

A PLACE TO CONNECT



Design Dissertation Report

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Dissertation Report presented in part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture Planning and Geomatics, University of Cape Town (APG5079W)


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In memory of my loving mother Virginiah
Kibera Ndungu

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If architects can offer anything in a time of strife and confusion it is the clarity of making places for everyone.

- Duo Dickinson

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This paper is presented as part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town Date:

Declaration

I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

I have used the APA method for citation and referencing. Each contribution to, and quotation in, this paper from the work(s) of other people has been attributed and has been cited and referenced.

This paper is my own work

Signed by candidate

Date: 11/09/2022

Abstract

This dissertation contributes to the discourse on the design of public space in the city. It illustrates a design approach that favours the social welfare of marginalised communities living in Cape Town in particular foreign nationals. By providing a socio-economic anchor for this marginalised community this project aims to assist with their integration into their host nations. The inquiry stems from my lived experience as a Third Culture Kid and student of architecture engaging with the subject of identity and a sense of place. Using lessons learnt from exploring the transition & reentry model of TCKs the proposal suggests ways of assisting foreign nationals in integrating into the city.

The document is organised in 4 parts that reflect how ideas of identity formation can be translated into place making strategies. Key themes emerging from this proposal are hybridity, memory, liminality and transparency. I begin by portraying how the concept of hybridity can be understood through the lived experiences of TCKs. I then explore the relationship between memory and place attachment through the lens of a TCK. Ways of translating memory and hybridity are further explored in the precedent studies of The Harpa Concert Hall and Conference Centre and The National Museum of African American History and Culture.

The architectural program and design response were reached through the analysis of immigrant settlement and integration requirements. Through mapping the city with parameters set by this study a site is selected in former District 6. The design proposal looks to suggest potential way of supporting the integration of foreign nationals whilst reviving the memory of the once culturally diverse community of District 6. The concept looks to provide spaces for cultural education and enterprise as a way of stimulating public engagement between foreign nationals and local citizens.

Introduction

My research explores the production of identity and its representation in public space within Africa. Architecture is said to exist in the crux of social and geo-political discourse thus my theoretical investigation shall interrogate these fields in my attempt to better understand the expression of identity in public buildings. The research begins by discussing the social condition of TCKs with particular interest in their unique formation of identity. My study argues that understanding the TCK condition may reveal lessons on dealing with social difference. This is supported by sociologist Carolyn Smith writing who looks at the identity politics of TCKs returning "home". The term home in my writing shall refer to the country of TCK parents' culture. I argue that the condition offers insight into the hybridized formation of identity in contemporary Africa.

To connect the sociologist theory of being a TCK to architectural discourse I elaborate on the theory of place attachment with specific interest in public buildings. This inquiry begins with an exploration of the potentials of collective memory in the production of hybrid identities. My study of collective memory delves into the production and representation of culture supported by memory researcher Laia Colomer. This study aims to illustrate the relationship between collective memory and place production. Colomers study showcases how place attachment relates to identity production in so doing my study aims to shine a light on the cultural significances of public space and spaces of mobility in defining cultural identity.

My discussion then focuses on how memory is applied in architecture particularly in public architecture. I examine the research and works of post-colonial architects Shahed Saleem and Sir David Adjaye who address the representation of marginalized communities in architecture. The study demonstrates their approaches to abstracting design elements from the collective memory. This research seeks to unpack the process of reflection, remembering and the reconstruction of spatial narratives.

My precedent studies focus on the façade systems of public buildings that address and embody transparency and reflection. I shall be analysing The Harpa Concert Hall and Conference Centre and The National Museum of African American History & Culture. My interest lies in how the design teams of both projects address both literal and phenomenal transparency. This study illustrates the production of design of the building's façade motif, form, and structural assemblage.

The proposal then focuses on mapping the city to identify a site with to test lessons extracted from my theory and precedent. The chosen site is then carefully analysed. From this, principles to incorporate the project into its context are proposed. Section 4 focuses on the working resolution of a design. Here one gains an understanding the programmatic resolution and site response .

A case of displaced identity

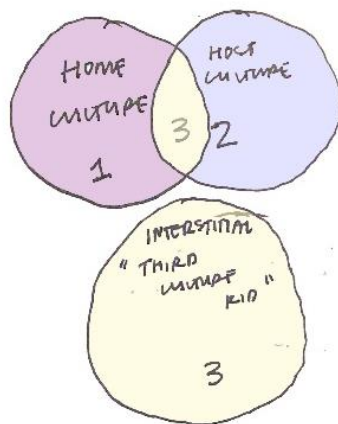


Figure 1. The third space in relation to TCKs

The term Third Culture Kids (TCKs) is borrowed from the field of sociology where it is used to identify the common experiences of individuals that have lived for most of their lives outside their parent countries of origin (Smith, 1996). This condition is where I find myself, constantly shifting between identities and never feeling fully accepted by any. The TCK condition emerged from escalated global mobility. The increased international migration due to globalization contributes to the growing population of young Africans who identify with this community. Sociologists David Pollock and Ruth Van Reken introduced this condition following their study of the repatriation of American children who were raised outside the USA. They attributed the condition to the development of the globalized market following World War 2 and the rise of capitalism leading to an increased migration of parties seeking more profitable conditions to study, work and begin new lives.

The theory of cultural hybridity offers an approach to understanding the post-colonial condition of identity and culture in Africa. Cultural hybridity is a post-colonial theory that challenges a purist interpretation of identity. The concept was made popular by Homi Bhabha who suggested that the condition accommodates difference by confronting the power dynamics of existing social hierarchies (Bhabha, 1949).

The concept suggest that identity is dynamic like that of the identities of TCKs. This is due to their complicated relationship between their parent and host cultures. The parent cultures refer to that of their parents or passport's identity and the host culture is the place/s where they have lived and consider home. Both cultures influence how they identify thus the TCK develops a hybridized cultural identity. As a result of this hybridized identity TCKs exist within the liminal conditions of the third space. The third Space is a condition of confusion and disorientation produced by cultural hybridity and characterized by its liminality.

Post-colonial theorist such as Fetson Kalua explore Cultural Hybridity as a product of colonialism in respect to Identity, Space and Power. This exploration is particularly important in post-colonial Africa as it continues the challenges of defining its identity in a globalising world. Kalua supports Bhabha's theory and argues that it is this thinking on the margins that sheds light on the contemporary African identity (Kalua, 2009). The third space is defined as 'in-between the designations of identity' where liminality occurs, and multiple cultures exist (Easthope, 1998). Thus, the concept of liminality is necessary in addressing decolonization in Africa as we critic the physical and imagined borders created over years by allowing us to acknowledge the dynamism of culture and difference in society. Kalua' suggests that African identity arises from people's capacity to reinvent and reconstitute themselves in their everchanging social conditions (Kalua, 2009).

Increased global mobility has led to a growing population of young Africans who identify with this community and thus do not fully adopt to national identities. This causes a level of confusion in defining the hybrid African identity due to its lack of the appreciation and rejection of existing pure cultures which exist in the form of ethnic tribes and are still acknowledged as identifying markers. Thus, through exploring the transitional experience of a TCK I hope to illustrate how these hybrid identities engage within the third space.

TRANSITIONAL MODEL

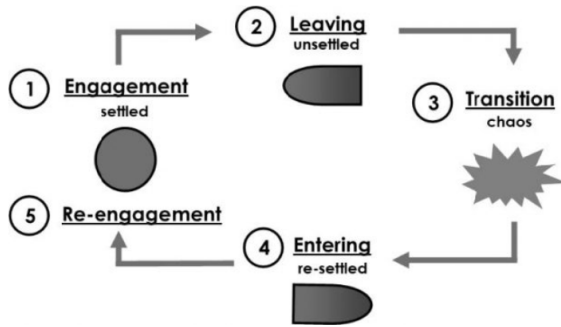


Figure 2. Transitional model of TCKs. (Pollock, David, 2017)

The transitional model designed by Dave Pollock shows the process that TCKs undergo when adjusting to new environments. The transitional model shows the cyclical process of engagement and transitioning as TCKs move across and adapt to new places and lifestyles. Leaving and entering indicate the point of “change” in the TCKs environment. Change is described as “the physical or external process of moving from one location of being to another”. Transition refers to the passage to change. During transition TCKs undergo psychological and emotional changes to adapt to their new environment such as code switching. Code switching describes the act of adjusting from one language to another and is common amongst TCKs.

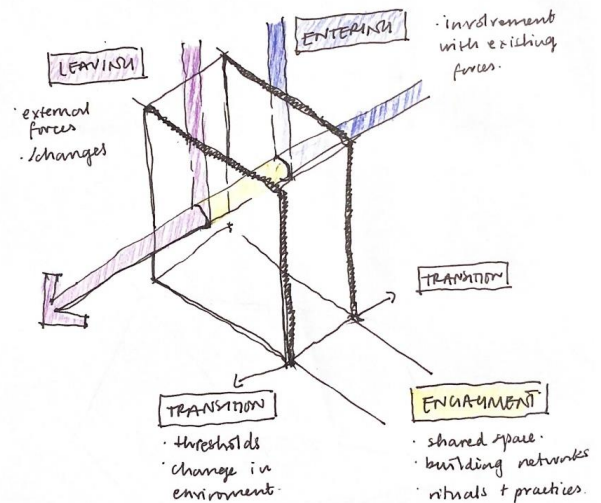


Figure 3. Extraction of meaning from TCK model (Author, 2022)

I shall be translating the TCK model into spatial conditions by exploring the process of leaving, entering, transition and engagement. Entering shall deal with how existing condition in the city and on the chosen site are addressed. Transition will involve the treatment of thresholds. Engagement relates to the building of the program and leaving shall explore way of assembling the façade.

Place attachment and memory

For TCKs like myself the idea of belonging to one geographic location is flawed. Furthermore, the cultural ambiguity attributed to this condition makes it difficult for one to position their identity geographically contributing to this sense of placelessness. Memory researcher, Laia Colomer, offers a study into TCKs collective memory and suggests that their common experiences of mobility form attachments to public places and places of transit e.g., airports. Her paper illustrates airports as meaningful places associated with the experiences and memories of TCKs constant transition in society (Colomer, 2020) Colomer claims that airports represent the condition of “in-betweenness” associated with TCKs mobile life (Colomer, 2020). Her analysis reveals that the link between identity production and place attachment.

Place attachment theory suggests that individuals' experiences and memories of space create a sense of place. The definition of place differentiates from that of space as it relates to the human rituals, lived experiences and cultures (Van Rensburg & Da Costa, 2008). Sense of place is defined as the associations made between individuals, their identity, and their environment. Associations between place attachment and a sense of place show its dependence on human engagement (Hashemnezhad et al., 2013) TCKs sustain their sense of place through ritual and memory which (Pollock et al., 2017). Based on individual experiences this concept engages both a subjective and objective view. Subjective in its relation to personal experiences i.e., memories, traditions, history and culture and objective in its relation to the external influences from the environment. To explore both thoroughly I shall engage with my own ideas of memory as a TCK and theory to extract ways in which a sense of place may be achieved.

Hashemnezhad et al defines a scale for human interactions with place that illustrates the range from a communal to individual relationship to components of place. The scale offers an understanding of how place is conceived by analysing the type of relationship that are formed to elements of placemaking. The scale ranges from a sense of alienation to that of rootedness created through various levels of human engagement. It is important to note that individual satisfaction, identification, and attachment varies hence must be appropriated with caution (Hashemnezhad et al., 2013). The types of relationships defined are cognitive, behavioural, and emotional. The cognitive relationship is associated with the form of the place relating to how it is generally perceived to orientate oneself. The behavioural relationship is associated with the function of the place relating to how it addresses human needs and emotional relationship is associated with the meaning of a place based on satisfaction and attachment (Hashemnezhad et al., 2013).

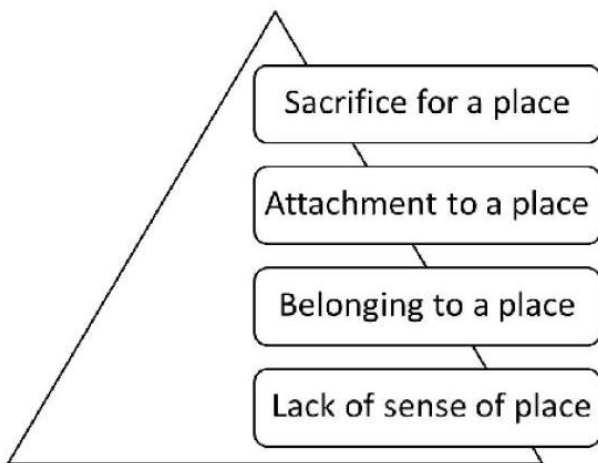


Figure 4. Different scales of sense of place,(Source: Shamai, 1991)

The scale ranges from a sense of placeness to a "sacrifice for a place" which is said to be the most intense relationship one can have to a place. Belonging to a place: in this phase, individuals have both a familiarity and emotional connection with a place. They recognise and respect the place and its symbols. Attachment to a place: people have a strong emotional relationship with the place. The place has an individual or collective significance as well as a defined identity (Hashemnezhad et al., 2013). Sacred spaces e.g., places of worship are an example of a "sacrifice for place" and relates to attributes of value, prosperity, and freedom (Hashemnezhad et al., 2013). The research classifies eight factors that influence the production of place attachment namely physical factors, social factors, cultural factors, personal factor, memories and experiences, place satisfaction, interaction and activity features and Time factor. Place attachment theory thus provides a framework for my exploration into the relationships between memory and architecture.

Through engaging with memory place and its symbols becomes part of our identity or serves as a symbol of our cultural identity. Architectural forms, such as museums and cultural centres are designed as cultural identifiers and repositories of collective memories. The term collective memory was devised by philosopher and sociologist Maurice Halbwachs. It refers to the shared memories that develop through communication and institutions. Halbwach defines three forms of collective memory namely social and cultural and political collective memory. I shall refer to Amal Adel Abdrabo definition of collective memory in the book "Forgive but Not Forget: The Social Role of Cinema in Restoring Collective Memory and Rebuilding Belonging". Abdrabo depends on Halbwachs' definition of collective memory as a plural that is created under conditions of two forces: the social context and the individual consciousness (Bartoszewicz, 2019) The author also uses Pierre Nora's opinion of a collective memory that constructs individual identities even based on scattered 'collective' memories through the serious labour of academics, film directories and civil society actors such as architects to reflect the collective memory of historically excluded communities. This allows for the development of multiple approaches in addressing issues surrounding displaced communities. In so doing providing instruments for members of marginalised groups to engage or re-engage with challenges in their host and homeland countries.

Translating memory in architecture

Architects and urban planners have become more concerned with devising appropriate place making responses to marginalised communities in public space. I look to the writings and works of architects addressing issues surrounding cultural representation to explore how the concept of memory may be translated in architecture. I begin with work of Shahed Saleem an architect based in the UK whose interest lies in the architectural heritage of diasporan communities. His work aids in defining design principles for my proposal. My precedent studies of The National Museum of African American History & Culture and The Harpa Concert Hall and Conference Centre then focus on how transparency as a design strategy may be used to translate architectural concepts.

Saleem describes the architectural work of diasporan communities as the act of invention, and restoration rather than of recreating or restoring a previous culture. His inquiry follows the development of Islamic Architecture in Britain. Saleem's presentation to the Architectural Association titled "A new model for otherness" showcases the evolution of the self built mosque and the diasporan Muslim identity. The mosque in Britain is a symbol of the "other" existing amongst a monoculture forcing this community to the margins of British society. TCKs hybrid identity forces them to deal with this process of othering. Othering is described as the systemic social and political processes whether explicit or nuanced which target groups according to a range of shifting and overlapping criteria i.e., class, ethnicity, religion, sexuality, ability (Saleem, 2022) This social exclusion results in social violence's such as xenophobia. Saleem's "new model of otherness" aims to address the lack of representation of migrant community and proposes new ways of community led design practice. He explores the potential of forming new identities through the uncovering of the collective power of diaspora communities self-built and initiated projects. Saleem's work shows how sustainability and acceptance is achieved through supporting self-initiated projects in communities.

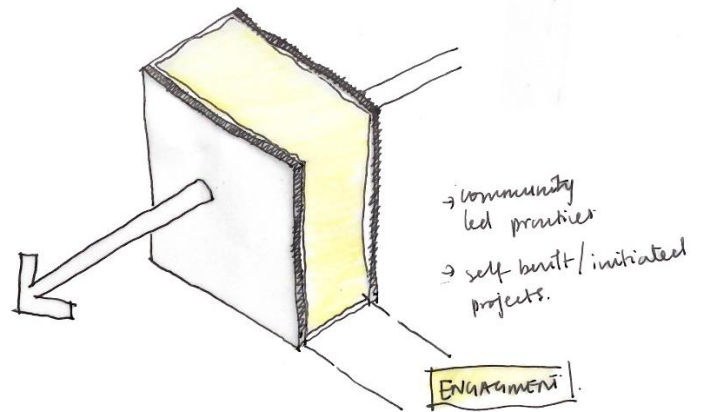


Figure 5. Ways of achieving engagement (Authour,2022)

This approach to architectural design is examined in his project, the Hackney Road Mosque in East London, where he engages the collective memory in the design of the mosque's façade. The facades motif is an abstraction from Anatolian tilework originating in the Alhambra palace in Granada (Welch, 2020) This process of abstraction allowed him to create a design that is part structural, part enclosure, part Islamic pattern and part abstract shape (Welch, 2020). This process focused on capturing the unexpressed identity of the Islamic community in a historic British precinct. In a similar way Saleem extracts and reimagines historical Islamic design elements for the overall design of the mosque.

The drawing and photography show the motif of an Anatolian tilework and how it has been translated into a façade design.

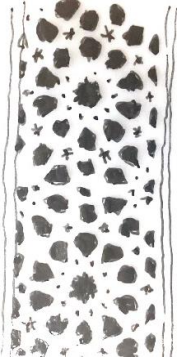


Figure 6. Motif of tile work
(Authour, 2022)



Figure 7. Hackney Road mosque in East London (Source: Asharq Al-Awsat, 2017)



Figure 8. Hackney Road Mosque façade (Source: Asharq Al-Awsat, 2017)

These following precedent studies focus on how the concepts of memory and cultural identity are translated into architectural elements. In this section the lessons from the theory of transparency as defined by Colin Rowe and Robert Slutzky shall be applied in the analysis of The National Museum of African American History & Culture and The Harpa Concert Hall and Conference Centre façade designs. My interest lies in how the façade systems of both public buildings address and embody ideas of identity and memory. These studies focus on how the process of abstraction and superimposition of elements through layers of motif, pattern, and structural assemblage.

2. Precedent study

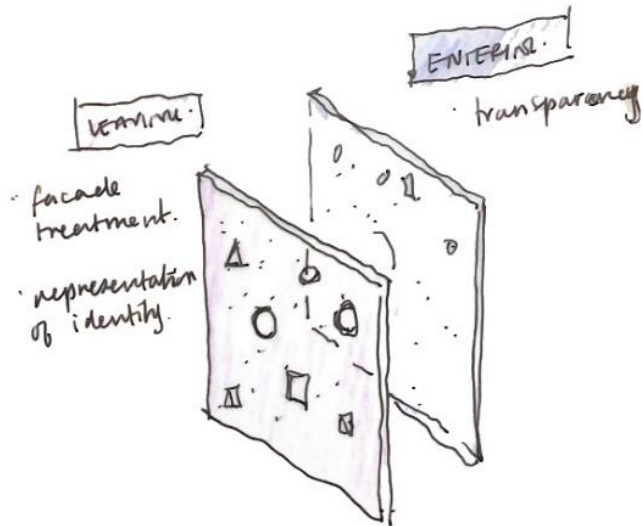


Figure 9. Ways of expressing leaving and entering (Author, 2022)

This section of the paper focuses on translating the process of leaving and entering in the TCK model. I understand this process as the relationship between the buildings envelop and its external and internal conditions. It is here that I shall exploring transparency as a way of connecting the perceiving subject to what is being perceived.

Precedent study

Architects and urban planners have become more concerned with devising appropriate place making responses to marginalised communities in public space. I look to the writings and works of architects addressing issues surrounding cultural representation to explore how the concept of memory may be translated in architecture. I begin with work of Shahed Saleem an architect based in the UK whose interest lies in the architectural heritage of diasporan communities. His work aids in defining design principles for my proposal. My precedent studies of The National Museum of African American History & Culture and The Harpa Concert Hall and Conference Centre then focus on how transparency as a design strategy may be used to translate architectural concepts

The subject of transparency was most prominently discussed in Rowe and Slutzky's seminal text "Transparency: Literal and Phenomenal" in 1963. Rowe and Slutzky's suggests that transparency implies both the obvious optical clarity which he defines as literal transparent and a broader spatial order which he refers to as phenomenal transparent (Rowe & Slutzky, 1963) They describe a broader spatial order which they refer to as phenomenal transparency which involves an aspect of superimposition of abstracted architectural elements..

The convincing spatial order of each element as they are located relative to another creates the effect of transparency. Phenomenal transparency can be explained using the example of a one-point perspective drawing (Garry Miley, 2021) . The coherent and connected way in which space is ordered in the drawing offers a realistic depiction of a scene. The convincing spatial order of each element as they are located relative to another creates this transparency. Transparency then translates as the ability to clearly understand the order of space made obvious by its representation.

The study of the building facades is a development of the exploration of the process of leaving and entering in the transitional model. In each precedent study I will analyse the process of motif abstraction and the façade structural assemblage. The façade of a building is the architectural element most concerned with the aesthetics, political and cultural expression (Koolhaas, 2014) . Referred to as a Skin by architect and writer Juhani Pallasmaa, the metaphor illustrates how facades respond and relate to their contexts physical and sensorial conditions. This metaphor describes a building's engagement in cultural and technological speculation (Pallasmaa, 1996). Like skin the building's envelope protects its interiors from the outside world and creates the interface that connects the building to the public.

Rowe's states that the layering approach to design can achieve "phenomenal transparency" or "operative transparency" as described by Loebermann (Carl, 2019) Loebermann's notion of operative transparency which is based on the typology of the traditional Japanese House, illustrates the potential for design to be incorporate several responses relating the environment and concept (Carl, 2019). Layered façades were often composed of spaces that are deeper than the wall itself precluding the curtain wall. Classical architecture incorporated columns, multi-layer front façades to create a lively interplay of light and shadow, as well as provide an inhabitable transitional space. Building elements such as rain screens and brise soleil also combine cultural functions with climate control, thereby orienting buildings not only in the context of their surrounding built environment, but also in the specific context of the local (micro-)climate (Carl, 2019). The use of sequential layering systems generates sophisticated and dynamic inhabitable in-between spaces that can encompass both interior and exterior spaces as well as allow for an independent aesthetic expression.

Exploring phenomenal transparency - The National Museum of African American History & Culture.

The National Museum of African American History and Culture showcases this layered approach to façade construction. Its construction was motivated by the national desire to recognize the contributions and identity of the African American community in American society. The design expresses the appreciation and adaptation of African memory, African American craft, and contemporary architectural technology. The abstraction of artefact from multiple cultures to represent the hybrid identities is portrayed its façade design



Figure 10. Façade of the NMAAHC

This precedent study explores the concept of remembering and constructing narratives in David Adjaye's design of The National Museum of African American History & Culture. The museum's construction was motivated by the national desire to recognize the contributions and identity of the African American community in American society. The design expresses the appreciation and adaptation of African memory, African American craft and contemporary architectural technology. This inquiry reflects my interests in representing collective memory, designing public place and its representation in façade design. The form and façade of the building is described as "The body" by Adjaye (Adjaye, 2017).

Building program:



Figure 11. Yoruba column that inspired the building form.

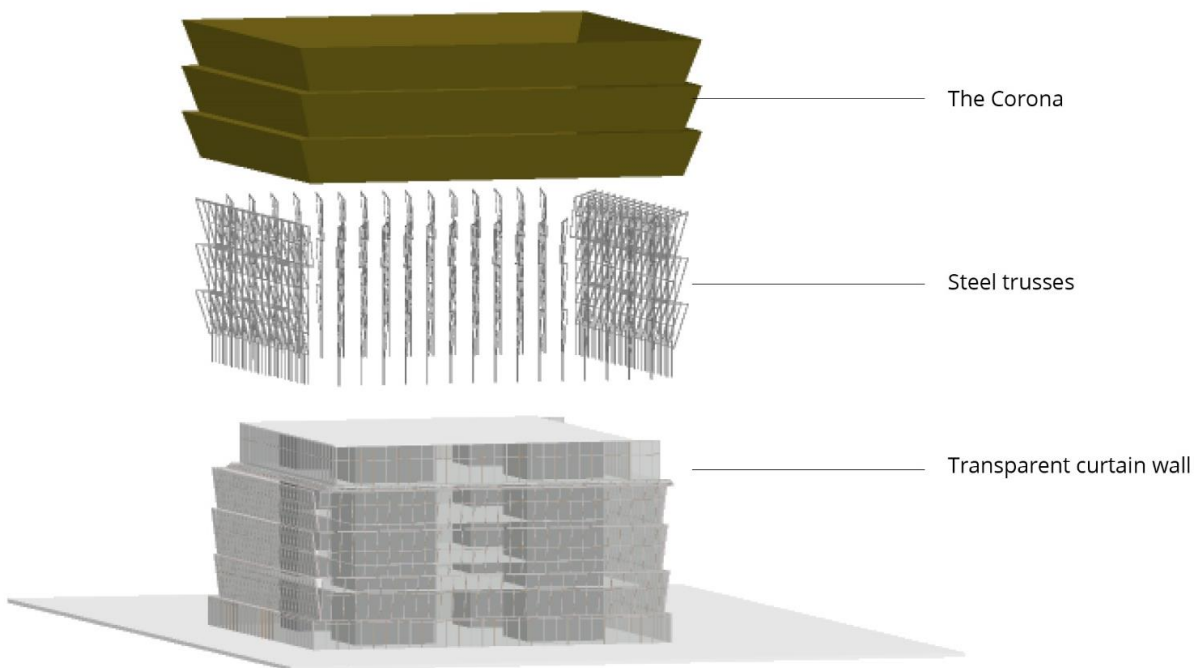
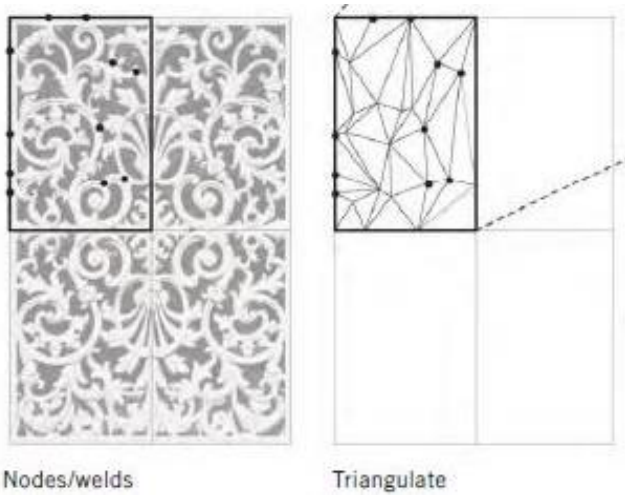


Figure 12. Double skin facade

Façade & Form

The Body relates to the process of achieving a coherent resolution in the assemblage of the brief and construction material (Adjaye, 2017; David Adjaye & Associates, 2022b)). Adjaye views this as a way of addressing the world. The Form and façade are then a result of the organization of the entire the project. He challenges the late modernist approach to developing the facades of building by expressing its parts. In his development of his building envelope, he asks how new objects express themselves in contemporary settings. The form is inspired by traditional west African sculptural (Wilson, 2016). The double skin approach to façade development in the museum allowed him to address the interior and exterior conditions of the building separately. This gave him a freedom of expression with regards to the façade design. Adjaye visualized the building as a series of nested spaces composing of an inner floor to ceiling transparent curtail wall that allows for direct views to the surroundings monuments and angled metal screens dubbed the Corona.



Nodes/welds

Triangulate

Figure 13. Iron cast balustrade abstracted by Adjaye
 (Source: Adjaye, 2011)

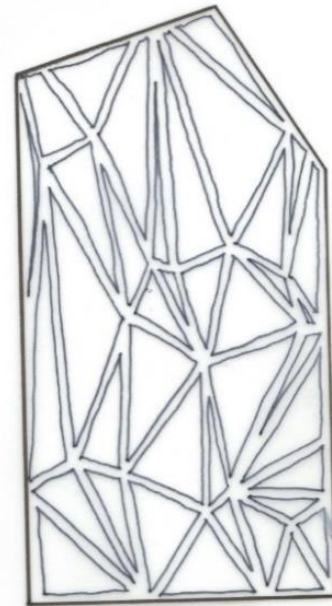


Figure 14. Corona motif

Motif

The Corona design draws from the memory of Africa, the unrecognized craftsmanship of African Americans and the memories of enslaved community rituals. The motif of each screen is abstracted from of the antebellum cast iron balustrades crafted by black Americans. The geometry relating to the welding points of the balustrades were extracted to create the panels motif. The pattern of each panel was produced by mirroring the motif to correlate with the quadripartite composition of the balustrades. The abstraction does not create a direct copy of its precedent allowing for viewers imagination thus engaging them in defining their individual experiences (David Adjaye & Associates, 2022). Adjaye reflects on his design process in his book *Constructing Narratives* that explores his five principles i.e., Democracy of Knowledge, Addressing communities, Place and Ritual, Journey and Body. He refers to these principles as “hybridizing strategies”. “Democracy of Knowledge” relates to the aims of his public buildings to provide inclusive access and information by creating an environment where people of various backgrounds can engage and interact with their wider community. His motif thus suggests transparency by “breaking down matter” so that it is no longer a sealed entity thus democratizing architecture (Adjaye et al., 2010; David Adjaye & Associates, 2022a)

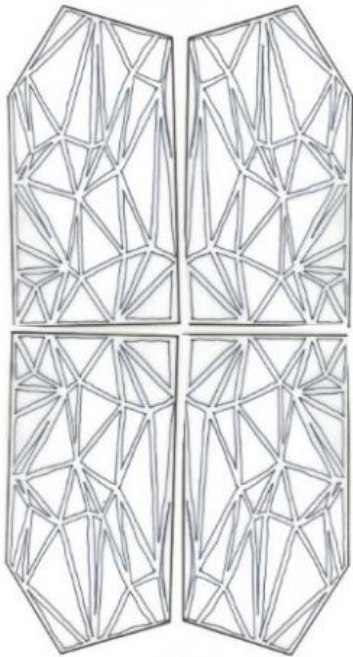


Figure 15. Corona panel pattern

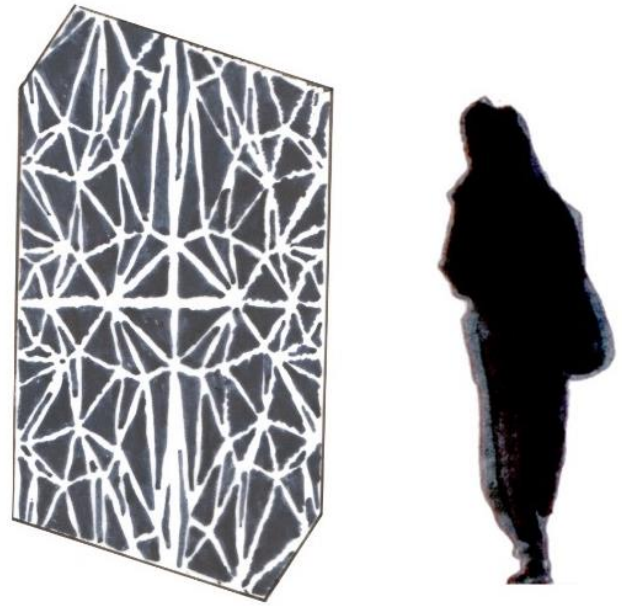


Figure 16. Corona panel design

Pattern

The pattern aims to evoke a sense of place by reclaiming the narrative of craftsmen and African American people at large (Wilson, 2016). The panels were designed in proportion to human scale and the scale of building. The design team aspired to create bronze reflective panels reminiscent of bronze African sculptures. In their testing phase bronze was deemed too expensive thus the panels were constructed cast aluminium (Element, 2022). Three dimensional programming was employed to create a model that would respond to the light in order to create the desired exterior visual effect. The patterns density was varied to respond to heat gain and luminosity. Furthermore, the assembly of each panel reveals the inner skin thus suggesting that it is not the actual form of the building thus achieving transparency (Wilson, 2016).

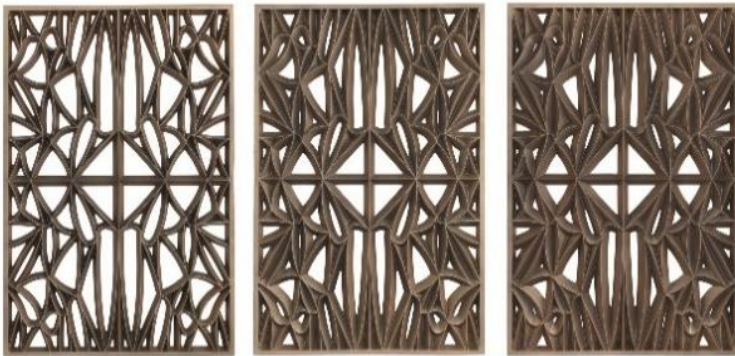


Figure 17. Corona panel opacities (Source: Adjaye, 2011)

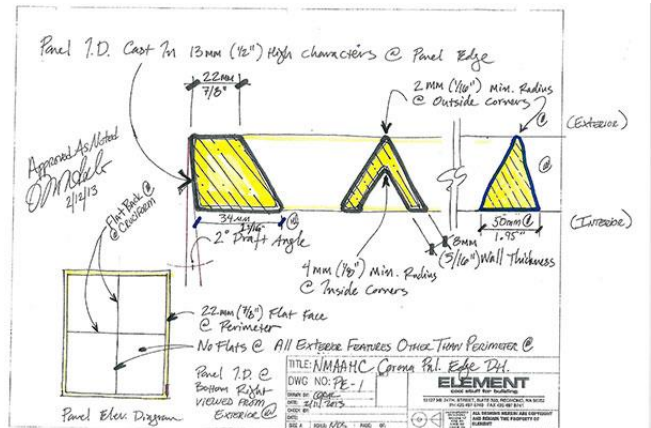


Figure 18. Corona cross section detail (Source: Element, 2011)

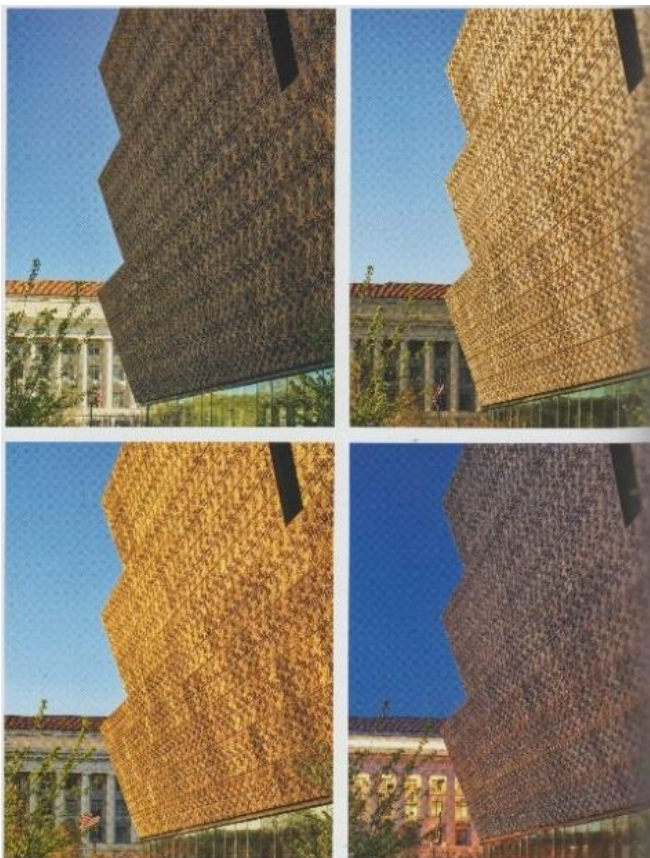


Figure 19. Facade colour in changing sun light

Materiality & Light

There are four panel designs with opening varying in opacity from 65% to 90% depending on their orientation (Wilson, 2016). The varying opacities control the amount of light entering the building thus regulating interior luminance and heat gain (Wilson, 2016). Each panel measures 1.5m x 1m and is angled at 17 degrees. This angle was chosen as it relates to the adjacent Washington monument. The Corona detail as seen in Fig 25 indicate the chamfered edges of the exterior face of each panel which reflect the sunlight in different directions creating a 3-dimensional light and shadow effect (Wilson, 2016). Adjaye uses the varying luminosity of the interior and radiance of the exterior as part of his spatial narrative. The façade of the building is perceived differently depending on the time of day. Custom colours were developed to achieve differing shades required for the desired colour balance, reflection, and texture (Wilson, 2016).

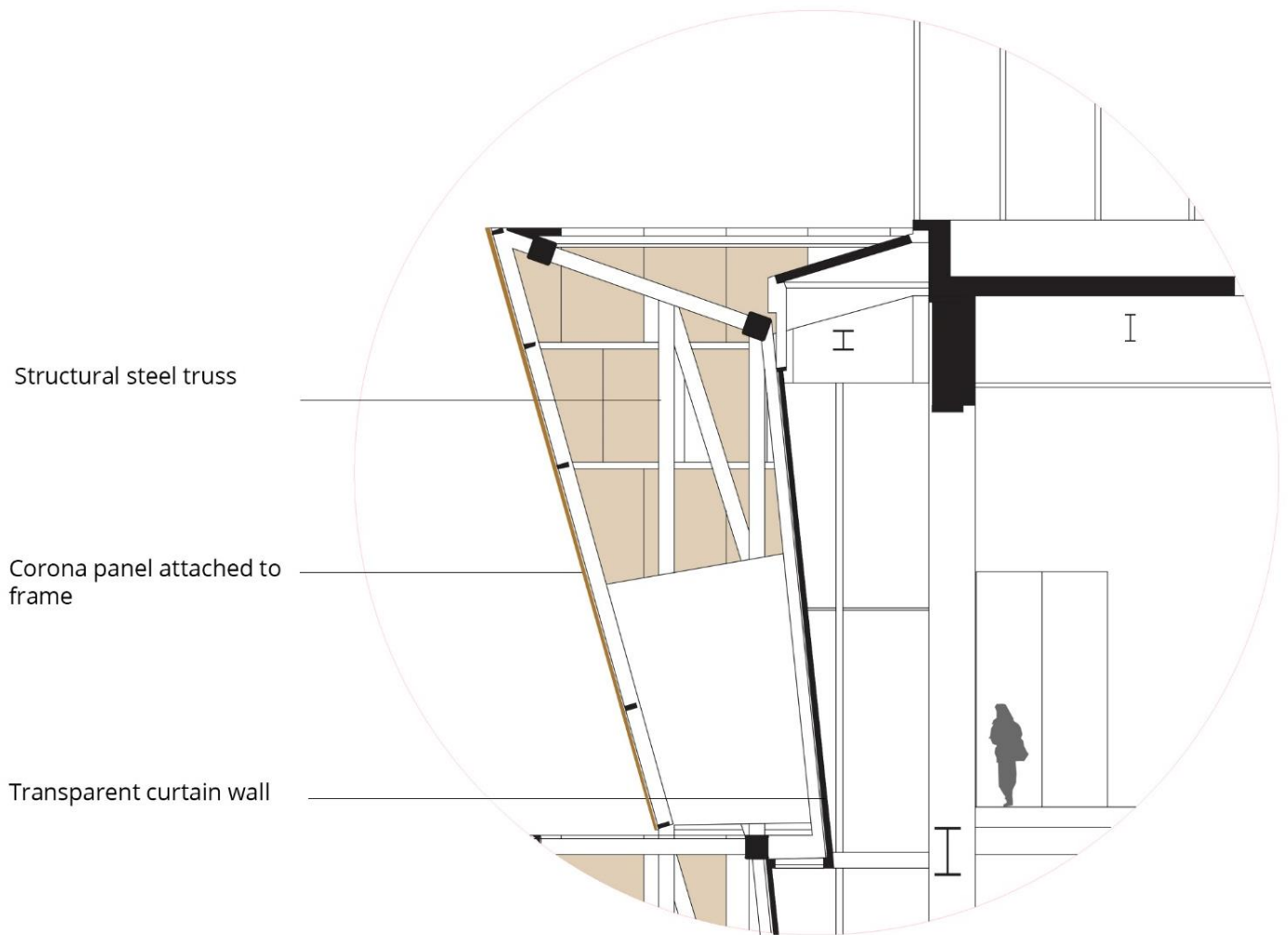


Figure 20. Section through facade



Figure 21. Structural assembly (Source: Barnes, 2011)

Structural Assemblage

3600 cast aluminium panels were prefabricated offsite by (Element, 2022) . Before being brought to site the metallic coating was applied by hand to each panel in order to create natural variations (Element, 2022) . The panels are supported by architecturally exposed structural steel (AESS) frames which are suspended from the façade by steel outriggers (Wilson, 2016).

Exploring literal transparency

- The Harpa Concert Hall and Conference Centre.

Transparent façades constitute of either clear glass or two-way mirror panels to create a visually transparent and reflective envelop. Clear glass is commonly used in commercial buildings as a way of displaying goods to consumers. Transparent façades constitute of either clear glass or two-way mirror panels to create a visually transparent and reflective envelop. Clear glass is commonly used in commercial buildings as a way of displaying goods to consumers. The Harpa concert Hall situated in Iceland showcases a contemporary application of transparent glass that proposes a new method of glass construction and cultural symbolism.

The Harpa concert Hall situated in Iceland showcases a contemporary application of transparent glass that proposes a new method of glass construction and cultural symbolism. The Harpa concert Hall situated in Iceland showcases a contemporary application of transparent glass that proposes a new method of glass construction and cultural symbolism. Its self-supporting glass envelope references the mountains in the landscape contextualising the project and symbolising the countries' identity. This study investigates how the project achieves transparency in its symbolism and conceptual development.



Figure 22. Basalt columns in Iceland (Barnaby, Julianna, 2021)



Figure 23. Facades of the Harpa concert hall and conference centre (Source: Author, 2022)



Figure 24 Harpa Concert hall (Henning Larsen Architects, 2011)



Figure 25. Facades of the Harpa concert hall and conference centre (Source: Author, 2022)

Façade & Form

Set in Reykjavik, the Harpa Concert Hall and Conference Centre is recognized as a national Icelandic architectural landmark. Its construction is said to symbolise the recovery of Iceland following the financial crash (D. Ponzini & M. Akhavan, 2020) It is both an international tourist attraction and everyday local public space (Larsen, 2011). Its design was developed to achieve a form and that is reminiscent of the basalt columns found in Iceland (Grima, 2011) My interest in this precedent lies in how the design team developed its form and façade in order to achieve both local and international appreciation.

Henning Larsen Architects collaborated with Danish-Icelandic artist Olafur Eliasson to fulfil their desire to provide sheltered public activity whilst connecting visitors to their natural environment (Grima, 2011). The architects describe the building as a crystalline shell with a program that supports activities for all age groups (Larsen, 2011). Its form is derived from the basalt columns that make up its natural landscape. The extraction of motif from landscape in the project aims to connect visitors to the country's identity.

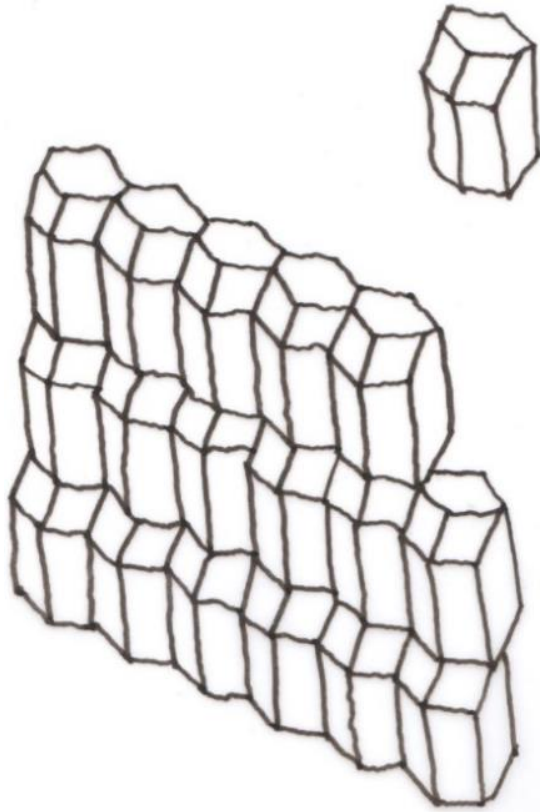


Figure 26. "Quasi brick" motif (Source: Author, 2022)

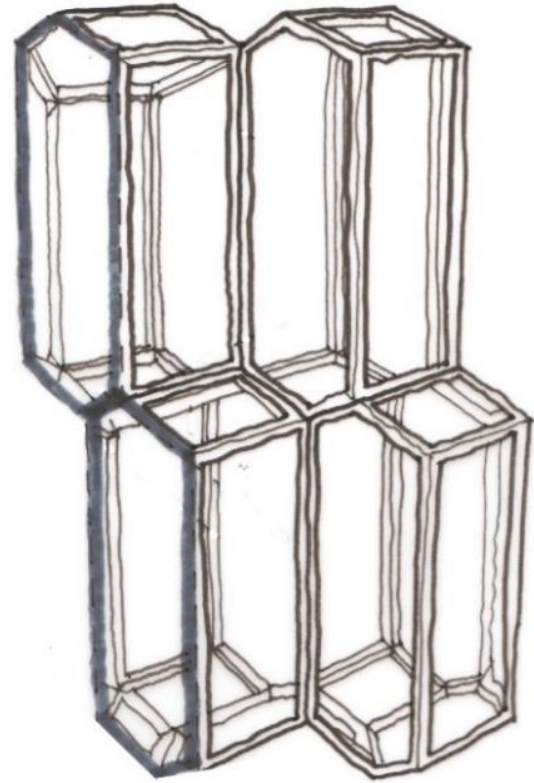


Figure 27. "Quasi brick" pattern (Source: Author, 2022)

Motif & Pattern

The design team's experimentation advances on the principles of the curtain wall offering an alternative to glass' structural use in architecture. They developed a space-filling grid principle using the polyhedron constructed by engineer Einar Thorsteinn. The resulting motif was coined the "quasi brick" and once repeated formed the crystalline shell that envelops the building. The "quasi brick" is a twelve-sided polyhedron consisting of rhomboidal and hexagonal faces (Olafur Eliasson, n.d.). When stacked together it forms both the structural and aesthetic component of the building (Olafur Eliasson, n.d.). Only the sun facing south façade utilizes the tree dimensional system whilst the other facades were generated by cutting through the three-dimensional bricks (Olafur Eliasson, n.d.). The combination of regularity and irregularity in the modules creates asymmetrical facades and roof structure forming a dynamic interior experience (Olafur Eliasson, n.d.). The quasi-brick system erased the obscuring effect of columns allowing for direct views throughout the building (Grima, 2011).

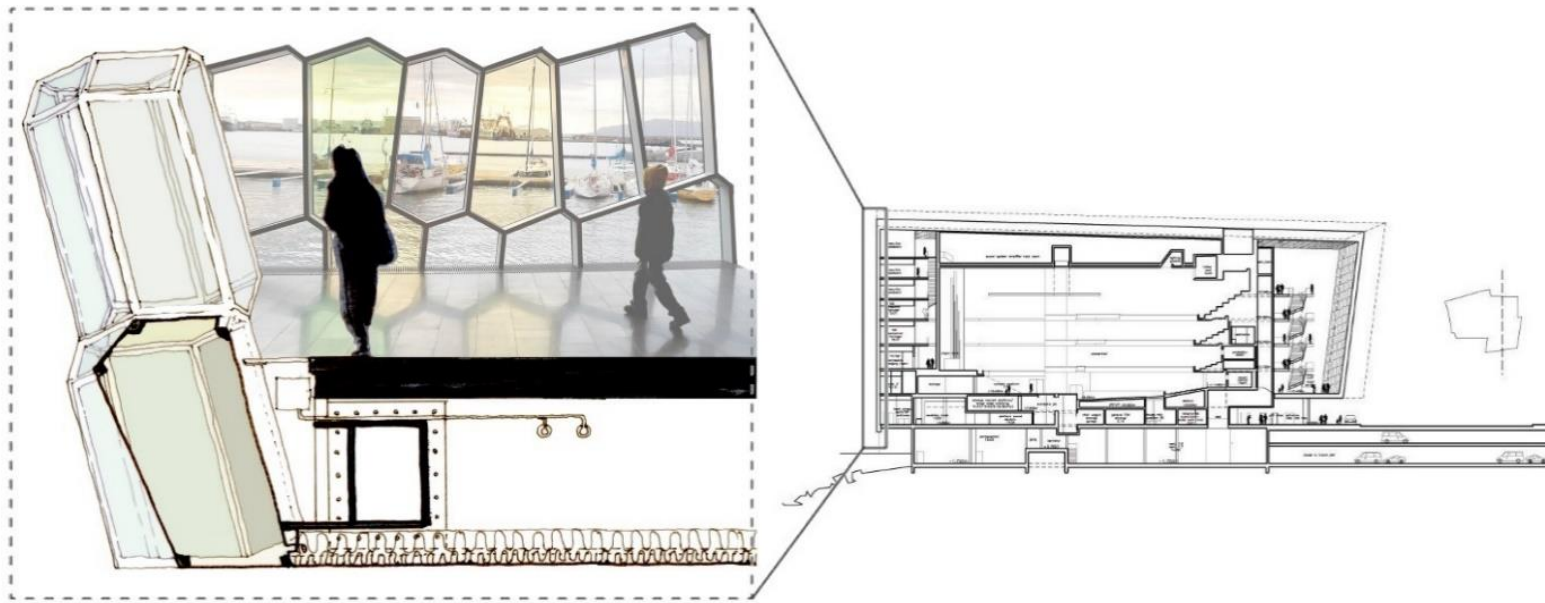


Figure 28. Section showing interior light quality (Source: Author, 2022)

Materiality & Light

Eliasson like myself is interested in the critic of the modern and postmodern movement. He views the building and artwork as a whole that challenges the rigidity of modernism and “the almost apocalyptic fervour” of post-modernism (Grima, 2011). The glass expresses both transparency and reflection in the continuously changing Icelandic light whilst creating unique experiences for its visitors (Grima, 2011). The quasi-brick consists of welded steel and transparent and dichromatic glass. The dichromatic glass creates a kaleidoscope light quality celebrating the dynamic daylight (Grima, 2011). The bricks contain light emitting diodes (LED) to emit different colours varying in brightness according to the Icelandic seasons and weather (Baldwin, 2022).

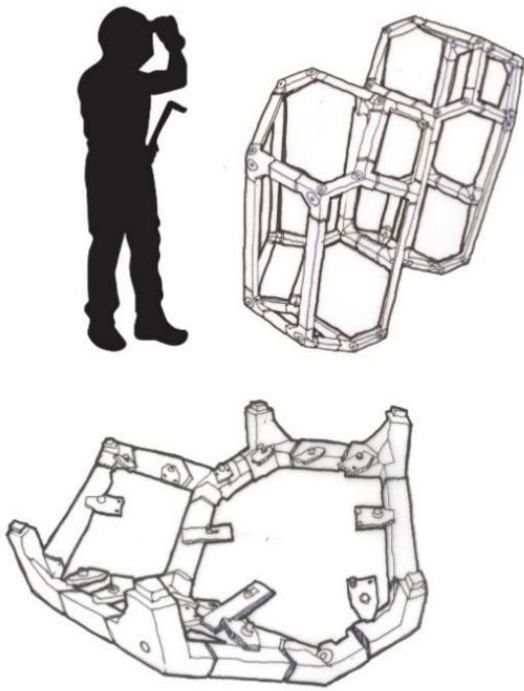


Figure 29. Construction of "Quasi brick" (Source: Author, 2022)

Figure 30. Assembly of façade (Source: Osbjørn Jacobsen, 2011)

Structural Assemblage

The façade of the building carries the weight from the roof and resists the powerful Icelandic wind requiring sophisticated joints. The engineering firm Ramboll Group __designed the building with 3D modelling software making it possible to create the unique balcony edges, walls and façades (Exner, 2011) The bricks connection formed a three-dimensional load-bearing structure, which was refined to optimise the use of material (Grima, 2011). The steel modules were prefabricated offsite and imported from China. The design provides a water- and airtight envelope.

2. Brief

This section focuses on determining immigrant settlement and integration requirements. To support my research, I turned to studies by the Human Science Research Council, Department of Home Affairs and Provincial Government of The Western Cape that identified the requirements, challenges, and settlement patterns of African migrants in the country.

Stakeholders study

The stakeholders for the project include both the foreign national community in Cape Town and the host communities that support their integration. The program aims to facilitate engagement between both groups. The foreign national community consists of students, formal and informal workers, refugees, and asylum seekers looking to live and work in the city. Studies of foreign nationals in the Western Cape indicated that foreign nationals from various parts of Africa made up 60 % of Cape Town’s foreign population as of 2012(Boaden, 2002). Majority of foreign African migrants are males between the ages of 20 and 30 who are rarely joined by family. The main factors from their migration included the pursuit for economic opportunities, academic qualifications or fleeing political uncertainty. Their settlement in the city is influenced by several socio – economic factors and their desire to reside in a location that they felt were either socially / economically aspirational or areas that they would find easier to integrate in culturally i.e., common ethnicity and language background.

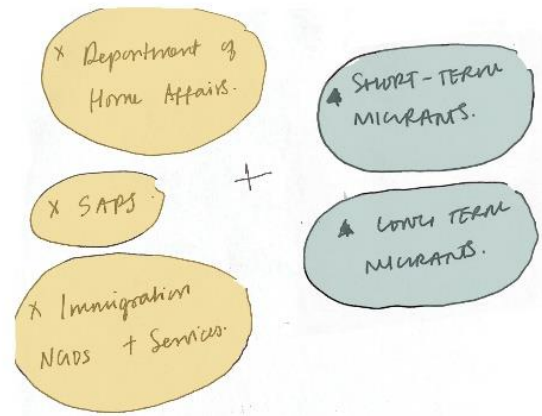


Figure 31. immigrant study stake holders (Authour,2022)

The highest proportion of non-south Africa’s African born residents were found in Sea Point, Masiphumelele, Claremont, Imizamo Yethu, Green Point, Woodstock, Table View and Joe Slovo Park (Rule, n.d.) A unique characteristic of their settlement patterns is their high residential mobility. Particularly un-documented immigrants use this as a strategy to evade xenophobia and law enforcement. This mobility highlighted a need for accessible living space close to economic opportunities that my program could offer.

Stakeholders study

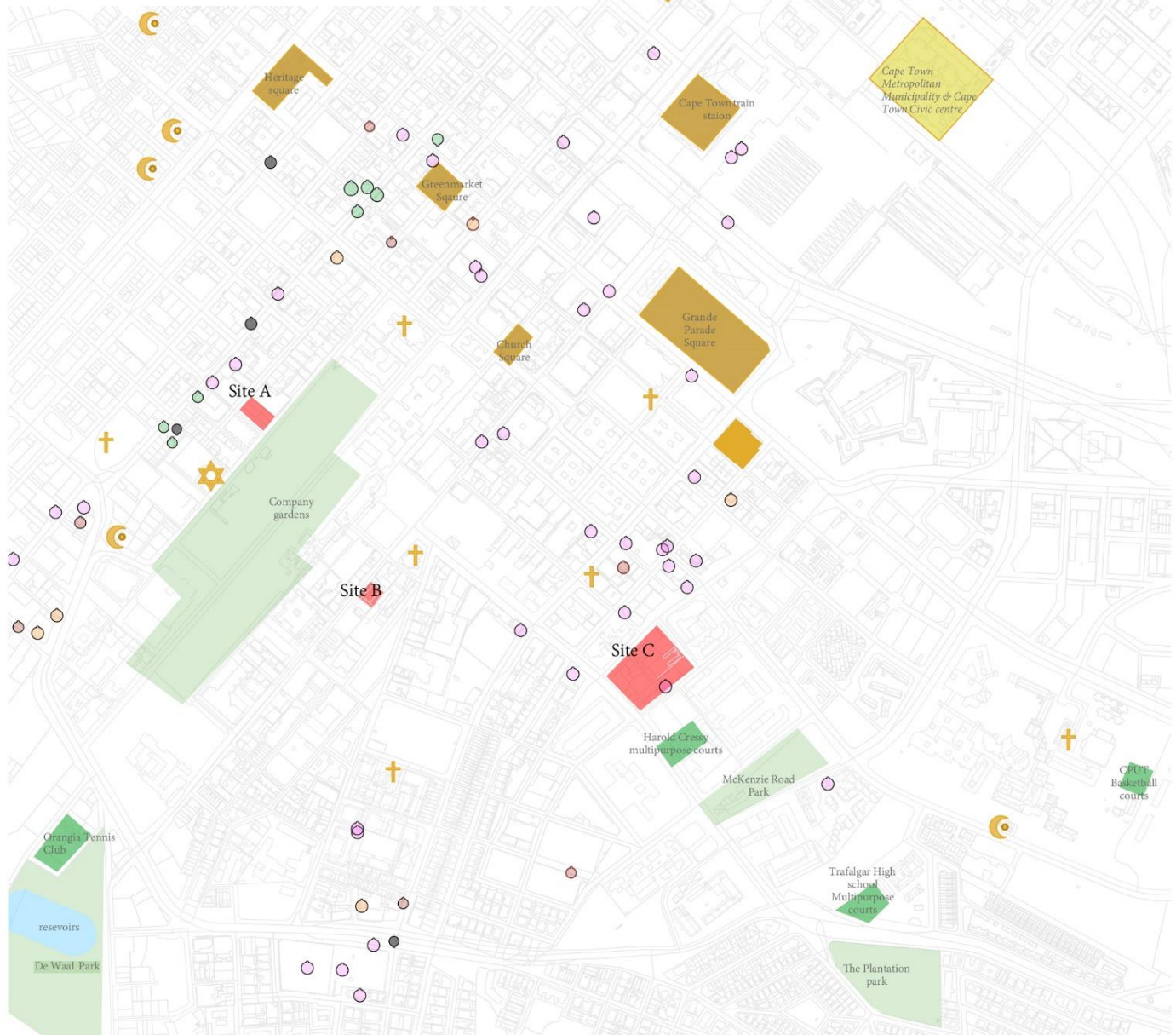
In addition to accessible living space immigrants require access to the various departments of Home Affairs (DHA) who are responsible for issuing their permits/visas that allows them to legally live and work/study in the country. Further studies into the settlement patterns of micro enterprise immigrant traders by Tendai Chikamhi describes the process of integration of foreign nationals in four stages namely social, structural, cultural and identification. Social integration is the process whereby people with different cultures, values and norms participate in a discourse to attain and preserve peaceful social relations(Chikamhi, 2011). Cultural integration is the process by which immigrants acquire knowledge, language and experiences needed to interact successfully in the host countries(Chikamhi, 2011).

Spaces that assist with cultural integration are all public spaces in the city and areas considered extensions of the home. These include public parks, religious institutes, recreational areas, restaurants, libraries, and community centres. Identification integration is achieved when migrants feel a sense of belonging in a community once the three other forms of integration are attained(Chikamhi, 2011). Cultural integration is achieved through continuous engagement between hosts and migrant communities thus establishing social support networks.

Proposed strategies for integration in studies of migrants show that education, health, justice, labour are key structures required for their integration (Ghanbari, 2019). Thus the project seeks to provide a socio-economic anchor that by providing spaces for negotiation, engagement, and transition. The intention is to connect foreign national communities to the city through extending the home into public space. Facilities includes spaces for everyday rituals such as public ablutions, spaces for food production and consumption, trade, and education. Using the integration requirements, my analysis of the city and aided in the identification of three sites in the city.

Mapping of cultural requirement in the city revealed a variety of multi cultural restaurants / eating spaces . The provision and production of food forms a key part of daily rituals . The restaurants and eating space act as extensions of the home .By providing additional space for these daily rituals the project creates a home away form home for its visitors.

Figure 32. Mapping of cultural integration related services (Authour, 2022)



SITE A
Parking lot on Queen Victoria street

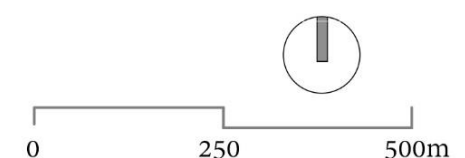
SITE B
Abandoned building on St John Street

SITE C
Parking lot on Roeland street



- ✝️ ⚙️ ☪️ Religious institutes
- 🍽️ Restaurants/cafes/eating space
- 🍽️ Cusines
 - 🟢 African
 - 🟠 European
 - 🔴 Asian
 - 🟡 American
 - 🟣 Casual dining

- 🌳 Public parks/gardens
- 🏟️ Sporting fields / recreational grounds
- 🏛️ Civic centres
- 🏘️ Public squares



Structural integration is defined as the ability to access basic rights mainly social and economic services e.g., employment, education, health care and housing (Chikamhi, 2011). After analysing the three Sites (A, B and C), Site C was chosen as the ideal site for the project. As a reactivation of a vacant site in the city, Site C provides access to the identified requirements of immigrants whilst being accessible and in proximity to the city's public spaces. The site is also located in District six, an area of Cape Town known for its once vibrant migrant community which allows me to connect my projects narrative to the site's history.

Figure 33. Mapping of structural integration related services (Author, 2022)



Public place & Accessibility

Architectural works produced by within this “post-colonial” time showcase the complex challenge of producing decolonized space in our contemporary contexts. Some of these challenges are a result of spatial injustices from colonial administration. They are reflected in the continued segregation of people and infrastructure in cities across the continent. Contested spaces such as borderlands and public space reflects this continual negotiation of power and tension that exists between segregated and marginalised communities. Public space refers to the space where human beings interact with one another with the intentions of determining a common way of life (Hénaff & Strong, 2001). This space plays an important role in the exercising of a population’s democracy. It poses a sense of liminality as there exists a continual negotiation of power and tension between members of society. Accessible public place provides a platform to address difference in culturally hybrid condition and has the potential to facilitate peaceful engagement between communities.

The March 2020 occupation of Green Market square in Cape Town’s CBD by African refugees and immigrants following xenophobic attacks can be seen as the occupation of public space and the reflection of a marginalised communities lived realities. This occupation exhibits the demand to be recognised by the people often shoved to the margins of society. My inquiry into public place queries the representation of communities constantly forced to the margins of society. My mapping of public spaces, educational spaces which includes language schools reveal existing areas in the city that are influenced by foreign nationals as well as provide their settlement needs. The selected site aims to connect to these existing spaces. The mapping of major thoroughfares and existing public transport routes showcase the sites accessibility.

Figure 34. Mapping protest sites by migrant communities Author, 2022)



March 2022
Protests by foreign nationals against xenophobia at the Parliament



Jan 2020
Occupation of Green market square by refugees and Immigrants

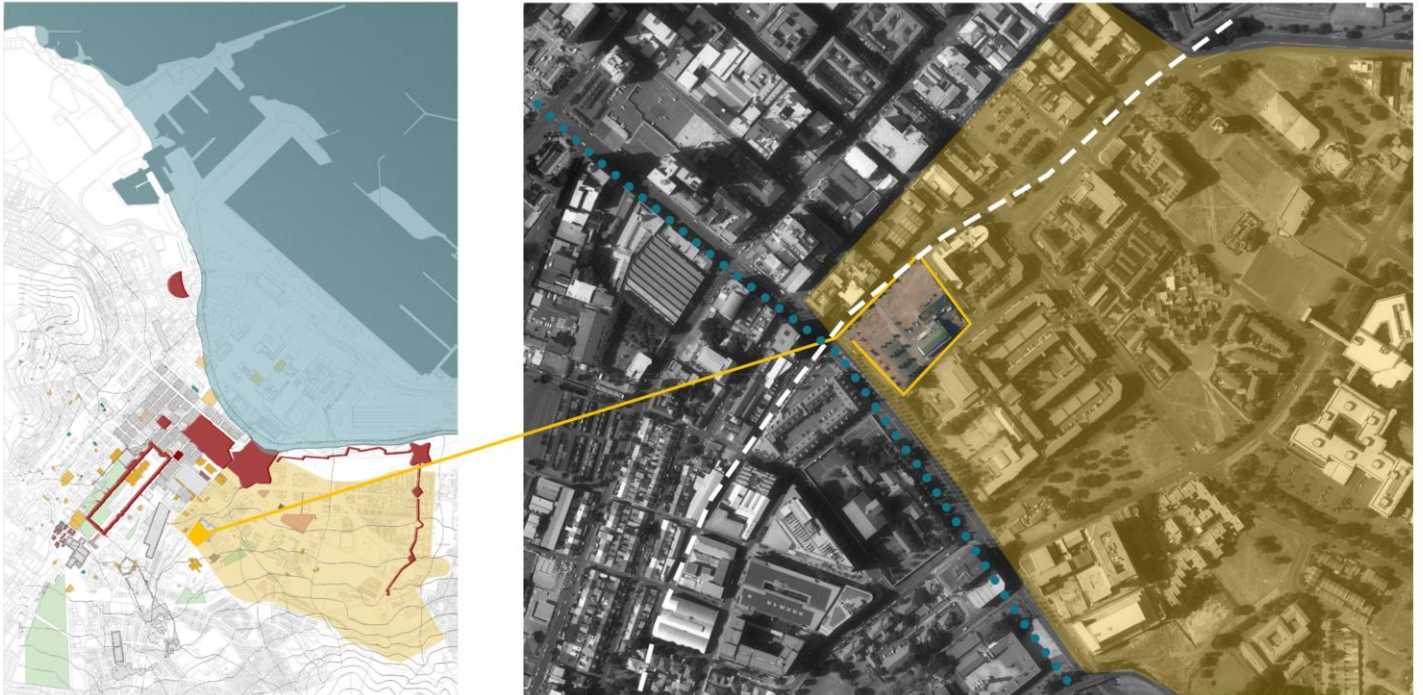


Oct 2019
refugee protesting against xenophobia outside the United Nations High Commissioner for Refugees

Figure 35. Mapping public space and accessibility



3. Site information



Roeland street

Figure 36. Site location

The site chosen sits on the edge of the city centre and District 6. This perceived border between the CBD and District 6 is made apparent by the vast amount of vacant land where the community of District 6 once existed. This area of the city is referred to as the East city precinct. The site fell under the ownership of the Western Cape government after the demolition of District 6 and is currently being used as parking for government officials, surrounding offices and the existing Food Lovers market. The area of the unbuilt land is 10 335m² and has a fall of 8.7m from its heights point where roughly 32 houses sat. The site is made up of 28 efs which I am consolidating into two plots. The area facing Roeland Street shall be used for my innervation This area is zoned under Transport + parking, open space, mixed use 2 under the Western cape zoning regulations. An 8m set back from the centre of the road and maximum height of 25-meter area allowed for this plot.

This site as well as other vacant plots along Canterbury Street remains partially undeveloped whilst highly contentious in the property market. A series of proposals have been suggested for the East city that have included proposals for a scientific park. Failure of this initiative has been attributed to conflict and resistance from the district six community. Groups such as The District Six Beneficiary and Redevelopment Trust, The District Six Community Forum, The District Six Reference Group; and The District Six Working Committee have led this resistance.

These groups have been working towards representing the claimants of District 6 in the redevelopment. The site has been earmarked for housing in the urban design framework by urban planner Guy Briggs. Through a transitional housing model, the project aims to provide housing that address the residential mobility of immigrants. The proposal also suggests potential housing for returning district six residents. Amongst the projects proposed for the East city has been the push to transform it into a creative district. Over the years the area has seen an influx of restaurants, bars, and tourist hotspots some of which are hosted on Canterbury Street in walking distance to the site. My proposals gallery, library, and exhibition spaces aim to develop an environment for teaching and sharing that connects the site to the other East city creative projects,

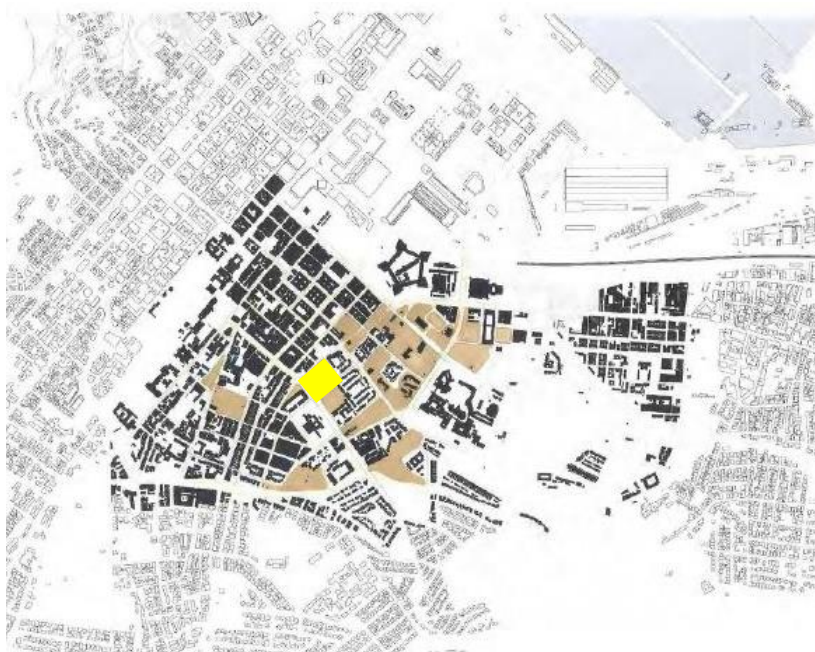


Figure 37. Remaining undeveloped sites in the East city (Muller, Wayne, 2014)

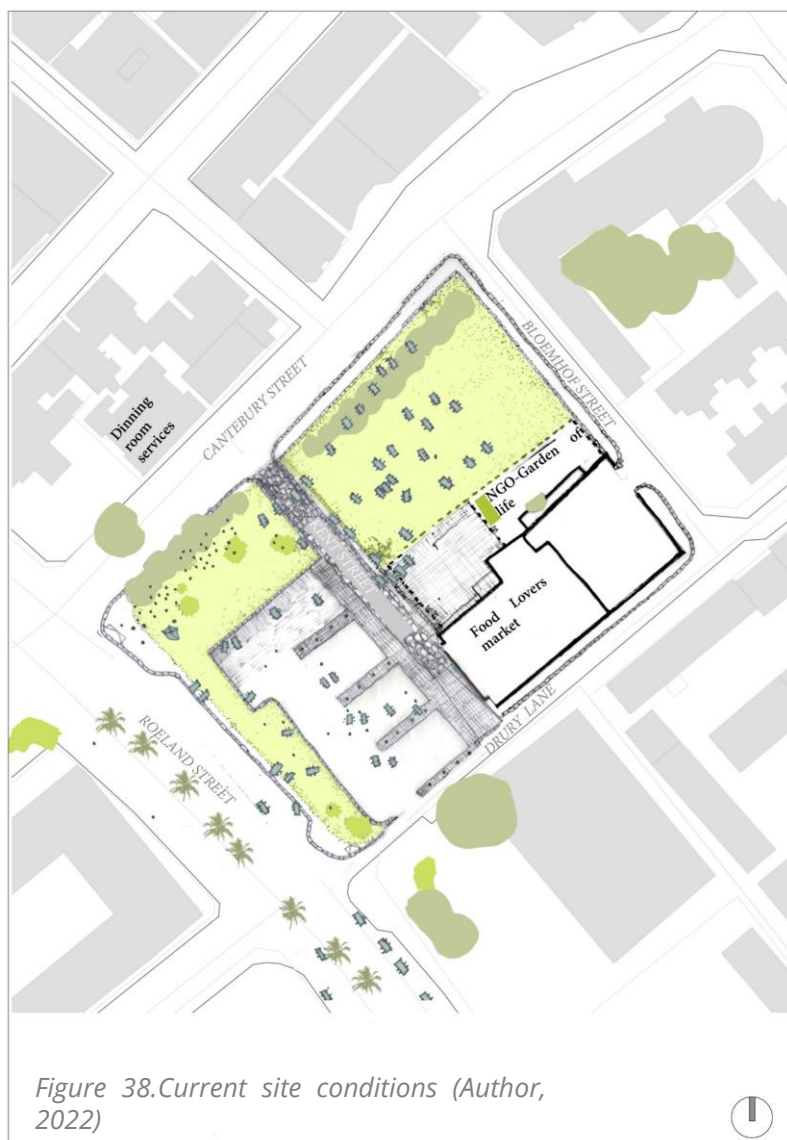


Figure 38. Current site conditions (Author, 2022)

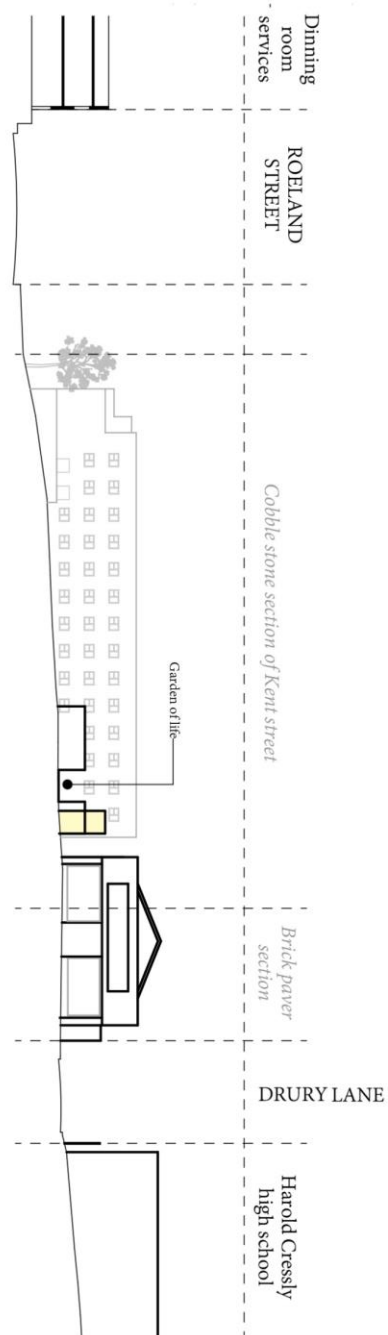
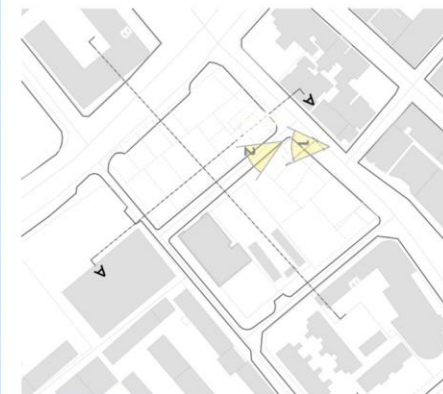


Figure 39. Current site conditions (Author, 2022)

Taking lessons from the TCK transitional model the process of entering the site requires a complete sense of displacement as I take on the role of an outsider. As an outsider I begin this process by documenting the site through multiple site visits at various times to uncover existing patterns of movement and engagement on the site. This process allowed me to identify the area of the site that are already supporting the social welfare of the city. The dining room across Canterbury Street serves vulnerable members of the city two hot meals each day. The slope of my site and line of trees provided a shaded area along the Canterbury Street for those receiving meals to sit and eat these meals. In addition, an NGO named the streetscape garden of life operates across Kent Street. The 600m² allotment consists of a subsistence garden that caters to the homeless community, office space and water treatment facility housed in shipping containers. The garden provides a place for the homeless to work during the day under the Ngo program that also provides them with housing (outside the site) and counselling benefits. By supporting the existing social infrastructure my proposal aims to facilitate the integration of its stake holder as well as provide additional spaces for advocacy services.

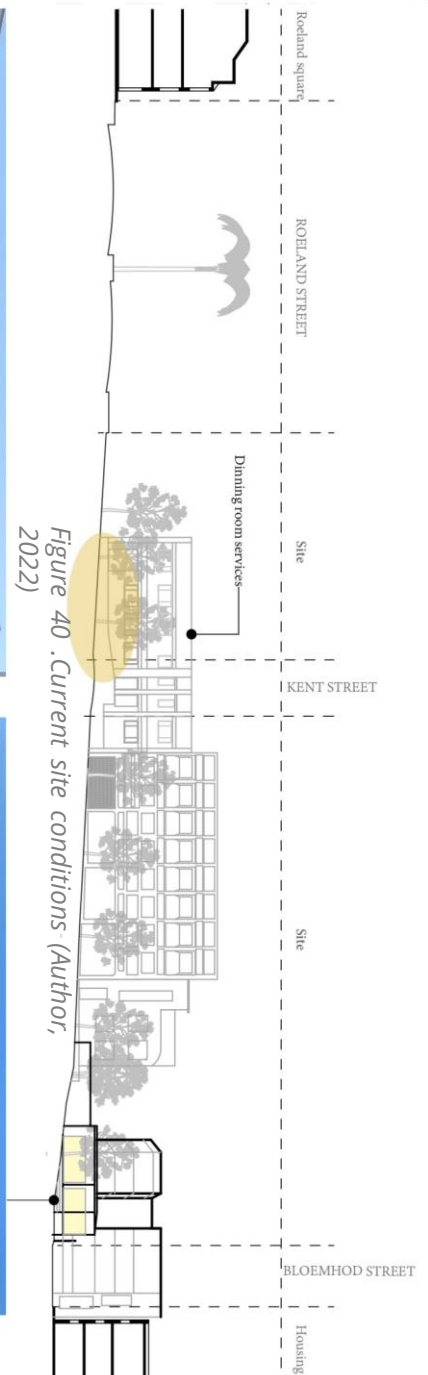
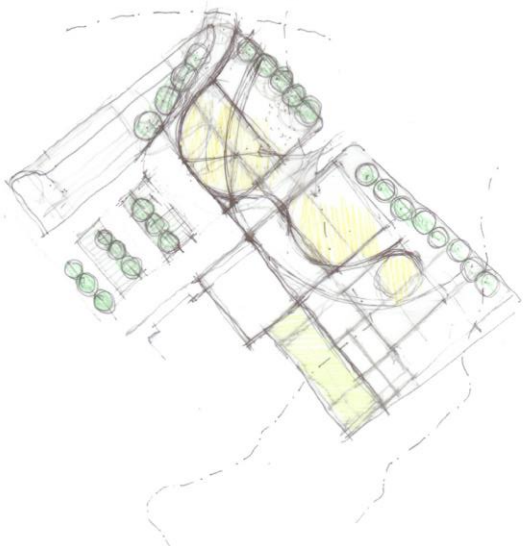
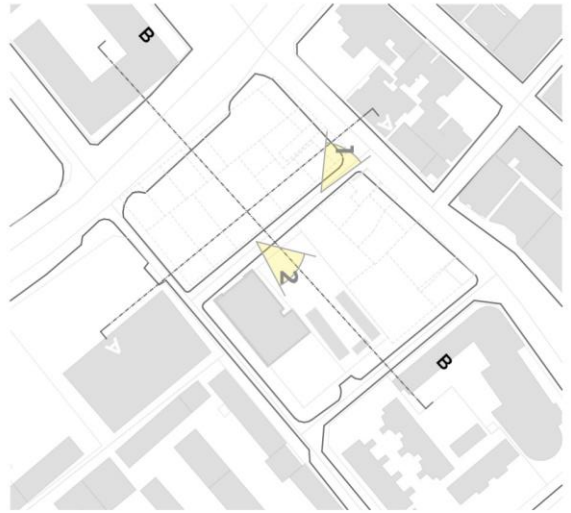


Figure 40 . Current site conditions (Author, 2022)



The cobbled stoned Kent Street is the remaining element from the demolished housing. The discovery of this street led to my investigations of the site's history. Correspondences found in the Western cape archives, books on the history of district 6 and a site plan from 1895 would provide me with further information on the residences and character of the area. The street currently acts as the access route to the Food lovers' market and the Garden of life garden.

The history of migration, displacement, and settlement in South Africa forms a key part of its hybridised national identity. From the lesser-known migrations of the nomadic Khoikhoi communities to the arrival and conquest from European empires the landscape of Cape Town has been shaped by these activities. During the late 18th century immigrants from Northern Europe were encouraged by the colonial administration to settle in the colony and take advantage of the fertile land and great climate by the VOC(Bezzoli Marco, 2002). Khoi Khoi communities were forced into slavery, and many opposed this violently furthering the shrinkage and displacement of villages. A demand for cheap labour furthered migration from Indonesia, India, Madagascar, and the hinterlands of Africa. Each community of migrants brought their individual cultures and building practices diversifying the landscape of the colony.

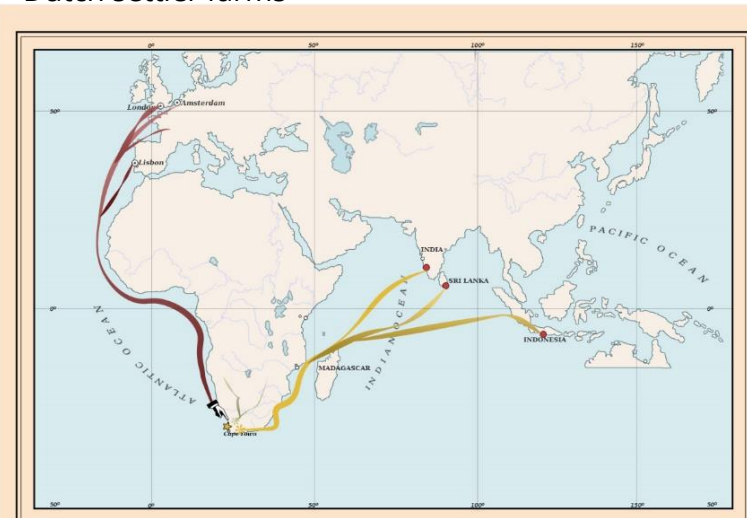
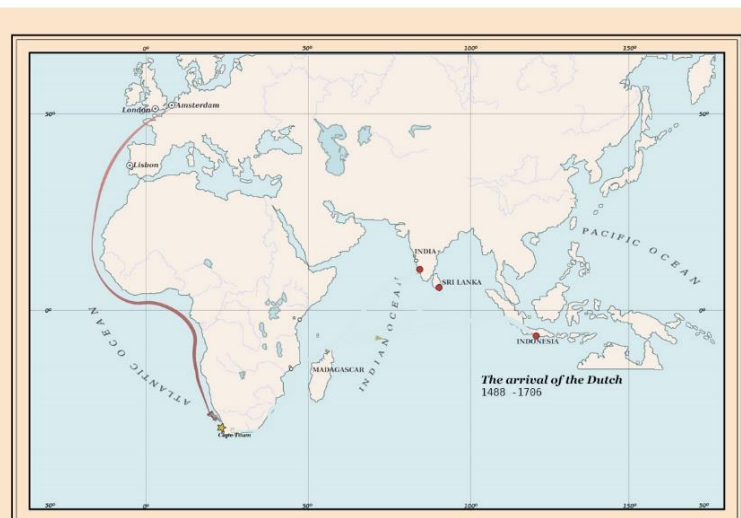
The first policy regulating immigration was issued in 1913 across South Africa (Immigrants Regulation Act of 1913) with the aims of excluding Indian immigrants entering the country(home affairs, 2017). This was a reaction to the increased migration of economic migrants who were aiming to work in sugar cane plantations. The growing Indian population was considered a major threat to the ideology of white supremacy that was prevalent in the colonial administration. This administration in no way represented most of the population which consisted of indigenous African communities.

Figure 41 .History of migration, settlement and displacement (Author, 2022)



Displaced Khoi settlements +

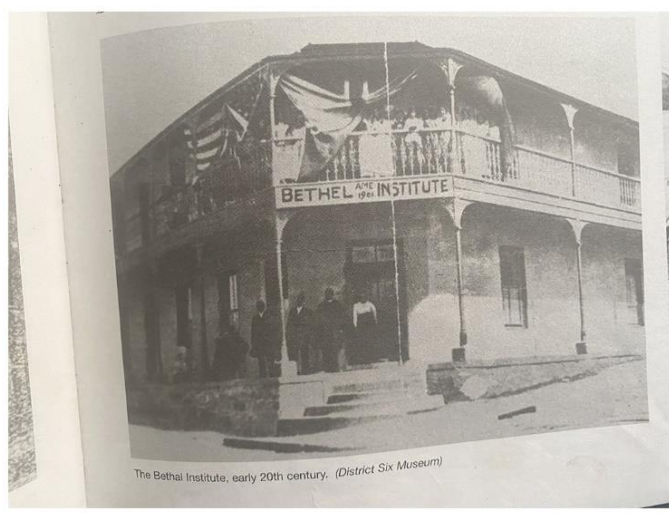
Dutch settler farms ■



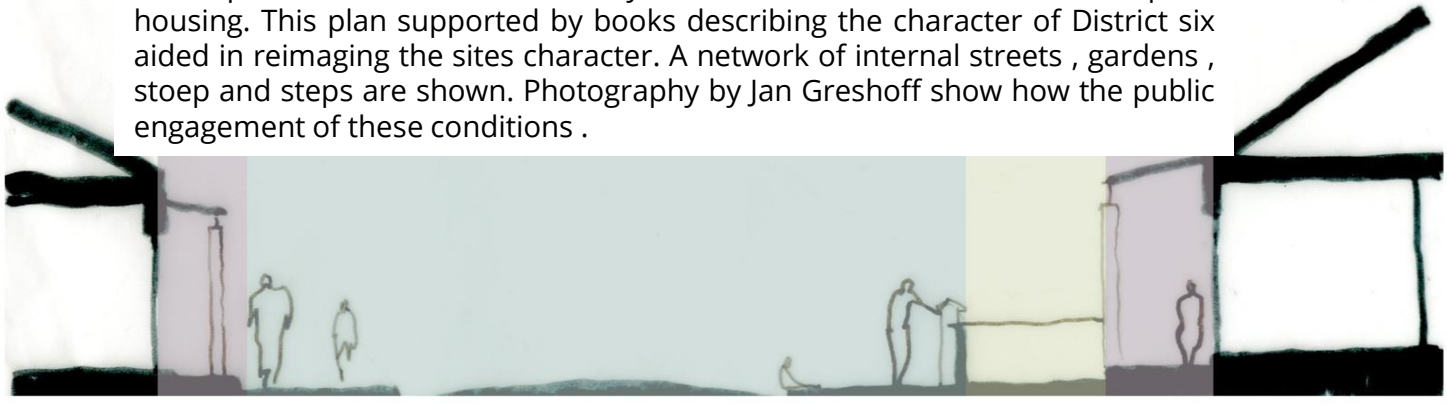
4. Design responses



Figure 42 .Translating sites memory (Author, 2022)



A site plan from 1895 was the only found document that showed the prior housing. This plan supported by books describing the character of District six aided in reimagining the sites character. A network of internal streets , gardens , stoep and steps are shown. Photography by Jan Greshoff show how the public engagement of these conditions .



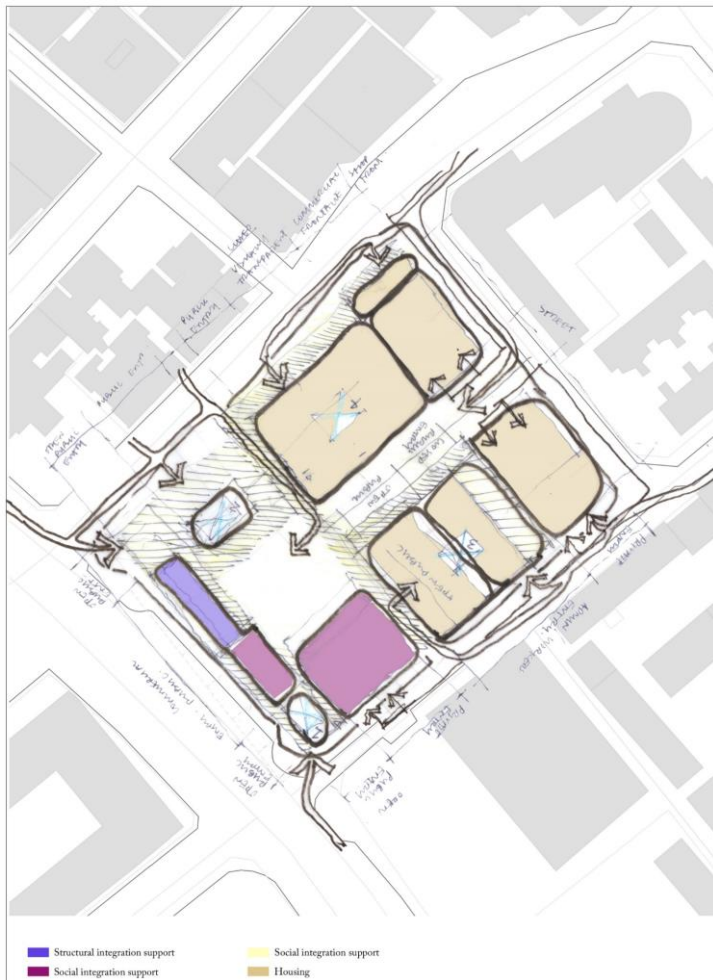


Figure 44. Potential approaches

The urban response is to extend the charitable services offered by the Dining room service and the streetscape garden onto my site. By going so, the building acts in-service to the public creating an engaging public space. Through fostering a connection with existing self-initiated projects my project aims to achieve community acceptance and sustainability. The three zones of the intervention respond to the cultural structural and social needs of migrants.



Figure 45. Entry points and gathering spaces

Inspired by the celebrated corners of District 6 the proposal creates points of entry and arrival along Roeland Street to. The suggested learning space along Drury land shields the courtyard from South-eastern winds. The courtyard space has the potential to form an open-air market or event space that will connect to the street scape garden

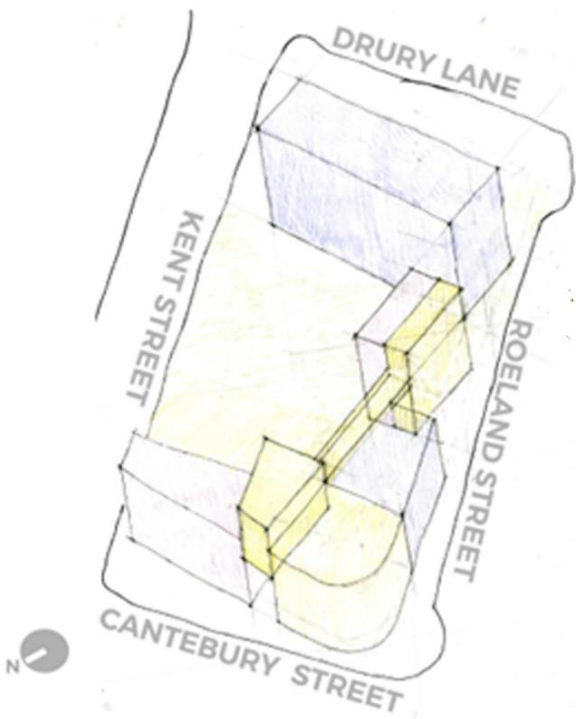


Figure 46. Concept program massing

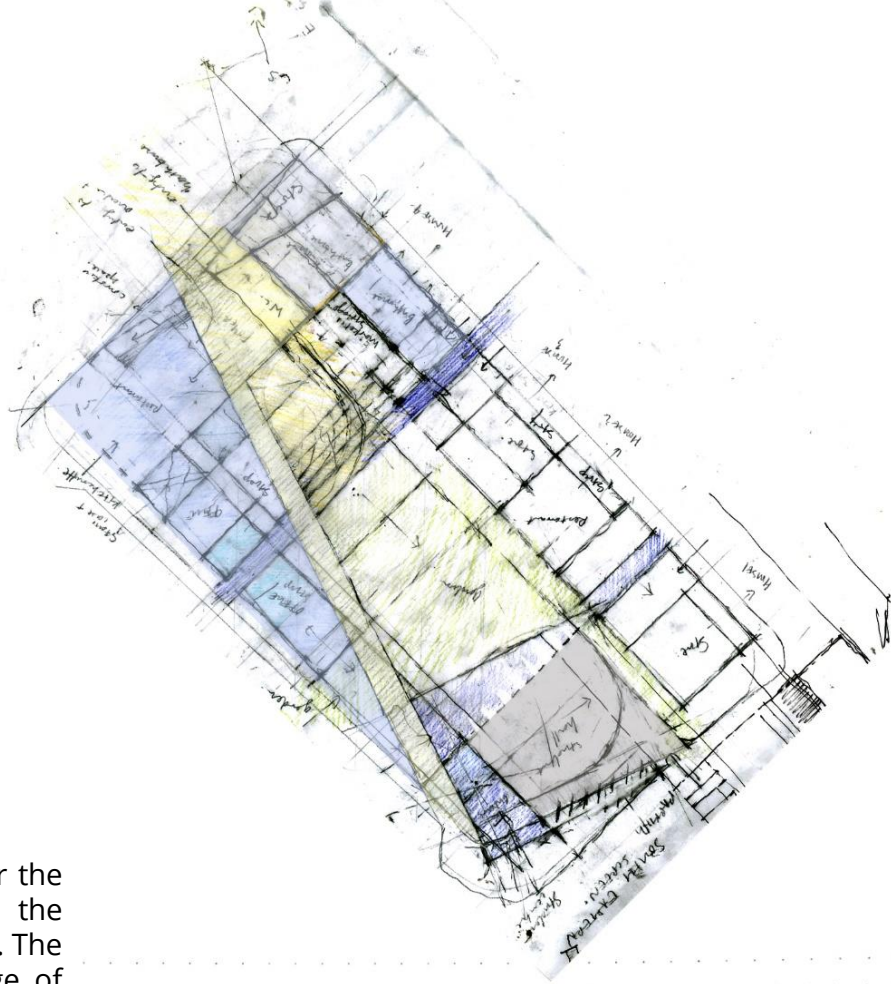


Figure 47. Conceptual ground plan

The program provides services identified for the integration of immigrants. It supports the surrounding education and charity services. The varying grains of housing allow for a range of room areas where I propose smaller rooms from meeting rooms, offices, and larger gathering spaces. These spaces for education support both immigrants and the students from Harold Cressy and surrounding institutions.

PROGRAM = SETTLEMENT REQUIREMENTS

CULTURAL INTEGRATION

- gathering spaces
- counselling rooms
- advocacy services

STRUCTURAL INTEGRATION

- each learning space
- opportunity for trade

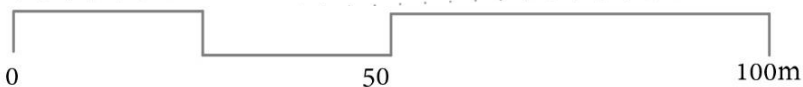
SOCIAL INTEGRATION

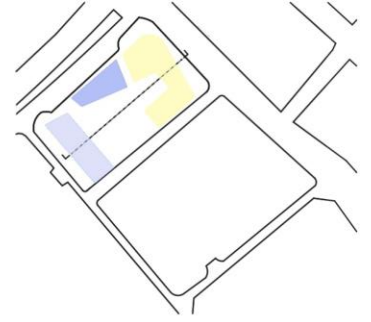
- public services
- extension of the home

- OFFICE SPACE
- MEETING ROOM
- MULTI-PURPOSE HALL
- RECEPTION
- YCS
- KITCHENETTE
- STORAGE

- LIBRARY / READING SPACE
- COMPUTERS + WIFI
- MARKET STORAGE
- ARTIST STUDIOS
- EXHIBITION
- RENTABLE OFFICE / TRADING SPACE

- PRAYER ROOM
- PUBLIC YCS + SHOWERS
- EATING SPACE
- OPEN MARKET SPACE





Moving forward plans and details shall be developed further to explore the concept transparency. The in-between space of my building is of interest to me in particular and shall be detailed further.

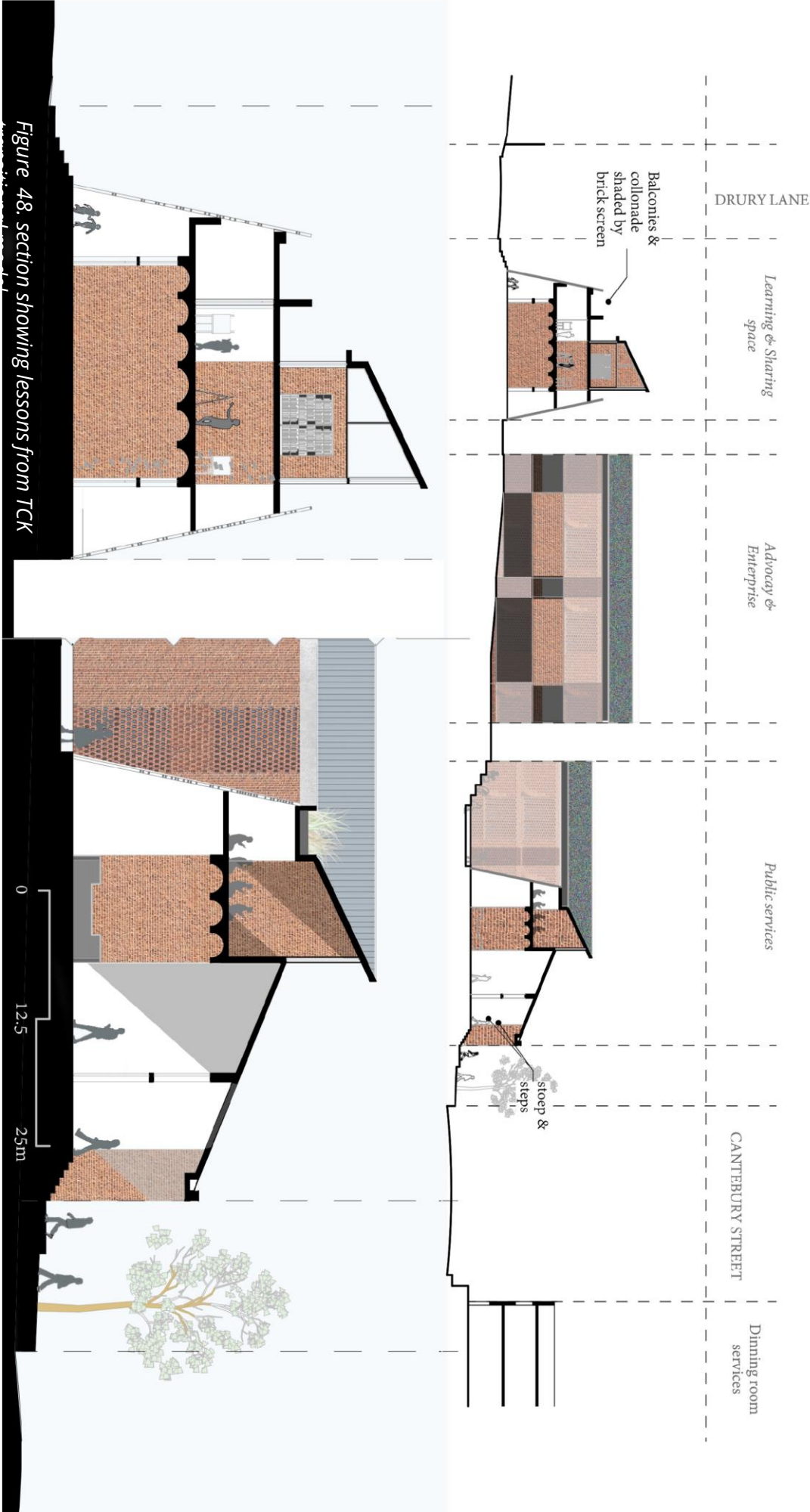
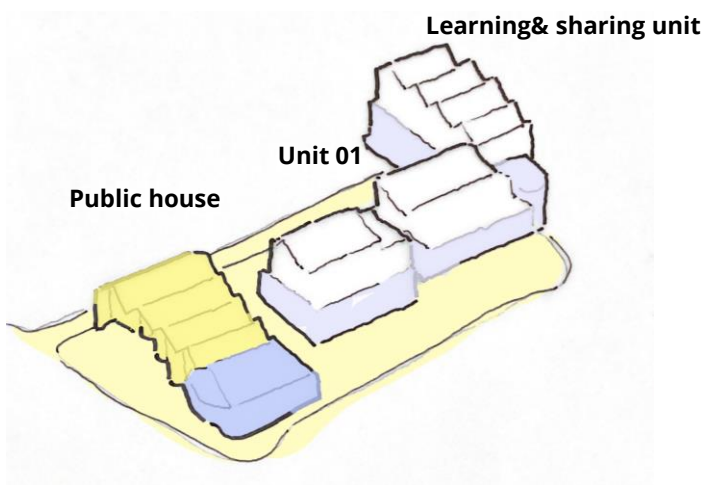
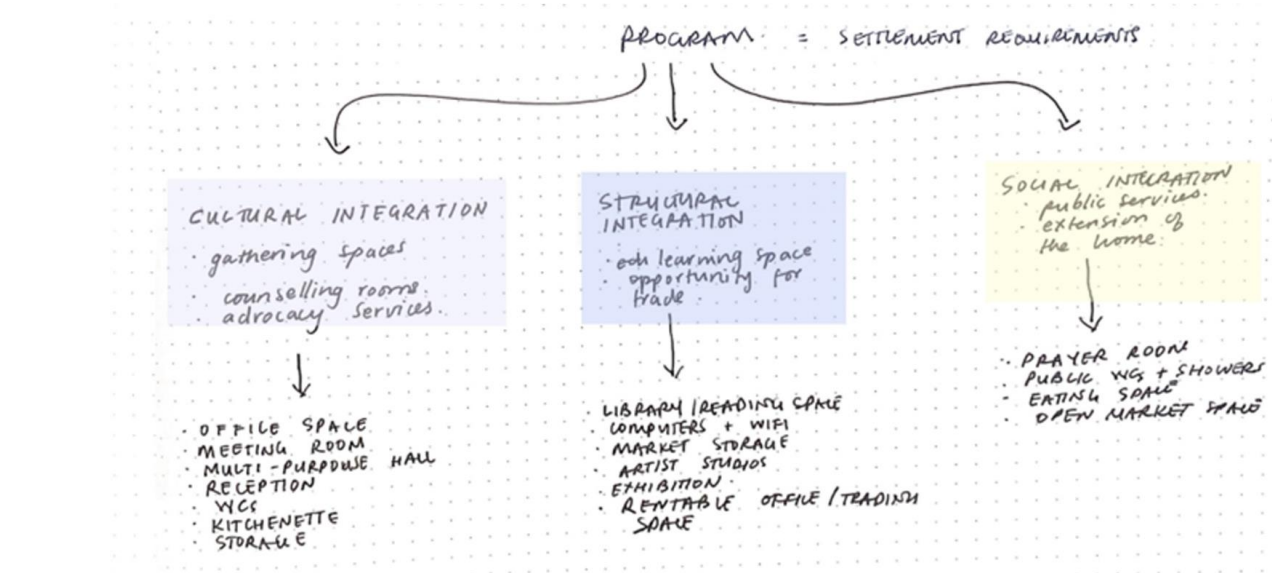


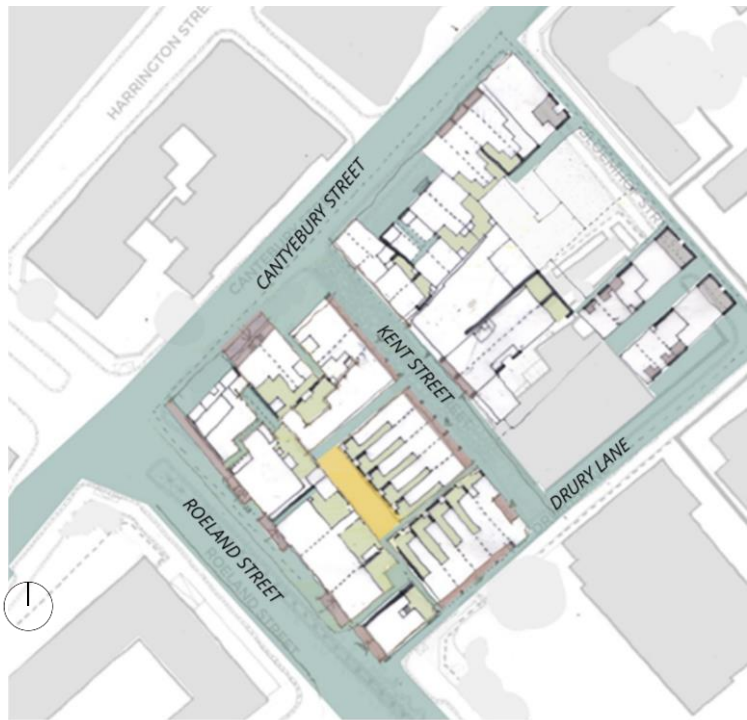
Figure 48. section showing lessons from TCK



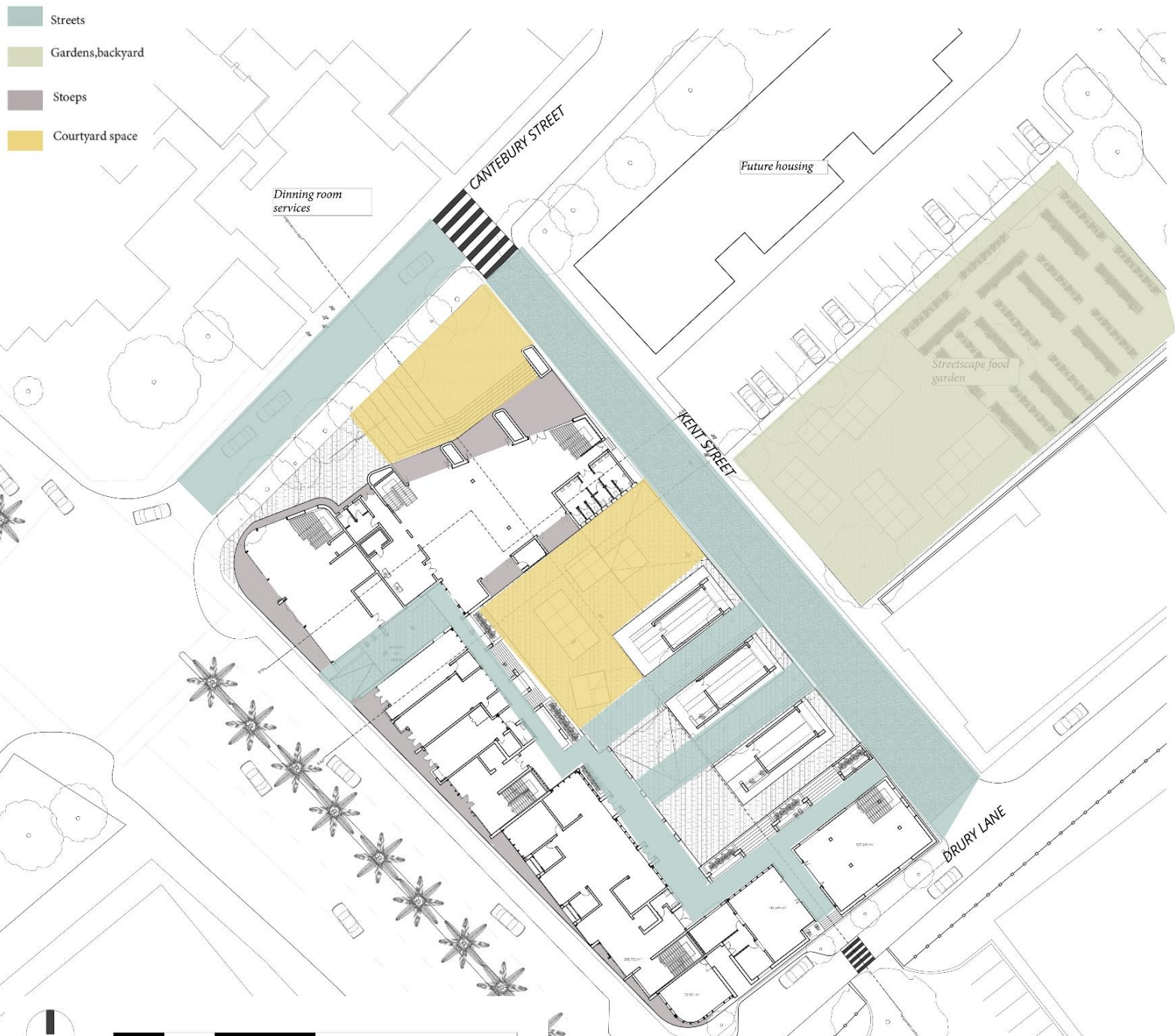
The proposal is divided into three main structures. these are the public house, Unit 01 and the learning and sharing unit. The Public house hosts the artists' studios & exhibition space towards Roeland Street and the public ablutions on Kent street which feed into the hall.

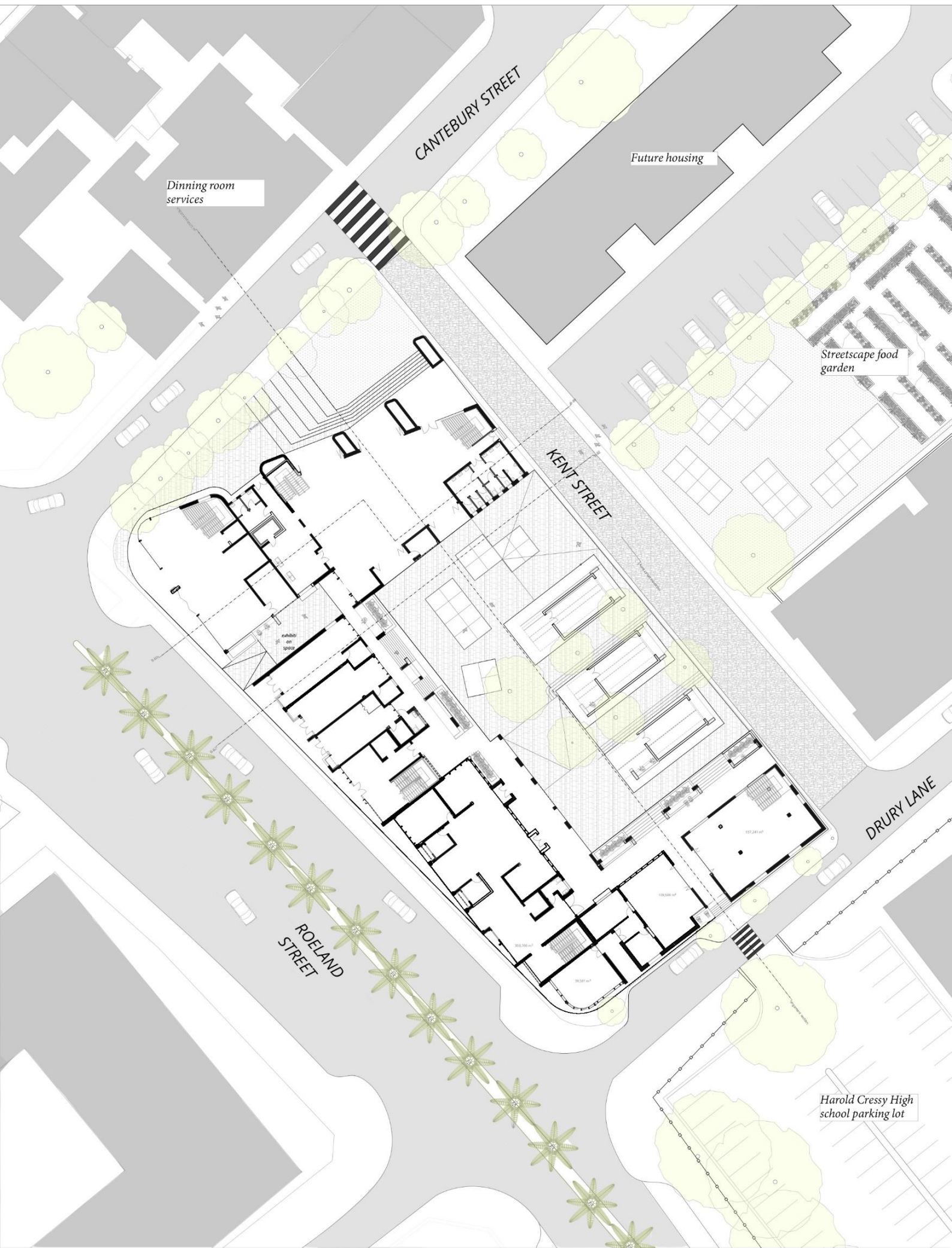


SITE PLAN - Memory



The building is positioned to allow for engagement from all four streets. developed by using previous site plans as a palimpsest. Transparency requires a found object, the site plan from archives acted as this object. it revealed the sites previous make up. A series of stoeps, steps, internal streets and courtyards are highlighted in my tracing of the plan. My building further steps back from the cobble stone as a way of respecting its memory. An open courtyard is created to accommodate dismountable trading stalls. The rows of exiting trees provide protection from the couth eastern winds.





Dinning room services

CANTEBURY STREET

Future housing

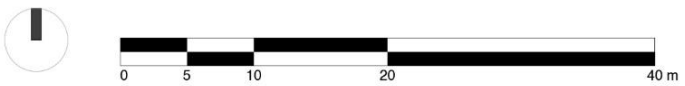
Streetscape food garden

KENT STREET

ROELAND STREET

DRURY LANE

Harold Cressy High school parking lot



Kent street elevation



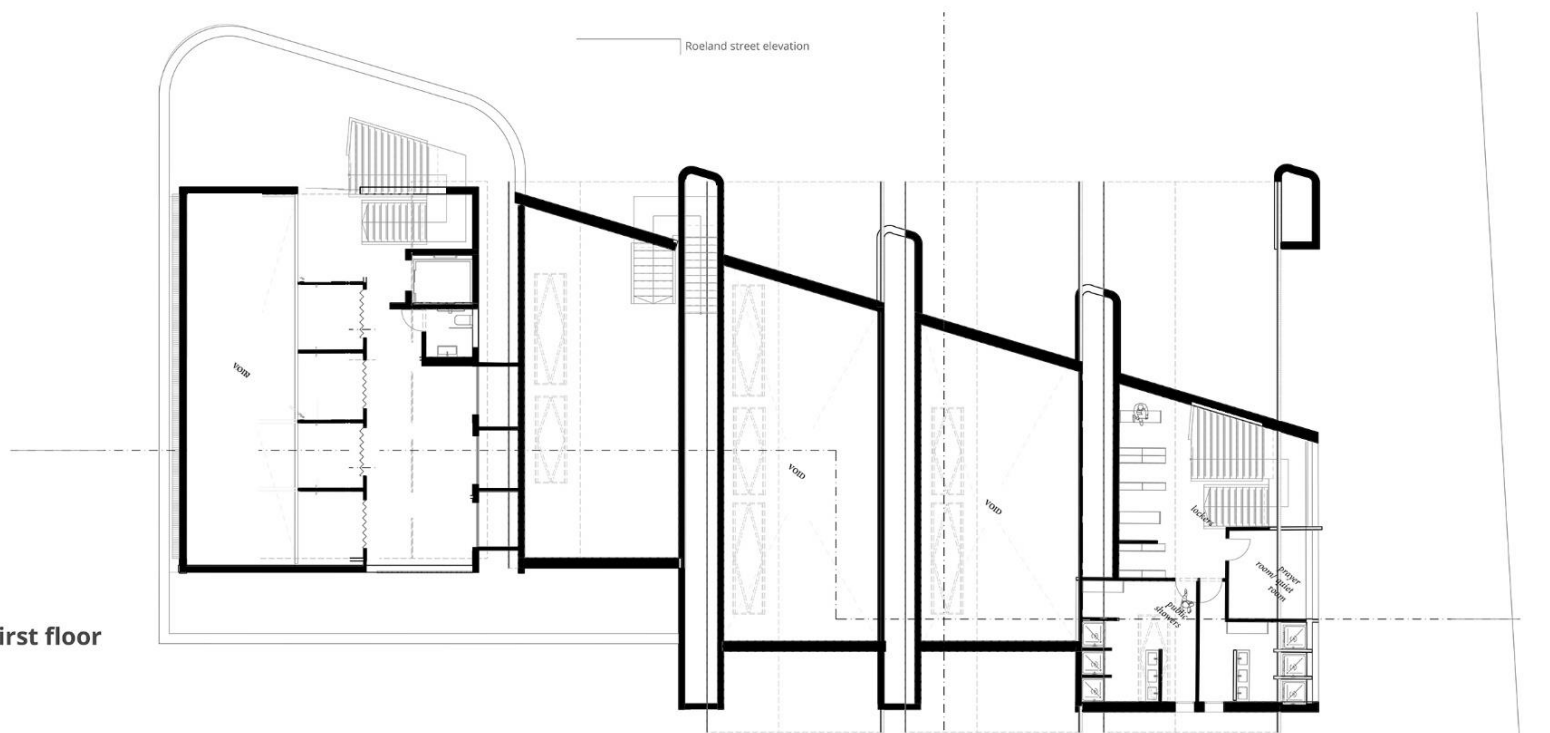
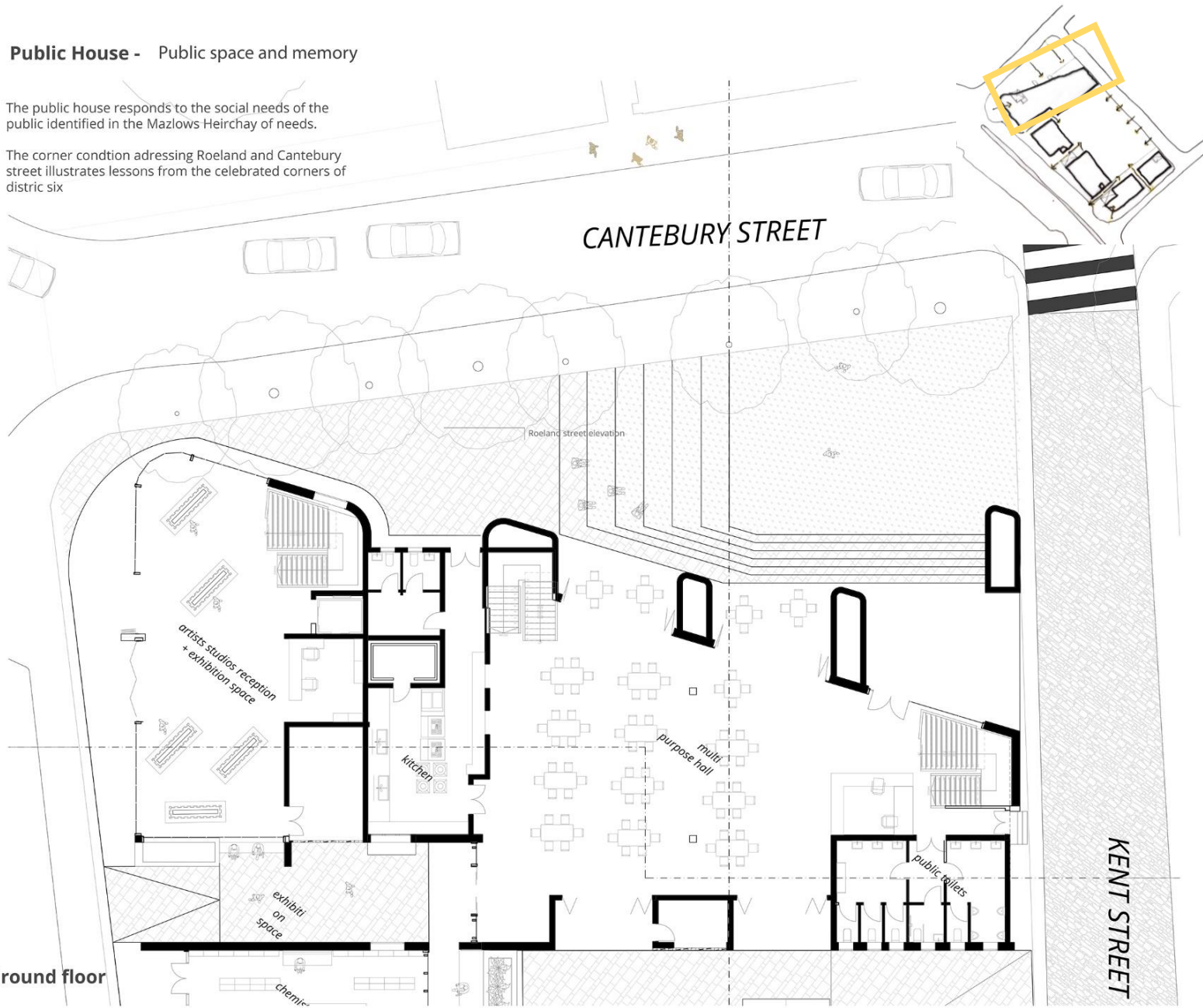
Section through learning unit & public house

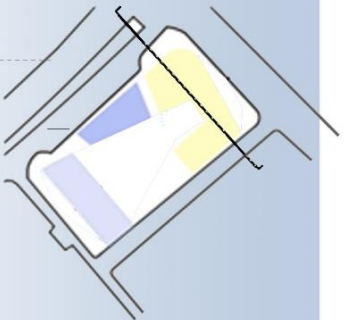
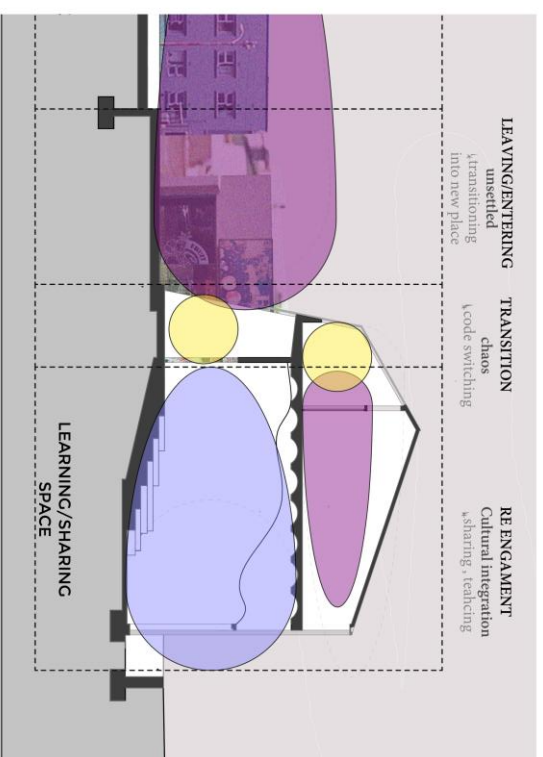
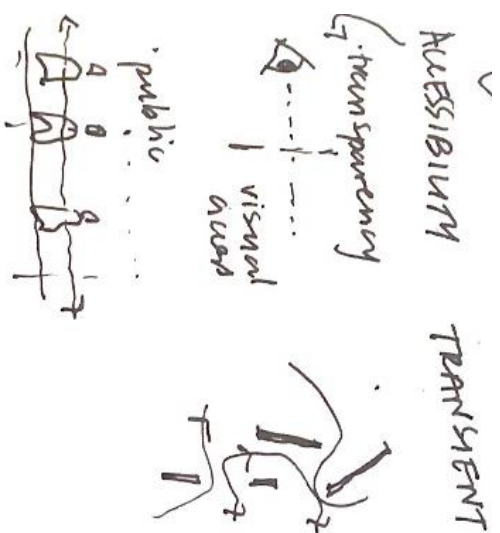


Public House - Public space and memory

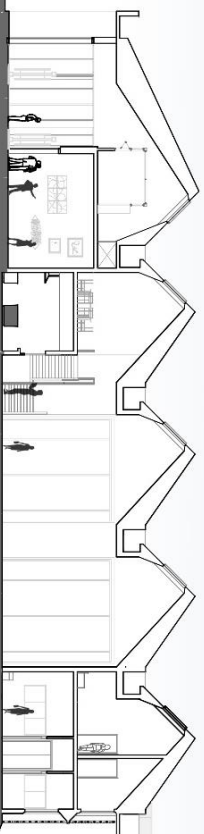
The public house responds to the social needs of the public identified in the Mazlows Hierarchy of needs.

The corner condition addressing Roeland and Canterbury street illustrates lessons from the celebrated corners of district six

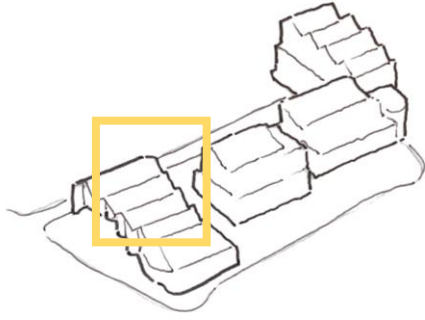




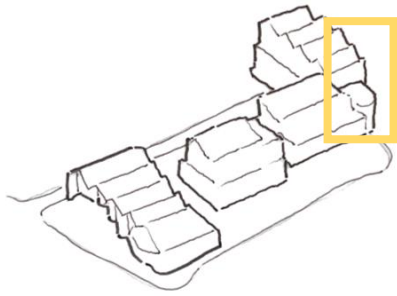
Section through public house



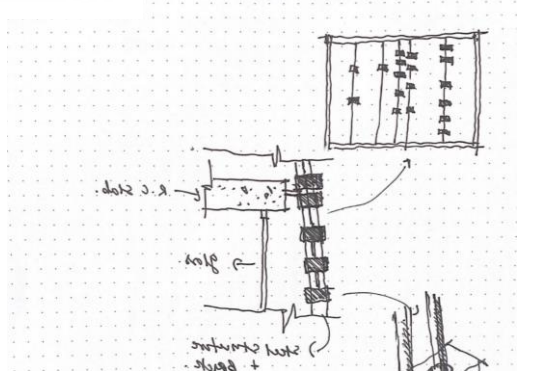
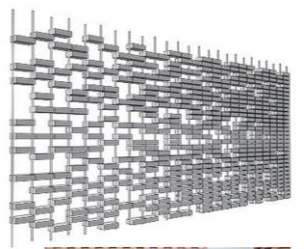
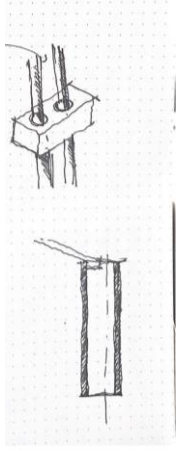
Approach from the intersection of Roeland and Canterbury street



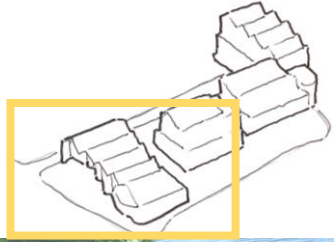
Approach from the intersection of Roeland and Drury Lane



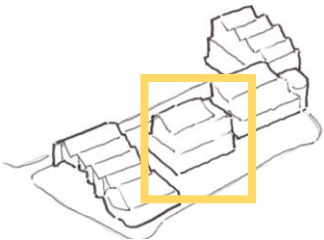
MATERIALITY & TRANSPARENCY - Canterbury street elevation



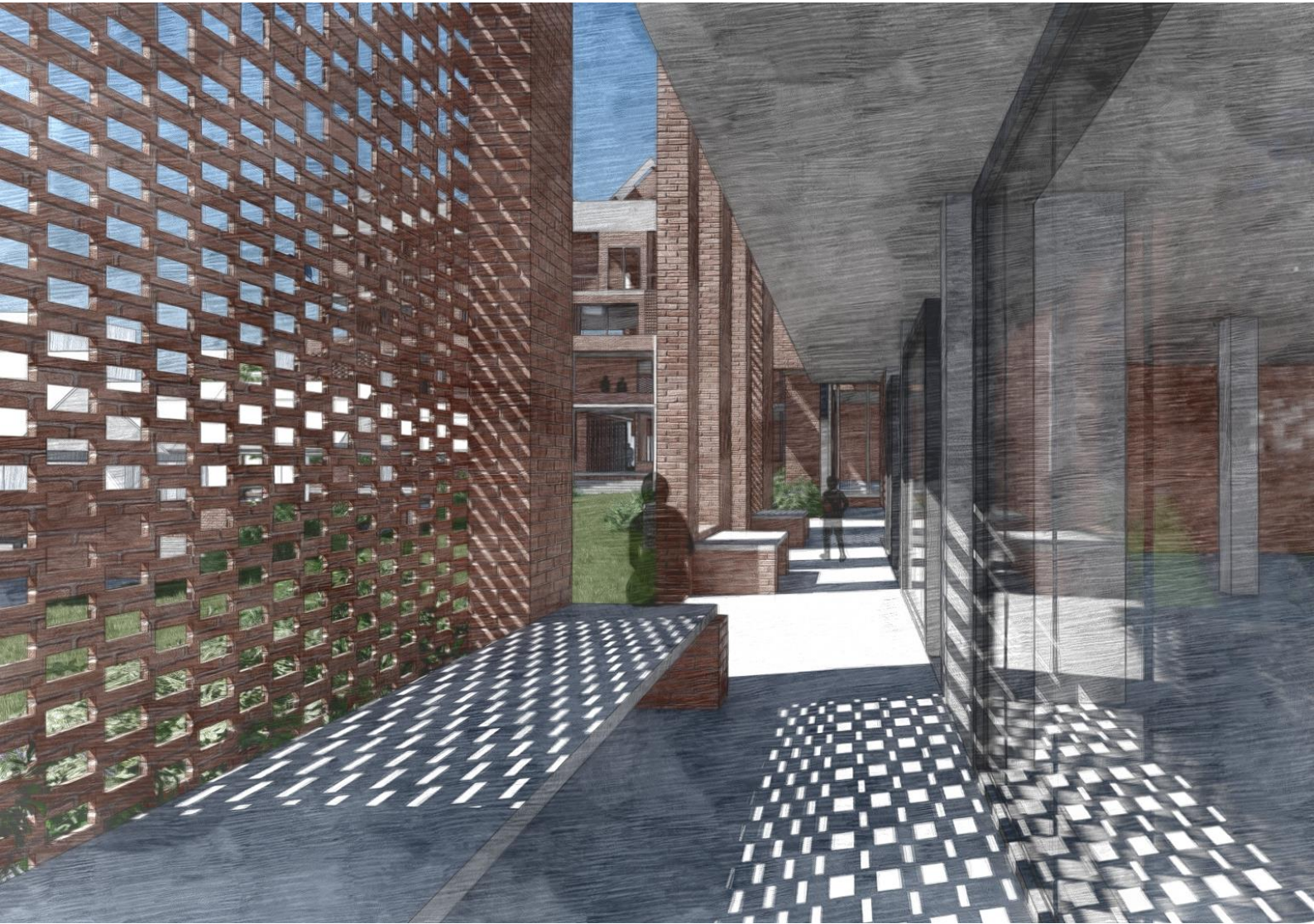
PUBLIC HOUSE – Entrance into public house



UNIT 1 – Stoops & internal streets



UNIT 1 - Transparency & thresholds



LEARNING & SHARING UNIT - Transparency & thresholds





Brick screen & bries
soleil

mezzanine
+17.280

3rd storey
+14.110

2nd storey
+10.920

1st
storey
+7.740

walkway

Family unit

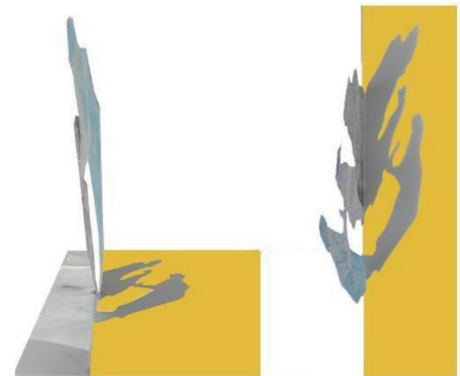
Studio apartment

counselling room

chemist



Archi Maki I : Memory Box



TESTING IDEAS: Mapping Experience

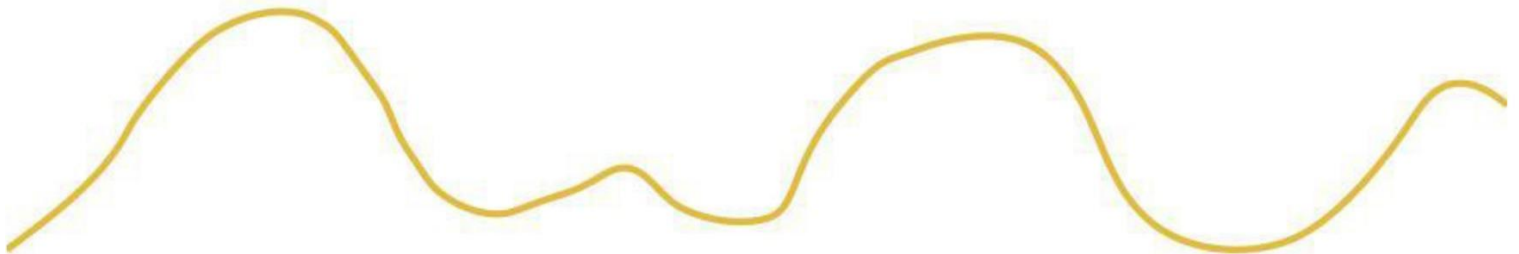
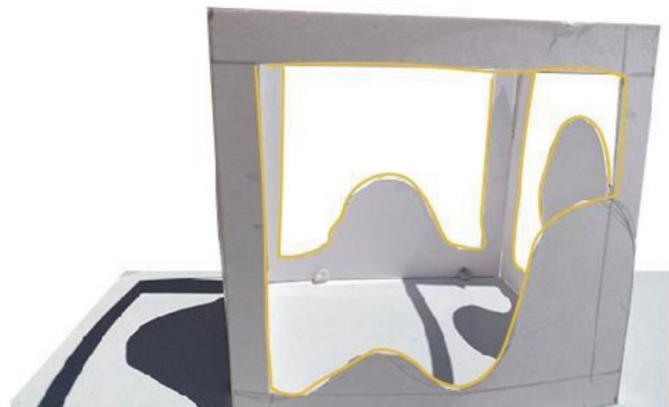
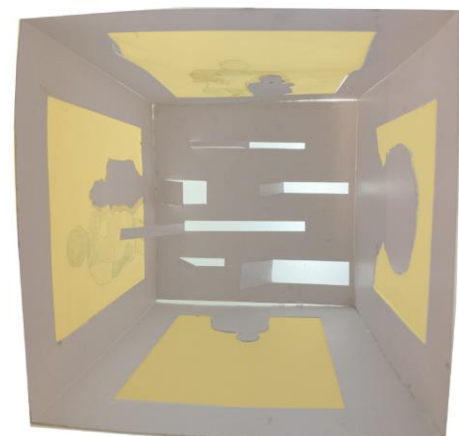


Figure 49. memory box

This model explores the relationship between myself and concept of memory in design. I test my ideas through sketching, painting and model making follows suit. Linking these ideas and finding relationships between theory and constructed space. In the making of my artifact, I was able to start testing my ideas through s and photography.

The exercise of making my poster lead me towards a two-dimensional abstraction of figures and space making features. In this representation I highlight the figures, light, and shadow.

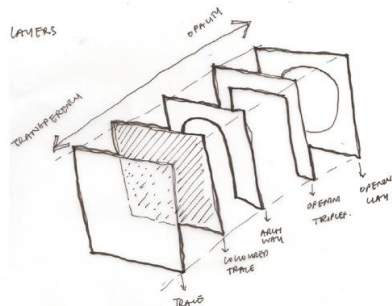


Archi Maki I : Memory & Transparency



Traditional food used in ritual ceremonies
Nduma , Bananas & Ucuru

Photograph of my parents wedding day
Layer 02
Place: Landscape and built form



Photograph of my parents wedding day
Layer 01
Figures: People

Sacred Tree where ritual ceremonies are performed
Müküngügü tree

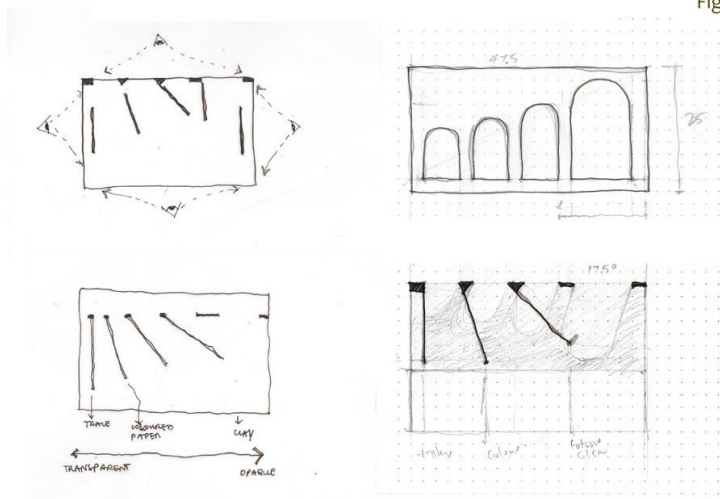


Figure 50. exploring memory and transparency

This exercise explored the construction of spatial narratives as a way of connecting myself to my ancestry. The models translate lessons from the life space model theory by memory researcher Paula Reavey. This theory suggests interrogating memory beyond the traditional clock time thus allowing one to position themselves in more than one time-space networks. Using photography and illustrated historical narratives as a point of entry I look to imprint memory into space literally by abstracting imagery and casting shadows.

Archi Maki I : Memory & Transparency

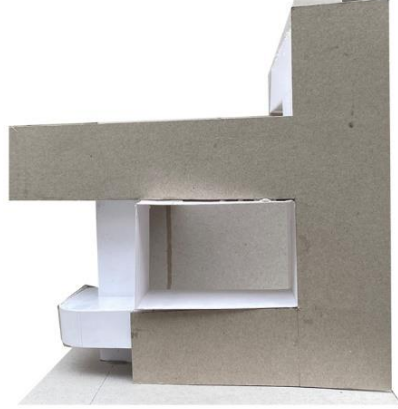
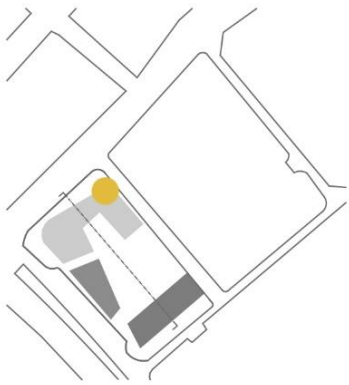
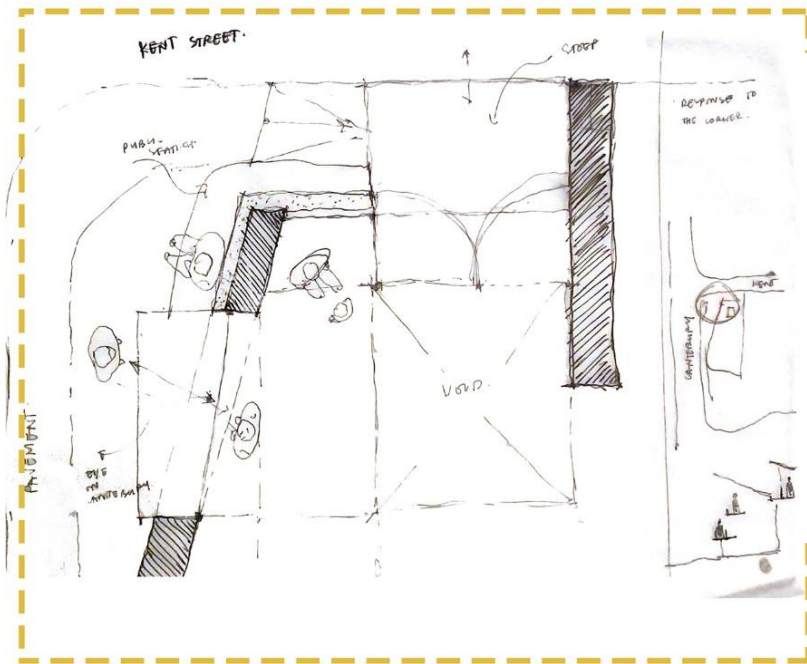


Figure 51. exploring memory and transparency



The Archi maki was a chance for me to test the concept of phenomenal transparency. I understood this as a process of superimposition of planes and volumes of space. My model attempts to test this layering process in the façade design. Transparency is tested in the positioning of the windows which mirror the opposing Dining room services brick façade.

The roof is my translation of the Victorian terrace houses that were on the site. The roof truss shows strategies for bringing in natural light.



KENT STREET



CANTEBURY STREET

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Application for Approval of Ethics in Research (EIR) Projects
Faculty of Engineering and the Built Environment, University of Cape Town

ETHICS APPLICATION FORM

Please Note:

Any person planning to undertake research in the Faculty of Engineering and the Built Environment (EBE) at the University of Cape Town is required to complete this form **before** collecting or analysing data. The objective of submitting this application *prior* to embarking on research is to ensure that the highest ethical standards in research, conducted under the auspices of the EBE Faculty, are met. Please ensure that you have read, and understood the **EBE Ethics in Research Handbook** (available from the UCT EBE, Research Ethics website) prior to completing this application form: <http://www.ebe.uct.ac.za/ebe/research/ethics1>

APPLICANT'S DETAILS		
Name of principal researcher, student or external applicant	Shirlyn Ndung'u	
Department	Architecture and Planning	
Preferred email address of applicant:	ndnshi001@myuct.ac.za	
If Student	Your Degree: e.g., MSc, PhD, etc.	Masters of Architecture (Professional)
	Credit Value of Research: e.g., 60/120/180/360 etc.	120
	Name of Supervisor (if supervised):	Stella Papanicolaou
If this is a research contract, indicate the source of funding/sponsorship		
Project Title	A place to connect	

I hereby undertake to carry out my research in such a way that:

- there is no apparent legal objection to the nature or the method of research; and
- the research will not compromise staff or students or the other responsibilities of the University;
- the stated objective will be achieved, and the findings will have a high degree of validity;
- limitations and alternative interpretations will be considered;
- the findings could be subject to peer review and publicly available; and
- I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism.

APPLICATION BY	Full name	Signature	Date
Principal Researcher/ Student/External applicant	Shirlyn Ndung'u		12/05/2022
SUPPORTED BY	Full name	Signature	Date
Supervisor (where applicable)	STELLA PAPANICOLAOU		28/05/2022

APPROVED BY	Full name	Signature	Date
HOD (or delegated nominee) Final authority for all applicants who have answered NO to all questions in Section 1; and for all Undergraduate research (Including Honours).			
Chair: Faculty EIR Committee For applicants other than undergraduate students who have answered YES to any of the questions in Section 1.			