

# UNLOCKING URBAN POTENTIAL

[breathing life into incomplete places]

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# ABSTRACT

Key words: infill development, inner city decay, placelessness, urban synergy

'Unlocking urban potential: Breathing life into incomplete spaces' explores the adaptation of vacant sites in the city, to unveil their potential for sustainable infill development. The project addresses placelessness in the city through design interventions that represent the complexities of urban life, fostering more vibrant urban environments.

Many cities today grapple with the challenge of inner-city decay, often due to urban renewal project failures, or various historical and socio-economic contributors. These failures leave large, unsafe, incomplete, and desolate spaces, which contribute to the phenomena of 'placelessness' - characterless urban spaces that neglect social relations and self-expression.

The chosen site is situated on an incomplete and abandoned construction site situated between Sunnyside and Trevena- two suburbs forming part of a strong mixed-use retail residential spine to the East of Pretoria CBD. These two areas are characterised by a strong culturally rich urban population, which makes up the mixed-use precincts.

The proposed project aims to adapt and repair the excavated ruins of vacant sites to integrate social, ecological, and spatial considerations, that facilitate walkable, interactive street interfaces to revitalize street vibrancy. Through this, the project will investigate how architecture can facilitate sustainable large-scale infill development of incomplete sites. The project outcome highlights the potential for urban socio-cultural repair to combat city decay.

To achieve this, the design proposes a permeable site arrangement, made up of public open space connected with programmes that support informal street activity. These activities are thoughtfully integrated into the existing excavated topography, creating a harmonious blend between built form and landscape. The primary programme is a culinary school-supported by the neighbouring Department of Tourism's ongoing initiatives, alongside supporting programmes for external stakeholders which populate the remainder of the city. The technology used investigates how the site can be dematerialised both vertically and horizontally to promote a permeable pedestrianised street scape, while simultaneously recreating a robust landscape.

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# 01 PROJECT BRIEF

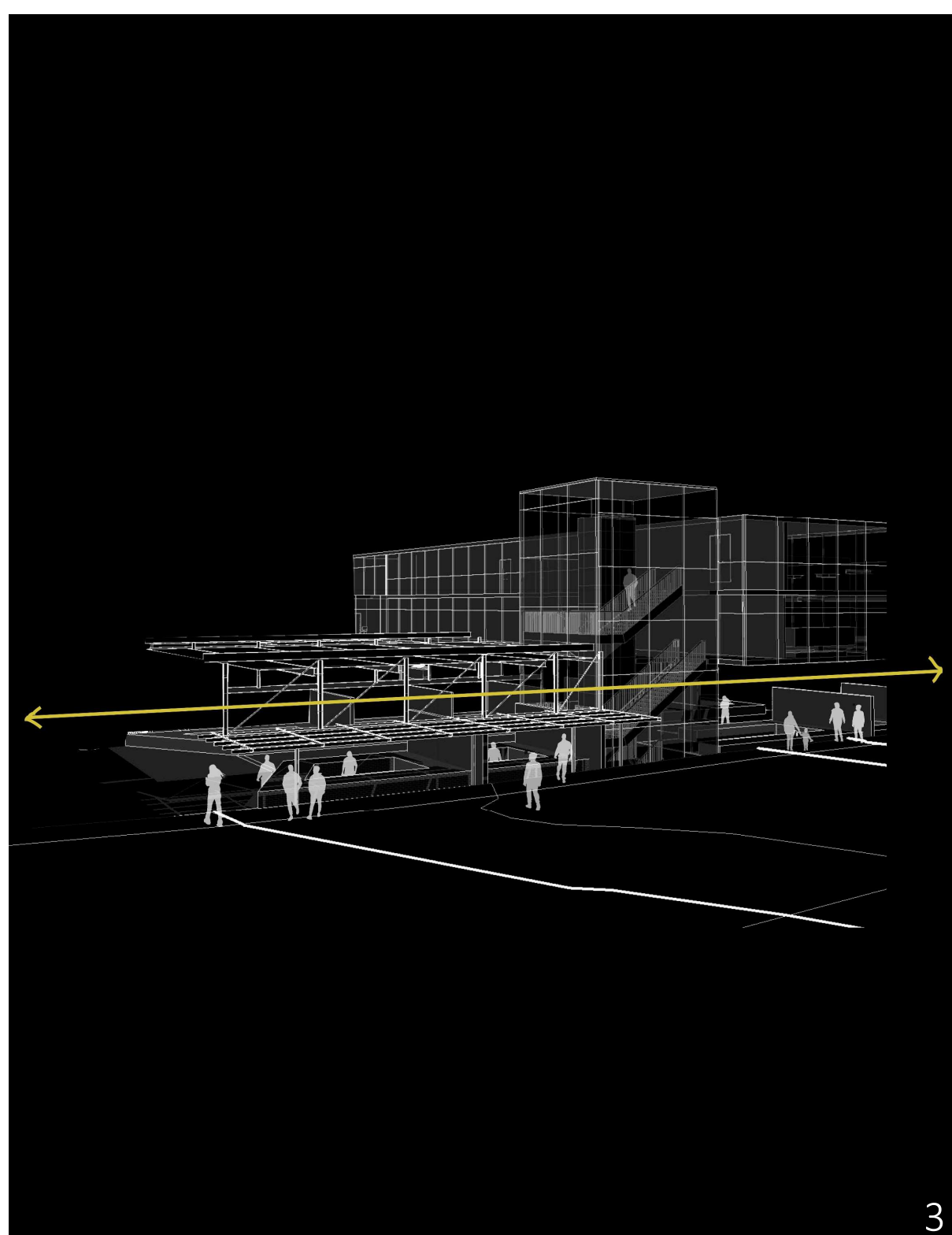
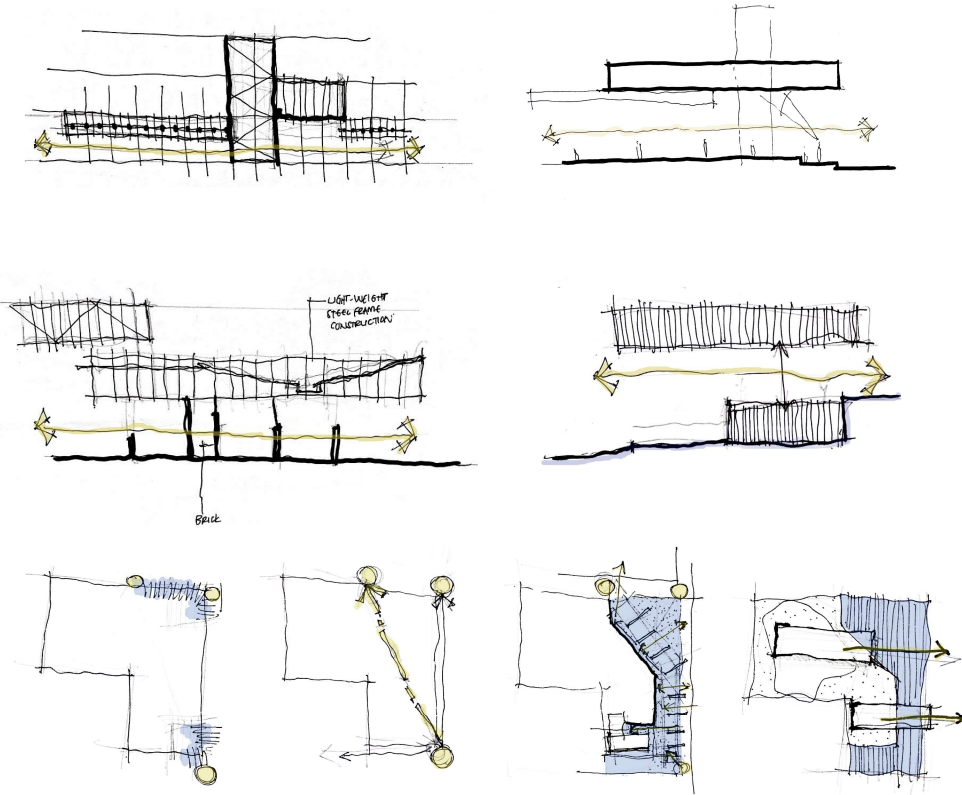
**Context/site:** Trevenna/Sunnyside

**Programme:** Culinary school and public market square

**Client:** Department of Tourism

**Users:** Sunnyside/Trevenna Community, food vendors, and retailers.

**Concept:** Urban synergy- the dynamic and interconnected nature of urban life, where walkable spaces, greenery, varies economic activities, informal interactions, come together to create a vibrant and resilient urban environment



# 02 PROJECT DESCRIPTION

## Urban vacancy: at a regional scale

### Background

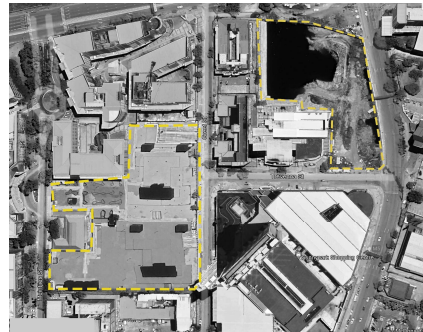
#### Urban decay : at a global scale

The concept of urban decay is not unique to the African city, severe cases of urban decay are evident 2 decades into the 21<sup>st</sup> century (Conradie et al., 2020). Globally, this decline in urban environments is synonymous with racial transitions/desegregation, marked by a shift from a predominantly white to a primarily black inner city (Crankshaw & White, 1995). In the South African context, urban city decay is similarly linked to racial transition, whereby a large population of white dwellers left the city due to new government subsidies for young mobile white citizens to own homes in suburban areas. Often, the deterioration of the city is affected and exacerbated by social, economic, and physical factors. Economically, a decline in economic investment through business migration, lead to increased unemployment, low skilled labour force, poverty, and subsequently increased criminal activity (Farjam & Motlaq, 2021).

Socially, the housing quality declined due to the decreasing economic opportunities, and thus disinvestment and neglect of the city which residential zones depended on (Farjam & Motlaq, 2021). This trajectory was an additional driving force for urban sprawl, leaving numerous residential buildings decollate undermaintained, and overpopulation; contributing overall physical decline. Over population also contributed to the decline in law enforcement quality, and lack of service delivery, as an increasing number of residents competed for limited resources, leading to social unrest, and a decreased quality of life (Conradie et al., 2020 ; Yoade et al.,2015).

Due to the social and economic factors named, the physical conditions of the city declined; showing the effects of poor integrated planning, leading to increased pollution, ineffective municipal service delivery, and an overall deteriorating-built environment (Conradie et al., 2020).

As mentioned previously, due to the cities deteriorating state, many portions of the urban environment were left vacant and poorly maintained and continue to do so. Furthermore, maintenance without return on investment keeps these locations in a vacant state. Urban deterioration and vacancy affect both private and public sectors in South Africa. The public sector, responsible for a large portion of assets like land, infrastructure, and government buildings, contributes significantly to urban vacancy due to inadequate maintenance and failure to commercialize some state-owned infrastructure, resulting in missed economic opportunities (Mahlangu & Worku, 2023). Though vacant sites hurt neighbouring communities, the demolition of vacant buildings can result in urban renewal developments which respond to the decades of neglect and decay (Massey, 2019). Unfortunately, cities have not always seen the positive impacts of these initiatives, in that often the consolidation of large sites for large scale developments has the potential to result in unfinished and abandoned construction sites (Hull, 2020). As a result, this vacancy creates gaps and lifeless zones within the urban fabric.



Proposed Site & Trevenna Office campus, Pretoria (Google earthpro, 2023)



Hatfield, Pretoria (Google earthpro, 2023)



Rosebank, Johannesburg (Google earthpro, 2023)

#### Placelessness: at a neighbourhood scale

*The intelligence of place, I continue to maintain, is in the streets of places everywhere, not in the planning offices of bureaucracy'*

*-Nabeel Hamdi*

Place is the symbol for functional centres centre of life for both individuals and communities. Therefore, placelessness describes the absence of that- flatscape meaningless patterns of buildings with show little to no representation of the identities, and the livelihoods of people (Smith, 1978). Therefore, considering the public sector as one of the largest contributors, the continuation of large-scale developments becomes detrimental to the emergence of placelessness in the city. Often reviving a sense of place requires micro scale interventions that consider senses and scale, safety, representation, sustainability, walkability and many more, all which together aim to foster community and build resilience (Ghel, 2015)

Therefore, the proposed project aims to adapt and repair the excavated ruins of vacant sites to integrate social, ecological, and spatial considerations, that facilitate walkable, interactive street interfaces to revitalize street vibrancy.

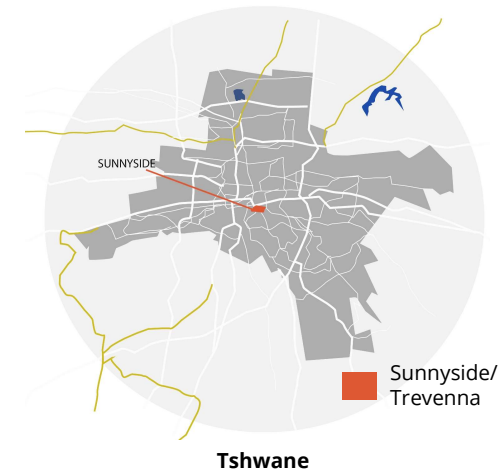
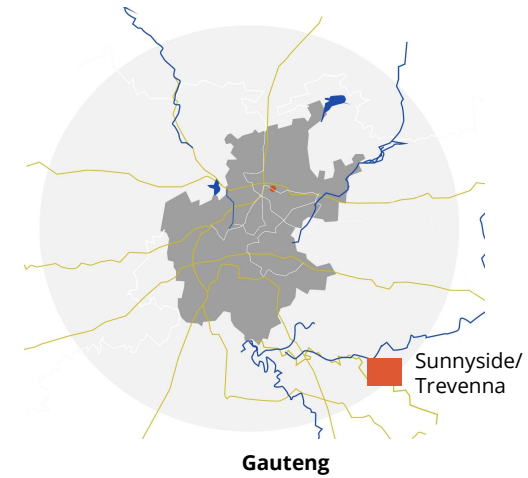
## Contextual background

### TREVENNA & SUNNYSIDE, PRETORIA

The vacant construction site chosen for the design proposal sits between two suburbs: Trevena and Sunnyside, Pretoria.

The suburb of Sunnyside is a strong mixed-use retail and high-density residential spine situated in the East of Pretoria CBD. The suburb is well located within a large degree of access to services, entertainment, and pedestrian activity (Tsebe, 2022). Currently, it houses a population of 39 282, which primarily consisting of 88% black African descent, from a variety of African countries such as Nigeria, Mozambique, Zimbabwe and many other African countries (Statistics South Africa, 2011), as well as the new governments burgeoning black bureaucratic class (Donaldson & Jurgens, 2003).

Similarly, Trevenna; though much smaller is also a mixed-use suburb, but is contrastingly concentrated with many large-scale state-owned buildings. Historically the original intent of the suburb was to house the white minority, but since then, the urban area is predominantly inhabited by a Black South Africans and African refugees of a low to middle income back (Tewold, 2020). This making both suburbs culturally rich suburbs, with significant contribution towards the project.



## The problem

Currently, the prevalence of **large scale abandoned** sites in Trevenna, Pretoria, **hinder the facilitation of socio-economic vibrancy** within their context. Therefore, there is an urgent need for interventions that address the **productive use of vacant sites to unlock urban revitalization**

## Design enquiry

How can **spatial strategies facilitate appropriate large scale infill development** of incomplete spaces in the city?



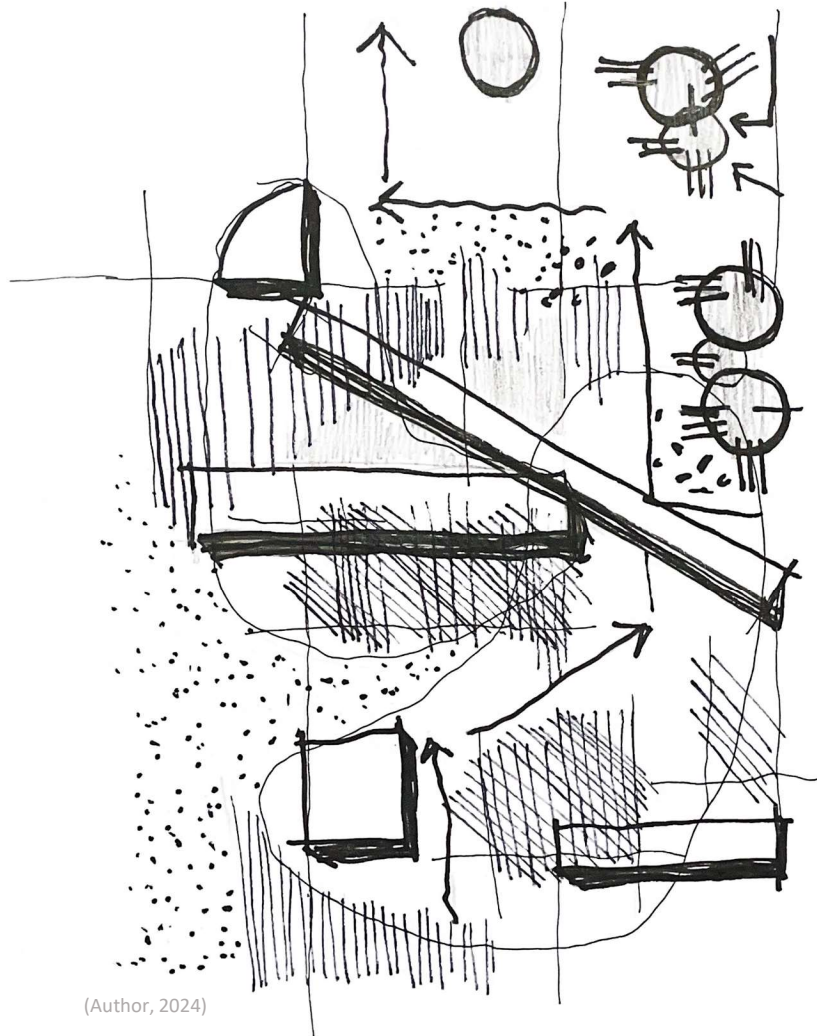
(Author, 2024)



# 04 THE CONCEPT

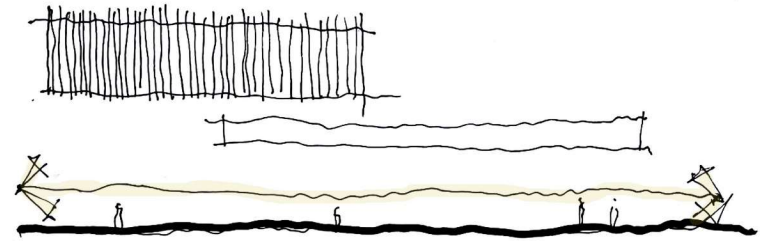
## Urban Synergy

Explores the dynamic and interconnected nature of urban life, where walkable spaces, greenery, varies economic activities, informal interactions, come together to create a vibrant and resilient urban environment



(Author, 2024)

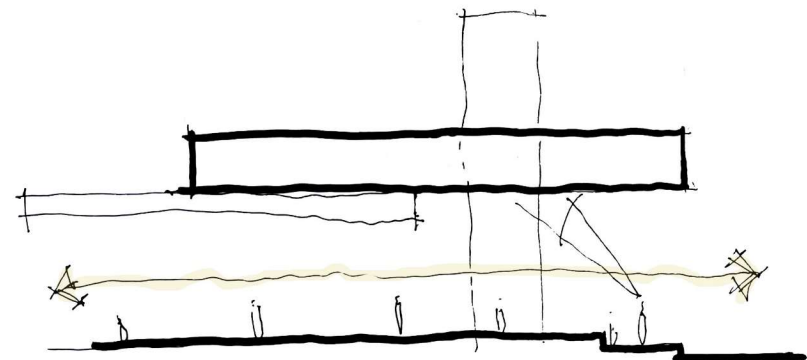
An architecture that explores:



**01** The relationship between the street/context and architecture



**02** The relationship between an injured landscape and man-made forms

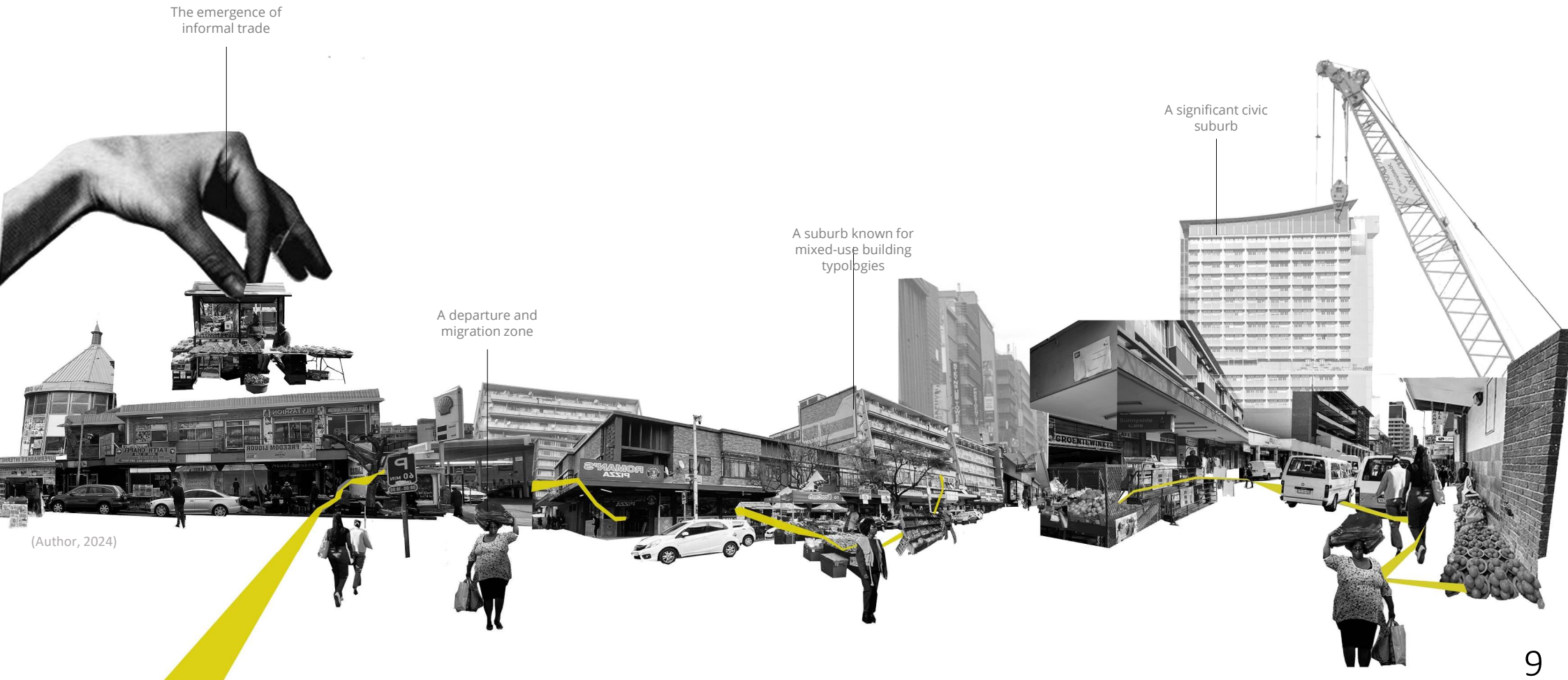


**03** The relationship between architecture, the street, and people

# 05 INFORMANTS

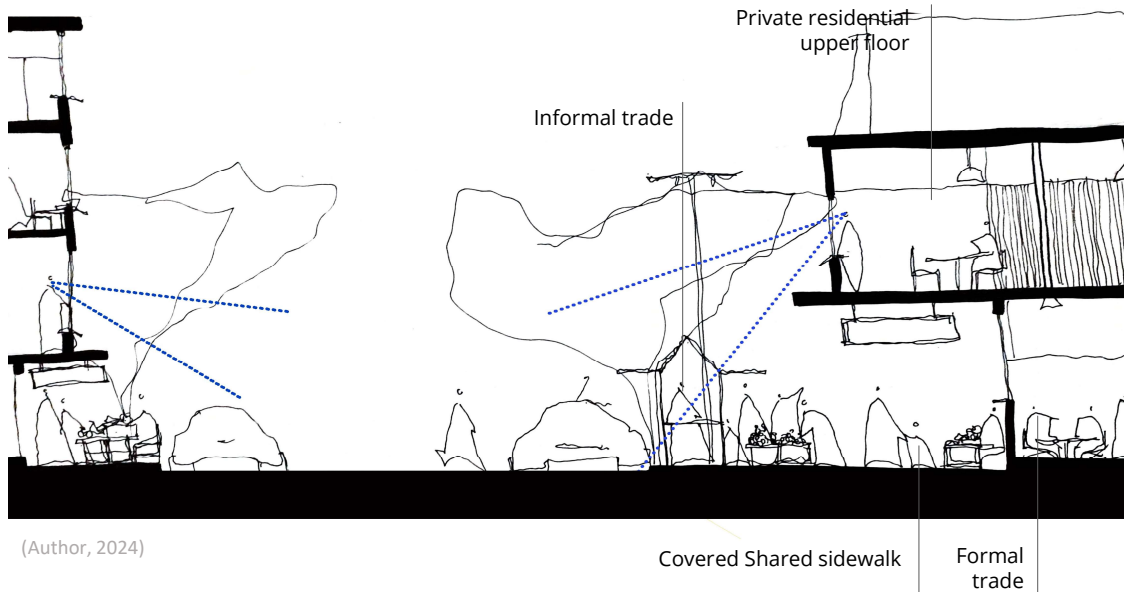
## 01 Context: Sunnyside & Trevenna

The suburb of Sunnyside is a strong mixed-use retail residential spine situated in the East of Pretoria CBD. Historically the centre housed the white minority, but since then, the urban area is predominantly inhabited by a Black South Africans and African refugees of a low to middle income back (Tewold, 2020). The suburb takes on the character of the African city; one which considers the city as a departure zone, as space for cultural creativity and representation, but still shows remnants of exclusionary barriers (Bakewell & Jonsson, 2011; Freund, 2007)

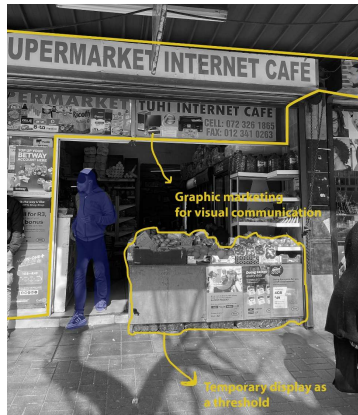


## 02 Sunnyside Mixed-use Precinct

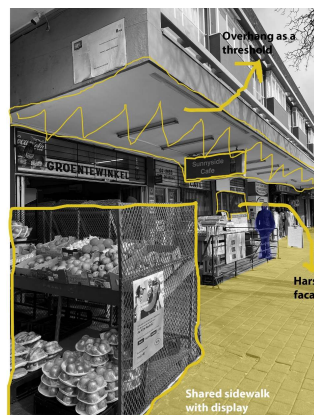
Sunnyside is filled with various mixed-use activities including residential buildings, commercial and retail activity, and informal trading. The selected informants highlight the architectural qualities of a vibrant street that the appropriation of intentional architectural arrangements.



(Author, 2024)



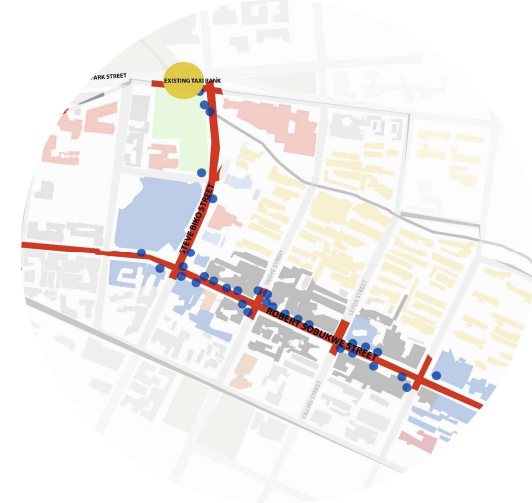
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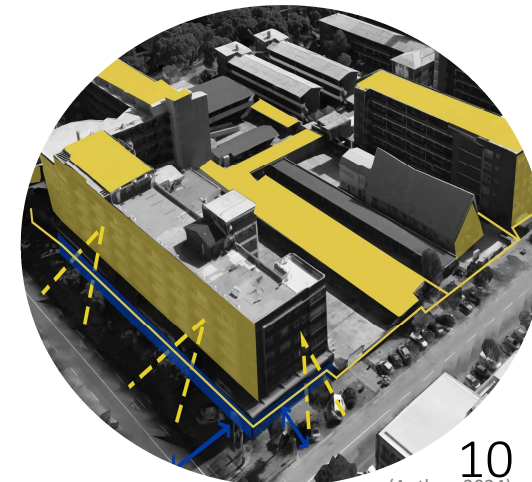
**Mix-use urban Block**  
A mix of commercial, residential, and retail uses on Robert Sobukwe Street leading up to the taxi rank.



**Robert Sobukwe Street**  
Prevalence of informal trade on Robert Sobukwe Street leading up to the taxi rank.



**Pedestrianised building interfaces**  
The building form and arrangement, eyes on the street, multi-use sidewalks, and permeable street edge facilitate a vibrant street.



### 03 Proposed site's existing conditions

The proposed vacant site shows three systems intersecting the site: the primary roads into and out Sunnyside/Trevenna, an ecological corridor running diagonally, and informal economies populating the periphery of the site leading up to Northern taxi rank.



Informal trade on the periphery



Existing taxi rank on the Northern end



(Author, 2024)

3m Excavation of site, with numerous water bodies



The architectural language of the building uses key elements found throughout the surrounding context. In doing so the proposed design will complement the existing context.



Varying skylines



Varying building technologies

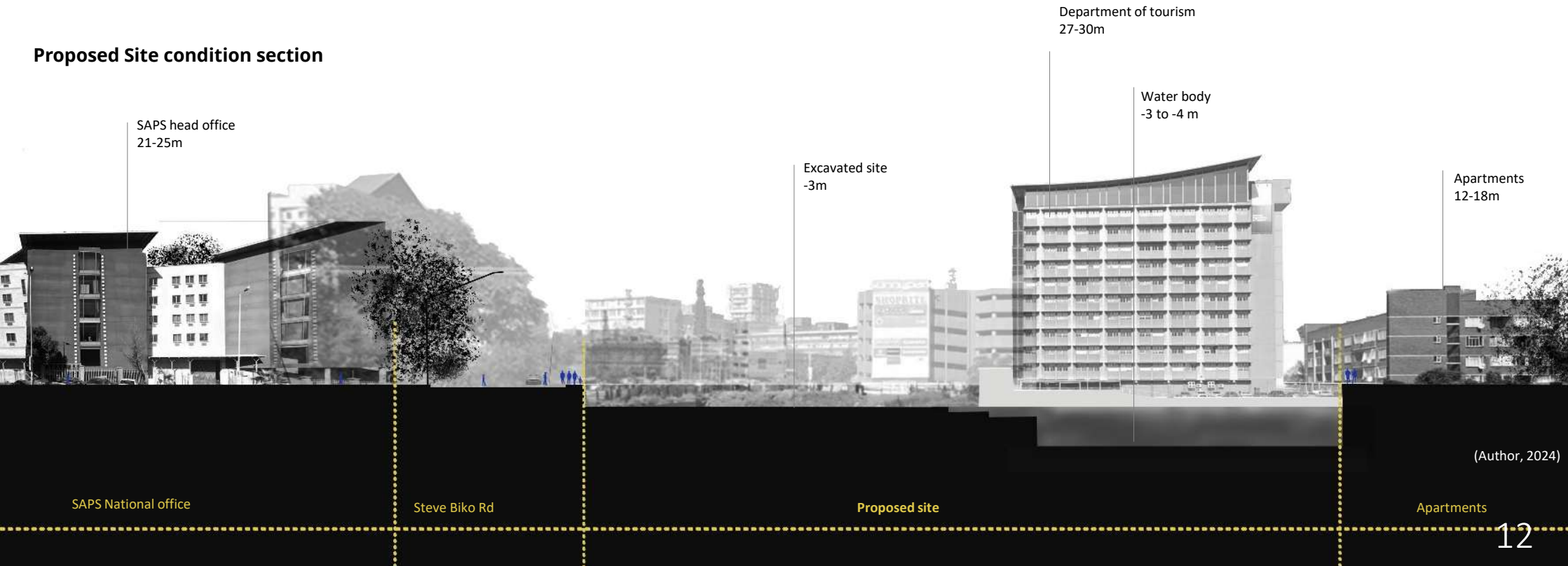


Programmed overhangs



Brick Multistorey

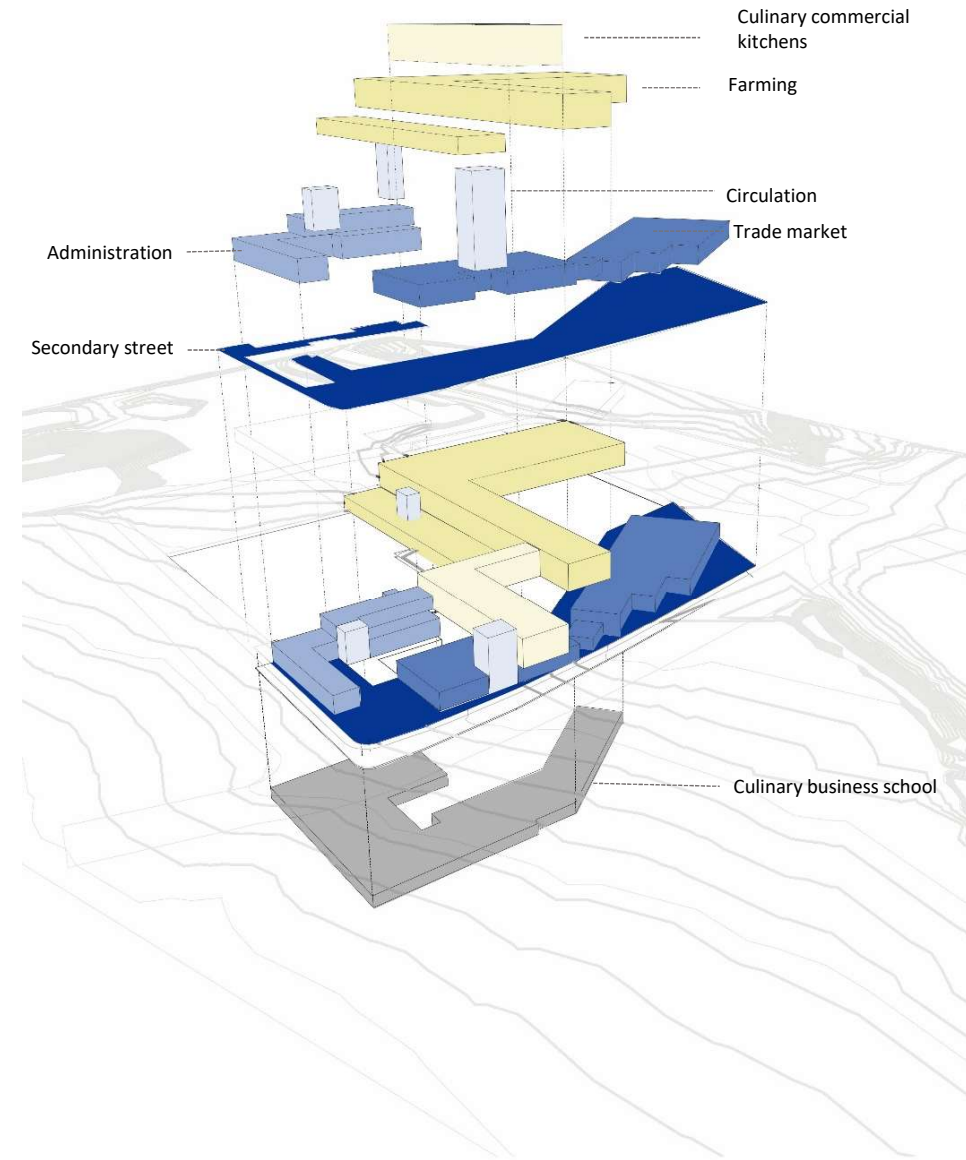
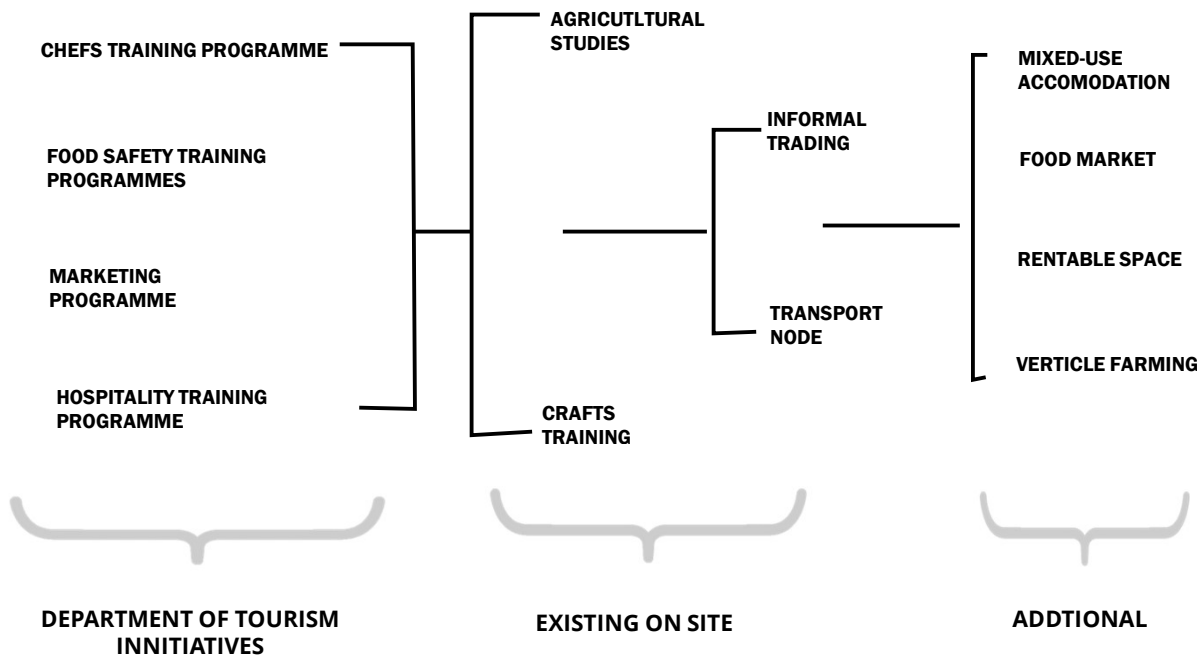
**Proposed Site condition section**



# 06 THE PROGRAMME

## Culinary school & Trade hub

Within the rich and diverse context of Sunnyside and Trevenna, the preparation and consumption of food, and the varying forms of trading present rich cultural expression. Food in this context is mostly influenced by the demographic of the area and is therefore a significant aspect of the area. The design proposal uses food as the primary programme, which allows for various supporting programmes to be attached. The choice is based off an existing initiative by the Department of Tourism (neighbouring site) whose initiative is a hospitality training and chef programme amongst others. The design proposal aims to house this and supporting programmes to reprogramme. Through multiple programming the vacant site is transformed into an ecosystem that encourages collaboration between economies. As a culinary school, the design proposal aims to focus on the growing making, and selling aspect of food, so that site can function as a catalyst for knowledge exchange, and the cohesion between formal and informal economies.

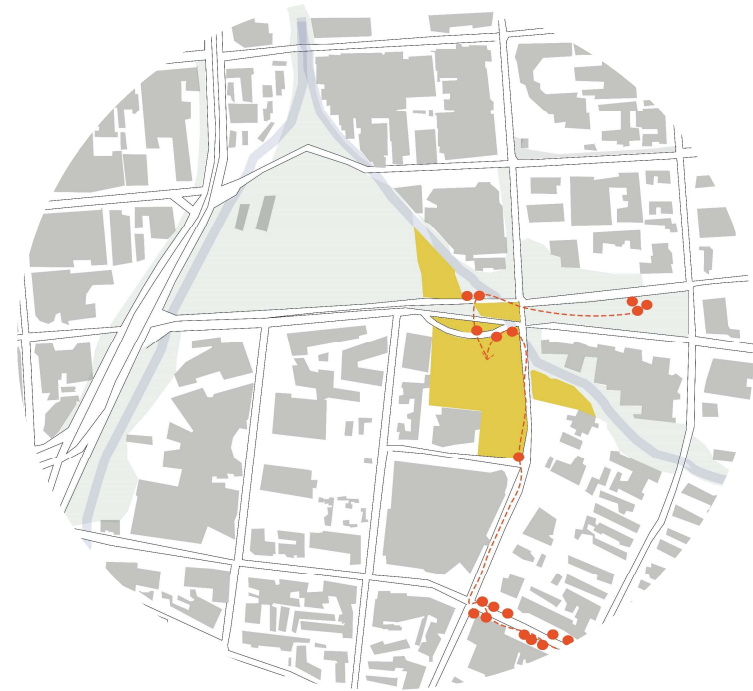


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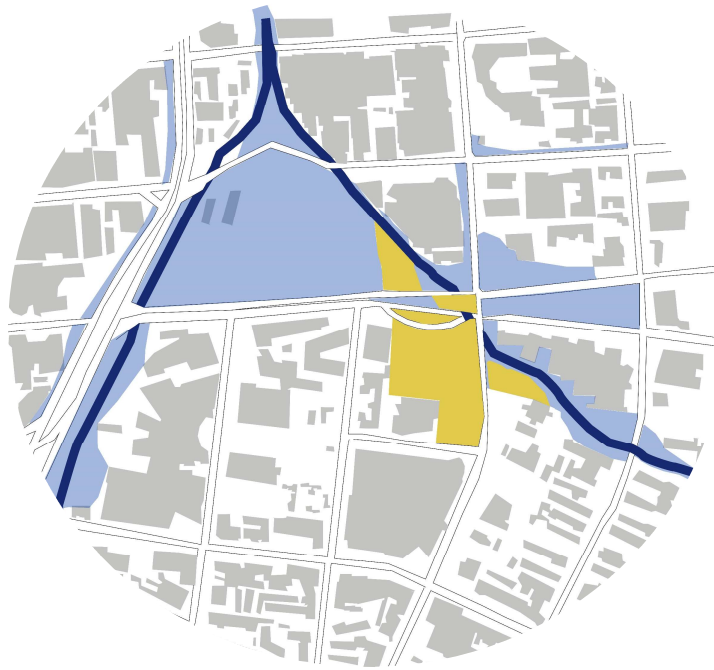
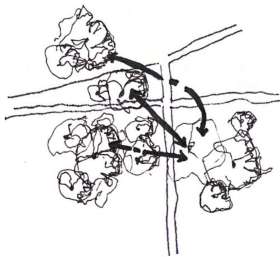
# 07 DESIGN APPROACH

## The urban Vision

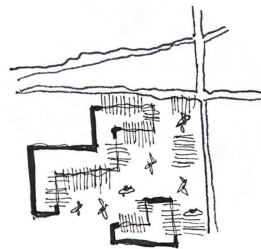
The primary focus of the urban vision is to address the site as a continuation of the existing ecological, social, economic, and civic networks that seem to skin the large portion of land.



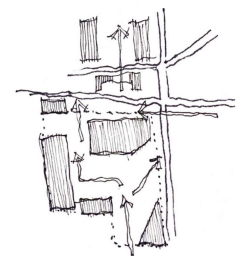
**01** Extended the natural corridors onto site



**02** Continue high street activity & public ground floor onto site



**03** Create permeable street edge & divide site

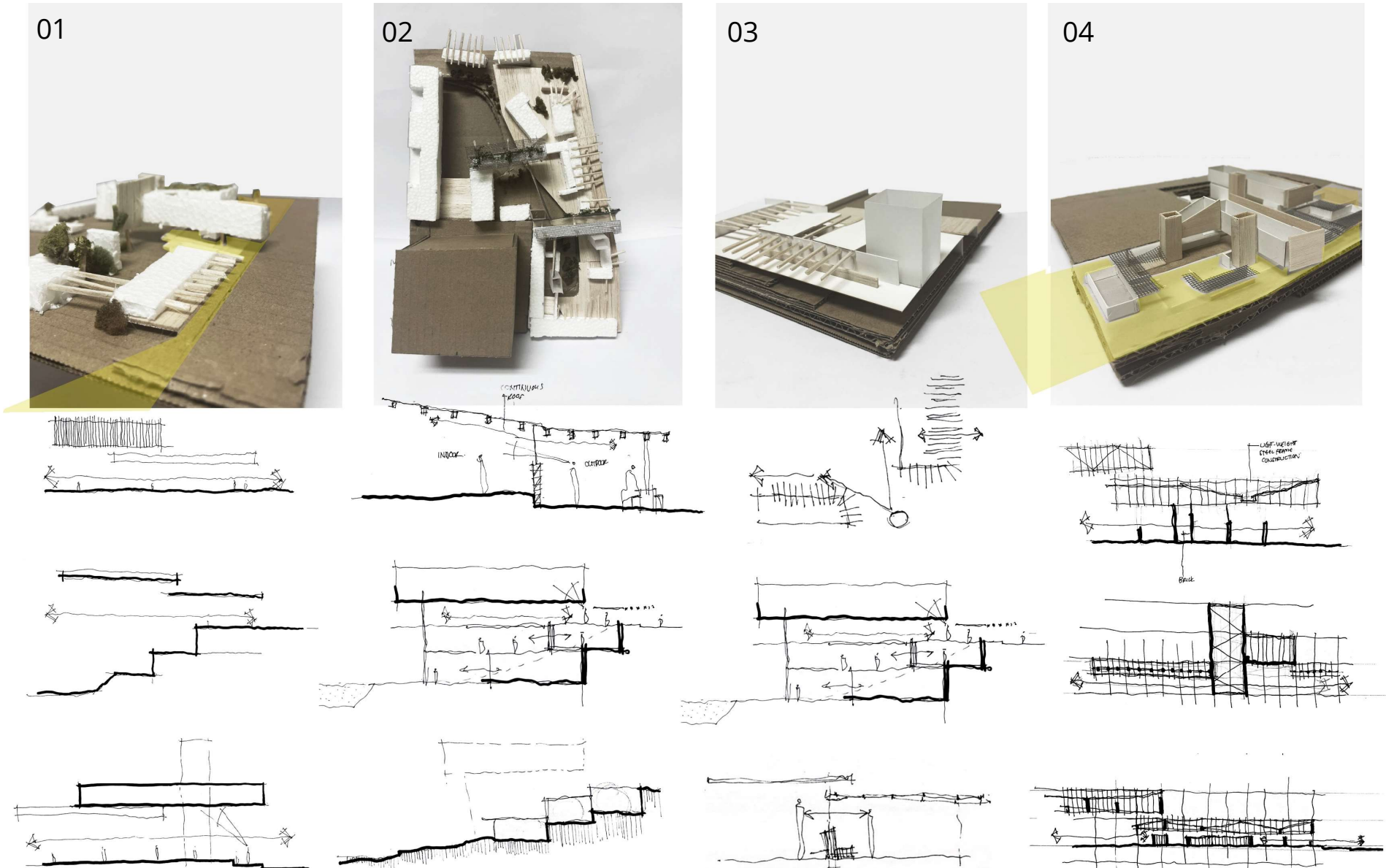


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# 08 SPATIAL AND TECHNOLOGICAL INTERGRATION

## Spatial iterations

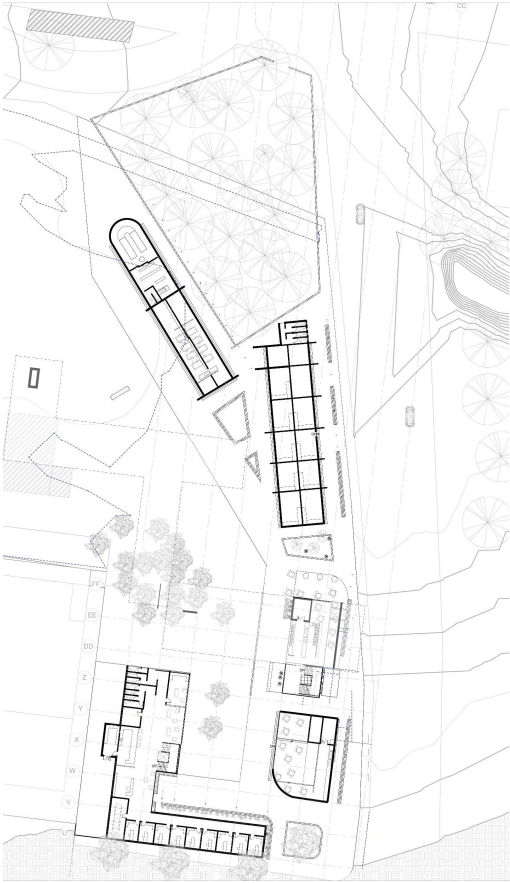
The iterations all explored the distribution of the varies building programmes whilst maintaining the idea of a secondary street (yellow highlight) cutting through the site leading to the taxi rank on the Northern end. In all iterations the ground floor façade aims to promote permeability as the building extends itself towards the street.



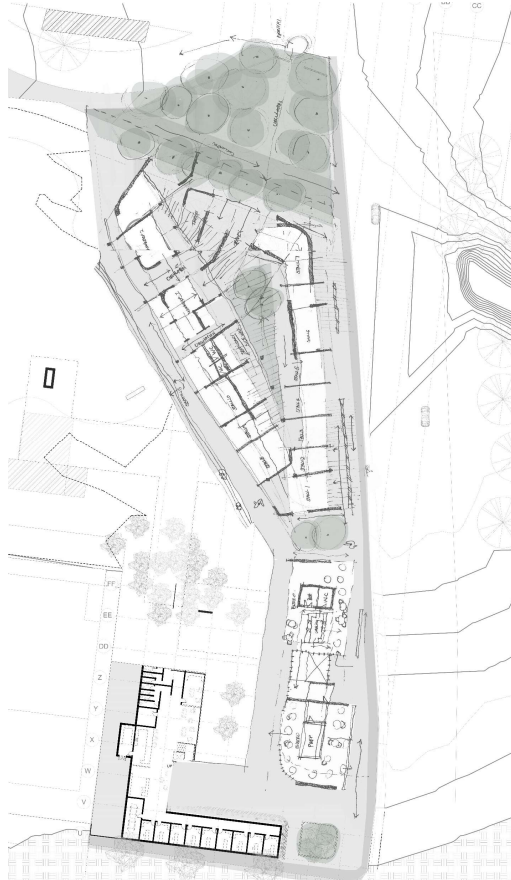
## Ground floor Spatial iterations

Similarly, the ground floor iterations aimed to keep the secondary sidewalk but differed according to a 'City making' criteria, which focused on pedestrianising the ground floor by manipulating the building interface & thresholds, increasing building adaptability, and space adaptability to create a more permeable building that prompts the engagement of pedestrians.

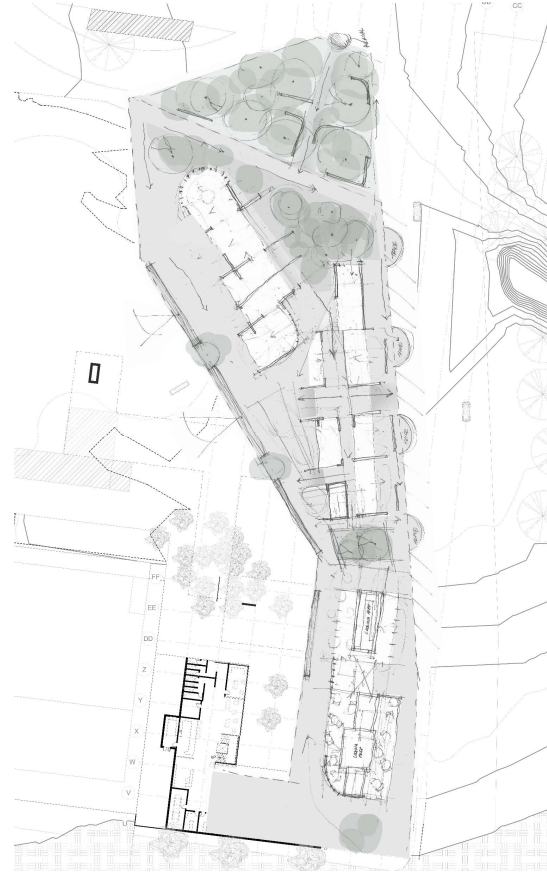
01



02



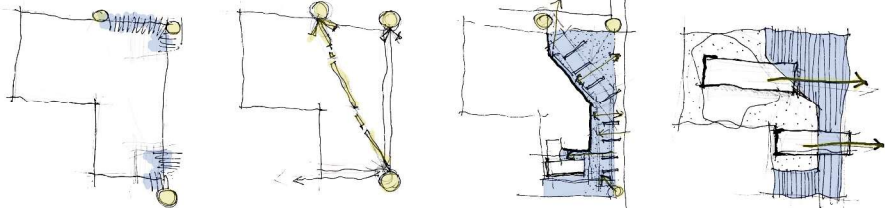
03



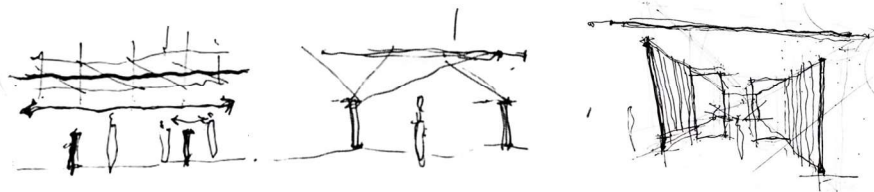
04



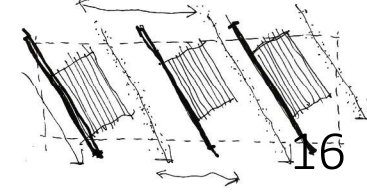
GROUND FLOOR ARRANGEMENT PROGRESSION



TRADING ROOF TYPOLOGIES

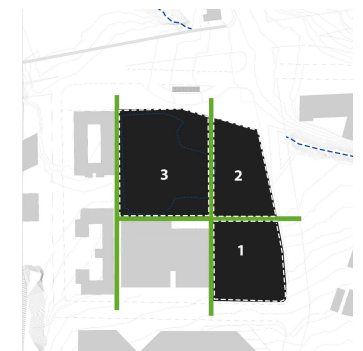
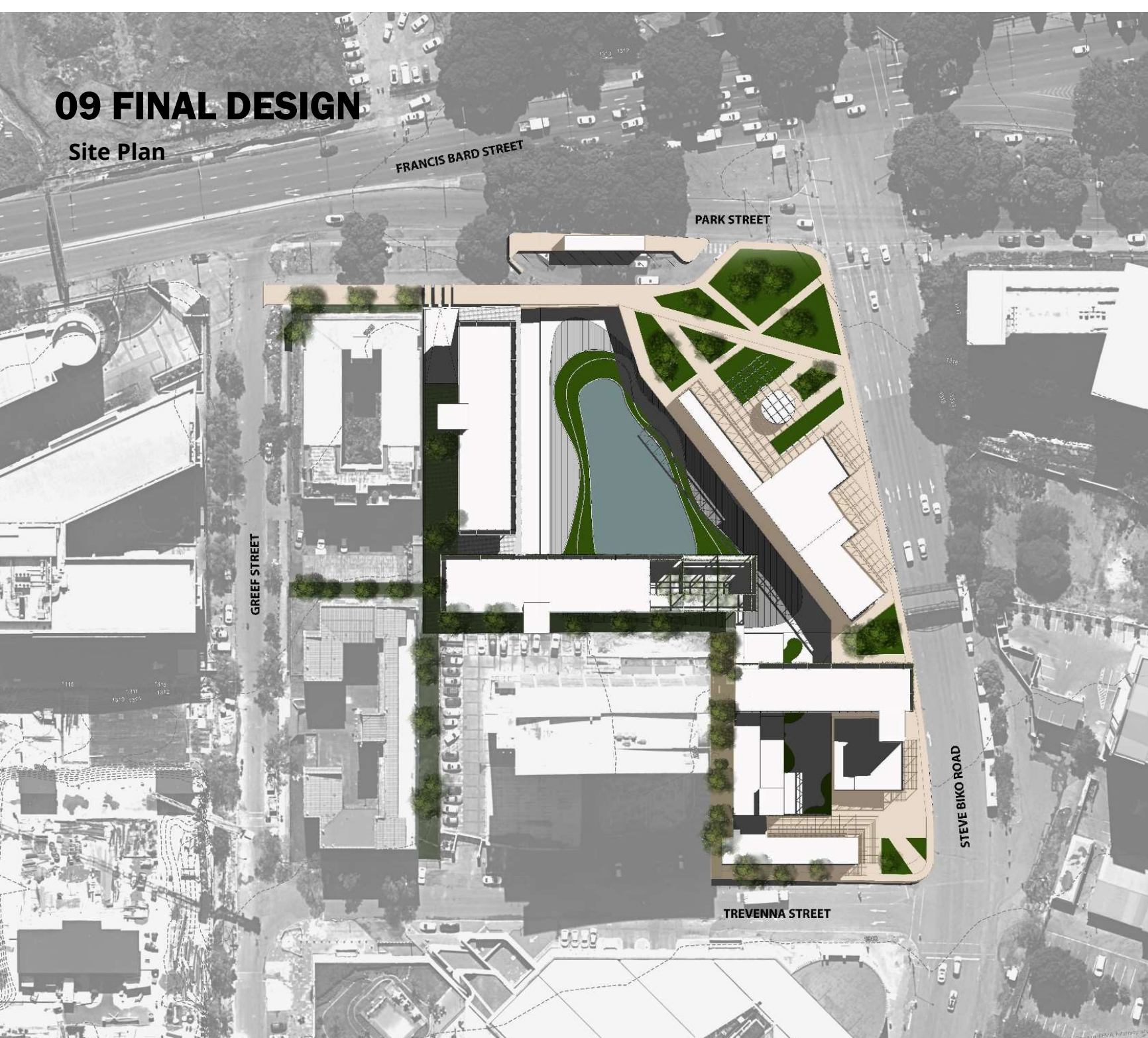


GROUND FLOOR MOVEMENT

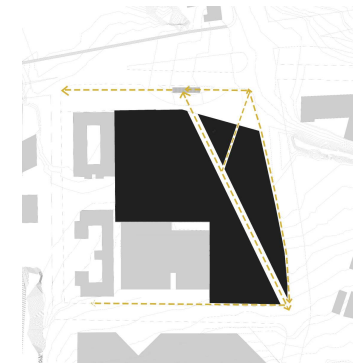


# 09 FINAL DESIGN

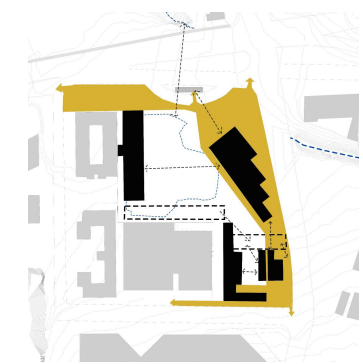
## Site Plan



Deconsolidation through greenery

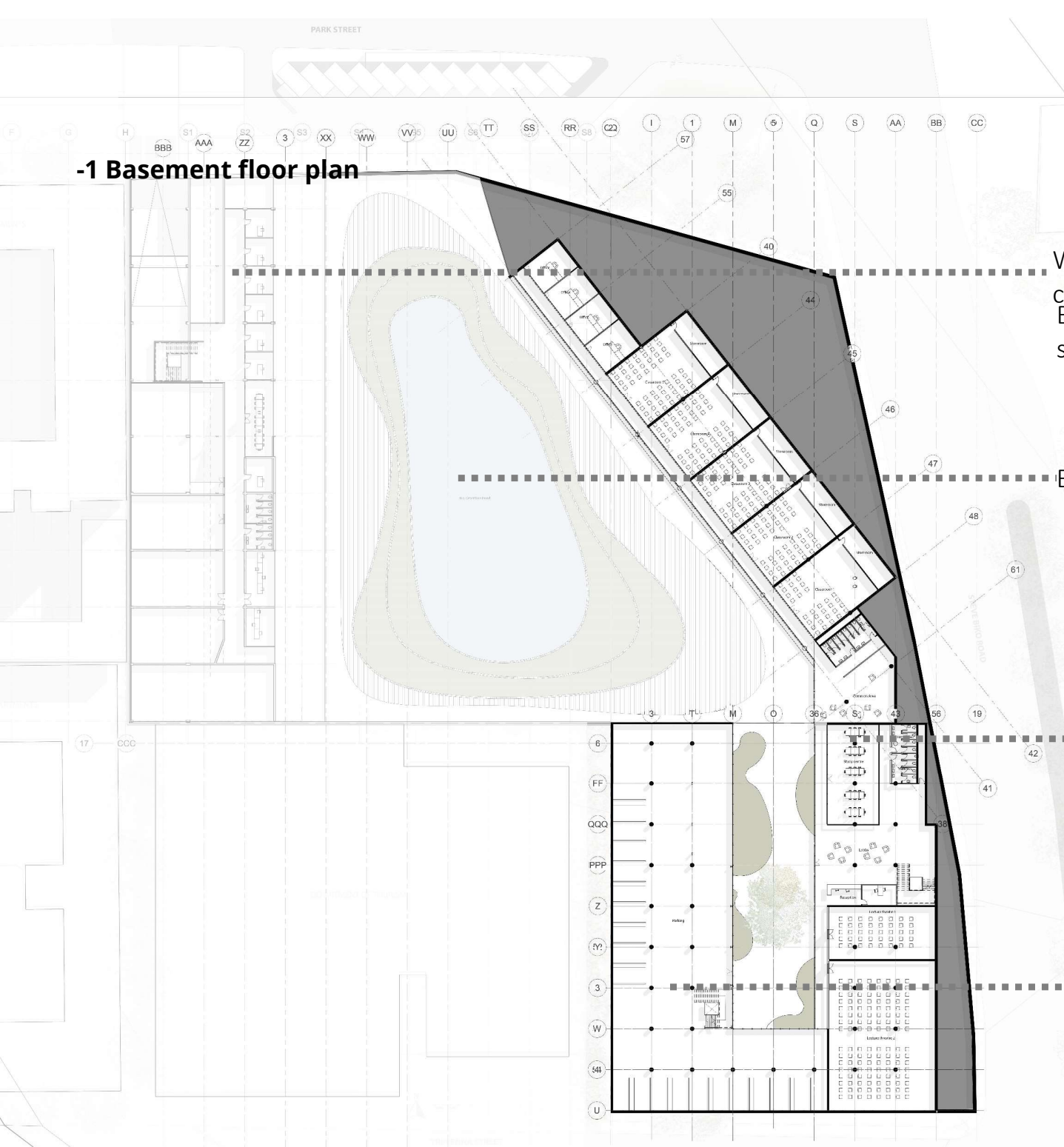


Circulation



Public space and complimentary programmes 17

**-1 Basement floor plan**



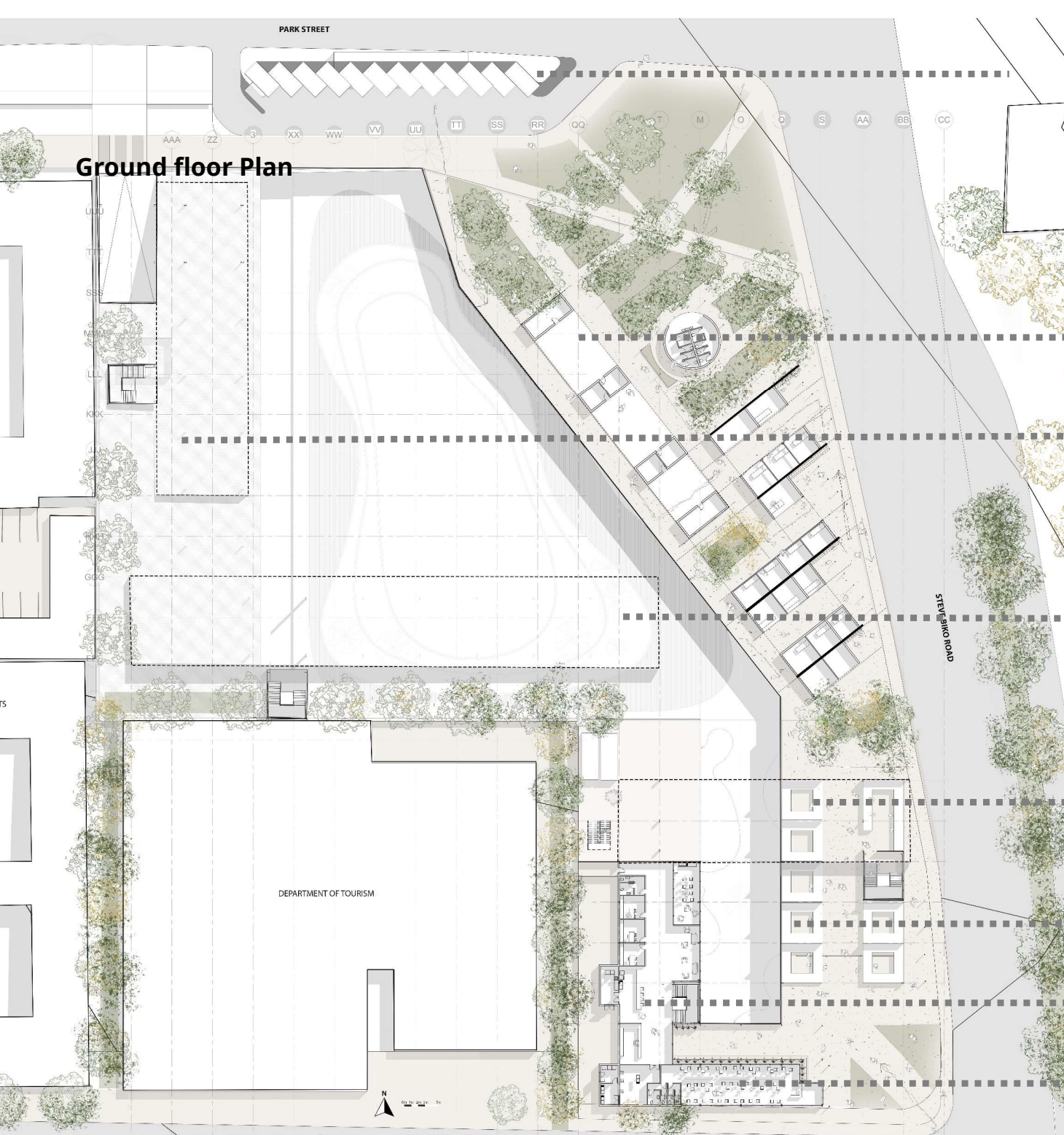
Water filtration  
centre  
Business Management  
school wing 1

Bio detention pond

Business management  
school wing 2

Students and Staff  
parking

**Ground floor Plan**



Existing Taxi rank

Rentable fixed-trade spaces

Offices overhead

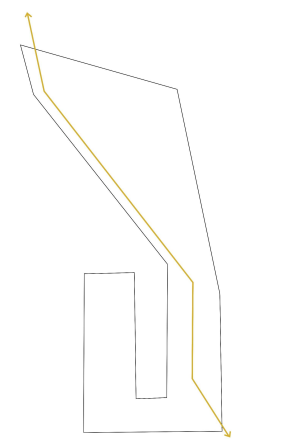
Vertical farm & water filtration overhead

Culinary school overhead

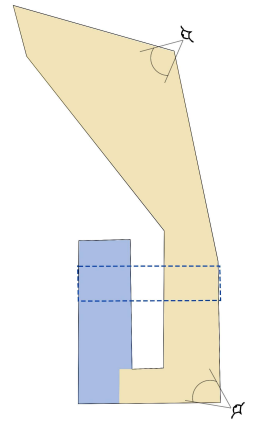
Open air food market

Culinary school admin

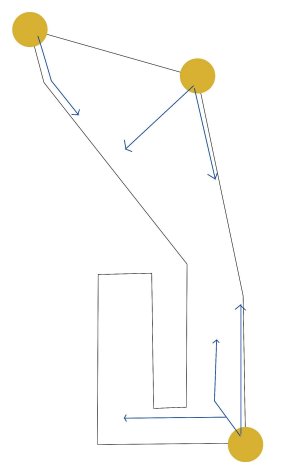
Bistro



Primary movement

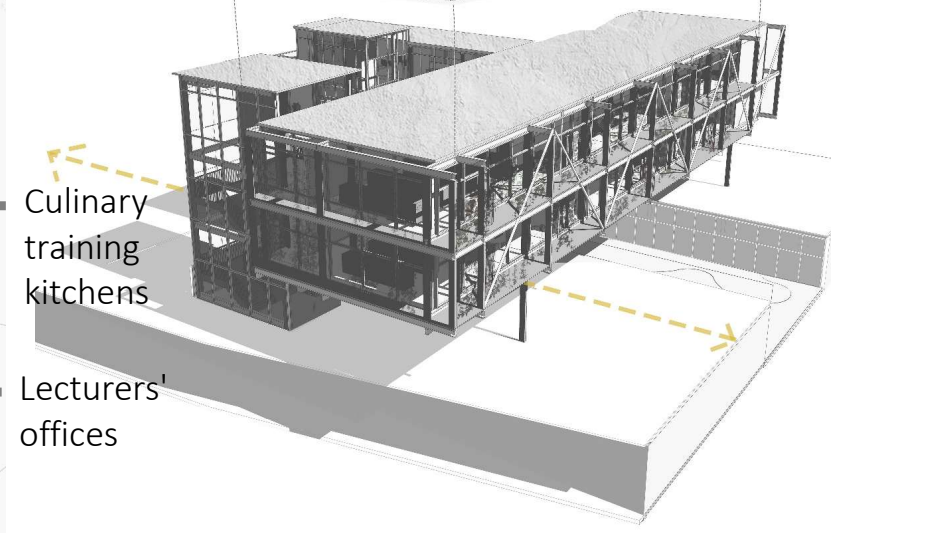
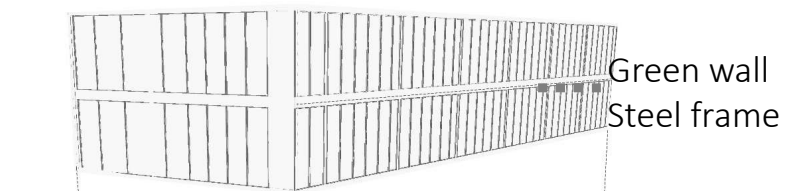
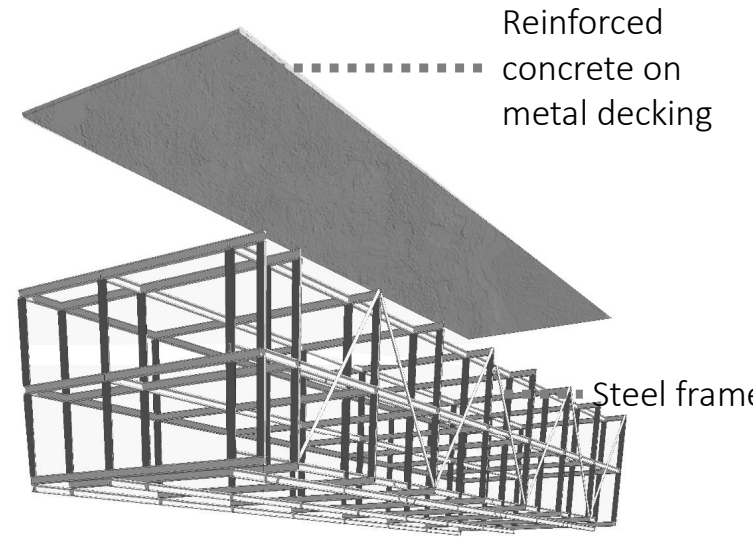
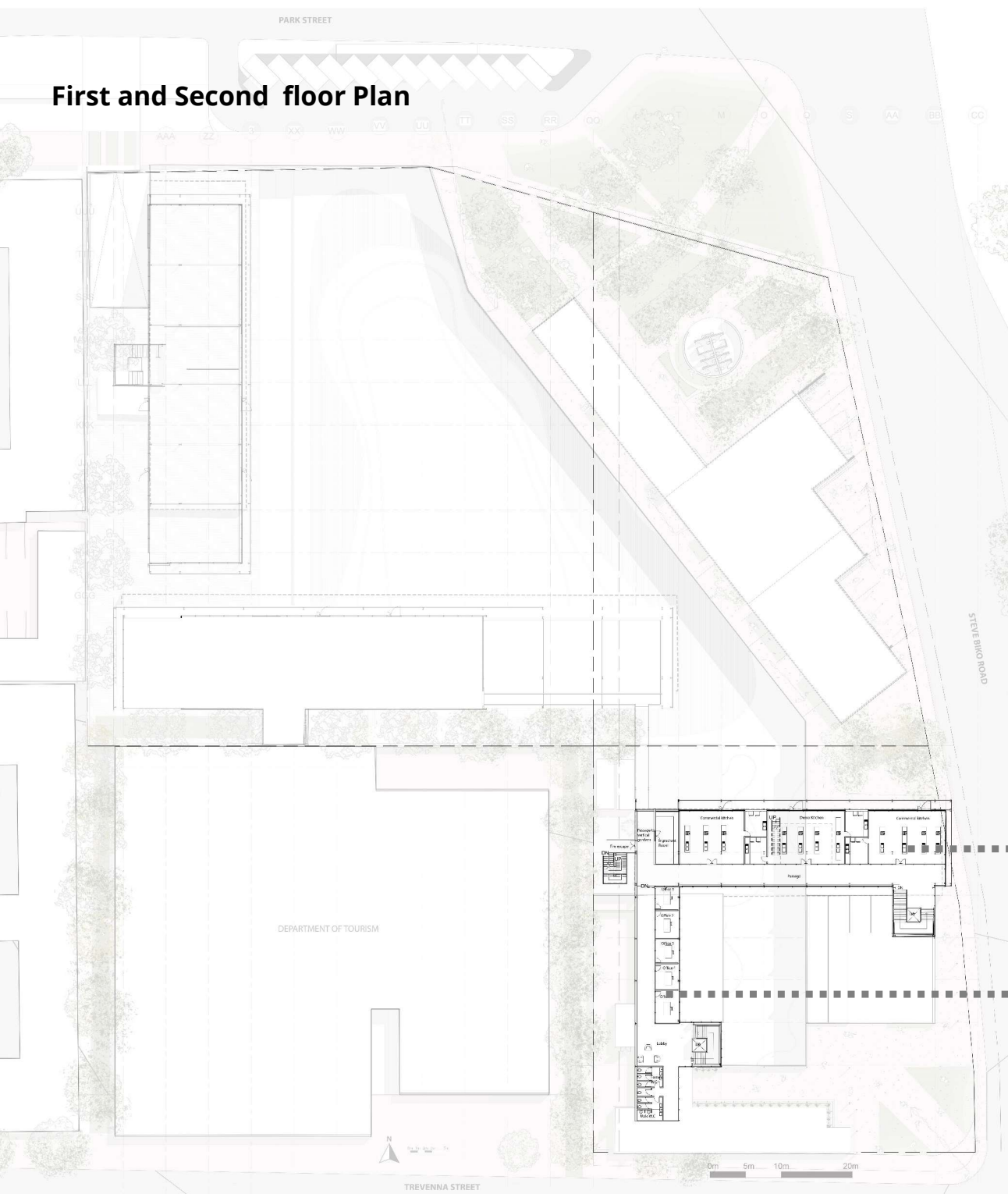


Private vs Public



Site entry

# First and Second floor Plan





Southern Entrance View



# 10 CRITICAL REFLECTION

## **Intent vs execution**

Based on the intents, the project aimed to reflect existing spatial planning strategies that successfully display vibrancy within mixed-use developments, to address placelessness caused by urban vacancy. While the overall design concept of urban synergy and dematerialisation provided a strong foundation for achieving visual and spatial permeability and contextual considerations, the project also highlighted spatial strategies to facilitate a sense of place. These included: pedestrianising the ground floor, assigning diverse complimentary programme offerings on the site, adapting and using the existing typographical conditions of the incomplete sites. This translated into a functional high-rise permeable structure, designed to be a beaker for socio cultural representation, while paying close attention to the users of its context through spatial arrangements.

## **Response to context**

The incomplete and desolate nature of the chosen site required a sensitive approach which acknowledged the existing terrain conditions. The design approach addresses repair and reclamation of the landscape through adaptation of existing three metre excavation and reintegrating ecological systems throughout the site. In addition, the positioning of cantilevering structures aimed to display minimal disturbance to the land and the varies socio-ecological systems taking place beneath it.

## **Theoretical response**

Considering the current state of African city and the emerging social, economic experiences and conditions, it is becoming increasingly important to address through Architecture. Looking at the public Architecture, this sector poses the greatest opportunity to display the integration between formal and informal economies, particularly in a civic context. This integration can reduce the scars of Apartheid spatial planning by collaborating with the current conditions of the city in the hopes of facilitating opportunities for repair and regeneration.

## **Personal growth and lessons learned**

This project firstly deepened my consideration between conceptual and technical feasibility; challenging me to keep the designs core whilst addressing the structural constraints. Secondly, the project challenged my design thinking regarding how the design will function within the broader city context. Micro scale user considerations allowed me to prioritize the community and their identified needs, whilst space and form prioritized contextually sensitive integration. Ultimately, I have learned the importance of keeping a balance between all these informants to maintain a holistic well considered design product.

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