

https://dspace.org/

Melville strip[ped]: Creating a School of Arts to rejuvenate 7th Street

Görner, Sebastian

2024-02

University of the Witwatersrand, Johannesburg

https://hdl.handle.net/10539/38788

Görner, Sebastian. (2024). Melville strip[ped]: Creating a School of Arts to rejuvenate 7th Street. [Master's dissertation, University of the Witwatersrand, Johannesburg]. WIReDSpace.

Downloaded from a DSpace repository. https://dspace.org/

Melville strip[ped]

Creating a School of Arts to rejuvenate 7th Street.

By Sebastian Gorner
1880785

School of Architecture & Planning
Unoversity of the Witwatersrand
Johannesburg, South Africa

Supervisor: Mr Christos Daskalakos

A research report proposal submitted to the Faculty of Engineering and The Built Environment, University of The Witwatersrand in partial fulfilment of the requirements for the degree of Master of Architecture (Professional)



Melville strip[ped]

Creating a School of Arts to rejuvenate 7th Street.

By Sebastian Görner 1880785

DECLARATION

I, Sebastian Görner (1880785) am a student registered for the degree of Master of Architecture (Professional) in the academic year 2023. I hereby declare the following:

I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong. I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise. I have followed the required conventions in referencing the thoughts and ideas of others.

I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature: _____

15 February 2024

ABSTRACT

This research report is focused on the suburb of Melville, Johannesburg. The issue of failing social and economic systems is defined and a new intervention is proposed. This intervention is a mixed-use development containing a School of Arts, Retail Spaces and Apartment Units.

The report covers precedents and case studies for the proposed intervenitons as well as similar design principles and areas within South Africa and international examples.

As the site on 7th Street in Melville is the center point of this report, an indepth analysis has been done to determine all asects that influenced the design of the intervention.

The design process is directly linked to the research findings, precedents and site analysis. After this the design development is documented.

The final outcome of the research report is a completed building set within Melvilles 7th Street as a method to turn the failing economy around and to bring the community back together.

TABLE OF CONTENT

PART ONE

01 INTRODUCTION **01**
1.1 Melville | 7th Street 02
1.2 Methodology 04

02 MELVILLE **06**
2.1 Melville Community 07
2.2 Crime and Safety 08
2.3 Inappropriate Spaces 09

03 CASE STUDIES **12**
3.1 Parkhurst 13
3.2 Maboneng Precinct 17

04 URBAN DESIGN **20**
4.1 Sidewalks 21
4.2 Landscape Architecture 23
4.3 Public Art 24

05 COMMUNITY BUSINESSES **25**

06 EDUCATOIN FACILITIES **28**

07 RESIDENTIAL DENSIFICATION **31**

08 SKETCH CHARRETTE **34**
8.1 Collage 35
8.2 3D Form Exploration 36
8.3 Material Exploration 38
8.4 Site 40
8.5 3D Building Exploration 41
8.6 Structure and Material 46

09 SITE ANALYSIS **47**

10 PRECEDENTS **67**
10.1 Institute for the Culinary Arts 68
10.2 Valladolid Art School 71
10.3 Axis Building 75

THEORY

11 DESIGN AND PROGRAMME **78**
11.1 Design Brief 79
11.2 Programme 81

12 VIABILITY ANALYSIS **83**

13 DESIGN DEVELOPMENT **92**
13.1 Design Factors 93
13.2 Process 94
13.3 Process - Chosen Layout 96
13.4 Massing and Layout 97
13.5 Design Process 98

14 TECHNICAL ANALYSIS **104**
14.1 Construction Methods 106
14.2 Construction Details 108
14.3 Detail Diagrams 111
14.4 Sustainability 112

PART TWO

15 FINAL DESIGN **113**

16 REFERENCES **121**

LIST OF FIGURES

CHAPTER 01

Figure 1.1.1 Melville Suburb (Google Earth, 2022), Edited by Author 2023 2

Figure 1.1.2 Site in Melville - 7th Street between 2nd Ave & 3rd Ave (Google Earth, 2022), Edited by Author 2023 2

Figure 1.1.3 Melville 7th Street between 2nd Ave & 3rd Ave ca. 2005, by Gauteng Film (n.d) 3

Figure 1.1.4 Melville 7th Street between 2nd Ave & 3rd Ave 2023, by Author 2023 3

CHAPTER 02

Figure 2.1.1 Sidewalk without People, by Author 2023 7

Figure 2.2.1 Minimal circulation space, by Author 2023 8

Figure 2.3.1 Three Empty Spaces, by Author 2023 10

CHAPTER 03

Figure 3.1.1 Parkhurst 4th Avenue, Streetside Restaurant, by Author 2023 14

Figure 3.1.2 Parkhurst 4th Avenue, Streetside Cafe, by Author 2023 15

Figure 3.1.3 Parkhurst 4th Avenue, Sidewalk, by Author 2023 15

Figure 3.1.4 Parkhurst 4th Avenue, Streetside Restaurant, by Author 2023 16

Figure 3.2.1 Maboneng Precinct, by TripAdvisor 2019 17

Figure 3.2.2 Invisible Boarder of Maboneng Precinct, by Author 2023 18

CHAPTER 04

Figure 4.1.1 Collage of Sidewalk obstacles, by Author 2023 21

Figure 4.3.1 Public Art-3rd Street, by Author 2023 24

CHAPTER 07

Figure 7.1 Melville Attractions Map (Google Earth, 2022), Edited by Author 33

CHAPTER 08

Figure 8.1.1 Sketch Charrette - Collage, by Author 2023 35

Figure 8.2.1 Massing, by Author 2023 36

Figure 8.2.2 Massing, by Author 2023 36

LIST OF FIGURES

Figure 8.2.3 Massing, by Author 2023 36
Figure 8.2.4 Massing, by Author 2023 37
Figure 8.2.5 Massing, by Author 2023 37
Figure 8.2.6 Massing, by Author 2023 37
Figure 8.3.1 Masonry exploration, by Author 2023 38
Figure 8.3.2 Masonry exploration, by Author 2023 38
Figure 8.3.3 Masonry & Timber exploration, by Author 2023 38
Figure 8.3.4 Timber exploration, by Author 2023 38
Figure 8.3.5 Steel exploration, by Author 2023 38
Figure 8.3.6 Stone & Steel exploration, by Author 2023 38
Figure 8.3.7 Stone & Steel exploration, by Author 2023 39
Figure 8.3.8 Stone, Timber, Steel, Glass exploration, by Author 2023 39
Figure 8.3.9 Stone, Timber, Steel, Glass exploration, by Author 2023 39
Figure 8.3.10 Concrete & brick exploration, by Author 2023 39
Figure 8.3.11 Concrete & brick exploration, by Author 2023 39
Figure 8.4.1 Site Shading, by Author 2023 40
Figure 8.4.2 Site Shading, by Author 2023 40
Figure 8.4.3 Site Shading, by Author 2023 40
Figure 8.5.1 Site Massing, by Author 2023 41
Figure 8.5.2 Site Massing, by Author 2023 41
Figure 8.5.3 Site Massing, by Author 2023 41
Figure 8.5.4 Massing Sketch, by Author 2023 41
Figure 8.5.5 Site Massing, by Author 2023 42
Figure 8.5.6 Site Massing, by Author 2023 42

LIST OF FIGURES

Figure 8.5.7 Site Massing, by Author 2023 42
Figure 8.5.8 Massing Sketch, by Author 2023 42
Figure 8.5.9 Site Massing, by Author 2023 43
Figure 8.5.10 Site Massing, by Author 2023 43
Figure 8.5.11 Site Massing, by Author 2023 43
Figure 8.5.12 Massing Sketch, by Author 2023 43
Figure 8.5.13 Site Massing, by Author 2023 44
Figure 8.5.14 Site Massing, by Author 2023 44
Figure 8.5.15 Site Massing, by Author 2023 44
Figure 8.5.16 Massing Sketch, by Author 2023 44
Figure 8.5.17 Site Massing, by Author 2023 45
Figure 8.5.18 Site Massing, by Author 2023 45
Figure 8.5.19 Site Massing, by Author 2023 45
Figure 8.6.1 Structure Sketch, by Author 2023 46
Figure 8.6.2 Structure Sketch, by Author 2023 46
Figure 8.6.3 Structure Sketch, by Author 2023 46

CHAPTER 09

Figure 9.1 South Africa Map (Google Earth, 2022), Edited by Author 48
Figure 9.2 Johannesburg Map (Google Earth, 2022), Edited by Author 48
Figure 9.3 Melville Map (Google Earth, 2022), Edited by Author 48
Figure 9.4 Melville Site Map (Google Earth, 2022), Edited by Author 49
Figure 9.5 Melville Attractions Map (Google Earth, 2022), Edited by Author 50
Figure 9.6 Melville Zoning Map (Google Earth, 2022), Edited by Author 51
Figure 9.7 Melville Routes Map (Google Earth, 2022), Edited by Author 52

LIST OF FIGURES

Figure 9.8 Melville Cnr 4th Ave & 7th St ca. 1960, Johannesburg 1912 *53*
Figure 9.9 Melville 7th Street between 3rd Ave & 4th Ave ca. 2012, Tripadvisor 2012 *53*
Figure 9.10 Melville 7th Street between 2nd Ave & 3rd Ave ca. 2005, GautengFilm n.d *53*
Figure 9.11 Melville Cnr 4th Ave & 7th St, by Author 2023 *53*
Figure 9.12 Melville 7th Street between 3rd Ave & 4th Ave, by Author 2023 *53*
Figure 9.13 Melville 7th Street between 2nd Ave & 3rd Ave, by Author 2023 *53*
Figure 9.14 Melville Usage Map (Google Earth, 2022), Edited by Author *54*
Figure 9.15 Melville Venues Map (Google Earth, 2022), Edited by Author *55*
Figure 9.16 Site Map (Google Earth, 2022), Edited by Author *56*
Figure 9.17 Site Vegetation Map (Google Earth, 2022), Edited by Author *57*
Figure 9.18 Site Activity Map (Google Earth, 2022), Edited by Author *58*
Figure 9.19 Site Sidewalk Map (Google Earth, 2022), Edited by Author *59*
Figure 9.20 Sidewalk, by Author 2023 *59*
Figure 9.21 Sidewalk, by Author 2023 *59*
Figure 9.22 Sidewalk, by Author 2023 *59*
Figure 9.23 Site Contour Map (Google Earth, 2022), Edited by Author *60*
Figure 9.24 Site Building Use Map (Google Earth, 2022), Edited by Author *61*
Figure 9.25 Site Photo, by Author 2023 *62*
Figure 9.26 Site Photo, by Author 2023 *62*
Figure 9.27 Site Photo, by Author 2023 *62*
Figure 9.28 Site Photo, by Author 2023 *62*
Figure 9.29 Site Photo, by Author 2023 *62*
Figure 9.30 Site Photo, by Author 2023 *62*
Figure 9.31 Site Photo, by Author 2023 *62*

LIST OF FIGURES

Figure 9.32 Site Buildings Map (Google Earth, 2022), Edited by Author 63
Figure 9.33 Site Climate Map (Google Earth, 2022), Edited by Author 64
Figure 9.34 Site Climate Map (Google Earth, 2022), Edited by Author 65

CHAPTER 10

Figure 10.1.1 Institute for the Culinary Arts (ArchDaily,2011) 68
Figure 10.1.2 Second Floor Plan (ArchDaily, 2011) 69
Figure 10.1.3 Institute for the Culinary Arts (ArchDaily, 2011) Edited by Author 70
Figure 10.1.4 Facility Ratio, By Author, 2023 70
Figure 10.2.1 External Facade Valladolid Art School (ArchDaily, 2023) 71
Figure 10.2.2 First Floor Plan (ArchDaily, 2023) 72
Figure 10.2.3 Second Floor Plan (ArchDaily, 2023) 72
Figure 10.2.4 Section showing Natural Lighting (ArchDaily, 2023), Edited by Author 73
Figure 10.2.5 Courtyard Facade Valladolid Art School (ArchDaily, 2023) 74
Figure 10.2.6 Facility Ratio, By Author, 2023 74
Figure 10.3.1 Axis by dhk Architects (Gleich,2019) 75
Figure 10.3.2 Perspective of courtyard (Gleich, 2019), Edited by Author 75
Figure 10.3.3 Axis Ground Floor Plan (ArchDaily,2019) 76
Figure 10.3.4 Axis First Floor Plan (ArchDaily,2019) 76
Figure 10.3.5 Axis Section, By Author, 2023 77
Figure 10.3.6 Facility Ratio, By Author, 2023 77

CHAPTER 11

Figure 11.1.1 Design Principles - by Author, 2023 80
Figure 11.2.1 Programming diagram - by Author, 2023 81
Figure 11.2.2 Programming diagram - by Author, 2023 81

LIST OF FIGURES

Figure 11.2.3 Programming diagram - by Author, 2023 *81*
Figure 11.2.4 Programming diagram - by Author, 2023 *81*

CHAPTER 12

Figure 12.1 Site Map - by Author, 2023 *84*

CHAPTER 13

Figure 13.1.1 Layout Sketch 01 - by Author, 2023 *94*
Figure 13.1.2 Layout Sketch 02 - by Author, 2023 *94*
Figure 13.1.3 Layout Sketch 03 - by Author, 2023 *95*
Figure 13.2.1 Chosen Layout Sketches - by Author, 2023 *96*
Figure 13.3.1 Massing Diagram - by Author, 2023 *97*
Figure 13.4.1 Site Plan - by Author, 2023 *98*
Figure 13.4.2 Ground Floor Plan - by Author, 2023 *99*
Figure 13.4.3 First Floor Plan - by Author, 2023 *100*
Figure 13.4.4 Second Floor Plan - by Author, 2023 *100*
Figure 13.4.5 Planning Sketch 01 - by Author, 2023 *101*
Figure 13.4.6 Planning Sketch 02 - by Author, 2023 *101*
Figure 13.4.7 Artistic Impression (North-West) - by Author, 2023 *102*
Figure 13.4.8 Artistic Impression (South-West) - by Author, 2023 *102*
Figure 13.4.9 Urban Design - Current - by Author, 2023 *103*
Figure 13.4.10 Urban Design - Proposed - by Author, 2023 *103*

CHAPTER 14

Figure 14.1 Artistic Impression - Facade - by Author, 2023 *105*
Figure 14.1.1 Structural System - by Author, 2023 *106*
Figure 14.1.2 Construction Materials (Plastered Brick & IBR Sheeting) - by Author, 2023 *107*

LIST OF FIGURES

Figure 14.2.1 Longitudinal Section - by Author, 2023 108
Figure 14.2.2 Detail Section - by Author, 2023 109
Figure 14.2.3 Detail 01 - by Author, 2023 110
Figure 14.2.4 Detail 02 - by Author, 2023 110
Figure 14.3.1 Trellis Sketch - by Author, 2023 111
Figure 14.3.2 Stone Sketch - by Author, 2023 111
Figure 14.3.3 Planter Sketch - by Author, 2023 111
Figure 14.3.4 Window Sketch - by Author, 2023 111
Figure 14.4.1 Artistic Impression - Sustainability - By Author, 2023 112

CHAPTER 15

Figure 15.1 Locality Map, by Author 2023 114
Figure 15.2 Proposed Design 3d Render, by Author 2023 114
Figure 15.3 1:500 Site Plan, by Author 2023 114
Figure 15.4 South-West View 3D Render, by Author 2023 115
Figure 15.5 West View 3D Render, by Author 2023 115
Figure 15.6 North-West View 3D Render, by Author 2023 115
Figure 15.7 1:200 Ground Floor Plan, by Author 2023 115
Figure 15.8 1:200 First Floor Plan, by Author 2023 116
Figure 15.9 1:200 Second Floor Plan, by Author 2023 116
Figure 15.10 Courtyard View 01 3D Render, by Author 2023 116
Figure 15.11 Courtyard View 02 3D Render, by Author 2023 116
Figure 15.12 Rooftop Terrace View 3D Render, by Author 2023 116
Figure 15.13 North-West View Day 3D Render, by Author 2023 117
Figure 15.14 North-West View Night 3D Render, by Author 2023 117

LIST OF FIGURES

Figure 15.15 North View 3D Render, by Author 2023 *117*
Figure 15.16 1:200 Basement Plan, by Author 2023 *117*
Figure 15.17 Trellis Sketch, by Author 2023 *117*
Figure 15.18 Stone Sketch, by Author 2023 *117*
Figure 15.19 Planter Sketch, by Author 2023 *117*
Figure 15.20 1:200 Section 01, by Author 2023 *118*
Figure 15.21 1:200 Section 02, by Author 2023 *118*
Figure 15.22 1:200 Section 03, by Author 2023 *118*
Figure 15.23 1:500 Use Diagram, by Author 2023 *118*
Figure 15.24 Summer Sun Diagrams, by Author 2023 *118*
Figure 15.25 Winter Sun Diagrams, by Author 2023 *118*
Figure 15.26 1:200 North Elevation, by Author 2023 *119*
Figure 15.27 1:200 East Elevation, by Author 2023 *119*
Figure 15.28 1:200 West Elevation, by Author 2023 *119*
Figure 15.29 South View 3D Render, by Author 2023 *119*
Figure 15.30 South-East View 3D Render, by Author 2023 *119*
Figure 15.31 Courtyard Entrance View 3D Render, by Author 2023 *119*
Figure 15.32 1:10 Construction Detail 01, by Author 2023 *120*
Figure 15.33 1:10 Construction Detail 02, by Author 2023 *120*
Figure 15.34 1:50 Construction Roof Plan, by Author 2023 *120*
Figure 15.35 Construction Detail Section, by Author 2023 *120*



CHAPTER 01

INTRODUCTION

1.1 Melville | 7th Street

Melville is one of the oldest suburbs of Johannesburg, South Africa. It was officially founded by Edward Harker Vincent Melvill, after whom it was named, in 1896 (Mashishi, 2018). It is well known for its small, older houses situated on small stands. It is equally well known for its tight knit community and its popular attraction of 7th Street, or "The Strip" as it is commonly known. This road is set up in a High-Street type of way with cafes, stores, and restaurant along the sidewalks. For these reasons it was named one of the "12th coolest street in the world" by Time Out Magazine in 2021 (SAPeople, 2021).

Problem:

This much-loved suburb has however, over the last several years, seen a major economic, and social, decline. Specifically, the popular 7th Street is not what it once was. Many of the popular venues have closed down, leaving behind rows of closed off shopfronts. While it is common knowledge that "The Strip" tends to go through economic



Figure 1.1.1 (above) Melville Suburb (Google Earth, 2022), Edited by Author 2023

Figure 1.1.2 Site in Melville - 7th Street between 2nd Ave & 3rd Ave(Google Earth, 2022), Edited by Author 2023

cycles, this particular downward turn can be attributed to two major events. The first of these events was the unfortunate New Year's Eve shooting which occurred outside of a restaurant in 2019 (Karrim, 2020), resulting in the death of two people. This brought a wave of fear among Melville residents as well as visitors to the area and the restaurant, Poppy's, was also forced to move to escape this tragic event.

The second of these events was the infamous Covid-19 pandemic. In March of 2020 residents were ordered to remain at home resulting in sudden and large scale failures among local businesses (Naik, 2020). Many of the restaurants had to close their doors for good as they could no longer afford to remain open and were never able to recover. Similar situations happened with cafes and retail stores. This economic crash had several negative impacts to the once popular Melville attraction. For one, landlords became desperate to rent out their spaces and accepted new tenants which opened pubs and clubs. These were primarily shut during the day, resulting in less foot traffic, and caused major noise and disruptions during the night (Mahapa, 2016). Furthermore, the crime rate increased dramatically. Opportunistic thefts started occurring increasingly (Bain, 2022) with motor vehicle thefts topping the list.



Figure 1.1.3 (above) Melville 7th Street between 2nd Ave & 3rd Ave ca. 2005, by Gauteng Film (n.d)

Figure 1.1.4 Melville 7th Street between 2nd Ave & 3rd Ave 2023, by Author 2023

This was a major deterrent for visitors as there is no safe parking within the area and patrons are therefore forced to park along the roads. These shortfalls that have arisen over the past several years have had more dramatic effects on 7th Street than anything that has caused a downward cycle before. The question "**what architectural intervention can turn this cycle around and prevent it from occuring again**" arises and will be answered in this report to bring "The Strip" back to its former glory.

Solution:

This Research Report will aim to investigate the above-mentioned factors of crime and the closure of spaces as well as many other aspects that have caused this extreme economic decline in 7th Street. The current architectural aspects of the street will also be investigaed and researched to create a thorough understanding of the street and the effects that the existing buildings have on the pedestrian usage. The architectural issues as well as other influences will be examined together to establish the perfect intervention on the street. More specifically, one portion of the street will be redesigned, which will aim to act as a catalyst and an encouragement of other spaces along 7th Street to do the same.

Through the adaptation and reuse of existing structures, as well as with the addition of new spaces a mixed-use venue, predominantly containing a School of Art together with residential units and retail spaces, will aim to rejuvenate the street restoring it to its former glory and simultaneously introduce something completely new to ensure the street will remain sustainable in the future.

1.2 Methodology

As the end goal of this Research Report is to create a multi-use precinct, containing a School of Art, some retail and restaurant

spaces as well as residential units, there have been several different methods of investigation and research.

Firstly, an intense and very comprehensive desktop study has been done to fully understand all aspects of the current porblem and site. This desktop study included readings of local newspaper articles, a number of theses and dissertations that cover the above-mentioned fields, as well as case studies of similar existing scenarios and interventions that have been either successful or unsuccessful. These provided an indication into the relationship of residents and visitors to High-Street like locations.

Through thorough observation, including sketching and photographing, a clear understanding of the site was gained. This was an invaluable component of the research as it provided clear insight into ways in which the site is currently used, and by who it is currently used. Furthermore, it indicated when the site was most active and when not, both in terms of pedestrian activity and vehicular activity. In addition to this the quietest spots and the busiest spots have been examined and compared to gain an understanding of the site. These findings influenced the design of the proposed intervention to ensure a successful building for community use was created.

Following this, several precedent studies of interventions that are similar to the proposed have been carefully investigated. These gave clear inputs and details into the requirements of the proposed spaces as well as provide insights into additional spaces that had not previously been considered.



CHAPTER 02

MELVILLE

2.1 Melville Community

The community of Melville is one of the suburb's most notable characteristics. The residents of Melville are very well known for their supportive and cohesive ways. Melville is around 172 hectares in size and has an overall population of 3 355 people (Firth, 2011a). This number is condensed into a household size of 1 608, indicating that the majority of household are only made up of two people. This is further supported by the fact that there is an almost equal number of men and women. Furthermore the average age of residents ranges from 20 years to 44 years of age, with very few children having been recorded (Firth, 2011a).

The residents of Melville tend to fall more on the artistic and creative side, and they pride themselves "on their individualism" (Zyl, 2013) and their Bohemian-like lifestyle. Along these lines Melville is also known for being extremely welcoming with a youthful charm and diverse residents (Cox, 2021). These residents were therefore part of the 7th Street scene, they visited the venues and some even worked there.

In addition to this the area is also heavily dependent on tourism (Naik, 2020). Both national and international visitors frequented Melville's 7th Street, as well as the variety of guest houses in the area, ensuring a steady and reliable economic income. This too has decreased however, due to the above-mentioned security concerns and dwindling street activity. In order to combat these, the already tight knit community, has come together to fight against crime, through the introduction of private security initiatives, as well as to fight illegal developments which



Figure 2.1.1 - Sidewalk without People, by Author 2023

are aimed solely at making profits by individuals without taking into account the heritage and the character of the area (Cox, 2021). They have also tried to create income opportunities for other residents through the introduction of a small Saturday Farmer Market, where residents are urged to sell their home-made products. This additionally also enhances the community relationship and creates a space for fun and bonding.

2.2 Crime and Safety

While Melville, and more specifically 7th Street, are iconic for their restaurants and artisan cafes and stores, they are equally well known for the crimes being committed. 7th Street in particular has been growingly plagued by crime (Ramela, 2021). This is predominantly due to the spacial design and architectural characteristics of the street.

The sidewalks are fairly narrow, measuring a mere 2.4 meters. This makes it uncomfortable for pedestrians to pass by one another, and it is made worse by some restaurants placing tables and chairs onto the side walks or stores displaying products. This creates opportunities for criminals to snatch smaller valuables from pedestrians, especially those sitting at outdoor restaurant tables. Cell phone, Handbag and laptop snatchings are one of the most common crimes reported along 7th Street (Bain, 2022). The lack of dedicated parking lots or official parking guards has also resulted in car thefts, as motor vehicles need to be parked along the sides of the main road, namely 7th Street, or along the adjoining smaller and



Figure 2.2.1 Minimal circulation space,

unpatrolled roads. Through observations it has also become evident that opportunistic individuals try to earn money as car guards but are also trying to sell pedestrians various types of drugs. This results in pedestrians feeling even more uncomfortable and more unsafe, reducing the chances of them returning to “The Strip”.

Homeless people have also started sleeping under the iconic 7th Street canopies, in front of empty and disused shops. This again adds to the uncomfortable sensation felt by pedestrians as they try and avoid their personal belongings and beggars. The above-mentioned tight knit community has tried to relocate many of these homeless people to shelters in an attempt of “not letting Melville become Hellville” (Cox, 2021) by rejuvenating it.

Through the above research and observations, it becomes clear that there is a dire need for serious security intervention. This can partially be achieved by better architectural design decisions, especially when it comes to store fronts and sidewalks. A better solution is also required when it comes to vehicular parking, through the possible addition of parking lots or official parking guards. While the local community has gotten the “Brixton police [to] commit to improving service delivery to [the] precinct” (Bain, 2023), no improvements have yet been recorded.

2.3 Inappropriate Spaces

When scrolling through the Melville residents Facebook group “I Love Melville”, a common trend becomes evident: that being the complaints about venues and spaces currently located along 7th Street. During the 2020 and 2021 national lockdown regulations, the majority of restaurants and cafes along 7th Street were not allowed to operate as normal, limitations were introduced to opening times and venue capacity, drastically reducing the income and profitability for these

restaurants (Naik, 2020). 7th Street had several iconic restaurants such as *Pablo EggsGo-Bar* and *Ba-Pita* which were not able to reopen after the Covid-19 pandemic had eased (Ramela, 2021). These were not the only spaces to permanently shut their doors which led to a multitude of shops and restaurants standing empty. Landlords were therefore becoming desperate to rent their spaces out, which led to them accepting almost any type of new business. As a result of this several bars, clubs and pubs have opened along 7th Street. While there were already a few of these venues, like the popular Ratz bar, the addition of more has drastically changed the feel and use of



Figure 2.3.1 Three Empty Spaces, by Author 2023

"The Strip". Pubs and clubs are generally open during the late hours of the day and closed during the day. This, along with many permanently closed stores significantly reduces the foot traffic in 7th Street and equally reduces the number of visitors coming from further away. The knock-on affect of this is that stores, restaurants, and cafes experience lower visits. This means the creative and Bohemian Melville community has less attractions to visit which starts to separate the community.

Further downsides of pubs and clubs are the extreme levels of noise that they emit, residents living in close proximity to 7th street regularly complain about the noise that keeps them awake until the late hours of the night (Mahapa et al., 2017). The reported noise stems both from loud music emitting from the venues but also from loud patrons that tend to gather outside of these venues as well.

It therefore becomes vital that any intervention on 7th Street carefully considers the types of venues that will be included. The architectural

design must also consider the use of proposed venues as well as any potential future venues to ensure the community is not neglected as it is currently.



CHAPTER 03

CASE STUDIES

3.1 Parkhurst

Parkhurst is a suburb located within the centre of Johannesburg. This small suburb is perhaps one of the most important suburbs to study in comparison to Melville. It is located around 5km further North of Melville ("Google Maps," 2023) and shares many characteristics with the suburb that is at the centre of this Research Report. Parkhurst was established just a few years after Melville, in 1904 and is slightly smaller at 164 hectares (Firth, 2011b). Property sizes are equally comparable at around 500m^2 with similar small houses, which are predominantly inhabited by only two people (Monare, 2014) as is the case in Melville. They both also have very similar High-Streets, Melville's above-mentioned 7th Street and Parkhurst has 4th Avenue. One would imagine therefore, that life in these two suburbs would be alike, however that is not the case.

Parkhurst has become a lot more upmarket than Melville, because it is further away from major routes and economical hubs. When comparing the average housing prices, Parkhurst has averaged out at around R 3 000 000.00 ("Parkhurst Property Trends," 2023) while Melville sits at a rather low R 1 600 000.00 ("Melville Property Trends," 2023). This shows that Parkhurst is much more appealing to upper class residents (Monare, 2014) while Melville is more popular among the middle to upper class population.

The same difference can be seen when looking at the suburbs' major attractions of 7th Street and 4th Avenue. While both contain restaurants, retail stores and pubs, 4th Avenue seems to be a lot more successful. There are very few closed stores, and all of the venues are open during the day, ensuring plenty of foot traffic. Only a few venues are open at night; a few restaurants and two pubs (which are also positioned at the end of the street, as far away from residential properties as possible). The success of the suburb and the success of the street go hand in hand, and it becomes evident that a successful

attraction, in this case in the form of a High-Street will attract more income into the area.

4th Avenue is still a success even though it experiences some of the same negative aspects as Melville's 7th Street, those being limited parking and fairly high crime rates (Monare, 2014). The difference being that wider road reserves were present from the beginning, resulting in dedicated street side parking as part of the urban design (Kotzé et al., 2014). Secondly, by having a high presence of private security and official parking guards patrolling the street. This proves that by including smart design and safety consideration, the entire street and also the neighbourhood can be uplifted and unified, as more of the population will be attracted to the area, for both living in and visiting for pleasure resulting in a boosted economy.

Figure 3.1.1 portrays an excellent example of how a restaurant can successfully interact with the street. In this case the restaurant itself



Figure 3.1.1 Parkhurst 4th Avenue Streetside Restaurant, by Author 2023

is set back from the sidewalk allowing enough space for outdoor seating, which is also covered, as well as providing a sidewalk space that is wide enough for pedestrians to comfortably pass by without having to step into the street which is not the case in Melville's 7th Street.



Figure 3.1.2 Parkhurst 4th Avenue, Streetside Cafe, by Author 2023

The photograph above (figure 3.1.2) is another example of a smaller scale outdoor seating area at a café in 4th Avenue, Parkhurst. While this sidewalk is noticeably smaller than the one shown in figure 3.1.1, there is still ample manoeuvrable space alongside the narrow line of tables and chairs. This ensures that patrons who wish to be seated outside have the opportunity to do so without impeding pedestrians. While this was an option to be considered in the proposed intervention on Melville's 7th Street, it was not the best method to create outdoor seating spaces as it limits the amount of tables and chairs that can be placed on the sidewalk in order to maintain a comfortable pedestrian walk space.



Figure 3.1.3 Parkhurst 4th Avenue, Sidewalk, by Author 2023

When examining shopfronts that face the road in 4th Avenue, it becomes evident that a narrow sidewalk cannot be used for any form of outdoor seating or retail displays, as the space for walking would be too narrow for pedestrians to be able to pass one another. This can be seen in figure 3.1.3. A sidewalk of this nature would only be useable if the spaces are used for retail or office spaces without the need of any displays on the sidewalk.

A final example of a streetside restaurant with outdoor seating can be seen in figure 3.1.4. This restaurant as a large, covered outdoor seating area that is set back from the street. Through the use of planters an indirect boundary is formed and demarcates the space used for the restaurant as well as the remainder of the sidewalk that caters for pedestrians. This is a successful intervention as it caters for comfortable use by both pedestrians and patrons. Similar methods as this were considered and included in the proposed School of Arts in Melville's 7th Street.



Figure 3.1.4 Parkhurst 4th Avenue, Streetside Restaurant, by Author 2023

3.2 Maboneng



Figure 3.2.1 Maboneng Precinct, by TripAdvisor 2019

The Maboneng Precinct is a part of the Johannesburg Inner City. It has undergone extensive gentrification and redevelopment from the late 2000s (Goo, 2017). What started out as a commercial and industrial area in the mid to late 1900s became a derelict and abandoned housing solution for Johannesburg's low-income population. In 2008 the property developer Jonathan Liebmann purchased several run-down buildings and turned these into mixed use developments containing predominantly residential units as well as restaurant and retail spaces. This is a similar intervention as is proposed in this Research Report for Melville's 7th Street.

This intervention, similar to 4th Avenue in Parkhurst, appears to be a great success, as many new residents have moved into the area, and the economy has grown as new shops and businesses open. A community market was also introduced which is the same sort of community led intervention as the market that is held in Melville. However, when examining this intervention with an open mind, it becomes clear that a great deal of this project has been the exact opposite of a success. The original plan was to "create an integrated community and mixed-income neighbourhood" (Goo, 2017) but this was not achieved.

The primary failure around the Maboneng Precinct project is the alienation of its former residents and the residents of surrounding suburbs. Through the costly development of the area, property prices soared which meant previous residents were no longer able to afford to live there (Gregory, 2016) and had to move to other low-cost areas. People living in surrounding suburbs also do not feel comfortable visiting the Precinct as they cannot afford to visit any of the stores or restaurants. This results in the developer needing to fill the residential and commercial units with people coming from higher-income areas, which proves to be difficult as Central Johannesburg has a bad reputation in terms of crime and maintenance. This indicates that market related research was not properly considered, or that the outcomes were misjudged. It was a crucial lesson for the mixed-use precinct being proposed for 7th Street.



Figure 3.2.2 Invisible Boarder of Maboneng Precinct - By Author 2023

Some successful aspects of the Maboneng Precinct are the overall design, which focused on turning the development outwards towards the street, rather than creating enclosed centres (Goo, 2017). This is the same principle that has been implemented, and will be maintained in the proposal, in Melville. A further important strategy that was implemented was the introduction of permanent security guards in the area, to ensure residents and visitors remain safe. This did however have an unexpected side effect; neighbouring

neighbouring communities saw this as an invisible boundary (Goo, 2017) and no longer felt comfortable crossing it, which means the intervention of security had to be carefully considered to prevent a similar situation happening within 7th Street, as there are lower-income areas close to this suburb as well.



CHAPTER 04

URBAN DESIGN

4.1 Sidewalks

As previously mentioned, the sidewalk play a major role in a High-Street scenario such as Melville's 7th Street. Seeing as all of the existing commercial places face the street it becomes clear that 7th Street's success is largely dependent on pedestrians and high volumes of foot traffic. It should have therefore been designed to cater for this accordingly. This was not done however, the sidewalks are only 2.4 meters wide and contain many obstacles such as trash cans, columns, irregular paving, and items from the stores such as product displays or tables and chairs. This issue is not solely one in Melville, it is a common notion that "pedestrians have often been neglected in the design [...] of road networks" (Naicker and Sinclair, 2022), which sidewalks fall under. A small study completed by Naicker and Sinclair in 2022 focused on the effectiveness of sidewalks. They studied areas where sidewalks had been redesigned and reconstructed to address similar issues as those in Melville. The study proved that the sidewalks were utilized much more than they had been previously (Naicker and Sinclair, 2022). This also increased safety for pedestrians as they were not forced to walk in the road or along the roadside, which poses several risks of either getting injured by cars or falling victim of thefts.



Figure 4.1.1 Collage of Sidewalk obstacles, by Author 2023

Further aspects that proved to be important in the design of sidewalks was the relationship between greenery, visibility of sky and bordering buildings (Joo Lee et al., 2009). Design research focusing on this topic proved that a successful sidewalk designed, naturally, consisted of ample space for circulation. However second to this it was preferred by pedestrians to have a large amount of greenery along the sidewalks, as this is more "harmonious" (Joo Lee et al., 2009). This was more important than being able to see a large amount of sky. Especially along "The Strip" in Melville it became vital to add more greenery, especially along the sidewalks as these areas were almost completely bare and comprised only of hard surfaces.

Further considerations that seem to have been overlooked is the inclusion of all residents. "people with different characteristics live together and each group has its own needs" (Aghaabbasi et al., 2017), meaning that there are residents in Melville, as well as visitors and tourists, who are differently abled. A well known charity organisation Children of Fire" ("Children of Fire," n.d.) is located on the Melville and Auckland Park border. Many of the children and adults living in this home have decreased abilities when it comes to sight, hearing, and mobility. This is one example of a group of people that had to be considered in the redesign of the sidewalk in the proposed intervention, as current sidewalks contain the above-mentioned obstacles and also have large steps along the roadside.

The sidewalk design and urban design strategies directly impact the built environment around it (Cai and Wang, 2009). This aspect was a major consideration in the design of the proposed intervention on 7th Street. A sense of psychological and physical safety had to be created within the urban re-design of the street, to ensure that pedestrians as well as patrons to the site felt comfortable and were at no risk of any injuries or thefts. As mentioned above one of the greatest strategies in this regard is ample space along the sidewalks. It is equally important to consider alternative uses of the sidewalk space as it may

be used for restaurant or café seating or retail displays.

The final major factor that was considered was that of street crossings. There are few traffic circles or traffic lights along 7th street allowing cars to speed along the road. This makes crossing difficult for pedestrians. While the sidewalks were being considered in the design this aspect was included in the urban design of the street as well as a solution had to be found to slow down cars and to create a safe crossing point for pedestrians.

4.2 Landscape Architecture

As discussed in the previous section, Melville's 7th Street is severely lacking. One of the driving factors of the proposed intervention of a Mixed-Use Precinct was the focus on- and implementation of a strong landscape design strategy. Because the proposed intervention, similarly to the current design and layout of 7th Street, will be focused outwards and focused on pedestrians, the surrounding landscape needs to be both suitably and functionally designed but also need to be a memorable space that can act as a landmark in Melville and will therefore attract more people. The design of the landscape should also consider one of Melville's most known natural landmarks, The Melville Koppies. This paired with the desire to include more vegetation along the sidewalks as well as in the site, because "places which include nature [...] or water [...] have been found to be particularly conducive" (Thwaites, 2001). This also aids people to feel more comfortable and familiar around the site.

Clever landscape design can also achieve a type of zoning within the site. The space can be given several different functions in different spaces and can be divided by landscaped elements such as a change of materials and design, rather than hard divisions such as walls and fences. Furthermore, the landscape of the proposed building acts as a

transition from the completely public street to the semi-private interior programme of the building (Thwaites, 2001).

4.3 Public Art

Public art inclusion can work in a similar way as landscape design as it attracts visitors to the site while also serving as a landmark. The City of Johannesburg has previously used public art in several different areas as a method to rejuvenate urban spaces (Harrison and Phasha, 2014). The inner city has been decorated with statues, such as the Eland in Braamfontein, which is one of the most iconic urban decorations within Johannesburg (Harrison and Phasha, 2014), as well as large murals on facades of large buildings. This is a creative tool that can be used to include the diverse community of Melville in the rejuvenation project on 7th Street. There are many examples of urban art, albeit illegal and not commissioned examples, within the neighbourhood. The most prominent is examples of graffiti murals. As the proposed intervention also contains a School of Art, it would make sense for the building and its landscape to represent this in forms of public art. Not only do these act as landmarks and serve to beautify the area, they also bring the community together as they can decide on the art together and it can be regularly changed to keep the interest in the area high.



Figure 4.3.1 Public Art-3rd Street, by Author 2023



CHAPTER 05

COMMUNITY BUSINESSES

Businesses within communities are vital for economic sustainability (Miller et al., 2010) in any area, with the suburb of Melville being extremely dependant on them. As there are many spaces from which businesses are run, or empty spaces where businesses can be run from, the suburbs and its residents are heavily dependant on the success of local businesses. The popular attraction of 7th Street is not the only spot in the suburb that contains businesses. There are several different centres, such as 27 Boxes, an unsuccessful spot built out of containers as stores, as well as The Service Station which contains a bookshop, coffee shop and salon, these are just to name a few. Another trend becoming evident in Melville is that more and more residents are working from their home, and even turning the entire house or a portion of it into a business space.

One last business intervention that is important to note is the Melville Farmers Market which takes place every Saturday along the side of the Melville tennis courts (Cox, 2021). This is a community initiative where residents can set up a makeshift stand and sell their home made or self-sourced goods. The aim is that residents can either earn their income through this market, as they form business relations with the community, or that they supplement their income, as many individuals in today's economy struggle to live off of their salaries. This Market was a major influence for the proposed Mixed-Use development along "The Strip", as the aim was to include this market, and expand on it, in a more permanent and structured manor. The idea was to create a permanent space for individuals to sell their goods, be it on a daily basis or at times of their choosing.

Further parts of the proposed intervention will also be aimed at included small community businesses as a way to boost Melville's overall economy. It was important to also take into consideration that it has become a necessity to create organisations and businesses that function in socially and environmentally responsible ways (Arko-Achemfuor and Dzansi, 2015). This does not only mean using active

design to reduce emissions through methods such as solar generated power, it also means that these businesses, or at the very least the development itself, focus on interacting and giving back to the community. Funds earned from these businesses or from the letting out of spaces can be used to assist in helping the needy through ideas such as food programmes. Alternatively, the effort can be made to employ the local struggling community within the intervention, as is already being one by the U-Turn Homeless Ministries (Sikhungo, 2023), which recently opened a branch in Melville and provides employment to homeless people.

While the above-mentioned community interventions do not directly reflect in the proposed design of the intervention, it is an important factor to consider and to include in the overall planning and execution of the new development in 7th Street, to ensure that the community can remain as tight-knit and resilient as they are known to be.



CHAPTER 06

EDUCATION FACILITIES

> *To unlock the creative power of older adults through community-based art education. In addition to physical, social, and psychological benefits, art knowledge, and art skills, transformative learning empowers individuals to explore and analyze themselves and engage with their community through both traditional and non-traditional visual art forms and experiences. (Lawton and La Porte, 2013)*

The biggest component of the proposed intervention on Melville's 7th Street, as mentioned above, is the inclusion of a School of Arts. The aim of this school is to provide short term classes and courses for all members of the Melville community as well as for anyone coming from further away. It is a well known notion that art schools within communities are an important contribution (Roberts, 1989). This can act as a steppingstone to improved skills to enable members to form a career out of the training, or to just serve people with corresponding interests who would like to improve their general skills or would like to learn something new.

Through this intervention the economy of Melville and especially 7th Street would be significantly boosted. The surrounding spaces such as stores, and restaurant will experience more foot traffic as more people will be visiting the street. The School of Art was designed to contain three different categories, namely a fashion design school, a culinary school, and an art school, this combination of different fields in the overall artistic category is more and more popular in modern Schools of Art (Hazelkorn, 2005). Each of these schools were additionally designed to work in conjunction with a retail store, a restaurant, and a gallery respectively.

An art school in particular is known to be an excellent activity, especially amongst the adult population, as there are many "therapeutic and educational aspects of art and art education" (Lawton and La Porte, 2013). Furthermore, it provides opportunities

for older members of the community to interact with the younger members, forming relationships that further Melville's image of a close community. Art schools have also become popular among the older adult generations. Many of them have either been childless couples or have had children leaving the homes, sparking the desire to learn new skills or to experience new things. A large portion, around 25%, of Melville's population is between the ages of 45 and 70 (Firth, 2011a), making them key targets for the proposed intervention. Not only does the school serve to improves people's skill levels, but the addition of the attached gallery will also provide several further opportunities for art students. They will be able to portray their work there, be it what was produced inside or outside of the school. This will provide income opportunities for the community through the sale of their art works, or alternatively it will expose them to other professional entities which may provide specialised future employment opportunities. The same principles were considered by the inclusion of the restaurant that adjoins the culinary school as well as the retail store that is partnered with the fashion design school.



CHAPTER 07

RESIDENTIAL DENSIFICATION

The introduction of smaller scale residential opportunities was the final component that was considered for this Research Report. The aim was to include various types of apartments into the proposed Mixed-Use development in 7th Street. The reasoning for this is that the densification of the area is aimed at boosting the economy. The more people who are able to live in the area and close to the intervention the more successful it should be. This is due to urban densification being one of the best methods to achieve successful and sustainable developments (Barger, 2016). Residential developments that follow a denser principle often result in its residents having an improved quality of life, as they are often more affordable and are housed within larger developments containing employment opportunities and proximity to recreational spaces.

Densification is however quite a challenge in large urban areas, as there is no space for further developments. The majority of suburbs close to Johannesburg's economic hubs such as the CBD and Sandton are already completely developed (Fataar, n.d.), predominantly with freestanding houses. South Africa as a whole has one of the lowest density rates when compared to other middle-income countries (Todes et al., 2018). As a result of this the only option for densification, without spreading further into the outskirts of the city, is to subdivide existing properties or to consolidate in certain areas. This would be the case for the proposed intervention on 7th Street, as four of Melville's small properties, two currently zoned as Business 1, one as Residential 1 and the last as Special ("GeoLIS," 2023), would be consolidated in order for the proposed mixed-use development to be possible. It would also be ideal to keep the densification options of the area located towards 7th Street (Teller, 2021), as this is already one of the more popular attractions of the area. This will also ensure that the remaineder of the suburb can remain as it is with freestanding houses. There are several reasons why a residential component of the proposed project would ensure the overall success of the intervention. First of which would be Melville's location within the greater Johannesburg area, it is close to the city centre, as well as two major

universities and has easy access to major highways, making It an ideal place to reside in (Teller, 2021). Furthermore, as it is a fairly small suburb, it is also possible to walk to a large variety of different facilities, such as shopping malls, Campus Square and Rand Steam Mall are both within walking distance, while stores along 7th Street and Main Road are equally close by. In addition to this access to public transport is also an attractive feature as the Reya Vaya bus and various taxi points are all within walkable proximity. This adds a further bonus as there will most likely not be a major increase in vehicular activity in regard to the residential additions.

The apartments were designed taking single individuals as well as couples into consideration. Single professionals might want to reside in this trendy neighbourhood but might not want the responsibility of owning a freestanding home or might not have the financial resources for this. The same can be said for targeted couples, as young or older couples are often attracted to the area. The goal was to include one-bedroom and two-bedroom apartments, which would be an

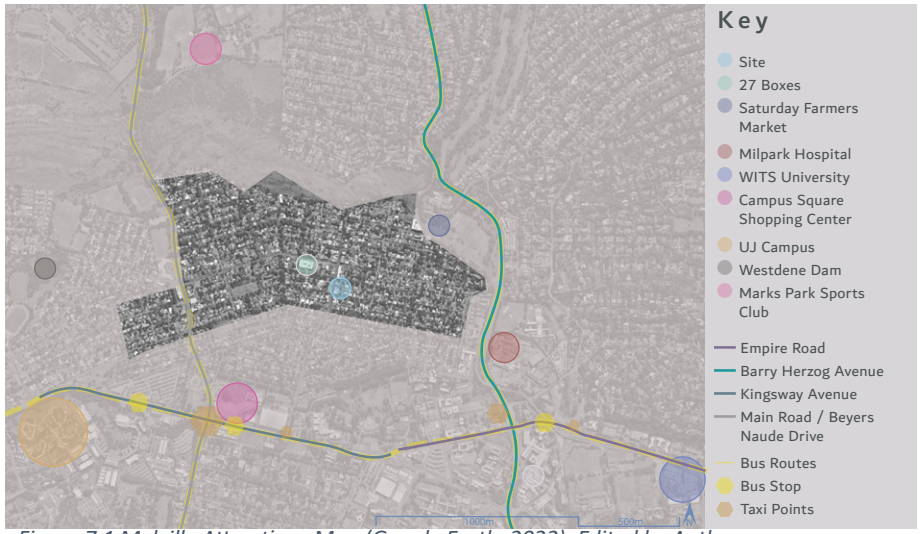


Figure 7.1 Melville Attractions Map (Google Earth, 2022), Edited by Author

affordable housing solution for the area. The two-bedroom units in particular would also be beneficial for people who work from home as the second room could easily be used as a home office. While there will not be a large number of apartments in this development, the inclusion of these, as well as the overall new proposed development, aims to influence future developments that may take place along Melville's 7th Street, therefore increasing the number of smaller residential units and business opportunities for those residents and others living in the area.



CHAPTER 08

SKETCH CHARRETTE

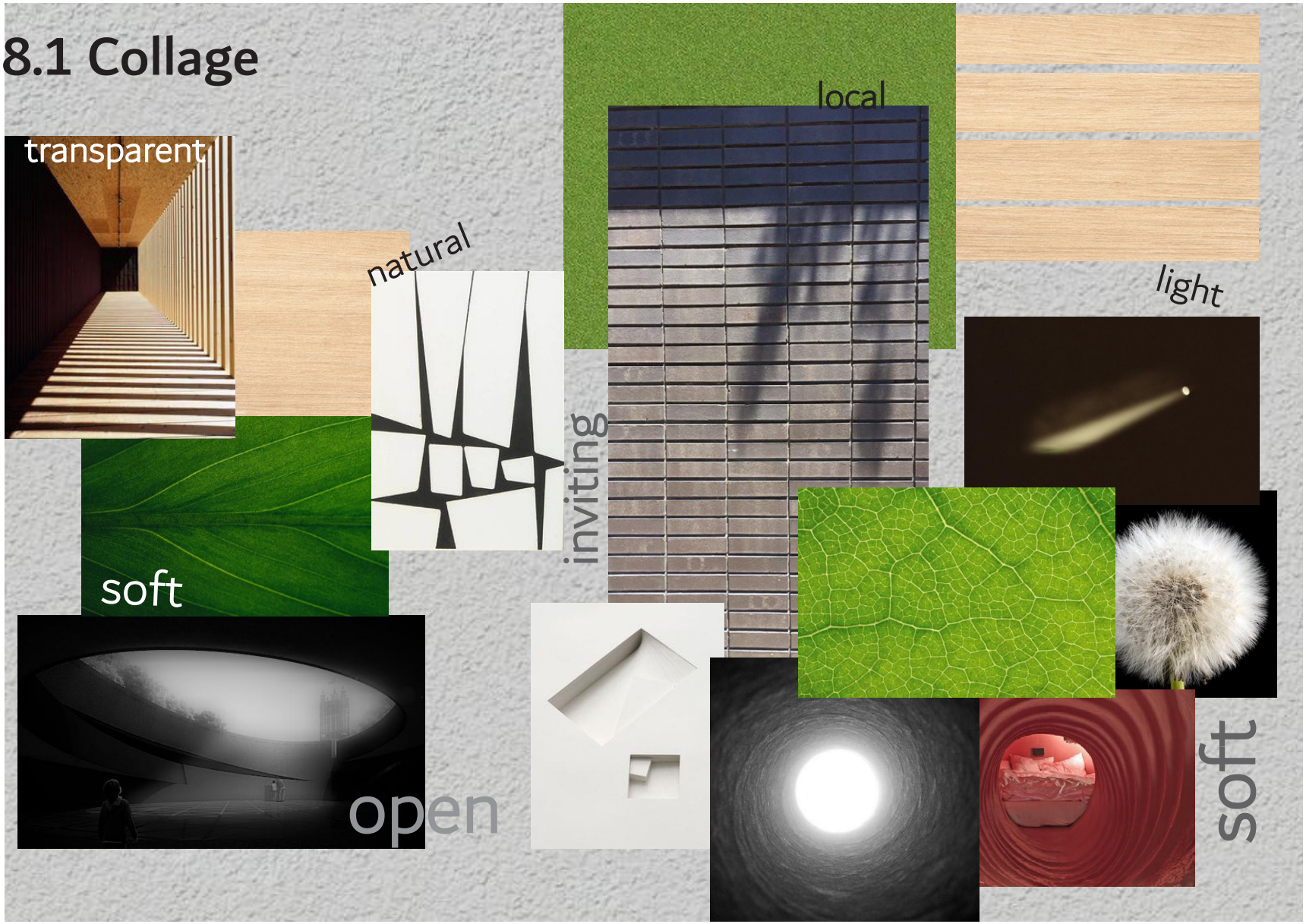


Figure 8.1.1 Sketch Charrette - Collage, by Author 2023

8.2 3D Form Exploration



Figure 8.2.1 Massing, by Author 2023

Form 1
creating a mass that has organic properties

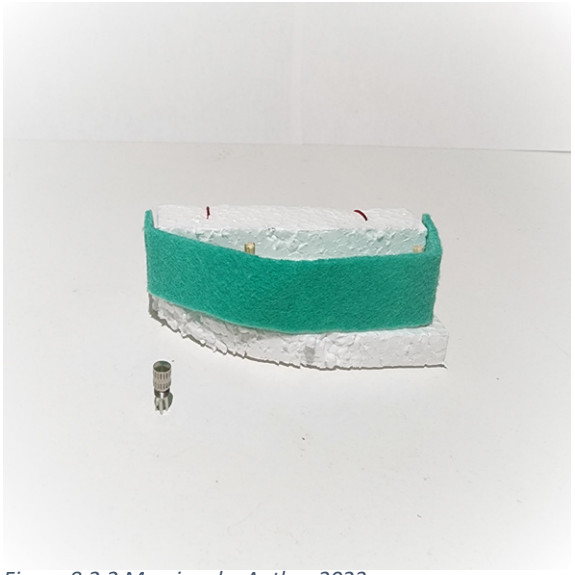


Figure 8.2.2 Massing, by Author 2023

Form 2
introducing layering and a stepped facade with screening

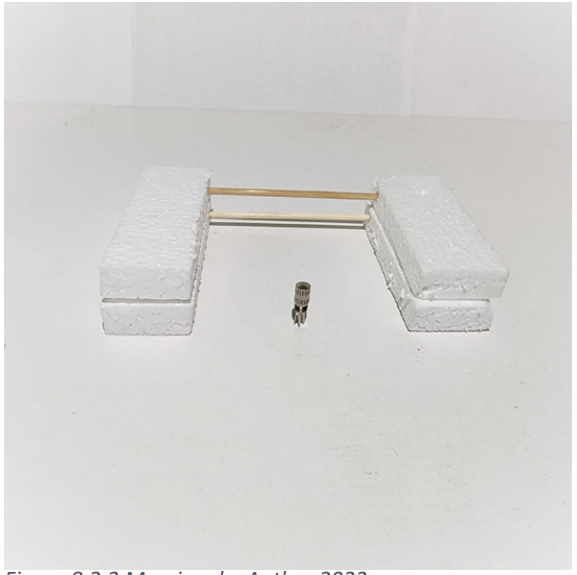


Figure 8.2.3 Massing, by Author 2023

Form 3
splitting the mass to create spaces

The above three explorations all have qualitites that I think will create a successful building. The organic form, the layering and the different spaces all play a vital role in creating a successful intervention, and all three of these properties will be carried into the final design.

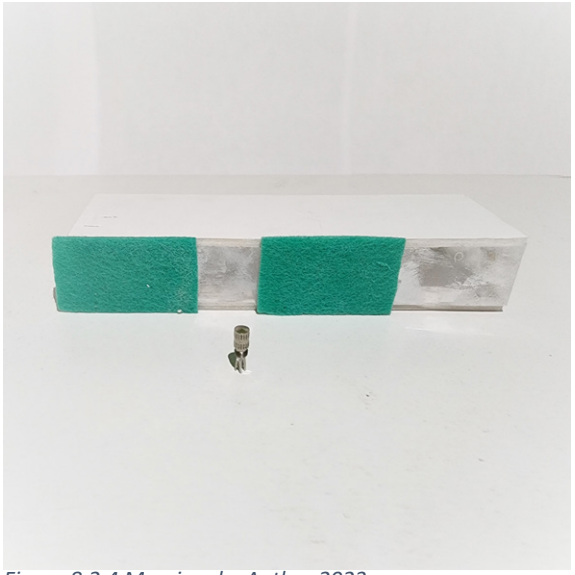


Figure 8.2.4 Massing, by Author 2023

Form 4
indroducing different materials, vertical planting & glazing in layers



Figure 8.2.5 Massing, by Author 2023

Form 5
defining separated spaces with materials (glazing & timber)

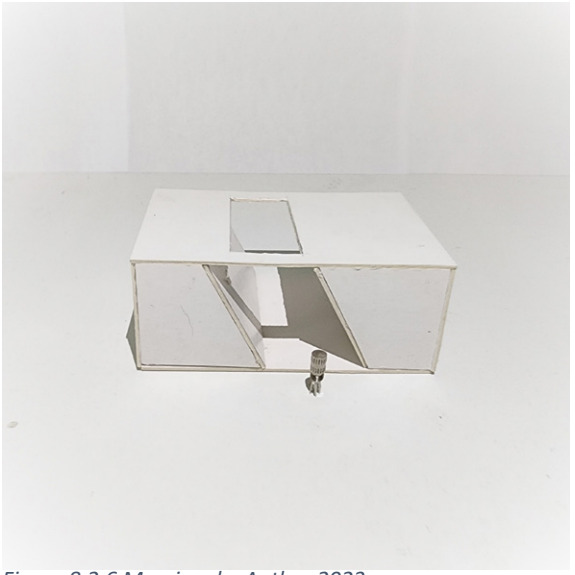


Figure 8.2.6 Massing, by Author 2023

Form 6
changing proportions and exploring light and angles

The introduction of glass alongside vertical planting is also a good exploration as Melville has very little vegetation, and glass will allow transparancy between the more private spaces and the public road. A partially covered open space with softer materials such as timber is also appealing while the more angular design of the last exploration does not match the feel of the desired aesthetic.

8.3 Material Exploration



Figure 8.3.1 Masonry exploration, by Author 2023

Material 1
facebrick in a stacked bond

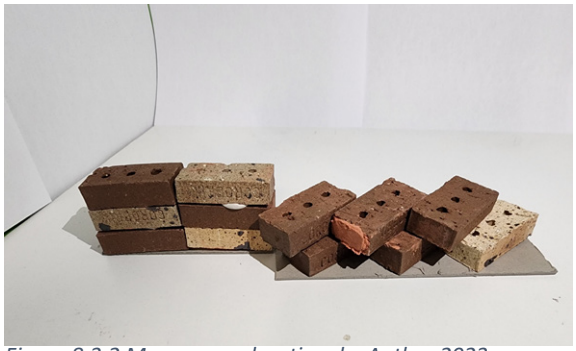


Figure 8.3.2 Masonry exploration, by Author 2023

Material 2
exploring feature bond type



Figure 8.3.3 Masonry & Timber exploration, by Author 2023

Material 3
primary timber framed structure with brick feature

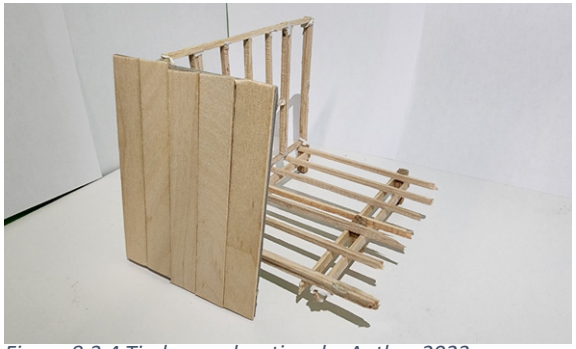


Figure 8.3.4 Timber exploration, by Author 2023

Material 4
timber framed structure with timber cladding

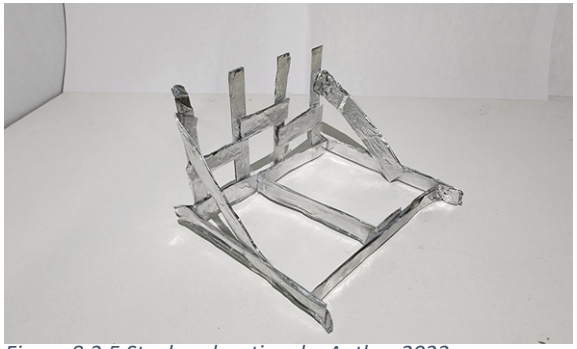


Figure 8.3.5 Steel exploration, by Author 2023

Material 5
light steel frame structure



Figure 8.3.6 Stone & Steel exploration, by Author 2023

Material 6
LSF structure with stacked stone feature wall



Figure 8.3.7 Stone & Steel exploration - by Author 2023

Material 7
stone cladding instead of stone wall



Figure 8.3.8 LSF, timber, stone & glass exploration - by Author 2023

Material 8
combination of LSF, timber, stone & glass

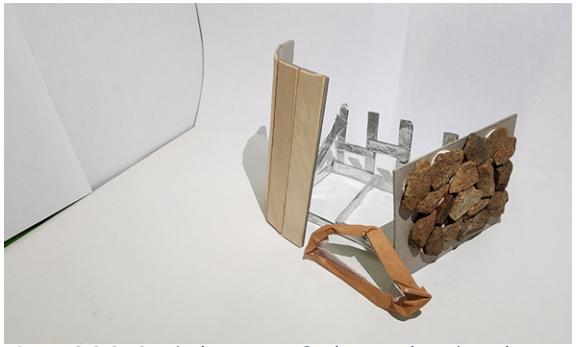


Figure 8.3.9 LSF, timber, stone & glass exploration - by Author 2023

Material 9
combination of LSF, timber, stone & glass

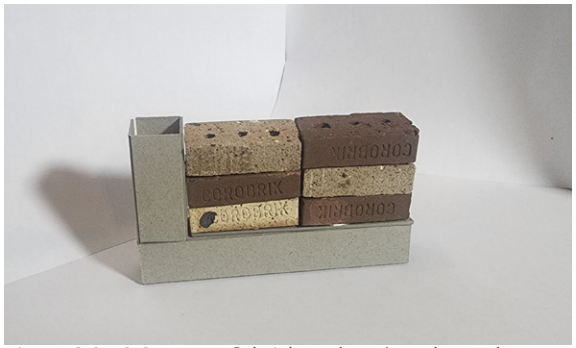


Figure 8.3.10 Concrete & brick exploration - by Author

Material 10
common concrete frame & brick infill

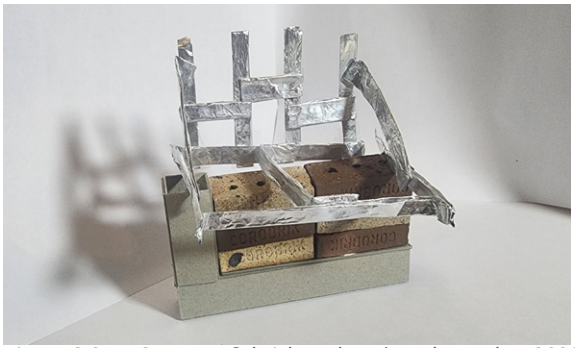


Figure 8.3.11 Concrete & brick exploration - by Author 2023

Material 11
combination of concrete frame, brick & LSF

The final choice of materials is still undecided, however the advantages of light steel frame construction, such as reduced weight and faster construction times, are appealing. Additionally the use of stone cladding (which has reduced weight as apposed to a stone wall, will tie the building back to the Melville Koppies were many similar stones can be seen. Lastly some timber cladding would soften the facade and glass will provide transparancy between the building and the street.

8.4 Site

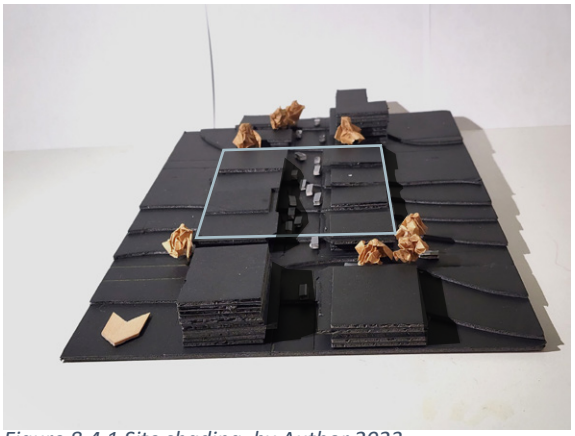


Figure 8.4.1 Site shading, by Author 2023

morning

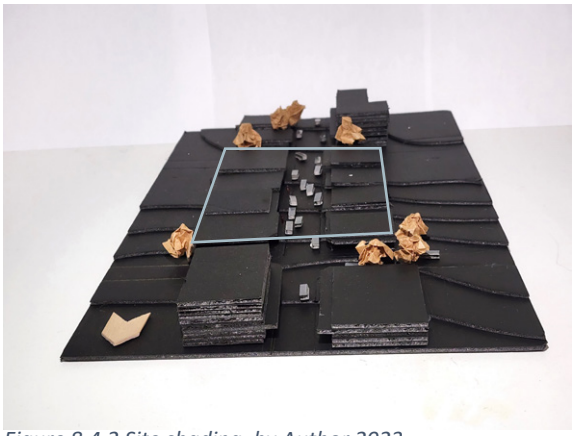


Figure 8.4.2 Site shading, by Author 2023

midday

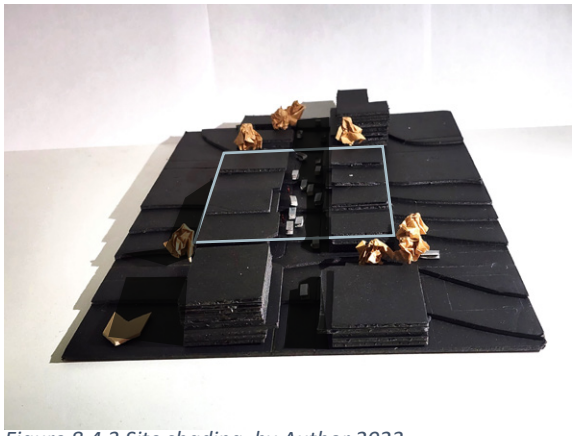


Figure 8.4.3 Site shading, by Author 2023

afternoon

This site contains venues such as restaurants, coffee shops, retail stores and pubs, which means they will be used throughout the day. It will therefore be vital that as much natural light as possible is allowed into the site.
The existing buildings on the site are only one storey high and therefore allow lots of light in. Neighbouring buildings to the North-East and South-West of the site are three storeys high and show that there is still ample sunlight reaching the site.

8.5 3D Building Exploration

morning
three storey addition

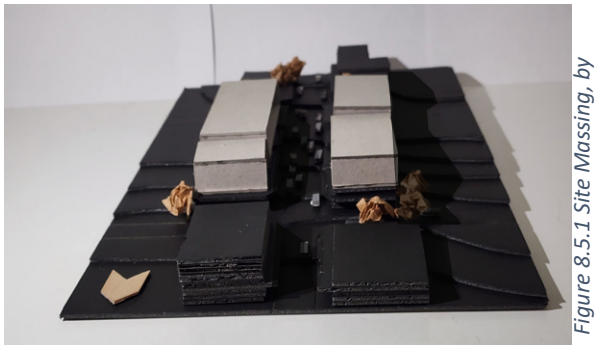


Figure 8.5.1 Site Massing, by Author 2023

midday
three storey addition

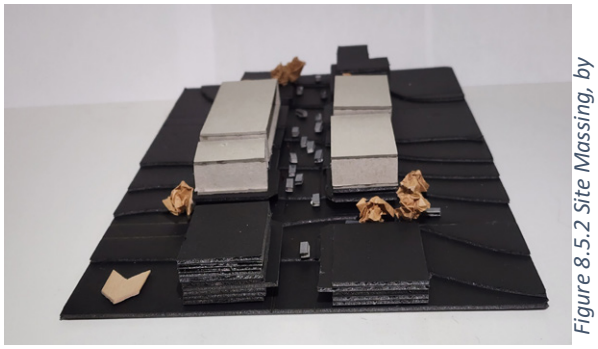


Figure 8.5.2 Site Massing, by Author 2023

afternoon
three storey addition

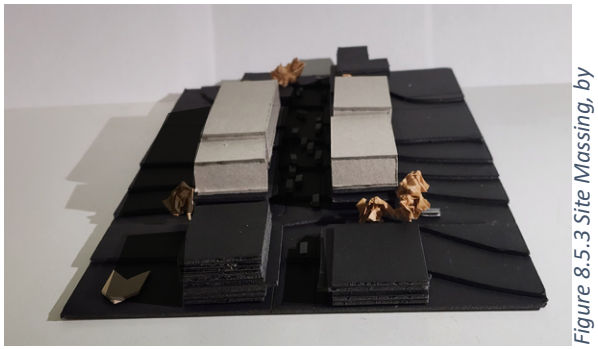


Figure 8.5.3 Site Massing, by Author 2023

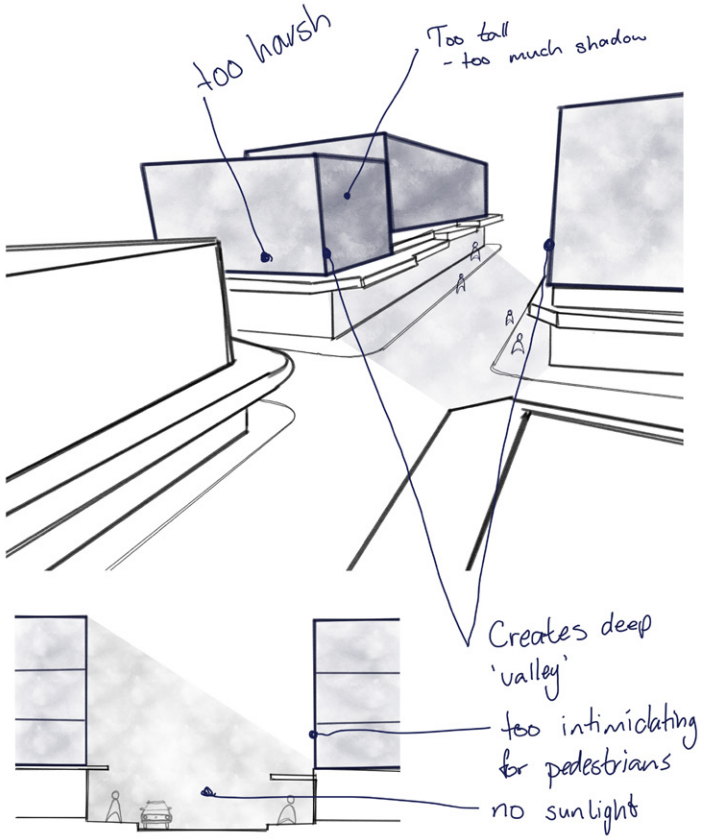


Figure 8.5.4 Massing Sketch, by Author 2023

The aim of this massing was to determine the size and number of floors for the proposed new addition. When looking at the shading created by this size and positioning, it became clear that three storeys with a flat facade would create too much shade and would create a valley like feel for pedestreians.

morning
two storey addition

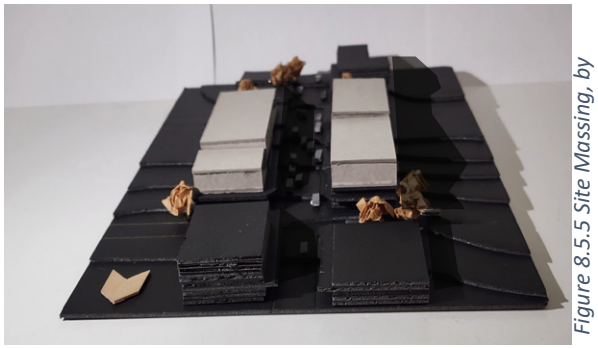


Figure 8.5.5 Site Massing, by Author 2023

midday
two storey addition

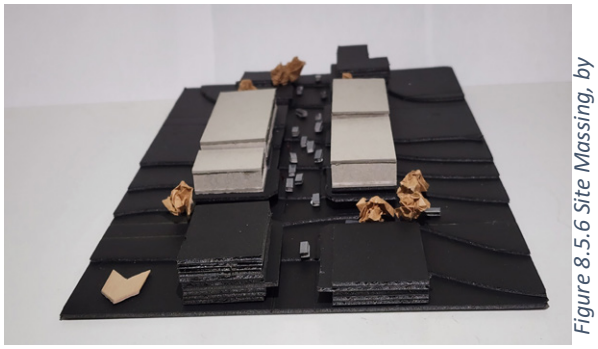


Figure 8.5.6 Site Massing, by Author 2023

afternoon
two storey addition

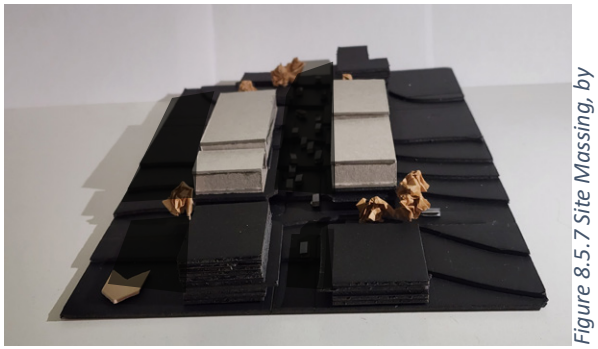


Figure 8.5.7 Site Massing, by Author 2023

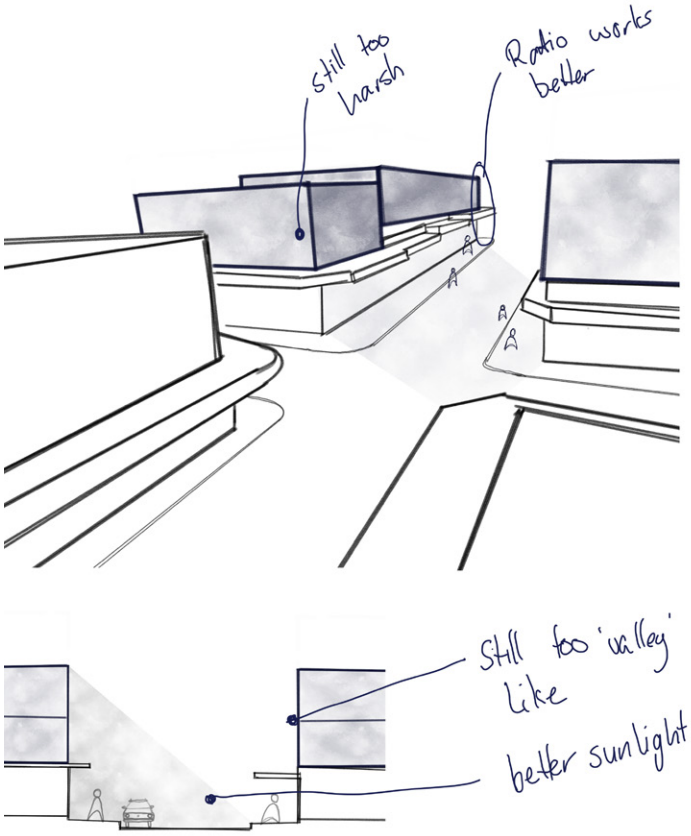


Figure 8.5.8 Massing Sketch, by Author 2023

This massing still aims to determine the size and configuration of the new addition. This study proves that a two storey addition works much better, but that the rectangular form is still too intimidating and angular, and creates an unpleasant feel for pedestrians.

morning
two storey addition



Figure 8.5.9 Site Massing, by Author 2023

midday
two storey addition

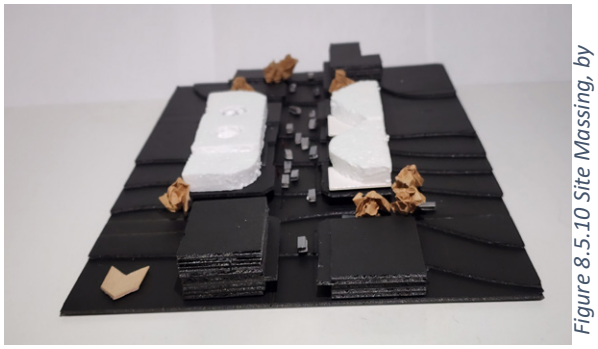


Figure 8.5.10 Site Massing, by Author 2023

afternoon
two storey addition

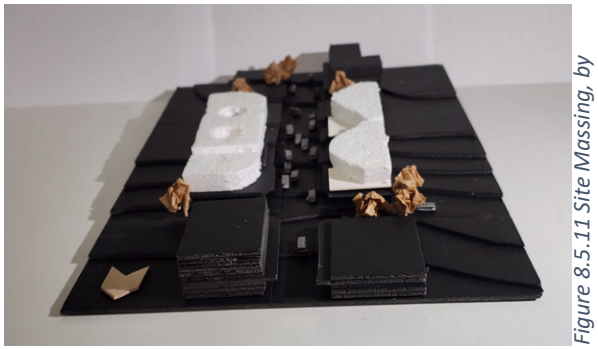


Figure 8.5.11 Site Massing, by Author 2023

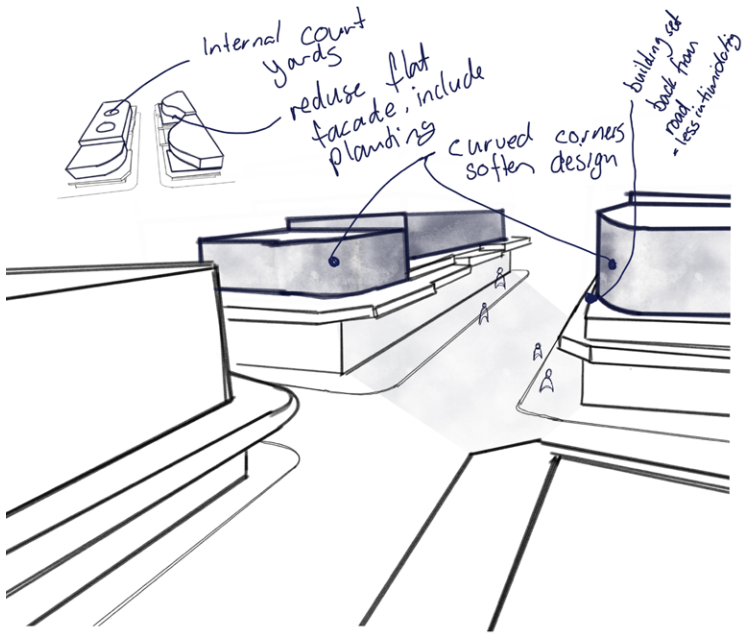


Figure 8.5.12 Massing Sketch, by Author 2023

By cutting away at the corners of the massing, the additon was less intimidating and appeared softer and more inviting, the same applies to carving out a central portion from the facade of the western additon. I also experimented with creating open central spaces within the building by creating circular courtyards, which was more successful

morning
two storey addition



Figure 8.5.13 Site Massing, by Author 2023

midday
two storey addition

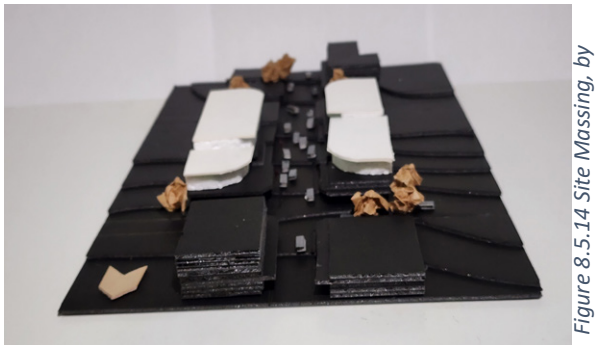


Figure 8.5.14 Site Massing, by Author 2023

afternoon
two storey addition

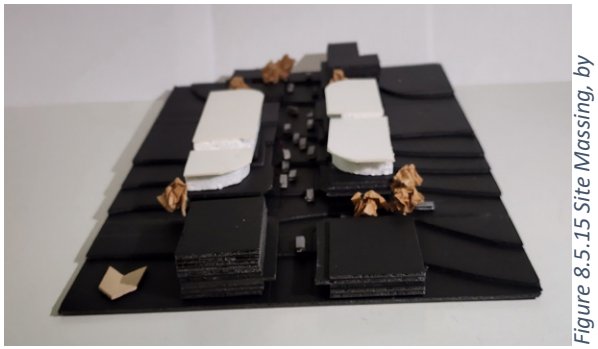


Figure 8.5.15 Site Massing, by Author 2023

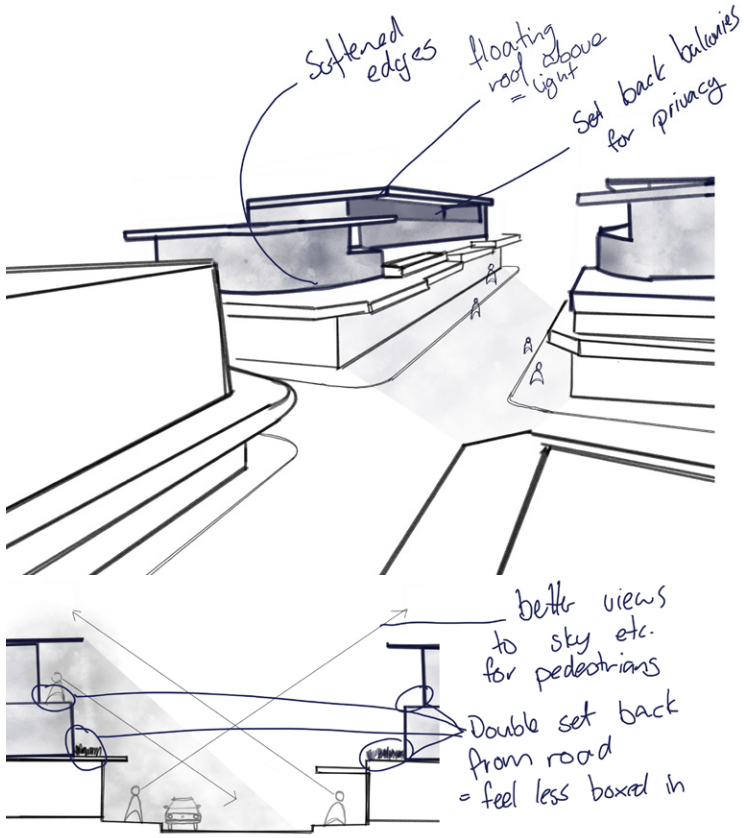


Figure 8.5.16 Massing Sketch, by Author 2023

This final exploration introduced some layering to the street facing facade, the different floors were cut back and a thin, light roof cantilevered above to create a feel of a floating roof. The entire structure was also set further back to allow more natural light into the street. This, however, highlighted that the flat back of the building creates a problem as it does not tie the building back to the neighborhood.

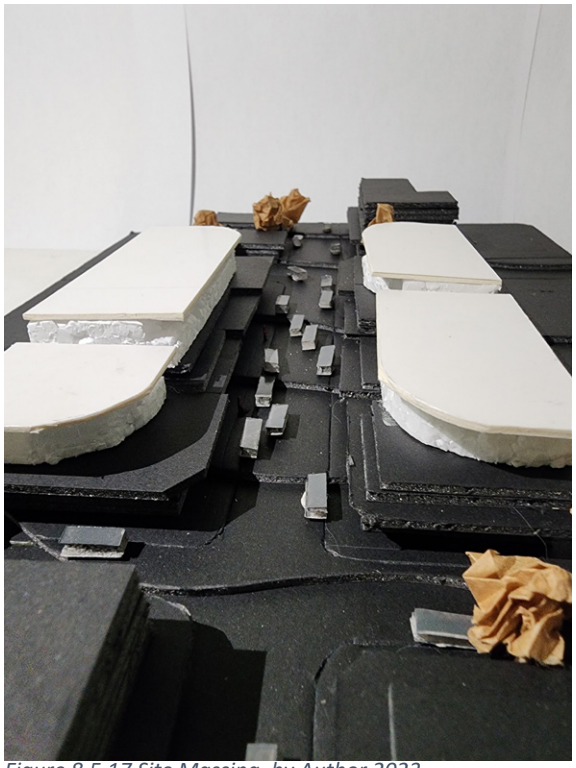


Figure 8.5.17 Site Massing, by Author 2023

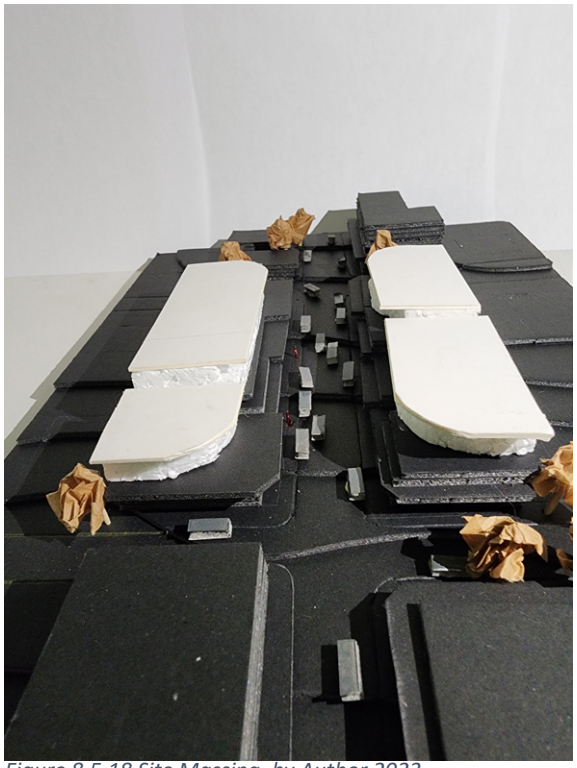


Figure 8.5.18 Site Massing, by Author 2023

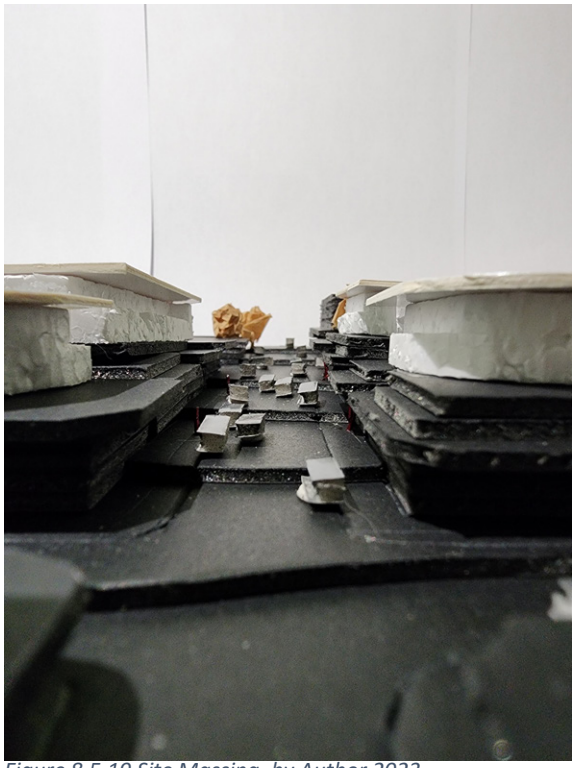


Figure 8.5.19 Site Massing, by Author 2023

The above three perspective photographs provide a better view of the final model exploration. The stepped back design of the addition creates a much better feel for pedestrians, and allows them to look up past the buildings, instead of creating a “concrete valley”.

8.6 Structure and Materials

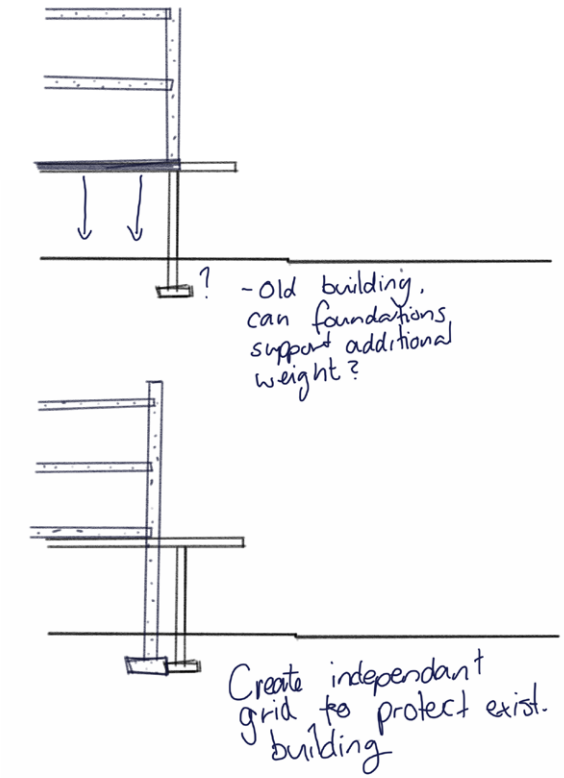


Figure 8.6.1 Structure Sketch, by Author 2023

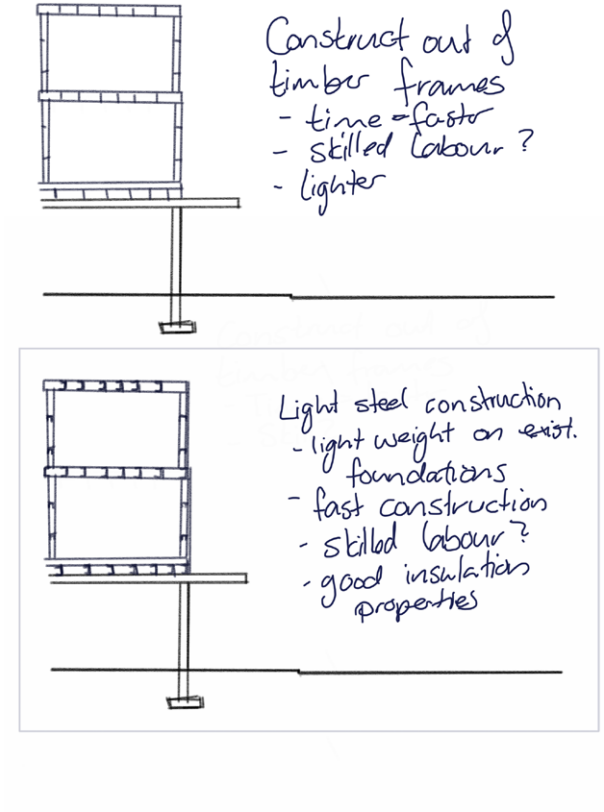


Figure 8.6.2 Structure Sketch, by Author 2023

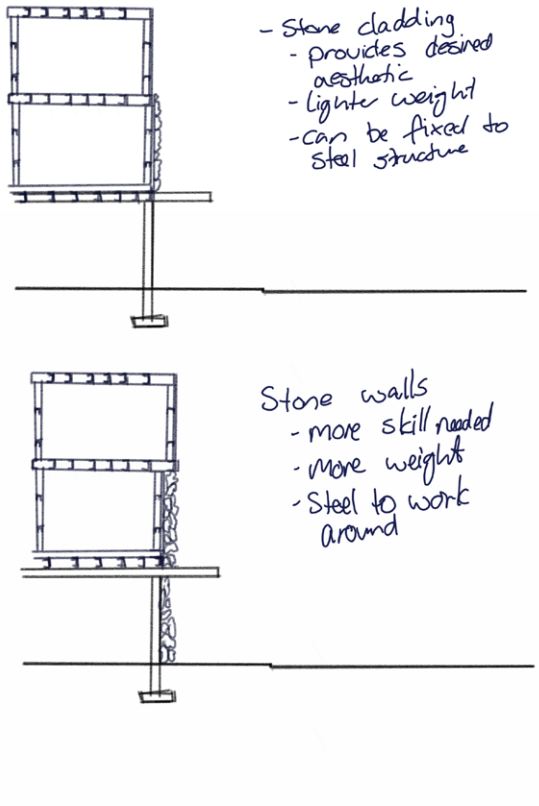


Figure 8.6.3 Structure Sketch, by Author 2023

The above 1:100 sketches explored how an addition onto exisitng buildings could be achieved. The first explores an independant concrete and masonry grid as the exisitng structure might not be able to support the additional weight, this would allow the addition to be independantly supported. Following that, lighter systems of timber and steel framed structures were explored, with steel being the chosen system. This is then combined with the use of stone, either as a stone wall which would need to be supported from the ground up, or with stone cladding which is much lighter in weight and faster to apply.



CHAPTER 09

SITE ANALYSIS

SITE LOCATION

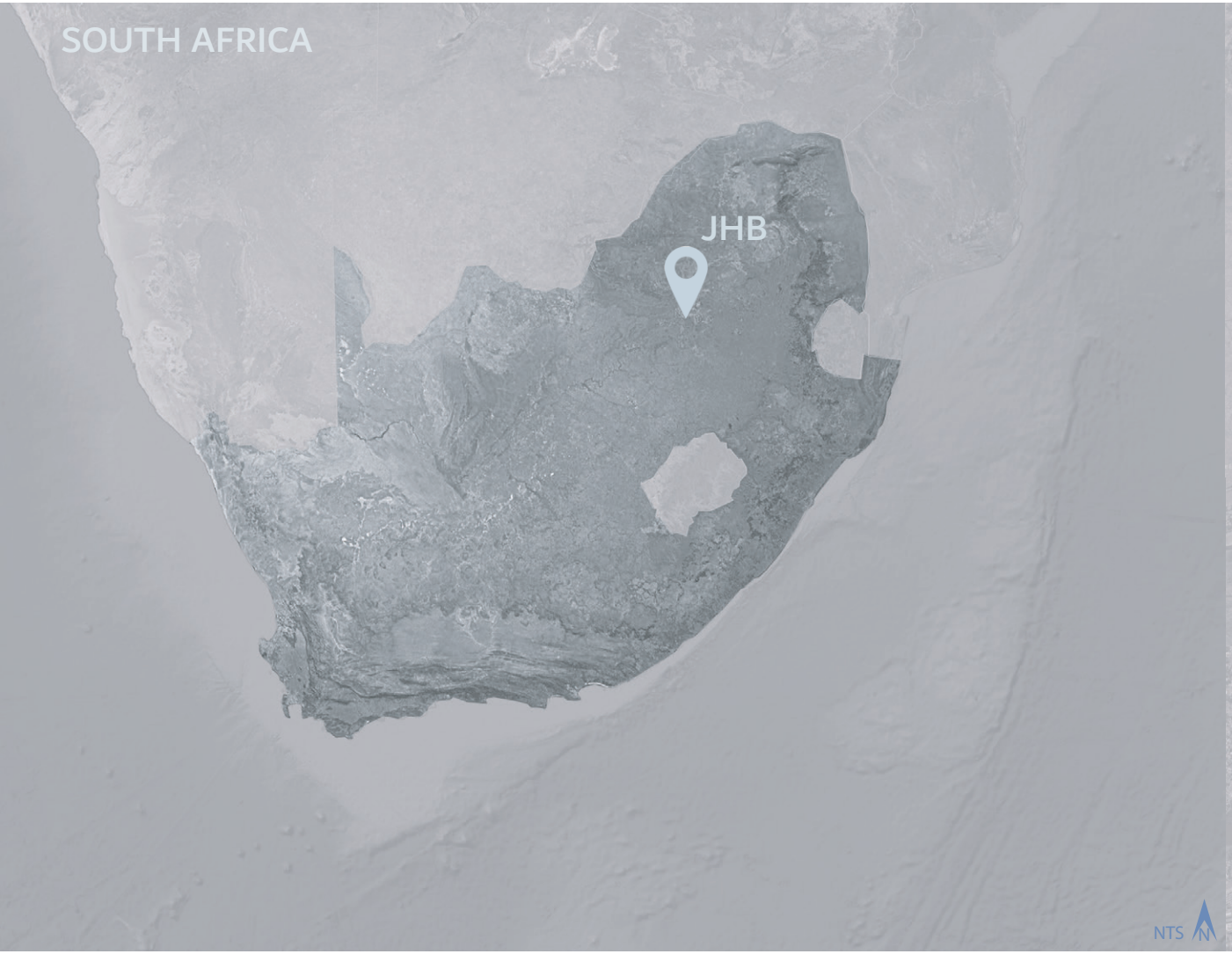


figure 9.1: South Africa Map (Google Earth, 2022), Edited by Author

figure 9.2: Johannesburg Map (Google Earth, 2022), Edited by Author



figure 9.3: Melville Map (Google Earth, 2022), Edited by Author

MELVILLE - CHOSEN SITE



figure 9.4: Melville Site Map (Google Earth, 2022), Edited by Author

MELVILLE - ATTRACTIONS & MAJOR ROUTES

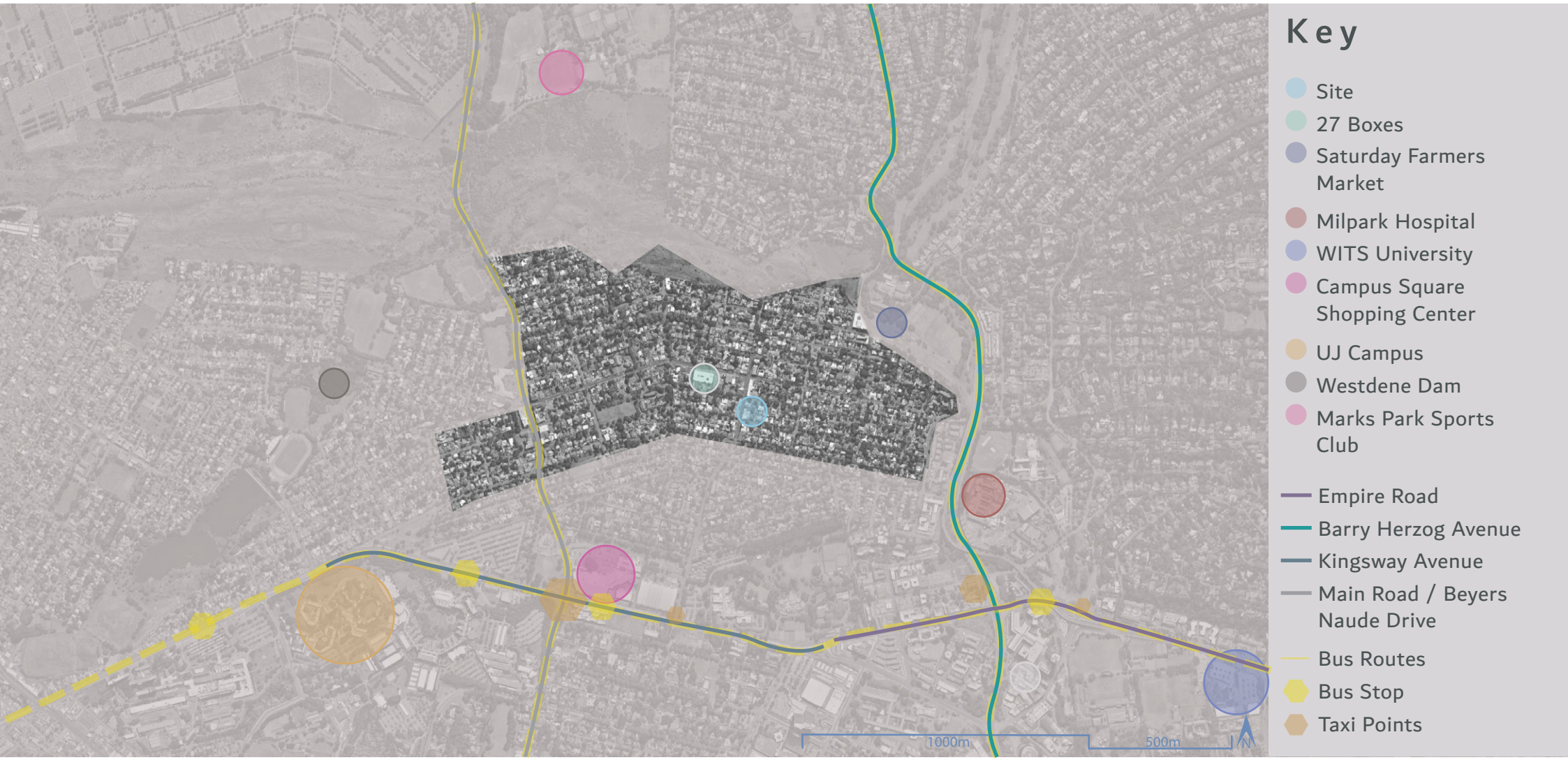


figure 9.5: Melville Attractions Map (Google Earth, 2022), Edited by Author

MELVILLE - ZONING

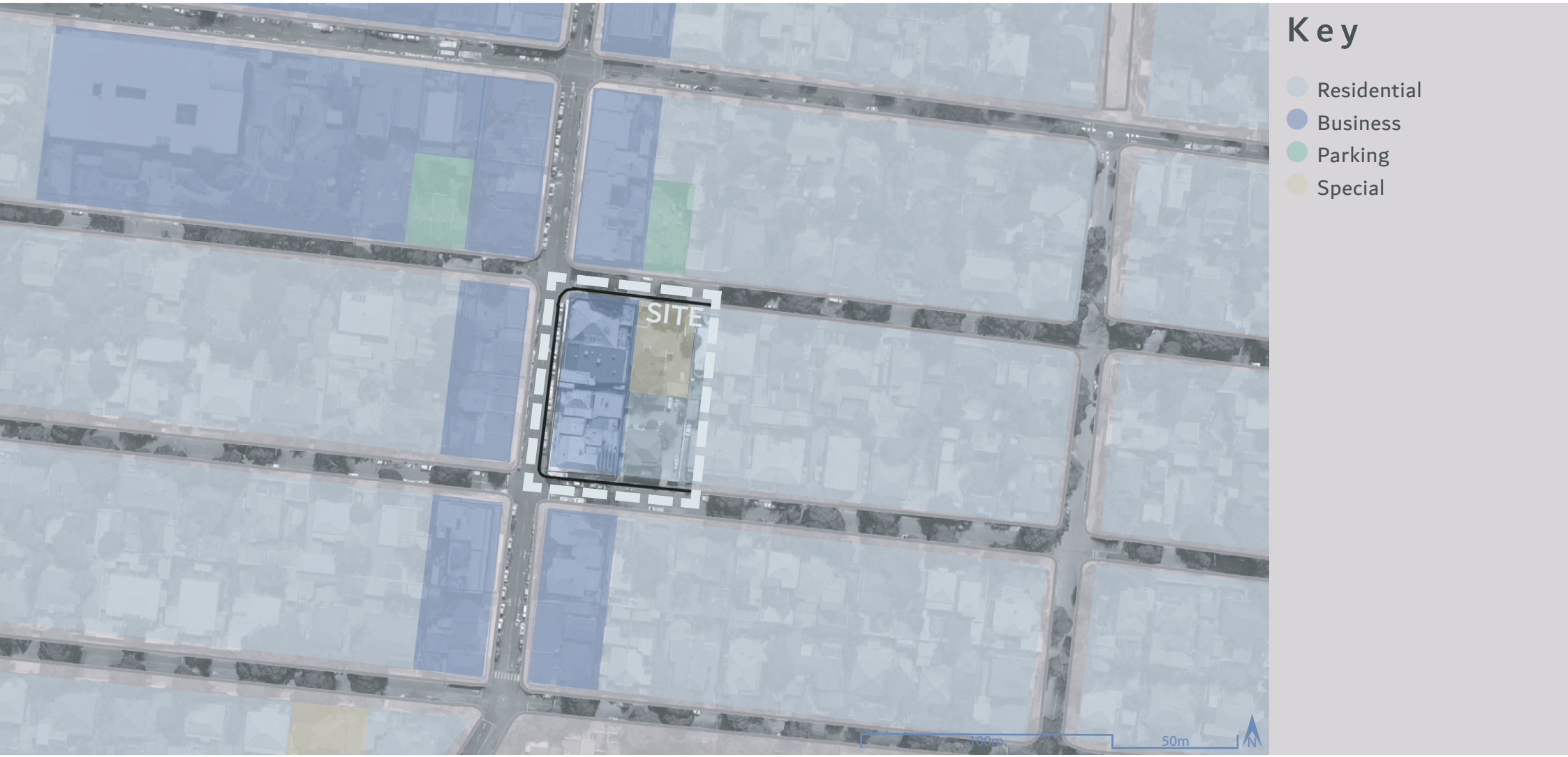


figure 9.6: Melville Zoning Map (Google Earth, 2022), Edited by Author

MELVILLE - ROUTES

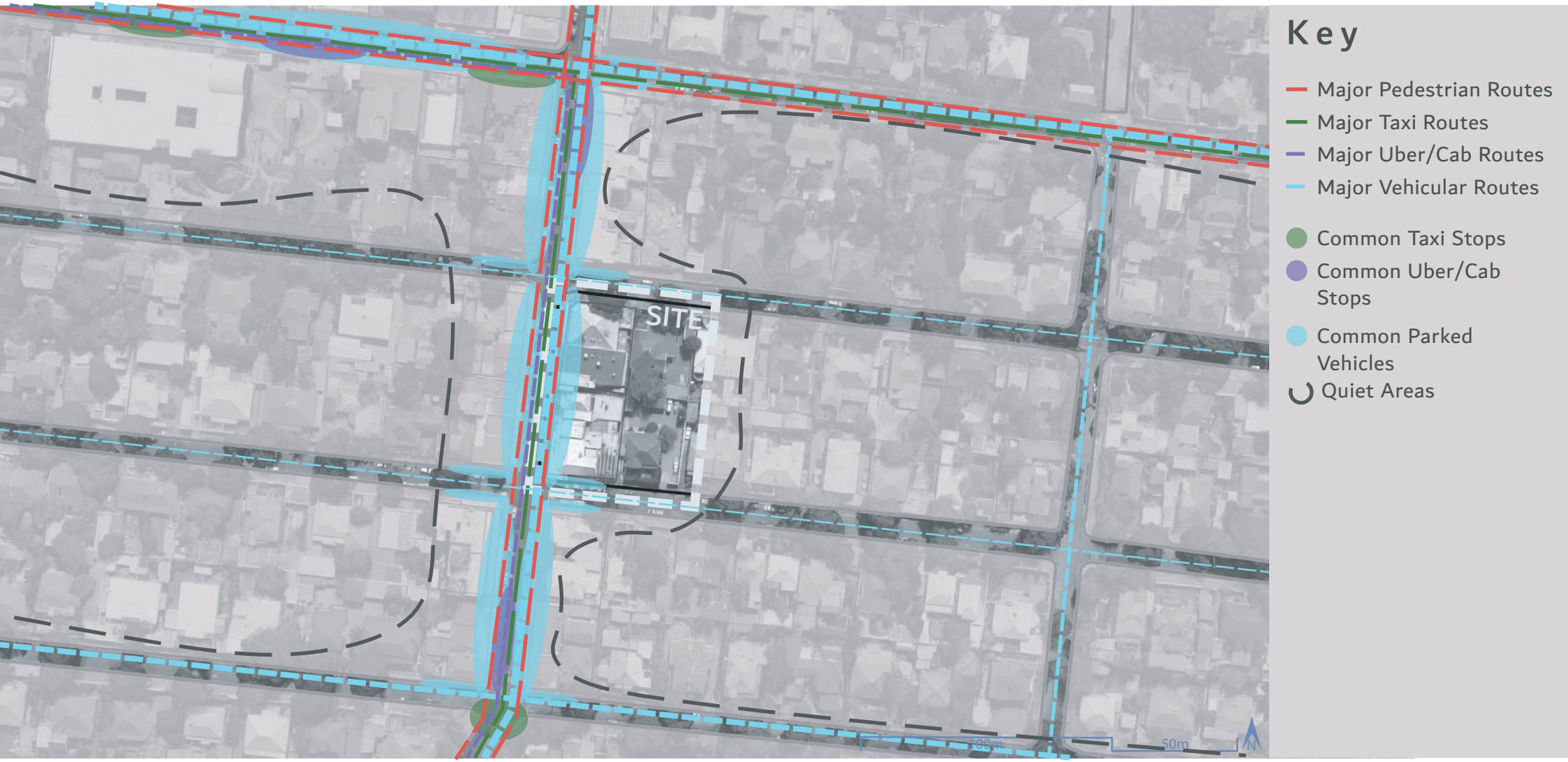


figure 9.7: Melville Routes Map (Google Earth, 2022), Edited by Author

MELVILLE - HISTORIC CHANGES



figure 9.8: Melville Cnr 4th Ave & 7th Street ca. 1960
Johannesburg 1912(2013)



figure 9.9: Melville 7th Street between 3rd Ave & 4th Ave ca. 2012
Tripadvisor (2012)



figure 9.10: Melville 7th Street between 2nd Ave & 3rd Ave ca. 2005
GautengFilm (n.d)



figure 9.11: Melville Cnr 4th Ave & 7th Street 2023
By Author (2023)



figure 9.12: Melville 7th Street between 3rd Ave & 4th Ave 2023
By Author (2023)



figure 9.13: Melville 7th Street between 2nd Ave & 3rd Ave 2023
By Author (2023)

MELVILLE - USAGE CHANGES



figure 9.14: Melville Usage Map (Google Earth, 2022), Edited by Author

MELVILLE - VENUES



figure 9.15: Melville Venues Map (Google Earth, 2022), Edited by Author

SITE



figure 9.16: Site Map (Google Earth, 2022), Edited by Author

SITE - VEGETATION



figure 9.17: Site Vegetation Map (Google Earth, 2022), Edited by Author

SITE - ACTIVITY

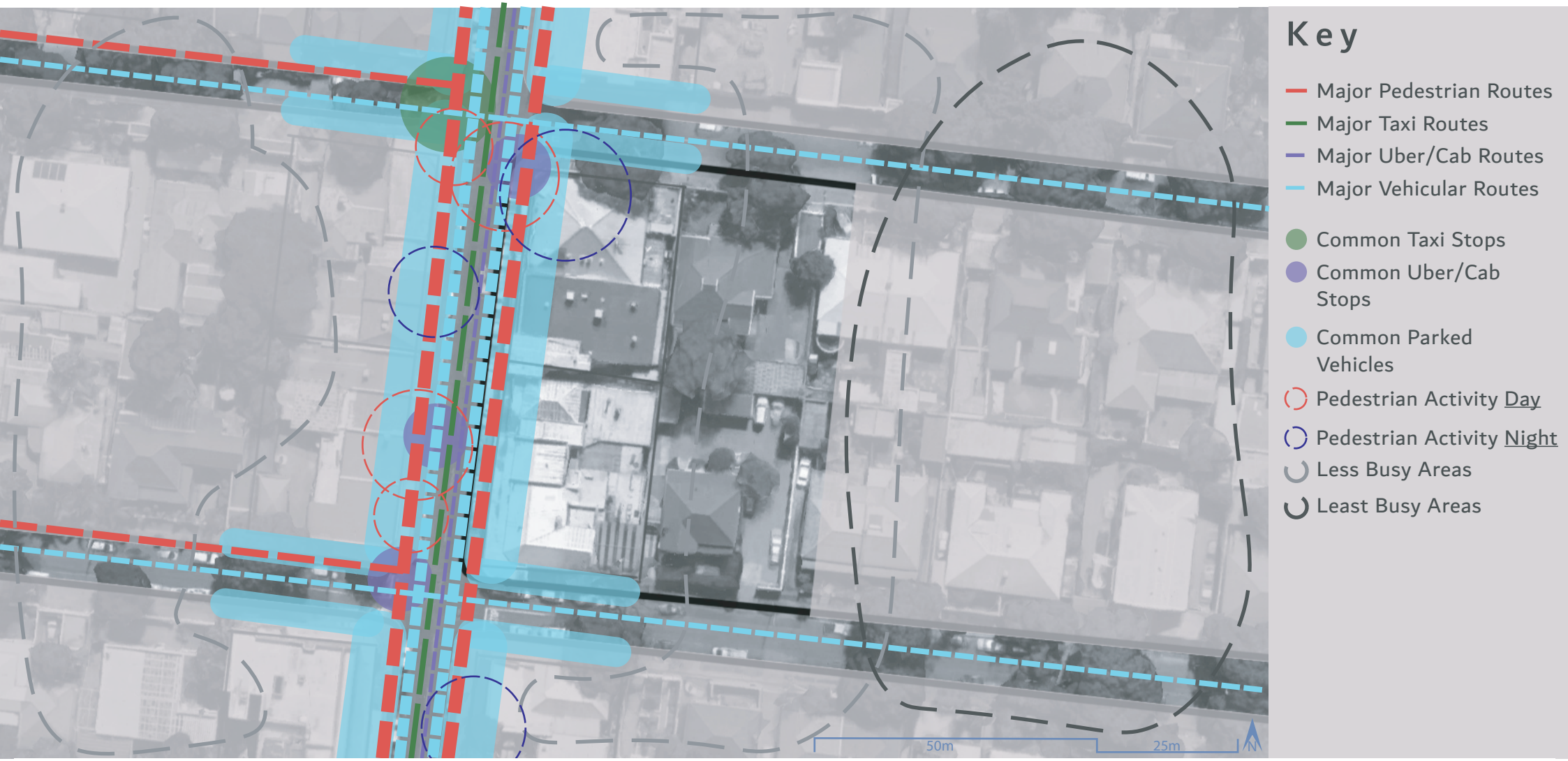


figure 9.18: Site Activity Map (Google Earth, 2022), Edited by Author

SITE - SIDEWALKS

Narrow Sidewalk



figure 20: Sidewalk
By Author (2023)

Unkept Sidewalk



figure 21: Sidewalk
By Author (2023)

Large, uneven Step



figure 22: Sidewalk
By Author (2023)



Key

- Open Sidewalk - 2.4m
- Covered Sidewalk - 2.4m
- Pillar
- High Curb
- Unkept Bin

figure 9.19: Site Sidewalk Map (Google Earth, 2022), Edited by Author

SITE - CONTOURS

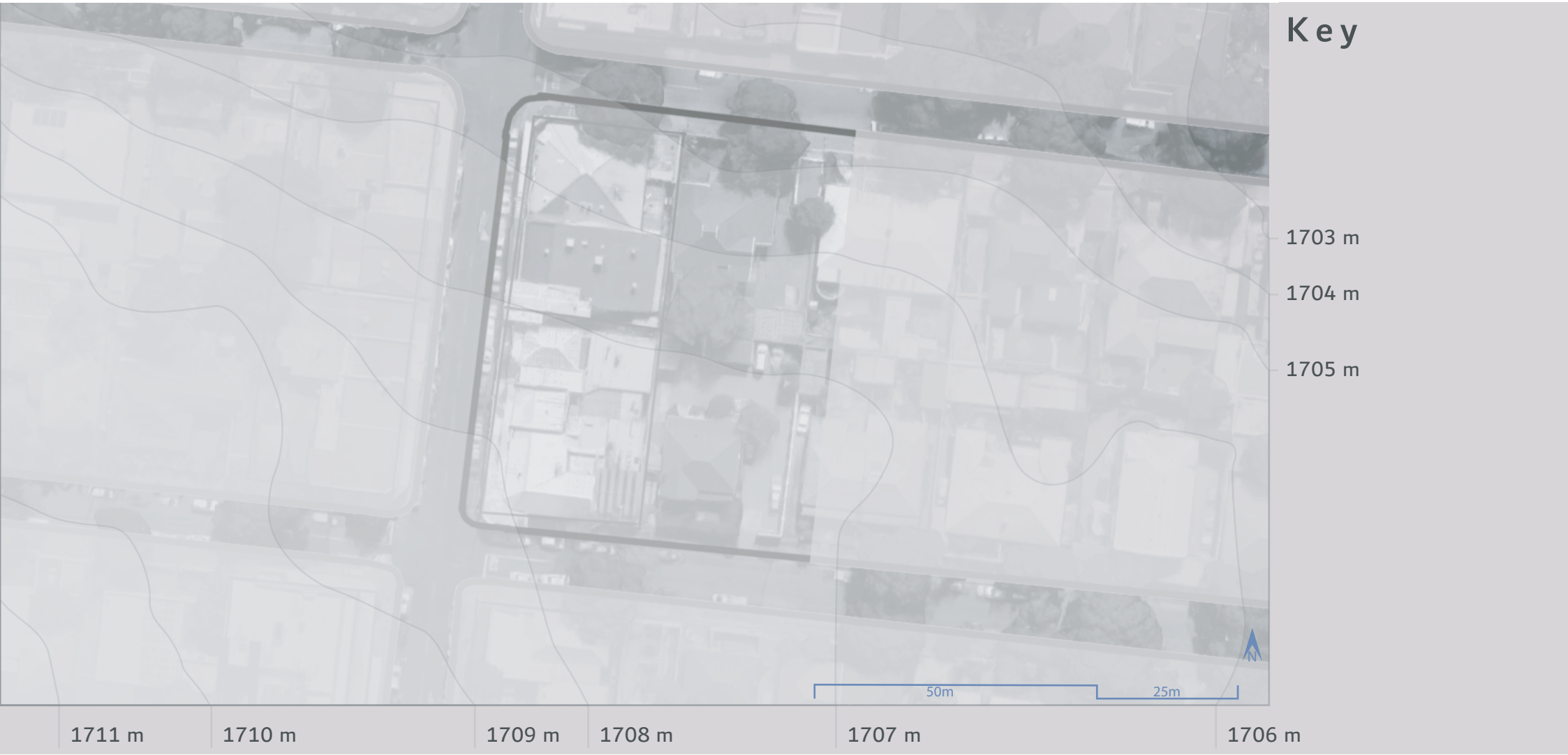


figure 9.23: Site Contour Map (Google Earth, 2022), Edited by Author

SITE - BUILDING USES



Key

- Six Cocktail Bar
- Liquid Blue Club
- The Moral Kiosk Retail
- Melville Convenient Supermarket
- Sips Restaurant
- Dukes Burgers
- Charity Store
- Nkosibo Laundromat
- Smokers Deli
- IT Corner
- Vacant

figure 9.24: Site Building Use Map (Google Earth, 2022), Edited by Author

SITE - PHOTOS



Site Photo - South - 91 2nd Ave

figure 9.25: Site Photo, by Author (2023)



Site Photo - South - 89 2nd Ave

figure 9.26: Site Photo, by Author (2023)



Site Photo - West - 7th Street

figure 9.27: Site Photo, by Author (2023)



Site Photo - West - 7th Street

figure 9.28: Site Photo, by Author (2023)



Site Photo - West - 7th Street

figure 9.29: Site Photo, by Author (2023)



Site Photo - North - 90 3rd Ave

figure 9.30: Site Photo, by Author (2023)



Site Photo - North - 92 3rd Ave

figure 9.31: Site Photo, by Author (2023)

SITE - EXISTING BUILDINGS



figure 9.31: Site Buildings Map (Google Earth, 2022), Edited by Author

SITE - CLIMATE

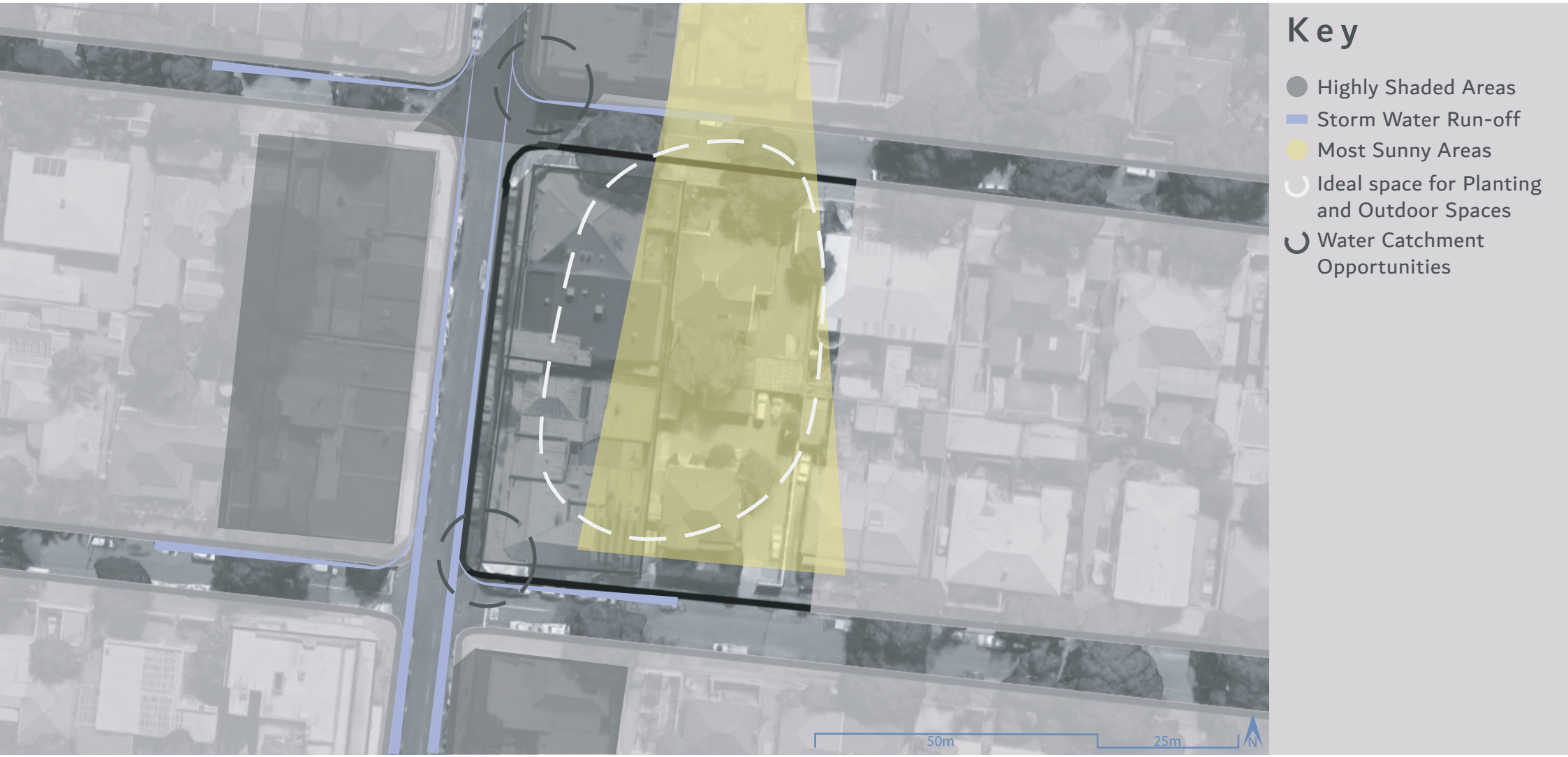


figure 9.32: Site Climate Map (Google Earth, 2022), Edited by Author

SITE - CLIMATE

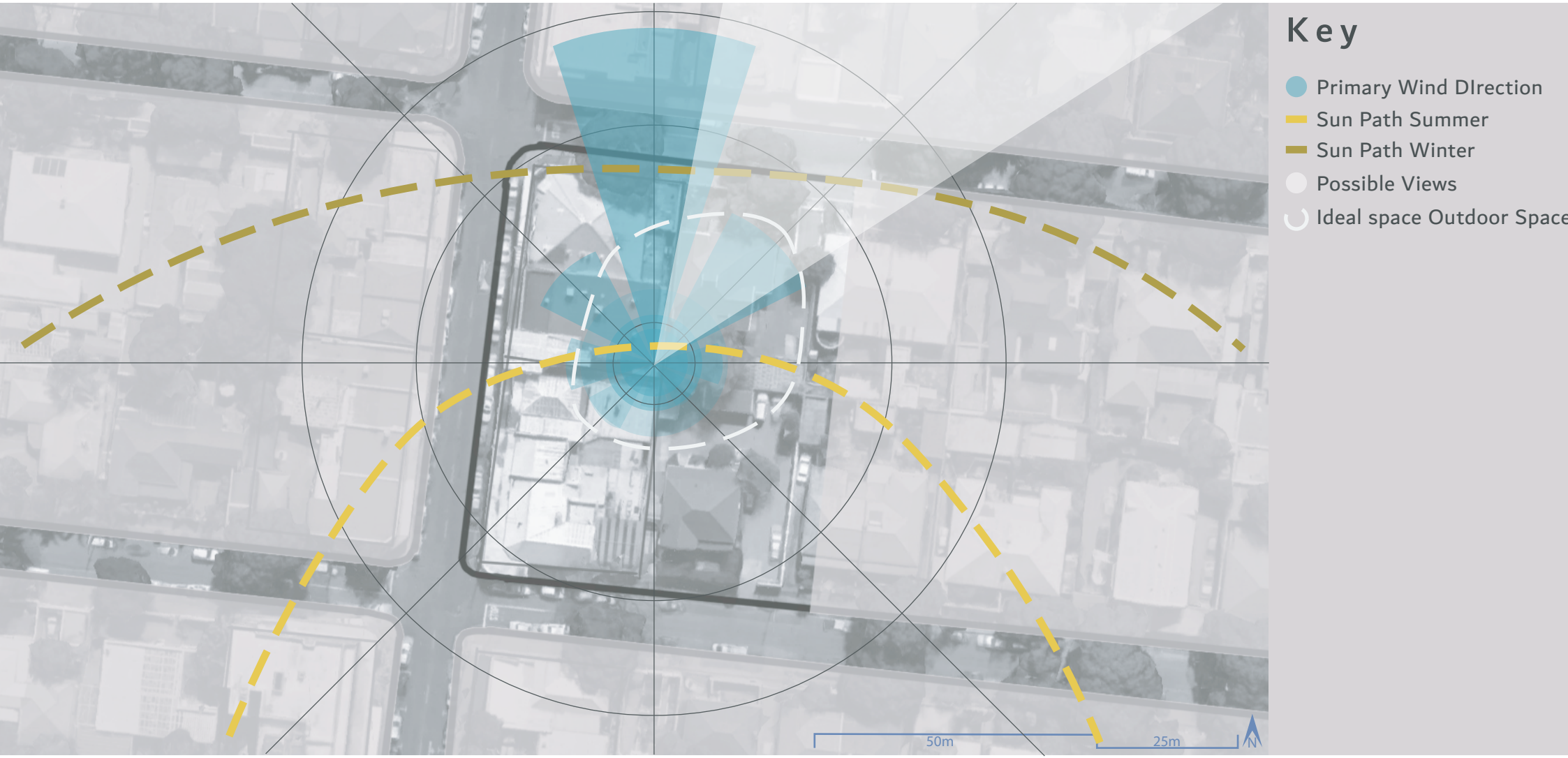


figure 9.33: Site Climate Map (Google Earth, 2022), Edited by Author

FINDINGS

Taking all the findings from this analysis into consideration, it became evident that the primary orientation and access to the site should be along its western side, namely along 7th Street as this is the most active side. This did not however, rue out the northern and southern street edges, as these too experience foot traffic and general circulation.

The views are to the northing creating ample opportunities for primary spaces to be located along the northern side of the site. There is also unobstructed access to northern natural lighting resulting in the possibility to design a sustainable building. During this process neighbouring properties to the East of the site had to be considered to ensure that their natural light is not obstructed by the mass of the proposed building.

Considering that the majority of spaces along the site are vacant, and have no heritage value, the opportunity arose to demolish these entirely and to start with a clean site.

The sidewalks along the site and 7th Street as a whole also had to be considered as these were not adequately suited to its use. They were too narrow for pedestrians to circulate comfortably. Furthermore, the general aesthetic of the site had experienced several refurbishments, which lost all senses of character and appeal. The greyscale colours along the facades are oppressive and uninviting compared to the colourful designs of the past.

The last matter that was looked at was that of vegetation, there is very little greenery along the site which was a major concern and had to be addressed in the proposed intervention.



CHAPTER 10

PRECEDENTS

10.1 Institute for the Culinary Arts - HDR Architecture (2009)

The goal on Melville's 7th Street is to create a School of Arts with some accompanying venues. It is therefore crucial to understand what is required to make the venues successful. As mentioned before, the primary spaces within the school are a culinary school, and art school as well as a fashion design school. The first project from which important information was gained is the Institute for the Culinary Arts designed by HDR Architecture. This school is located on the Fort Omaha University Campus in Omaha, USA. The construction was completed in 2009 and it began operations directly after this.

This particular project is a standalone building, comprising of around 3600m^2 spread over two floors. The primary layout follows a similar design as I intend to use, that being a combination of a publicly accessible restaurant paired with the school. The restaurant is located on the ground floor and can seat between 400 and 600 guests (Garriott, 2010). Considering that a comfortable space for a person in a restaurant is around 2m^2 results in the restaurant being around 1200m^2. This space makes up around 65% of the total required space (Alberts, 2017), meaning the kitchen and service space would be around 650m^2. This gave me a good indication of the spaces that is be required for my chosen design. The aim was to create a restaurant for around 150 people, which work out to about a third of that at the Institute for the Culinary Arts, meaning I required around



Figure 10.1.1 Institute for the Culinary Arts (ArchDaily,2011)

450m^2 in total for the restaurant portion that is be linked to the culinary school.

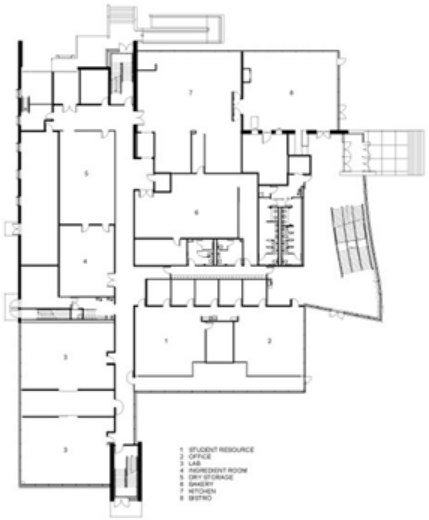


Figure 10.1.2 Second Floor Plan (ArchDaily, 2011)

A closer examination of the second-floor plan of the Omaha Institute for the Culinary Arts gave clearer insights into the layout and requirements to create a professional and successful teaching environment. The total area of the teaching space is around 1480m^2 (HDR Architecture, 2011), which caters to nearly 600 students (Garriott, 2010). This is much larger than what I was looking to include in my design. The cooking section of the proposed School of Arts should cater to a maximum of 100 students as it is aimed at creating a community intervention and will be focused more on short courses rather than lengthy degrees. I therefore looked at an educational space of around 450m^2 which allowed me to create a spacious and comfortable school.

Important venues that are included in the Institute for the Culinary Arts are as follows (HDR Architecture, 2011).

Demonstration Lab: A common lecture venue with a kitchen setup in front for demonstrations to a class.

2x Theory Labs: These are technical stations comprising of workstations in which student gain hands-on experience.

Other spaces include common areas for casual interactions between students and teachers as well as service spaces such as wash areas, cold and dry food storage, and amenities.

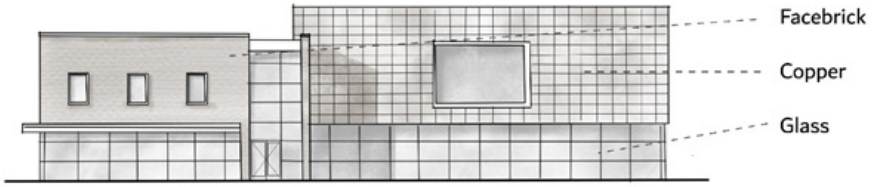


Figure 10.1.3 Institute for the Culinary Arts (ArchDaily, 2011) Sketch

Some further design factors that HDR Architecture included revolve around the materiality of their building. The use of glass allows transparency into both the restaurant and the culinary school. This is a similar design method I am considering allowing connection between the restaurant and the school as well as connection to the public in 7th Street. They also clad the building in copper panels which is a clever link to the copper equipment that is used in a kitchen.

In addition to the above, there was a consideration to include independent restaurants into the design intervention on the Melville "Strip", these would follow the same principles as the above-mentioned restaurant space.

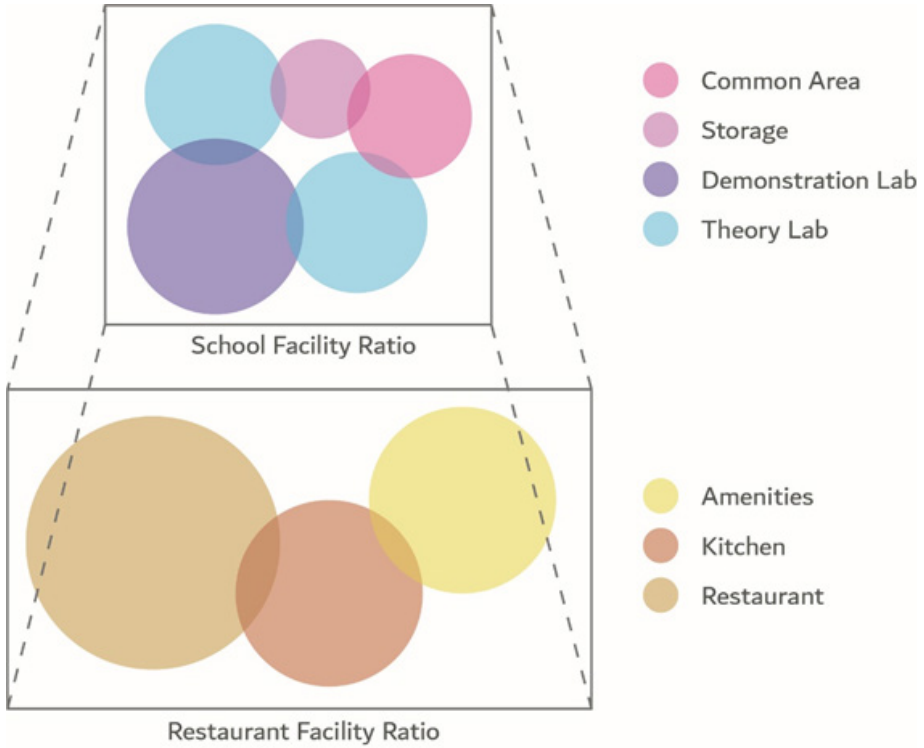


Figure 10.1.4 Facility Ratio, By Author, 2023

10.2 Valladolid Art School by Estudio Primitivo Gonzales (2022)

The second case study focused on the Art School component of my intervention. To get a better understanding of the requirements and components I looked at the Valladolid Art School, designed by Estudio Primitivo Gonzales in Valladolid in the north-west of Spain. The school opened its doors in 2022. The land on which the school was built belonged to the neighbouring convent, which inspired the design which revolves around two central courtyards, much like the convent. The exterior of the building is built from dark face bricks, with very little differentiation in the façade, creating a fairly blank shell.



Figure 10.2.1 External Facade Valladolid Art School (ArchDaily, 2023)

The interior of the building, however, is the complete opposite. It is “a bright interior [...] devoted to creativity” (estudio Primitivo González, 2022). The omission of ceilings allows the spaces to have floor to clear storey windows, following the line of ‘folded’ roof, resulting in bright, naturally lit art studios. This is perhaps one of the most important aspects of an art school, as many artists prefer to work in natural light.

A further inspirational factor of this design was the layout and relationship between studios or classrooms with circulation spaces as well as the courtyards. Each space was carefully designed to allow for human interaction and collaboration. The hallways as well as the lobby serve as exhibition spaces as well and are therefore larger than normal, while the lobby is also double volume.

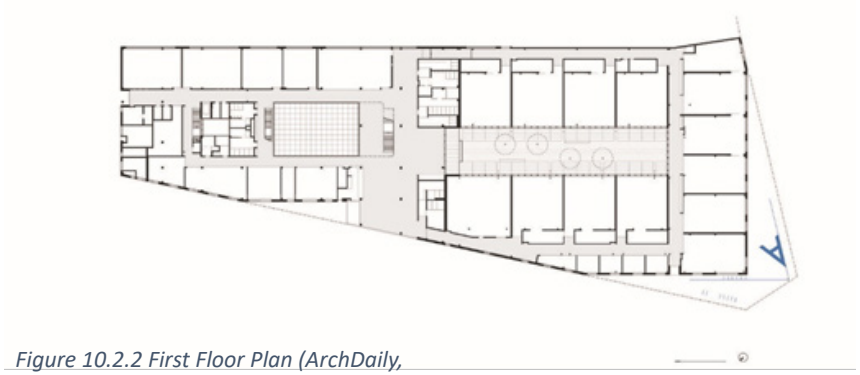


Figure 10.2.2 First Floor Plan (ArchDaily,

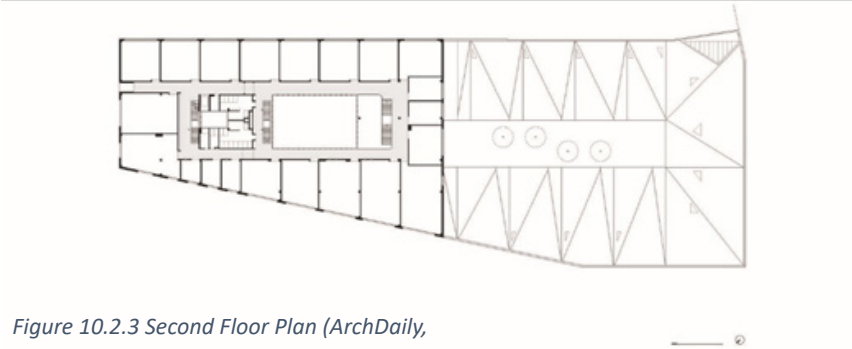


Figure 10.2.3 Second Floor Plan (ArchDaily,

This Art School is 6173m^2 big (Estudio Primitivo González, 2023), making it much larger than I required for my intervention on 7th Street. The ground and first floor plans were very valuable in determining the requirements for an art school. Estudio Primitivo Gonzales incorporated eight large studios, along with five medium size studios for smaller groups and a number of small spaces that focused on individual work. Accompanying these spaces were some offices, common areas as well as the required amenities. An additional space that I had not previously thought to include was a library. This is an excellent space to include as there is a lot of published art history which is a vital component of a school teaching art.

The above project was a great start when determining the requirements, I wanted to implement in the Art School for 7th Street. Similar to the culinary school, the art school is aimed at a community intervention with relatively short-term courses instead of full-time degrees. The space should serve a maximum of 100 people, separated into different spaces. There will be one lecture type venue for classes, as well as two studios for groups and the afore mentioned library. An exploration determined that a studio space should average at around 3m^2 per student, resulting in the studio spaces needing to be at least 120m^2 including space for the instructor. Each studio also needs to be accompanied by storage spaces for materials and equipment. The lecture venue should be able to seat the entire class of 100 students as well as any guests for events that are open to the public, meaning the space should be around 200m^2 and include seating for at least 150 people. The library space can be on the smaller side as it will be mostly dedicated to art history. Around 80m^2 should be allowed for the library space. All of the above spaces should focus on the use of natural light as is the case at the Valladolid Art School, and space and volume will need to be carefully considered to create successful spaces.

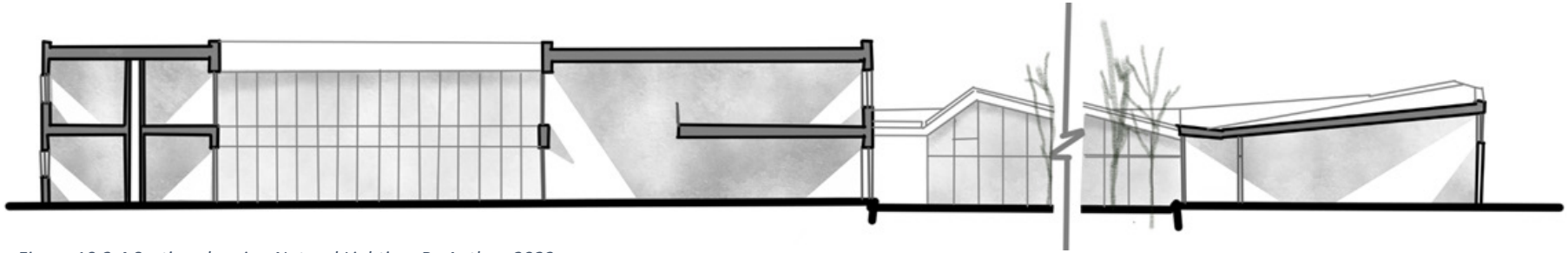


Figure 10.2.4 Section showing Natural Lighting, By Author, 2023

A key component for this Art School is the addition of a gallery space. This gallery space is aimed for public viewing as well as public purchasing of art created in the school, as well as features of local artists. An ideal gallery space should be open and airy with constant and uniform lighting.



Figure 10.2.5 Courtyard Facade Valladolid Art School (ArchDaily, 2023)

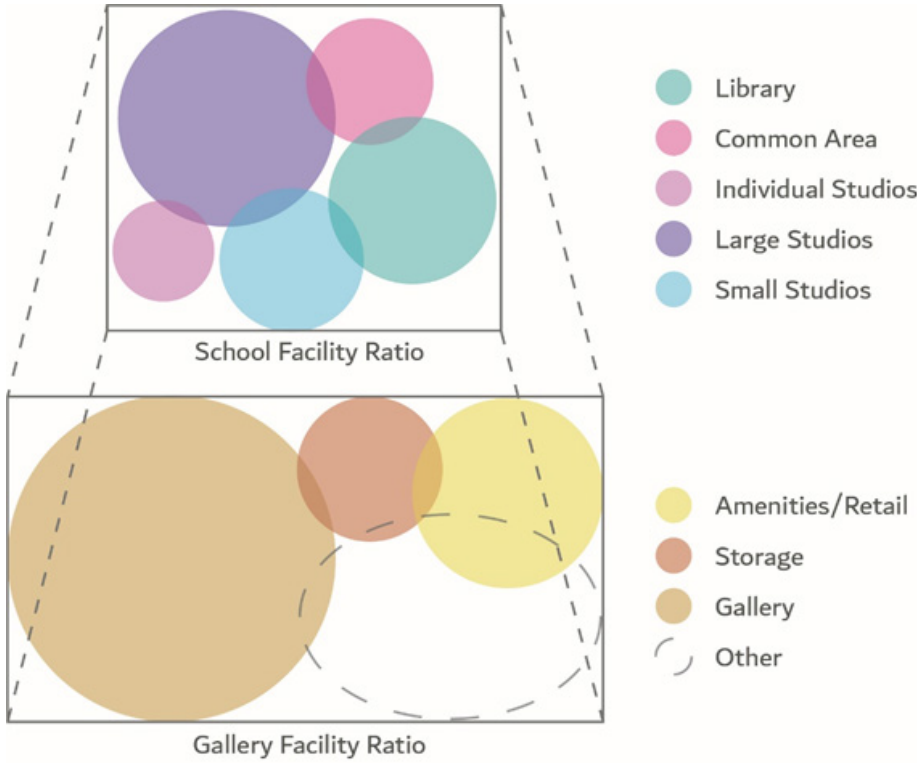


Figure 1.2.6 Facility Ratio, By Author, 2023

10.3 Axis Building by dhk Architects (2018)

A major design consideration for the building in Melville is the inclusion of residential units. The suburb largely comprises of houses, which are too expensive for many, or carry too much responsibility. There are very few apartments in the surrounding area, and I therefore wanted to include smaller apartment units. These were to be located within the same building to create the feeling of inclusion. The idea was to create two or three floors of studio and two-bedroom apartments with the addition of some ground floor retail spaces.

The local Axis Building in Cape Town, designed by dhk Architects, provided some insights and learnings into this hybrid type of building. The project was completed in 2018 and contains 85 residential units as well as three large retail spaces on the ground floor and two levels of basement parking (dhk Architects, 2019). This building is located within a large commercial and residential development and therefore has all four sides facing roadways. This is slightly different to the chosen site in Melville that only borders three roads. It does however show how the building was carefully designed on all four sides, eliminating the common and unsightly back of a building which is often covered in services.

This building, like the Valladolid Art School has a central courtyard which allows lots of natural light into all of the apartments. This is once again a very important aspect that I wanted to include in the



Figure 10.3.1 Axis by dhk Architects (Gleich, 2019)



Figure 10.3.2 Perspective of courtyard (Gleich, 2019), Edited by Author

intervention. Furthermore this precedent displays an excellent example of how a mixed use apartment building can successfully fit into the urban context “by creating a series of public, semi-public and private spaces and urban courts - challenging ideas associated with apartment living” (“Axis Building / dhk Architects,” 2019). The urban courts in particular proved to be a necessary requirement within my own design as it provides the vital threshold between the public and the building itself. This will be a consideration not only for my apartment component, but the overall project.

The Axis building covers a total of thirteen floors, starting with two basement parking levels, the higher level being more of a semi basement. This, once again, proved to be a very important consideration for the School of Arts Precinct that I was designing, as there is no dedicated parking within the vicinity. This brought forth the consideration for underground parking on the two rear properties, as the existing small structures will need to be demolished, creating the opportunity to create underground parking.

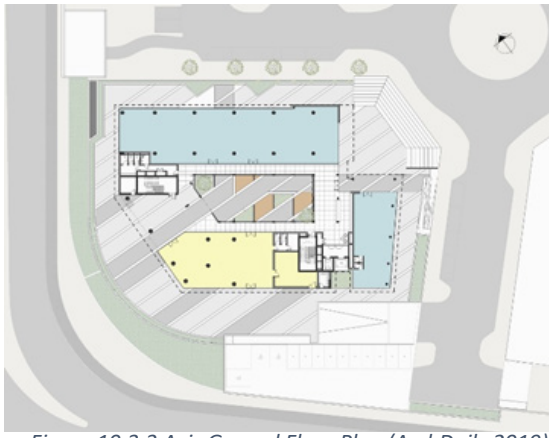


Figure 10.3.3 Axis Ground Floor Plan (ArchDaily,2019)



Figure 10.3.4 Axis First Floor Plan (ArchDaily,2019)

Following this level is the raised public forecourt. This creates the afore mentioned threshold between the public spaces of the Century City compound and the semi-public retail spaces and the private apartment access lobby. The retail spaces are split across three areas, each of them facing the central courtyard as well as one of the two forecourts and a road front, ensuring maximum interaction with the public.

The apartments span across ten floors, making it much larger than what is desired for the site in

Melville. The way in which the floors reduce as the level increases, is however a great design decision to ensure maximum amounts of sunlight getting into the central courtyard and therefore getting into the rear sides of the apartments. The majority of the apartments are either one- or two-bedroom apartments. I wanted to include a mix of studio and two-bedroom apartments, which would also be smaller than those in the Axis, as those are luxury apartments and not smaller, more affordable housing solutions.

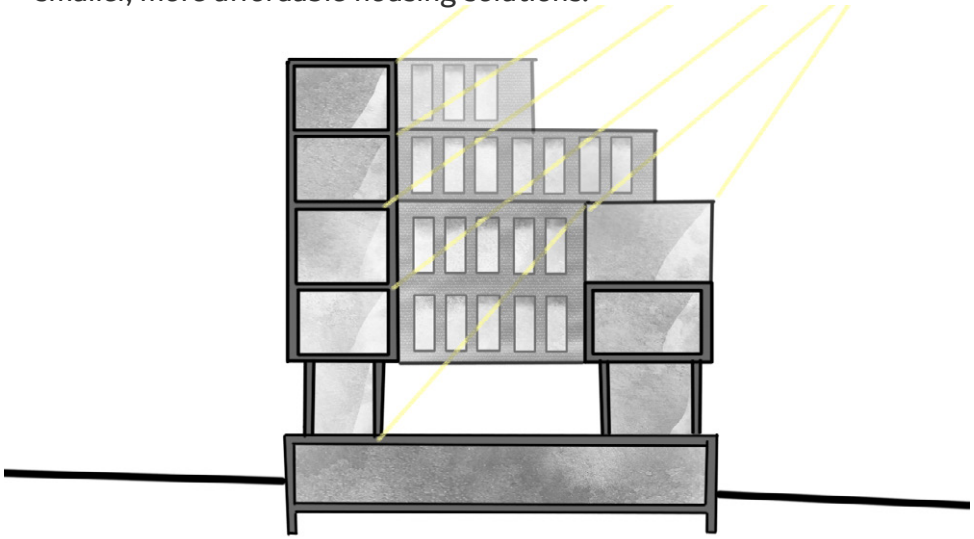


Figure 10.3.5 Axis Section, By Author, 2023

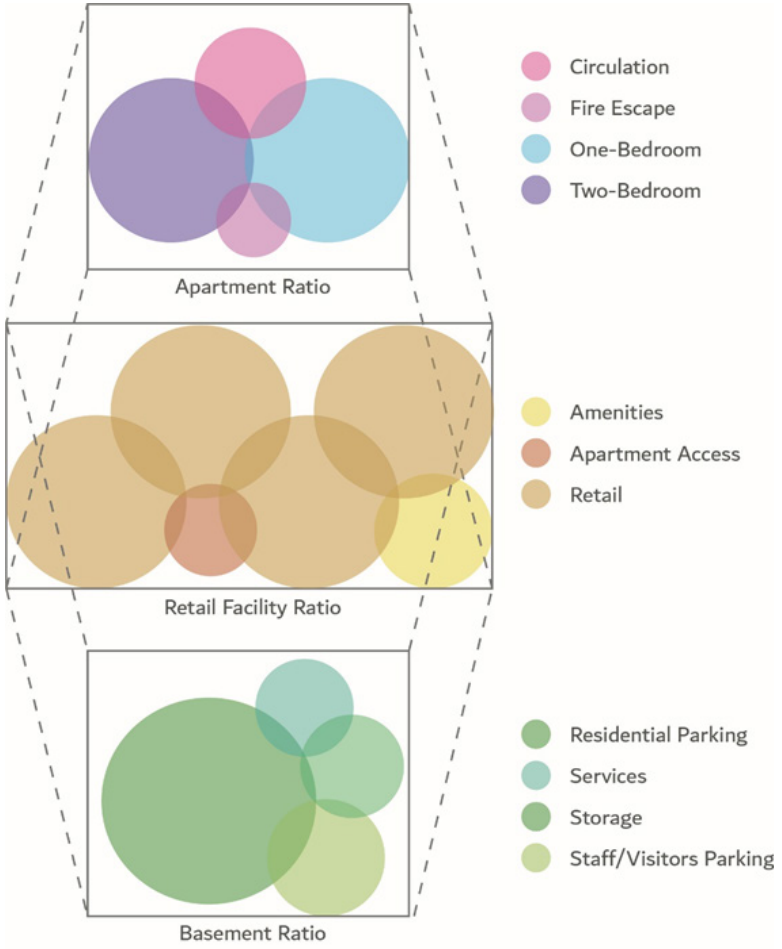


Figure 10.3.6 Facility Ratio, By Author, 2023



CHAPTER 11

DESIGN AND PROGRAMME

11.1 Design Brief

As has been described in this report, the aim of this research is to design a mixed-use development. These types of developments are becoming increasingly popular around the world as they promote people's desire to fit into their neighbourhood and give them the feeling as though they belong (Wardner, 2014). The proposed development therefore contains a School of Art facility to rejuvenate Melville's 7th Street, or "The Strip" as it is known. The proposed intervention is to contain three major components, firstly the School of Art, secondly a retail component, and lastly some residential units in the form of apartments.

The School of Art will house facilities for a Culinary School and an Art School. These form part of one facility and will need a shared lobby as well as their own ablution and services. As this school is aimed at short term courses, it does not have to be too large, as it must not cover too much of the site. It will also need to be joined with supporting venues such as a Restaurant and an Art Gallery respectively.

The remaineder of the retail spaces serve to provide business opportunities for local residents or investors. There should be several stores that can be adapted and used for a variety of different uses. These stores should contain the necessary services such as storage spaces and ablutions for staff.

The apartments should be located on the first floor and above, to ensure privacy from the road and the public spaces on the ground floor. The apartments should vary between one- and two-bedroom apartments that focus on natural light and ventilation. The Apartments are a vital part of the design as there are very few small housing opportunities within the greater suburb and will provide a greater variety of housing options for potential resident which will further serve to the success of the proposed intervention. The aforementioned retail spaces should be on the ground floor below. These are to be generic to encourage any type of local business to occupy them.

Some major considerations that need to be included in all of the

design components are the use of ample natural lighting and the inclusion of vegetation. This is to ensure the site does not come across as a hard surfaced mass. Additionally, natural light and vegetation will reduce the number of mechanical services required. Vegetation in particular assists in the cooling of the site as well as creating more comfortable areas for visitors, as soft, landscaped spaces are more inviting.

The design of the proposed structure needs to be carefully considered and compliment both the site itself as well as the contextual conditions that have been highlighted in the analysis focusing on the site. It is vital that pedestrians in particular are well catered for and that any future developments within the road can be tied into a greater 7th Street development plan.

A final consideration is the inclusion of the Six Cocktail Bar restaurant that is currently on the corner of 7th Street and 3rd Avenue. This is a successful component of the site and should therefore be maintained and carefully incorporated into the proposed intervention. Although it is cakked a bar, the restaurant is open during th eday as well catering for breakfast and lunch guests, insuring that the space will not be closed up during the day when the rest of the intervention is a hive of activity.

Figure 11.1.1 highlights the importance of the above mentioned design principles. These are to be the driving factors when it comes to the design of the development and need to work in relation to ensure a successful building.

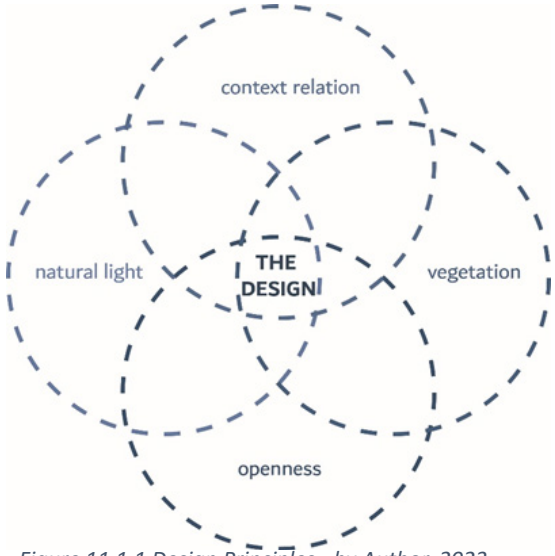


Figure 11.1.1 Design Principles - by Author, 2023

11.2 Programme



Formation of buildings around sunlight and views.

Figure 11.2.1 Programming diagram - by Author, 2023



Central courtyard with access points along North, South and West.

Figure 11.2.2 Programming diagram - by Author, 2023



Vegetation clusters for shading, cooling, and air purification.

Figure 11.2.3 Programming diagram - by Author, 2023

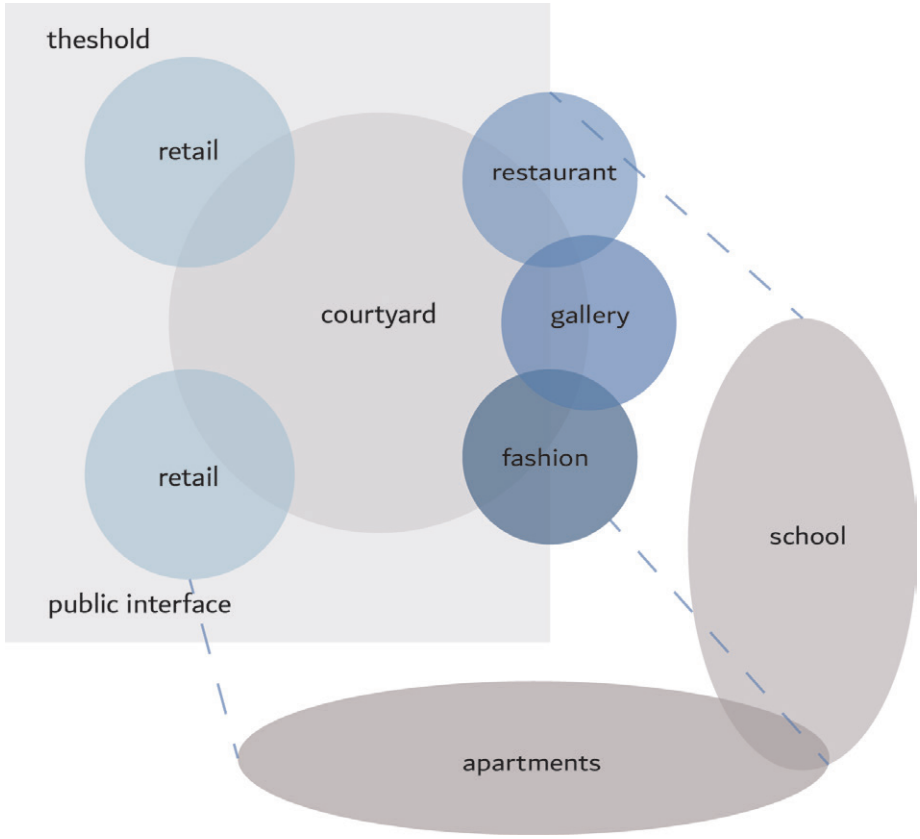


Figure 11.2.4 Programming diagram - by Author, 2023

Area Schedule:

This area schedule was the starting point for all venues to be included in the intervention on 7th Street. The site is approximately 3000m² in size. The most common Floor Area Ratio (F.A.R) in the area is 1.2 resulting in the maximum building size being 3600m². The inclusion of open spaces and a courtyard means the maximum desired coverage was to be 1500m², or 50%. The basement should contain one level for parking that serves the residents, staff as well as the public.. The total height of the building should not be more than three storeys.

Programme	Occupation	Quantity	Area m²	Area Total m²	Programme Total Area m²
Culinary School – 50 People					
Restaurant	150 people	1	200+180	570	1080
Kitchen		1	140		
Storage		1	50		
Demonstration Lab	60 ppl	1	100	510	
Theory Lab	25 ppl	2	110		
Common Space		1	80		
Cold Storage		2	10		
Dry Storage		2	10		
Wash Station		2	25		
Office		1	20		
Art School – 50 People					
Gallery		1	150	200	650
Storeroom		1	50		
Studio	25 ppl	2	100	450	
Lecture Venue	60 ppl	1	100		
Library		1	80		
Circulation / Display Areas		1	50		
Office		1	20		
Apartments					
Circulation		1	150		1040
One-Bedroom Apartments		5	55		
Two-Bedroom Apartments – Large		2	80		
Two-Bedroom Apartments - Small		7	65		
Retail					
Retail + Storage		6	65	390	800
Exist. Restaurant (6 Cocktail Bar) + Kitchen		1	410		
Basement Parking					
Staff and Residential	As per SANS	1	1500		1500
Total				**5070**	



CHAPTER 12

VIABILITY ANALYSIS

The proposed intervention is a mixed-use development which will house a School of Arts comprising of an art school and a culinary school. These two programmes will be accompanied by supporting establishments. A restaurant will work in conjunction with the culinary school, while an art gallery will be paired with the art school. The apartments that are included in the development aim to target a different part of the general public, for which there are currently no housing opportunities in Melville.

The goal is to create a mixed-use development that not only aims to bring the community back together, but to also create an economically sustainable development that can boost the income of local residents; therefore, the feasibility and viability of this project will be examined in the following sections:

1. Town Planning Considerations
2. Design and Technical Considerations
3. Financial Considerations
4. Development Planning
5. Economic Analysis

TOWN PLANNING CONSIDERATIONS



Figure 12.1 Site Map - By Author, 2023

The chosen erven are 154 and 155 (89 and 91 2nd Avenue), and 245 and 246 (90 and 92 3rd Avenue). Erven 155 and 245, along 7th Street, are zoned as Business 1, while the remaining two erven are zoned as Special (erf 246) and Residential 1.

According to the "City of Johannesburg Land Use Scheme of 2018" zoning Business one allows the following establishments:

Business purposes, shops, residential buildings, place of instruction, social halls, restaurant, car sales lot, motor showrooms, showrooms. offices, public or private parking area, institutions, religious purposes, dwelling units, warehouse

The uses required for the proposed mixed-use intervention are:

Shops, dwelling units, places of instruction and restaurant

In order for erven 154 and 246 to be re-zoned several steps need to be taken. To initiate a rezoning process, first, arrange a meeting with a Town Planner for guidance and a quotation. Then, submit a Rezoning application (Form 3) detailing the owner, current zoning, and desired rezoning, with fees of R 6,215.00 per erf. Following application completion, the zoning change will be advertised, and neighbours notified. The Town Planner will coordinate internal council approvals. If there are no objections, the approval typically takes six months, during which no on-site work can occur. they have any qualities that

After this step the properties will need to be consolidated to form one new erf. To initiate a property consolidation process, first, arrange a meeting with a Town Planner for guidance and a quotation. Then, submit a Consolidation application (Form 5), detailing the owner and the properties to be merged, with fees of R 449.00. The approval process considers urban planning schemes and takes several months. Once approval is granted, a registered Land Surveyor will survey the land and create a new Surveyor General (SG) Diagram for approval at the SG office. If the SG Diagram is approved, Conveyancing attorneys will proceed to register a new Title Deed for the consolidated property.

As Melville is one of the older suburbs within Johannesburg the chosen properties therefore fall under Heritage Legislation. The four buildings are older than 60 years and therefore require heritage or PHRA-G approval. This approval process aims to protect cultural and historical sites for future generations. While it is still unclear if these buildings were designed by any famous architects, it is unlikely that

require preservation as they have been changed multiple times since they were built. Nonetheless, a PHRA-G application is still required following this process:

1. Complete PHRA-G application form.
2. Provide a copy of the original building plans if available.
3. Locality plan of the structure in relation to surroundings.
4. Site Development Plan (SDP) of any proposed new structures.
5. History of the structure: includes architectural, history and previous, ownership details.
6. Coloured photographs with descriptive caption of all elevations of the structure in its present form and context adjacent houses in the area, street- scape
7. proof of the notice calling for comments from interested or affected parties.
8. In the event of proposed alteration or partial demolition, three sets of drawings, one of which must be coloured up to show the proposed work / restoration details

   (Provincial Heritage Resources Authority –Gauteng)

It can be assumed that this process would take between 1 and 6 months, which is a necessary step if any changes to the site are to be done.

DESIGN AND TECHNICAL CONSIDERATIONS

While the design of the proposed intervention has not yet been finalised, the goal is to construct the new development using a combination of brick and concrete in conjunction with timber and natural stone cladding.

To minimize costs, the construction will primarily utilize masonry and concrete, readily available in Johannesburg without the need for specialized labour or training. This common building method offers opportunities to compare materials from various vendors for cost-effective supply and delivery rates. Stone cladding, another component of the project, won't be problematic either, as the local area boasts skilled workers experienced in working with stone due to

the prevalence of stone walls and cladding in neighbouring properties. The plan involves sourcing rocks from the residential properties' grounds and purchasing additional materials from vendors.

Other considerations are power and water, which are currently available from site. There is also easy access to the site from all surrounding direction, and the site has three road fronts making deliveries easy. The site can also be hoarded off to ensure materials and equipment stay safe. Being next to a residential area there will be a certain amount of noise and construction dirt, which will mean construction can only take place during allowed working hours: 06h00 to 18h00 on weekdays and 06h00 to 17h00 on Saturdays.

FINANCIAL CONSIDERATIONS

The most detailed and efficient method for costing proposed additions and alterations is a Bill of Quantities (BOQ), encompassing all financial aspects required for the development, excluding land costs. The BOQ starts with a list of drawings used for costing and initial cost items like toilet hire and insurance. The subsequent sections break down construction costs, including demolition, earthworks, concrete work, masonry, and more. Some sections may involve subcontractors, with provisional costs until detailed quotes are obtained. Profit and attendance are added by the main contractor, and provisional costs account for items like sanitary fittings. Contingency is included for unforeseen expenses. The BOQ is prepared by the contractor or a Quantity Surveyor in collaboration with the project manager, who ensures materials match specifications. Revisions or variations are issued as needed, and timely payments are essential to maintain project timelines. Considerations for cost fluctuations, especially for long-term projects, are also incorporated into the BOQ.

DEVELOPMENT PLANNING

The initial costs of the project, particularly for the school section, will be significant due to specialized equipment requirements, leading to higher long-term maintenance expenses. Some project aspects, such as restaurant ovens and stoves, carry increased risks, resulting in higher building insurance premiums compared to standard buildings. If the project is financed by investors or a bank, marketing and selling spaces, including residential units, may be necessary to ensure funds are utilized as intended. This approach ensures investor returns or facilitates loan repayment, contributing to the project's success.

ECONOMIC ANALYSIS

It is vital for the survival of the mixed-used development that it is economically viable. Therefore, the proposed uses need to be evaluated to ensure that they will bring in enough money to keep the development afloat and to ensure that the clients or investors actually make a profit. Education Facilities

This was achieved by looking at similar establishments int the area, in terms of first purchasing the desired properties, and then by comparing the desired interventions to other similar establishments in the area in order to get an average costing. The below is the information gathered:

- 2x Commercial properties
  Average purchase price of R 3 514.00 / m^2 -> R 2 610 902.00
- 2x Residential properties
  Average purchase price of R 3 648.00 / m^2 -> R 2 710 464.00
- Retail Space
  Average monthly income of R 119.00 / m^2
- Restaurant Space
  Average monthly income of R 138.00 / m^2
- Apartments
  1 Bed Average monthly income of R 7 500.00 / unit
  2 Bed Average monthly income of R 10 000.00 / small unit
  2 Bed Average monthly income of R 12 000.00 / large unit

Average monthly income of R 142.00 / m^2

- Educational Courses

  Average monthly tuition of R 4 800.00 / student

- Rates & Taxes

  Average monthly cost of R 5.20 / m^2

The Site is around 2 972 m^2 big and the building is estimated to be around 5 000 m^2.

The initial establishment costs are:

Purchase Cost	
Erf 154	R2 610 902,00
Erf 245	R2 610 902,00
Erf 155	R2 710 464,00
Er 246	R2 710 464,00
Total Purchase Cost	**R10 642 732,00**
Municipal Fees	
Town Planning & PHRA-G	R36 879,00
Total Municipal Fees	**R36 879,00**
Construction Costs	
Demolition	R250 000,00
Average Construction @ R10 000,00 / m2	R50 000 000,00
Architecture fees @ 12%	R5 550 000,00
Total Construction Costs	**R55 800 000,00**
Total Costs	**R66 479 611,00**

Using the above-mentioned rental and running costs, an estimated monthly and annual return can be calculated using the provisional area schedule:

Monthly Income & Expenditure

Monthly Income			
Programme	*Area(m2) / unit*	*Cost / m2*	*Total*
Retail	390	R119,00	R46 410,00
Restaurant	410	R138,00	R56 580,00
1 Bed Apartment	5	R7 500,00	R37 500,00
2 Bed Apartment	7	R10 000,00	R70 000,00
2 Bed Apartment	2	R12 000,00	R24 000,00
Education Facility	1730	R142,00	R245 660,00

Expenses			
Rates & Taxes	2972	-R5,20	-R15 454,40
Maintenance (General Worker)	2	-R9 680,00	-R19 360,00
Security	1	-R12 500,00	-R12 500,00
Total Monthly Income			**R432 835,60**
Total Annual Income			***R5 194 027,20***

Taking the above into account, it can be deduced that it will take approximately 13 years until the proposed intervention will start making investors a profit. While the proposed intervention is seemingly not suited for investors wanting a quick return on investment, it is aimed more at boosting the general public and economy in Melville.

In addition to the above, the School of Art will have significant income as well. The below calculations have been devised by averaging tuition costs of similar establishments, as well as taking average expenditure amounts compared to their relative fields. It was also assumed that, realistically, the School of Arts would be unlikely to be at constant capacity, therefore an average of around 80% capacity was used in the below calculations:

School of Art Monthly Income & Expenditure

Programme	*Students*	*Cost / student*	*Total*
Culinary School	50	R5 600,00	R280 000,00
Art School	50	R4 800,00	R240 000,00
Expenses			
Materials @ 5%	1	-R26 000,00	-R26 000,00
Staff @ 1 per 25 students	4	-R25 286,75	-R101 147,00
Total Monthly Income			**R392 853,00**
Total Annual Income			***R4 714 236,00***

The above calculations prove that the actual School of Arts has a much higher income than the development itself, making it the most profitable component of the proposed intervention and therefore making it economically viable.

FINDINGS

Programme	*Area(m2) / unit / students*	*Cost / m2, Cost / student*	*Total*
Retail	390	R119,00	R46 410,00
Restaurant	410	R138,00	R56 580,00
1 Bed Apartment	5	R7 500,00	R37 500,00
2 Bed Apartment	7	R10 000,00	R70 000,00
2 Bed Apartment	2	R12 000,00	R24 000,00
Culinary School	50	R5 600,00	R280 000,00
Art School	50	R4 800,00	R240 000,00
Expenses			
Rates & Taxes	2972	-R5,20	-R15 454,40
Maintenance (General Worker)	2	-R9 680,00	-R19 360,00
Security	1	-R12 500,00	-R12 500,00
Materials @ 5%	1	-R26 000,00	-R26 000,00
Staff @ 1 per 25 students	4	-R25 286,75	-R101 147,00
Total Monthly Income			**R580 028,60**
Total Annual Income			***R6 960 343,20***

By making the School of Arts the primary component and the owner and client of this development, then it will take less than ten years until the school starts making a profit from the building.



CHAPTER 13

DESIGN DEVELOPMENT

13.1 Design Factors

Several design decisions and considerations were determined to be vital for a successful, architectural intervention along Melville's 7th Street. These aspects can be seen as **driving factors** when it came to determining this intervention's aesthetics and form. These considerations were the following:

Inclusion of nature | openness | suitable aesthetics

While Johannesburg is known to be a very nature-rich city, "The Strip" does not reflect that. There is no natural ground cover and very little in terms of shrubbery and trees. This resulted in a harsh and uninviting setting. It was therefore important to include greenery within the layout and planning, as well as the aesthetics of the proposed development.

An aspect of 7th Street that was found to be unsuccessful to a certain degree is the tightness of the current layout. The sidewalks are uncomfortable to use, and shops had little to no spill out space. It was therefore critical that the proposed intervention mitigates these issues. The inclusion of wider sidewalks that are carefully designed and considered for their use was vital. Ensuring that spaces were inviting, open and accessible to the desired users was equally important.

Melville is one of Johannesburg's oldest suburbs (Mashishi, 2018) and has, over the years, developed its own architectural language. The mixed use of face brick with plastered walls accompanied by hipped IBR sheeted roofs are iconic to the area. Residents are attracted to this suburb for its village like feel and aesthetics. It was therefore imperative that the proposed School of Arts fit into this aesthetic. A contemporary structure with modern materials would be unlikely to succeed as it would not be a welcoming addition to the suburb's aesthetics. Therefore, the aim was to create a building that matches and improves upon the proven Melville aesthetics.

13.2 Process

The success of the proposed intervention on “The Strip” will depend primarily on its layout and usability. The design process therefore started by identifying a successful building footprint and massing.

Using the site boundaries and direct context, several iterations were sketched while considering the above mentions design factors. Several of these were explored in terms of where different floors are located and how they worked in Section.

A common theme among these sketches was the inclusion of a large outdoor space. This was occasionally placed at the outskirts of the building or as an internal courtyard. Following on this accessibility and paths of travel were also identified within some of the sketches to ensure success.

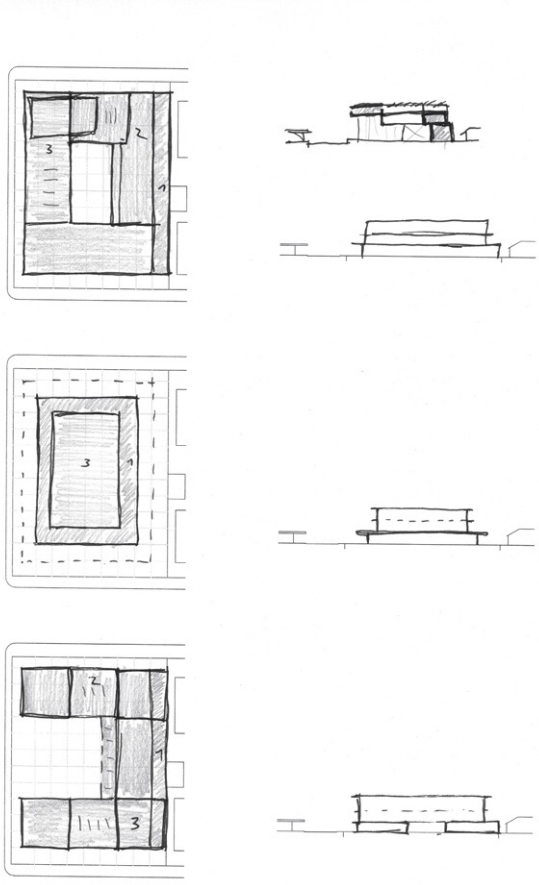


Figure 13.1.1 Layout Sketchs 01 - By Author, 2023

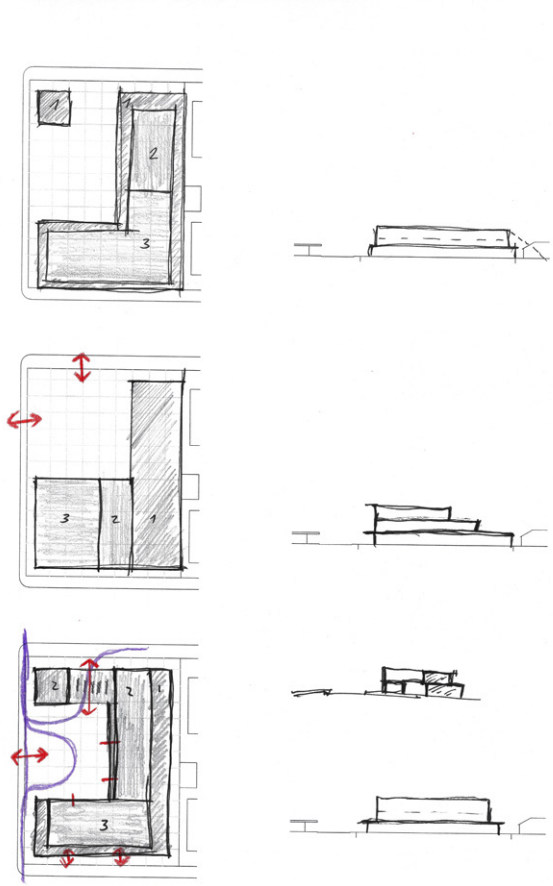


Figure 13.1.2 Layout Sketchs 02 - By Author, 2023

In the process of creating these sketches, several external factors were also considered. These include the fact that both natural lighting and views are towards the north. Additionally, the shade created by the proposed development was also considered, to ensure the little to no natural light will be blocked for the direct neighbours to the east. Therefore, the second floor of many of the sketches is fairly condensed and often located to the south of the site ensuring no shadows fall onto the neighbouring properties.

The last factor that drove this design was the thought of spaces and programming. The fact that the basic program of the building had already been determined was kept in mind while creating these layouts to ensure that all spaces can be successfully included and used within the proposed project.

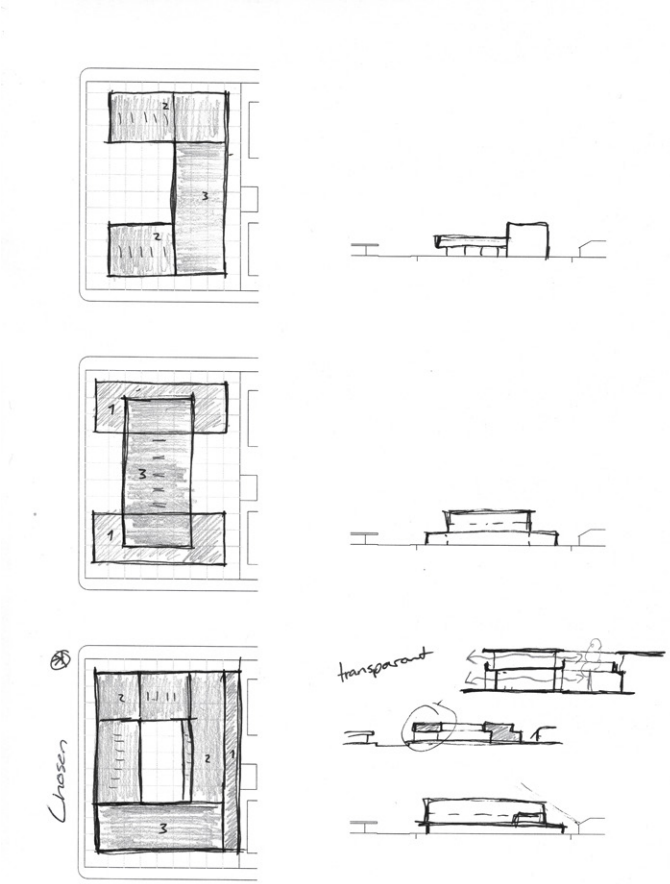


Figure 13.1.3 Layout Sketchs 03 - By Author, 2023

13.3 Process - Chosen Layout

One of the layout sketches stood out and was thus chosen as the basis for this design intervention. It carefully considered the impact it would have on neighbouring properties which is vital. It also provided excellent opportunity to create a large, green courtyard that is set away from the street making it safer and more comfortable, while still ensuring that it is easily accessible to the public. This was accomplished by carving out large sections of the ground floor allowing free flowing access to the internal courtyard.

In section the transparency of the massing was investigated by creating high volumes on the ground floor and using transparent materials on the first floor ensuring there is a visual connection between the courtyard and the public street.

The chosen layout sketch was then explored further by investigating each of the three floors. The programming was combined with the form of the building to create a building that ranges from public on the ground floor, to semi-public on the first floor and private on the second floor, where the residential units would be located.

This exercise highlighted further considerations that had not yet been made. The most important of which was the inclusion and consideration of the urban environment. It was essential to ensure that the proposed building ties in with the entire street and the suburb. It was one of the most important factors of the entire intervention that the urban development around this building is successfully designed. Remembering that this proposal is not confined to the site boundaries ensured that the overall context was carefully included in the design.

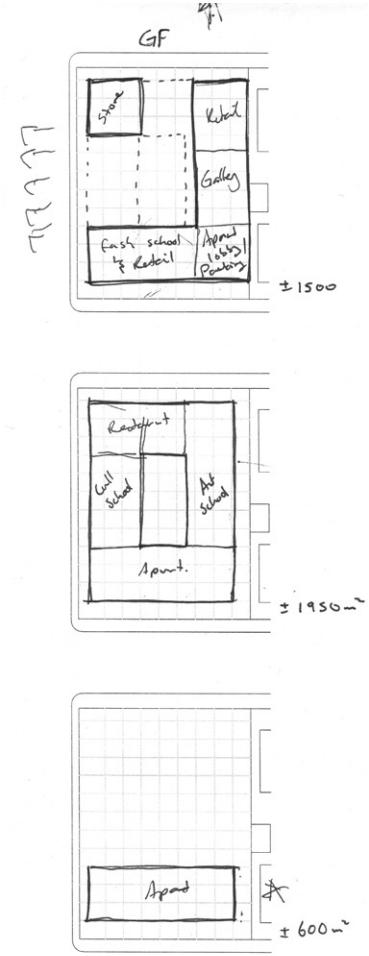


Figure 13.2.1 Chosen Layout Sketchs - By Author, 2023

13.4 Massing and Layout

The chosen massing was explored in three dimensions in order to achieve a more resolved layout and sense of functionality. This was also used to illustrate the active street edges, which are a crucial consideration for this intervention. These were taken into account when determining the access points to the site and also influenced the ground floor layout and planning of spaces.

Furthermore, the vertical circulation was also considered in this axonometric view as a method of establishing the best placement for these to ensure they are easily accessible and are located correctly in reference to their required areas.

This massing was aided in determining the effects this development would have on the surrounding area. It proved that maximum views and natural lighting could be obtained while still ensuring that the mass of the building does not encroach on neighbouring properties or the street. This also meant that the building did not seem too intimidating for pedestrians, nor did it cast shadows onto neighbouring houses.

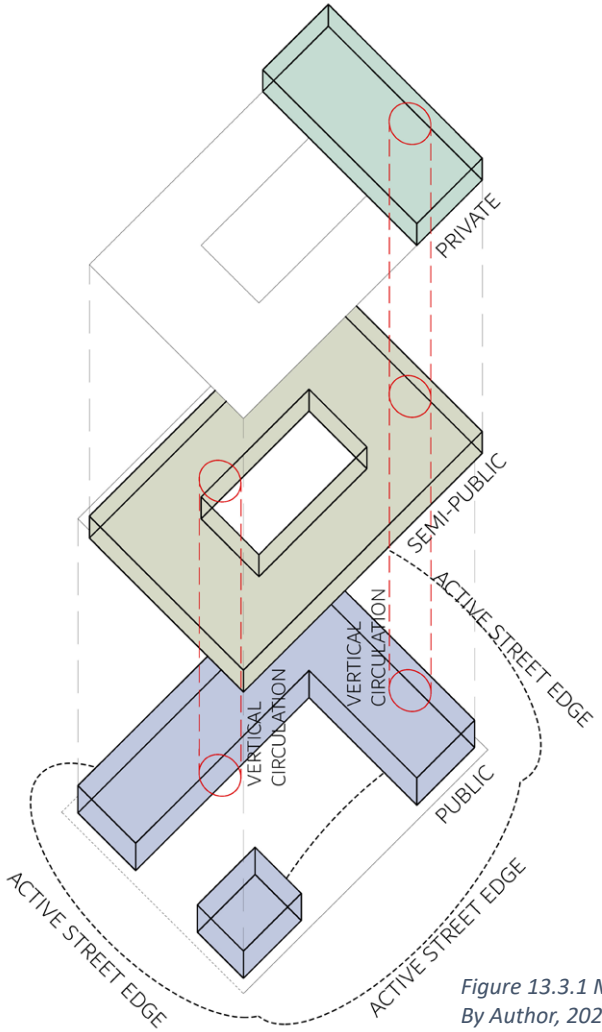


Figure 13.3.1 Massing Diagram - By Author, 2023

13.5 Design Process

The initial design drawings were an attempt at using the desired form of the building to create free flowing floor plans that relate to the site context as well as the programming.

This process highlighted that the area of internal spaces was limited, and that careful attention had to be paid to circulation and accessibility.

The **site plan** in figure 13.4.1 shows how the structure sits within the site and the context. This was done because one of Melville's key characteristics is the placement of stores and shop fronts along the road, bordering directly against the sidewalk. This was then offset by creating an internal courtyard in order to produce green spaces as well as allowing a more secluded space that in addition allowed natural light and ventilation into the deeper portions of the building.

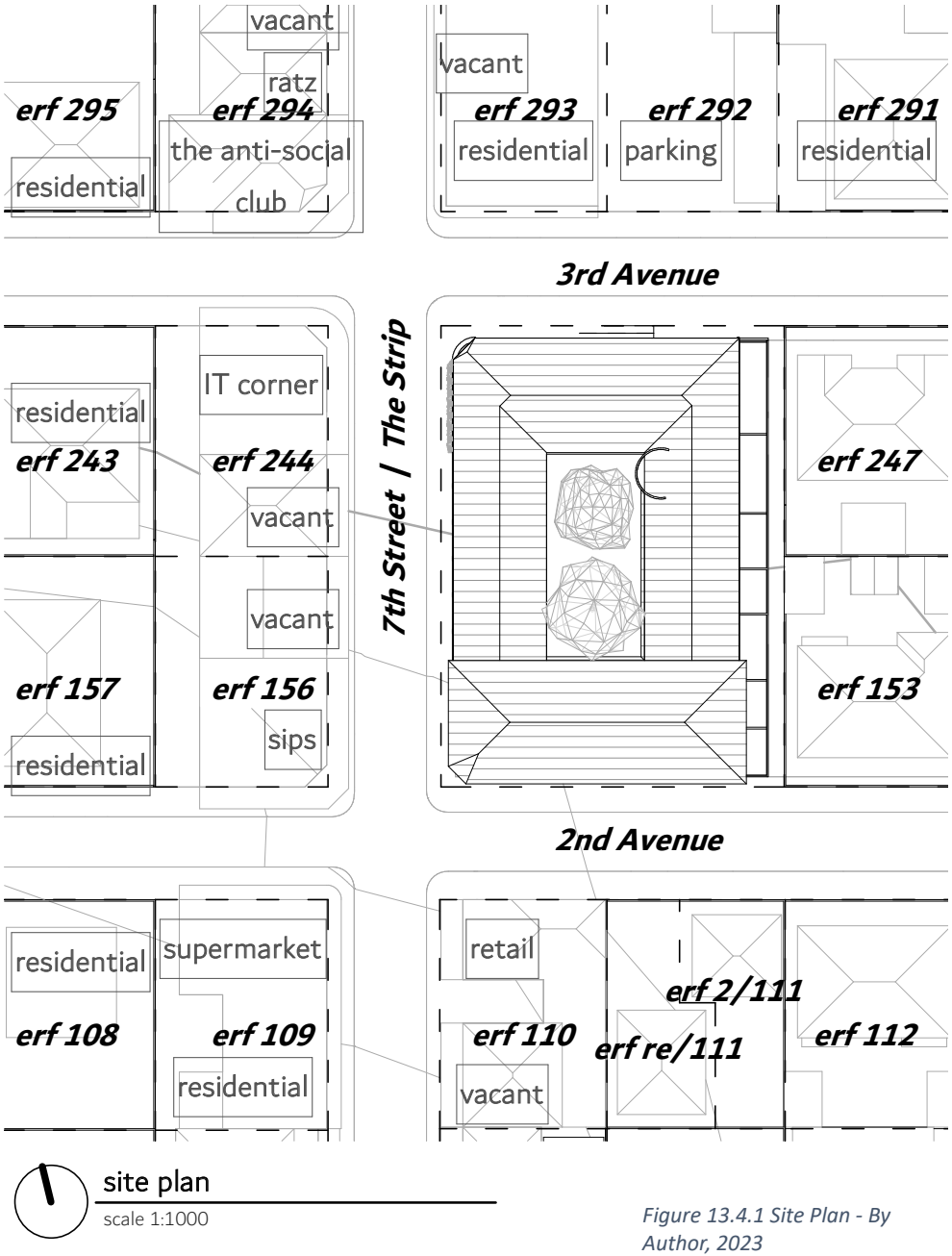


Figure 13.4.1 Site Plan - By Author, 2023

The **ground floor plan** in figure 13.4.2, while including all the desired programming, proved to be an unsuccessful iteration of the design. The access to the building and the courtyard was adequate but the spaces located along 7th Street in particular were not relating to the greater context or to the users. The most prominent edge of the site is along "The Strip", and in this layout that street edge was not interacted with other than the large, covered entrance point to the courtyard. In addition, several of the spaces leading off of the courtyard were semi-private spaces which again, did not make the best use of the courtyard.

One consideration that was made at this point in the building development was the inclusion of '6 Cocktail Bar' which was the only operating venue on this block of 7th Street. The restaurant remained in its current location but was integrated into the overall building design.

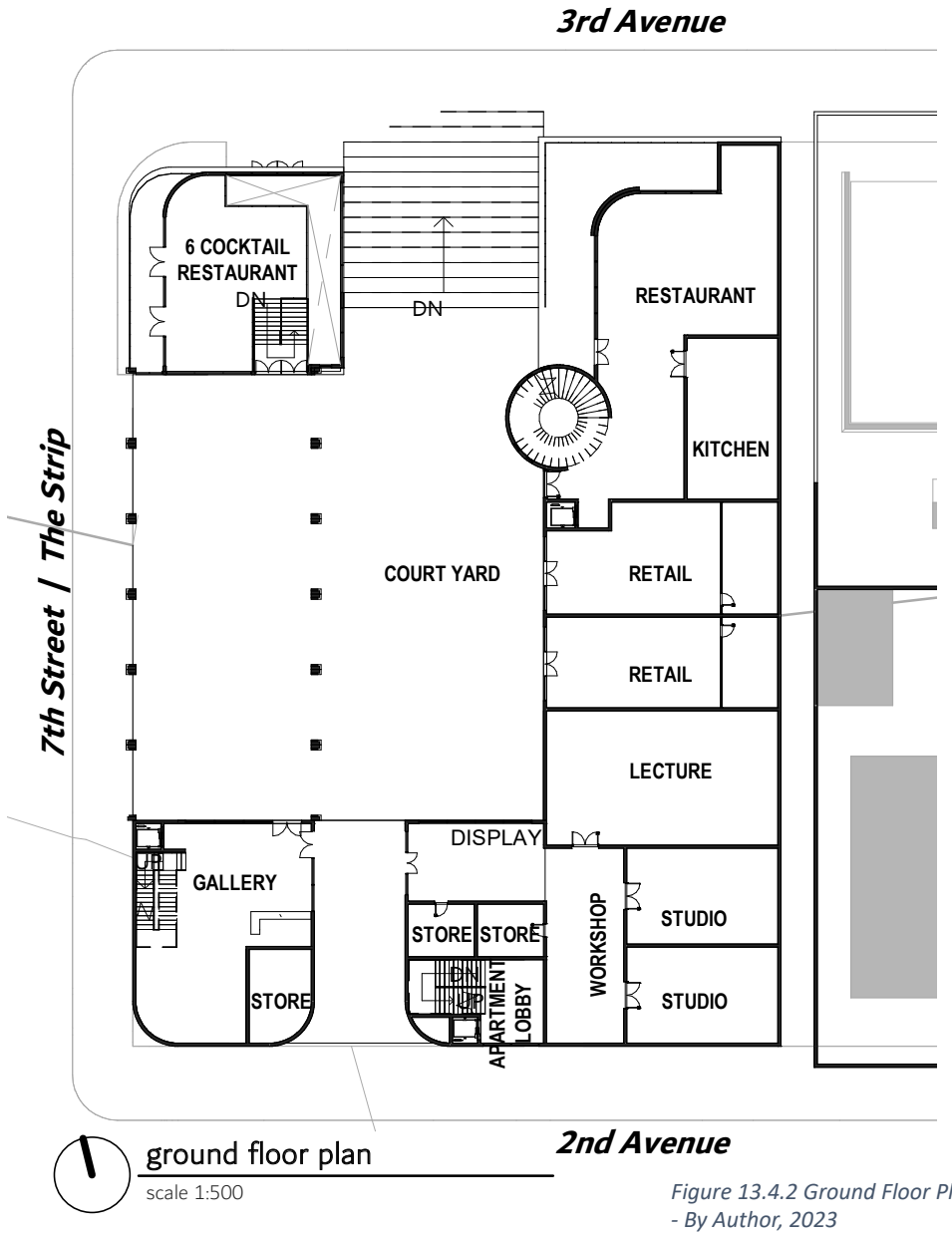
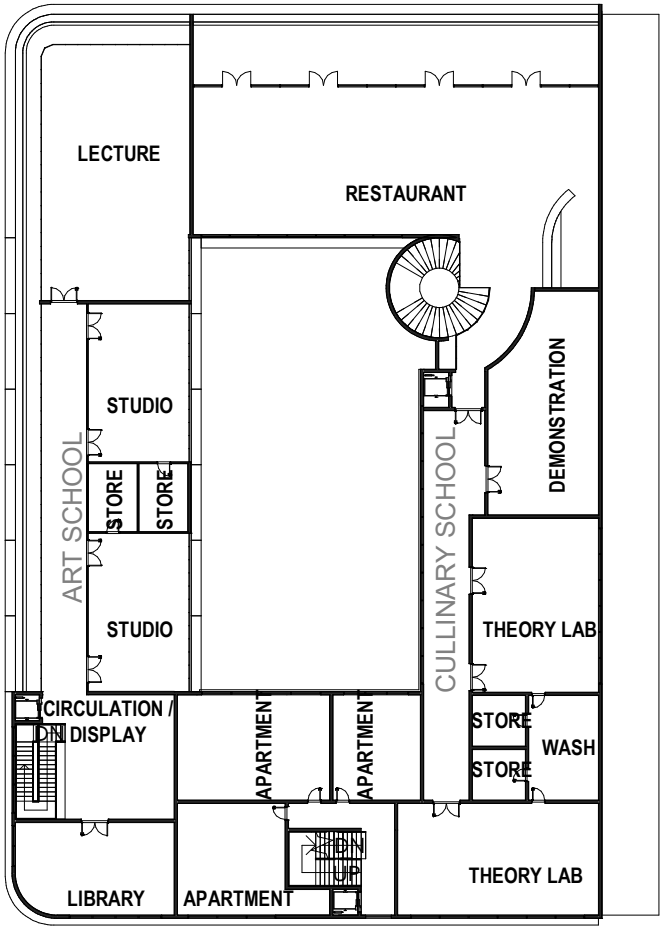


Figure 13.4.2 Ground Floor Plan - By Author, 2023

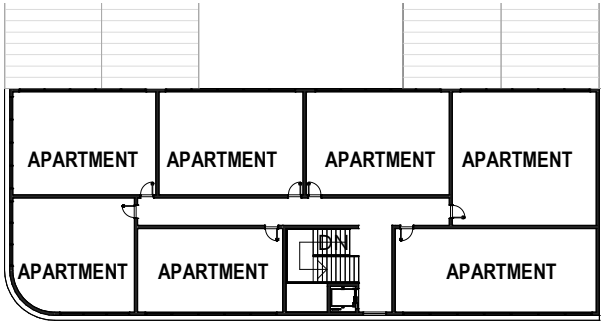


first floor plan

scale 1:500

Figure 13.4.3 First Floor Plan - By Author, 2023

The **first floor**, figure 13.4.3, was a mix of semi-private educational facilities and private accommodation. Vertical circulation proved difficult as separate areas had to be dedicated for each usage type, there was no central circulation available. The two education facilities, the Art School, and the Culinary School, were also located at opposite ends of the building rather than being positioned together. Lastly, the apartment units located on this floor and the **second floor** (figure 13.4.4) were all differently shaped and partially located to the south with is not ideal for natural lighting and heat gain.



second floor plan

scale 1:500

Figure 13.4.4 Second Floor Plan - By Author, 2023

As a method of resolving the above-mentioned issues revolving around layout, planning, and contextual relationships, the plans were drawn over in order to work out a more successful intervention. This was done several times until one set of drawings seemed to address all of the issues and resolved them accordingly (figure 13.4.5).

Following this a new drawing was created (figure 13.4.6) depicting only the empty shell of the proposed building, into which all the different spaces where sketched. This was used to ensure that all spaces fit well together and are comfortable and easy to use for the desired users.

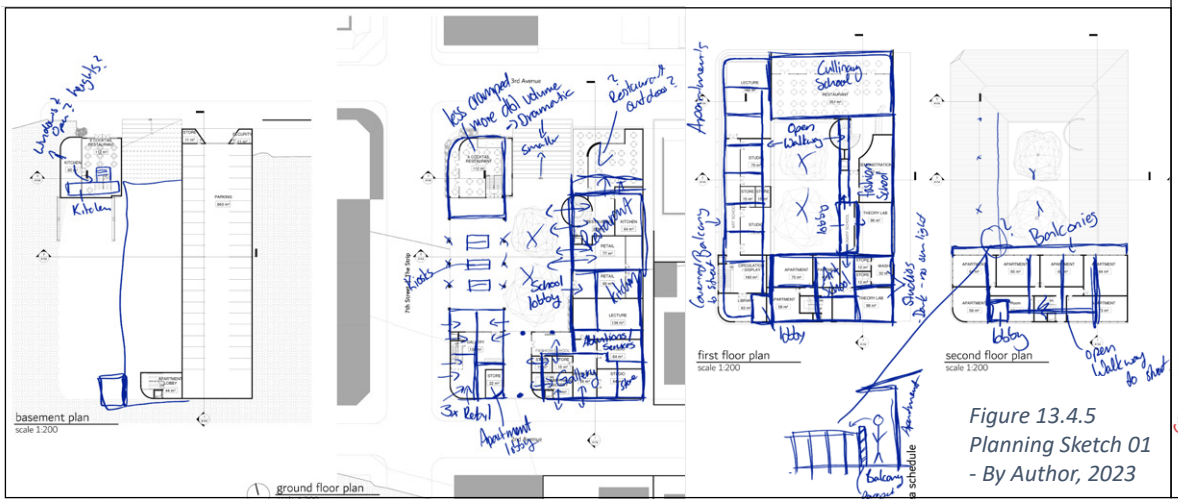


Figure 13.4.5
Planning Sketch 01
- By Author, 2023

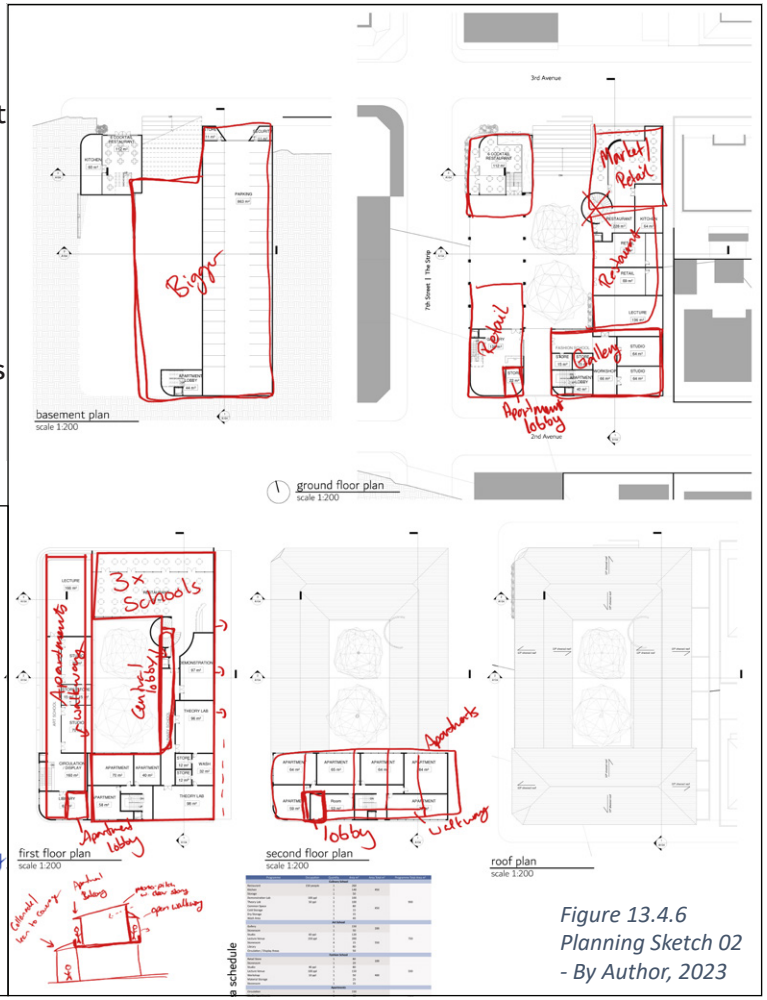


Figure 13.4.6
Planning Sketch 02
- By Author, 2023

The artistic impressions, in figures 13.4.7 and 13.4.8, of the initial building further emphasized the shortcoming of the contextual relationship between this proposed intervention and Melville's iconic street design. When looking at the remaineder of "The Strip" it becomes evident that canopies, colonnades, and open shop fronts are an intricate part of the suburbs appeal. This design methodology is absent form the proposed design and was one of the major aspects that required attention.

The lack of canopies also created an unpleasant intimidating feeling of the building. It was not inviting which is further substantiated byt the large blank walls facing the street edge. Lastly, the face brick arches did not suit the environment and stood out too harshly compared to adjacent properties. It has been established that in order for this project to be successful it needs to fit into the overall area and its iconic aesthetic while still being comfortable and easy to use.



Figure 13.4.7 Artistic Impression (North-West) - By Author, 2023



Figure 13.4.8 Artistic Impression (South-West) - By Author, 2023

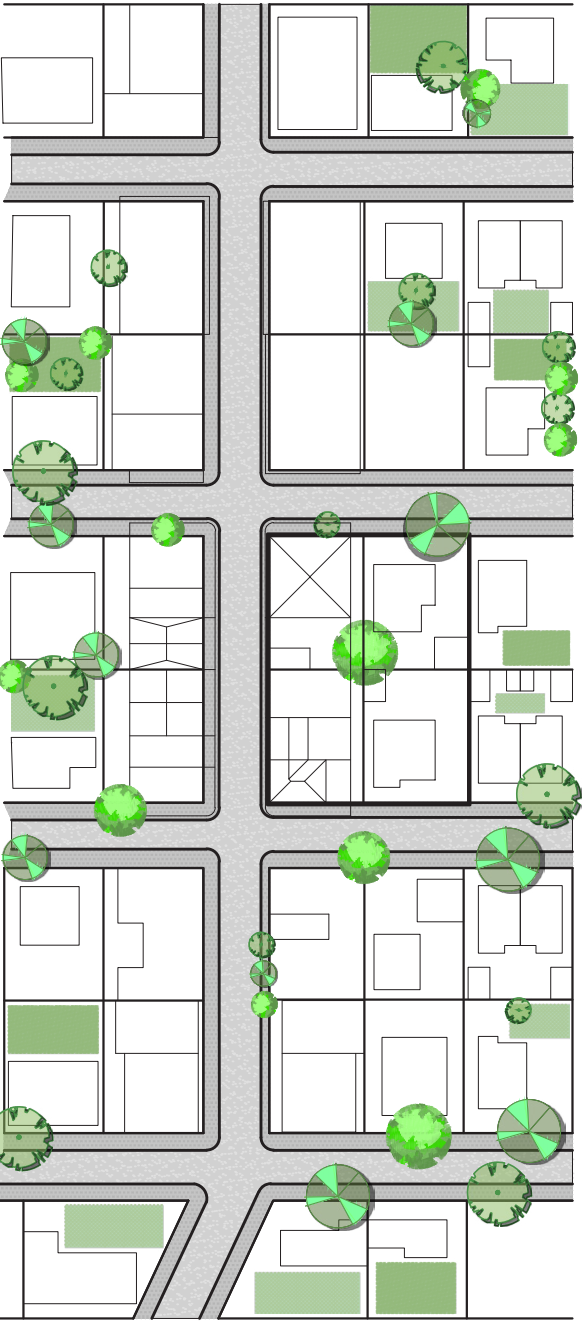


Figure 13.4.9 Urban Design - Current - By Author, 2023

Figure 13.4.9 shows the current urban design of Melville's 7th Street. It is a simple combination of single lane, two-way roads with streetside parking and narrow sidewalks. This is a major area that formed part of the proposed intervention. The aim of the School of Arts is to encourage neighbouring properties and business to redesign and redevelop their spaces as well. Figure 13.4.10 therefore depicts what future developments may look like on neighbouring properties and how the urban environment can be upgraded to suit the overall proposed redesign on 7th Street.

As part of the urban development of the area, it was proposed that new structures are located further away from the road allowing for more user-friendly sidewalks. In addition, raised crossings with a material change act as speebumps to slow cars down which will create a safer environment for pedestrians. The last proposed aspect is the introduction of a lot more green spaces and vegetation. The area is in desperate need of more trees to provide shade and cooler surroundings as well as soft spaces for people to gather.

The result of this intervention will not only uplift "The Strip" but also the greater Melville area and the surrounding suburbs. More people will be attracted to the area and will therefore boost the economy resulting in a more money being available to uplift and maintain the physical spaces.

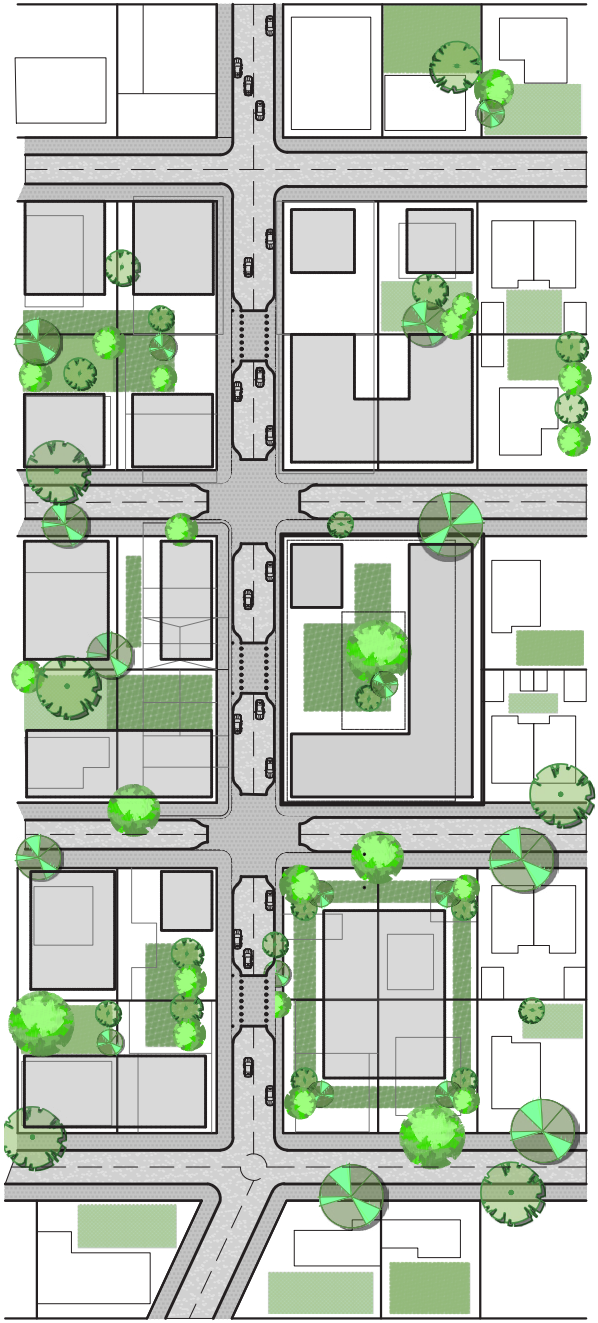


Figure 13.4.10 Urban Design - Proposed - By Author,



CHAPTER 14

TECHNICAL ANALYSIS

It has been established that the aesthetics of the proposed School of Arts on 7th Street will play a major role in its success. This ties back to the overall construction method of the building, as this greatly influences how the building will look.

The desired outcome regarding the design of the proposed building is to relate to, and match the overall design language of the suburb, namely predominantly plastered brick walls, with few face brick and stone components, partnered with hipped, metal IBR sheeted roofs. Therefore, after some experimentation it was decided to keep the construction of the project relatively modest, making use of the recognized and proven concrete frame and brick and mortar construction methods. This is further aided by the fact that this is by far the most used building technology in South Africa, resulting in easily accessible materials and skilled labour.



Figure 14.1 Artistic Impression - Facade - By Author, 2023

14.1 Construction Methods

The proposed intervention on Melville's "Strip" aims to be the turning point for the downward spiral of 7th Street's economic and social decline. It serves as a basis point for the entire street. It therefore is fitting that the primary structure of the building itself is concrete framed, as a concrete frame, much like the proposed intervention, can be a disguised element supporting the entire project.

A concrete frame was also chosen as the building itself is fairly large, and spans over multiple floors with large open areas. Its high strength factors and relative ease of construction make it the most suited building system for this project. In addition to this, the skill, as well as the necessary equipment and materials required are easy to find within Johannesburg, which in turn will reduce both the construction time and cost, while resulting in a strong and long-lasting structure.

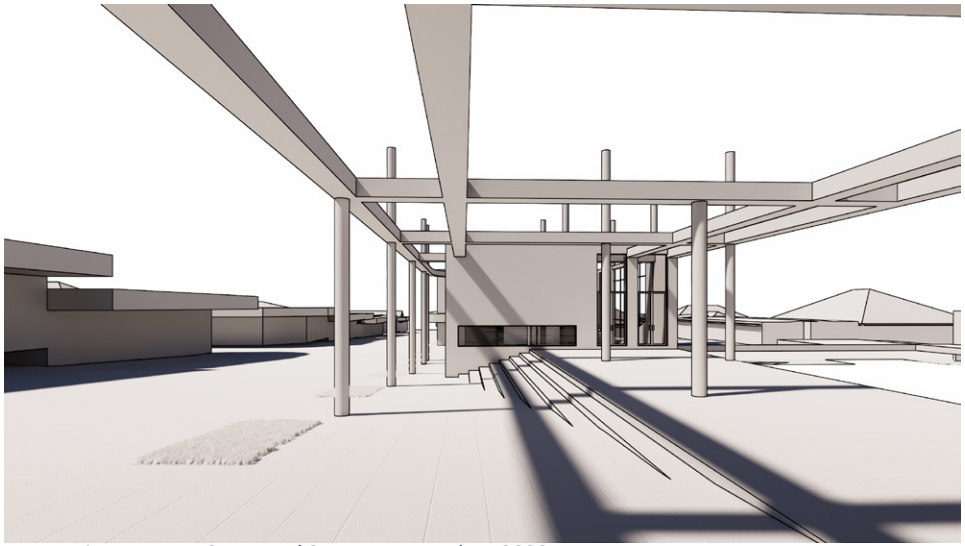


Figure 14.1.1 Structural System - By Author, 2023

The concrete frame will work in conjunction with brick and mortar infills. These infills will act as all of the external and internal partitioning walls. Brick and mortar construction, similarly as concrete construction, is readily available within Johannesburg when it comes to both material as well as skilled labour. Both the internal and the external sides of these brick walls will be plastered and

painted, to ensure that the exterior of the structure in particular fits within its surrounding context and can also be easily changed over the years in terms of paint colours and paint textures and techniques. As the suburb of Melville changes the building will be able to change with it, a smooth paint finish can be adapted to a textured one with different colours or an exterior trowel on render can be applied in order for the building to change and to adapt to its context.

Brick walls have several other benefits over alternatives such as drywall or light steel frame walls. Because of a bricks mass, the use of this material in walls offers great structural characteristics resulting in a structurally sound building that will be able to stand the test of time and be used and reused for many years. In addition to this a brick wall also offers excellent sound insulating qualities, which is crucial in a project such as this which contains classrooms, lecture rooms and apartments, all of which require quiet atmospheres.

The last element that was chosen was IBR sheeting for the roofs of the building. As with the brick walls this was done primarily to ensure that the building's aesthetic matches its surroundings. This will aid in the buildings success as Melville residents and visitors expect to see design details such as those as they provide a feeling of comfort and familiarity.

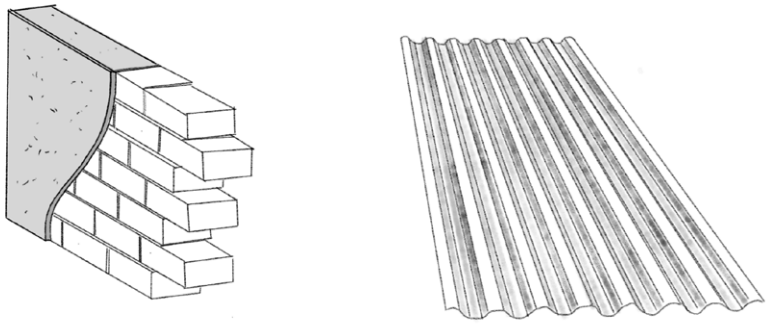
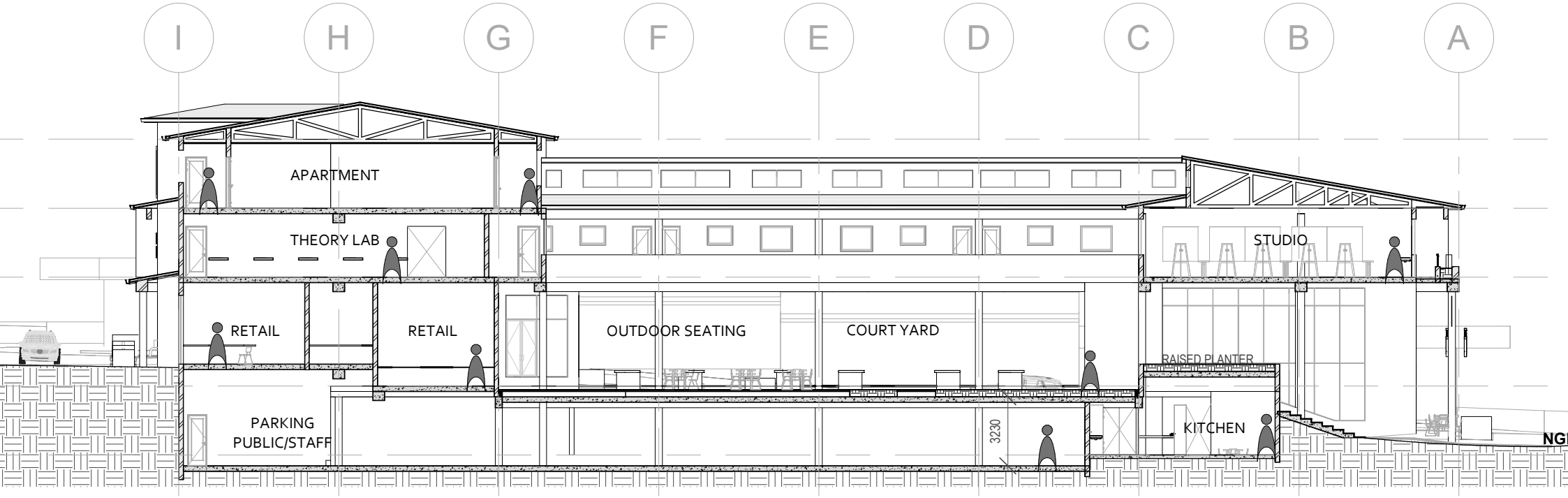


Figure 14.1.2 Construction Materials (Plastered Brick & IBR Sheeting)- By Author, 2023



Longitudinal Section @ 1:250

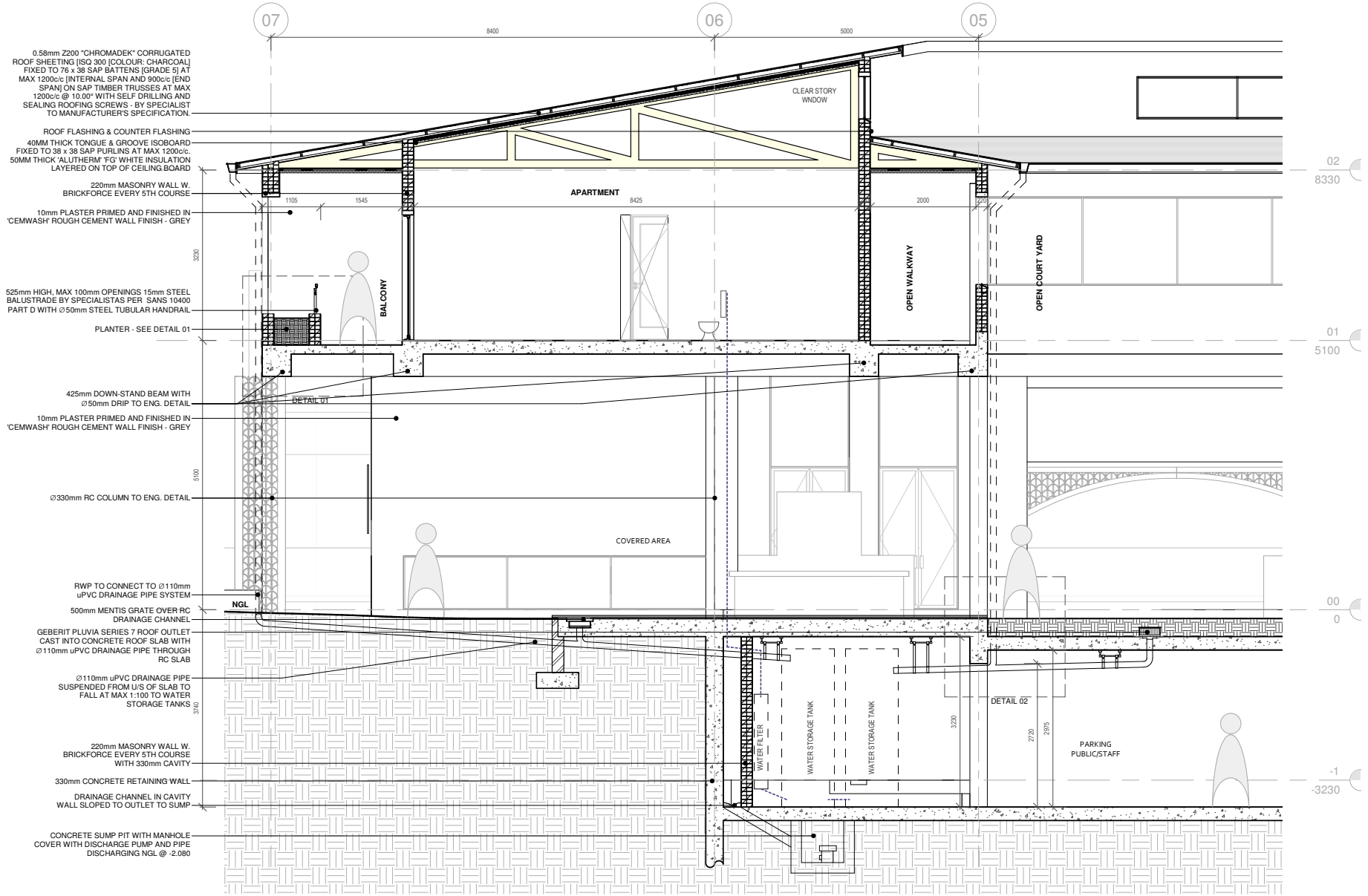
Figure 14.2.1 Longitudinal Section- By Author, 2023

14.2 Construction Details

In this **Longitudinal Section** (figure 14.2.1) it becomes clear why a concrete framed structure was chosen. It allows for large volumes of space to be created with relative ease while maintaining suitable structural integrity. A combination of masonry walls with aluminium framed windows and doors contribute to the whole building envelope.

The last building element to complete the overall structure is the timber framed roof. Common timber trusses make up the roofing system which is then fitted with IBR S-profile metal sheeting.

The section also expresses the internal courtyard and outdoor seating area. While this is a natural feeling space, it requires a lot of attention to detail to ensure that all the vegetation does not impact the structural integrity of the building. This space is therefore carefully designed with additional structural support.

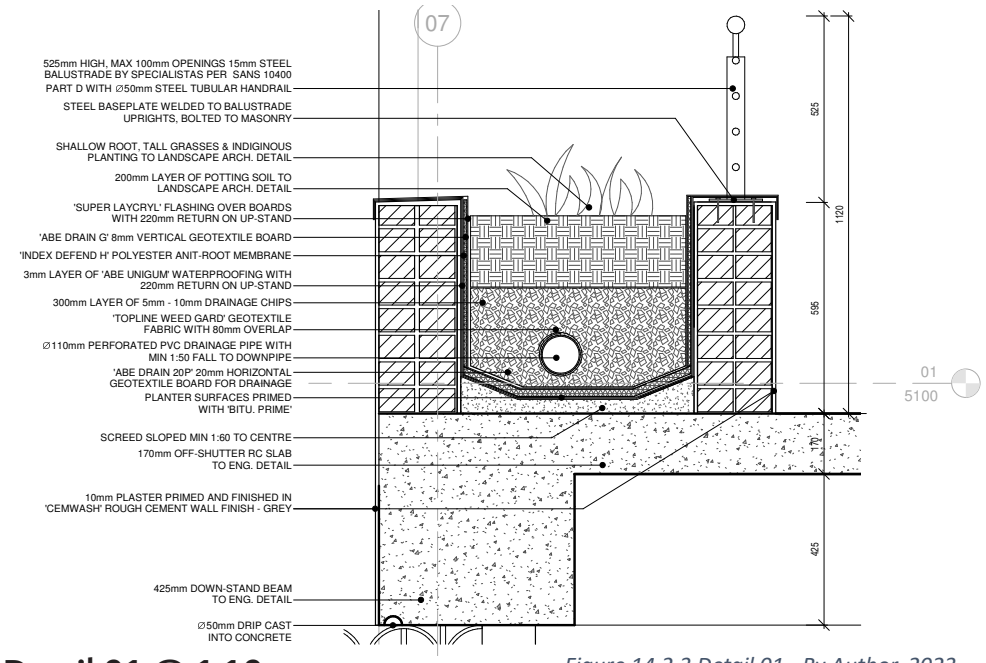


Detail Section @ 1:50

Figure 14.2.2 Detail Section- By Author, 2023

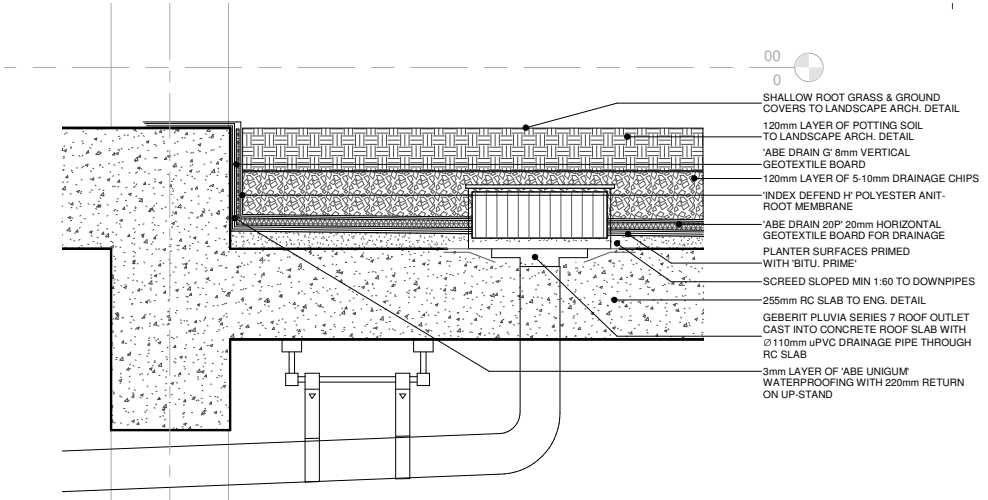
The above **Detail Section** further explored the finer details of the proposed building. Attention has been paid to storm water management and collection, as well as its re-use in a grey water system used in the building's ablutions and irrigation.

Detail 01 (figure 14.2.3) explores the multiple steps and layers required to ensure that an integrated planter system within the building is properly waterproofed to ensure no water reaches the structure as well as to ensure that the vegetation is properly provided for. **Detail 02** (figure 14.2.4) depicts similar details regarding the planting located in the courtyard. The aim of the section was to identify and determine the best solution for the structure that supports the greenery. With up-down stand beams that are integrated into the two slabs located at different levels, a grazed area that is level with the outdoor floor can be achieved.



Detail 01 @ 1:10

Figure 14.2.3 Detail 01 - By Author, 2023



Detail 02 @ 1:10

Figure 14.2.4 Detail 02 - By Author, 2023

14.3 Detail Diagrams

The below diagrams reflect some of the specialised design and construction elements that were included in the building. They serve to further develop and detail the building.

The idea behind the ornate wrought iron trellis in **Sketch 01** was that these can be placed around the simple round columns along the colonnade of the building. Various types of creepers could then be planted at the base of these trellis and would grow up them, softening the overall façade of the building. **Sketch 02** shows the inclusion of stone cladding on certain parts of the building. As the site is located close to the "Melville Koppies", this aspect aims to tie the entire building back to that natural element, as well as to serve as some points of difference along the facades.

Integrated balcony planters were also considered for the building's design, **Sketch 03** shows how these would be expressed along the building elevations. Lastly, **Sketch 04** portrays a solution for spaces within the residential apartments that are located further back in the building, with the use of clear storey windows these spaces will be able to receive natural lighting and heat gain.

Sketch 01 - Trellis

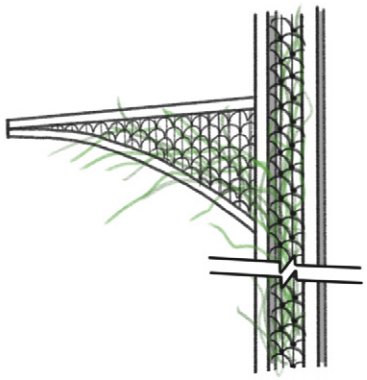


Figure 14.3.1 Trellis Sketch - By Author, 2023

Sketch 02 - Stone Clad

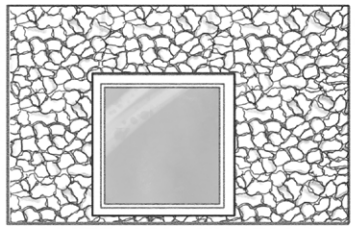


Figure 14.3.2 Stone Sketch - By Author, 2023

Sketch 03 - Planter

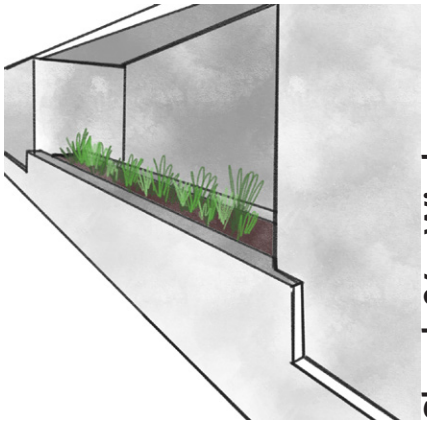


Figure 14.3.4 Planter Sketch - By Author, 2023

Sketch 04 - Window

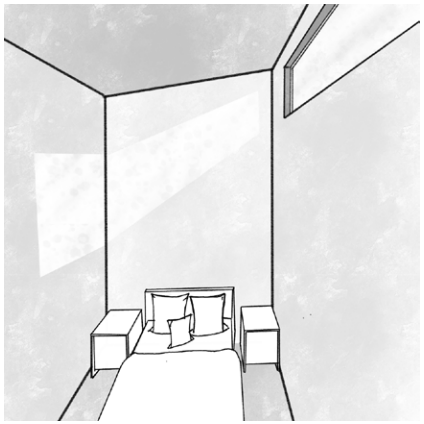


Figure 14.3.2 Window Sketch - By Author, 2023

14.4 Sustainability

Sustainability is a crucial consideration for every new building. By designing a sustainable building, the human impact on the environment can be minimised and carbon emissions can be reduced. The result of this is lower operational costs as less energy and water is used, which means it will be more affordable to live and work from the proposed development. To achieve this Solar panels will be fitted onto the East, North and western roofs to capture as much energy as possible to reuse within the building. All stormwater will also be harvested to maintain the green spaces and to reuse for grey water for toilet-flushing for example. This is critical in Melville as the area suffers from regular water outages (Bega, 2023).

Through the use of passive design active systems such as air conditioning can be reduced or removed altogether. By designing spaces that benefit from cross ventilation and shading the internal areas of the buildings can remain cool in summer but warm in winter, this is why orientation plays a crucial role. The proposed intervention predominantly faces north but has a large western façade which has been designed with large overhangs protruding shading devices such as walls to ensure thermal comfort within the relevant spaces.

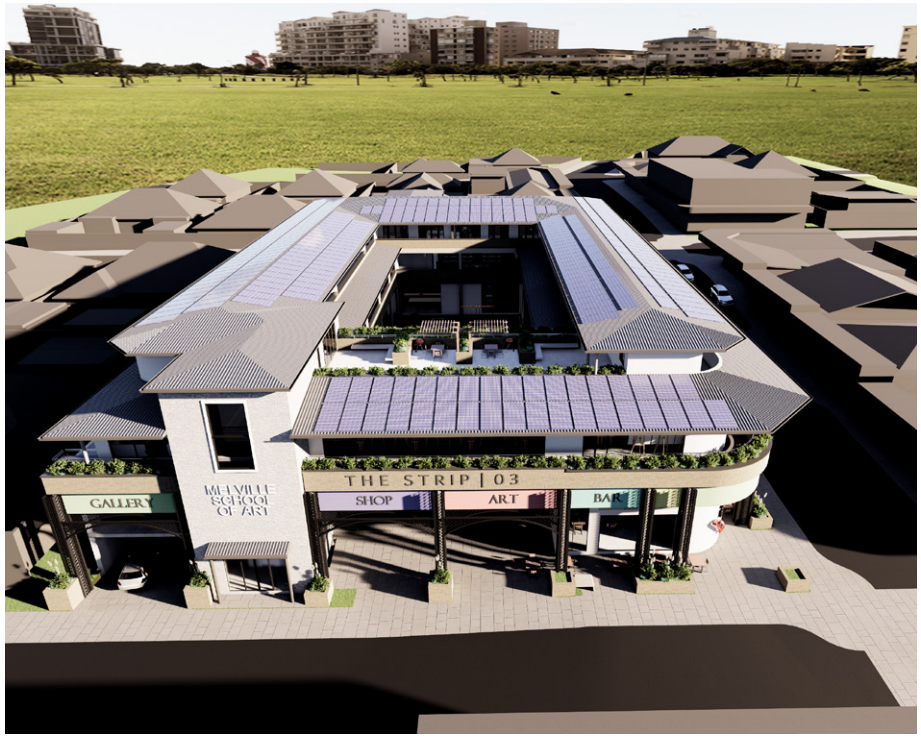


Figure 14.4.1 Artistic Impression - Sustainability - By Author, 2023



CHAPTER 15 - PART TWO

FINAL DESIGN

Melville strip[ped]

Creating a School of Arts to rejuvenate 7th Street.

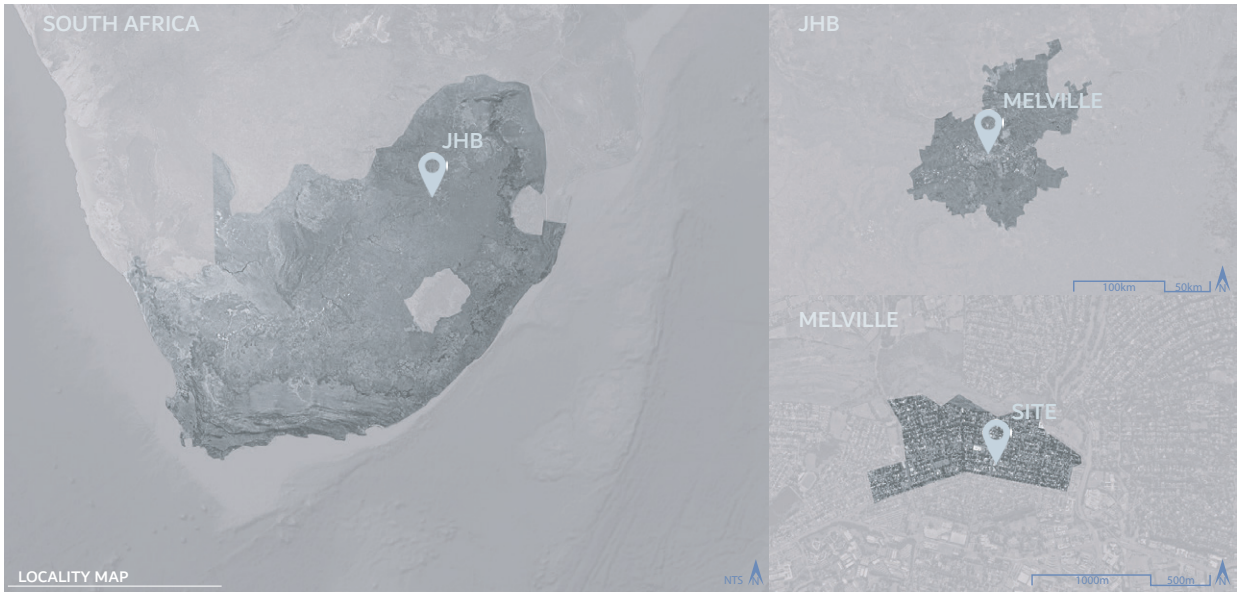


Figure 15.1 Locality Map - By Author, 2023



Figure 15.2 Proposed Design 3D Render - By Author, 2023

This research report is focused on the suburb of Melville, Johannesburg. The issue of failing social and economic systems is defined and a new intervention is proposed. This intervention is a mixed-use development containing a School of Arts, Retail Spaces and Apartment Units.

The report covers precedents and case studies for the proposed intervenitons as well as similar design principles and areas within South Africa and international examples. As the site on 7th Street in Melville is the center point of this report, an indepth analysis has been done to determine all asects that influenced the design of the intervention. The design process is directly linked to the research findings, precedents and site analysis. After this the design development is documented.

The final outcome of the research report is a completed building set within Melvilles 7th Street as a method to turn the failing economy around and to bring the community back together.

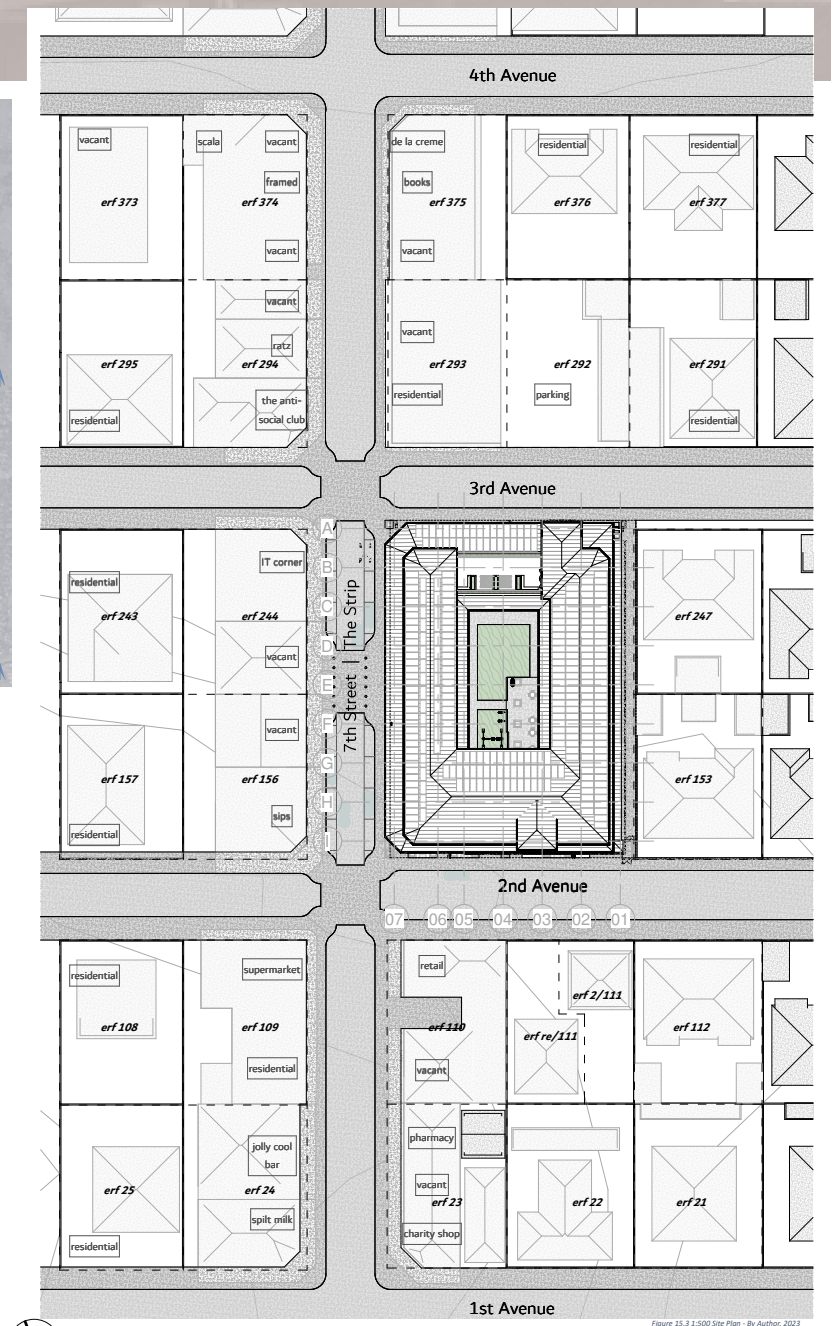


Figure 15.3 1:500 Site Plan - By Author, 2023



SOUTH-WEST VIEW

Figure 15.4 South-West View 3D Render - By Author, 2023



WEST VIEW

Figure 15.5 West View 3D Render - By Author, 2023



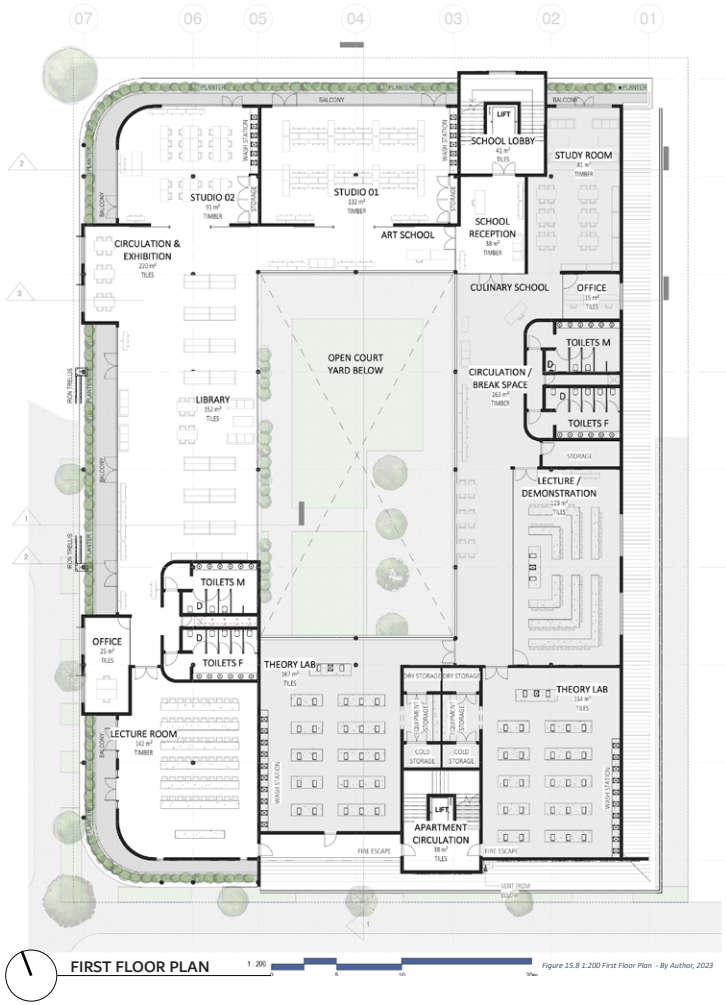
NORTH-WEST VIEW

Figure 15.6 North-West View 3D Render - By Author, 2023



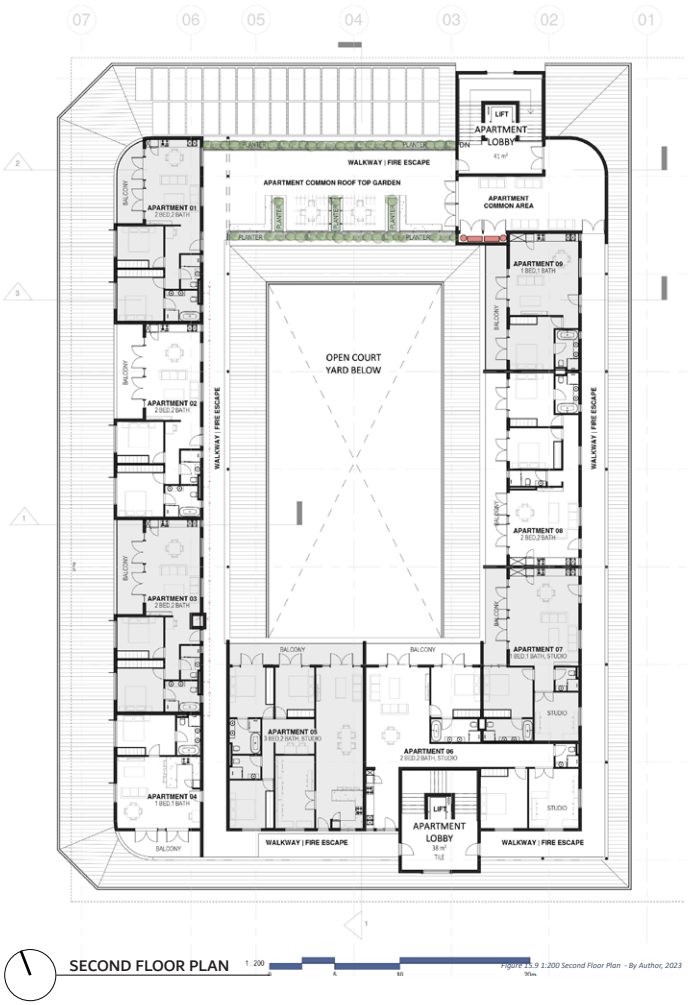
GROUND FLOOR PLAN

Figure 15.7 1:200 Ground Floor Plan - By Author, 2023



FIRST FLOOR PLAN 1 : 200

Figure 15.8 1:200 First Floor Plan - By Author, 2023



SECOND FLOOR PLAN 1 : 200

Figure 15.9 1:200 Second Floor Plan - By Author, 2023

Programme	Occupation	Quantity	Area m²	Area Total m²	Programme Total Area m²
Culinary School – 50 People					
Restaurant	150 people	1	200×180		
Kitchen		1	140	570	
Storage		1	50		
Demonstration Lab	60 ppl	1	100		
Theory Lab	25 ppl	2	110		1080
Common Space		1	80		
Cold Storage		2	10	510	
Dry Storage		2	10		
Wash Station		2	25		
Office		1	20		
Art School – 50 People					
Gallery		1	150		
Storeroom		1	50	200	
Studio	25 ppl	2	100		650
Lecture Venue	60 ppl	1	100		
Library		1	80	450	
Circulation / Display Areas		1	50		
Office		1	20		
Apartments					
Circulation		1	150		
One-Bedroom Apartments		5	55		1040
Two-Bedroom Apartments – Large		2	80		
Two-Bedroom Apartments - Small		7	65		
Retail					
Retail + Storage		6	65	390	800
Exist. Restaurant (6 Cocktail Bar) + Kitchen		1	410		
Basement Parking					
Staff and Residential	As per SANS	1	1500		1500
Total				5070	

AREA SCHEDULE

The ground floor plan of the proposed building is aimed at creating an open, and freely accessed public space. It focuses on the use of an enclosed courtyard that intends to introduce more green spaces into the suburb of Melville. The sidewalks are two-tiered with an indirect border separating the sidewalk used to walk and the one used for shop displays or seating arrangement. The latter is covered in a colonnade which links to the original, iconic Melville feel. The original 'Six Cocktail Bar' is retained within the proposed development and is reimagined into the overall structure. A variety of retail spaces run along the outer edge with more private spaces like a restaurant and gallery are located within the courtyard, which is accessed through to large, covered sections. Kiosks are located under the western access point to provide small business opportunities for residents to engage with the public.

The first floor houses the semi-private schools. These are accesses through the northern circulation point which runs from the road / basement to the second floor. Both schools make use of views and focus around the central courtyard below. The private residential units are located on the second floor and can be accessed from the northern circulation point or a private one located on the southern side which is for residents only. Some units contain private studios which aim to create a live-work environment.



COURTYARD VIEW 01

Figure 15.10 Courtyard View 01 3D Render - By Author, 2023



COURTYARD VIEW 02

Figure 15.11 Courtyard View 02 3D Render - By Author, 2023



ROOFTOP TERRACE VIEW

Figure 15.12 Rooftop Terrace View 3D Render - By Author, 2023



NORTH-WEST VIEW DAY

Figure 15.13 North-West View Day 3D Render - By Author,



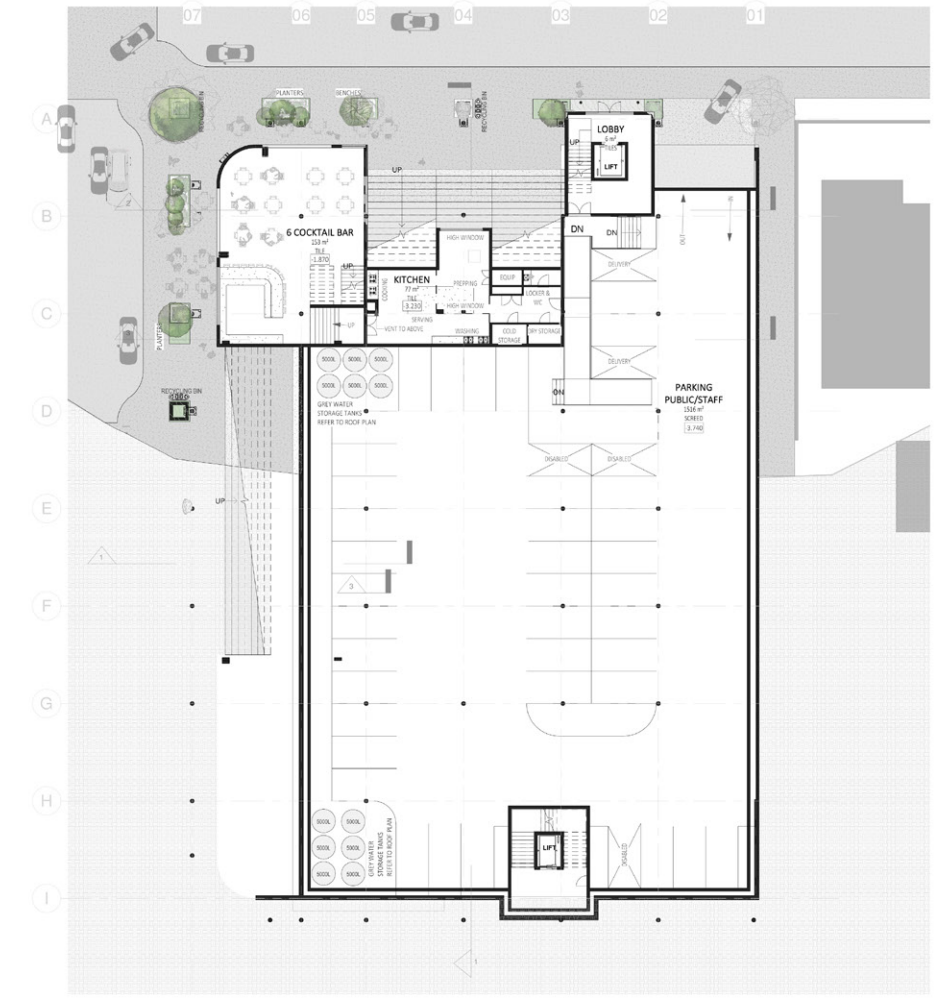
NORTH-WEST VIEW NIGHT

Figure 15.14 North-West View Night 3D Render - By Author,



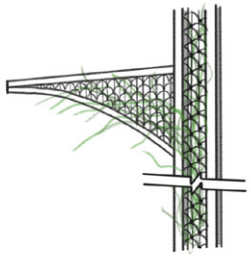
NORTH VIEW

Figure 15.15 North View 3D Render - By Author, 2023



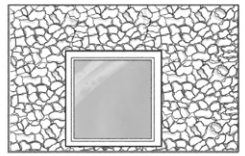
BASEMENT PLAN 1 : 200

Figure 15.16 1:200 Basement Plan - By Author, 2023



Sketch 01 - Trellis

Figure 15.17 Trellis Sketch - By Author, 2023



Sketch 02 - Stone Clad

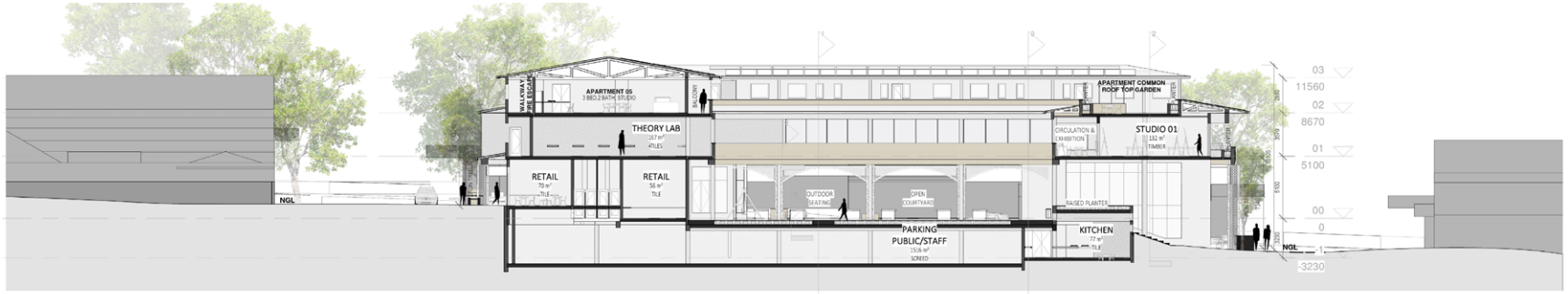
Figure 15.18 Stone Sketch - By Author, 2023



Sketch 03 - Planter

Figure 15.19 Planter Sketch - By Author, 2023

DESIGN ELEMENTS



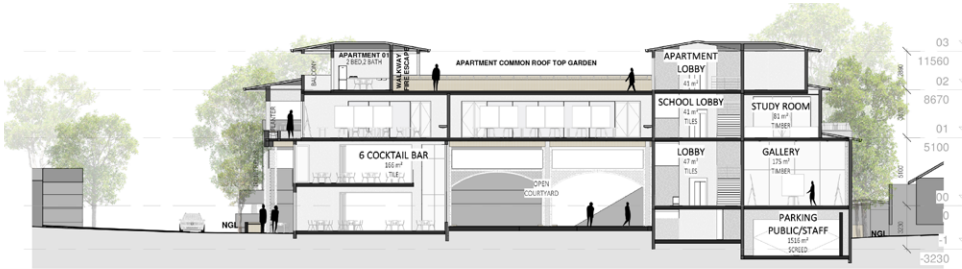
SECTION 01 1 : 200

Figure 15.20 1:200 Section 01 - By Author, 2023



SECTION 02 1 : 200

Figure 15.21 1:200 Section 02 - By Author, 2023



SECTION 03 1 : 200

Figure 15.22 1:200 Section 03 - By Author, 2023

USE DIAGRAM

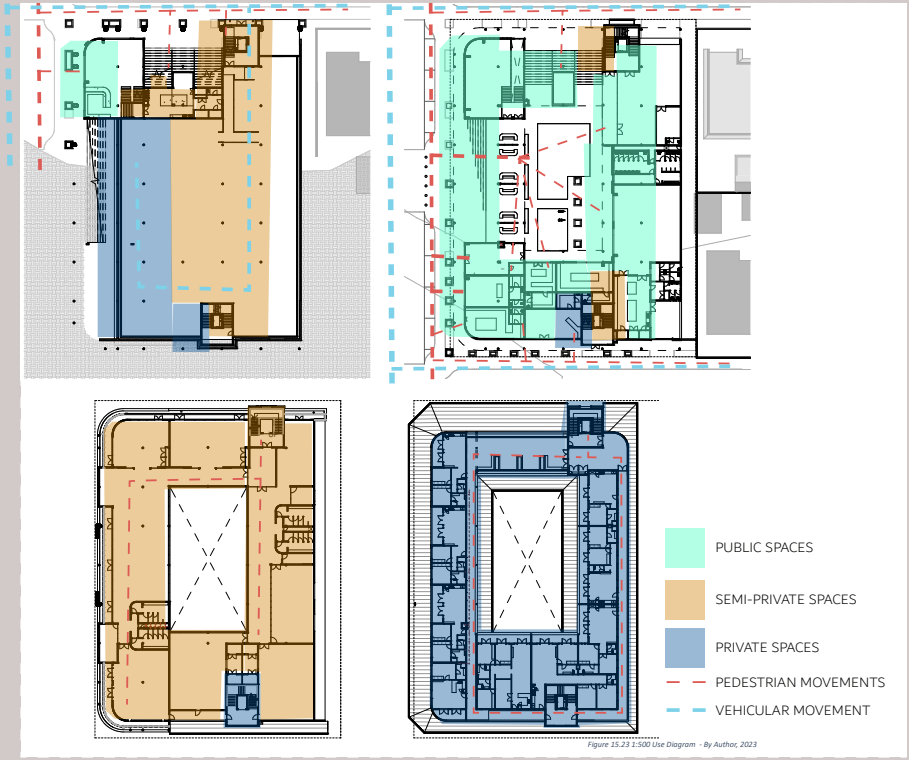


Figure 15.23 1:500 Use Diagram - By Author, 2023

SUN STUDY

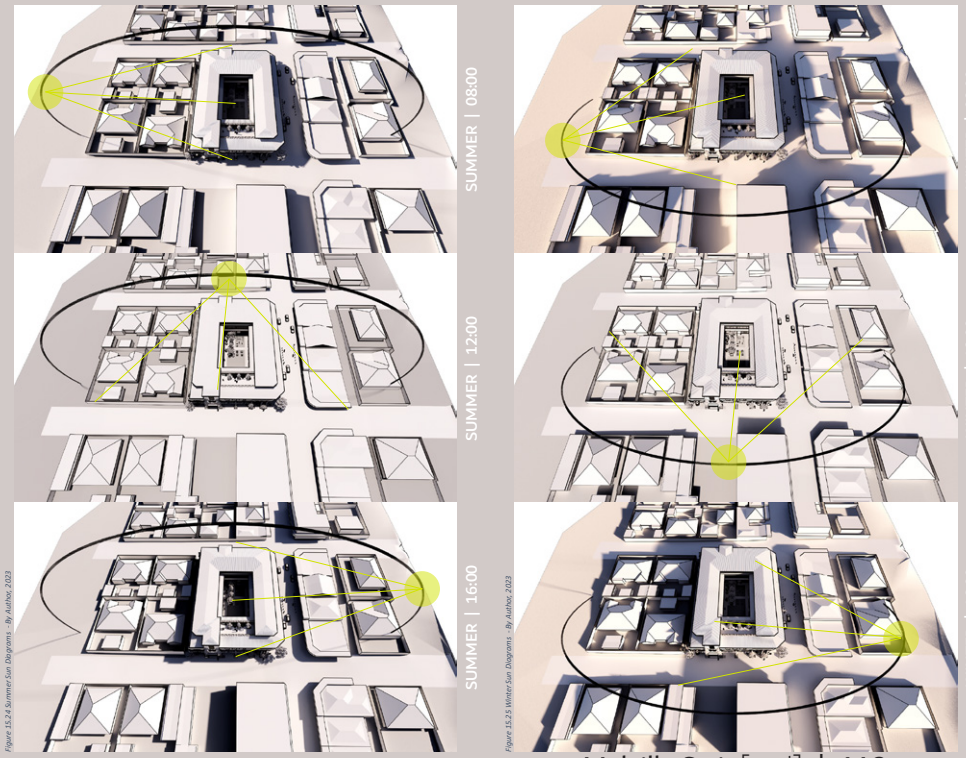
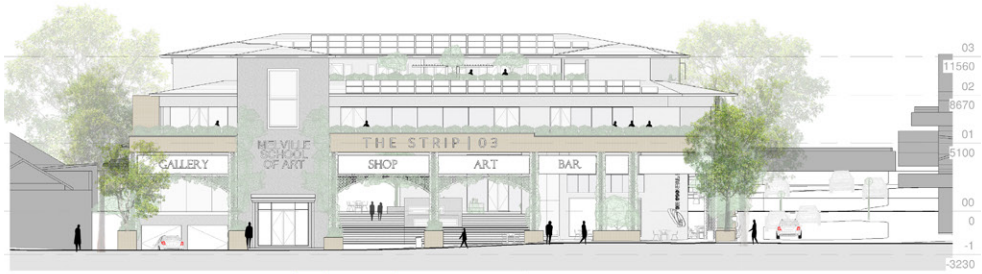


Figure 15.24 Summer Sun Diagrams - By Author, 2023

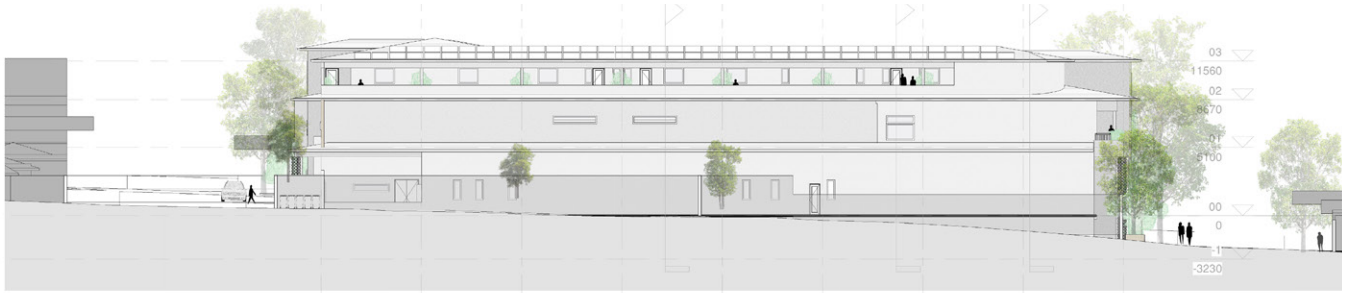
Figure 15.25 Winter Sun Diagrams - By Author, 2023



NORTH ELEVATION

1 : 200 0 5 10 20m

Figure 15.26 1:200 North Elevation - By Author, 2023



EAST ELEVATION

1 : 200 0 5 10 20m

Figure 15.27 1:200 East Elevation - By Author, 2023



WEST ELEVATION

1 : 200 0 5 10 20m

Figure 15.28 1:200 West Elevation - By Author, 2023

The outcome of introducing the mixed-use development of the School of Arts into Melville's 7th Street is to address several socio-economic and urbans concerns. The proposed development contains an art school, culinary school, restaurants, and retail spaces as well as residential apartments. This will foster the diverse and vibrant community by bringing the residents with various backgrounds and interests back together, and will promote social interaction, and will create opportunities for collaboration and cultural exchange within Melville. In addition to this the introduction of creative educations facilities will boost the local workforce by providing specialized training while also contributing to the creative economy and cultural richness of the area. The integration of retail stores and restaurants will cater to the daily needs of the residents in the area while also stimulating the economic growth by attracting visitors and creating employment opportunities. Furthermore, the inclusion of apartments provides mixed income housing options, encouraging socio-economic diversity and affordability within Melville's community.

From an urban perspective, mixed-use developments such as the proposed intervention, optimize land use, therefore reducing sprawl, and promote walkability, thus mitigating traffic congestion and reducing environmental impact.

Overall, the interaction created by combining several different uses within a single development not only address socio-economic differences but also enhance the overall liveability and sustainability of the urban environment. Based on this outcome the proposal of re-inventing "The Strip" by introducing several of these developments can result in a dramatic economic and social shift for the community of Melville.



SOUTH VIEW

Figure 15.29 South View 3D Render - By Author, 2023



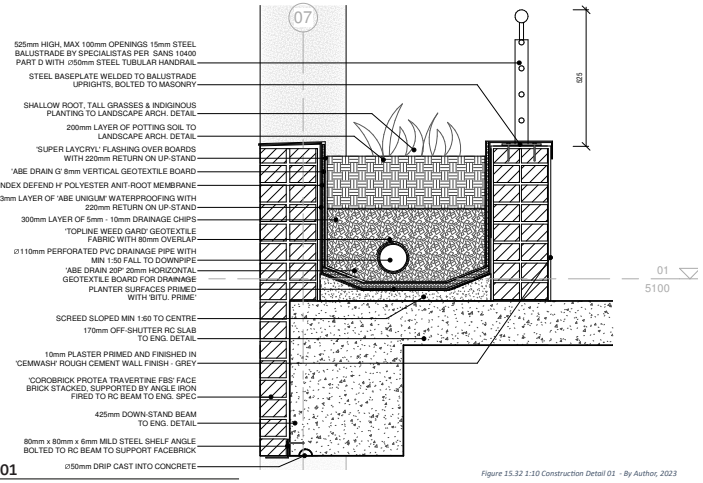
SOUTH-EAST VIEW

Figure 15.30 South-East View 3D Render - By Author, 2023



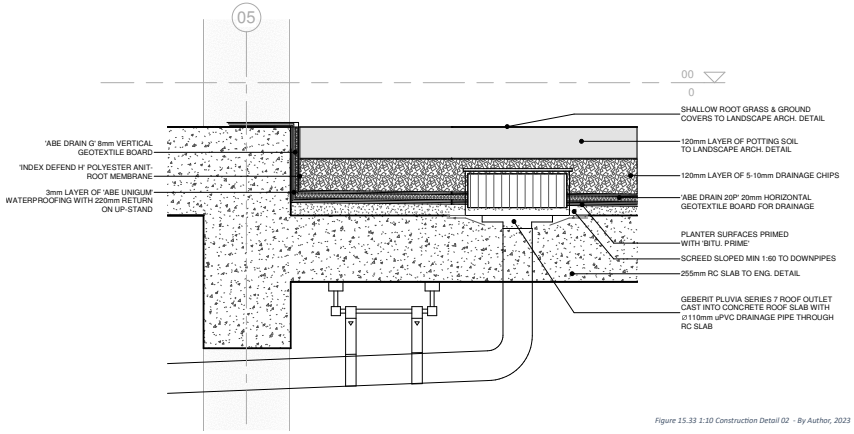
COURTYARD ENRTANCE VIEW

Figure 15.31 Courtyard Entrance View 3D Render - By Author, 2023



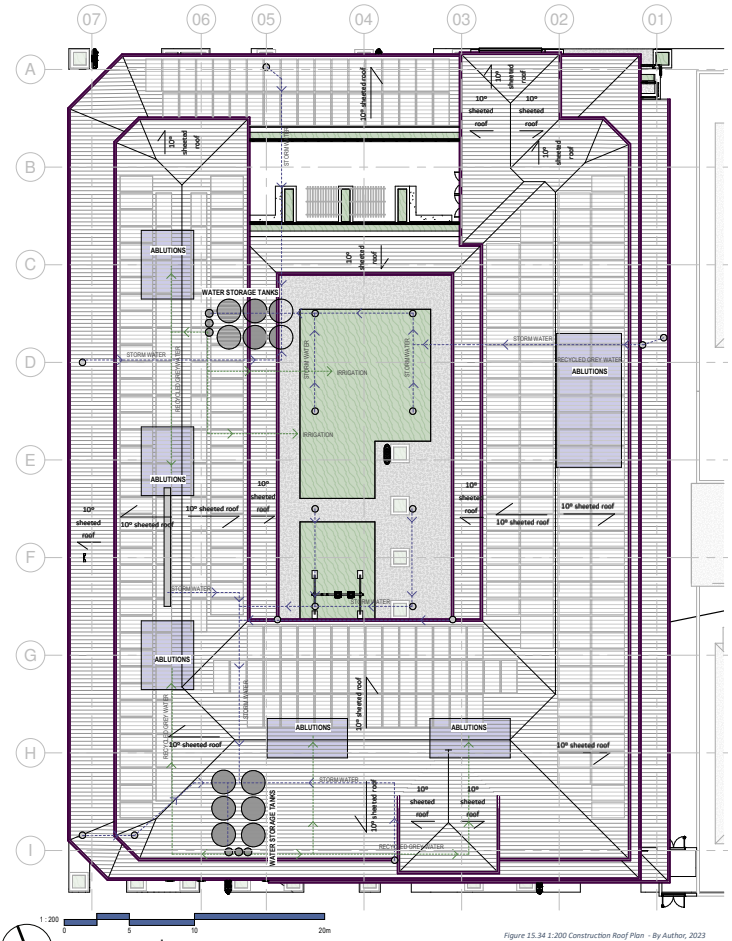
DETAIL 01
SCALE 1:10

Figure 15.32 1:10 Construction Detail 01 - By Author, 2023



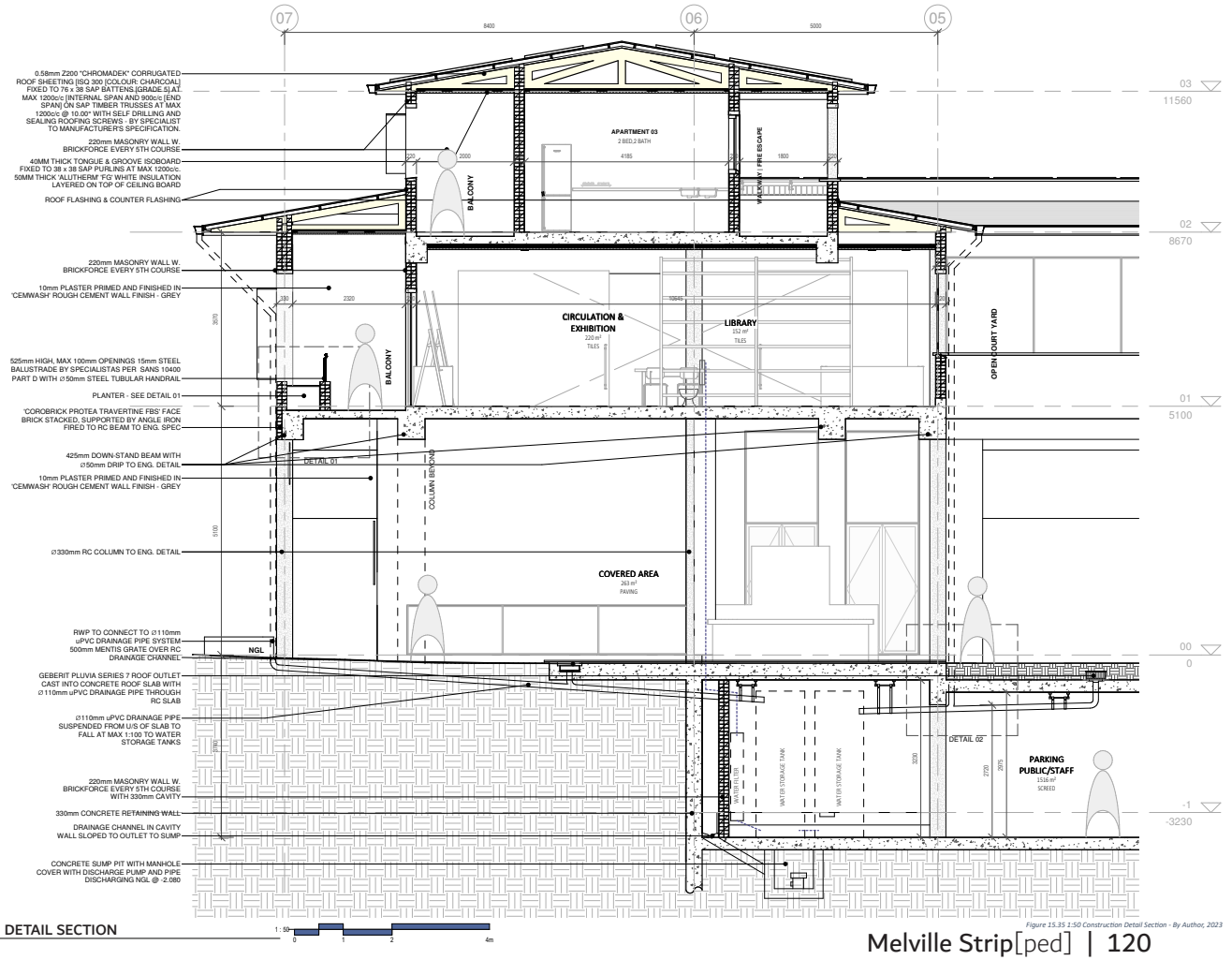
DETAIL 02
SCALE 1:10

Figure 15.33 1:10 Construction Detail 02 - By Author, 2023



ROOF PLAN | WATER MANAGEMENT PLAN
1 : 200
0 5 10 20m

Figure 15.34 1:200 Construction Roof Plan - By Author, 2023



DETAIL SECTION
1 : 50
0 1 2 4m

Figure 15.35 1:50 Construction Detail Section - By Author, 2023



CHAPTER 16

REFERENCES

Aghaabbasi, M., Moeinaddini, M., Zaly Shah, M., Asadi-Shekari, Z., 2017. A new assessment model to evaluate the microscale sidewalk design factors at the neighbourhood level. J. Transp. Health, Walking and Walkability: A review of the evidence on health 5, 97–112. https://doi.org/10.1016/j.jth.2016.08.012

Arko-Achemfuor, A., Dzansi, D.Y., 2015. Business doing well by doing good in the community: The case of Sedikong sa Lerato in South Africa.

Bain, E., 2023. Brixton police commit to improving service delivery to precint. Northcliff Melville Times. URL https://northcliffmelvilletimes.co.za/?p=374714 (accessed 4.2.23).

Bain, E., 2022. Crime stats, comments from stations which all call for vigilance. Northcliff Melville Times. URL https://northcliffmelvilletimes.co.za/?p=364053 (accessed 5.18.23).

Barger, K., 2016. DENSIFICATION AS A TOOL FOR SUSTAINABLE HOUSING DEVELOPMENT: A CASE STUDY OF UMHLANGA HIGH INCOME AREA IN DURBAN.

Bega, S. (2023) We live in fear of water outages, say residents in Joburg's Melville, The Mail & Guardian. Available at: https://mg.co.za/the-green-guardian/2023-06-22-we-live-in-fear-of-water-outages-say-residents-in-joburgs-melville/ (Accessed: 25 June 2023).

Cai, K., Wang, J., 2009. Urban design based on public safety—Discussion on safety-based urban design. Front. Archit. Civ. Eng. China 3, 219–227. https://doi.org/10.1007/s11709-009-0023-4

Children of Fire [WWW Document], n.d. URL http://www.childrenoffire.org/ (accessed 5.19.23).

Cox, A., 2021. Residents don't want to allow homelessness and crime turn Melville into Hellville [WWW Document]. URL https://www.iol.co.za/the- star/news/residents-dont-want-to-allow-homelessness-and-crime-turn-melville-into-hellville-7fe7cf85-b4c7-4565-a1f1-0e7a5988955e (accessed 5.15.23).

Degen, M., García, M., 2012. The Transformation of the 'Barcelona Model': An Analysis of Culture, Urban Regeneration and Governance. Int. J. Urban Reg. Res. 36, 1022–1038. https://doi.org/10.1111/j.1468-2427.2012.01152.x

Fataar, R., n.d. Densification and the ambition for a democratic city.

Firth, A., 2011a. Census 2011: Sub Place: Melville [WWW Document]. URL https://census2011.adrianfrith.com/place/798015091 (accessed 5.18.23).

Firth, A., 2011b. Census 2011: Sub Place: Parkhurst [WWW Document]. URL https://census2011.adrianfrith.com/place/798016061 (accessed 5.19.23).

GeoLIS [WWW Document], 2023. URL https://ags.joburg.org.za/cgismobi/ (accessed 5.20.23).

Goo, D., 2017. From urban decline to gentrifying spaces : the case of the Maboneng precinct in Johannesburg's inner city [WWW Document]. https://doi.org/10.10520/EJC-99ad056ce

Google Maps [WWW Document], 2023. . Google Maps. URL https://www.google.co.za/maps/dir/18+Sunbury+Ave,+Auckland+Park,+Johannesburg,+2092,+South+Africa/Parkhurst,+Johannesburg,+2193/@-26.1580738,27.9941884,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1s0x1e950b8c323e3967:0x7638dc9262b680fd!2m2!1d28.0101191!2d-26.1794079!1m5!1m1!1s0x1e950b6009436de5:0x44962e19de2-06b4d!2m2!1d28.0156811!2d-26.1368196!3e0 (accessed 5.19.23).

Gregory, J.J., 2016. Creative industries and urban regeneration – The Maboneng precinct, Johannesburg. Local Econ. J. Local Econ. Policy Unit 31, 158–171. https://doi.org/10.1177/0269094215618597

Harrison, K., Phasha, P., 2014. Public Art. Aesthetic, Evocative and Invisible?

Hazelkorn, E., 2005. Art Schools for Tomorrow: Challenges and Opportunities. High. Educ. Manag. Policy 16, 135–152. https://doi.org/10.1787/hemp-v16-art27-en

Joo Lee, B., Youn Jang, T., Wang, W., Namgung, M., 2009. Design Criteria for an Urban Sidewalk Landscape Considering Emotional Perception [WWW Document]. URL https://ascelibrary.org/doi/epdf/10.1061/%28ASCE%29UP.1943-5444.0000013 (accessed 4.5.23).

Karrim, A., 2020. Inside the Melville shooting: What we know so far | News24 [WWW Document]. URL https://www.news24.com/news24/inside-the-melville-shooting-what-we-know-so-far-20200105 (accessed 5.18.23).

Kotzé, N., McKay, T.M., Monare, P.T., 2014. A second wave of gentrification: The case of Parkhurst, Johannesburg, South Africa. Urbani Izziv 25, S108–S121. https://doi.org/10.5379/urbani-izziv-en-2014-25-supplement-008

Lawton, P.H., La Porte, A.M., 2013. Beyond Traditional Art Education: Transformative Lifelong Learning in Community-Based Settings with Older Adults. Stud. Art Educ. 54, 310–320. https://doi.org/10.1080/00393541.2013.11518905

Mahapa, T., 2016. THE IMPACT OF NIGHTCLUBS AND RESTAURANT BARS NOISE POLLUTION ON THE POPULATION OF MELVILLE, JOHANNESBURG, SOUTH AFRICA. pdf.

Mahapa, T.P., Siziba, W., Moja, S.J., 2017. Nightclubs and restaurant bars noise pollution: a case study of Melville Community, Johannesburg. Civ. Environ. Res. 9, 47–55.

Mashishi, N., 2018. Preserving the memory of Melville. Melville Park. URL https://melvilleandparktown.joburg/2018/11/20/preserving-the-memory-of-melville/ (accessed 3.16.23).

Melville Property Trends : Property24.com [WWW Document], 2023. URL https://www.property24.com/johannesburg/melville/property-trends/4145 (accessed 5.19.23).

Miller, N.J., Besser, T.L., Sattler Weber, S., 2010. Networking as marketing strategy: a case study of small community businesses. Qual. Mark. Res. Int. J. 13, 253–270. https://doi.org/10.1108/13522751011053626

Monare, T.P., 2014. Neighbourhood renewal in Parkhurst, Johannesburg : a case study of gentrification?

Naicker, D., Sinclair, M., 2022. THE EFFECTIVENESS OF SIDEWALKS ON PEDESTRIAN SAFETY IN A TOWNSHIP ENVIRONMENT.

Naik, S., 2020. Lockdown has turned Melville's popular 7th Street to a ghost town [WWW Document]. URL https://www.iol.co.za/saturday-star/news/lockdown-has-turned-melvilles-popular-7th-street-to-a-ghost-town-a20a5eec-9416-4747-b503-4f1a0a4391b0 (accessed 4.2.23).

Parkhurst Property Trends : Property24.com [WWW Document], 2023. URL https://www.property24.com/johannesburg/parkhurst/property-trends/12133 (accessed 5.19.23).

Ramela, A., 2021. Gauteng Tourism looks to build on 7th Street's new cool factor and make it safer [WWW Document]. URL https://ewn.co.za/2021/10/20/gauteng-tourism-looks-to-build-on-7th-street-s-new-cool-factor-and-make-it-safer (accessed 5.15.23).

Roberts, M.Y., 1989. The Importance of Community-Based Art Education Programs for Adults. Des. Arts Educ. 90, 43–48. https://doi.org/10.1080/07320973.1989.9938166

SAPeople, 2021. Melville's 7th Street Named One of the Coolest Streets in the World [WWW Document]. SAPeople - Worldw. South Afr. News. URL https://www.sapeople.com/2021/06/21/melvilles-7th-street-named-one-of-the-top-30-coolest-streets-in-the-world/ (accessed 5.15.23).

Sikhungo, M., 2023. Help the homeless make a skills development U-turn [WWW Document]. URL https://www.iol.co.za/capetimes/opinion/help-the-homeless-make-a-skills-development-u-turn-dc9c2537-8130-44b5-9aa3-094f0bf6cef5 (accessed 5.20.23).

Teller, J., 2021. Regulating urban densification: what factors should be used? Build. Cities 2, 302–317. https://doi.org/10.5334/bc.123

Thwaites, K., 2001. Experiential Landscape Place: An exploration of space and experience in neighbourhood landscape architecture. Landsc. Res. 26, 245–255. https://doi.org/10.1080/01426390120068927

Todes, A., Weakley, D., Harrison, P., 2018. Densifying Johannesburg: context, policy and diversity. J. Hous. Built Environ. 33, 281–299. https://doi.org/10.1007/s10901-017-9561-6

Wardner, P. (2014). Explaining mixed-use developments: a critical realist's perspective. Annual Pacific Rim Real Estate Society (PRRES) Conference: Resilient Communities: Providing for the Future, Christchurch, New Zealand. https://research.usc.edu.au/esploro/outputs/conferencePaper/Explaining-mixed-use-developments-a-crit ical-realists/99447756902621

Zyl, C.V., 2013. SUPPORTING A COMMUNITY THROUGH DESIGN: MELVILLE, JOHANNESBURG.

Figure References

7th street, Melville - Picture of Melville Neighborhood - Tripadvisor [WWW Document], n.d.
URL https://www.tripadvisor.com/LocationPhotoDirectLink-g21004786-d311490-i39932056-Melville_Neighborhood-Melville_Johannesburg_Greater_Johannesburg_Gauteng.html (accessed 9.6.23).

2023 Maboneng Precinct Walking Tour [WWW Document], n.d.
URL https://www.tripadvisor.co.za/AttractionProductReview-g312578-d17680211-Maboneng_Precinct_Walking_Tour-Johannesburg_Greater_Johannesburg_Gauteng.html (accessed 9.6.23).

Author, 2023. Author's adapted drawing of Figure 1.1.1 Melville Suburb. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,2077.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jAjxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 1.1.2 Site in Melville - 7th Street between 2nd Ave & 3rd Ave. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,2077.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jAjxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.1 South Africa Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,2077.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jAjxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.2 Johannesburg Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,2077.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jAjxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.3 Melville Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,2077.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jAjxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.4 Melville Site Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.5 Melville Attractions Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.6 Melville Zoning Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.7 Melville Routes Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.14 Melville Usage Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.15 Melville Venues Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.16 Site Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.17 Site Vegetation Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.17 Site Vegetation Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.18 Site Activity Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.19 Site Sidewalk Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.23 Site Contour Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.24 Site Building Use Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.32 Site Buildings Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).

Author, 2023. Author's adapted drawing of Figure 9.33 Site Climate Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23).
Author, 2023. Author's adapted drawing of Figure 9.34 Site Climate Map. [image] available at:
Google Earth [WWW Document], n.d. URL https://earth.google.com/web/search/melville/@-26.1755589,28.00728195,1704.68999343a,207
7.09521832d,35y,0h,45t,0r/data=CnMaSRJDCiUweDFlOTUwYjhmZTQ2NGEyOGI6MHgyMGQzYmJhY2JhNmMyNGU5GWr_XmXILDrAISOJuf8jA
jxAKghtZWx2aWxsZRgCIAEiJgokCRD6dftLUBpAEcBNABtw-j7AGYHRB310zFNAIRVSkgpg2kTAKAI (accessed 6.5.23)
Axis Building / dhk Architects [WWW Document], 2019. . ArchDaily.
URL https://www.archdaily.com/916537/axis-building-dhk-architects (accessed 9.6.23).
Axis Century City in Cape Town, n.d. . dhk Architects.
URL https://www.dhk.co.za/projects_type/axis-century-city/ (accessed 9.6.23).
Institute for the Culinary Arts / HDR Architecture | ArchDaily [WWW Document], n.d.
URL https://www.archdaily.com/121226/institute-for-the-culinary-arts-hdr-architecture (accessed 9.6.23).
Short history of trams in Johannesburg, 2013. . Johannesburg 1912 - suburb by suburb research.
URL https://johannesburg1912.com/2013/06/01/short-history-on-trams-in-johannesburg/ (accessed 9.6.23).
Valladolid Art School / Estudio Primitivo González | eGa | ArchDaily [WWW Document], n.d.
URL https://www.archdaily.com/997208/escuela-de-arte-valladolid-estudio-primitivo-gonzalez-ega?ad_source=search&ad_
medium=projects_tab (accessed 9.6.23).
Webmaster, n.d. 7th Street, Melville, Johannesburg. Gauteng Film Commission.
URL https://gautengfilm.org.za/gauteng-film-commission-directory/listing/7th-street-melville/ (accessed 9.6.23).

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

SCHOOL of ARCHITECTURE PLANNING

19 May 2023

Faculty of Engineering and the Built Environment:

Ethics clearance letter:

Dear Sebastian Gorner

Student number (1880785), this letter confirms that your ethics application has been cleared. Your clearance/protocol number: SOAP012/04/2023

Yours sincerely

Lerato Nkosi

School of Architecture and Planning, Faculty of Engineering and the Built Environment, John Moffat Building, Wits, 2050, South Africa
Tel: +27 11 717- 7692| Email: lerato.nkosi@wits.ac.za | **www.wits.ac.za**