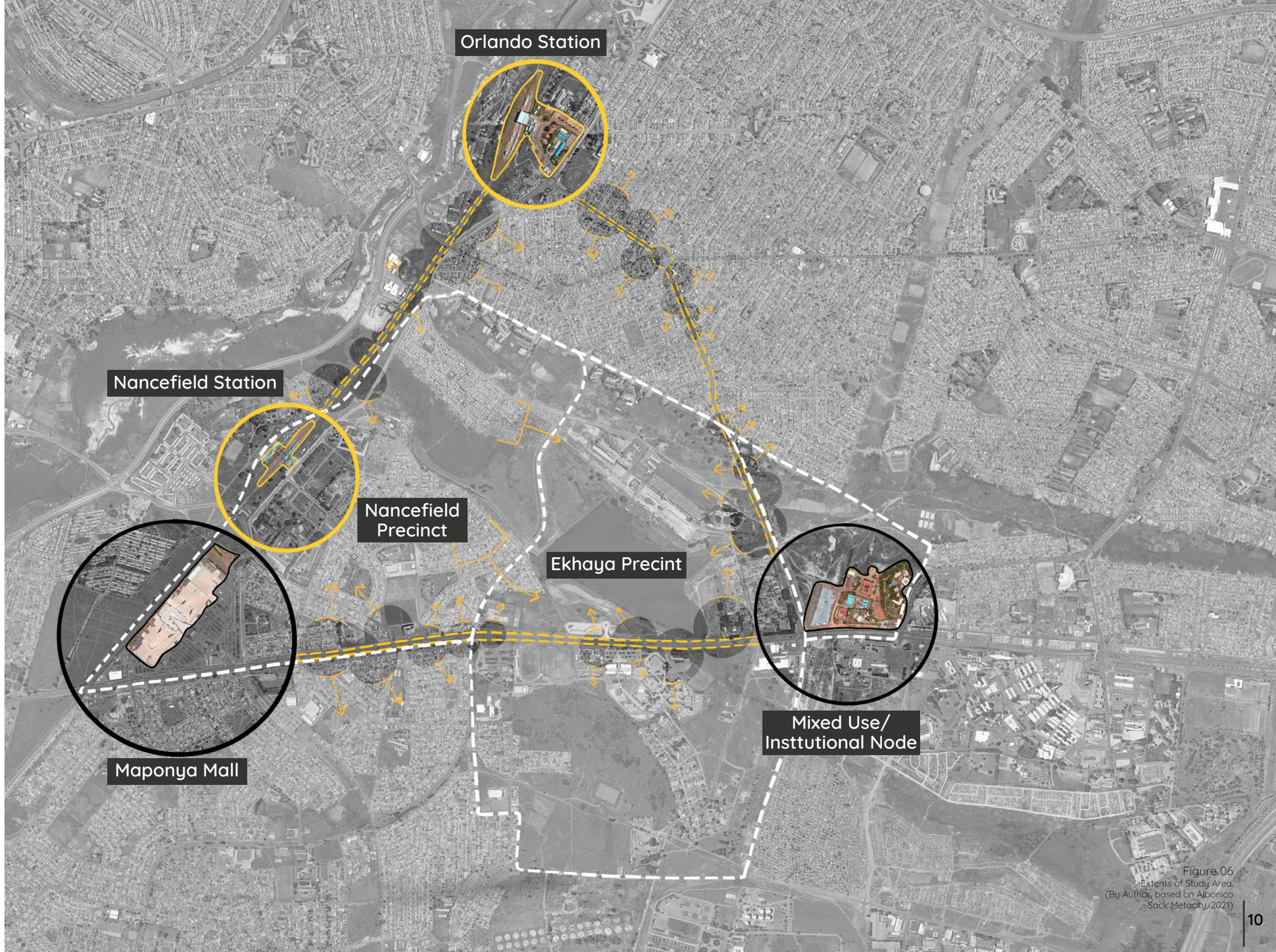


Figure 06
Extents of Study Area.
(By Author, based on Albonico Sack Metacity, 2021)

DEFINING THE COMMUNITIES OF EKHAYA

The communities of Ekhaya are defined as those that are directly affected by the development of the demarcated Orlando Ekhaya Precinct, proposed by Albonico Sack Metacity in 2015. These communities are situated next to, or within the vicinity of the Orlando Dam and the power station. Parts of communities such as Orlando East, Diepmeadow, Klipsruit, and Primvile surround the proposed precinct, while others such as Nomzamo, Orlando Hostels, and Power Park are situated within.

The combination of all these communities depicts a great mixture of local cultures, values and needs. This is what makes the development of the Orlando Ekhaya precinct so challenging and so exciting. There is a lot to analyze and unpack before we are to understand how to benefit these communities.

To be able to understand the needs of the communities we first need to investigate how they function, and to do so we need to take a closer look. Upon first glance the communities of Ekhaya may seem chaotic and unorganized due to its large and overcrowded population. However, after interacting with the spaces and people on the ground and in person, it becomes clear that there are unspoken systems in place that keep the communities and their people functioning. Small communal spaces can be found scattered all over the area with many different forms and functions. These spaces range from informal to semi-formal as seen in figure 07 and 10.



Figure 07
Communal Space.
(By Author, 2022)

The space depicted in Figure 07 might be considered to be small and decrepit in developed areas, but in a location such as Ekhaya it becomes valuable space. In this instance the space is used as a gathering space on weekends to socialize. The space does not belong to one person or group as in Figure 10, but instead is open for public use at any time.



Figure 08
Communal Space.
(By Author, 2022)



Figure 09
Framed Street View of Towers.
(By Author, 2022)

Figure 10
Communal Space.
(By Author, 2022)

Building Typology



Figure 11
Building Typology
(By Author, 2022)

When the communities of Ekhaya are observed from above through means of areal photography it would seem that there is only one or two building typologies present. But after intimate interaction and on the ground investigation, it becomes clear that there are many different building typologies to be found.

These typologies are all associated with their own unique purpose. The most obvious typology that's most commonly observed is the standard single story, double brick house (Figure 13). These houses host the majority of the common dwelling spaces in the area. They are a mixture of government provided housing, projects from local NGO's, or privately owned.

Less permanent dwelling spaces are located in informal structures such as huts (Figure 12) and shacks. These spaces where and addition to the brick houses by their inhabitants to serve their additional needs. The huts would often be used as extra bedrooms as the houses would generally be overcrowded. And the shacks would often be used as storage or gathering space due to their temporary nature. Another common building typology would be the informal stalls found throughout the area. These are often made from raw reusable material that would be easy to pack up and move. This allows for the traders to move around the community until they have found the optimal spot. This structure is simplistic and rough but serves its purpose perfectly (Figure 11).



Figure 12
Building Typology
(By Author, 2022)

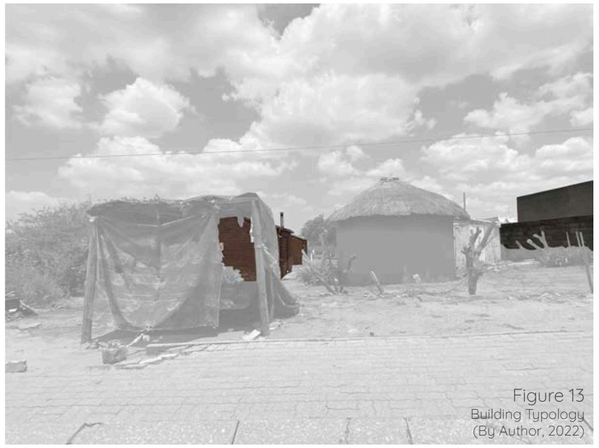


Figure 13
Building Typology
(By Author, 2022)



Figure 14
Framed Street View of Towers
(By Author, 2022)

The materiality of these structures exists not just because they are easy to acquire and cheap, but because they have been tried and tested by many generations. These materials have been present in communities such as those like Ekhaya for decades. This means that these structures are more than the quickly patched together shelters like one might think.

These structures house temporary and mostly uninhabitable program such as storage, toilet facilities, and occasionally extra sleeping or gathering space. Thus, it makes sense that they are constructed from material that is easy to both install and take down. Many of the peoples living situations could and do change often, meaning that their lifestyle is volatile and easily changeable. This is why materials such as cheap metal panels, wooden boards, and tarp have the appeal that they do. They are easy to move around and serve their purpose of creating the space that is required.

These materials are often recycled even before they are used to create these structures. They are picked up from local construction sites and vacant buildings and reused within the community. The beauty of this is that these materials can be and are used again and again. This is very cost effective and also teaches the people of these communities the uses of recycling from a very early age. This would be beneficial to incorporate communal interaction with new developments within the Orlando Ekhaya precinct.



Figure 15
Materiality.
(By Author, 2022)

Incorporating the concept of reuse and recycle as a philosophy into the proposed development would be more effective than to try and re-create these same spaces in a fixed location. Much like the informal traders that need to be able to move around to do their business. so too does these structures need to be moveable.



Figure 16
Materiality.
(By Author, 2022)



Figure 17
Framed Street View of Towers.
(By Author, 2022)

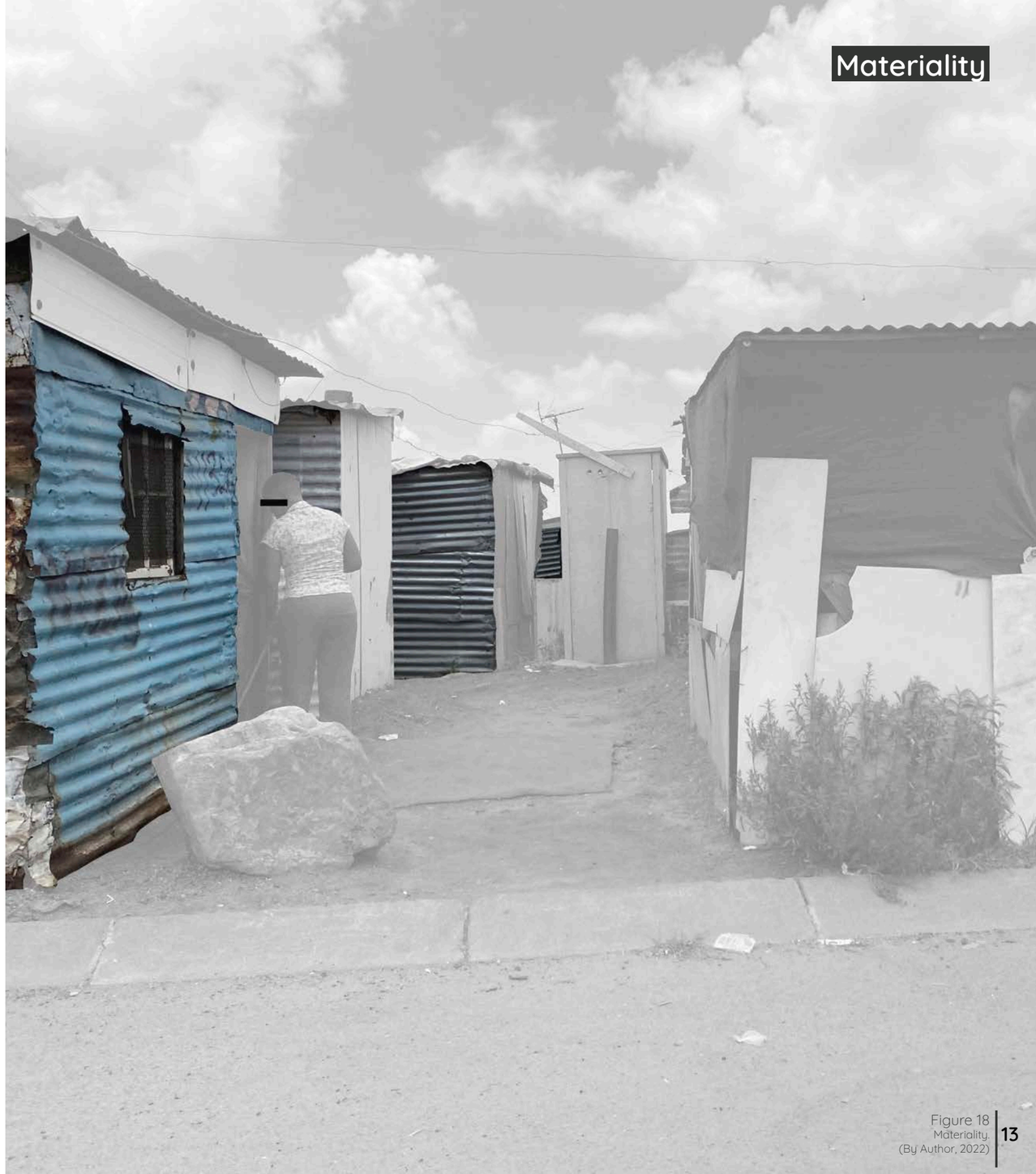


Figure 18
Materiality.
(By Author, 2022)

Local NGO's

Nonprofit organizations are important to the development of a community as they are the ones that realize its needs firsthand. NGOs are able to interact with a community and its people in a way a developer can't. They often provide personal help to those in need at no expense and often at their own expense. If we are to understand the communities of Ekhaya we need to interact with its local NGO's. A set of specific questions was drafted with the intent to understand what each NGO does, what their needs are, and how they could be addressed.

FADZISO Foundation NPC:

(Arthur – Programs Manager)



Figure 19
NGO Logo.
(By Author, 2022)

1. Can you please explain what your organization does?

"We give out food in food parcels to the community. We also do the same planning and helping other organizations, partnerships with organizations dealing with capacity building for young people and the youth and also our main focus on pain on cancer and HIV patients."

2. If facilities were to be provided, what facilities would you like to see provided that would benefit your organization and the community?

"A Space to work and programs that are able to assist young people in the community and also to more especially to those who are trying to take care of their families."

3. Not as a non-profit organization but as a community member what would you like to see provided in the power station area?

"I would like to have a space to work unaffected by loadshedding like something with solar systems also a space where people from outside our community can meet us."

4. What meaning does the Soweto towers and the power station have to the community?

"It is an identified area as it brings tourists to our community."

5. If the power station was to be developed, would you prefer the development to be commercial like a shopping mall? Or a communal space that hosts organizations such as yourself?

"I think a communal development."

Hope SA Foundation NPO:

(Namrita – Head of Foundation)



Figure 20
NGO Logo.
(By Author, 2022)

1. Can you please explain what your organization does?

"Hope is a foundation is a foundation. Okay. And we currently we work in quite a few areas throughout Johannesburg and Cape as well. So right now, we created a disaster relief. We've done disaster relief in Johannesburg during the July unrest. Coincidence now. In Johannesburg, we feed every day five meals a day and we do various outreach drives, we do Winter drives, we do drive against gender-based violence. A few initiatives that we run throughout because obviously we work in the community."

2. If facilities were to be provided, what facilities would you like to see provided that would benefit your organization and the community?

"I think skill centers skill centers. Okay. Yeah. Because we want to set up skill centers to educate people. Yeah, because the fundamental problem with SA is education."

3. Not as a non-profit organization but as a community member what would you like to see provided in the power station area?

"Think, for me, a hand out mentality can only take you so far. Even though we feed every day, establishing soup kitchens is fine. Also shelters for gender-based violence Victims."

4. What meaning does the Soweto towers and the power station have to the community?

"It Provides Job Opportunities for the surrounding community."

5. If the power station was to be developed, would you prefer the development to be commercial like a shopping mall? Or a communal space that hosts organizations such as yourself?

"Definitely a communal space."

Siyavuka Lateral Improvement Foundation

(Erin Moyeti – Programs Manager)

Figure 21
NGO Logo.
(By Author, 2022)



1. Can you please explain what your organization does?

"We are a multi political organization which deals with development."

2. If facilities were to be provided, what facilities would you like to see provided that would benefit your organization and the community?

"Either like a shopping mall it will bring more employment to the community."

3. Not as a non-profit organization but as a community member what would you like to see provided in the power station area?

“As an individual, Employment. That’s the major problem with increasing crime in our communities its how the problem will be solved.”

4. What meaning does the Soweto towers and the power station have to the community?

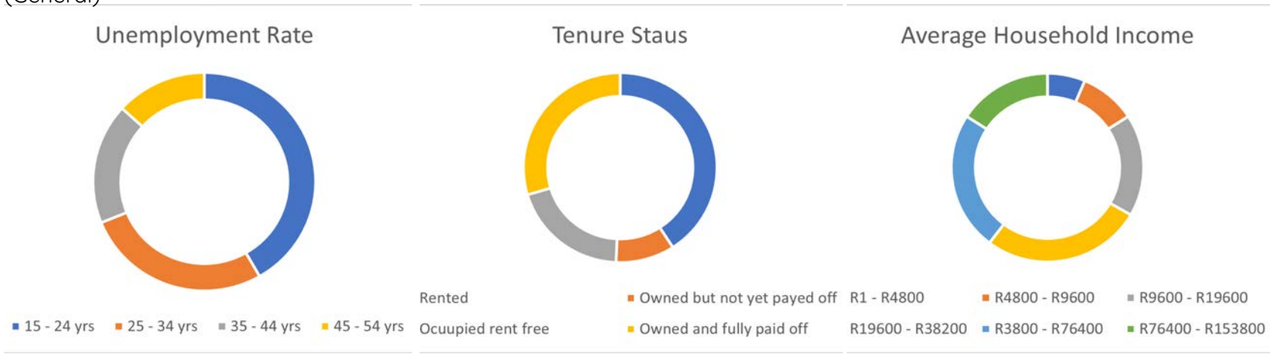
“They bring tourists to the area as well as provide employment to the youth but the power station plot does not do much.”

5. If the power station was to be developed, would you prefer the development to be commercial like a shopping mall? Or a communal space that hosts organizations such as yourself?

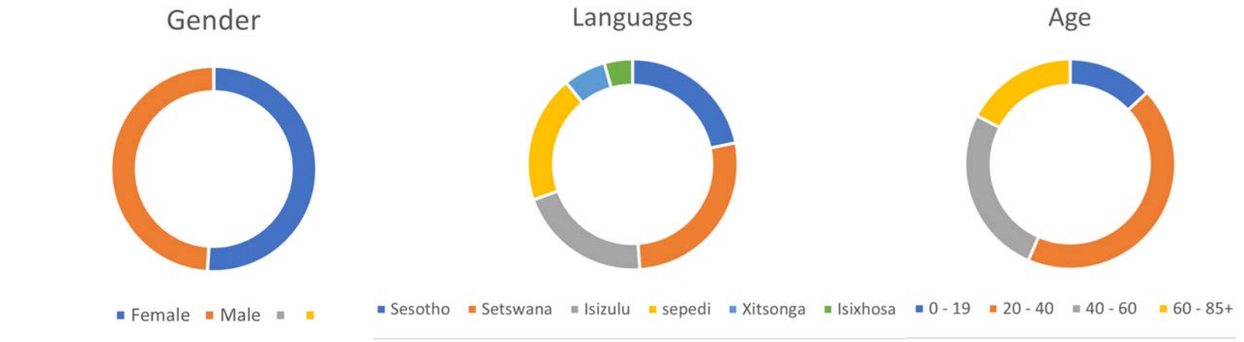
“Commercial space.”

Local Statistics

Soweto
(General)



Diepkloof
(Zone 4)



Primville

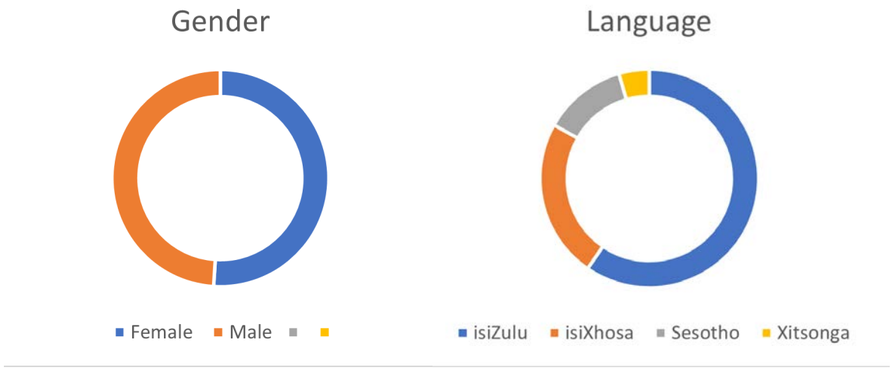


Figure 22
STATS Diagrams.
(By Author, 2022)

INTRODUCTION TO SITE

In order to reach the many communities of Ekhaya through a single intervention, we need a site that is not only central and easily accessible but well known and widely recognized as well. The decommissioned Orlando Power Station and its cooling towers are perfect candidates to act as a central node that is well known and easily accessible by the communities of Ekhaya.

Taking into consideration the vast scale of the communities to be affected by the proposed intervention, the chosen site not only meets the physical requirements but houses Soweto's most prominent landmark as well: the Soweto Towers. This iconic landmark benefits the narrative of empowerment and independence that we want to embody within our proposed intervention. The tower's symbolism could act as a powerful driving force behind the proposed intervention and provide an incentive for financial and political support.

The Soweto Towers represent Soweto itself, including all that resides within it, yet it does not belong to the people that caused it to be a landmark in the first place. The communities of Ekhaya have borne witness to the tower's transformation of the past few decades and even partook in that transformation. It would stand to reason that the landmark representing the people of Soweto should be openly assessable by them as well.

The site is located within Orlando east, central to the communities of Ekhaya, making it familiar not only to them but to us as well, being such an iconic landmark. The site is quite significant in the physical sense, and that it is pretty iconic and well known. Currently, the power station is demolished and unused, and the towers are used for tourism activities such as bungee jumping. The site's potential feels wasted as it is an iconic landmark that should belong to the community tied to its history.

Figure 23
Power Station Coal Yard.
(Author, 2021)



Figure 24
Ekhaya Over Time.
(Author, 2021)

SITE ANALYSIS

- Site Location
- Existing Context
- Analysis
- Proposed Urban Developemnt Framework



Figure 25
Locality Map
(Author, 2021)

Existing Site Context



Figure 26
Existing Site Context.
(Author, 2021)

Lokholwest Primary



Figure 27
Lokholwest Primary. (Google Earth, 2021)

Situated on the northern bank of the Orlando Dam, Lokholwest Primary acts as one of the few architectural buffers between the northern communities and the power station. Despite being currently located within an unpopulated field, the area around it is not unused. Clear pedestrian pathways can lead from the community to the school and eventually towards the power station site. The school's location is beneficial towards the new urban framework development scheme as residential development is scheduled for the surrounding area.

Ziduneleni Junior Secondary Primary

Located just down the road from Lokholwest Primary, Ziduneleni consists of junior, secondary, and primary schools. Sandwiched between the northern communities and Nomzamo township, the school acts as a buffer between the two. Again, the future development of residential space around the school would be beneficial to both parties. The school would serve as a central node that links to the various residents around it. This important node should also have a programmatic impact on the development of the power station site.



Figure 28
Ziduneleni Junior Secondary Primary. (Google Earth, 2021)

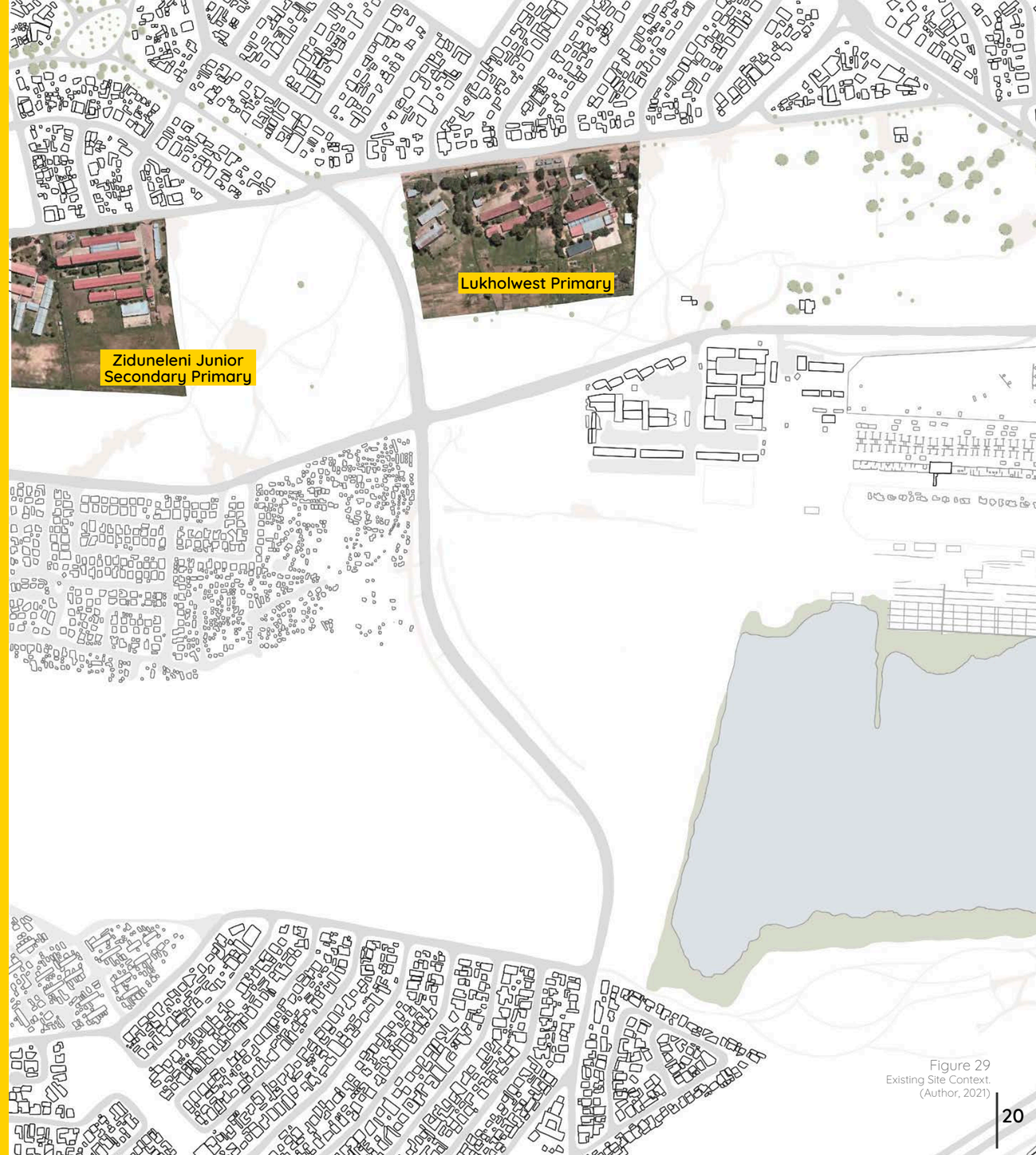


Figure 29
Existing Site Context.
(Author, 2021)



Figure 30
Existing Site Context.
(Author, 2021)

Orlando Hostels

As part of the JOSHCO Housing project initiated in 2014, these hostels are part of phase 1 of a 2-phase project to provide affordable housing to Ekhaya. Except for the towers, these hostels are the closest existing development to the power station site. This would mean that the amended proposed urban framework would have to interact with the hostels directly. Existing pedestrian pathways can be seen leading from the hostels to the power station site and various other directions. From what could be seen on site these hostels house various sets of residents ranging from full families to single bachelors. This development brings life to Kingsley Sithole street and provides a strong starting point for the further development of the surrounding area.



Figure 31
Orlando Hostels. (Author, 2021)

Orlando Towers

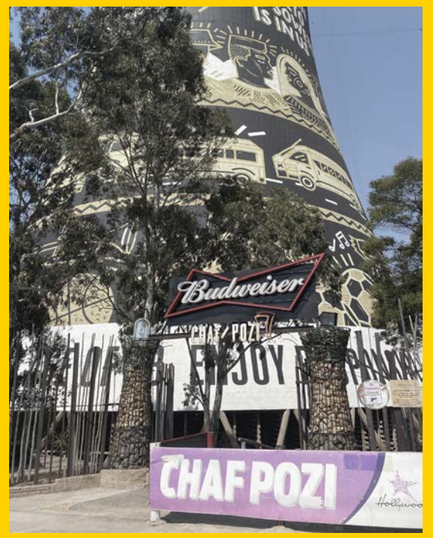


Figure 32
Orlando Towers Entrance. (Author, 2021)

The power station cooling towers are well known within Soweto and nationwide as they are an iconic landmark. Currently, the towers house recreational programs such as bungee jumping, ATV drives, paintball, and some retail. The proposed redevelopment of the urban framework indicated no changes to be made to the current program of the towers. Initially, this dissertation found that the current use of the towers to be a waste of potential. Due to its history, it seemed apparent that the towers should belong to the people who have witnessed its transformations firsthand. Thus, its program should reflect its relationship with the communities of Ekhaya. And while this dissertation still finds this to be valid, the existing program appeals to the proposed urban framework. In the future, a connection could be made between the existing tourism/recreational program and the heritage of the towers through the use of the surrounding communities.

UJ Soweto Campus



Figure 33
Orlando Towers Entrance. (UJ Sport, 2021)

Located on the southern bank of the Orlando dam, the tertiary institution is a prominent feature of the area. The campus is widespread and is enclosed via Chris Hani Road, somewhat isolating it from the dam and its context. Additionally, it is situated on higher grounds than that of the power station allowing for clear views of the northern bank. Across Chris Hani Road, an open area is located stretching from the western bank and wrapping around the east towards the power station site. This area is earmarked for future development that will extend the university campus across the road.

Ekhaya Community (east)

Tucked into the southeast corner of the Ekhaya precinct, this little community is very close to the towers and power station sites. Running parallel to Nicholas Road, a bridge stretches over the wetlands connecting the community to the power station site and towers. This critical connection will be exploited during the redevelopment of the Ekhaya precinct to create internal vehicle and pedestrian circulation. The community is also earmarked for hotel / mixed-use development that will connect to both the power station site and the Orlando dam waterfront.



Figure 34
Ekhaya Coomunity (east). (Google Earth, 2021)



Figure 35
Existing Site Context.
(Author, 2021)



Figure 36
Existing Site Context.
(Author, 2021)

Klipspruit

Located on the southwest corner of the Ekhaya precinct, this community runs alongside the western wetlands. The area is well-established, housing various programs such as schools, churches, retail and residential. Communities of this size and stature benefit from mixed-use precincts where they are able to work, play, and relax. The proposed urban framework for the Ekhaya precinct will provide such amenities to the people of this community. It is important to note that Mbambisa Street leads directly in this community, making it an essential node for circulation within the proposed precinct.



Figure 37
Klipspruit. (Google Earth, 2021)

Nomzamo



Figure 38
Nomzamo. (Google Earth, 2021)

Nomzamo township is located on the corner of Mbambisa Street and Chris Hani Road within the wetlands isolating it from the surrounding communities. It might be the youngest of the local communities, but its people are fully integrated with the communities surrounding it. Its division from the Orlando hostels via Mbambisa Street does not isolate it from its neighbors; it has become a threshold connecting the two. This settlement could not be considered for the development of the Ekhaya precinct as it did not exist when the proposal was made in 2015. This time around, it should be capitalized upon and integrated within the proposed developments.

Ekhaya Community (northeast)



Figure 39
Ekhaya Community (northeast). (Google Earth, 2021)

This community makes up for a significant portion of the Ekhaya precinct, and its people are well established in the area. Located across the Orlando dam's northern bank, this community is separated from the waterfront via the power station site. The majority of the residential space is single-floor housing densely packed together. The proposed urban framework plans to develop the space between the community and the power station site through mixed-use residential interventions. These developments will connect the power stations site to the community and allow for densification.

Ekhaya Community (northwest

Separated only by Nicholas Road, this community borders the previous one but is still part of the Ekhaya precinct. This community also borders the local schools and runs parallel to Nomzamo township, making it a focal point for both foot and vehicular traffic. Footpaths can be seen sprouting out from the community into the surrounding context. With the proposed urban development framework, this community would be connected to surrounding context such as Nomzamo township, new mixed-use areas, and the power station site



Figure 40
Ekhaya Community (northwest). (Google Earth, 2021)



Figure 41
Existing Site Context.
(Author, 2021)

Precinct Access

Internal Vehicular

Internal Pedestrian

External Vehicular

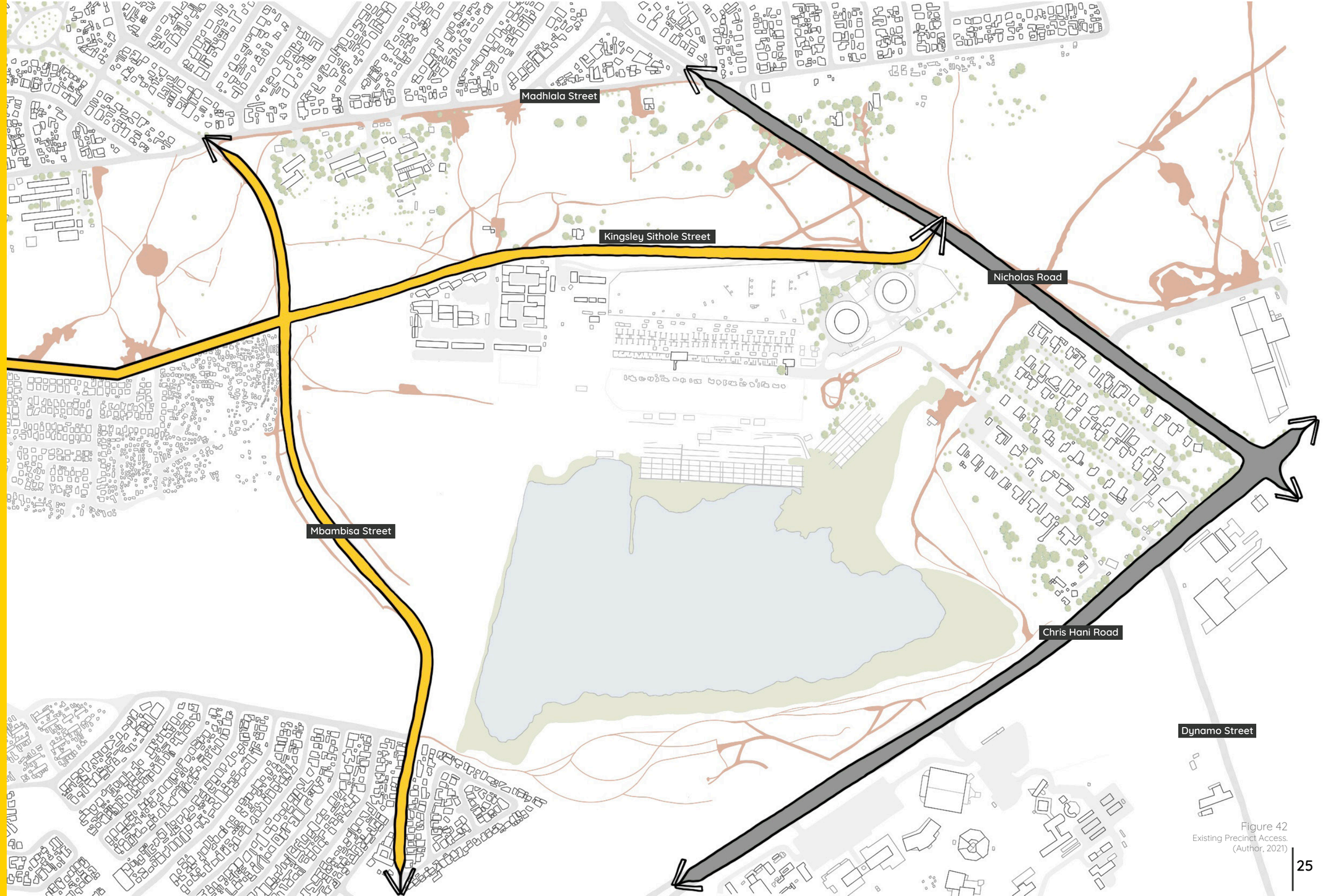


Figure 42
Existing Precinct Access.
(Author, 2021)



Figure 43
Kingsley Sithole Road View.
(Author, 2021)

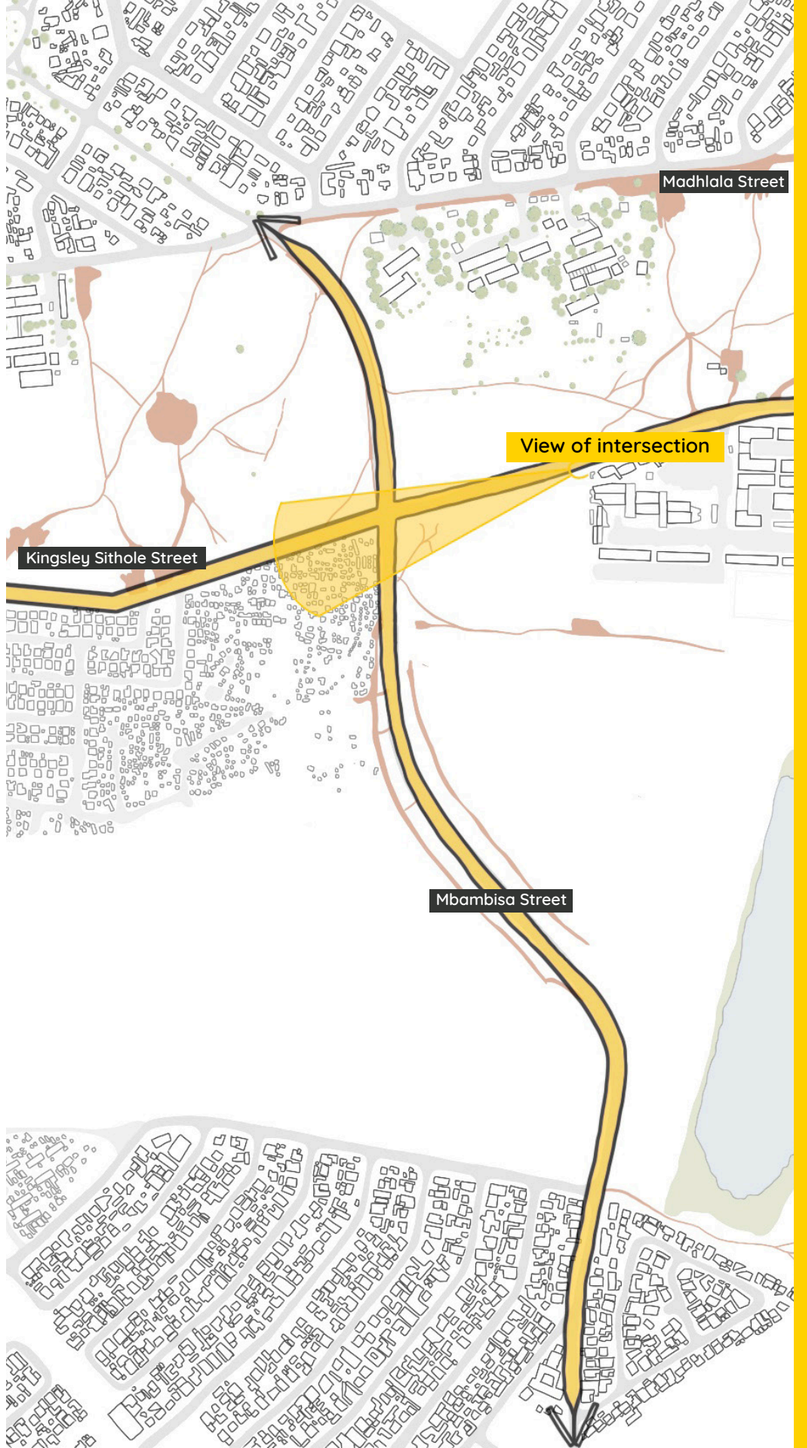


Figure 44
Precinct Access Street View.
(Author, 2021)

Precinct Access

Precinct Access

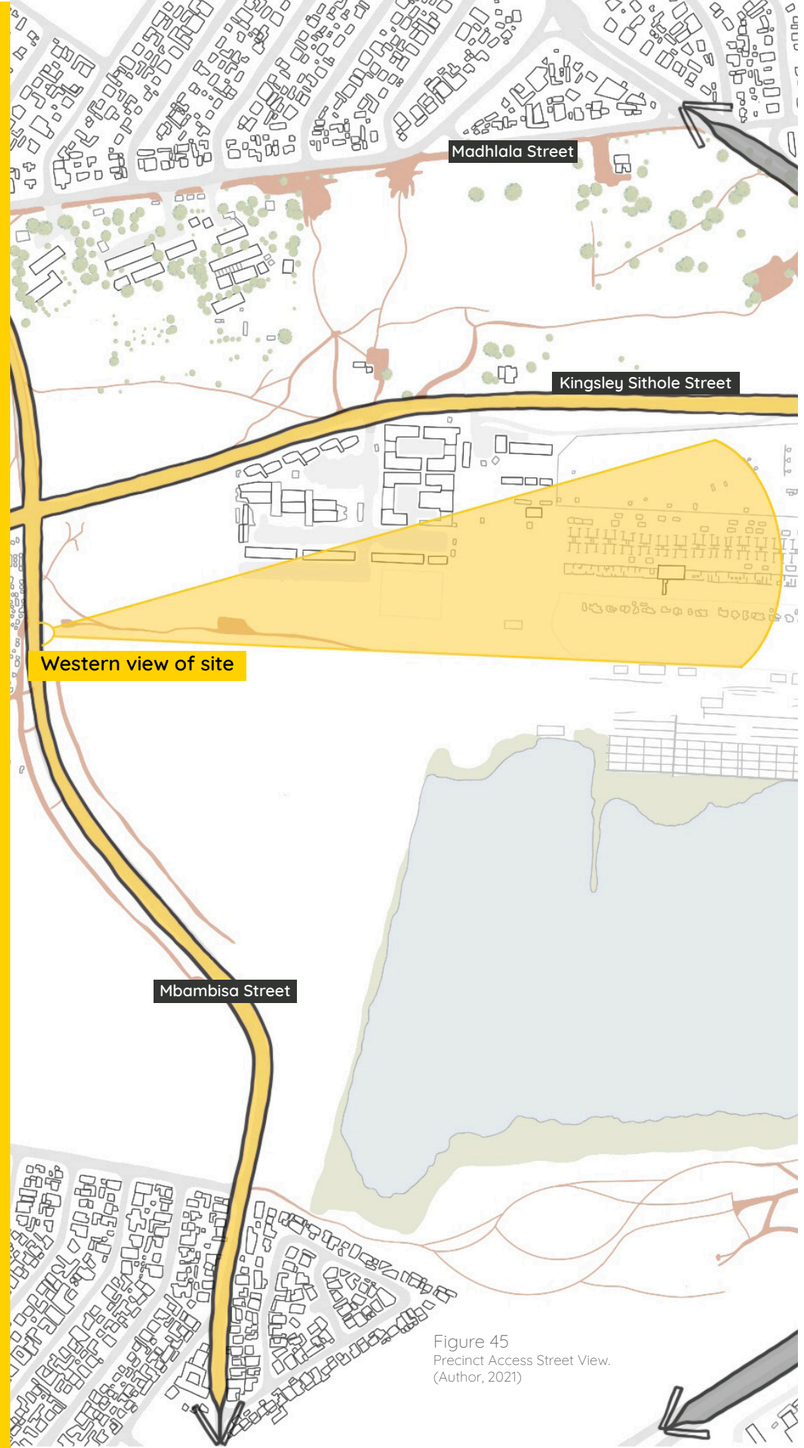


Figure 45
Precinct Access Street View.
(Author, 2021)



Figure 46
Mbambisa Street View.
(Author, 2021)

Ecological Veins



Figure 47
Ecological Veins.
(Author, 2021)



Figure 48
Orlando Eco Belt.
(Author, 2021)

Orlando Dam Ecological Impact Assessment

The local ecology of the Orlando precinct is part of an intricate web of ecosystems connected throughout all of Soweto. The ecology of the Orlando dam is essential to understand so that it can be determined what can and can not be constructed within its vicinity. The ecological impact assessment done by Envirolution Consulting in 2020 suggests that the ecology of the dam and wetlands are safe for the construction of various building types and programs. All programs suggested in the proposed urban development framework are approved to be constructed within the Orlando dam and wetlands vicinity.

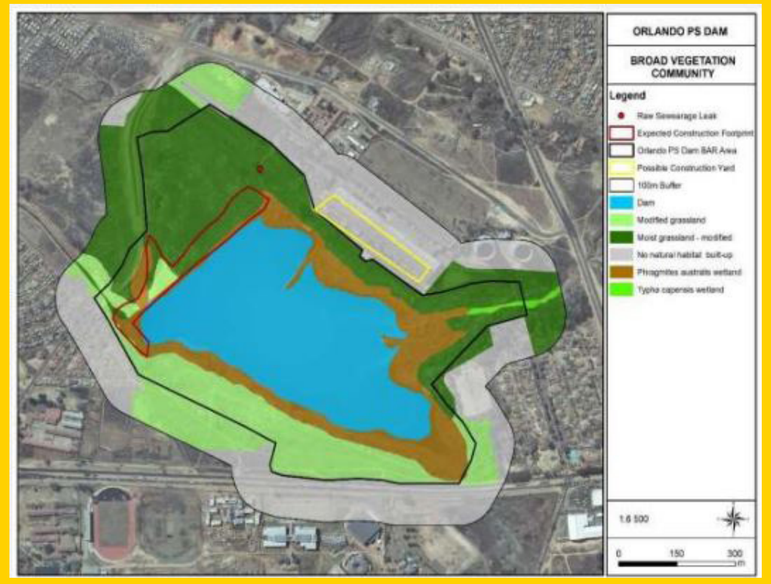


Figure 49
Vegetation groups within 100m around the dam. (Envirolution Consulting, 2021)

8. LAND USE CHARACTER OF SURROUNDING AREA

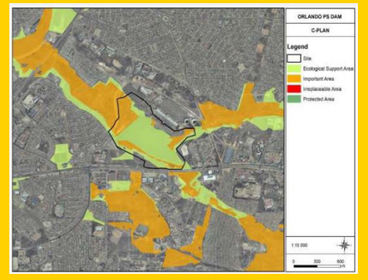
Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

Proposed Activity:

1. Vacant land	**2. River, stream, wetland**	3. Nature conservation area	**4. Public open space**	**5. Koppie or ridge**
6. Dam or reservoir	. Agriculture	8. Low density residential	**9. Medium to high density residential**	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial[AN]	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	24. Railway line[N]	25. Major road (4 lanes or more)[N]
26. Sewage treatment plant[A]	27. Landfill or waste treatment site[A]	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	34. Small Holdings	
Other land uses (describe):	**Existing dam**			

Figure 50
Proposed Activity. (Envirolution Consulting, 2021)

Figure 51
As per the Gauteng Conservation Plan, the Orlando Dam forms part of an ESA and CBA: Important. (Envirolution Consulting, 2021)



Ecological Support Area

Important Area

Irreplaceable Area

Protected Area

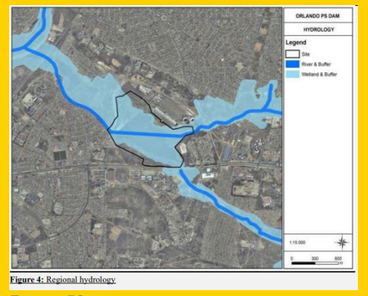


Figure 4: Regional hydrology

River and Buffer

Wetland and Buffer

Figure 52
Regional hydrology. (Envirolution Consulting, 2021)



Figure 53
Orlando Dam Waterfront.
(Author, 2021)

Proposed Zoning

1.1 Power Station Site
1.2 Shopping Centre
2. Orlando Hostels (developed)
3.1 Mixed Use
3.2 Residential
3.3 Ekhaya Villages
3.4 Ekhaya Villages
3.5 Ekhaya Villages
3.6 Residential
3.7 Residential
3.8 Residential
3.9 Mixed Use
4. Orlando Towers
5. Waterfront Park
6. University of Johannesburg
7. Bird Sanctuary
8. Innovation Centre
9a. Ashambe Convenience Retail (developed)
9b. Buisiness Site
10. Buisiness Site
11.1 Transport
11.2 Mixed Use
12. Hardware / Buisiness
13. Buisiness
14. Hotel / Mixed Use
15. Substation & Electricity Lines
16. Power Lines
17. Buisiness Site
18. Residential
19. Residential
20. Residential
21. Residential
22. Residential
23. Buisiness Site

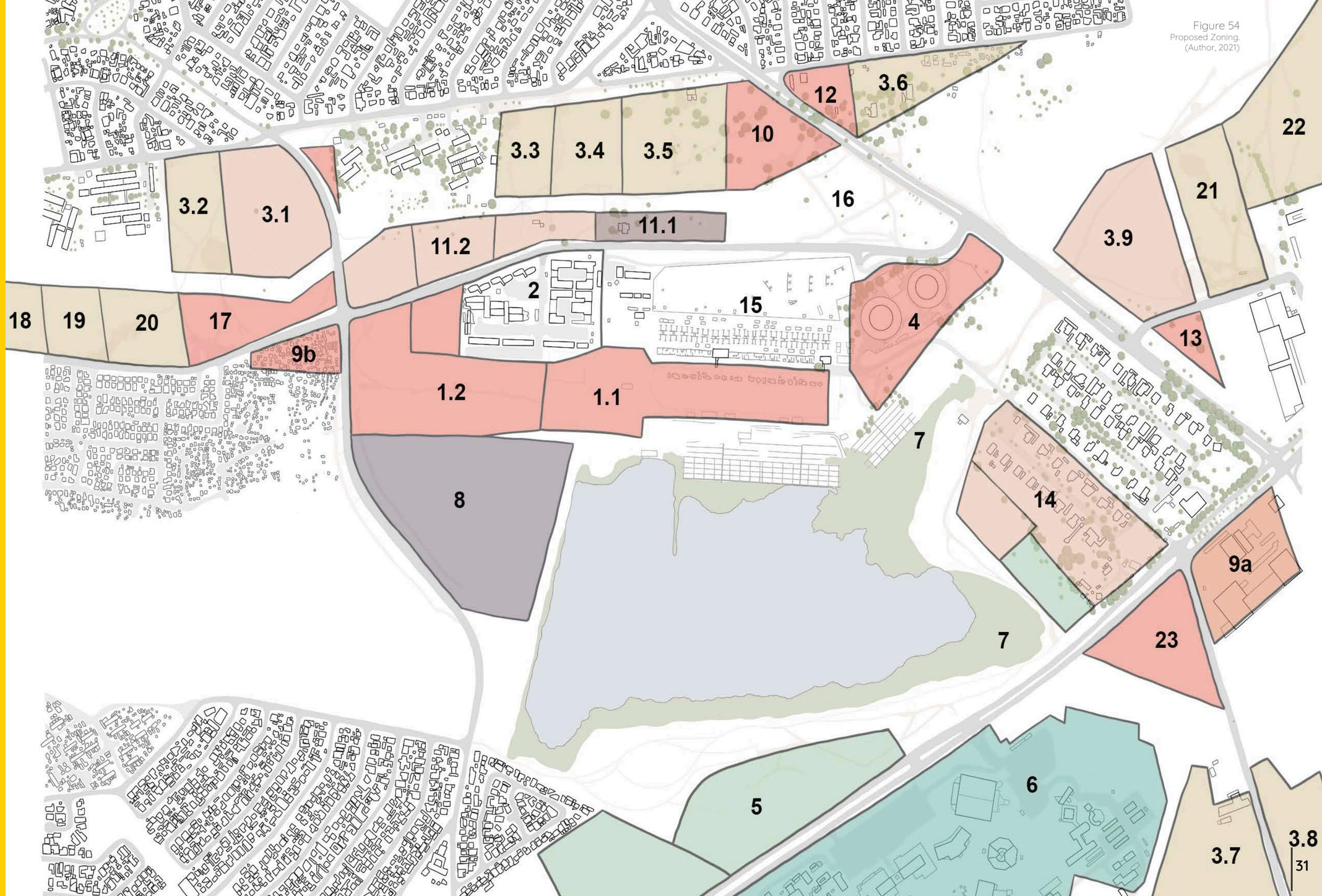


Figure 54
Proposed Zoning.
(Author, 2021)



Proposed Urban Framework

1. Orlando Power Station Mixed Use Development
2. Innovation Centre
3. Power Park Precinct Mix Use Precinct
4. Orlando Waterfront Park
5. UJ Sporting and Recreations Facilities
6. JOCHCO Housing Project
7. Integrated Housing Strategy

Figure 55
Proposed Urban Framework.
(Author, 2021)

Orlando Power Station Mixed Use Development



Figure 56
Power Station Site: Overview. (Albonico Sack Metacity, 2021)

At the time of this proposal, the existing power station had not yet been demolished; thus, the proposal includes a building footprint that is no longer existing—the proposal intended to include specialist retail, offices, institutional land uses, and residential opportunities. The coal bunker site was intended to be used for a local shopping center. This is the portion of the proposed urban development framework that this dissertation will revise to be more inclusive of the surrounding communities. The shopping center proposal might have made sense from a practical standpoint while the existing power station building was still intact. However, with the building demolished, a new opportunity has arisen to revise this proposal and transform it into something that can provide empowerment and independence to the surrounding communities.

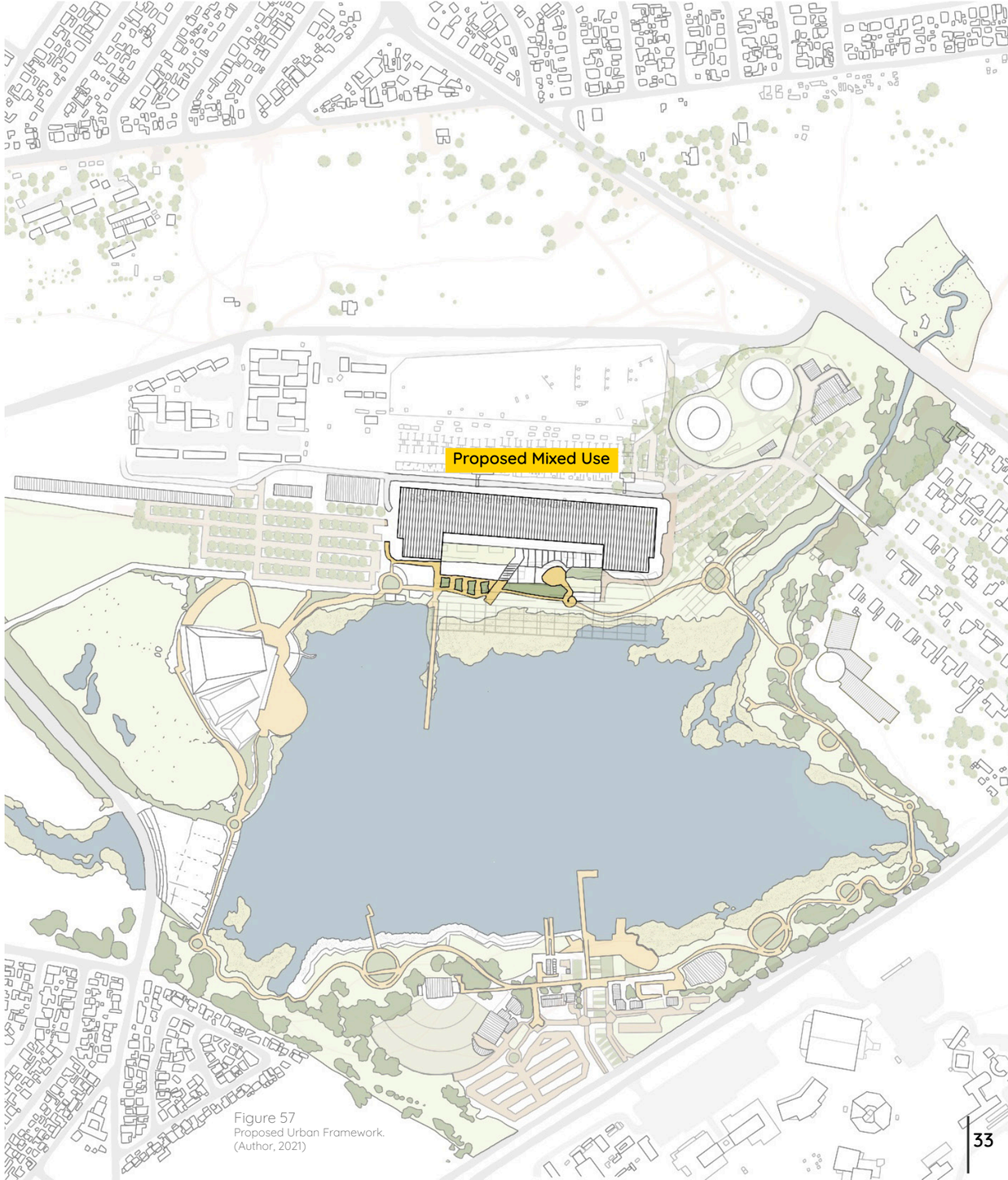
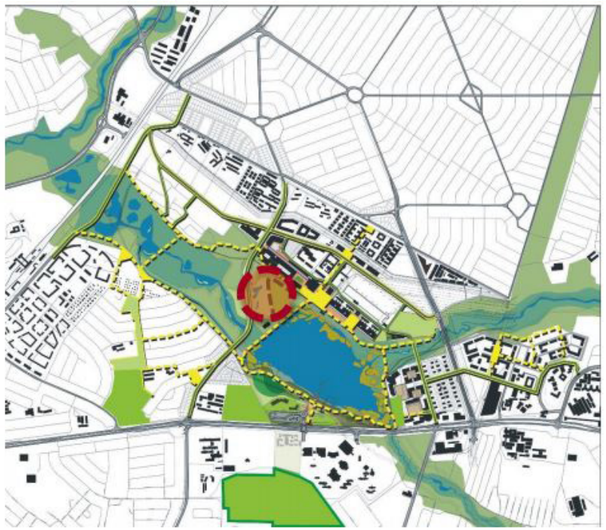


Figure 57
Proposed Urban Framework.
(Author, 2021)



Figure 58
Proposed Urban Framework.
(Author, 2021)

Innovation Centre



6.7 INNOVATION CENTRE

Pretoria University (Example)

- Local centre
- Sponsored by TED X
- Science and technology hub
- Change local perception
- Produce wealth and prosperity for locals
- Knowledge based institution



ASM Conceptual Proposal for the Innovation Centre



Precedent : Pretoria University , Lynwood | Precedent : Botswana | Precedent : Botswana

Figure 59
Interface Facility. (Albonico Sack Metacity, 2021)

This proposal includes developing an innovation center on the western bank of the Orlando dam that is connected to the power station site and UJ extended campus via the proposed waterfront. The development will activate the currently unused western edge of the Ekhaya precinct while creating opportunities for further development towards the Nomzamo township. The proposal includes features such as a science and technology hub to act as a knowledge-based institution to produce wealth and prosperity for the locals. This proposal is more aligned with the aim of this dissertation to bring about empowerment and independence to the communities of Ekhaya. Its connection to the Soweto power station site will benefit the program this dissertation will propose.

Power Park Precinct Mix Use Precinct



Figure 60
Power Park - Mixed Use Precinct. (Albonico Sack Metacity, 2021)

This proposed mixed-use development will aim to further increase residential activity by developing medium-density apartments that include student accommodation. With the possibility of communal facilities to be included, this development can become a solid link to the program this dissertation proposes on the power station site. The development will be linked to the UJ extended campus as well via the development of the waterfront. The proposed development will have strong links to the surrounding context of the Ekhaya precinct, making it a focal point for both vehicular end pedestrian circulation.

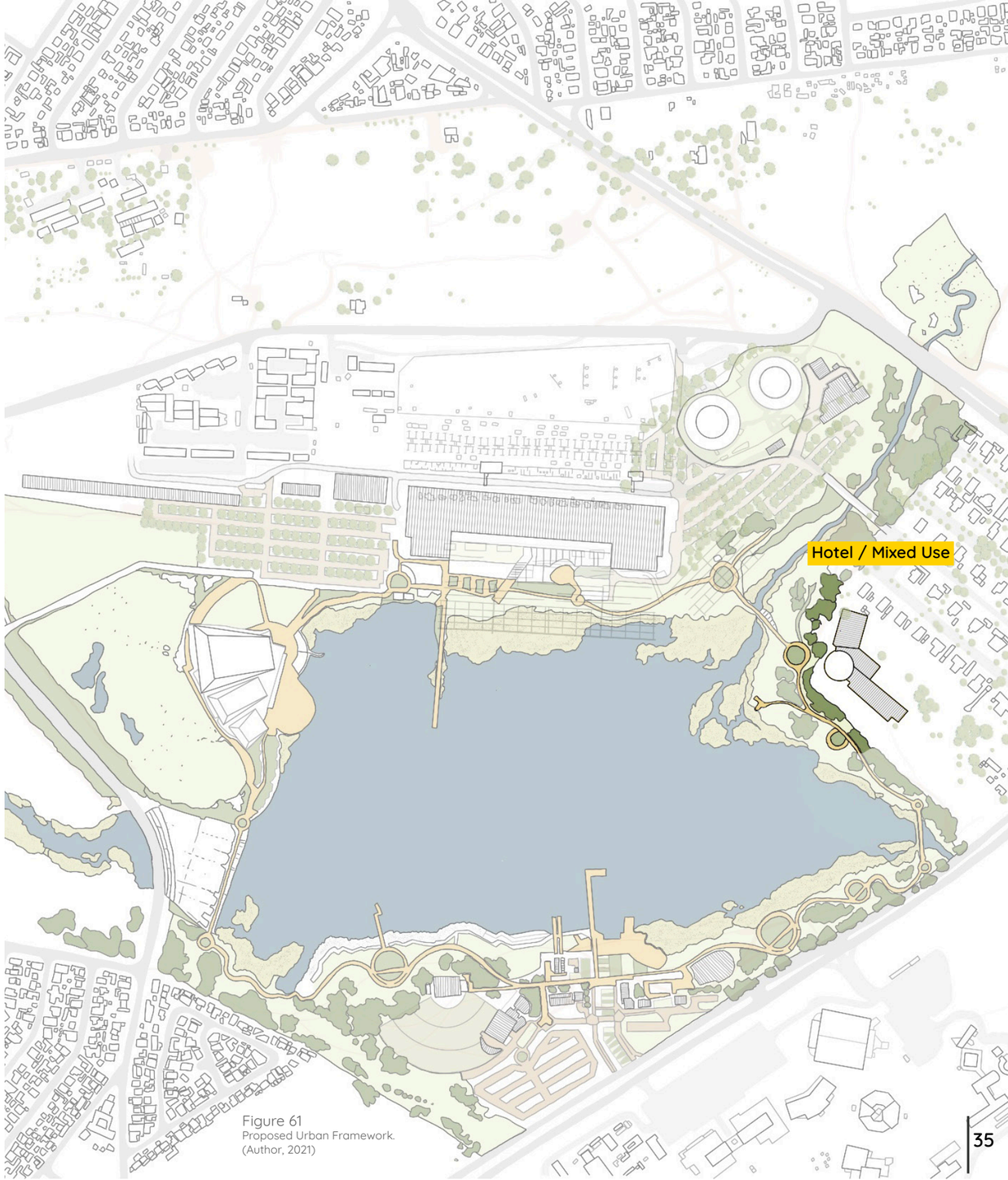


Figure 61
Proposed Urban Framework.
(Author, 2021)

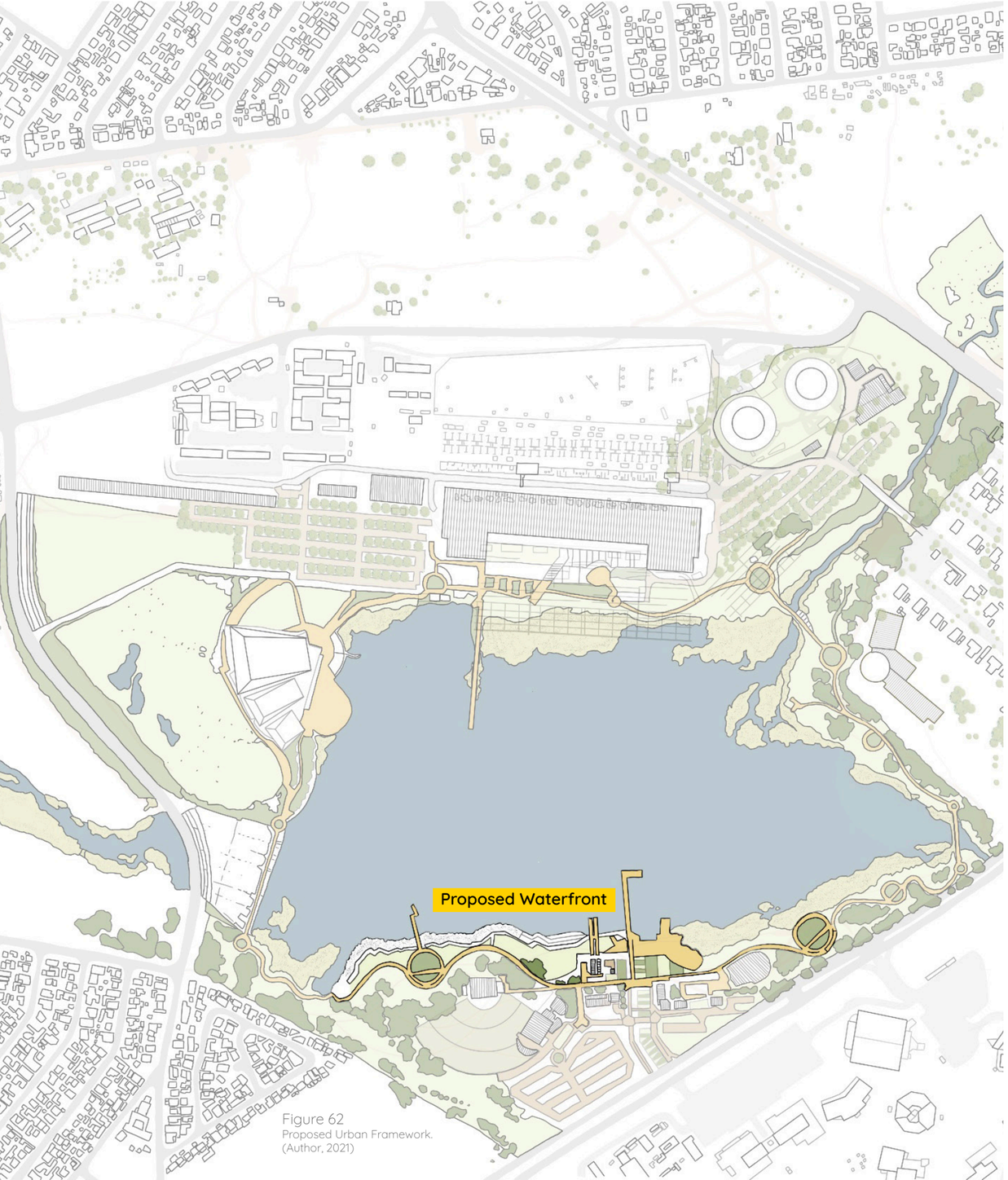


Figure 62
Proposed Urban Framework.
(Author, 2021)

Orlando Waterfront Park



7.1 ORLANDO WATERFRONT PARK

PROPOSED FACILITIES

- Boating Club
- Restaurants and facilities
- Active and passive recreation
- Educational
- Events
- Community Development Facilities: Multi-purpose centre (Sport & recreation administration, swimming pool, gymnasium, sports field, splash-park; & possible library)
- Commemorative art installations
- Furniture
- Solar lighting
- Ablutions
- Piers for leisure boating and walking.
- Perimeter fence & control gates

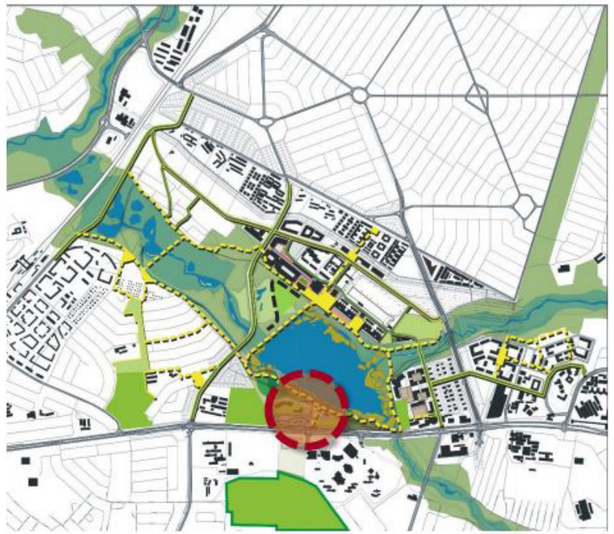


Various views of the Waterfront Park Plan

Figure 63
Orlando Waterfront Park Activities.
(Albonico Sack Metacity, 2021)

Orlando Waterfront Park is a crucial development in the proposed Ekhaya urban development framework as it ties all other proposed development around the Orlando dam together. The development is located on the southern bank of the Orlando dam and will act as a threshold from the UJ extended campus to the waterfront. Thus, development makes use of existing footpaths to connect surrounding contexts. There are many variations of programs proposed for this development and among them are community development facilities such as sport and recreation grounds, splash-park and a possible library. These programs are to be linked to the surrounding communities and the program proposed on the power station site by this dissertation.

Sporting and Recreations Facilities



6.8 SPORTING AND RECREATIONS FACILITIES

WATERFRONT PARK

- Green infrastructure
- Sport fields
- Public Piazza, Picnic areas & outdoor recreation
- Water sports- rowing, canoeing
- Splash-park
- Community development – sports fields, sports hall & swimming pool

STRATEGY

- hierarchy of spaces
- synergy between them
- activation of public space



Precedent from Liverpool's garden festival





View of Sontonga hill and Nikes sport academy



Figure 64
Public Spaces and Sport Facilities. (Albonica Sack Metacity, 2021)

This development proposes integrating various public spaces such as picnic areas, watersports, and community development programs. The development aims to connect the UJ campus to the waterfront by providing sports fields and other amenities. The integration of communal facilities will provide a solid link to the rest of the precinct's developments, especially those with existing community programs. The relationship with the northern bank of the Orlando dam is vital to establish a cohesive waterfront for the urban framework.

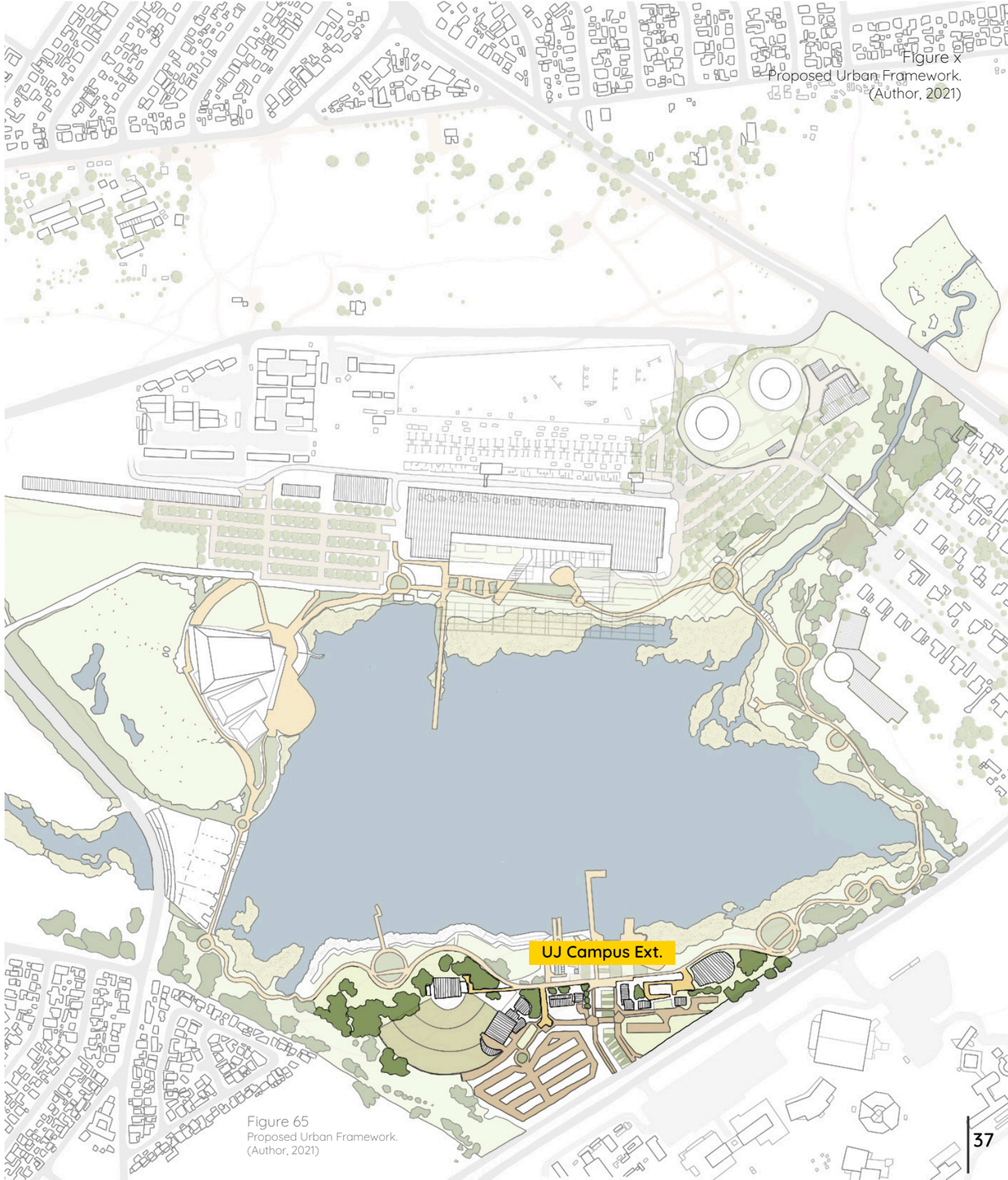


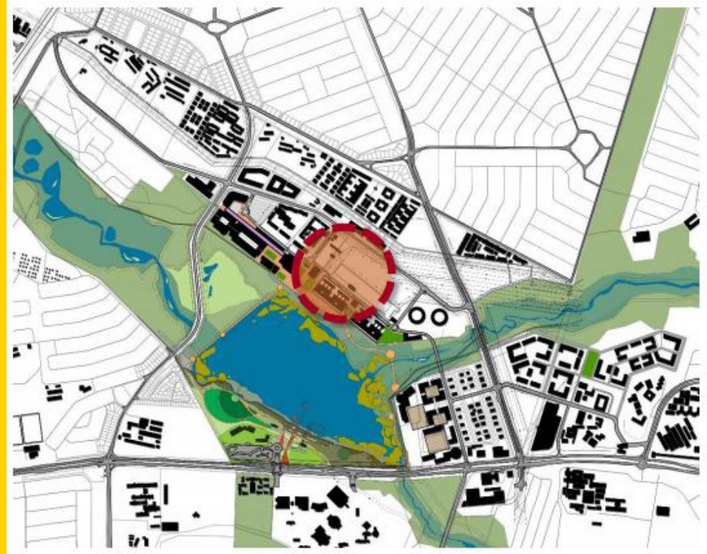
Figure x
Proposed Urban Framework.
(Author, 2021)

Figure 65
Proposed Urban Framework.
(Author, 2021)



Figure 66
Proposed Urban Framework.
(Author, 2021)

JOSHCO Housing Project



6.10 JOSHCO HOUSING PROJECT- 2014

The Orlando Ekhaya project is located on Nicholas Road behind the Orlando Power Station cooling towers in Orland East, Soweto. The project entailed Phase 1 - Conversion of Hostel Block A into 102 family units consisting of 24 one-bedroom units and 78 two-bedroom units. Phase 2 - Construction of a new GF&3 Storey walk up complex. This comprises of 18 blocks of 6 two-bedroom units each, a total of 108 two-bedroom units. The refurbishment of Block B will consist of 61 two-bedroom units. The total number of units is 266.



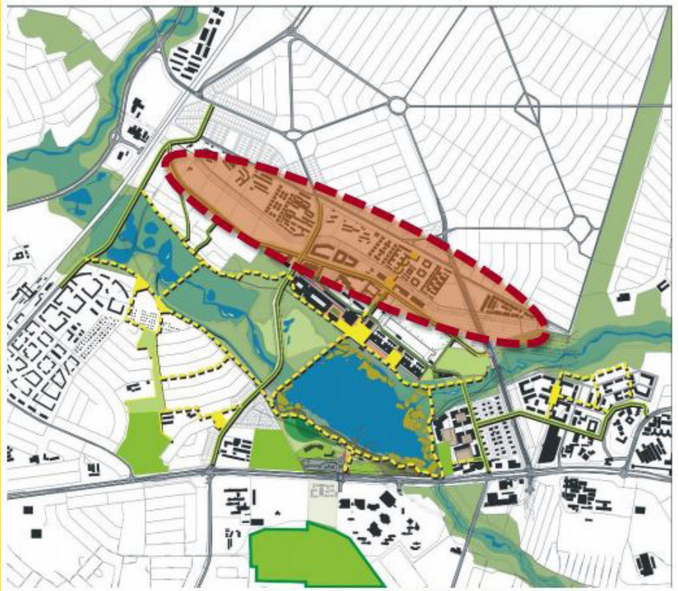


Recently completed Joshco Housing project

Figure 67
Completed JOSHCO Development. (Albonico Sack Metacity, 2021)

The JOSHCO Housing project started in 2014, completing phase 1 of the development introducing hostels to the Ekhaya precinct. This development paved the way for future residential opportunities that could be included around its vicinity. Its current relationship with the power station site is non-existent except for the pedestrian footpaths connecting them. The proposed intervention on the power station site will activate the edge between the two sites and improve their connection in circulation and programmatically. This development consists of medium-density apartments that are currently foreign to the northern communities. However, the following proposal will aim to soften the edge between the single-story houses of the northern communities and the Orlando Hostels.

Intergrated Housing Strategy



6.6 INTEGRATED HOUSING STRATEGY

- Better Connections
- Amenities Supporting Environment



Example of Residential Development with active street edge

Existing Residential Development within the Area

Figure 68
Residential Development. (Albonico Sack Metacity, 2021)

This strategy proposes integrating a residential program alongside the edge of the northern communities and the power station site. This will allow for a better connection between the communities and the waterfront, essentially completing the Ekhaya precincts urban framework. Currently, the separation of the northern communities and power station site acts as a dead zone except for the occasional pedestrian traffic. This development will activate the power stations' northern edge and provide a safe and easily accessible threshold for the Ekhaya communities.



Figure 69
Proposed Urban Framework.
(Author, 2021)

Proposed Precinct Access

Precinct Access

Internal Access

Waterfront Pedestrian



Figure 70
Proposed Precinct Access.
(Author, 2021)

PROBLEM DEFINITION

- Reseach Questions

RESEARCH QUESTIONS

Community - What does a community need to function? What encourages growth within a community? Does external involvement help a community? Or hurt it?

Does the ability of a community to function and grow depend solely on its own internal evolution without any external influence or guidance?

Before we can address the Ekhaya communities architecturally, we first need to understand what defines them and how they function. This understanding will allow us to uncover the foundations on which the communities were built and why they exist in the first place. This is important because understanding how the communities came to be will clarify how they function. This will allow us to compare the communities of Ekhaya to others both similar and different in context so that we may identify their shortcomings and advancements in comparison. Moreover, we need to understand why the communities of Ekhaya are necessary for the growth of greater Soweto and Johannesburg.

Empowerment - Does empowerment stem from dis-empowerment? What role does privilege play? How is it related to power? In what way do you empower a community? Can a community empower itself?

Is it possible for a previously oppressed community without privilege to empower themselves using their own internally developed systems without tools provided by outsiders?

With the end goal in mind of empowering the communities of Ekhaya, we first need to understand why said communities need to be empowered in the first place. As previously dis-empowered and oppressed communities, they should be empowered or allowed to empower themselves. Understanding how these communities functioned during the Apartheid regime will allow us to understand how their current systems came to be and how they could be used to provide empowerment. Following this, we need to understand the difference between empowering communities and providing empowerment to communities.

Independence- What does it mean to be independent? How can a previously dependent community become independent? Can there be independence without chaos? Independent to what degree?

Can a previously oppressed and dependent community achieve a level of independency that is not only beneficial to themselves, but to those surrounding them as well?

To understand how independence is gained, we must first address that which is dependent on it. Meaning we must understand what the communities of Ekhaya depend on for their survival, from the Apartheid era to the present day. This will allow us to look at how efficient the current systems within the community are and why the community depends on them. Following this, we need to explore the connection between the individual's identity and the community and how it relates to the individual's independence and the community. Finally, we need to determine the extent of independence achievable within today's current framework.

IDEATION

- The Use of Community
- Providing Empowerment
- Achieving Independence

THE USE OF COMMUNITY

What are communities and why do they exist?

The concept of community can be defined in many ways depending on how the individual experiences it. Some would define it as a place such as where their home is located. Others would define it as a collection of individuals with similar characteristics, such as an Italian community. David W. Minar broadly classifies community as “a set of social identifications and interactions” (W. Minar, 2007). All these definitions are relevant, and each one represents a unique perspective that indicates why the concept of community exists.

Community spaces can be found worldwide in every country and culture because they are part of being human. We constantly contribute to the community around us through relationships such as family, friends, work colleagues, neighbors. Based on the above-stated definitions, a community will always be present where individuals share interactions rooted in shared relationships and experiences.

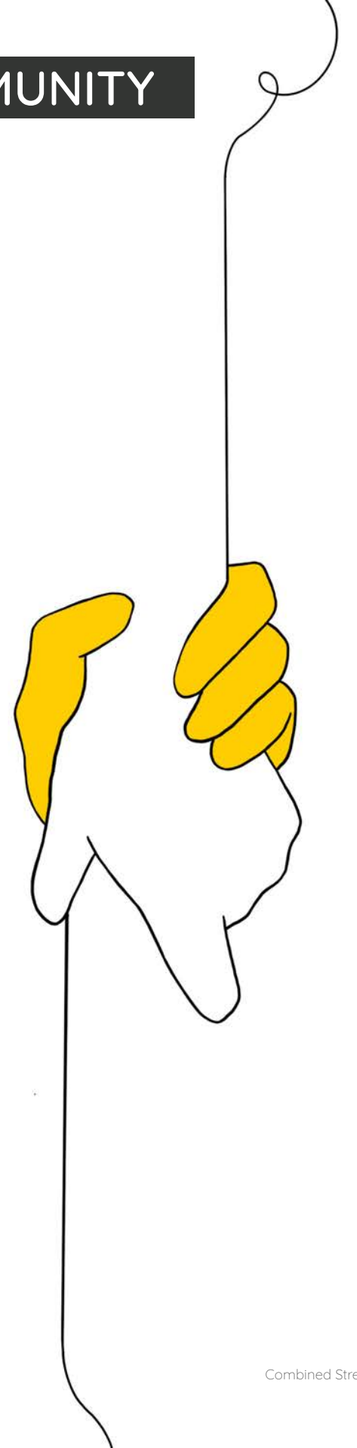


Figure 71
Combined Strength. (Author, 2021)

What are the functions of a community?

Every community has its own unique identity and characteristics that are shaped by the individuals that inhabit it. Therefore, the functions of that community are based on the social fabric of the people and their collective needs. Most examples of well-functioning communities seem to have at least three of the same pillars of functionality present within them. An article on philosophy-question.com suggests that a community's core functions are Product Distribution and Consumption, Socialization, and Mutual Support (philosophy-question.com, 2021). Similarly, Peter Block and John McKnight propose three universal properties for a well-functioning community; The Giving of Gifts, The Presence of Association, and the Compassion of Hospitality (McKnight, Block, 2010).

The first pillar, Product Distribution and Consumption / The Giving of Gifts, refers to the identification of the communities needs and the ability to address those needs through both group and individual expertise. Even though this is a standard function found within most communities, each one has its own unique identity tied to it.

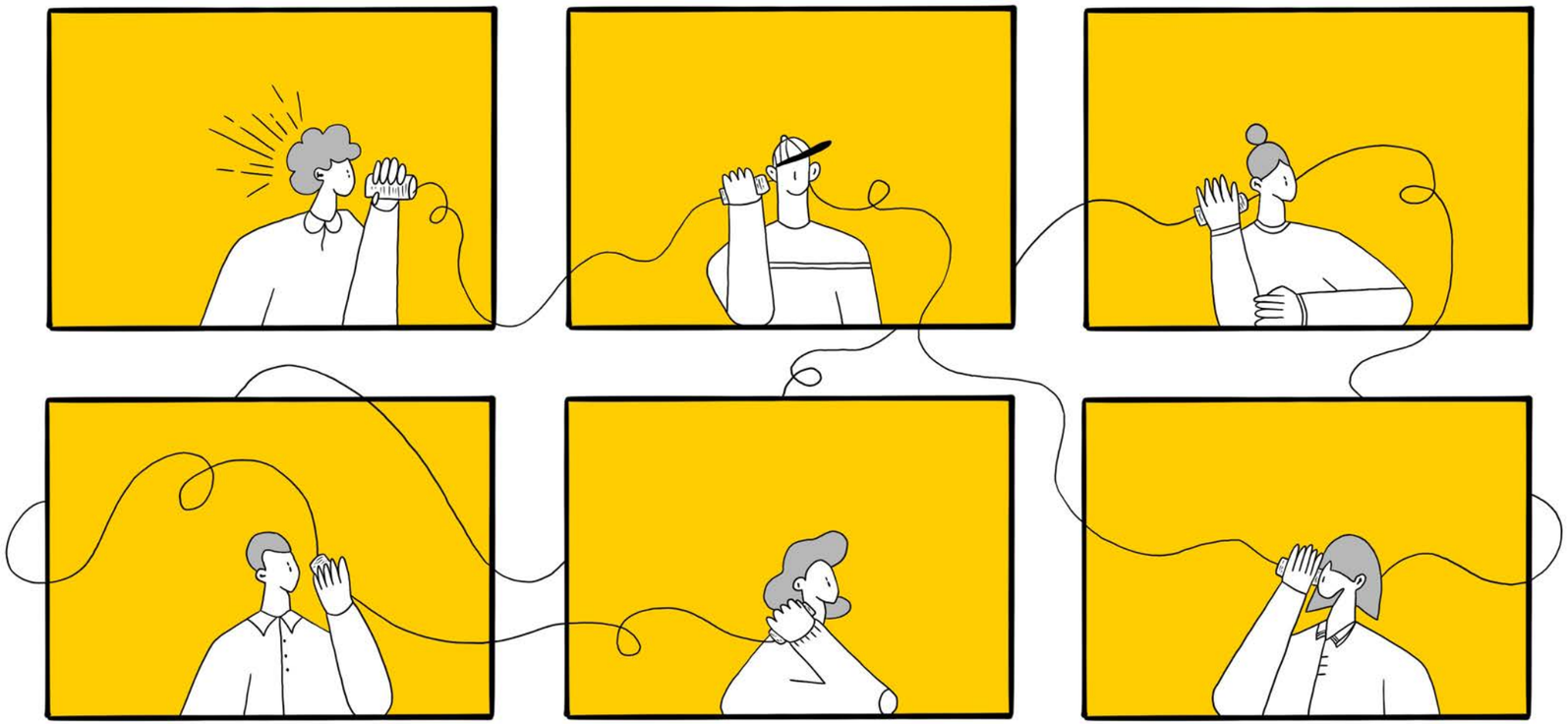


Figure 72
Community Connection. (Author, 2021)

The Westwood Unidos community, located in Denver, Colorado, is an excellent example of a community that identifies its member's needs and addresses them through shared skills. When the WU's community center was first established director, Rachel Dahlke hired three Latino female residents to act as Community Connectors. This was done so that the organization could connect with its members effectively and comfortably. "The Community Connectors and Director conducted over 225 listening conversations in the first three months. Through the conversations, WU identified the skills and resources that existed in the community and, most importantly, gained its trust. With this knowledge, Westwood Unidos' built "from the inside out," facilitating the leadership of residents on the projects they had prioritized" (Dahlke, 2021).

First, the community identifies its needs through means of clear communication between its leadership and members. Second, the community identifies the range of skills its members could provide while leadership assigns those skills to areas of relevance.

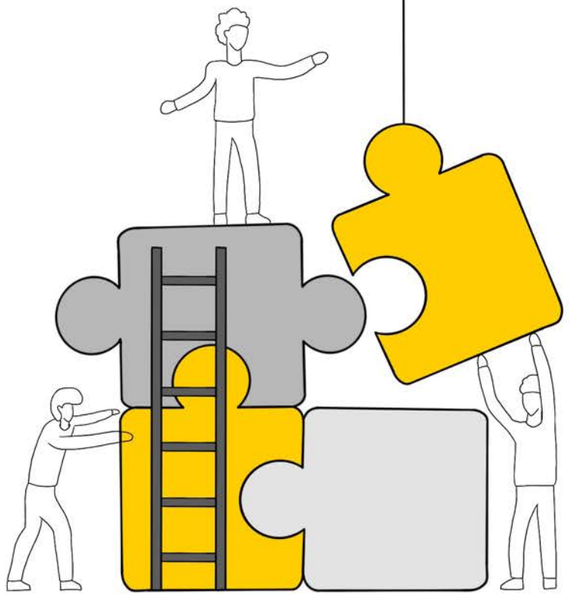


Figure 73
Community Unification. (Author, 2021)



Figure 74
Westwood Unidos. (unkown, undated)

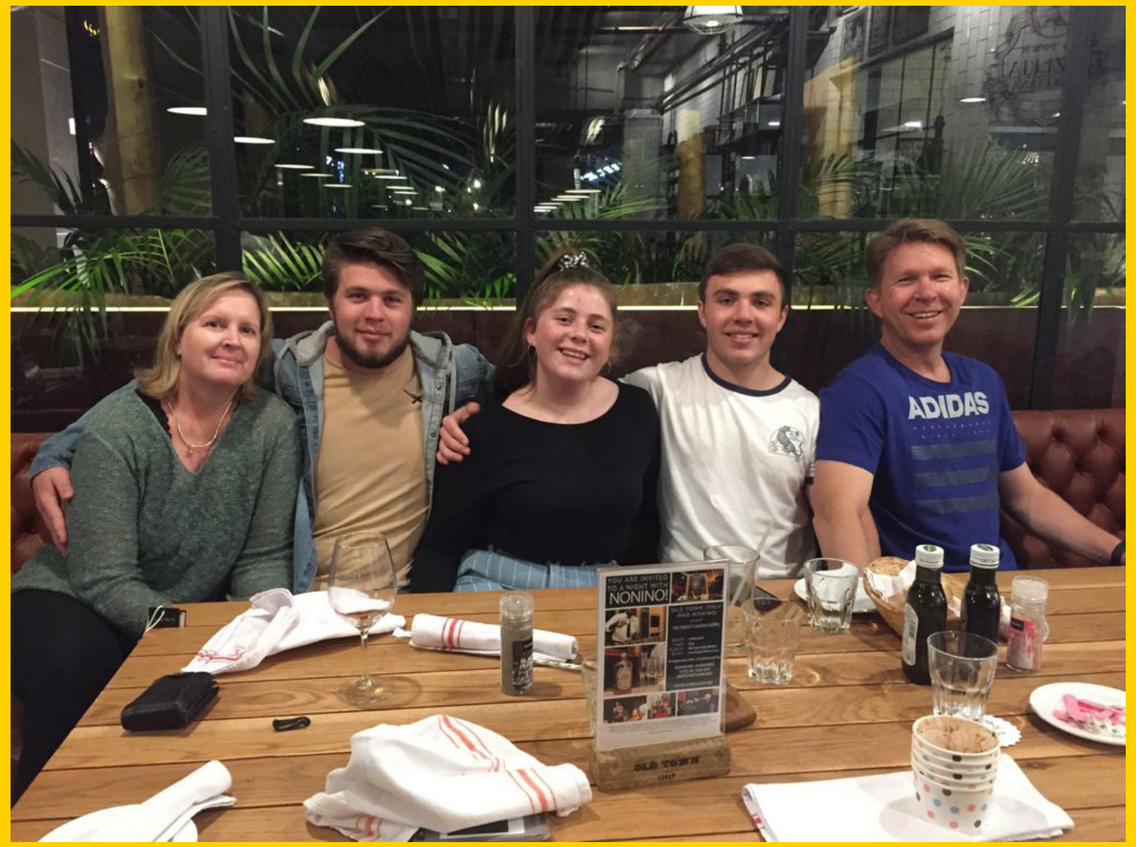


Figure 75
Family Roles and Pillars. (Author, 2020)

The second pillar, Socialization / Association, refers to the gathering of community members to amplify, magnify, and celebrate our shared skills and binding characteristics. This can be done through various mediums such as recreational activities involving the whole community, educational workshops, traditional events, communal charity. Not only does this strengthen the community as a whole but provides a sense of belonging to its members as well.

As architects, we tend to think of communities as large groups of people situated in large urban landscapes. For a community to exist, it only requires a handful of people who share interactions and experiences. The community that I personally know best is the one I was raised in from birth, my family. Looking back at my childhood, I can clearly see all three pillars of community present in my family structure. “The Giving of Gifts” pillar resembles my family member’s ability to share and delegate chores according to hierarchy and individual skills. “The Presence of Association” pillar represents our family’s recreational gatherings and support during critical events. This again strengthens our bond as a family and provides a sense of belonging to each member. Lastly, “The Compassion of Hospitality” pillar resembles my family’s ability to interact with strangers in order to provide and obtain an additional sense of belonging. This is how our small cul-de-sac became a community of its own, through separate families joining together based on a shared commonality.

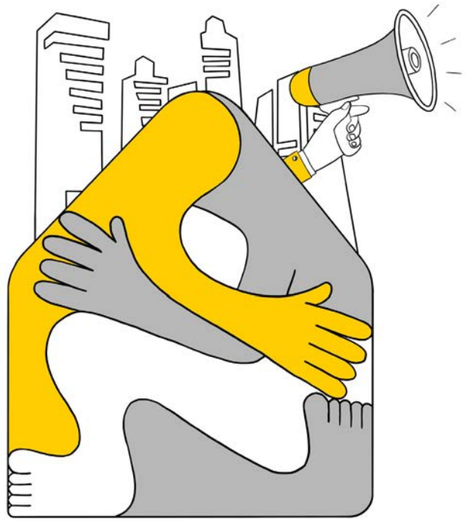


Figure 76
House of Community.
(Author, 2021)

Why is community important?

“Belonging is best created when we join with other people in producing something that makes a place better” (Block, 2018). Humans have always gravitated towards each other no matter what the circumstances are. Even before the modern age, we have always gathered together in order to survive and thrive. Not only do we band together for our survival, but we also do so because we crave a sense of belonging. We seek others out with similarities to us because that is what makes us feel comfortable and safe. The expression “strength in numbers” rings true for humans, and that is why we form groups and communities.

“To belong is to act as an investor, owner, and creator of this place” (Block, 2018). If a community can create a strong sense of belonging and pride amongst themselves, they can achieve things they otherwise would not be able to do on their own. Therefore, a community can be a powerful tool for developers and architects to use as a catalyst for change. That is why this dissertation will aim to use these principles of community to strengthen and empower the people of Ekhaya and Orlando East.

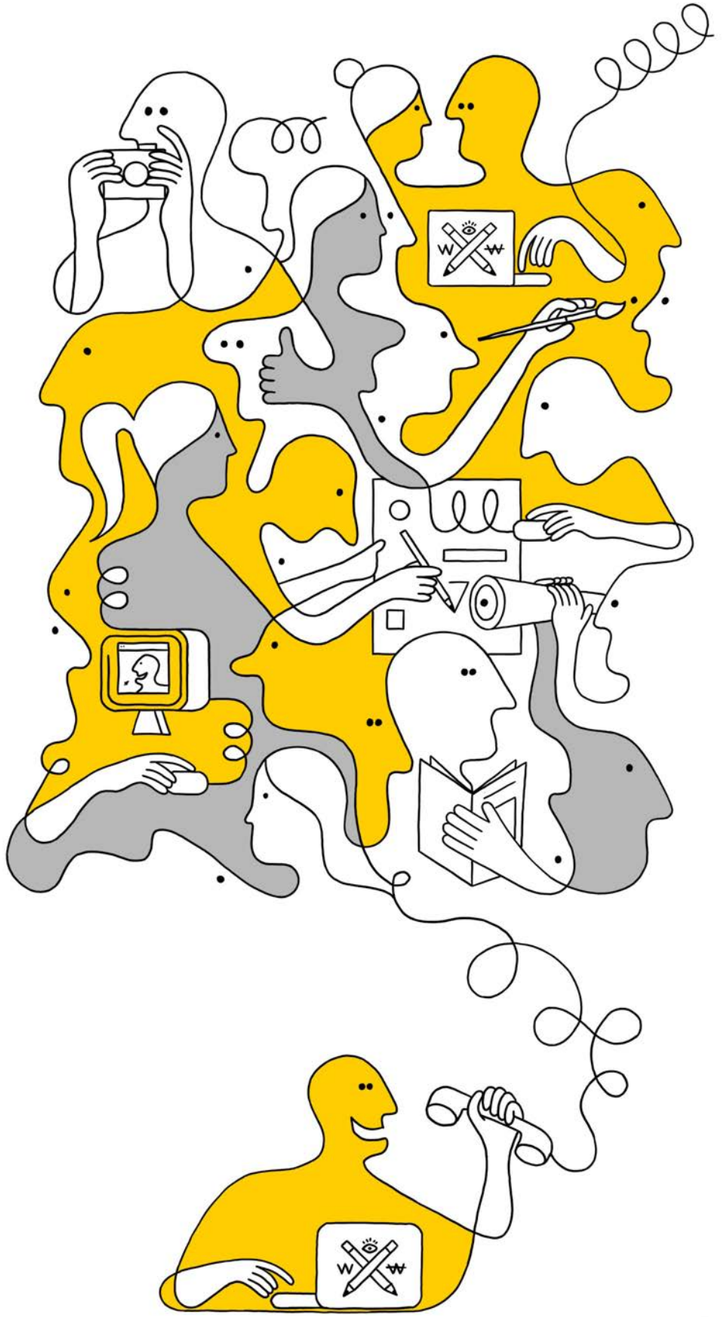


Figure 77
Community of Individuals.
(Author, 2021)

PROVIDING EMPOWERMENT

Empowering the individual through the collective

"If we can accept that the ultimate aim of community development is to empower, then all roles undertaken in this guise must be subject to the lens of empowerment, as well as its opposite - that of disempowerment" (Toomey, 2011).

Thus far, this dissertation has attempted to understand the core principles of a functioning community to formulate a strategy on how to empower the communities of Ekhaya. One such principle is the need for a community to function as a collective rather than a set of individuals. Dr. Martin Luther King, Jr once said: "There is power in numbers and there is power in unity." This is a statement that has proven to be true throughout history, especially the history of Soweto. From its establishment in the 1930s, the people of Soweto were under the oppressive rule of the apartheid government until the multiracial elections in 1994. The riot in 1976 is an example of what the collective can achieve as opposed to a group of individuals. That being said, it seems clear that the actions of a collective solid such as the people of Soweto are able to empower individuals such as our former president Nelson Mandela.

Empowerment vs Disempowerment

"Empowerment refers broadly to the expansion of freedom of choice and action to shape one's life. It implies control over resources and decisions." (Narayan,2005)

The term disempowerment refers to removing power from a person or group, making them less likely to succeed. This is a common phenomenon that can be witnessed throughout history and is still prevalent to this day. The people of Soweto, in particular, have been the victims of disempowerment due to the laws once enforced by the apartheid regime. However, since disempowerment is a reoccurring phenomenon, should there not be a typical pattern present in most examples? Including within the history of Soweto? Melissa Dawn describes these patterns as the "Triangle of Disempowerment" (Dawn, 2021), which consists of: "The Persecutor, The Victim, and The Rescuer." When applied to Soweto, the persecutor would be the apartheid regime and the people of Soweto the victim. As in most cases, the rescuer would be played by the victims themselves, revolting against the persecutor. Thus, it would seem that the cycle of disempowerment in most cases eventually leads to the empowerment of the oppressed. This is not to say that in order for something or someone to be empowered, they first need to experience disempowerment. For the cycle to halt, we need to be aware of how both phenomena work to identify when we are being empowered and when we are being disempowered.

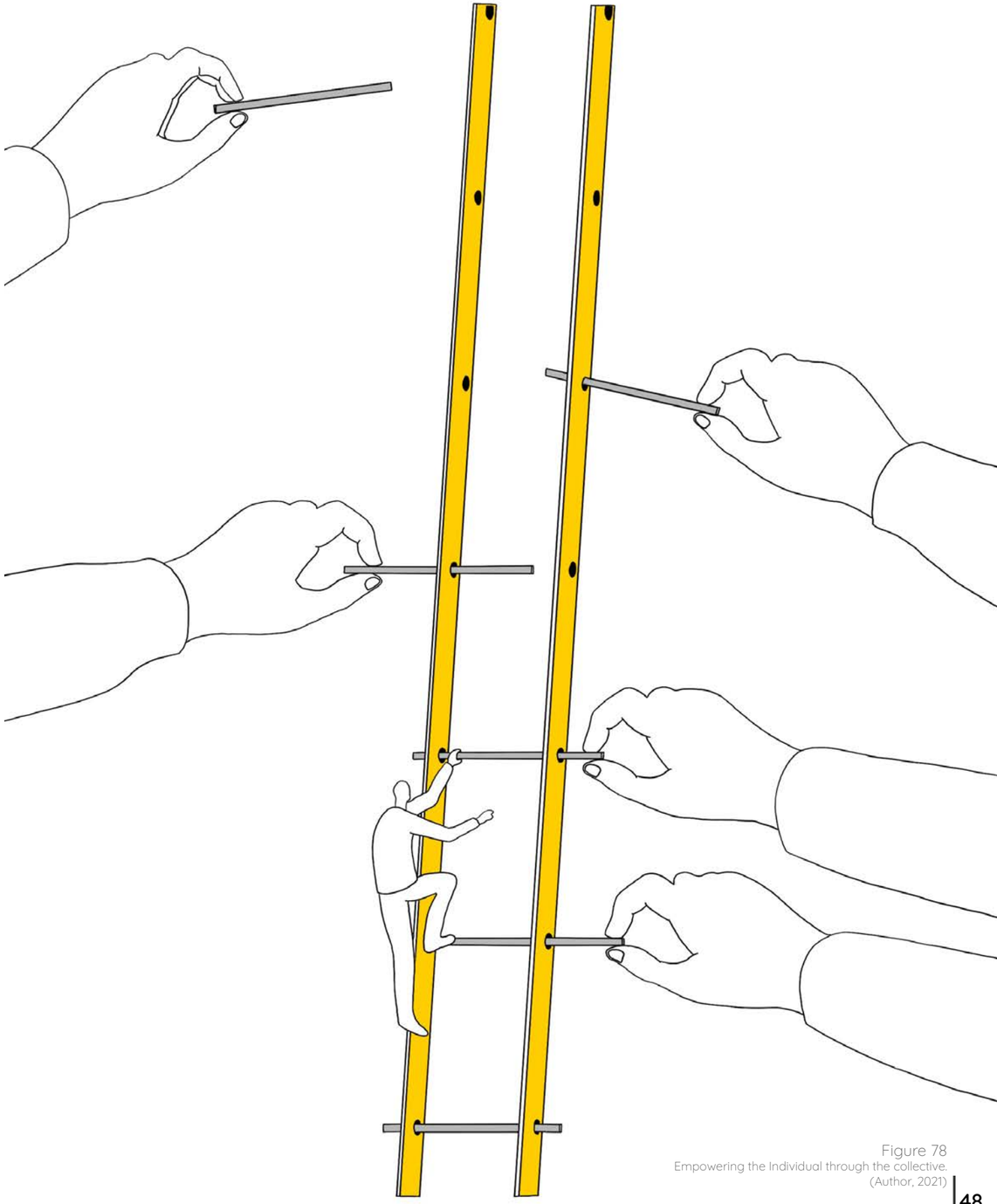


Figure 78
Empowering the Individual through the collective.
(Author, 2021)

he definition of power is addressed not as one specific concept but rather as various observations in individual and group behavior and tendencies. These observations are mainly grouped under two major categories, namely “Power To” and “Power Over.” The distinction between these two categories is vital to understanding power as a broad concept and its practice (Dovey et al., 1999). People constantly exercise power as individuals or as groups such as governments or societal collectives, either empowering themselves (or someone else) or using their empowerment to oppress others. The struggle for power is something the people of Soweto are very familiar with due to their oppressed past. The apartheid government exercised “Power Over” the people of Soweto for 60 years, and those scars are still visible in the current economic and social fabric. The Soweto Uprisings is a clear example of “Power To,” where the people (victim) empowered themselves to stand up against the apartheid government (oppressors) and became their own saviors’ (rescuer). This dissertation aims to explore the tools needed for the communities of Ekhaya to empower themselves socially and economically through means of architectural intervention.

To understand what qualifies as a tool of empowerment, we first need to understand its purpose and how it came to be. For example, a rock could be used as a tool to hit a nail into a piece of wood; however, if that same rock was molded into a hammer, it would become a more effective tool to use. The same could be said for the communities of Ekhaya and their existing “tools” such as informal trade, community groups, and initiatives. Provided with the right opportunities, these existing “tools” could be enhanced and improved upon so that they may become more effective. Opportunity is directly related to empowerment. Providing the opportunity for empowerment is better than enforcing it in a foreign way to the people who need it. From an architectural point of view, urban development would effectively provide opportunities for empowerment.

Furthermore, while this may be true, it depends on how the content of the development responds to its surrounding context. If the proposed development isolates itself from its surroundings, it will fail to empower those around it and will only empower those within it, i.e., private investors. Developments that aim to empower should be beneficial to both parties; thus, mixed-use urban frameworks are becoming more prevalent within the world of architecture. The redevelopment of the Ekhaya urban framework needs to be inclusive of its surrounding communities and be profitable to its investors. This dissertation will aim to portray a proposal that will do so.

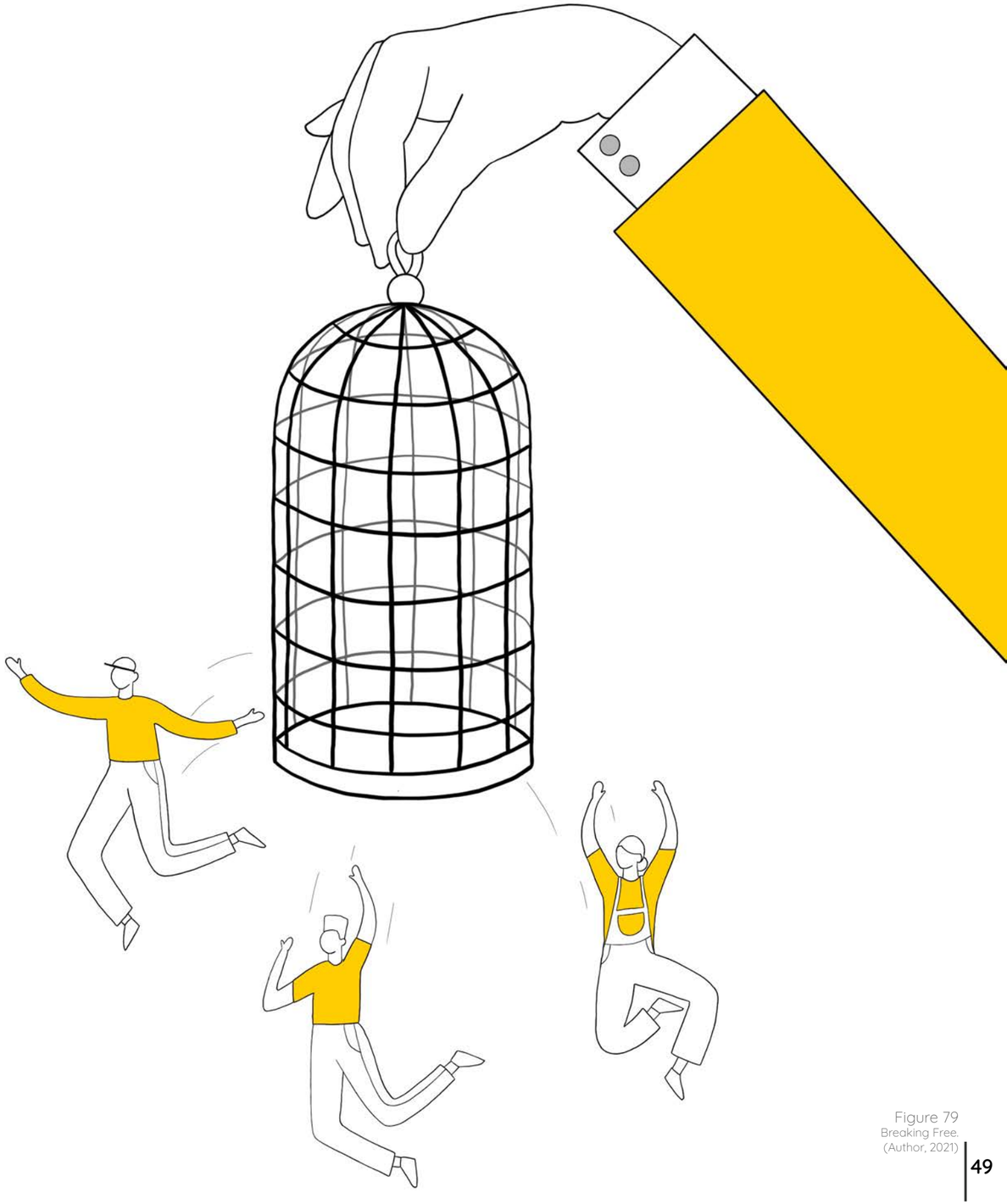


Figure 79
Breaking Free.
(Author, 2021)

ACHIEVING INDEPENDENCE

What is Independence?

Independence is the complete freedom of control or influence from another party, be it a single individual, a group of people, or an organization. (Sailius, 2016)

The relationship between an oppressor and an oppressed seems to display many similarities to dependence and independence concepts. The oppressive party (apartheid government) would be dependent on the oppressed for cheap labor. In contrast, the oppressed party (Soweto) would, in turn, be dependent on the oppressor (unwillingly) for things such as survival and basic needs. This would imply that the apartheid government, while retaining a substantial amount of freedom were never independent. After the fall of apartheid, could it be said that Soweto achieved independence?

If only the masters had been replaced, independence and liberty get a narrow and superficial meaning. (Sailius, 2016)

By this definition, Soweto has not gained independence but obtained a vastly more significant amount of freedom than in the apartheid era. Considering the parameters of my chosen site and that of the South African law, the question should not be whether a community can become fully independent but rather how one strives for independence under the governmental rule.



Figure 80
Taking Action.
(Author, 2021)

In/Dependent on/from what?

Independence is the complete freedom of control or influence from another party, be it a single individual, a group of people, or an organization. (Sailius, 2016)

Independent from what? To be independent, there must be something that was once or still could be dependent upon. Like a child is dependent on their mother so is a community dependent on various variables, variables such as government, social and economic position and even its own members. As previously stated, the question should not be if it is possible to be independent of these variables, but rather how to minimize and properly utilize them. Moreover, while the services provided by the government are necessary for a community's survival, it does not mean that they cannot be enhanced or replaced. If a community can generate its own electricity, that service would no longer be required from the government. If a community were able to construct their own houses, like exiting townships, they would no longer depend on governmental social housing promises. This is an excellent example of an existing strategy belonging to the community that could be improved through the right opportunities and tools. It is often easy to become dependent on a higher power to provide basic needs to those under its rule. However, we forget that we have the potential to better our surroundings ourselves (Sailius, 2016). The people of Soweto once used their own power to improve their surroundings with very little to work with. Imagine what could be achieved if they were given the proper tools to do so.

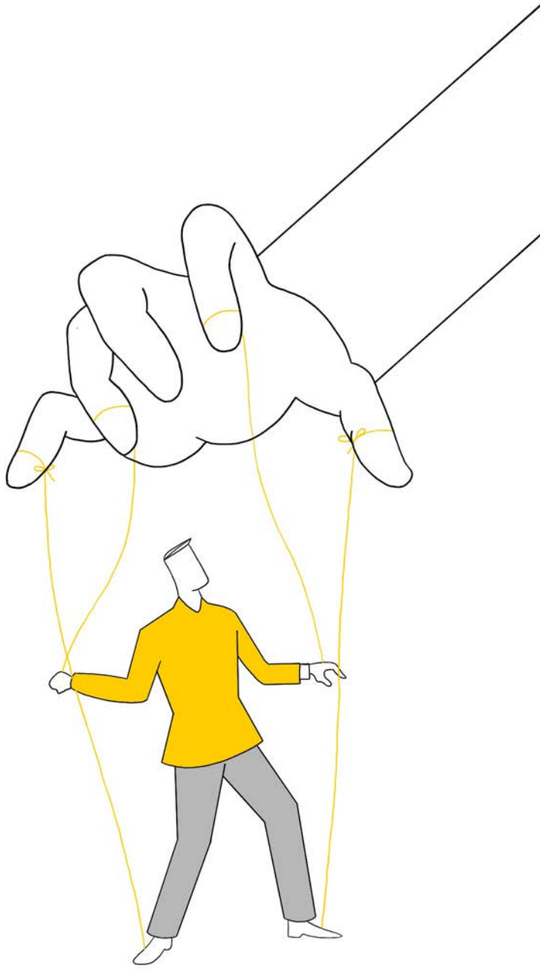


Figure 81
Forced Dependence.
(Author, 2021)

Community Striving for Independence

By encouraging the embrace of human dependence and the need for care and community, it implicitly advocates for a reevaluation of the idea of human independence. (McCrary, 2017)

As architects, we can envision development within an area that benefits both the invested parties and those affected by the development. The development of an area makes a considerable positive impact within a community but only when done in the right way. Again, much like the approach to empowerment, development cannot be forced onto a community as this will only distance them further from independence and growth. The correct tools need to be provided to enable development within the community by the community. If a community can support internal development, they are a big step closer to true independence. However, this can only be made possible by the community members themselves as they are the ones that need to support the development in order for it to be successful. Therefore, it is essential for the development not to be new and foreign but based on the existing systems and needs within the community. The community can easily support this kind of development as it is familiar and directly bifacial. When all these variables are addressed, a community can come as close to independence as possible within the society we live in today. The communities of Ekhaya ought to strive for the independence and freedom they fought for during the apartheid era. Not only were they able to obtain independence from an oppressive government, but they were also able to do so on their own. Provided with tools such as sustainability, education, social and economic growth, it should be possible for the communities of Ekhaya to empower themselves by striving for independence.

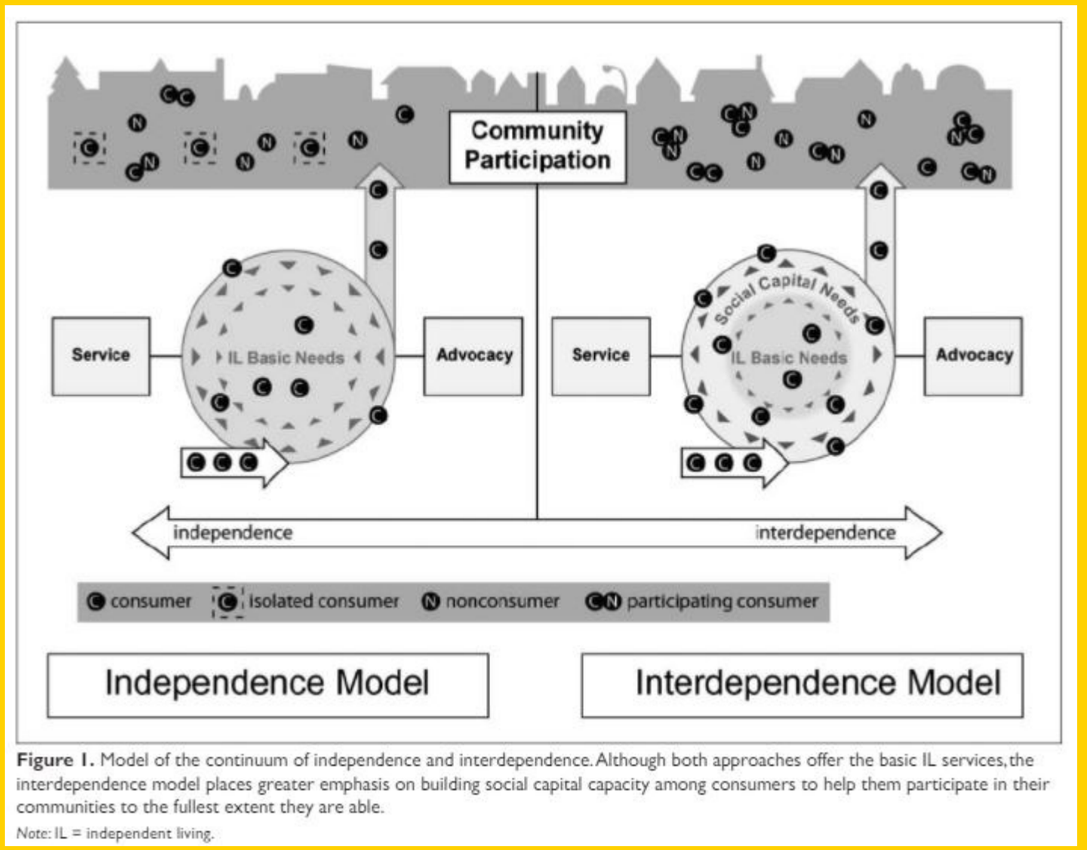


Figure 1. Model of the continuum of independence and interdependence. Although both approaches offer the basic IL services, the interdependence model places greater emphasis on building social capital capacity among consumers to help them participate in their communities to the fullest extent they are able.

Note: IL = independent living.

Figure 82
Model of the continuum of independence and interdependence. Although both approaches offer the basic IL services, the interdependence model places greater emphasis on building social capital capacity among consumers to help them participate in their communities to the fullest extent they are able. (White at el. 2010)

CONCLUSION

Due to the history of Soweto's communities with the apartheid government, the people of the Orlando Ekhaya precinct have known oppression and have known liberation. They are familiar with the concepts of empowerment and independence but lack the opportunities to achieve them. This research has aimed to question the possibility of affecting tangible social, political, and economic change within an already established and previously oppressed urban landscape through communal empowerment and socio-economic independence. The research targeted three main concepts to understand better how they could be applied to the proposed intervention to achieve the desired outcome.

The concept of community proved to be an enlightening exploration as it helped to understand better the nature of the Ekhaya communities and how they function. Understanding how communities are formed and under what circumstance is essential as it informs us on how to approach them as architects. The communities of Ekhaya were formed out of necessity, but they banded together under a common cause to liberate themselves. The same bond that united them in the past is still present today within the communities, meaning that provided with the right opportunities, the communities without fail would make the most of them.

The exploration of empowerment clarified the many ways it is achieved by both people who desire it and those who encourage it. This exploration led to the realization of the role that power plays within empowerment, how it was used to oppress the people of Soweto, and how it was used to liberate them. Power does not necessarily need to be given to empower but could instead be harnessed by the individual or collective to empower themselves. The communities of Ekhaya have proven in the past that they are capable of empowering themselves, given very few opportunities to do so. Given the right opportunities, the communities of Ekhaya would be able to empower themselves and others as well.

Independence proved to be an exciting concept considering its relation to the history of Soweto and the Orlando precinct; gaining a better understanding of how the relationship between independence and dependence worked helped clarify Soweto's relationship with government past and present. This understanding helped to identify what the communities depended on and what can not be dependent on. It also helped identify what aspects of dependence could be transformed into community independence.

In conclusion, as can be seen from the above research, when redeveloping the Orlando Ekhaya precinct urban framework, it would be beneficial to be inclusive of the surrounding communities. This will ensure the provision of opportunities for empowerment and independence that will benefit not only the people of the Ekhaya precinct but also its investors through means of social and economic stability.

Case Studies

- Architectural Principals of Empowerment , Independence, and community.
- Case 1: Indalo Social Development Project
- Case 2: Khayelitsha, Cape Town
- Comparisons
- Conclusions

Architectural Principals of Empowerment , Independence, and community.

Urban planning is about the physical and functional planning of urban spaces, networks, and systems, but it is also a process-oriented exercise. As a means to empower communities and achieve their independence, it is necessary to foster the engagement of all sectors. This will generate a scale of local growth in an urban area based on processes and prioritizing participation, providing coalitions and betting on the co-production of areas that respond to community needs.

“Community” is relationships, reference spaces, illusions, empathy, exchange, fears, conflicts, territory, proximity, mutual support, and from the logic of community intervention, a space to organize from where to give answers to problems. The “community” is, therefore, an objective, but at the same time it is a means, and this is how it was understood in the experiences of citizen participation that achieved the empowerment of the popular classes. Citizen participation, if it is to be empowering for those popular classes with fewer resources or less social capital, needs, in addition to the decision-making mechanisms of the participatory process, to have a relational strategy of proximity to facilitate this participation to the maximum and contribute to the construction of that subject we call “community”. (Phillips,2019)

Thus, while the community actively participates in the whole process, urban planning articulates its concerns, ideas and solutions through technically and economically sound plans. From conception through strategy to implementation, it is the inhabitants themselves who ensure that projects bring about structural change.

To achieve this, urban planning professionals must engage with sectors of the population that have common interests; in this way, partnerships can be created between local leaders and the community, which is often not given sufficient visibility and voice. Urban planners can advocate for them more broadly once they are aware of the objectives and benefits of urban areas that respond to their needs. It is worth mentioning that communities have considerable capacity to plan and implement programs, which has often been masked by a lack of empowerment.

The construction projects they develop seek greater community empowerment through the participatory tools mentioned above, as well as, for example, the transfer of management to the community once the infrastructure is built. In this way, from the beginning, the community will be involved in the construction process, taking ownership of the entire infrastructure.

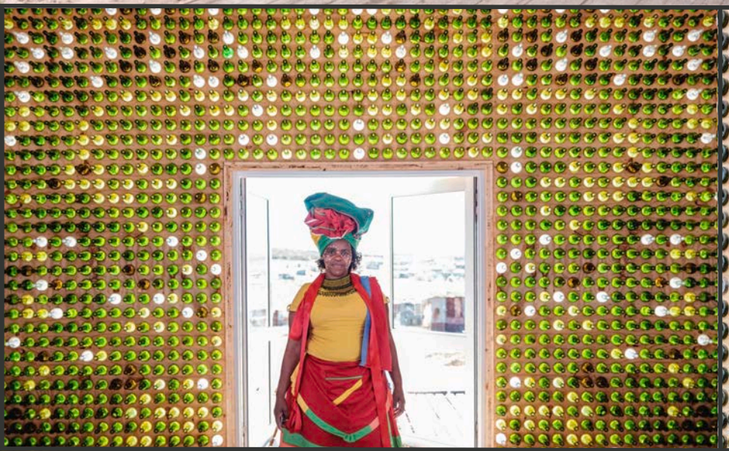
Once it becomes clear that the local population has the power to solve the problems, it will finally have the incentive to organize itself, assess the current ills and find solutions. The very act of fighting problems develops new capacities. So, the process of capacity building can be described as learning by doing, learning by using power, learning by solving problems and learning by making mistakes.

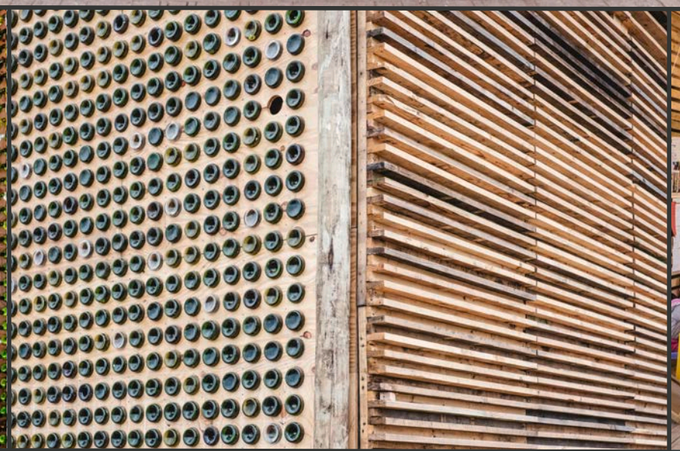
Case 1: Social Development Project

By Indalo + Collectif SAGA



Figure 83
SDP Collage.
(Author, 2021)







In the municipality of Joe Slovo, on the outskirts of Port Elizabeth, in South Africa, an action project was carried out that managed to unite the community through strategies of empowerment and independence. At the beginning, being a recently created community, the RDP housing program managed to benefit only a few, leaving a large gap of unattended population that lived in small shacks, did not have the minimum health requirements, and only a few enjoyed of electricity in their homes.

Patricia N. Piyani, one of Joe Slovo's locals, seeing the problems that were going through, decided to contribute by turning her own shack into a shelter for children, the same one that was very well received; however, it did not enjoy the best conditions either, especially due to the floods that continually affected it.

Faced with this problem, the NGO Love Story, in collaboration with professionals in the field, decided to undertake this reform project that included the reconstruction of said nursery and together with it, the implementation of new facilities for other community uses in the locality, being the hierarchical space a large room with flexible uses. The implementation was made possible by using mostly recycled materials - free or low cost, such as tires, pallets, or corrugated sheets - and by establishing efficient construction techniques.

The main objective of the project was to fully integrate the community in the development, to develop sustainable, simple, and reproducible processes, to provide them with the necessary tools and knowledge to reproduce these processes for their own progress.

CASE 2: Khaylitsha, Cape Town

By Designers VPUU

Cape Town is a city of gross inequalities based largely on racial divisions. Although it is home to some of the most expensive real estate in the world, a quarter of its inhabitants live in informal settlements. Khayelitsha is one of the largest slums in South Africa, with the fastest growing population in the country.

Today, there are currents of change afoot. Many of those who have been marginalized are working to overcome stigma and legitimize their communities, recruiting architects into the fight. These projects represent not only the power of design to legitimize informal architecture, overcome stigma and dignity, but also the power of communities to incite these projects, own them and allow them to flourish.

Thus, was born the VPUU (Violence Prevention Through Urban Upgrading), an urban renewal project of “safe nodes”, each of which serves some 50,000 residents. Ranging from Harare Square to Khayelitsha Railway Station, these nodes are made up of a network of playing fields, school fields, shopping plazas and pedestrian links, developed in response to communities expressing a desire for streets and safer routes to and from schools, the CBD and public transport. A positive image was modified by ensuring a ‘human’ scale and using materials, colors, landscaping, and above all appropriate lighting, to encourage high levels of public activity.

What is most exciting about the project is that the design facilitates community participation, as is evident in the artwork, tree cages and stonework. Vehicles and spaces seem to belong to the community, as they are constantly busy and in good condition. This intervention shows how design can improve the quality of a community’s living environment with simple exposures.





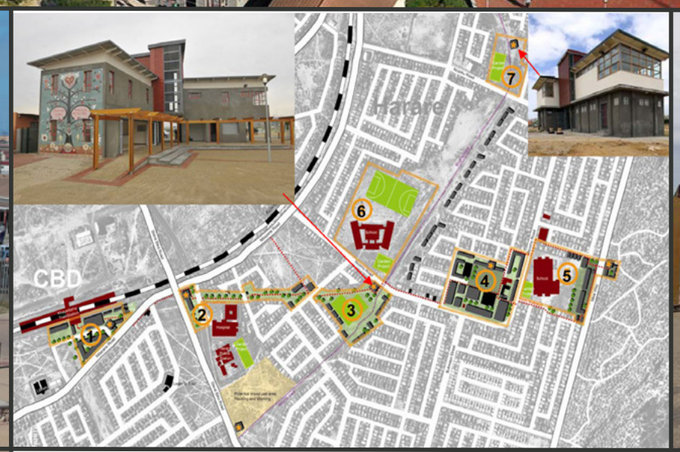




Figure 84
VPUU Collage.
(Author, 2021)

COMPARISON OF CASE STUDIES WITH EKHAYA

While it is true that Ekhaya communities have known oppression deeply, they have also known liberation. As such, they have become familiar with many concepts of empowerment and independence over the years; however, they lack the optimal opportunities to achieve them. A comparison between the case studies analyzed and the Ekhaya communities, it is possible to question the possibilities of creating a large social, political and economic effect that is perceivable within an established urban context. This, as part of a new communal and socio-economic empowerment referring to community independence.

Although the Ekhaya communities were initially formed out of sheer necessity, they united together under a common cause of liberation. This bond continues to this day, and they are waiting for the right opportunities to bring about the change they all hope for. In that sense, as in the first case study, a source is needed to fully integrate the community as part of the process. Also, try to develop sustainable processes, which can be simple and reproducible, in order to provide the necessary tools and knowledge needed to generate continuity in the processes for the community's own development.

On the other hand, based on the second case study, it is important that a new implementation design in the Ekhaya community be defined by the participation of the community itself, which, as has been analyzed, is very important for proper social and community development. According to the analysis, it is proven that this type of participatory and community-focused intervention can bring noticeable improvements in the quality of the living environment of a social group that seeks resurgence.

Based on the above, it is important for a future intervention to understand the nature of the Ekhaya communities and the way in which their social dynamics function. Also, to understand the way in which the communities are formed and the circumstances in which they have been developing. It is important to highlight that the exploration of empowerment plays a fundamental role in the exploration, due to the fact that this can be used by an individual or by the whole collective to generate the common good. In addition, this type of intervention can help to identify what communities depend on and how this could be transformed into proper community independence.

CONCLUSIONS

It is possible to conclude that communities have considerable capacity to plan and implement programs, which has often been masked by a lack of empowerment. Furthermore, it is shown that well-designed participation and decentralization can reduce the multiple dimensions of poverty. Flexibility of use needs to be emphasized, allowing local people to choose what they want to do, and local capacity is necessarily multisectoral because local communities have to deal with a wide range of problems.

Finally, it must be emphasized that the role of the architect in these projects must be to facilitate, ultimately it is the community itself that must take responsibility and ensure the longevity of the design. And this means taking the time to listen to what the community wants, needs and will be able to sustain. Also, at the most basic level, active user participation helps with the ongoing maintenance of the building, i.e., when something goes wrong or breaks or needs to be expanded, and at some point, users will better appreciate the intent of the design and how to go about fixing or expanding.

Precedents

- Power Park Swimming Pool
- Zeitz MOCHAA Museum
- Durban Point Waterfront
- Senegal Market Space
- Saw Hydroponic Pumping Station



Figure 85
Power Park Locality.
(Author, 2021)

Power Park Swimming Pool



Figure 86
Waiting for the Power Park pool to open. (Wilson, G. 2017)

Located just off Chris Hani Road, the Power Park Swimming Pool is situated on the western edge of the Ekhaya precinct. This community pool is open to the immediate community it is situated in and many others around it. The pool accommodates all demographics and is looked after by volunteers from the surrounding community. These volunteers do not get paid to work and do so for the love of their community and its people. This is proven by an interview conducted by a 20laps member associated with jozi.rediscovered : "I love this job even though there's no money," she laughs. "I'm like a mama, looking after children at a creche. I enjoy shouting!" – Carine 41, lifeguard.

This community synergy is to be promoted and encouraged by those who can do so. It becomes easy to overlook hidden gems like the Power Park Pool when considering the bigger picture. But it is examples like these that are vital to understanding community and how to harness its power. This case study shows us what happens when a single simple facility is provided for public use. The article referenced tells a story of a group of people that had a bit of spare time while in Orlando east and were recommended by a local to visit the pool. They first went to the towers to bungee jump and afterward went to cool off at the pool. This suggests that however thin there are existing links to this one facility, such as other recreational facilities (the towers), its local members, and outsiders. If this existing network could be capitalized on and improved, it would be an extremely beneficial addition to the Ekhaya precinct and its communities.

Figure 87
Power Park swimming pool, pictured with the Soweto cooling towers. (2Summers, 2017)



Zeitz MOCAA Museum



Figure 88
Atrium at night. (Baan, I. 2017)

The Zeitz MOCCA Museum is a well-known development that has been praised and critiqued locally and internationally. Initially, a decommissioned grain silo was left abandoned situated within the old Silo District. This heritage building has seen many proposals made for its reinvention. This is not unlike the Soweto Towers and the power station site in Orlando Ekhaya, which has also has seen many proposals for its redevelopment. Much like the power station site, the old grain silos could not be redeveloped without considering the surrounding precinct. It, too, was located within an existing urban framework scheme that addressed the entire waterfront. Although the program might differ from this dissertation, the public interface has some similarities. The Zeitz MOCCA boasts a well-designed building and a well-thought-out site circulation that integrates well with the existing waterfront framework.

This precedent shows how a new development responds to its surrounding context in order for it to fit in well within an existing framework. This is incredibly beneficial to developing the proposed power station site, especially its public interface with the proposed urban framework that surrounds it.



Figure 89
Zeitz MOCHAA Exterior.
(unknown undated)

Durban Point Waterfront



Figure 90
Rendered Perspective. (unknown, undated)

This precedent is an urban development that proposes the reinvention of 6 precincts within the Durban Point harbor area. This proposal includes the introduction of retail, business, tourism, recreational and residential facilities. Much like the development of the Ekhaya precinct, these proposed developments need to account for the existing urban framework surrounding them. The proposed program for these precincts responds to the growing economic wealth of the Durban coastline (pre-covid). The proposal is an example of what could be achieved through mixed-use developments that incorporate various facilities and programs compared to past developments that focused on developing single-use districts. A critique that could be made on this proposal is the lack of local inclusion. The Durban coastline is well known for its tourism, and its development is often focused on outsiders instead of providing opportunities for local community members to partake economically.

This proposal resembles that of the Orlando Ekhaya framework development because it aims to capitalize on existing frameworks to improve the economic and social well-being of the surrounding area and its investors. This precedent is an excellent example of large-scale urban planning that translates into detailed urban frameworks that seamlessly blend. This is beneficial to the proposed development of the power station site and the Ekhaya precinct.



Figure 91
Rendered Perspective.
(unknown, undated)



Precinct 1

Figure 93
Precinct 1. (unknown, undated)



Precinct 2

Figure 94
Precinct 2. (unknown, undated)



Precinct 3

Figure 95
Precinct 3. (unknown, undated)



Precinct 4

Figure 96
Precinct 4. (unknown, undated)



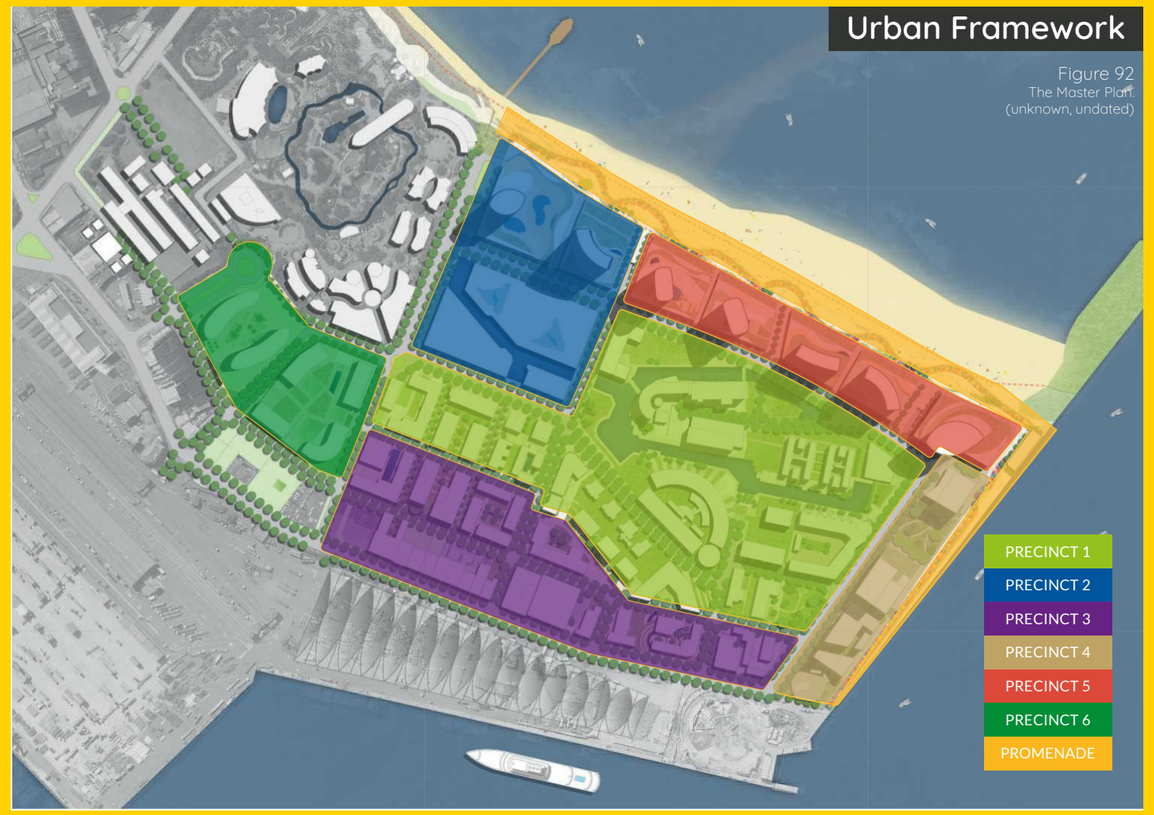
Precinct 5

Figure 97
Precinct 5. (unknown, undated)



Precinct 6

Figure 98
Precinct 6. (unknown, undated)



Urban Framework

Figure 92
The Master Plan.
(unknown, undated)

Precinct 1

Residential, Offices, and Retail.

Precinct 2

Accommodation and link to uShaka Marine World

Precinct 3

Heritage buildings, commercial, retail, and accommodation

Precinct 4

Cuisine and promenade development

Precinct 5

Mixed-use tourism

Precinct 6

Offices and Transport nodes



Promenade

Figure 99
Promenade. (unknown, undated)

Senegal Market Space



Figure 100
Senegal City Market. (PAB Architects, undated)

The proposed development is located in Kaolack, Senegal, and is revising a previous informal market that burnt down. The development aims to create a modular and flexible design built with modest local materials. It is keeping in mind the socio-economic factors of the community and with an awareness of local climate conditions and requirements. This project depicts how commercial development could be achieved through the use of informal trade. Within communities such as those found in Kaolack and Soweto, there is always informal trade present. This form of commerce is often overlooked and underestimated by developers as it is often only observed when immersed within the surrounding communities.

However, PAB Architects have done intensive research relating to the communities of Kaolack and their informal trade. The structure and materiality of the informal stalls have been closely analyzed to formulate a modern design that stays true to its roots. This precedent serves as a guide of local inclusivity when proposing development within areas such as Kaolack. The Ekhaya precinct and its communities are similar to this precedent and deserve the same measure of inclusivity. This dissertation proposes a measure of retail in its design. It would use this precedent to understand better how to approach the proper balance of formal and informal trade.

Figure 101 shows an understanding of the creation of space within the Senegal Market. They identify the various informal trading sections within the surrounding communities and unify them through a holistic and inclusive design.

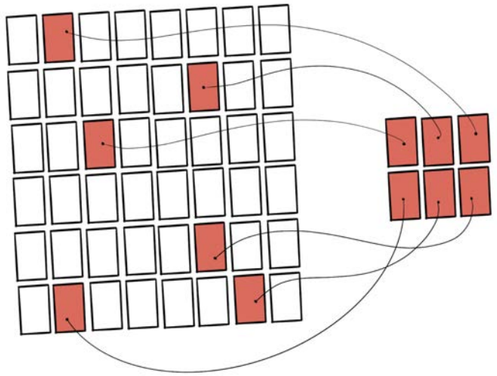


Figure 101
Creation of Market Space.
(Author, 2021)



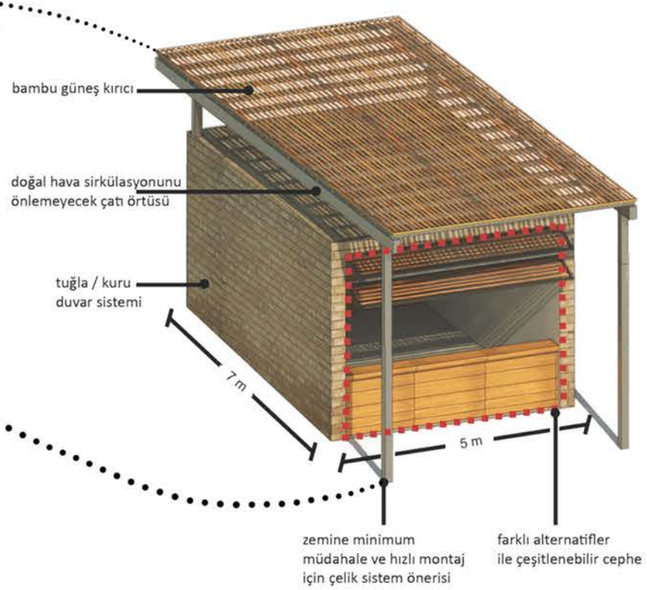
Figure 102
Modular Units.
(PAB Architects, undated)

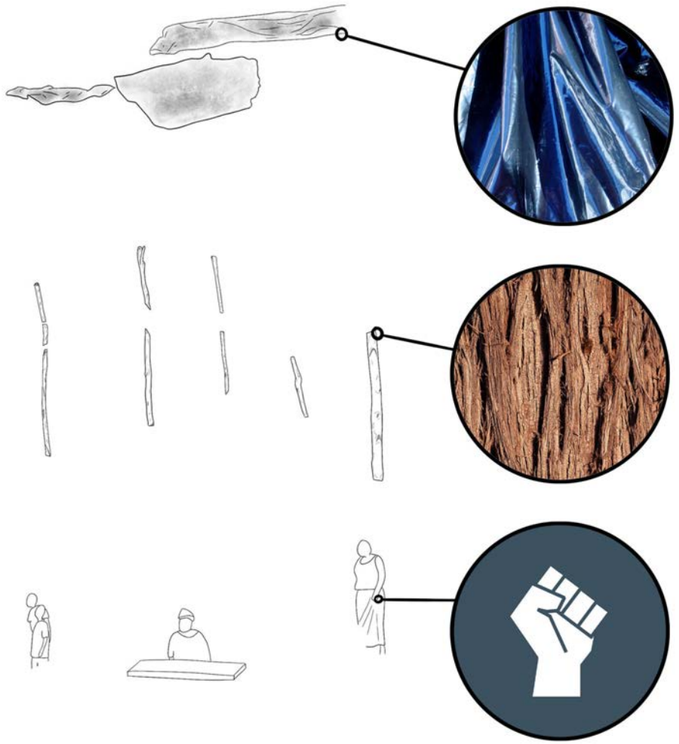
Figure 103
Modular Units.
(PAB Architects, undated)



Analyzation of modular stall







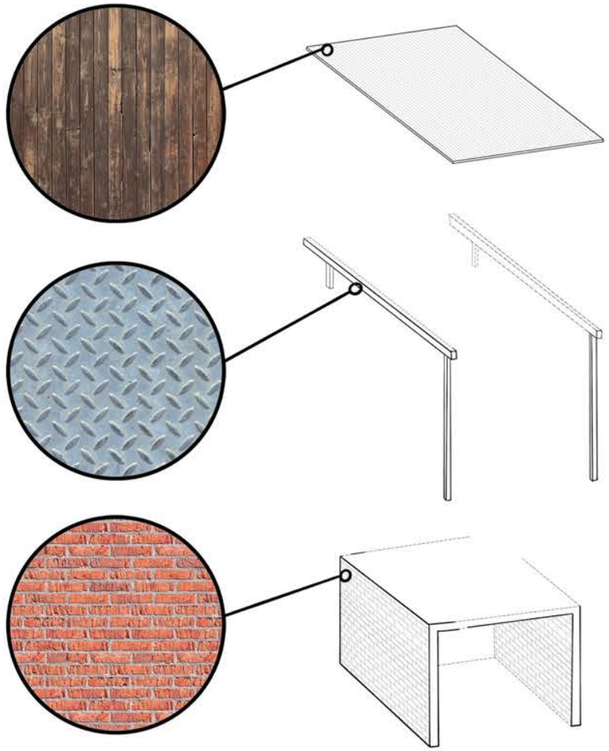


Figure 104
Analyzation of modular stall.
(Author, 2021)



Figure 105
Senegal Market strategy applied to dissertation.
(Author, 2021)

Precedent concept applied to Orlando power station site

The Senegal Market proposal is based off the informal sector residing within the communities surrounding it. Much like Orlando Ekhaya, the community members of Kaolack are served by these informal traders native to the community itself. The concept of the proposal being the unification of these informal traders scattered throughout the area into one localized market space.
This would allow for a form of gentrification to take place without the displacement of the area's current inhabitants. Instead, the foundation of this new development is built and supported by those who belong to the community.

This graphic depicts the same concept applied to the Orlando Power Station site. Reaching into the communities of Ekhaya and collecting the various informal traders to be hosted in one central location. And whilst this does seem like a strategy that could benefit the traders of Ekhaya, it falls short in a few ways. Relocating the informal traders to a centralized location might provide them with new customers but might cause them to lose their regular customers residing within the community. Informal traders are successful because they know their customers inside out, and thus they know the optimal location and time to sell their goods. The solution to this problem would be to rather provide the opportunity for these informal traders to improve and add to their skills. The Orlando Power Station site could host program that might provide further education to local traders so that they may stay within the local communities and better themselves and others.

Hydroponic Pumping Station



Figure 106
Rendered Perspective. (mode:lina, undated)

Located in Saw Poland, this precedent depicts the transformation of an old city water pump station into an urban hydroponic farm. The farm will be sustained by the old water pumps and will serve as a central node within the city for the production of certain foods. The project also aims to include programs such as educational facilities and laboratories for experimentation. The development will also house a commercial shop that sells ready-made components for DIY window farming and plants to give people the opportunity to start their own vertical farm at home.

This precedent encompasses similar qualities and conditions found within the proposal for this dissertation. The development makes use of a decommissioned station and repurposes it to serve its surroundings. The program of the precedent mirrors that which this dissertation would like to impose on the Orlando power station site, urban farming, and laboratories. These programs would serve to provide economic and educational opportunities to the communities of Ekhaya. With the combination of a communal recycling program, these same DIY kits could be provided to the local members of the Ekhaya communities.

Overall this precedent serves as an excellent example of the transformation of a once abandoned development to a functioning one through the use of program that benefits its surroundings.

Figure 107
Rendered Perspective. (mode:lina, undated)



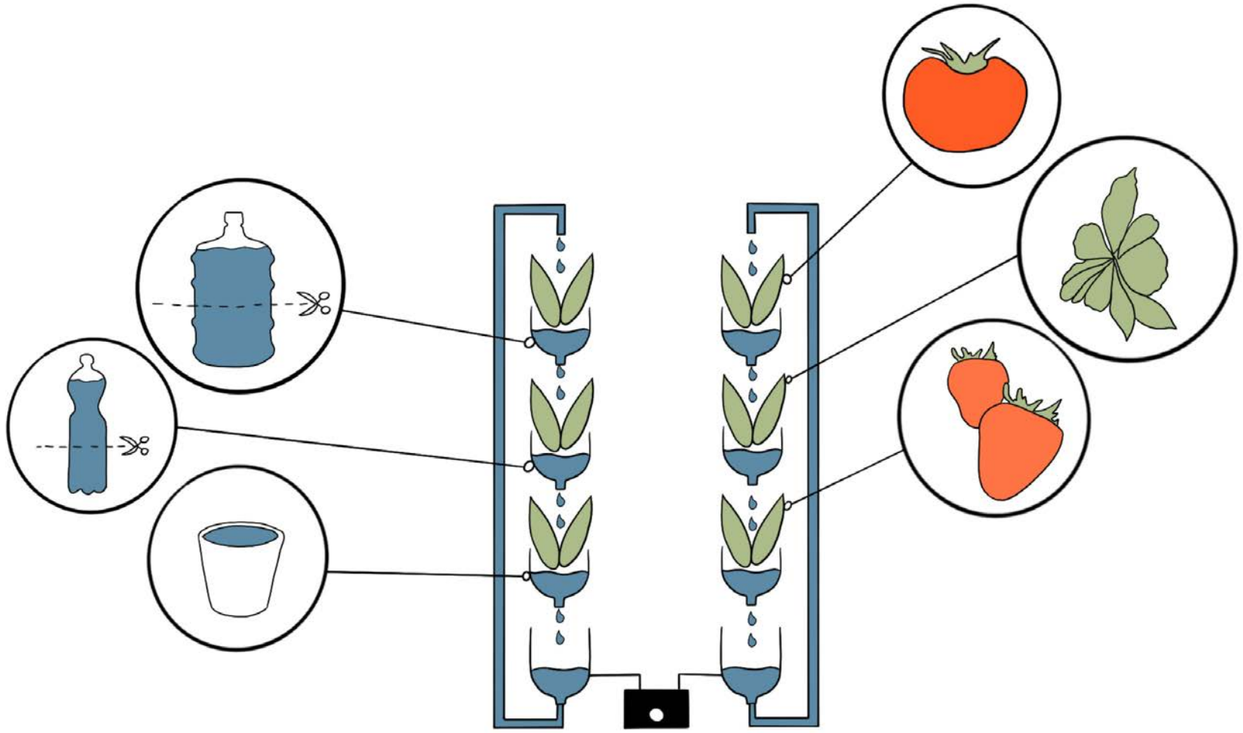


Figure 108
Recycling and hydroponics concept.
(mode:lina, undated 2021)

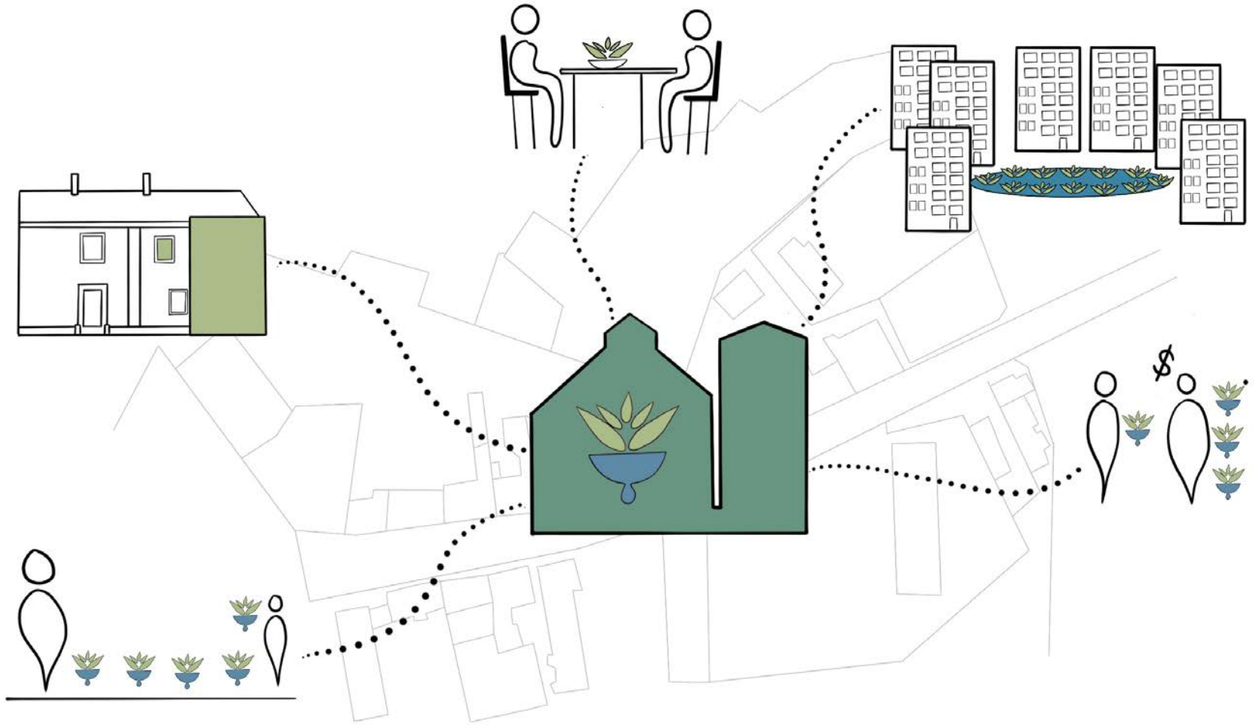


Figure 109
Urban Food Provision Concept.
(mode:lina, undated, 2021)

Figure 108 depicts the concept of the DIY hydroponic kits that might be provided to the local members of the surrounding communities. The combination of recycled materials and urban farming could prove to be a sustainable manner in which to become more independent as an individual and as a community.

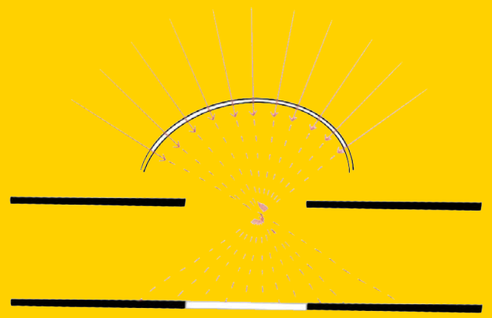


Figure 110
Lighting Analysis. (Author, 2021)

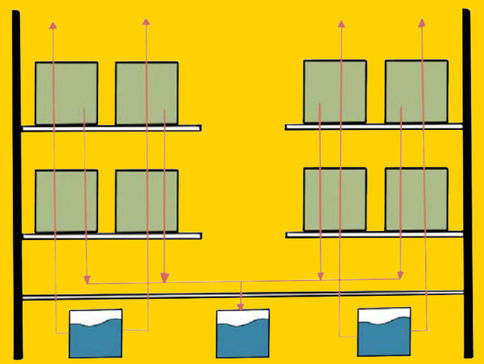


Figure 111
Hydroponic System Analysis.
(Author, 2021)

Figure 109 serves as an informative diagram depicting the concept behind the urban farming strategy employed by the precedent. It shows the provision of a central node within an area providing food and education to the surrounding communities. This node acts as a factory of sorts while remaining inclusive towards people who wish to educate themselves. This concept would be beneficial in the development of the Ekhaya precinct and its various programs.

Precedent concept applied to Orlando power station site

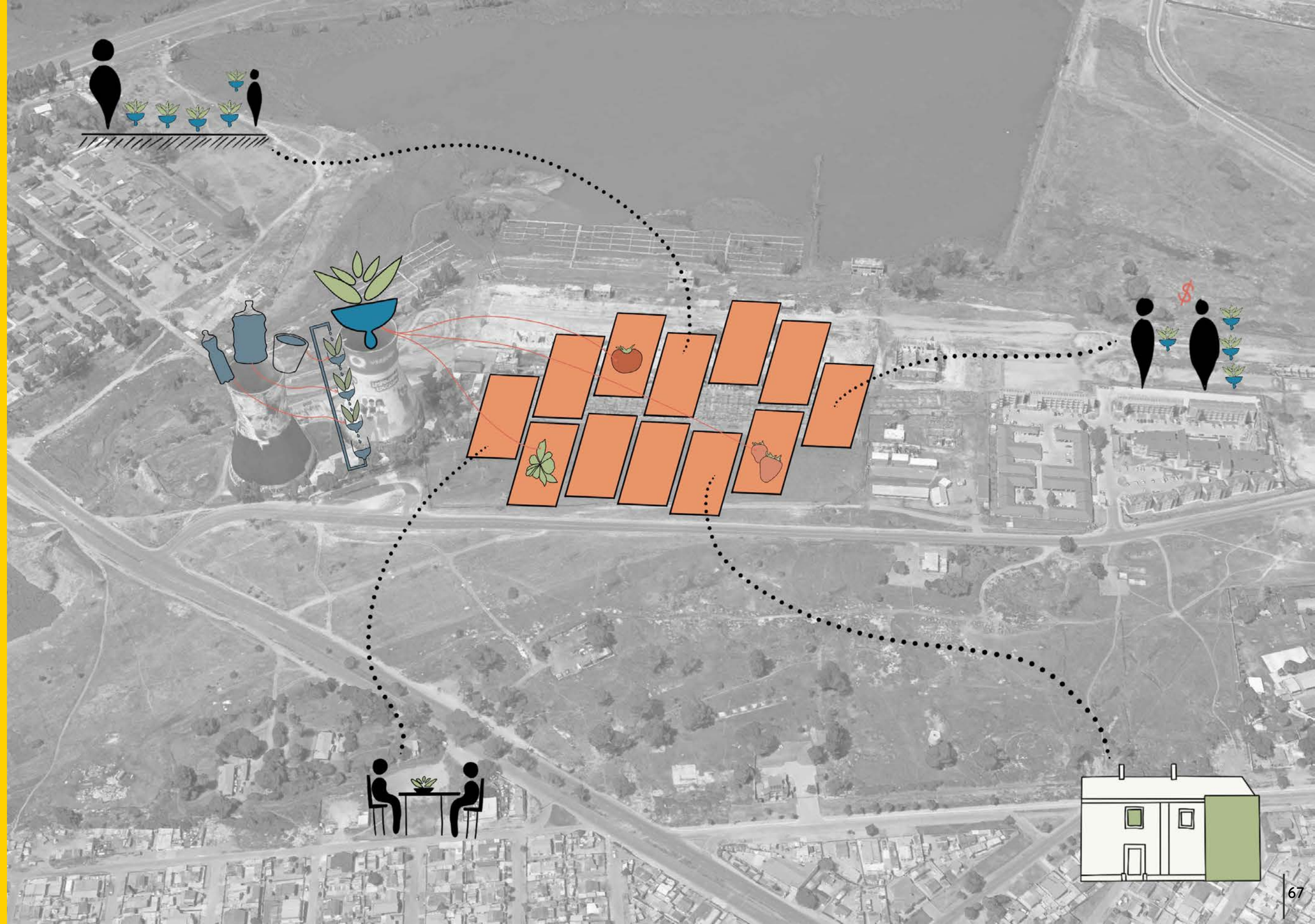


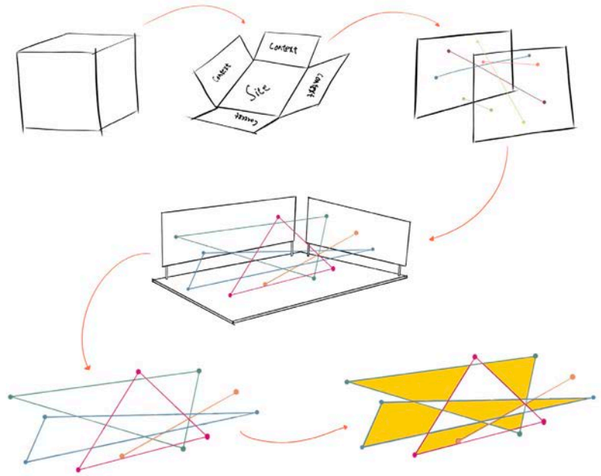
Figure 112
Urban Farming concept applied to dissertation. (Author, 2021)

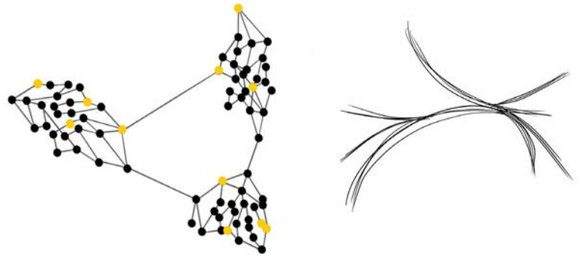
CHARETTE EXPLORATION

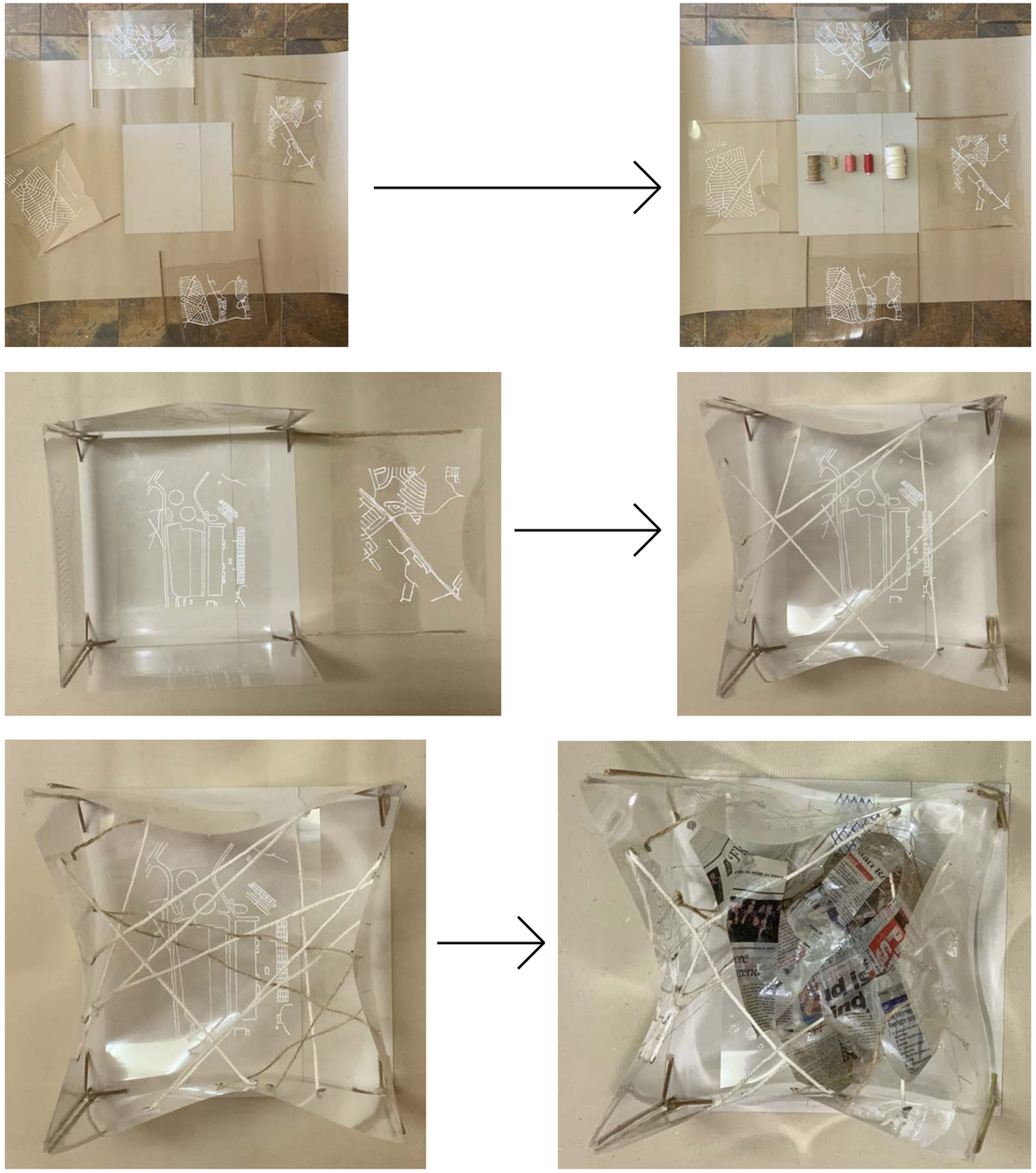


Before getting started, specific keywords were identified that would help inform the direction of the charette exploration. Words such as community led to the exploration of connectivity, leading to movement, tension, and growth. The idea behind this was to identify a logical way of thinking that could be applied to the creative process of the charette exploration. However, the process of charette exploration is ultimately a creative and somewhat chaotic exercise. So it was decided to at first work logically towards creativity and ultimately let the chaos take over. Preliminary concept sketches were made to plan out the approach towards the model-making process. These sketches started following rigid logic at first to inform the chaotic exploration later on while representing the rigid structures put in place by the apartheid government to segregate Soweto and its communities from Johannesburg. To represent this, a box was constructed that would engulf and overwhelm the site located within the center. The surrounding four walls were then painted with urban maps of the surrounding area. Following this, the aim was to visualize connection. To do so various types of ropes and string were used by connecting several places of interest within the surrounding community.

After the connections were made, creating a chaotic web of string that filled up the box, the concept of tension needed to be introduced. This had already been done to some extent due to the ropes pulling the walls inward, but a way to challenge this tension had to be found. It was then decided that bits of old newspaper and plastic would be used to create a paper Mache structure that would be formed by laying down wet strips on the hanging ropes, challenging their tension. Conceptually the walls could be interpreted as an imposed order, the ropes as the communities affected, and the paper Mache as the new intervention supported by the communities.



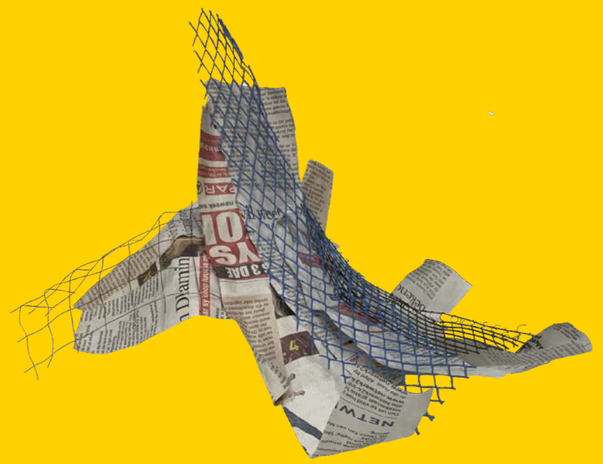


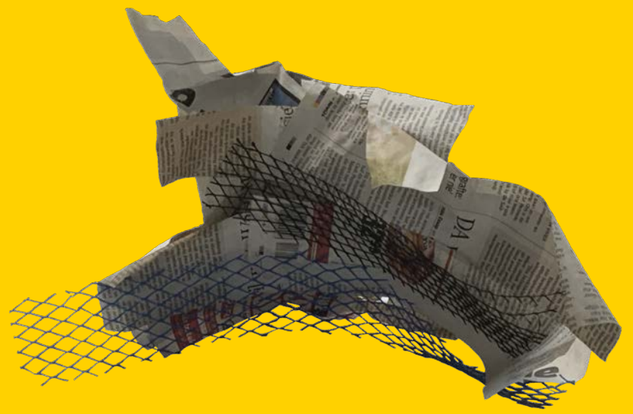


The figure below shows how the process ultimately became chaotic and messy but was informed by a logical plan of action. Following this, the paper Mache model was lifted out from the box and inspected. While taking photos of the models, it became increasingly difficult to capture a clear image. Frustrated, the decision was made to try and capture the model in 3D using a photogrammetry program to do so. The result turned out to be something completely different from what was intended but improved the exploration. The result of the 3D capture distorted the model further and gave it a sense of form and potential for programmatic use.
















The result of the charette exploration was unexpected but satisfactory nevertheless and provided a form of exploration that is uncommon but very intriguing. The use of digital experimentation within architecture is still new and not yet fully explored. This medium of conceptual exploration was beneficial and provided new insight into the possibilities of form-finding through means of digital applications. Untimely, the results of the charette exploration should provide ample data to formulate a conceptual approach to the design development to follow.

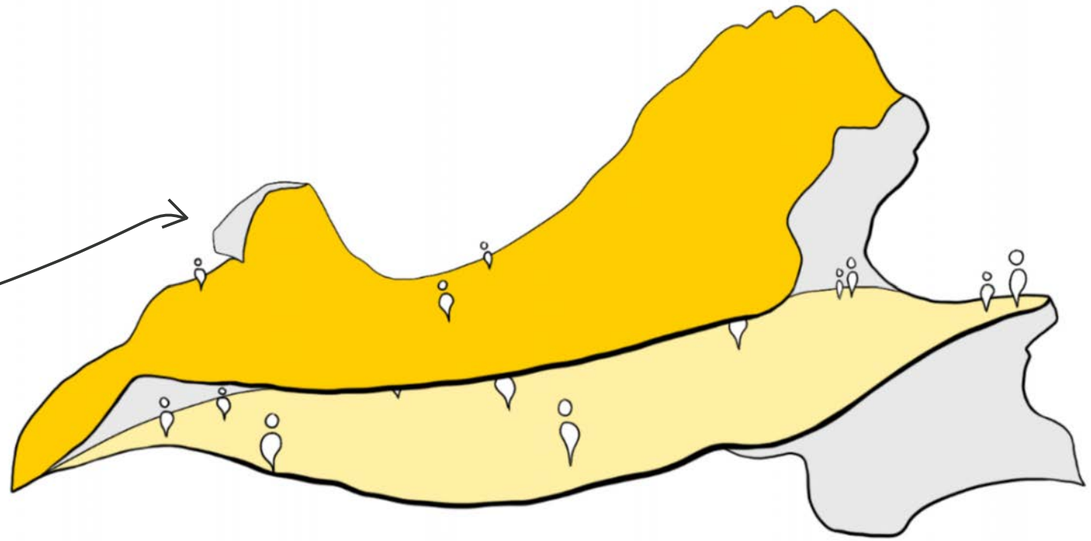


DESIGN DEVELOPMENT







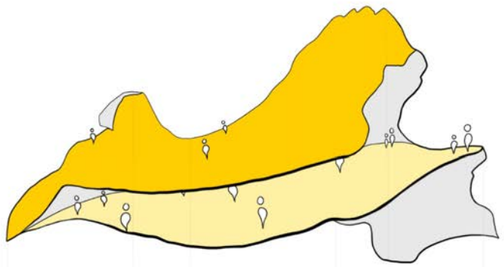


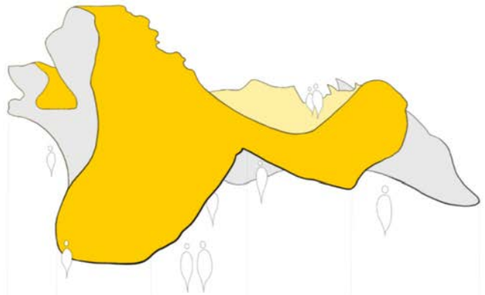


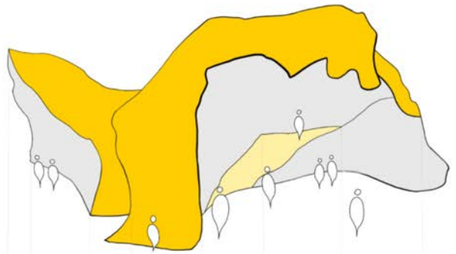


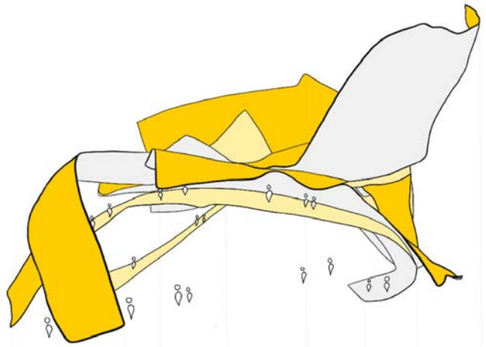


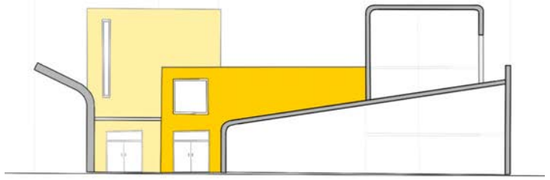


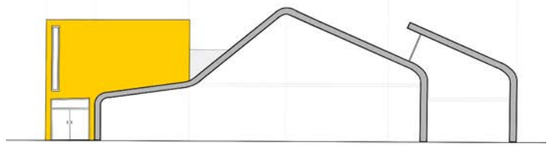


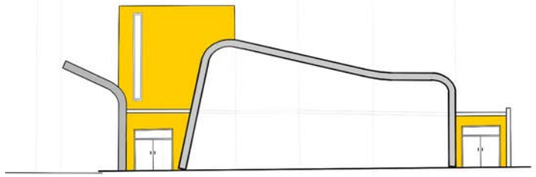




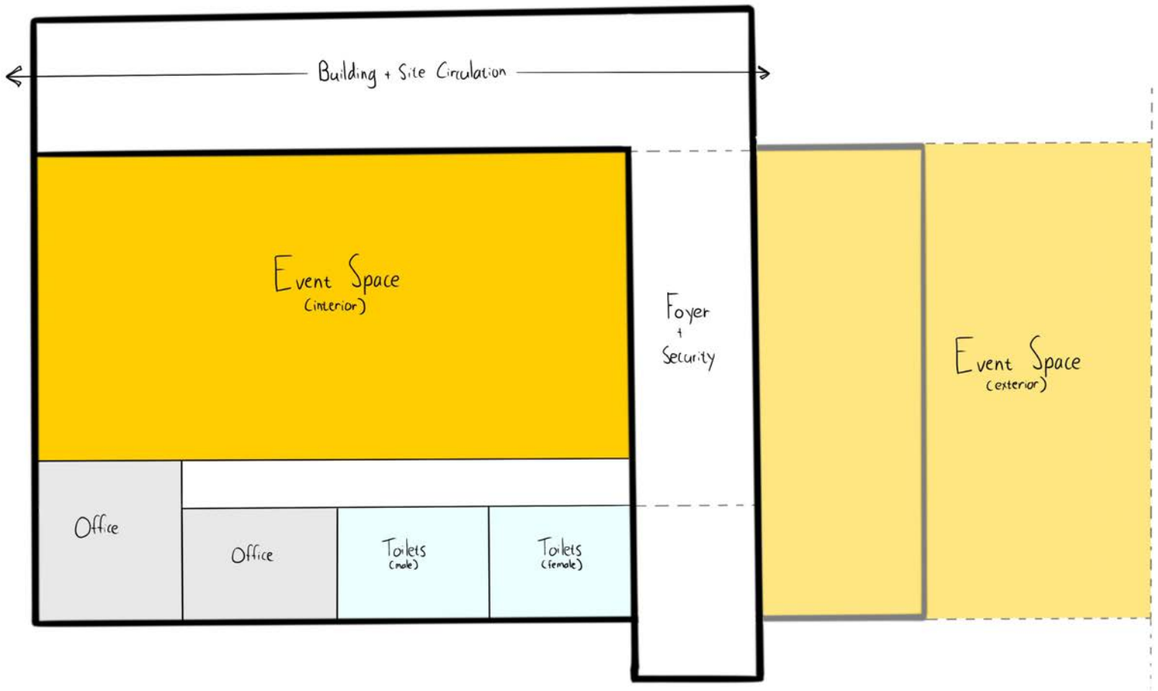


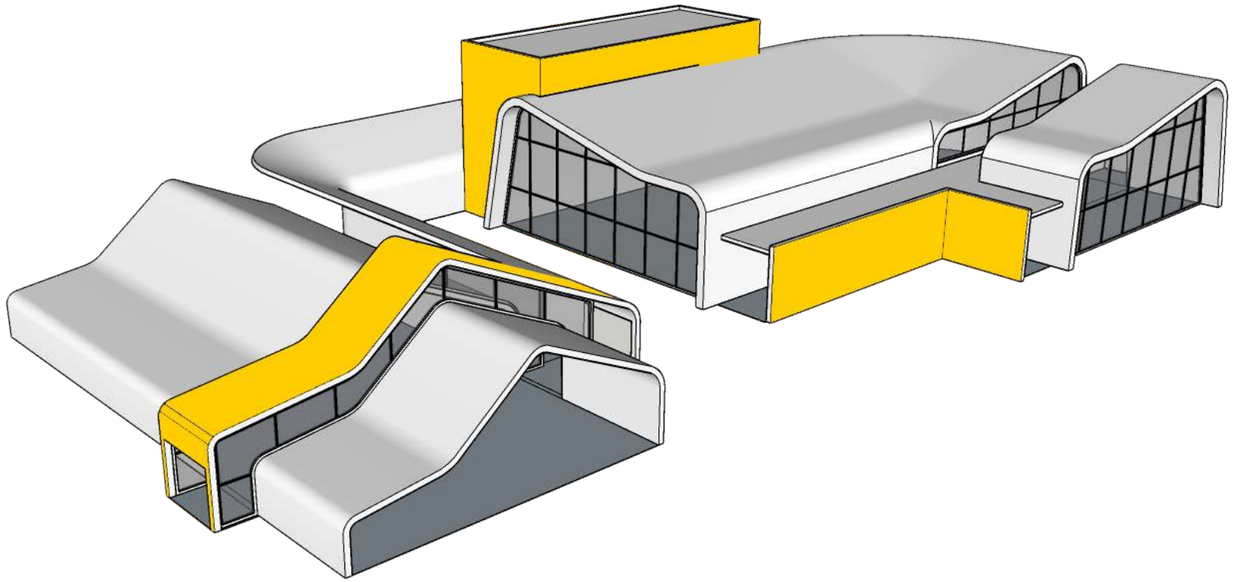


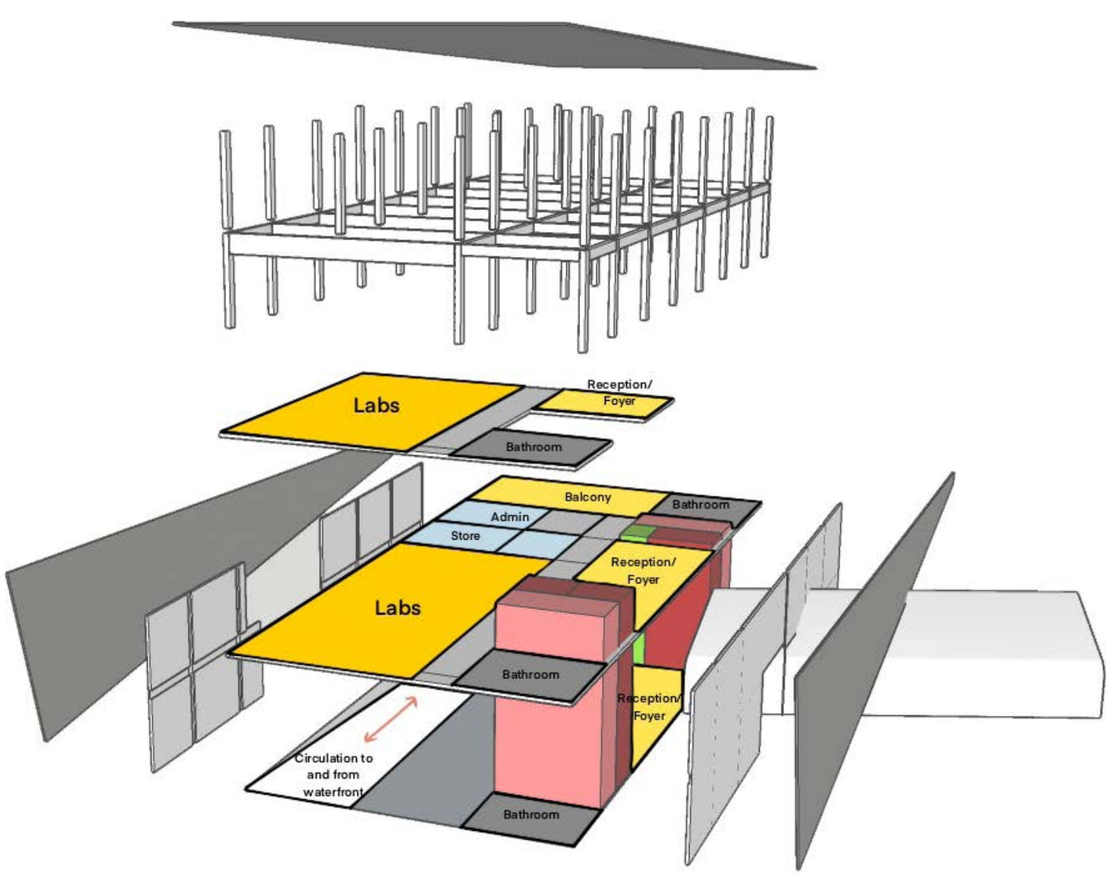


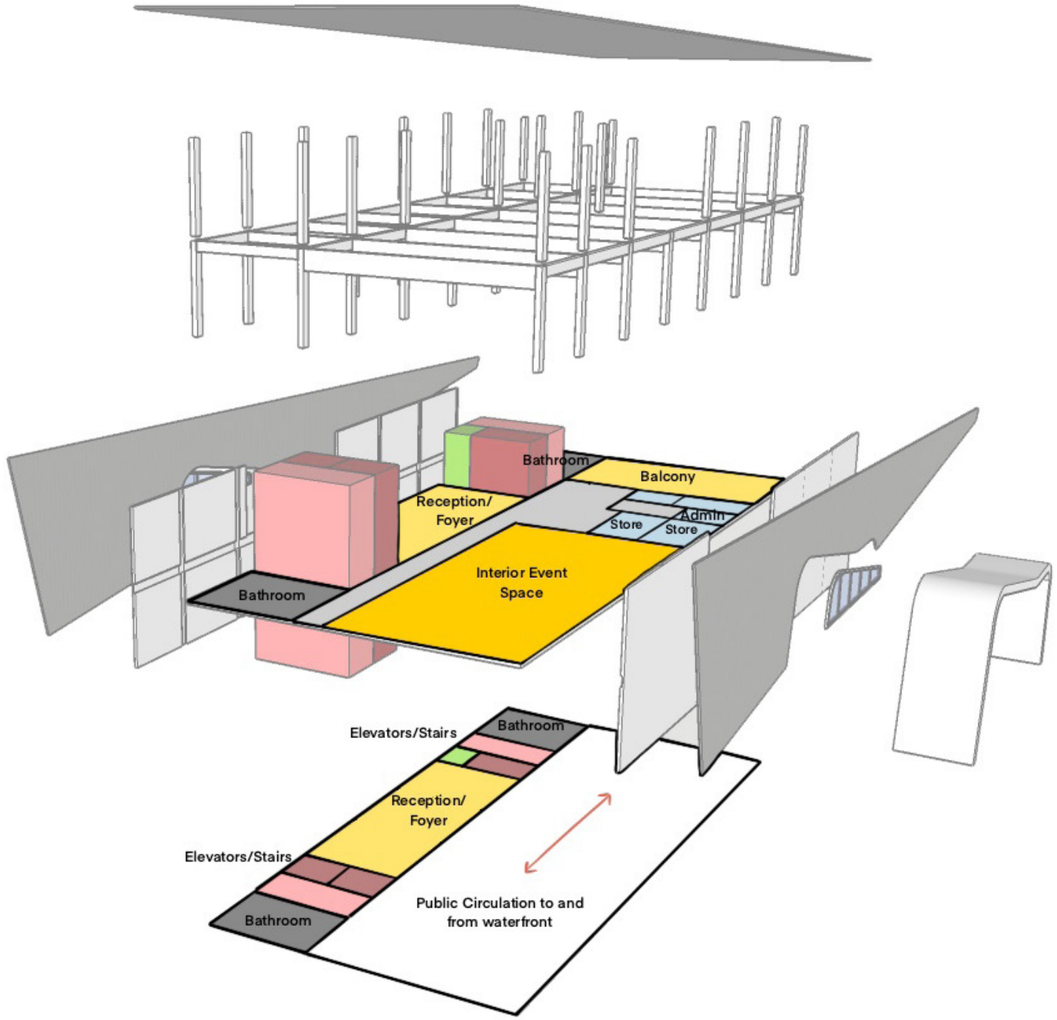





Building + Site Circulation
Event Space
(interior)
Foyer
+
Security
Event Space
(exterior)
Office
Office
Toilets
(male)
Toilets
(female)



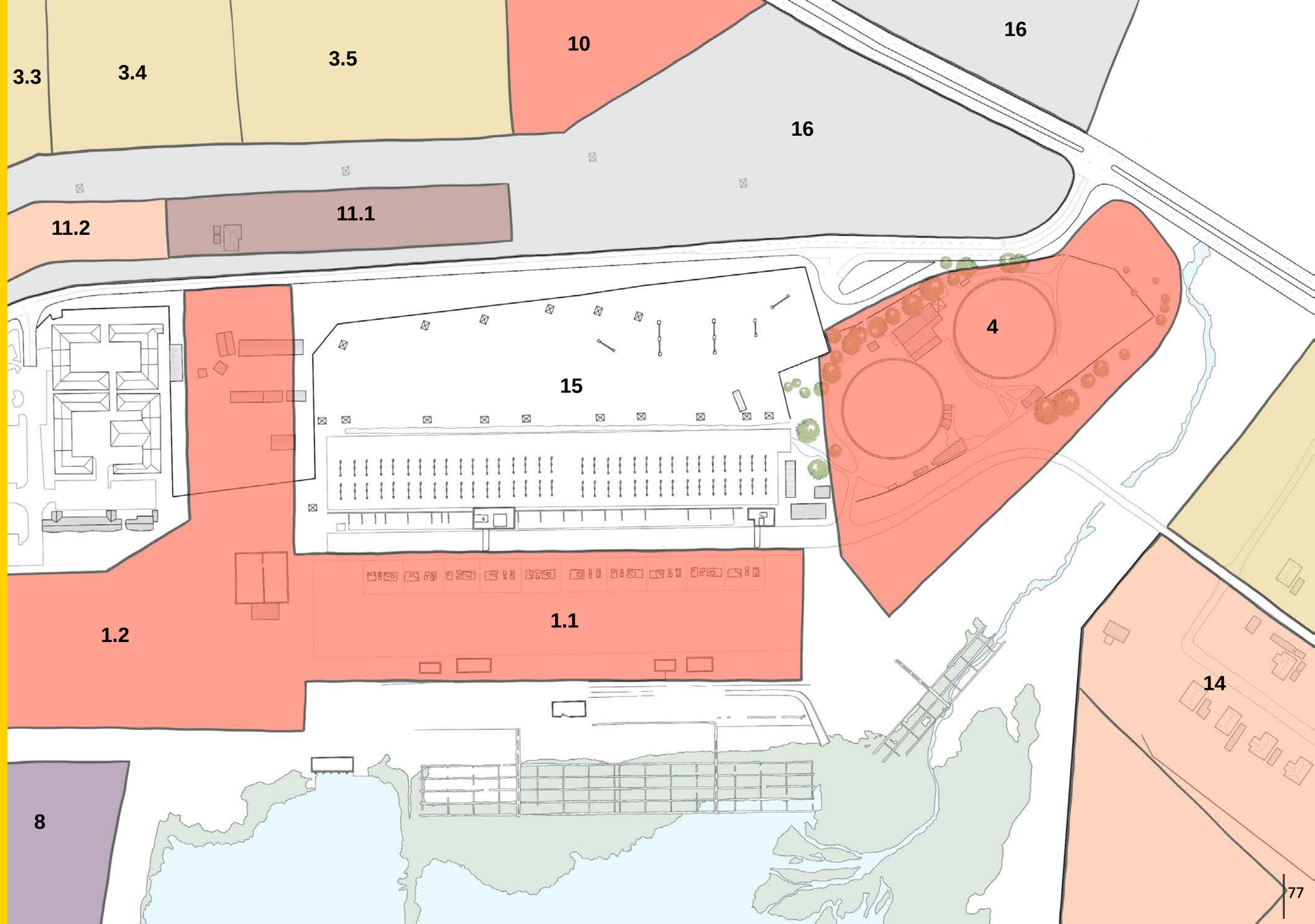

Labs
Reception/
Foyer
Bathroom
Balcony
Admin
Store
Bathroom
Reception/
Foyer
Labs
Bathroom
Reception/
Foyer
Circulation to
and from
waterfront
Bathroom

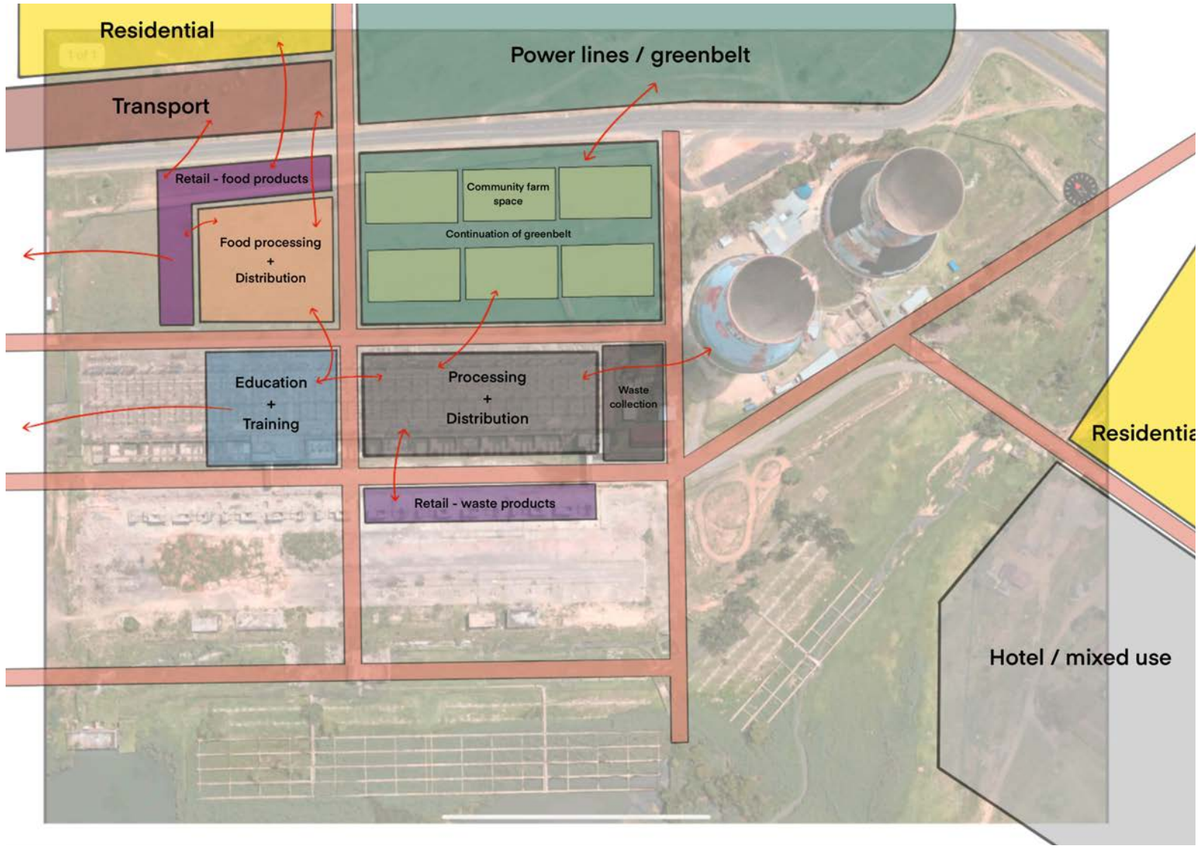

Bathroom
Balcony
Reception/
Foyer
Store
Admin
Store
Interior Event
Space
Bathroom
Elevators/Stairs
Bathroom
Reception/
Foyer
Elevators/Stairs
Public Circulation to and
from waterfront
Bathroom

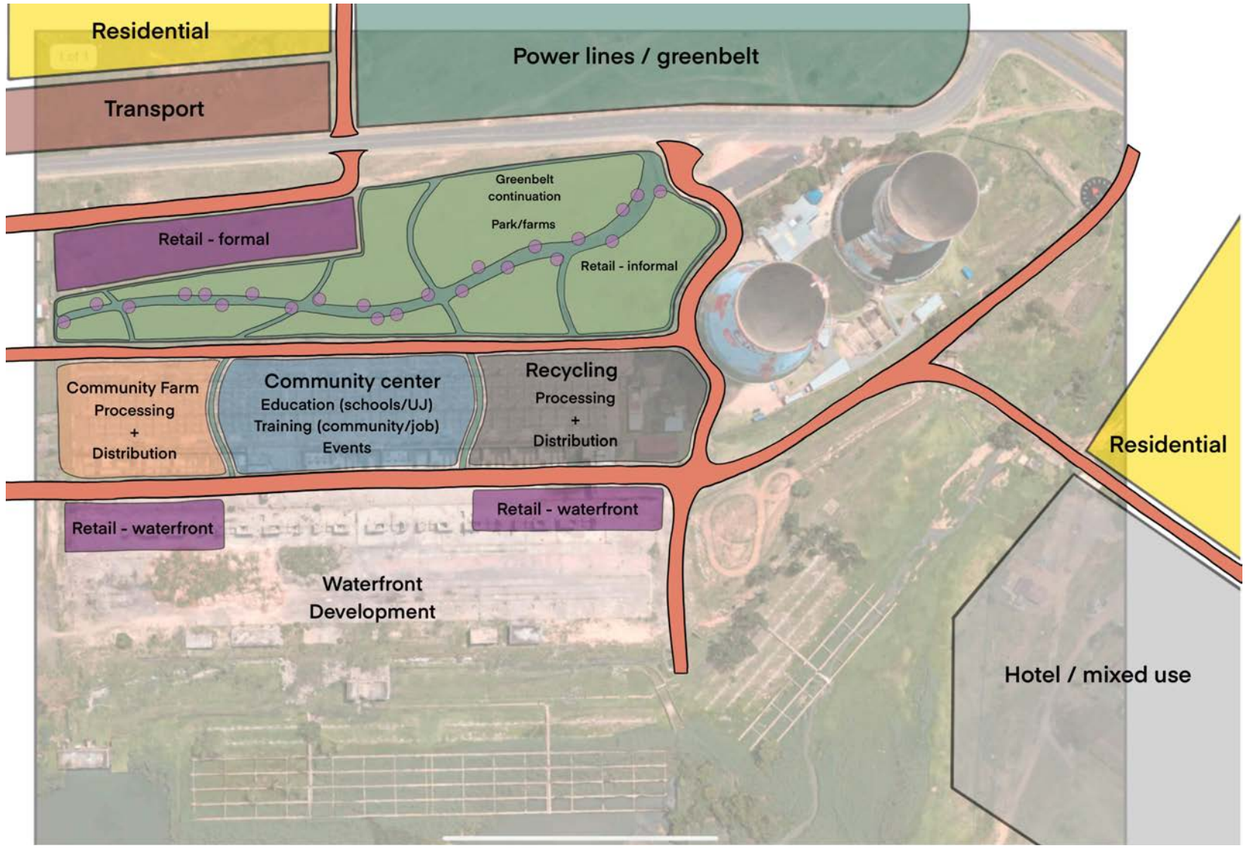


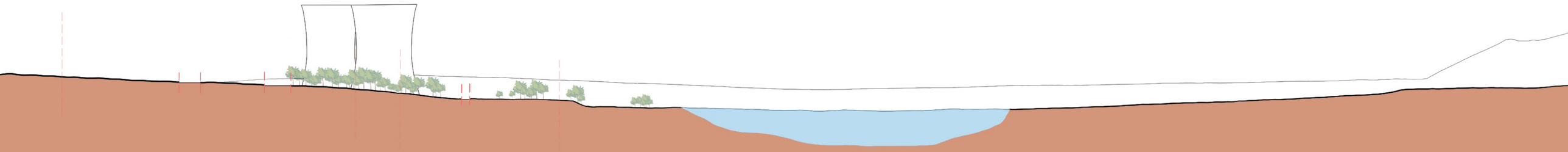
Proposed Zoning

1.1 Power Station Site
1.2 Shopping Centre
2. Orlando Hostels (developed)
3.1 Mixed Use
3.2 Residential
3.3 Ekhaya Villages
3.4 Ekhaya Villages
3.5 Ekhaya Villages
3.6 Residential
3.7 Residential
3.8 Residential
3.9 Mixed Use
4. Orlando Towers
5. Waterfront Park
6. University of Johannesburg
7. Bird Sanctuary
8. Innovation Centre
9a. Ashambe Convenience Retail (developed)
9b. Buisiness Site
10. Buisiness Site
11.1 Transport
11.2 Mixed Use
12. Hardware / Buisiness
13. Buisiness
14. Hotel / Mixed Use
15. Substation & Electricity Lines
16. Power Lines
17. Buisiness Site
18. Residential
19. Residential
20. Residential
21. Residential
22. Residential
23. Buisiness Site




Residential
Power lines / greenbelt
Transport
Retail - food products
Food processing
+
Distribution
Community farm space
Continuation of greenbelt
Education
+
Training
Processing
+
Distribution
Waste collection
Retail - waste products
Residentia
Hotel / mixed use


Residential
Power lines / greenbelt
Transport
Greenbelt continuation
Park/farms
Retail - formal
Retail - informal
Community Farm
Processing
+
Distribution
Community center
Education (schools/UJ)
Training (community/job)
Events
Recycling
Processing
+
Distribution
Retail - waterfront
Retail - waterfront
Waterfront
Development
Residential
Hotel / mixed use









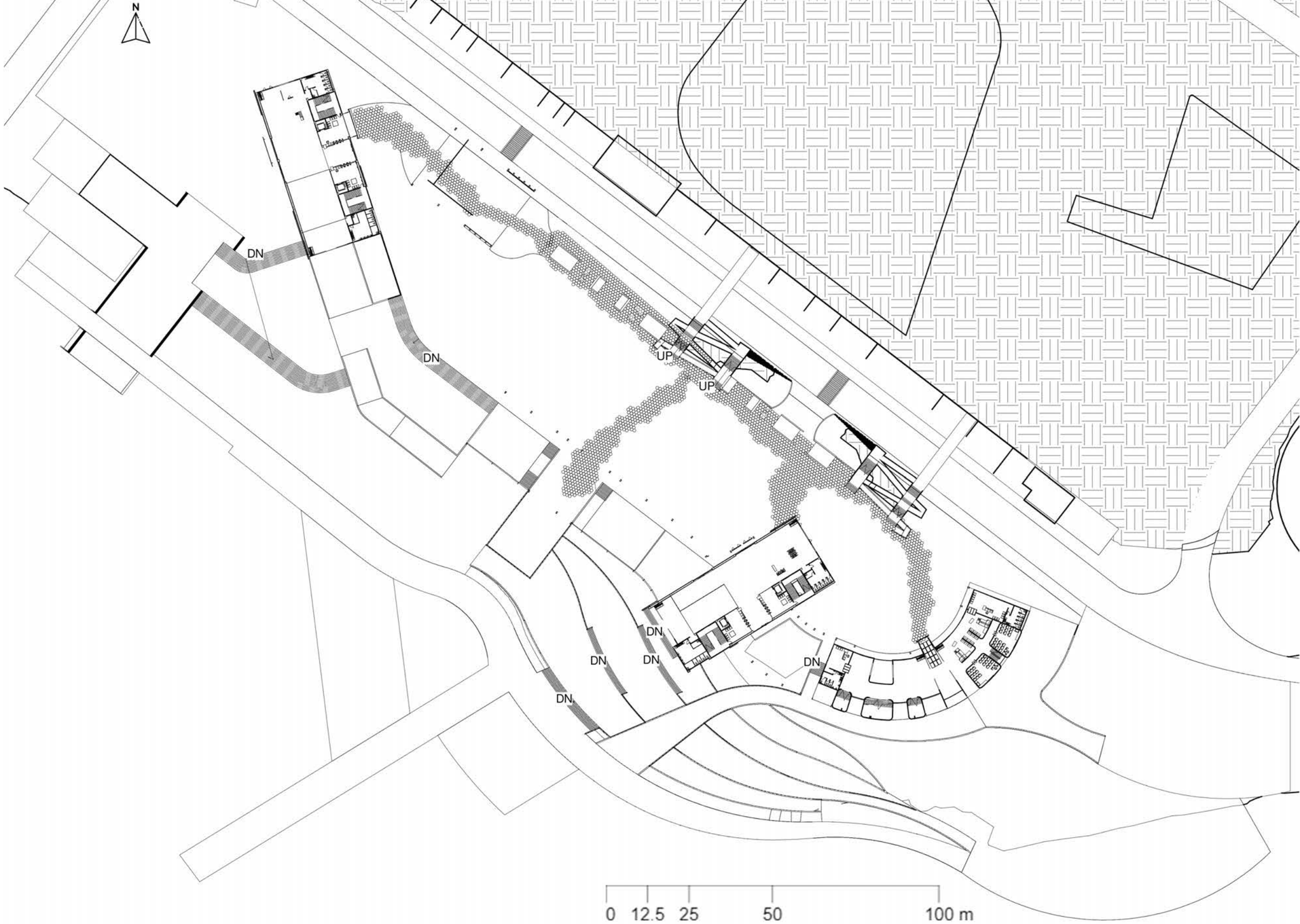

Meadowlands East
Orlando West
Orlando East
Soweto
Diepmeadow
Klipspruit
Primville
Johannesburg South



Ekhaya Percinct Proposal



Site Plan



Sustainability Center



Waterfront Perspective



Ground Floor

1. Arrival space, journey through local history and exhibitions.

2/3. Reception (Restricted).

4/5. Woman and mens bathroom respectively.

6/7. Fire Escape staircase

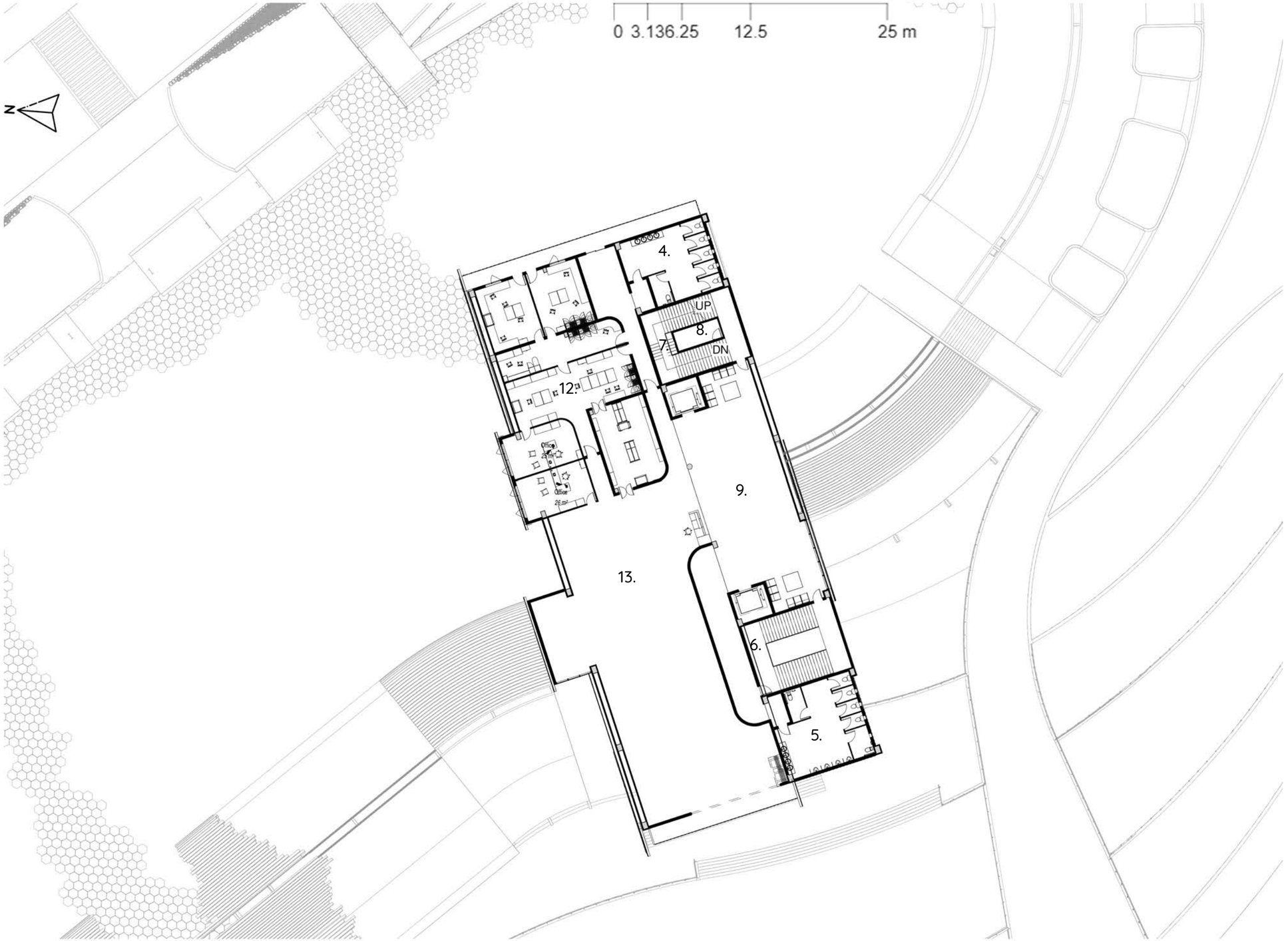
8. Service Core

9. Foyer

Mezzanine

10/11. Gathering Space that give overhead view of ground floor history journey and exhibitions.





First Floor

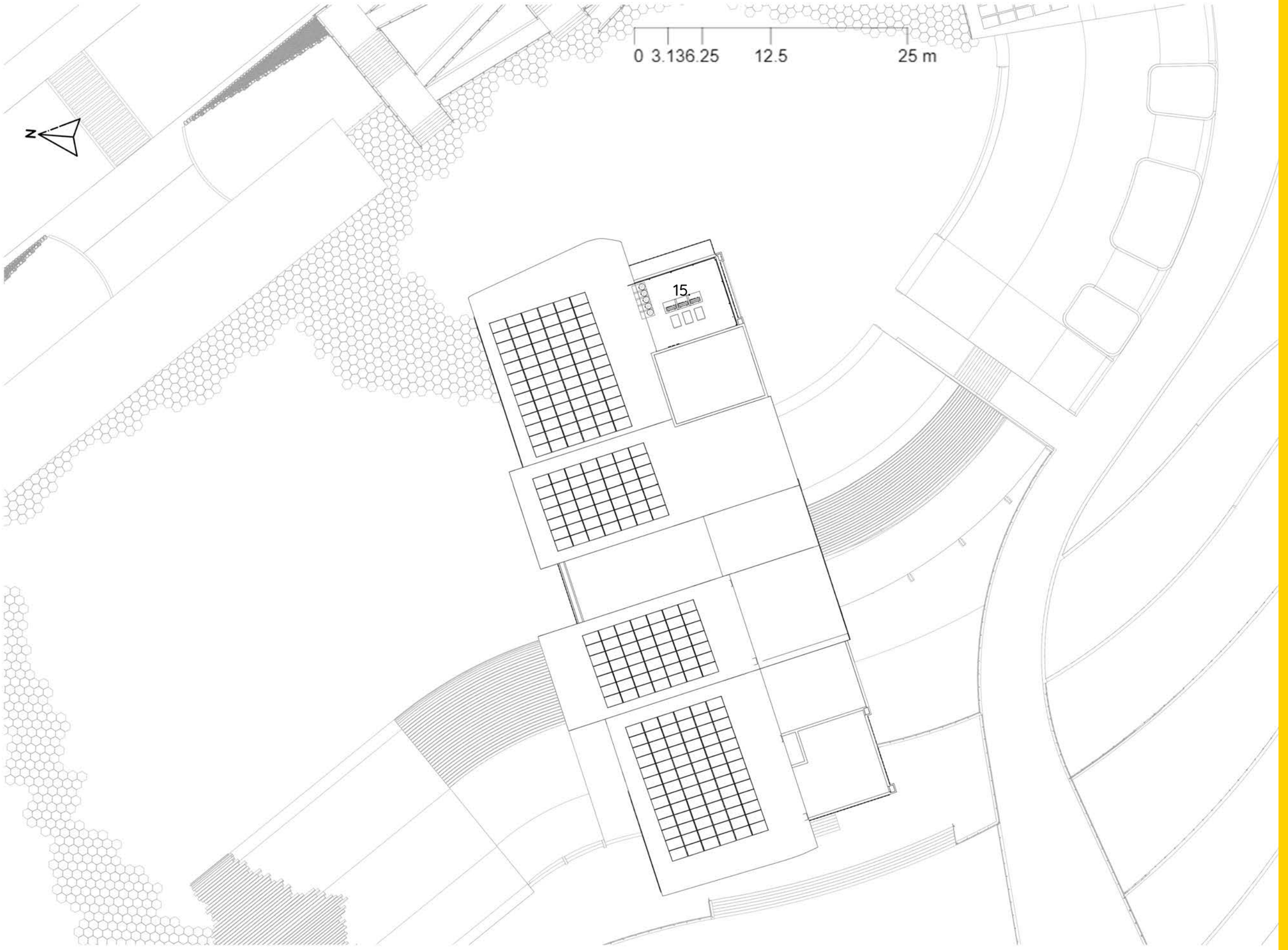
12. Agricultural and material laboratories.

13. Communal Eduvation Space

Second Floor

14. Educational Laboratory

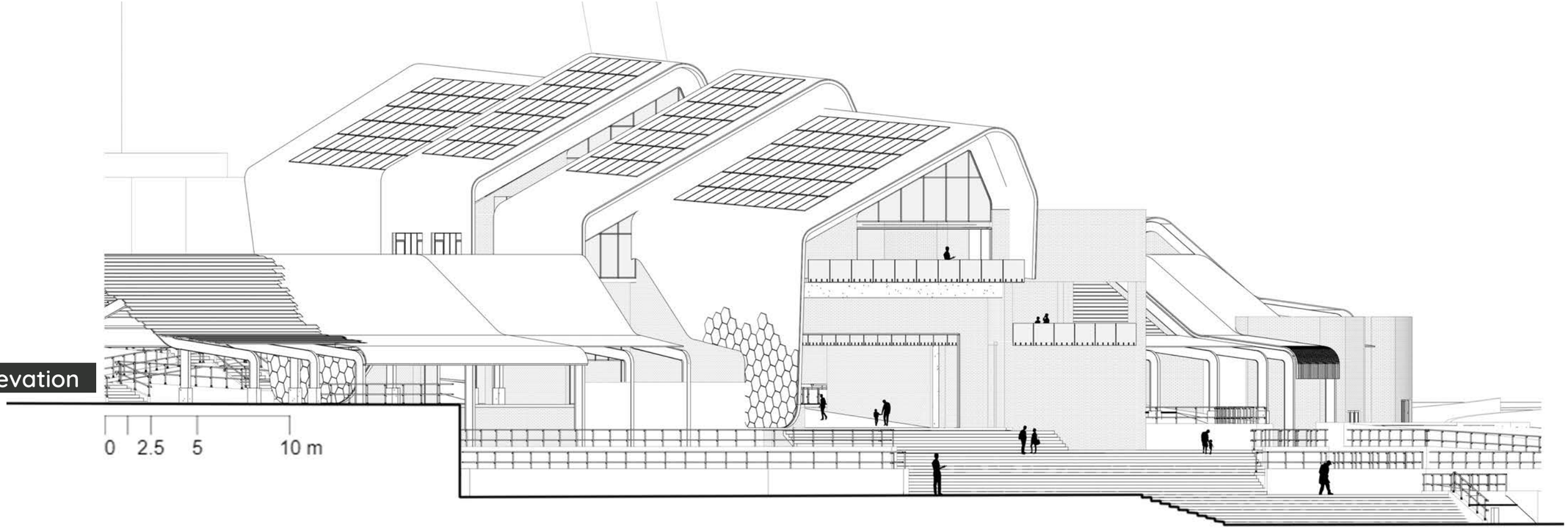


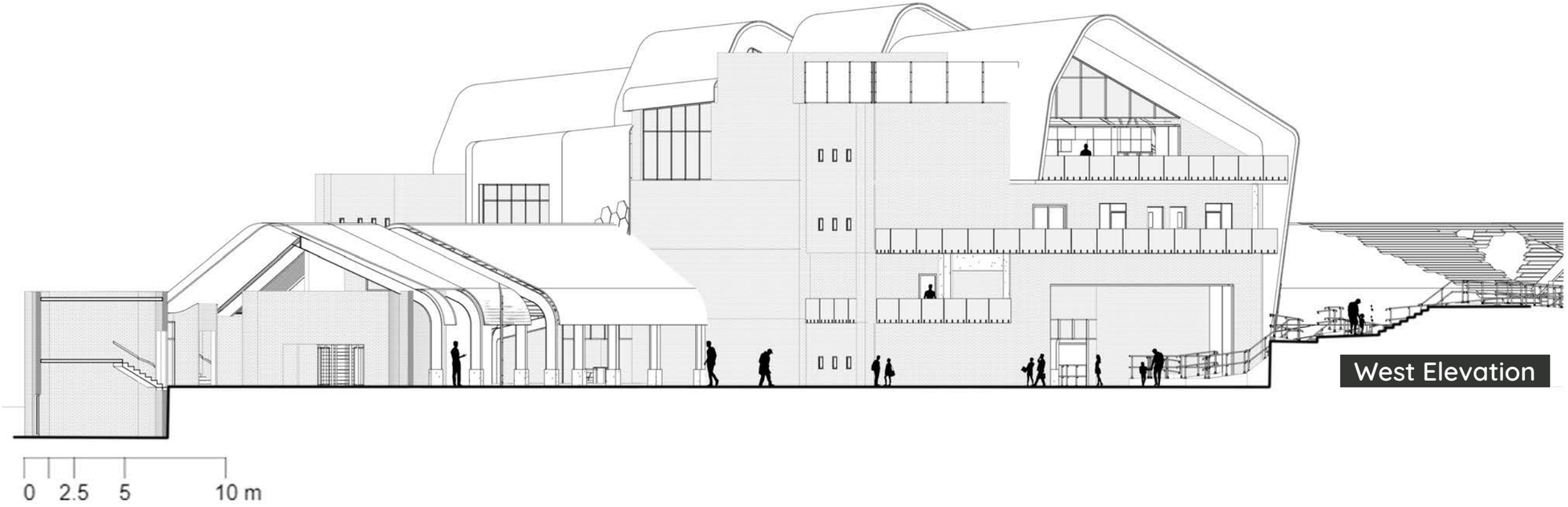


Roof Plan

15. Mechanical Room

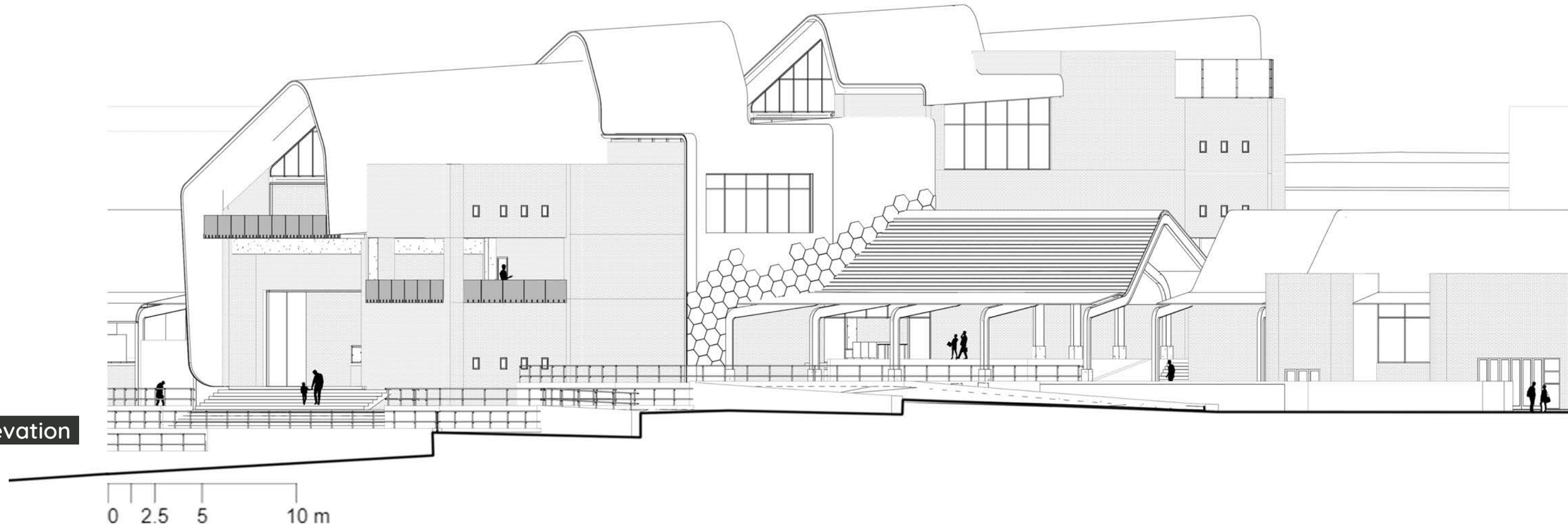
East Elevation

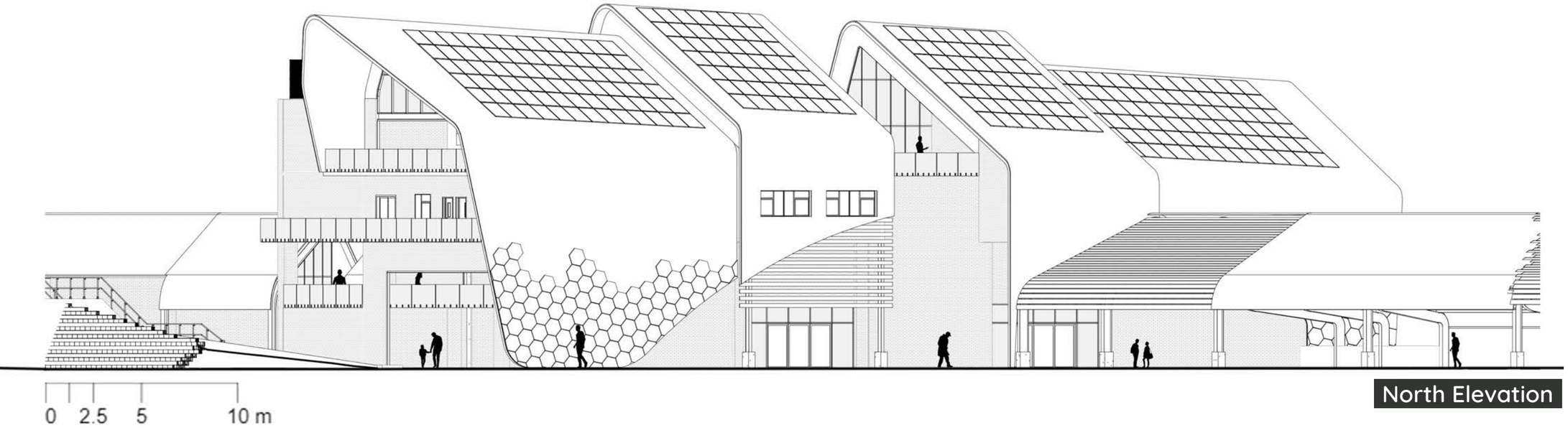




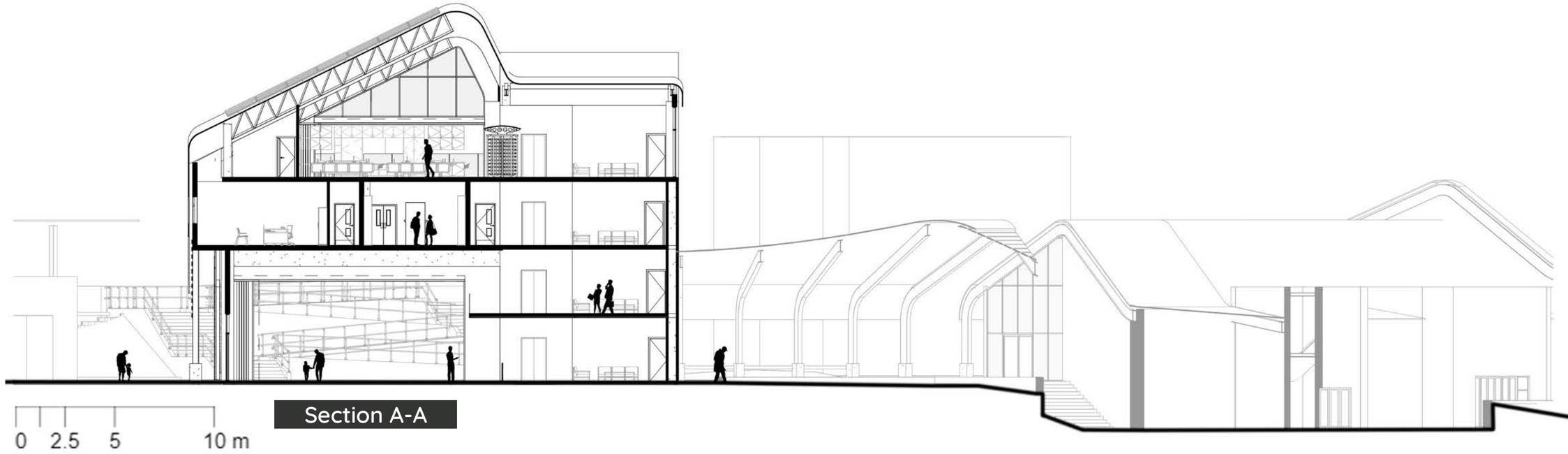
West Elevation

South Elevation

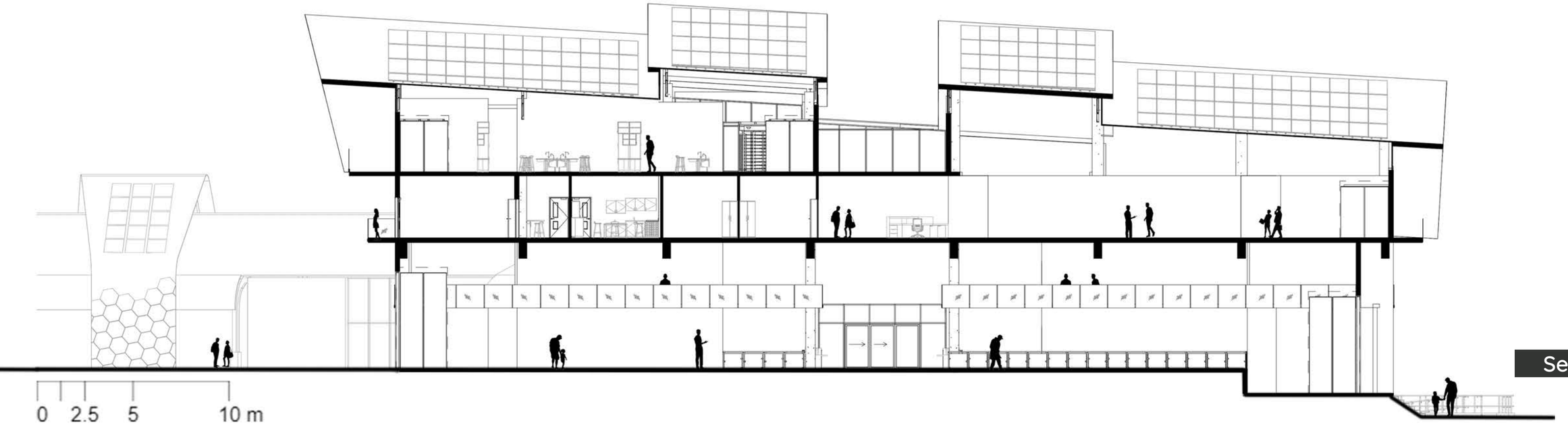




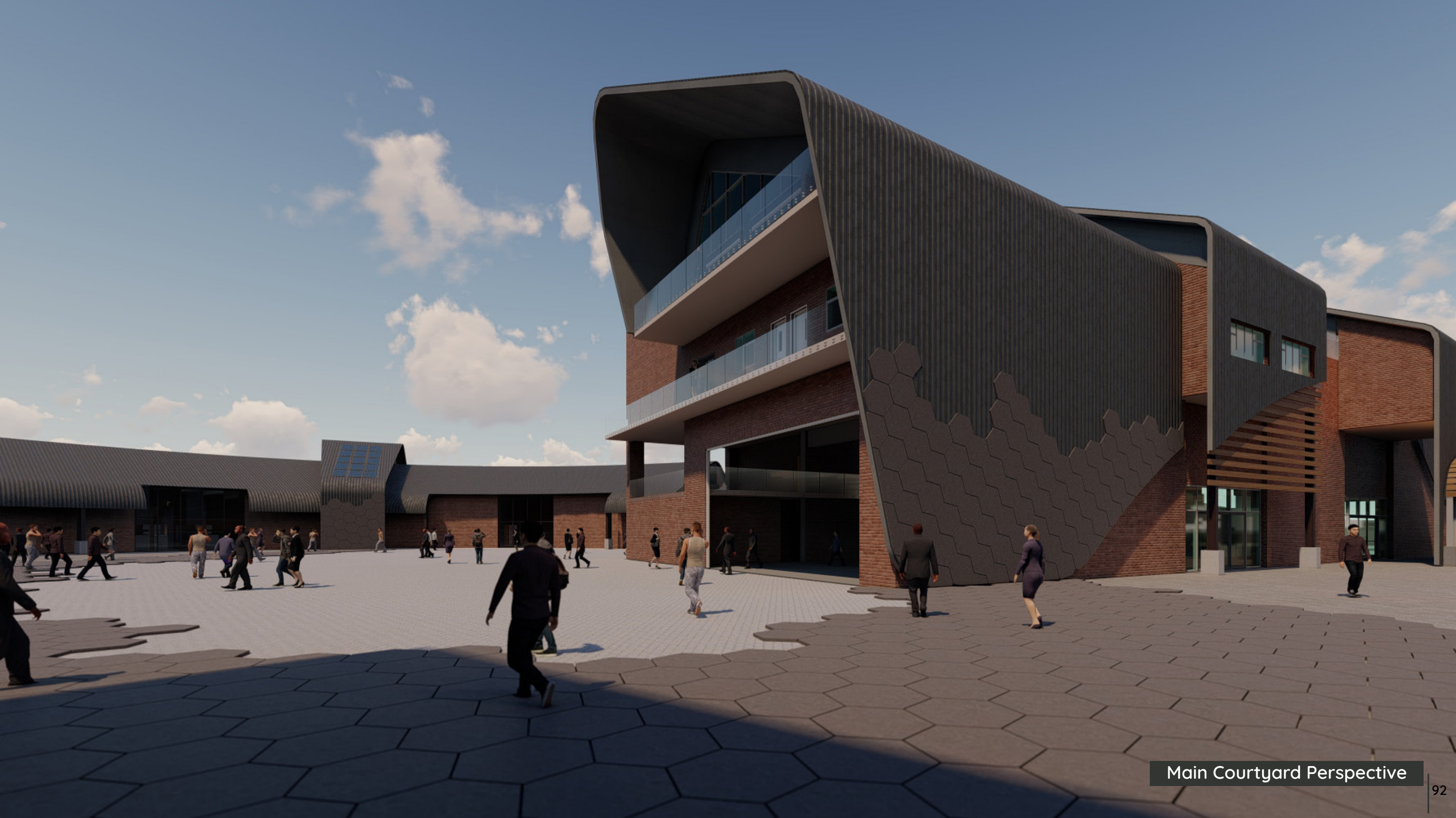
North Elevation



Section A-A

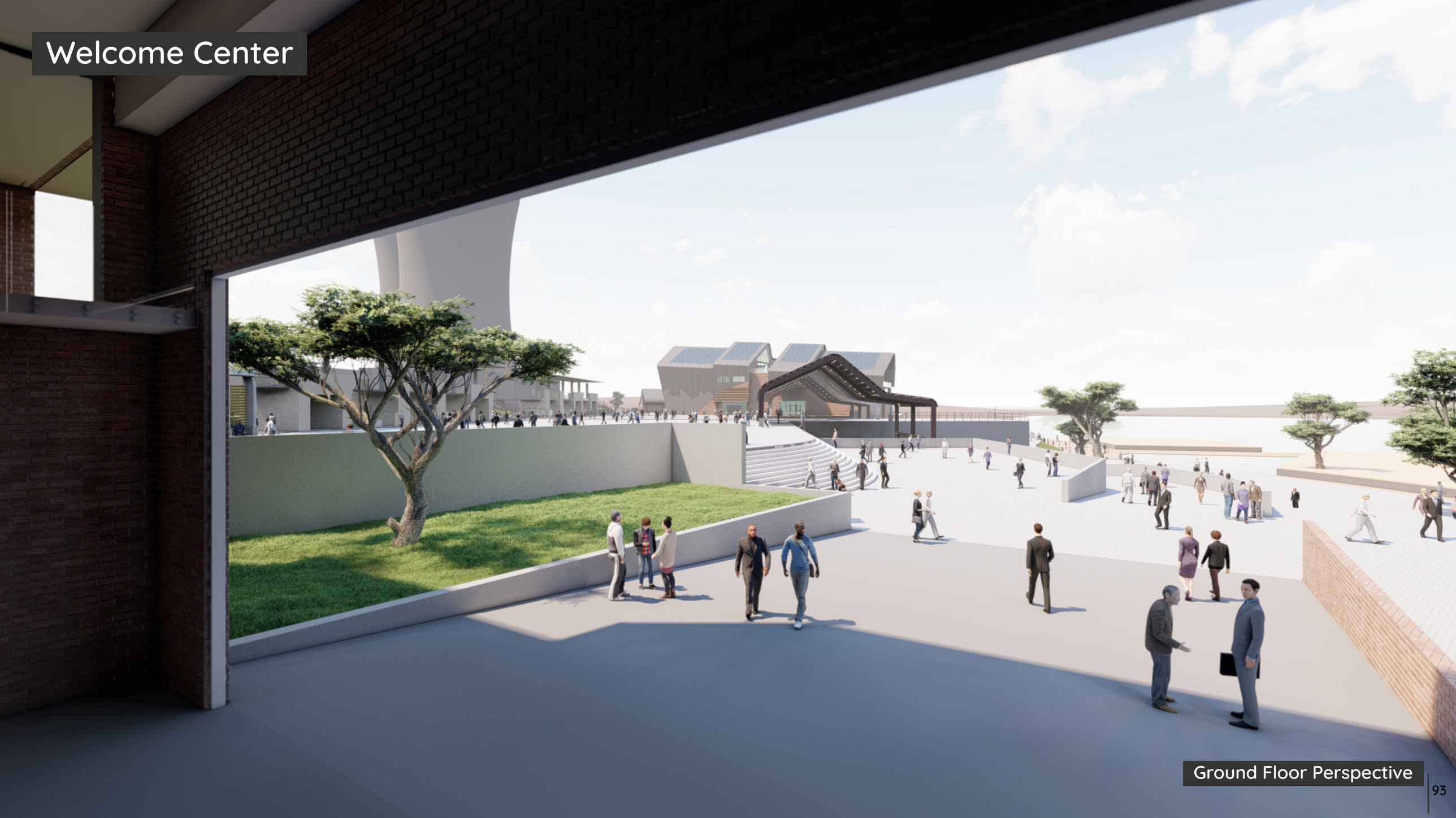


Section B-B



Main Courtyard Perspective

Welcome Center



Ground Floor Perspective

Ground Floor

1. Arrival space, journey through local history and exhibitions.

2/3. Reception (Restricted).

4/5. Woman and mens bathroom respectively.

6/7. Fire Escape staircase

8. Service Core

9. Foyer





Mezzanine

10/11. Gathering Space that give overhead view of ground floor history journey and exhibitions.

First Floor

12. Vommunal Event Space

13. Offices



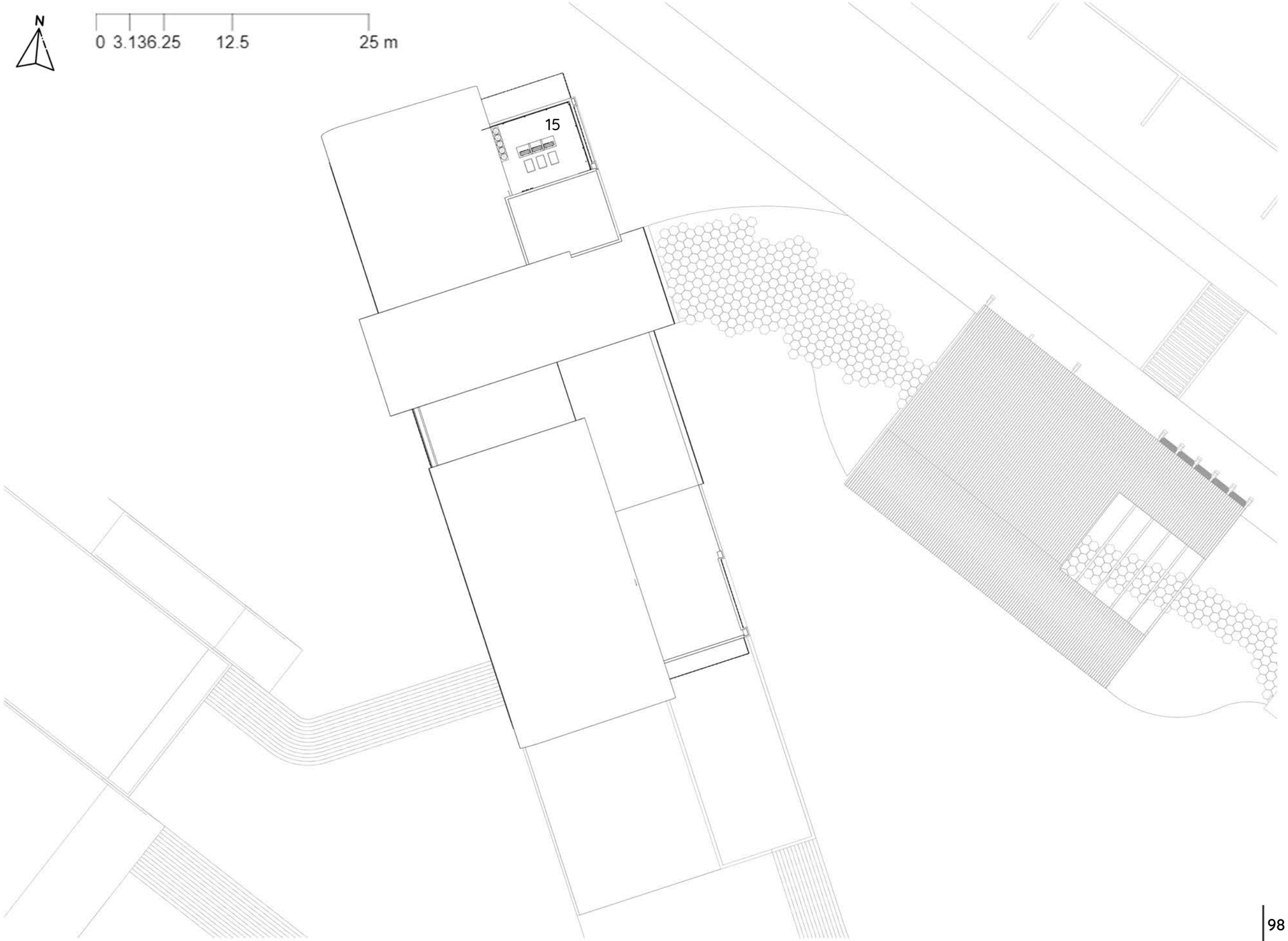


Second Floor

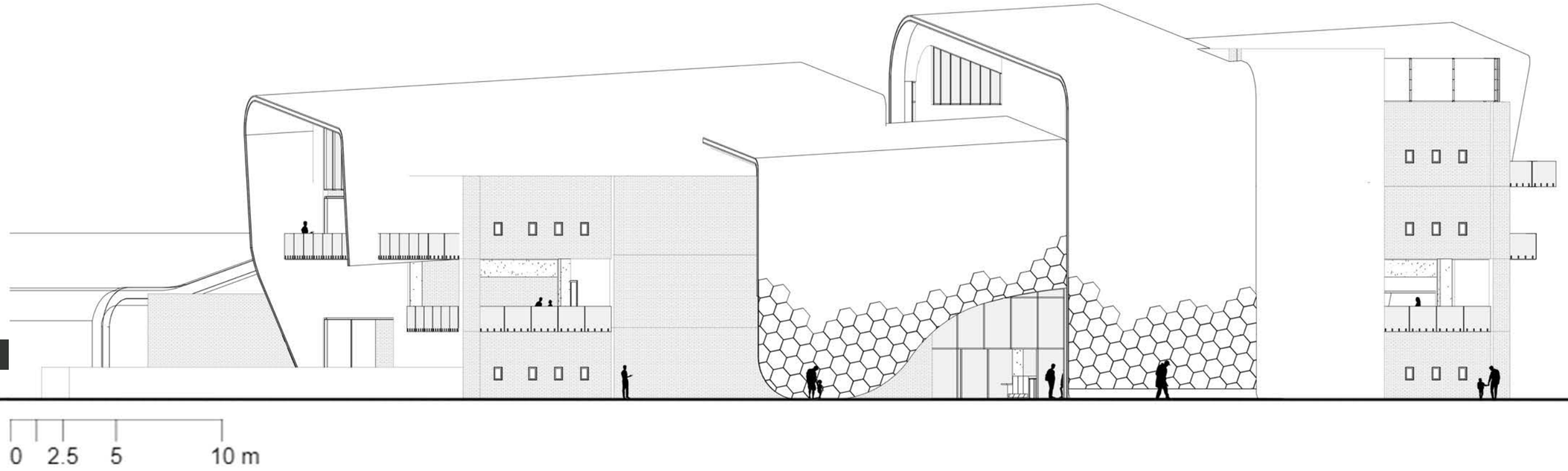
14. Private Event Space

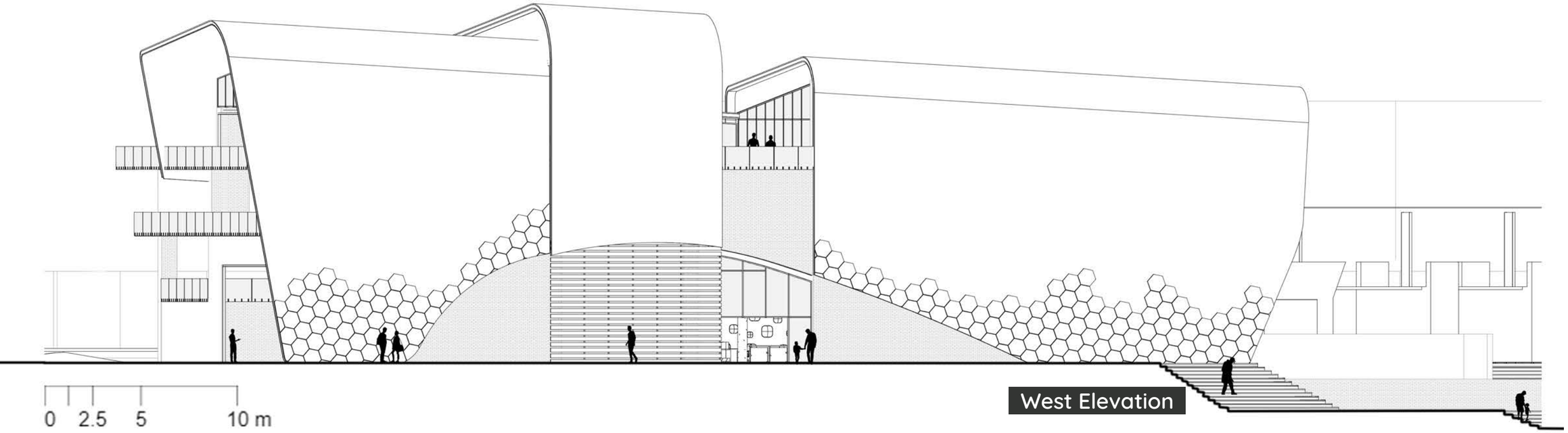
Roof Plan

15. Mechanical Room



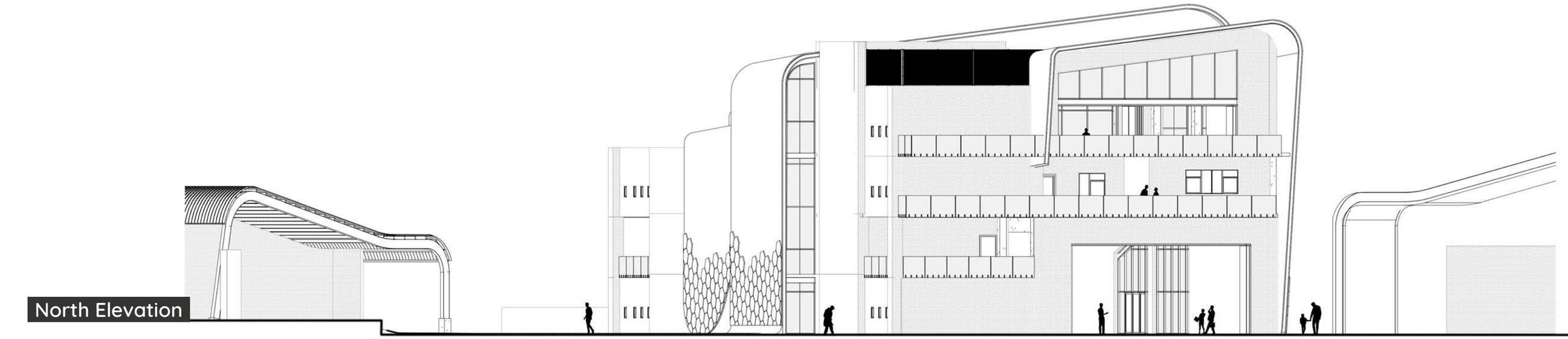
East Elevation

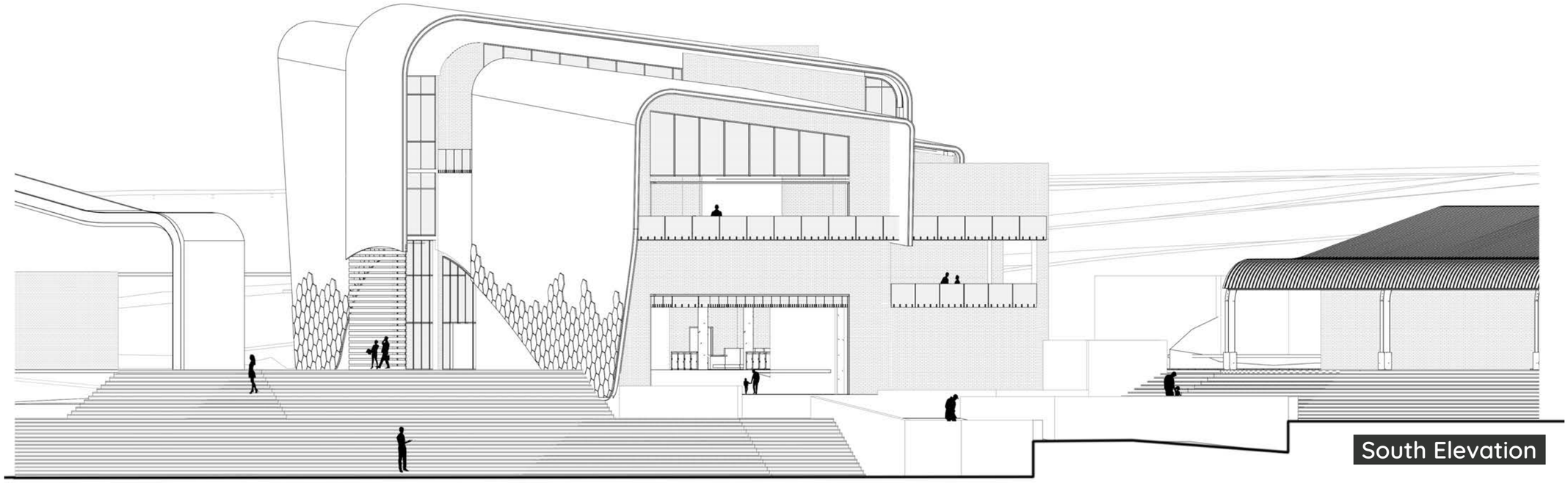




West Elevation

North Elevation

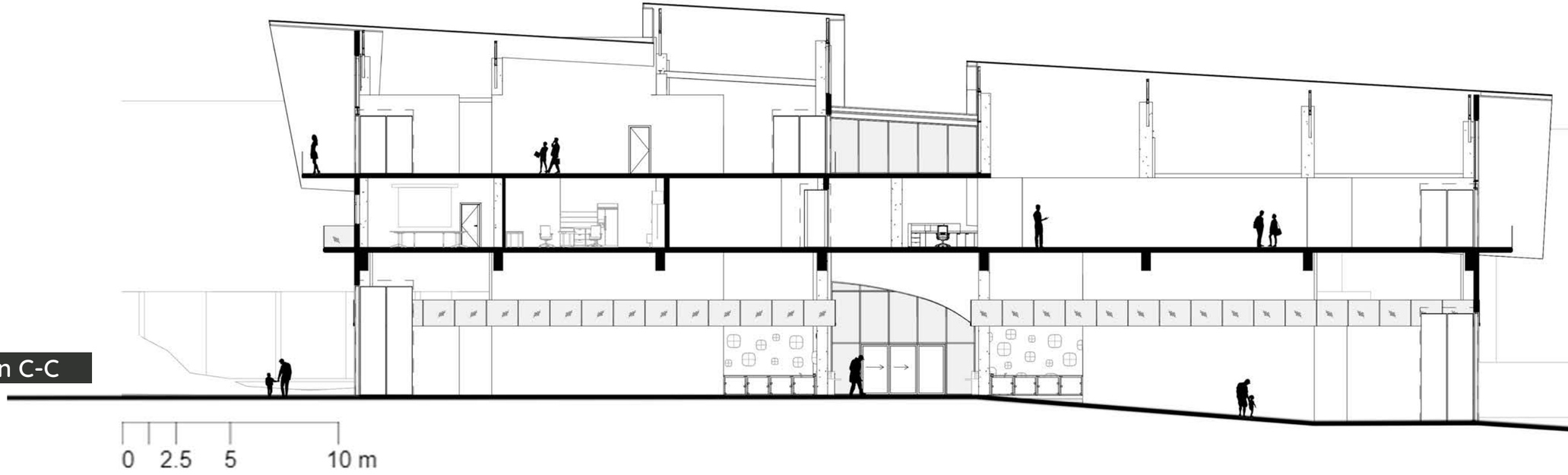


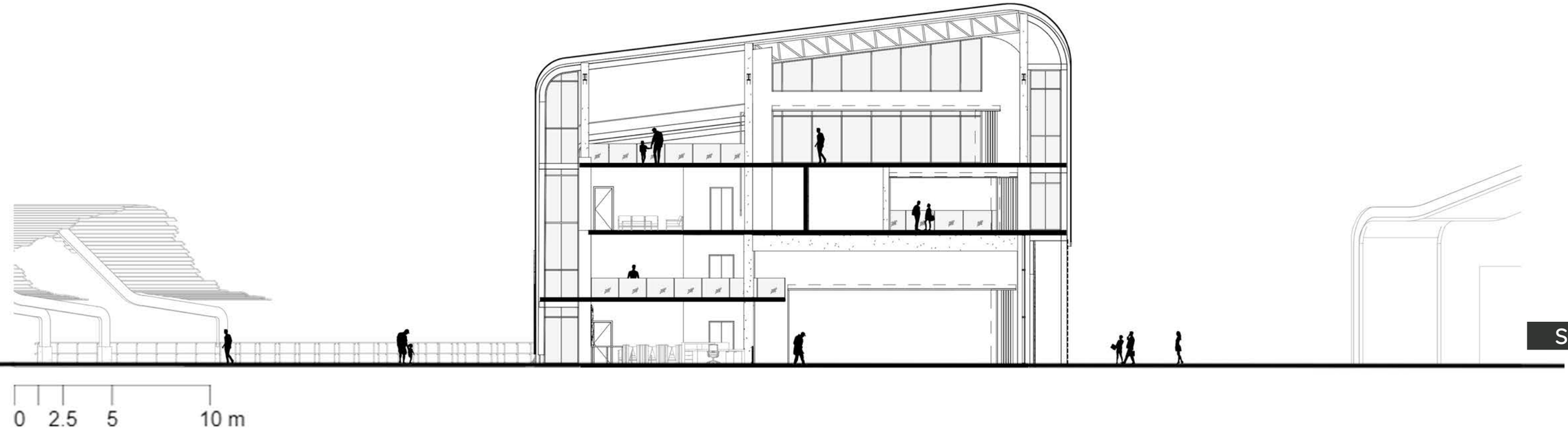


South Elevation

0 2.5 5 10 m

Section C-C





Section D-D

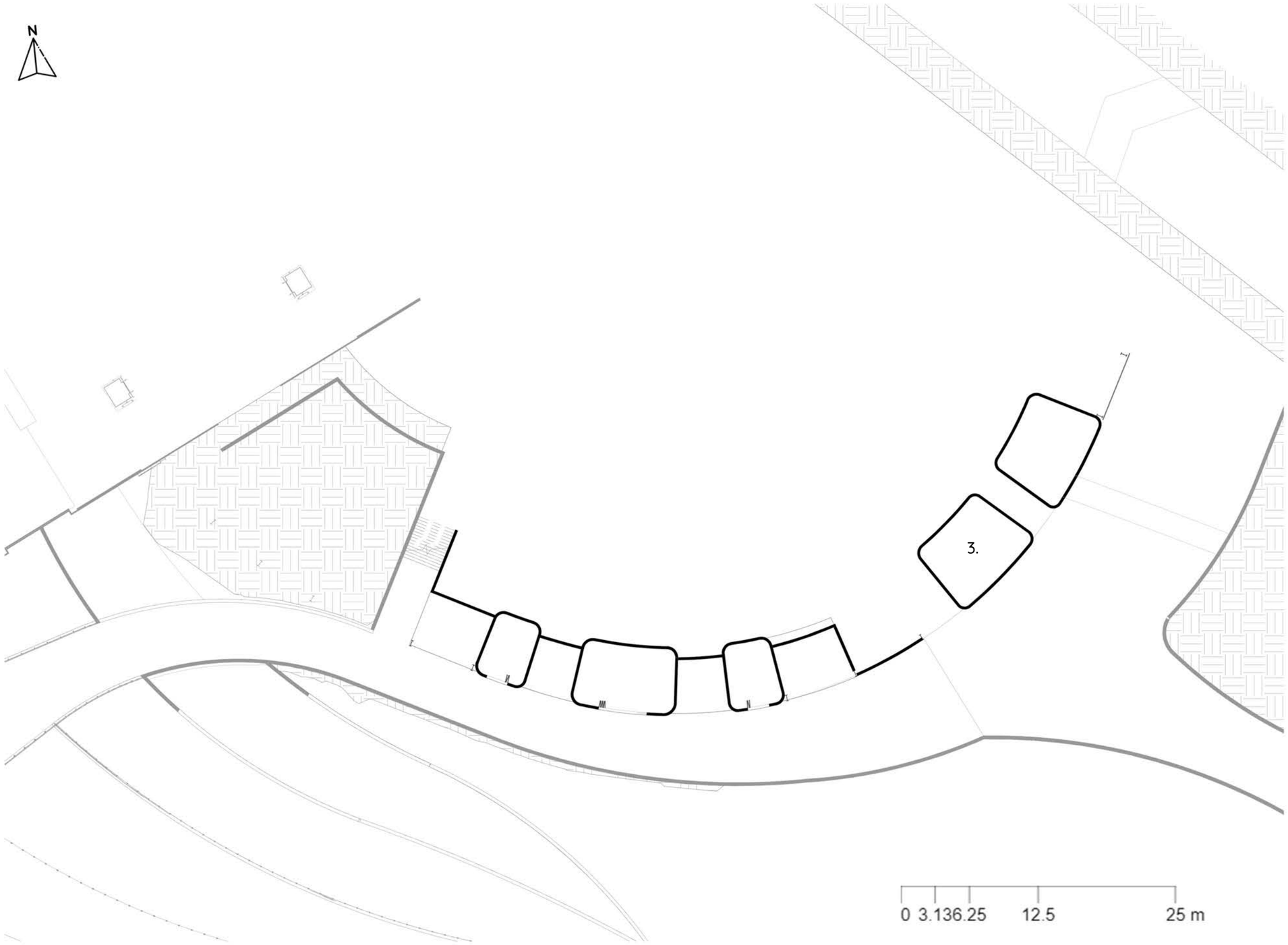


Ground Floor

1. Workshop Education + Labs

2. Material Construction Workshop

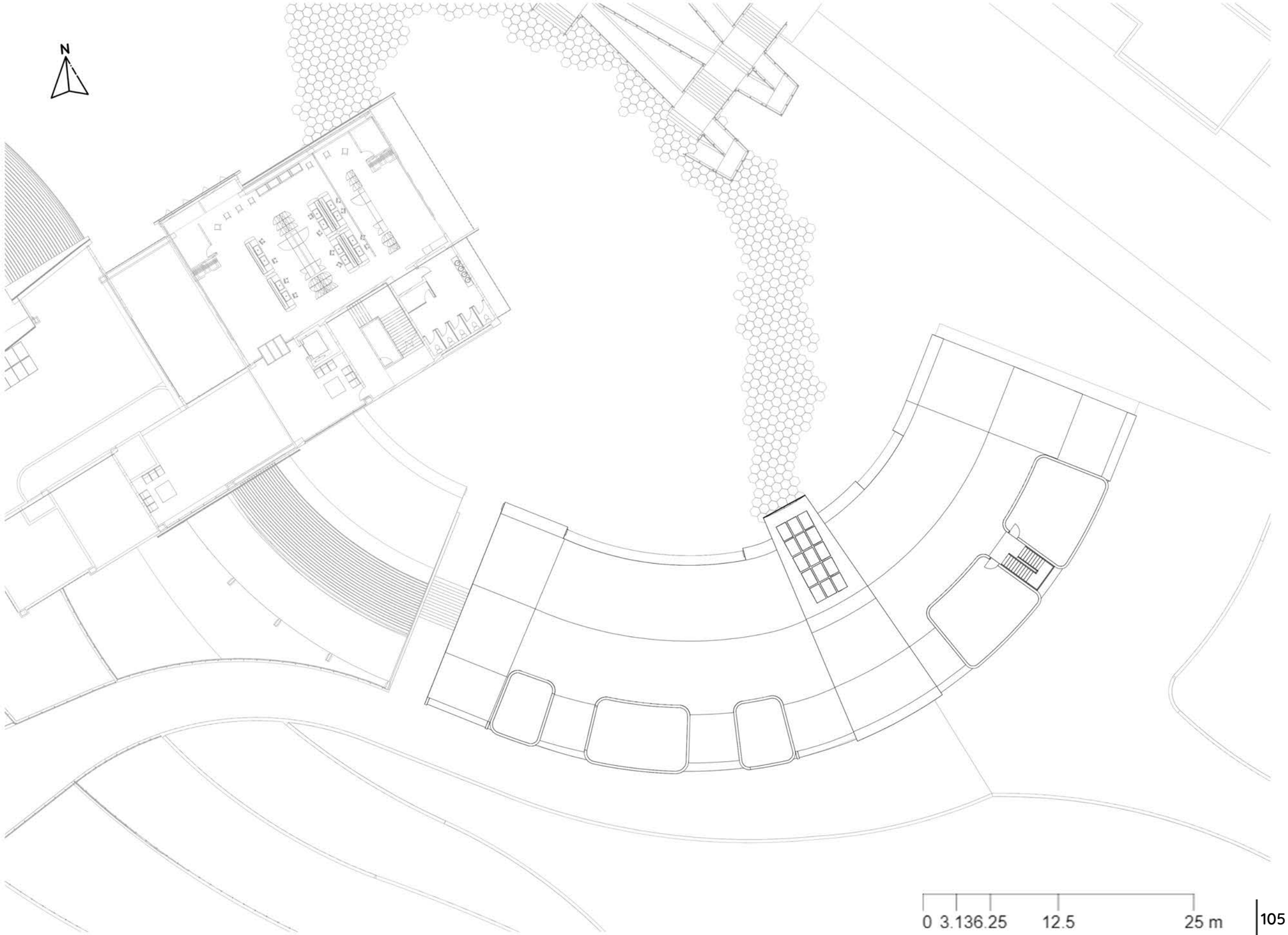




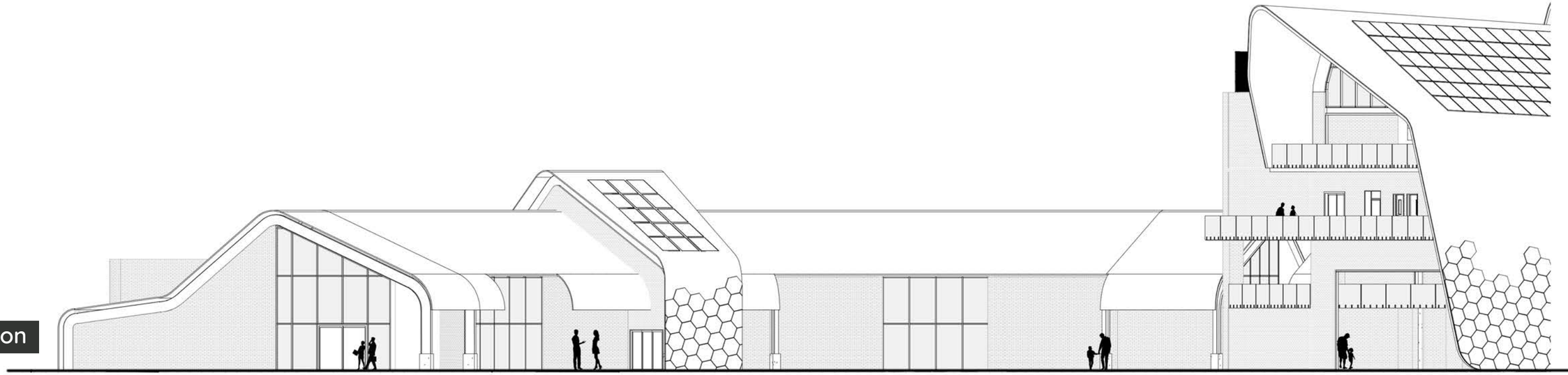
Promenade

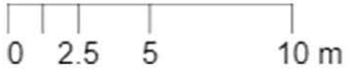
3. Workshop Retail

Roof Plan



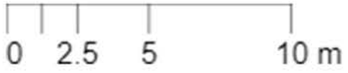
North Elevation



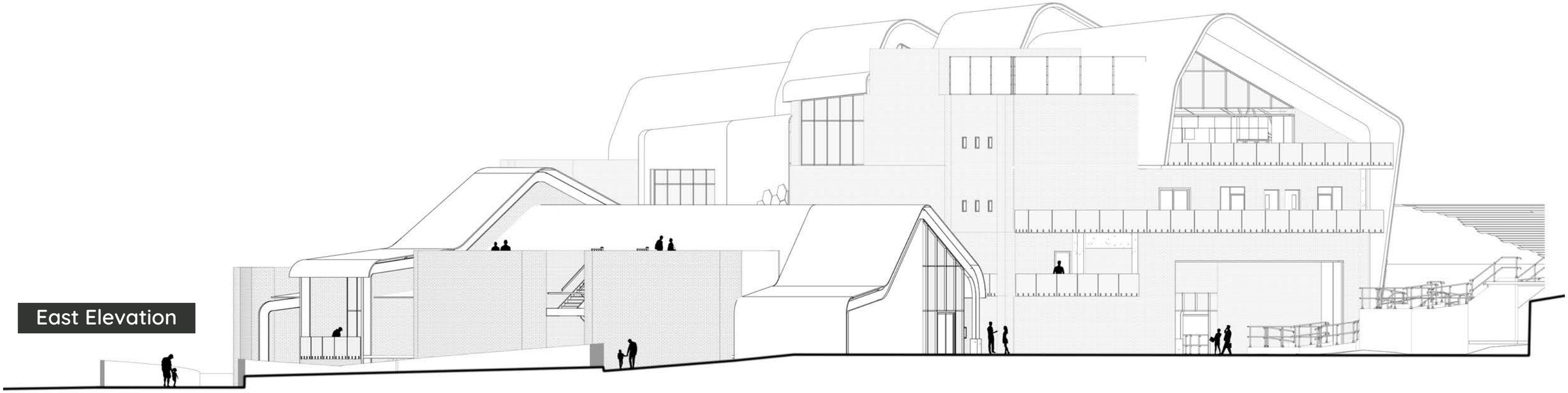




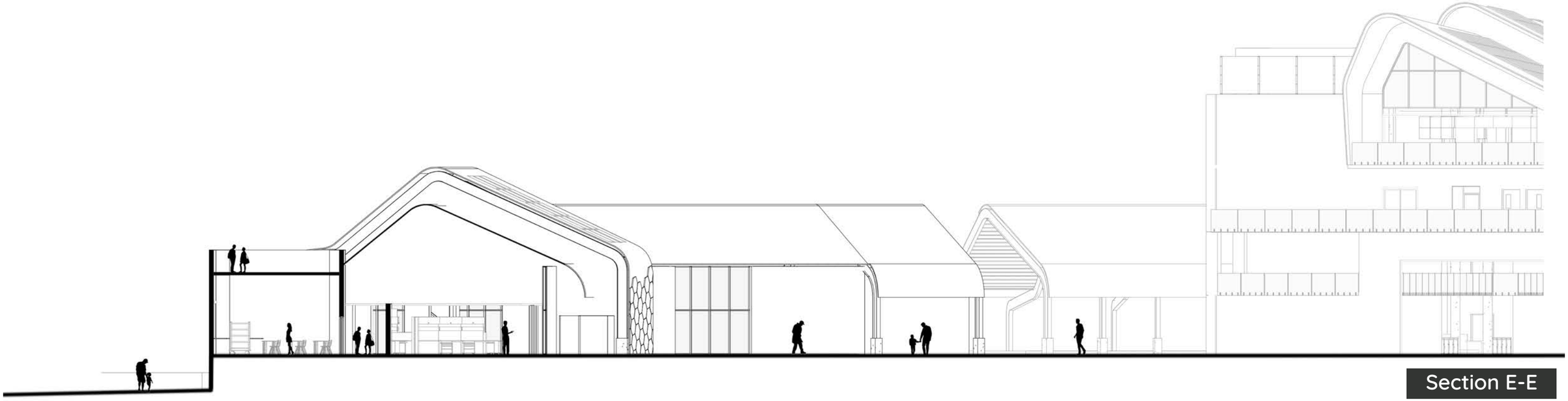
South Elevation



East Elevation



0 2.5 5 10 m



Section E-E

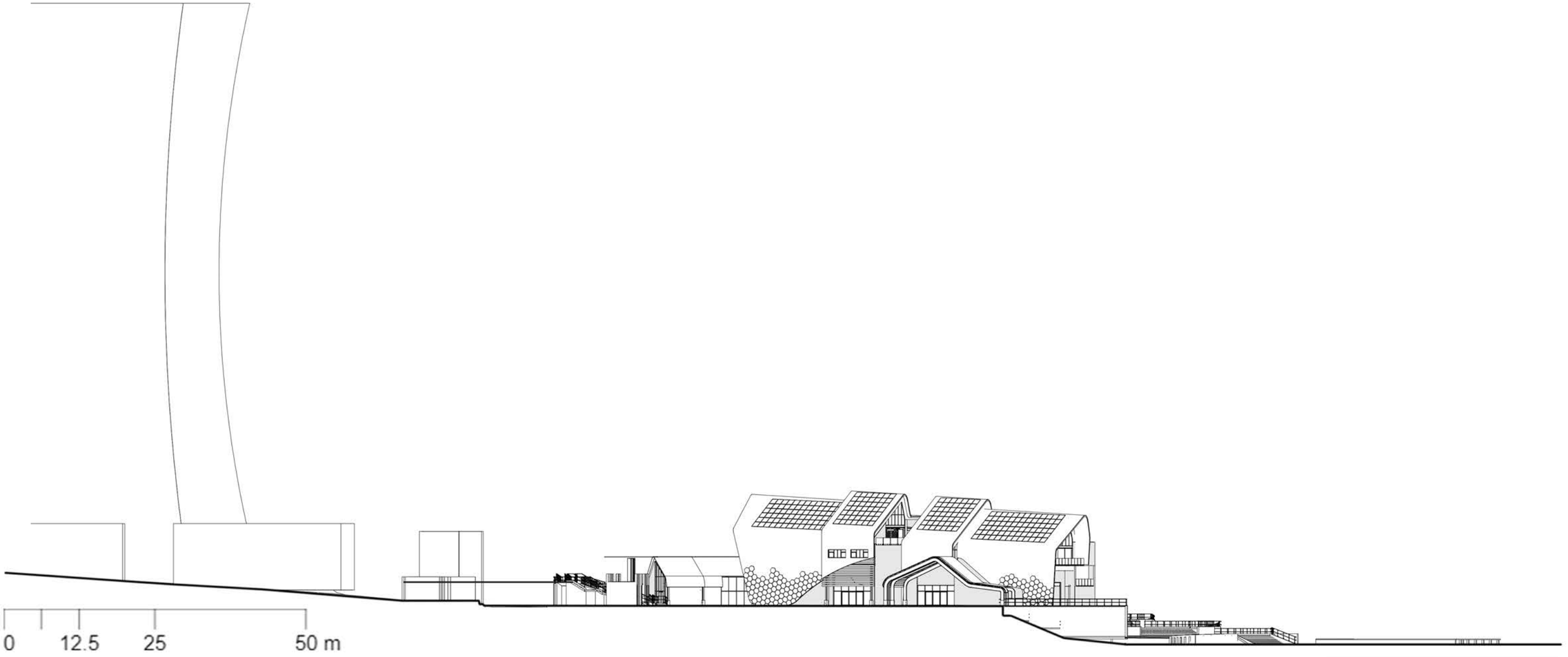
0 2.5 5 10 m



Promenade Perspective



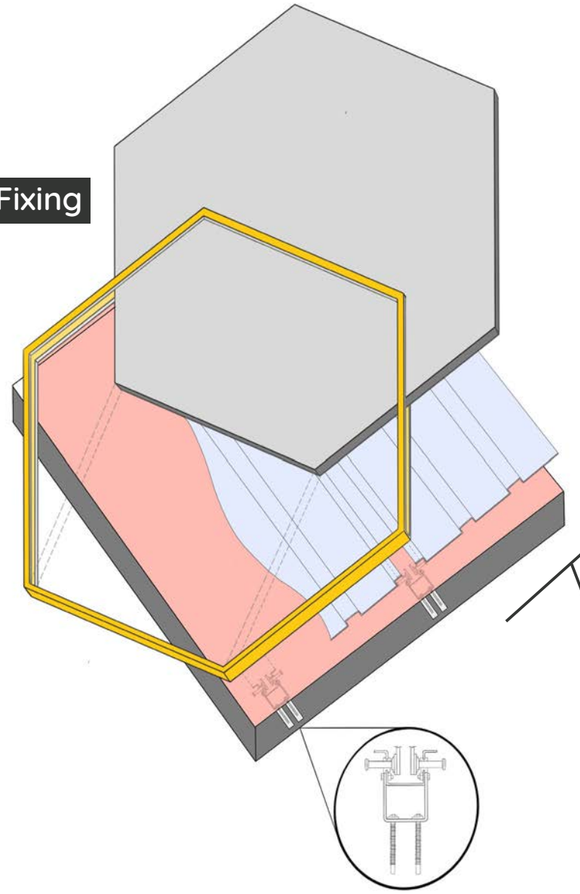
Welcome Center 1st Floor Perspective



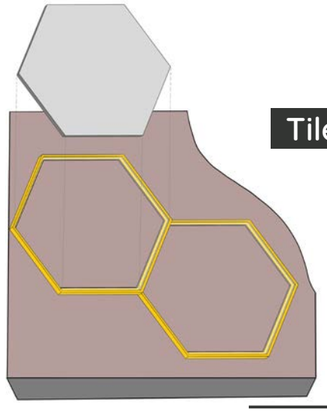
Site Section 0-0

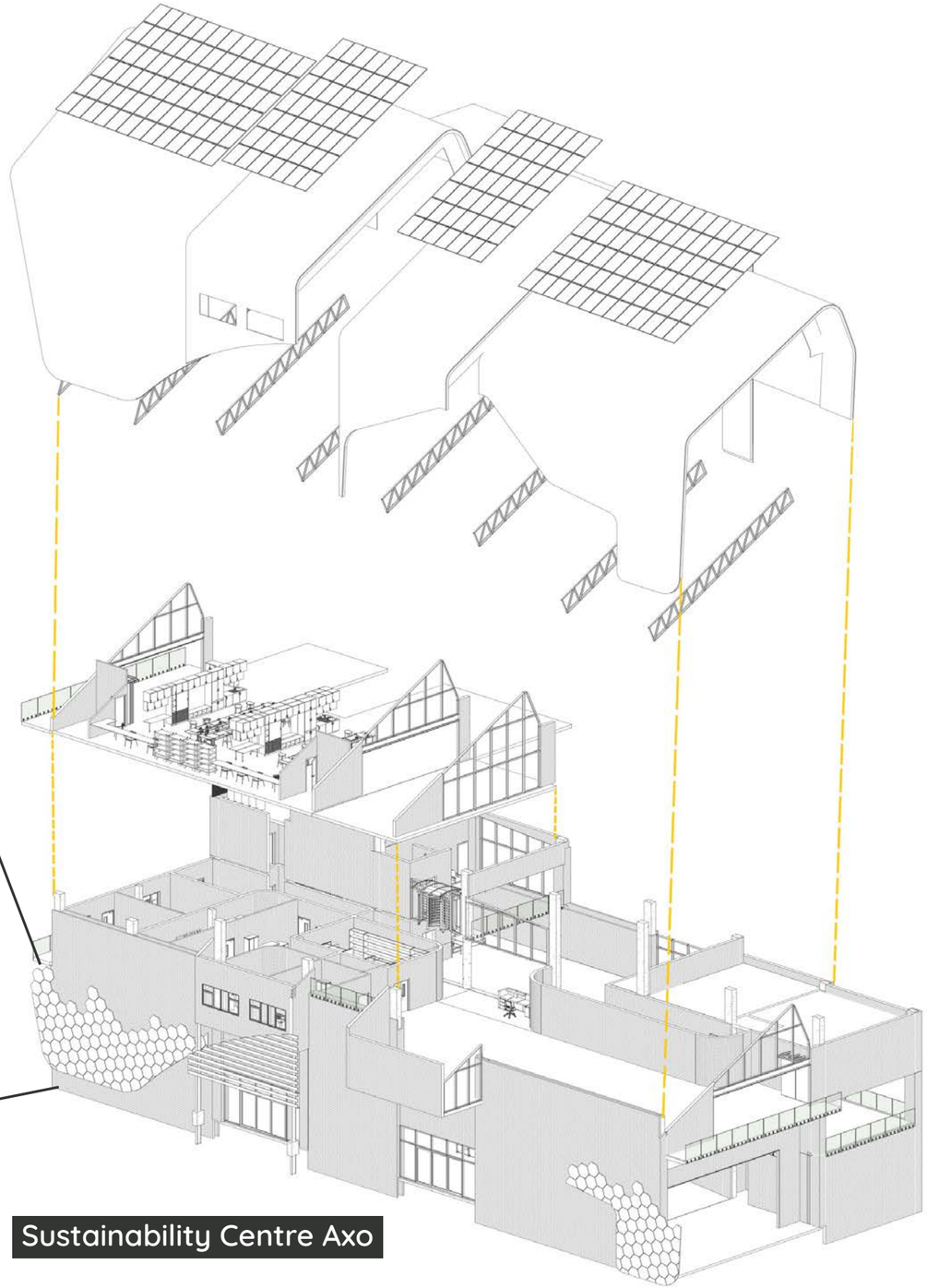
Technical Detailing

Facade Panel Fixing



Tile Panel Fixing





Sustainability Centre Axo

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