

# Re-Connecting...

*A Redevelopment of the Wynberg Precinct*

JASON ALLAN CHOKUPERMALL

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*A Redevelopment of the Wynberg Precinct*

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

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**03 November 2016**

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## ABSTRACT

### Re-Connecting...

This dissertation aims at motivating a redevelopment of the Wynberg Precinct which includes reconnecting the western and eastern fabric of the precinct which has been initially divided due to the installation of a train station. Wynberg is located in the southern suburb of Cape Town and is a highly active transport interchange which includes a train station and 3 taxis ranks with an estimated average daily density of 21,000 commuters. Subsequently, the high density of commuters transiting daily through the Wynberg precinct has consequently generated the opportunities for informal traders – street traders - to appropriate open spaces and street edges within the precinct to develop their micro enterprises. Associated together, the transport interchange, the street traders and commuters, had overtime shaped the character of the precinct and stimulate the public realm.

This dissertation is also motivated by the current ‘informal trading and mass commuting’ phenomenon arising within the Wynberg precinct. The precinct is an arena for contest for spaces and spatial inclusivity between the street traders, commuters and taxis. The planning and configuration of the Wynberg precinct has predominantly been driven towards the integration of the train station and the taxis ranks but not much considerations have been placed on the integration of the street traders in the precinct. Consequently, as a result of such planning attitude, traders contest for space to trade, pedestrians contest for clear sidewalks while Taxis contest for clear streets without any obstructions.

Furthermore, the dissertation also aims at reconnecting the commuter’s routes between the transport facilities. There is a discontinuity in the commuter’s routes from one transport facility to the other. Commuters are required to find alternative routes – using the street itself - to have access to their respective transport facilities since the street traders in the precinct occupies the sidewalks. Subsequently, using the street as a pedestrian route holds a further impact on the vehicular flow around the precinct.

The dissertation firstly introduces the Wynberg Precinct and explores the contest for spaces within the precinct and the causes of the contests. It highlights the disconnection of the Wynberg Precinct due to the installation of the train station and points out key infrastructural challenges faced by both commuters and street traders due to the actual planning and configuration of the precinct. Subsequently, the dissertation explores at a broader context the ‘contest for spaces’, the legitimate claims from different bodies and also the responses from such contest. It uncovers how informal microenterprises negotiate the right of entry to trading spaces and further how

bureaucracy and urban management influence the viability and sustainability of the informal microenterprises.

Consequently the dissertation uncovers at a broader context the different challenges faced by informal traders. Informal traders face 'Infrastructure and Planning' and 'Government Policy and Practice' Challenges. It is essential to understand the repercussions of such challenges onto the informal microenterprises operations. It highlights the different amenities and services that informal traders are striving for and further explore how Government Policy and Practice also influence their activities while subsequently making them vulnerable to bureaucratic interferences. The dissertation also analysed the different types of street traders and the various types of trading structures which they used as survival strategies. It is essential to understand the operations of street traders together with the current trading structures being used before aiming at developing new infrastructures to support their businesses.

The dissertation also explores the authorities who regulate the informal traders and trading activities in Cape Town. It focusses on the City of Cape Town Spatial Planning Principles regarding informal traders, which includes; Prioritised Areas, Spatial Allocation and Infrastructural Provision. Furthermore, the dissertation studied how the theories and principles of Transit Oriented Development, composed with the Principles of 'Placemaking' around transport interchanges – highlighted in **Appendix A** - can be adapted to the Wynberg Precinct. Subsequently, the dissertation compared several aspects of local and foreign urban renewal projects – highlighted in **Appendix B** and **Appendix C** – primarily regarding; Spatial Planning & Typologies, Materiality, Shelter and Associated Amenities so that design informants can be gathered for the redevelopment of the Wynberg precinct.

Following the research chapters, the dissertation focussed into the Wynberg Precinct and analysed the types and structural typologies of the street traders operating within the precinct. It further analyses the commuter's realm and the street trader's realms. The dissertation in reference to the theoretical research examines how other programs can be adapted to further stimulate the civic life within the precinct. Subsequently, it explores how the transport infrastructures can be connected and how the intervention can link the western and eastern fabric of Wynberg. The aim of this dissertation is to reconnect the western and eastern fabric of the precinct while providing the community with a civic building of utilitarian nature and civic prominence which can sustain both the 'street trading and mass commuting' phenomenon arising in the Wynberg Precinct.

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## CHAPTER I

### Introduction to the Wynberg Precinct

*The aim behind this chapter is to introduce the Wynberg Precinct. This chapter explores the contest for spaces within the precinct and causes of the contests. The aspiration behind this chapter is to highlight the disconnection of the Wynberg Precinct due to the installation of the train station and the rail tracks. This chapter also points out key infrastructural challenges faced by both commuters and street traders due to the actual planning and configuration of the Wynberg precinct. This chapter subsequently highlight the aims of this dissertation.*



Figure 1: Wynberg Context



Figure 2: Wynberg Street Traders



Figure 3: Wynberg Street Traders



Figure 4: Wynberg Station Road



Figure 5: Wynberg – Access to train station

## 1.0 INTRODUCTION TO THE WYNBERG PRECINCT

Wynberg, located in the southern suburb of Cape Town, is composed with a very active logistics including street traders, three taxi ranks and a train station. Wynberg is highly dense on the western and southern part. Due to the strategic location of Wynberg and its connectivity to the city centre, a train station was installed in 1864. Subsequently, due to the high density of commuters, three 3 taxis ranks were also installed to operate as secondary transport feeder. There is an estimated daily amount of 14,823 commuters using the Wynberg Station Transport Interchange on the Western Side (Cape Town Route) and 6, 781 using the Wynberg Station Transport Interchange on the Eastern Side<sup>1</sup>. Being a highly active and dense transport interchange, the Wynberg precinct has generated opportunities for informal traders - through street trading - to appropriate street edges and in-between-spaces so as to develop their burgeoning enterprises. These three entities – transport interchanges, street traders and commuters - had overtime shape the character of the precinct and stimulate the public realm.

All three elements composed together stimulate the civic life and shape the character of the vicinity. Street traders provide opportunities for commuters to break from their transit rhythm. However, the precinct is also an arena for contest for spaces and spatial inclusivity between those three entities. The planning and configuration of the Wynberg precinct has predominantly been driven towards the integration of the train station and the taxis ranks. Not much consideration has been placed on the integration of the street traders into the precinct. Consequently, such planning attitude has generated contest for spaces; traders contest for space to trade, pedestrians contest for clear sidewalks while Taxis contest for clear streets without any obstructions. Furthermore, the infrastructural supports at Wynberg Precinct are also predominantly driven towards the train station and the taxi ranks.

Regarding the street traders, no infrastructural supports have been incorporated to support the realm of street trading. The street traders operating within the Wynberg precinct strive to have access to infrastructural supports associated with water, sanitation, waste removal, shelter and storage. The street traders lack access to trading amenities, they make use of temporary and moveable structures to trade. Furthermore, these structures need to be assembled and disassembled daily. The street traders of the Wynberg precinct don't have access to onsite storage and shelter. They are also vulnerable to the climatic conditions and weather hazards which significantly affect their operations.

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<sup>1</sup> City Of Cape Town – Integrated Transport Plan: Transport for Cape Town Draft 2013 – 2018, pg. 55

Furthermore, due to the Wynberg train station and rail tracks, the sub-urban fabric of Wynberg has been divided into two parts. On the western side of the precinct is located the entrance and exit of the Wynberg train station together with two taxi ranks. As on the eastern side of the precinct, it holds another taxi rank<sup>2</sup>. In an attempt to reconnect the western and eastern part of the Wynberg precinct, an under-path has been integrated below the rail tracks. However, the under-path is used by both vehicles and commuters. The under-path works as an effective transit corridor for vehicles but however, it does not optimise the commuter's journey transiting from one transport facility on the western side to the other on the eastern side or vice versa. To cater for commuter's movement, a mere sidewalk has been integrated on the edge of the under-path. However, during peak hours and due to high density of commuter's transiting from either side of the Wynberg Precinct, the sidewalk is often overcrowded and commuters are forced to walk on the street which is subsequently hazardous and which also hampers traffic flow in the under-path.

Furthermore, regarding commuter's movement between the transport facilities - Train station and taxi ranks - there is a discontinuity in the commuter's routes. Commuters are forced to cross the streets crammed with taxis so as to access one transport facilities from the other. Subsequently, since street traders occupy the sidewalks, commuters are eventually forced to find alternative routes or path to reach their destination, sometimes the streets being the only mean which is however an important amenity for the proper flow of taxis.

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<sup>2</sup> **Taxi Ranks Routes :**

- Western Side Taxi Rank 1 Routes: khayelitsha Site C, Elitha Park – Harare, Samora – Lower Crossroads, Delft – Philippi, Nyanga – Gugulethu – Crossroads
- Western Side Taxi Rank 2 Routes: Retreat, Houtbay, Constantia
- Eastern Side Taxi Rank 3 Routes: Parkwood, Plantation Rd, Hanover Park, Wetton Circle Hypermarket, Ottery Buck Road, Lotus River, Italian Road, Busy Corner, Strandfontein Village, Pelican Park  
Mitchells Plain – Town Centre

# 1.1 Infrastructural Support

## Wynberg Precinct

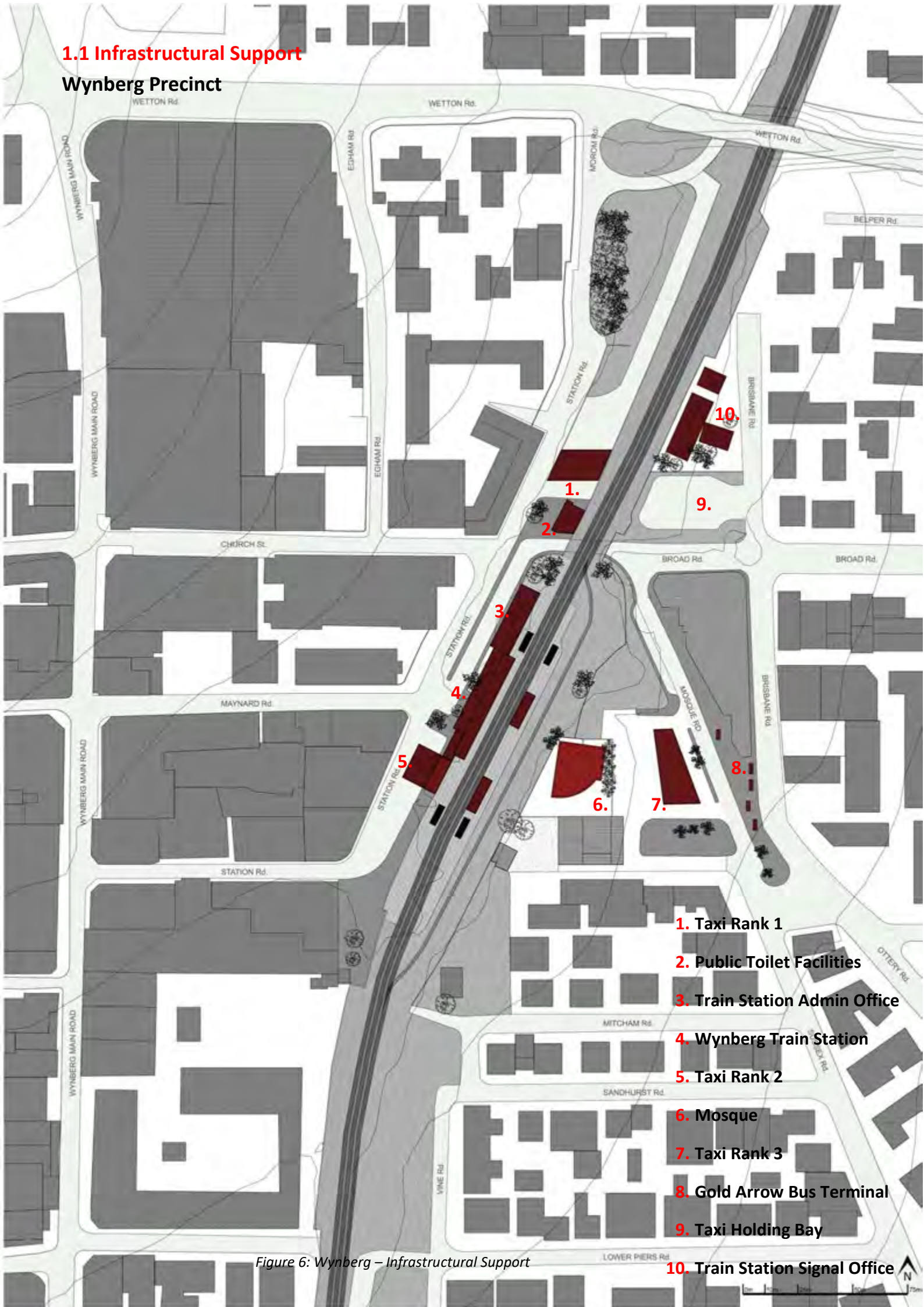


Figure 6: Wynberg – Infrastructural Support

10. Train Station Signal Office





Figure 7: Wynberg – Infrastructural Support – Train Station



Figure 8: Wynberg – Infrastructural Support – Train Station



Figure 9: Wynberg – Infrastructural Support – Taxi Rank 2



Figure 10: Wynberg – Infrastructural Support – Taxi Rank 3

Wynberg Precinct

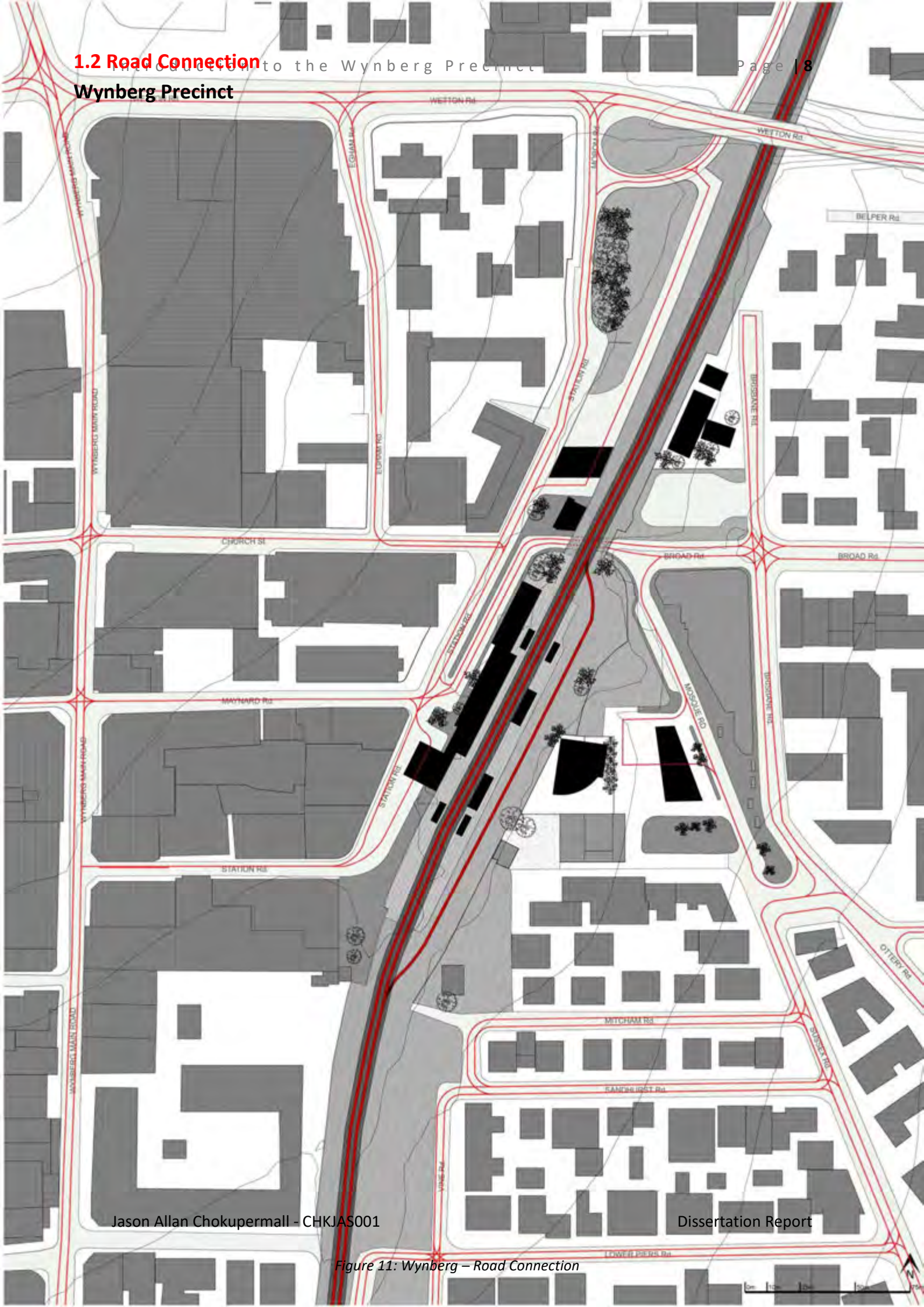


Figure 11: Wynberg – Road Connection



**1.3 Disconnection of the Wynberg Precinct**  
**Under-Path**

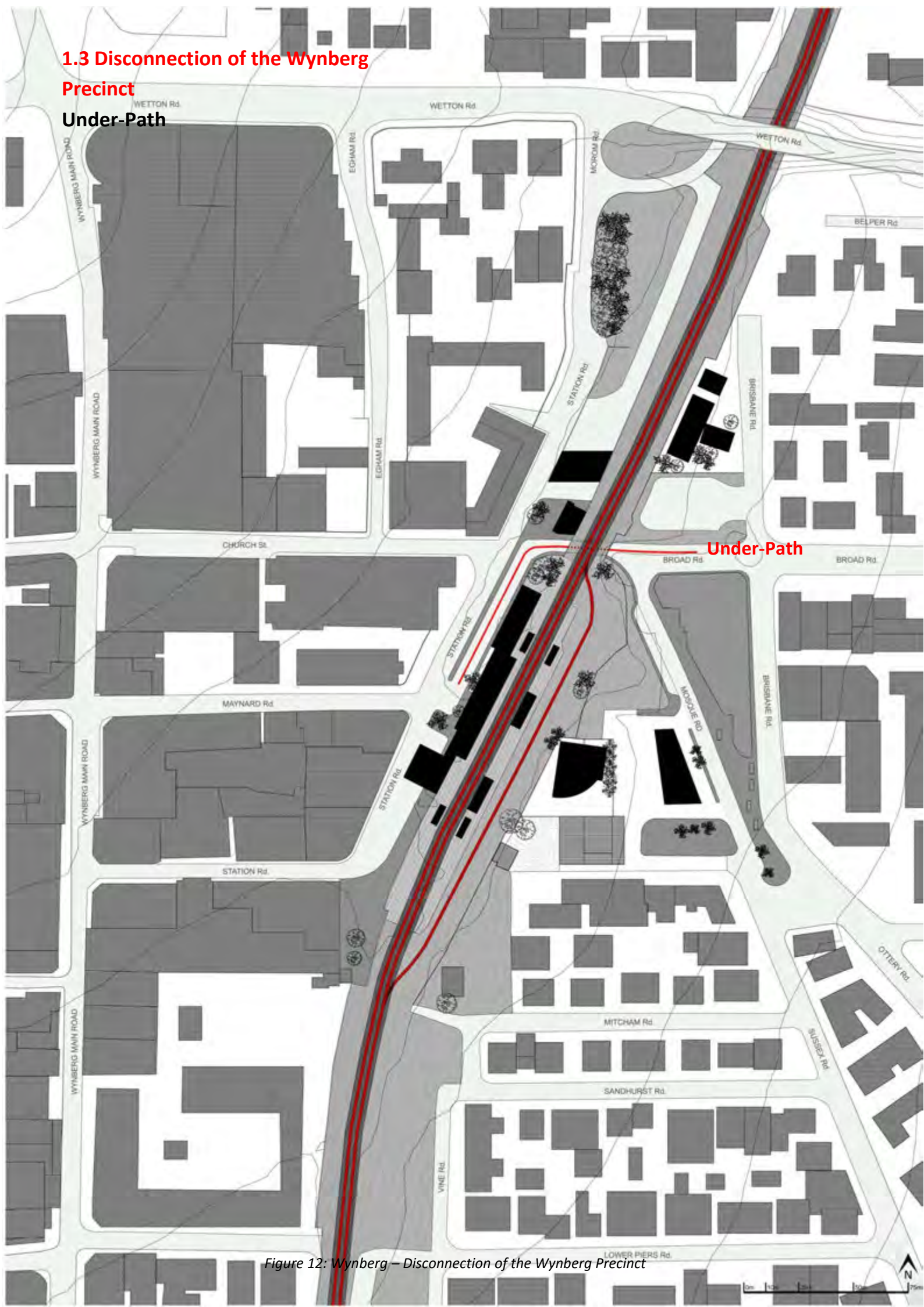


Figure 12: Wynberg – Disconnection of the Wynberg Precinct



Figure 13: Wynberg – Under-path Walkthrough

## 1.4 Commuter's Routes

### Wynberg Precinct

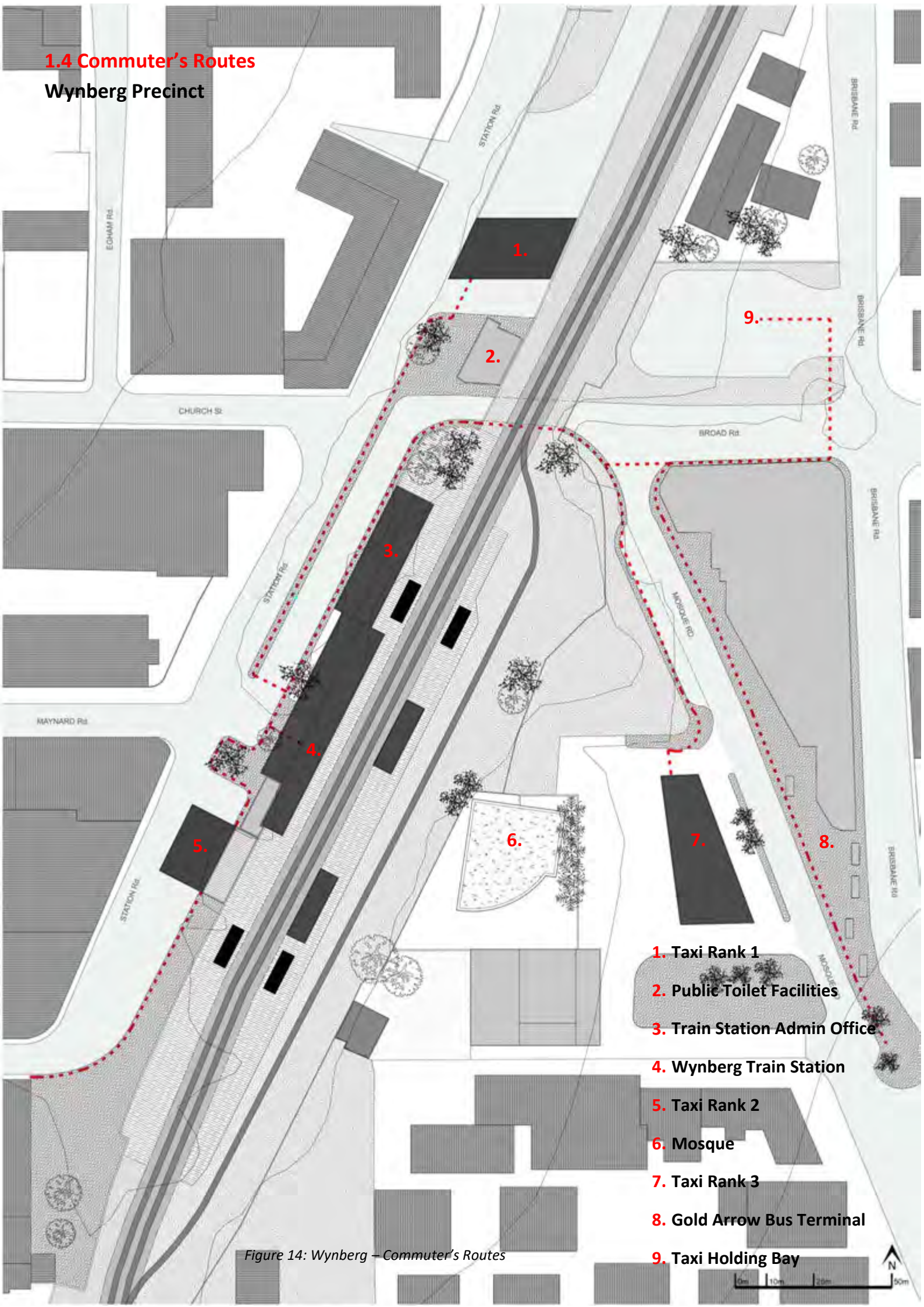
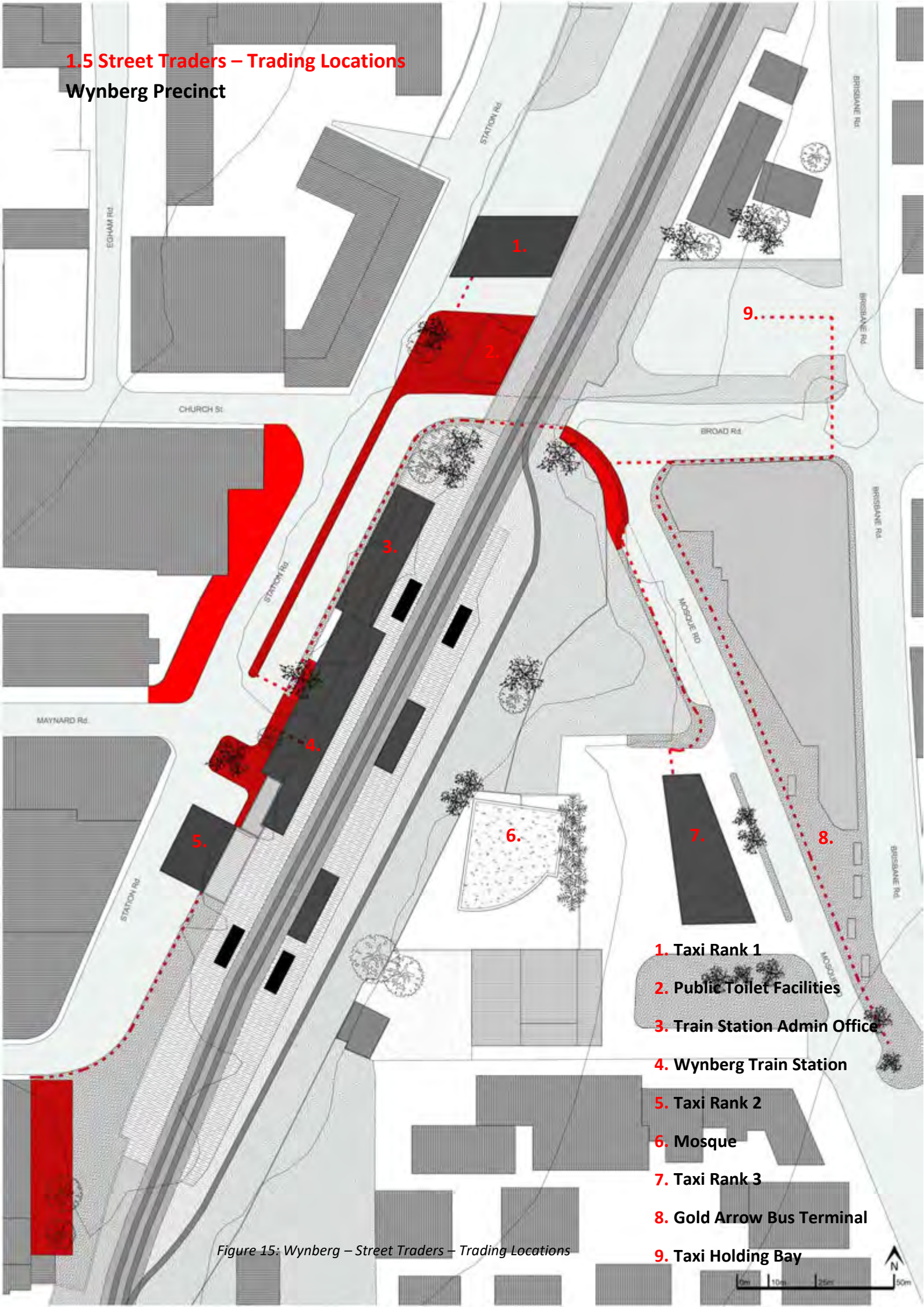


Figure 14: Wynberg – Commuter's Routes

1. Taxi Rank 1
2. Public Toilet Facilities
3. Train Station Admin Office
4. Wynberg Train Station
5. Taxi Rank 2
6. Mosque
7. Taxi Rank 3
8. Gold Arrow Bus Terminal
9. Taxi Holding Bay

# 1.5 Street Traders – Trading Locations Wynberg Precinct



- 1. Taxi Rank 1
- 2. Public Toilet Facilities
- 3. Train Station Admin Office
- 4. Wynberg Train Station
- 5. Taxi Rank 2
- 6. Mosque
- 7. Taxi Rank 3
- 8. Gold Arrow Bus Terminal
- 9. Taxi Holding Bay

Figure 15: Wynberg – Street Traders – Trading Locations





Figure 16: Wynberg 'Table' Traders



Figure 17: Wynberg 'table' Traders – Rain Condition



Figure 18: Wynberg 'Sidewalk Ground' Traders



Figure 19: Wynberg 'Sidewalk Ground' Traders -Rain Conditions



Figure 20: Wynberg- day time



Figure 21: Wynberg- End of Trading Hours

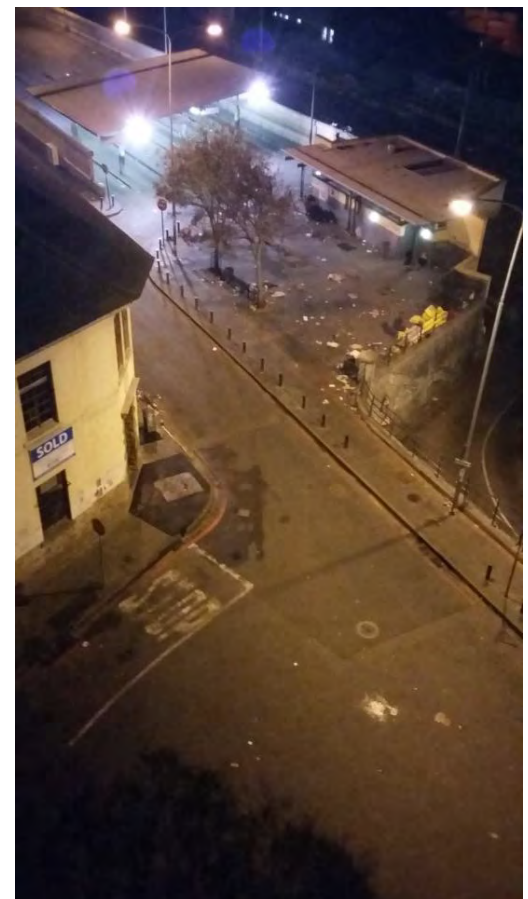


Figure 22: Wynberg- Night

## 2.0 AIMS OF DISSERTATION

The aim of this dissertation is to motivate a redevelopment of the Wynberg precinct which will aim at reconnecting the western and eastern fabric which has been divided due to the installation of the train station and the rail tracks. The dissertation aims at finding an alternative solution to reconnect the western and eastern fabric for commuters rather than using the actual under-path which is currently more effective as a transit corridor for vehicles. The dissertation also aims at reconnecting the commuter's routes between the transport interchanges while further optimising the realm of street trading by responding to the current infrastructural challenges face by street traders operating in the precinct.

The Wynberg precinct holds the Wynberg train station and three taxi ranks which supports the transport system. Subsequently the transport system is then associated with street trading activities which stimulate the civic life and shape the character of the vicinity. The Wynberg precinct has the potential to provide for a 'one-stop' form of service which caters for a broader accessibility which can further stimulate commuter's activities and experience in one single trip. Furthermore, achieving efficient and integrated public transport system is arguably one of the greatest priorities in South African Cities<sup>3</sup>. Public infrastructures – primarily transport interchanges – are places of opportunities for street traders. However, recognizing the significance of informal trading activities - which is a prominent employment generator and also substantial economic contributor – by integrating them together with transport system is also an infrastructural challenge.

Street traders hold different modes of operations and have different infrastructural needs. It is critical to have a broad understanding of street trader's contest for spaces and spatial inclusivity, challenges, streets trader's types and their structural typologies before aiming at catering for new infrastructures to support their businesses. The redevelopment of the Wynberg precinct should not only cater for the public to experience public life but also to meet the need of street traders while also creating more dignified working spaces for them<sup>4</sup>.

Furthermore, it is also important to explore the theories on progressive development of 'special places' around transport interchanges, the principles of transit oriented development regarding train station's configuration and the principles of placemaking around transport interchanges which provides means to; enhance urban quality and street connectivity, reduce traffic and parking space, cater for mixed use land, more convenient and effective transport stations and

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<sup>3</sup> Dewar & Todeschini, 2004 pg. 56

<sup>4</sup> Nteta - Cape Town Partnership, 2015

interchanges which can generate more opportunities to economic happenings and freeing up income<sup>5</sup>.

Furthermore, South Africa has initiated several developments forming part of an Urban Renewal Strategy aiming at integrating marginalised communities, primarily integrating street traders and taxi operators into the public realm. It is essential to explore these **Urban Renewal Projects** and understand how they respond in terms of functionality and architectural dynamism. These Urban Renewal Projects provide interesting design informants – primarily through; Spatial Planning & Typologies, Materiality, Shelter, Associated Amenities, and Iconography and Representation – which can be adapted to the Wynberg precinct so as to respond to the current infrastructural challenges face by street traders operating in the precinct.

The aim of this dissertation is to reconnect the western and eastern fabric of Wynberg while providing the community with a civic building which can sustain both the ‘street trading and mass commuting’ phenomenon arising in the Wynberg Precinct.

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<sup>5</sup> Luyt - Future Cape Town, 2015

### 3.0 GLOSSARY OF TERMS

#### **Contest for Spaces and Spatial Inclusivity**

Street traders contest for prime trading locations which are subsequently high pedestrian density zone for instance; transport interchanges, shopping and commercial vicinities or office locations. However, such sites are also 'conflict zone' or 'exclusive and elite' precincts where consequently informal trading are highly contested and persecuted<sup>6</sup>.

#### **Urban Public Spaces**

The architecture of urban public spaces in African cities is primarily focus towards the concepts of aesthetic and public while the Government policies further aim at expressing 'order' and 'control'. Such ideologies from the Bureaucracy and from urban administrators have a major influence on the architecture and typologies of the Urban Public Spaces. Such ideologies also dictate the right of entry to the Urban Public Spaces which frequently ignore the significance of the urban public spaces in supporting the realm of informal trading<sup>7</sup>.

#### **Challenges**

Informal traders face 'Infrastructure and Planning' and 'Government Policy and Practice' challenges. Informal traders operating in public spaces often face the challenge of city services and workplace amenities which include water, sanitation, waste removal, shelter and storage<sup>8</sup>.

#### **Street Traders - Types & Structural Typologies**

Street traders use different type of structures which are either permanent or moveable. These structures differ in sizes; from extra-small to extra-large structures depending on the type of trading activities being used for and also on the street trader's resources available for trading structure. The typologies and materials of these structures also vary in regards to the mode of trading.

#### **Transit Oriented Development**

Transit oriented development provide means to; enhance urban quality and street connectivity, reduce traffic and parking space, cater for mixed use land, more convenient and effective transport stations and interchanges which can generate more opportunities to economic happenings and freeing up income<sup>9</sup>.

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<sup>6</sup> Brown, 2006 pg.12

<sup>7</sup> Brown, 2006 pg.10

<sup>8</sup> Roever, 2014 pg. 59

<sup>9</sup> Luyt - Future Cape Town, 2015

**Regulations**

The Informal trading Unit use the Informal Trading by-Law and policy to regulate all informal trading activities. The Informal trading Unit regulates the informal activities by establishing where trading should take place, the types of trading activities permitted and also the operating hours while further establishing the obligations and responsibilities of traders<sup>10</sup>.

**Urban Renewal Projects**

South Africa has initiated several developments forming part of an Urban Renewal Strategy aiming at integrating marginalised communities, primarily integrating street traders and taxi operators into the public realm.

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<sup>10</sup> City of Cape Town, 2014 - Law Enforcement: Informal trading unit.

## CHAPTER II

### The Contest for Spaces & Spatial Inclusivity

*The aspiration behind this chapter is to explore at a broader context the 'contest for spaces' and the legitimate claims from different bodies and also the responses from such contest. This chapter aim explore the role of urban public spaces in sustaining realm of informal trading and also its role in in reflecting the concepts of an urbanising world<sup>1</sup>. The chapter aim at uncovering how informal microenterprises negotiate the right of entry to a trading space and further bureaucracy and urban management influence the viability and sustainability of the informal microenterprises.*

#### 4.0 INFORMALITY – Street Traders

For millions of South African workers, 'Informality' has been the real nature of their job conditions. Informality has a long history in South Africa. Due to the Apartheid racial discriminatory legislation, Black South African workers struggled for decent work conditions even though employment contract and labour laws were established. The collapse of Apartheid regime in 1994 also resulted in the intensification of informalities in the labour force. The change in legislation further represented the changed from discriminatory employment laws towards a more flexible labour market. The City of Cape Town restructured its frameworks with the new laws explicitly articulating a polarity between social justice and flexibility. However, The South African Municipal Workers Union –SAMWU- branch in Cape Town also claimed that the change to formal democracy has also been accompanied with a laissez-faire economic liberalism<sup>11,12</sup>.

Informal micro enterprises are prominent contributors to the life of the City of Cape Town and also it's the economy. Informal trading activities generate jobs for approximately 18% of Cape Town economically active residents consequently contributing to approximately 12% of Cape Town's economy<sup>13</sup>. However, despite being a prominent employment generator and also an essential economic stimulus, informal micro enterprises are bounded to restrictive social norms, ambiguous regulatory frameworks, or legal responses that hold a polarity between indifference and eviction<sup>14</sup>. Street trading is an essential component of the informal economy and the labour market. However, it is also one of the most visible and controversial component of the informal sector<sup>15</sup>. Street traders are often considered illegal and they are primarily the most affected by interferences from the state, local authorities and business elites. City streets and spaces are the arena for contest and civil unrest in which street traders are frequently the advertent victims. There are several legitimate claims and contest for spaces in cities. City administrators seek to control spaces and motivates developments that aim at making the City beautiful, traffic police aim at improving vehicular transit in the city while business investors seek for a city free of informal chaotic scenes<sup>16</sup>.

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<sup>11</sup> Lindell, 2010, pg. 116

<sup>12</sup> Laissez-faire economic liberalism is an economic theory which originates from the 18th century. Laissez-faire economic theory is the government's exclusion from business affairs.

<sup>13</sup> Sassen - Future Cape Town, 2015

<sup>14</sup> Sassen - Future Cape Town, 2015

<sup>15</sup> Brown, 2006 pg.7

<sup>16</sup> Brown, 2006 pg.3

## 5.0 CONTESTED SPACES

The collapse of Apartheid regime in 1994 and the change from discriminatory employment laws towards a more flexible labour market resulted into a rise in informal microenterprises, primarily through street trading which subsequently intensified the competition for trading spaces in the city or other high pedestrian's density precincts<sup>17</sup>. Street traders contest for prime trading locations which are subsequently high pedestrian density zone for instance; transport interchanges, shopping and commercial vicinities or office locations. However, such sites are also 'conflict zone' or 'exclusive and elite' precincts where consequently informal trading are highly contested and persecuted<sup>18</sup>.

The contest for space occurs through the manifestations and claims of different bodies, for instance, from the protectionist ideology of vested interest such as from formal businesses or owners of prime land, from urban administrator's expression of control and order, or from the bureaucracy through the expression of political power and control<sup>19</sup>. The responses from such contest vary between suppression and eviction of street traders to more co-operative measures associated with 'clientalism'.

One integral measure of contemporary city management is the exclusion of 'undesirable activities'. Subsequently the contest for space leads to a paradox since most governments aim at clearing the city streets to reduce congestions while on the other hand; they are also striving to decrease poverty rates through the development of microenterprises. Consequently, city policies sustain a complex agenda combining persecution, tolerance, regulation and promotion<sup>20</sup>.

## 6.0 'URBAN PUBLIC SPACES'

The architecture of urban public spaces in African cities primarily emphasises on the concepts aesthetic and public order. Furthermore, Government policies are also driven towards the expression of 'order' and 'control'. Such ideologies and parameters from the Bureaucracy and from urban administrators influence the architecture and typologies of public spaces subsequently

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<sup>17</sup> Lindell, 2010, pg. 116

<sup>18</sup> Brown, 2006 pg.12

<sup>19</sup> Brown, 2006 pg.12

<sup>20</sup> Brown, 2006 pg.12

ignoring the value and significance of public spaces to the livelihood of the poor and to realm of informal trading<sup>21</sup>.

Urban Public spaces sustain the panoply of activities which stimulates the public realm while further being an essential element in shaping the character of the vicinity. The character of urban the public spaces is further represented by the architecture of the local landscape, streets, public amenities and the effervescence of activities within the urban context and these subsequently reflects the concepts of an urbanising world<sup>22</sup>. The literatures on public spaces and urban spaces have been extensively elaborated. Architects and urban designers main exploration on public spaces is driven towards how physical forms and spatial hierarchies influence people's movement and experience of a designed public space. Architects while designing public spaces aim at stimulating social exchange so as to generate an active street culture. Geographers and sociologist literature explore the social and cultural factors that generate parameters for the design and the control of spaces<sup>23</sup>.

The term 'Urban public spaces' include squares, streets and roads, unoccupied land and edges, and further other spaces which has communal use and rights of entry. However, such urban public spaces might also be of private or unidentified ownership. For instance, an empty plot of land which is privately owned but however currently being use by traders for trading would also be considered as an urban public space<sup>24</sup>.

The right of entry to a space is controlled through boundaries and social practices which differentiate the public realm and the private realm. Private spaces are fragmented and highly controlled while also being significant resources for the informal traders to develop their microenterprises<sup>25</sup>. Urban public spaces are key trading locations and are economically feasible. However, to access and trade in urban public spaces, entrepreneurs might pay substantial amounts. The 'Use of and access to space' and 'right to the street' are the two main themes which define how informal enterprises acquire trading spaces. The 'Use of and access to space' is the informal negotiations of the informal traders to obtain right to access trading spaces, rental, tenure or

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<sup>21</sup> Brown, 2006 pg.10

<sup>22</sup> Brown, 2006 pg.17

<sup>23</sup> Brown, 2006 pg.10

<sup>24</sup> Brown, 2006 pg.10

<sup>25</sup> Brown, 2006 pg.10

infrastructures. The 'right to the street' refer to the economic happenings in public spaces or streets through the private appropriation of public property<sup>26</sup>.

Urban public spaces located in high density precinct are the most profitable trading locations however; they are also the most contested spaces. There are several legitimate claims over such spaces; from local government, established enterprises and also formal traders who contest the right to trade<sup>27</sup>. Another legitimate spatial claim comes from the pedestrians. Street traders frequently use sidewalks or pavements for trading which on the other hand are also important pedestrian route<sup>28</sup>. Furthermore, urban public spaces are often designed and restricted to specific purposes. For instance, some urban public spaces might be of historical or ceremonial importance<sup>29</sup>. The use of urban public spaces such as 'in-between' spaces, 'edge' spaces, side-walks or road sides are constantly increasing while also being highly contested. Subsequently, this contest also generates new challenges for city managers and urban administrators to control and manage spaces<sup>30</sup>.

Few contemporary urban management schemes acknowledge urban public space economic significance to the poor<sup>31</sup>. In low-income cities, the government development policies tend to overlook the significance of urban public spaces to the informal microenterprises<sup>32</sup>. The control and restrictions to urban public spaces is also a tool to demonstrate administrative power of the bureaucracy. Urban public spaces also play a vital role for governing business leaders in sustaining their economic and social aspiration. Local government and urban administrators aim at projecting the image of a modern city in hope to attract foreign investors or to enhance highway network. Consequently, through these aspirations, Cities might undertake radical redevelopment or beautification including spatial cleansing hence, relocating or evicting any informal activities in those space<sup>33</sup>.

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<sup>26</sup> Brown, 2006 pg.11

<sup>27</sup> Brown, 2006 pg. 175

<sup>28</sup> Brown, 2006 pg. 175

<sup>29</sup> Brown, 2006 pg.11

<sup>30</sup> Brown, 2006 pg. 175

<sup>31</sup> Brown, 2006 pg.11

<sup>32</sup> Brown, 2006 pg.10

<sup>33</sup> Brown, 2006 pg.24

## CHAPTER III

### The Challenges

*The aspiration behind this chapter is to uncover the different challenges faced by informal traders. Informal traders face 'Infrastructure and Planning' and 'Government Policy and Practice' Challenges and it is essential to understand what are the repercussions of such challenges onto the informal microenterprises operations. This chapter aim at exploring the different amenities and services that informal traders are striving for and further explore how Government Policy and Practice also influence their activities while subsequently making them vulnerable to bureaucratic interferences.*

## 7.0 'INFRASTRUCTURE AND PLANNING' AND 'GOVERNMENT POLICY AND PRACTICE' CHALLENGES

WIEGO - Women in Informal Employment Globalising and Organising – published a study which elaborates on the challenges faced by informal traders in the global south<sup>34</sup>. WIEGO is a team of researchers, policymakers, and activists around the world creating a global 'action-research-policy' network which aim at improving the working conditions of the poor, primarily women in the informal sector. 'Infrastructure and planning' and 'Government policy and practice' were highlighted as principal challenges faced by the Informal microenterprises.

The 'Infrastructure and planning' challenges faced by the informal traders are related to fix trading spaces, city services and workplace amenities. A fixed and profitable trading location is one of the primary necessities for the informal traders. It is vital for informal traders to hold a fix trading location, hence developing a clientele which is consequently economically significant. Informal traders often face relocation or eviction challenges due to the construction or redevelopment of public spaces or due to new urban development such as public transport infrastructures<sup>35</sup>.

Informal traders operating in public spaces often face the challenge of city services and workplace amenities which include water, sanitation, waste removal, shelter and storage<sup>36</sup>. Access to running water and sanitation are basic necessities for a work place. Informal traders often face inadequate access to tap water and this is further a particular concern to informal microenterprises dealing with food preparation. Inadequate access to running water may have a wider consequence on the economy of the informal traders, where sometimes traders need to pay for porters to buy and transport water to their trading site<sup>37</sup>. Furthermore, the study from WEIGO, claimed that approximately 89% of traders in market has access to toilets compared 69% of street traders who have access to these services. However, in the case of street traders, they have to pay to third parties to have access to such facility, rather than having the infrastructure accessible at their workplace as a benefit of rent paid<sup>38</sup>. Traders operating in markets or fixed stalls are more likely to have access to workplace amenities compared to mobile or temporary street traders<sup>39</sup>. Waste removal is another concern which affects the informal microenterprise in African cities. Even in

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<sup>34</sup> WIEGO, 2016

<sup>35</sup> Nteta - Cape Town Partnership, 2015

<sup>36</sup> Roever, 2014 pg. 59

<sup>37</sup> Roever, 2014 pg. 33

<sup>38</sup> Roever, 2014 pg. 33

<sup>39</sup> Roever, 2014 pg. 34

established trading space where traders currently pay for sanitation and waste removal, the services are inefficient and underprovided<sup>40</sup>.

Shelter and storage is a particular concern for informal traders in African Cities. The climate of South Africa lies between hot sun and heavy rain and such weather polarity highly influence the operation of street traders. They often find their products damaged due to the weather conditions. Street traders have to stop trading while it rains, which resulted in loss of working hours and potential sales. They further have to seek for shelter under the veranda of shops or other formal businesses in the proximity of their trading sites. However, at such location they are also vulnerable and lambasted by the regulatory bodies<sup>41</sup>. *“When it rains,” one said, “because I do not have shelter, I drag my stock to the dry part under the veranda of the shop that is next to my trading site. The owner does not have a problem, but when the police see this, they harass me and give me a fine”<sup>42</sup>.*

Similarly to shelter, access to storage facilities is also another challenge for the informal traders. Secure storage facilities are fundamental infrastructures needed by most informal traders. Without access to secure storage, traders need to reduce and limit their stock to what they can sell in one day. In the case where street traders have access to storage, their concern is that their products are often stolen or damaged since storage facilities are overloaded. *“It is not fair that we are paying high fees to the municipality but our goods are not well looked after. You leave your stuff at night, [and] the next day people have stolen everything and nobody is going to compensate you.” “We have to keep a lot of things on top of each other, and you find that some goods are broken because of that”<sup>43</sup>.*

Informal traders also face ‘Government policy and practice’ challenges. Informal enterprises in Cape Town are regulated by the Informal Trading Unit and it operates in relation to the Informal Trading by-law and policy<sup>44</sup>. The challenge for the informal microenterprises is that regulations and policies often hamper the dynamism and flexibility of informal trading activities, consequently being detrimental to the informal economy<sup>45</sup>. Government policies are driven towards the expression of ‘control’. According to the Trading by-law and policy, it is compulsory for informal traders to hold trading permits so as to operate legally<sup>46</sup>.

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<sup>40</sup> Roever, 2014 pg. 34

<sup>41</sup> Roever, 2014 pg. 34

<sup>42</sup> ‘Street trader’s quote’ - Roever, 2014 pg. 34

<sup>43</sup> ‘Street trader’s quote’ - Roever, 2014 pg. 34

<sup>44</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 3.0, pg. 2086-2087

<sup>45</sup> Nteta - Cape Town Partnership, 2015

<sup>46</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 3.0, pg. 2086-2087

‘Licencing’ and ‘permit’ which enable trading activities in a legitimate space are perceived as onerous by informal traders. Furthermore, it is often the case that Government policies makes the informal microenterprises vulnerable to bureaucratic interferences that revolve around abuse of power and persecution from City officials. Informal Traders often feels excluded from the city’s landscape and it is a challenge for them to negotiate the government policies. Consequently, informal traders are sometimes left with no other alternative than to abide to policies and accept the financial burdens of the bureaucracy which are also further intensified by macroeconomic variables that subsequently affect their performance and economy<sup>47</sup>.

City services and workplace amenities are fundamental fixtures to support the informal microenterprises operations. Hence, public spaces and infrastructures should be maximised, not only for the public to experience public life but also to meet the need of informal traders while also creating more dignified working spaces for them<sup>48</sup>. It is vital for the City of Cape Town to develop an efficient informal trade management and enabling policy. Such framework should be inclusive and participatory through both public sector and traders. It is vital that regulatory authorities understand the implications of a disabling policy and its outcome on the livelihood of informal traders. It is an imperative that the informal trading policies reflect the informal sector needs and avoid abstract constraints that will perturb the flourishing of the informal trader’s economy.

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<sup>47</sup> Nteta - Cape Town Partnership, 2015

<sup>48</sup> Nteta - Cape Town Partnership, 2015

## CHAPTER IV

### Street Traders - Types & Structural Typologies

*The aspiration behind this chapter is to explore the different types of street traders and the various types of trading structures which they used as survival strategies. Street traders use different types of structures - permanent or moveable – which also vary in size, typologies and materials to support their trading activities. This chapter explore these aspects of the structures by further grouping them according to their sizes; from extra-small to extra-large structures. It is essential to explore the operations of street traders together with the current trading structures being used before aiming at developing new infrastructures to support their businesses.*

## 8.0 STREET TRADERS - TYPES & STRUCTURAL TYPOLOGIES

### 8.1 'XS' - EXTRA SMALL type of structures

#### FIRE DRUM - 'XS'

Street trading activities also involves market places for fast-food. Some common fast-food products from street traders include; braaied meat, roasted mielies, chicken dust, friend fish, fried offal and vetkoek scones. Street traders usually prepare the food on street itself while subsequently cooking it using wood fires, coal or gas. Street traders used relatively small fired drums or braai grids which are moveable and carried daily to the trading site. The average area needed for such trading activities is around 1m<sup>2</sup>. At the end of the trading day, the cooking equipments are carried away and consequently leaving the ashes from the fire and the stones which were used to support fire drum or braai grids on the site<sup>49</sup>.



Figure 23: 'XS' – Fire Drum

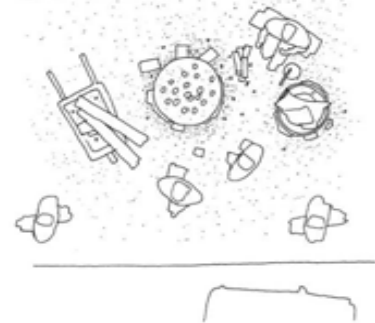


Figure 24: 'XS' – Fire Drum Sketch

#### 'MOBILE TRADERS - 'XS'

Mobile traders hold strategic advantages since they operate on foot hence, they can be directly linked to their targeted customers while displaying or vocally advertising their products. Such trading operations are relatively fast and convenient for both the traders and the consumers. Mobile traders frequently operate at taxi rank location. Some of them usually stand in the traffic selling cigarettes, snacks or newspaper to passengers inside the taxis while some of them target the commuters at the entrance of the taxi rank or pedestrians on the sidewalks<sup>50</sup>.



Figure 25: 'XS' – Mobile Traders



Figure 26: 'XS' – Mobile Traders Sketch

<sup>49</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

<sup>50</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

### TROLLEY - 'XS'

Trolleys are commonly used to collect stocks from retailers for home-based businesses and also used for door-to-door vending. Trolleys have an average area of 3m<sup>2</sup> and are widely used as a transport equipment to carry goods or moveable trading structure components to the trading site<sup>51</sup>. Trolleys are also used by street traders as a trading structure to display and sell items such cool drinks, fruits and vegetables.



Figure 27: 'XS' – Trolley

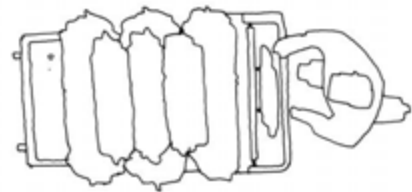


Figure 28: 'XS' – Trolley Sketch

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<sup>51</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

## 8.2 'S' - SMALL type of structures

### STAND AND UMBRELLA - 'S'

The stand and umbrella is an effective structure which provides a platform for street traders to expose their products and trade in the shade. The advantage of using such trading structures is that they are portable hence, can be easily moved and positioned close to sidewalks with high pedestrian flow. Umbrellas are also used as adverting structures for established banks or telecommunication companies hence, can be easily appropriated<sup>52</sup>. Such trading structure occupies an average trading area of 3m<sup>2</sup>.



Figure 29: 'S' – Stand and Umbrella

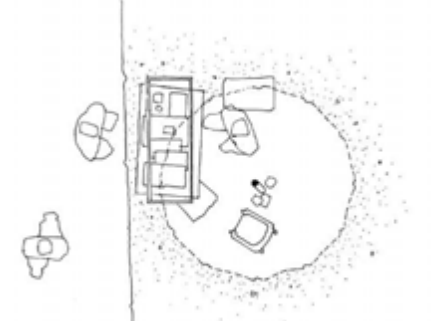


Figure 30: 'S' – Stand and Umbrella Sketch

### TABLE - 'S'

For hygienic reasons and in the moral economy of street trading, it is improper to expose food items or other comestible items on the ground. As such, table as a trading structure are widely used. Tables are very effective due to their portability hence, allowing street traders to locate strategic locations along sidewalk or open ground close to active pedestrian routes, to position the structure. Table structures relatively provide a simple display shelf or counter at waist level and occupy an average area of 4m<sup>2</sup>. Traders carefully lay their goods on the table to showcase the variety of goods which frequently includes; fresh meat, tradition medicines or electrical items<sup>53</sup>.



Figure 31: 'S' – Table

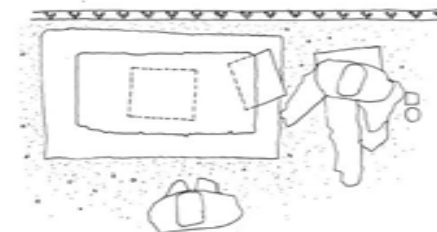


Figure 32: 'S' – Table Sketch

<sup>52</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

<sup>53</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

**VEHICLE - 'S'**

Vehicular-based businesses provide transport, delivery and collection of products services while further providing a space to store and sell goods directly. Vehicular-based trading occupies an average space of 7m<sup>2</sup>. Frequently, these types of traders use sound, music or loudhailer system to advertise their products and attract customers. Furthermore, it is often the case that such type traders make arrangements with their clients to arrive at a prearranged location and at a given time for trading purposes<sup>54</sup>.



Figure 33: 'S' – Vehicle



Figure 34: 'S' – Vehicle Sketch

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<sup>54</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

### 8.3 'M' - MEDIUM type of structures

#### GAZEBO - 'M'

The gazebo is a pre-manufactured tarpaulin structure. The primary use of the Gazebo as a street trading structure is to provide shelter from the sun and the rain. They are relatively light weight portable structures, which can be easily assemble and disassemble. Gazebo caters for an average sheltered area of 7m<sup>2</sup> and is widely used to shelter trading goods and also trading furniture; tables or shelves. It is often the case that gazebo are used as an adverting structures – for established banks, telecommunication Companies or funeral services - which promote specific products hence, they can be easily appropriated by street traders<sup>55</sup>.



Figure 35: 'M' – Gazebo

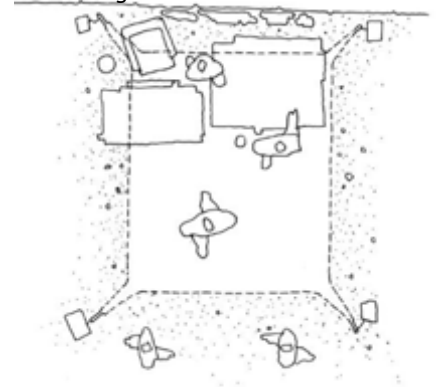


Figure 36: 'M' – Gazebo Sketch

#### TARPAULIN AND POST - 'M'

The Tarpaulin and post structure is a semi-permanent street trading structures which has an average area of 7m<sup>2</sup>. The main tectonic of such trading structure include; tarpaulin sheet, wooden posts and normally a single display platform. To be effective and to promote contact with customers, the structure should be positioned relatively close to active pedestrian routes. Hence, street traders usually install the structure near the sidewalks or on the extended street verge. Street traders carefully lay their goods on the display shelf and often, additional items are further suspended from the frame or any existing adjacent fences or walls. Such structure cater for trading activities such as fruit and vegetable stalls or stands selling electrical goods, sweets, chips or cigarettes<sup>56</sup>.



Figure 37: 'M' – Tarpaulin and Post

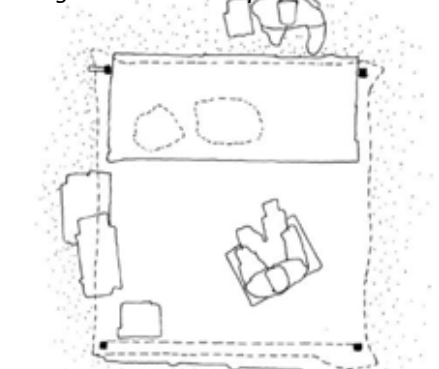


Figure 38: 'M' – Tarpaulin and Post sketch  
Dissertation Report

<sup>55</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

<sup>56</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

### SIDEWALK GROUND - 'M'

The sidewalk ground provides opportunities for street traders to expose and display their items. It provides significant trading spaces which are relatively open and located close to active pedestrian routes. Traders usually lay a sheet of plastic or cloth on the sidewalk ground and strategically lay their goods in a coordinated configuration, to showcase the variety of goods and subsequently to attract customers. Sidewalk ground street traders averagely occupy an area of 10m<sup>2</sup>. However, street traders using this method of trading are also dependent to an off-site storage for their products and stocks. The common products from sidewalk ground traders include plastic homewares, clothing or furniture<sup>57</sup>.



Figure 39: 'M' – Sidewalk Ground

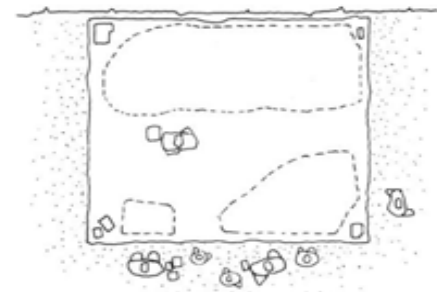


Figure 40: 'M' – Sidewalk Ground Sketch

<sup>57</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

## 8.4 'L' - LARGE type of structures

### KIOSK - 'L'

Trading Kiosks are permanent trading structures which have an average area of 3.5m<sup>2</sup>. The trading kiosks are most commonly made from prefabricated structures. However, skilled street traders may also use and adapt other non-specialised structures – convert them into kiosk - for the purpose of street trading. Kiosk are primarily designed to serve for a pedestrian clientele hence, the structure may consist of large serving hatches, overhead shade or business signage. The common services from trading kiosks include the dry cleaning or tailoring services<sup>58</sup>.



Figure 41: 'L' – Kiosk

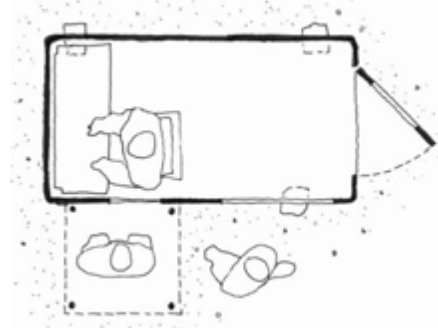


Figure 42: 'L' – Kiosk Sketch

### ZOZO HUT - 'L'

Zozo Huts are also permanent trading structures. Zozo huts are commonly built in private yards or frequently installed on an extended street verge. The zozo huts have an average area of 10m<sup>2</sup>. The structure is usually square in typology and the primary tectonic includes timber frame constructions which are then clad with corrugated zinc sheeting. Zozo huts structures may consist of large serving hatches for access or for serving purposes and they are also typically painted or branded to attract customers. The common services from zozo huts include the hair salons, traditional healers or spaza shops<sup>59</sup>.



Figure 43: 'L' – Zozo Hut

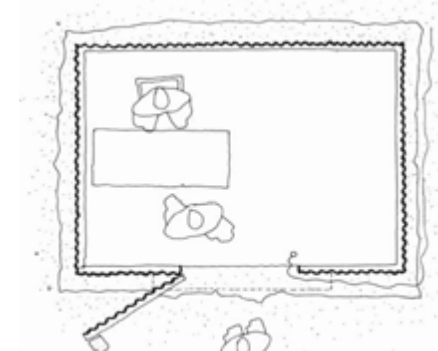


Figure 44: 'L' – Zozo Hut Sketch

<sup>58</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

<sup>59</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

### CARAVAN - 'L'

Caravans are mobile trading structures which have an average area of 16m<sup>2</sup>. Caravan can be easily adapted to temporal trading locations since they are easily moveable structures which can be positioned on the street verge and subsequently be moved to another area at the end of working or trading hours. Caravans provide decent storage facilities and preparation facilities. Caravan may also be used to only set up trade and then being subsequently utilised as an adjacent storage amenity. Caravans are frequently used as fast-food stores or as mobile storage units<sup>60</sup>.



Figure 45: 'L' – Caravan



Figure 46: 'L' – Caravan Sketch

<sup>60</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

## 8.5 'XL' – EXTRA LARGE type of structures

### SHIPPING CONTAINER - 'XL'

Used shipping containers are also commonly used as a structure for street trading. Shipping container has an average area of 16m<sup>2</sup>. They are installed in yards, open land or along the edge of sidewalks. Though it can be moved and installed at a different location, shipping containers are preferred as permanent trading structures since they are predominantly much secured and durable structures. Shipping containers are also favoured by stakeholder since; it provides them with the opportunity to sell their businesses and the container as a single entity if required to do so. Containers are commonly used as spaza shops, hair salons, liquor stores or repair businesses<sup>61</sup>.

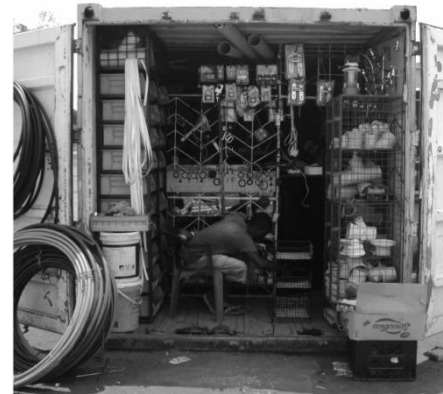


Figure 47: 'XL' – Shipping Container

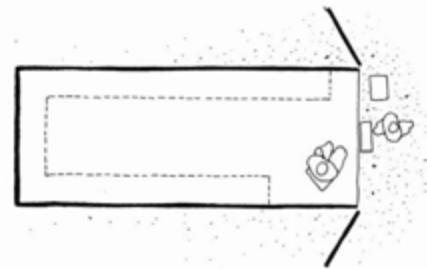


Figure 48: 'XL' – Shipping Container Sketch

### BUILDING - 'XL'

A formal building, which is either a house or a separate structure, is also used as a structure for street trading. The average size of such structure is around 30m<sup>2</sup> and they are usually connected to water and electricity services. These structures cater for high level of security and are also very effective for traders to safely store a bigger stock of products. Furthermore, such structures are also modified - to include serving hatches or verandas - in relation to the type of trading services offered. These structures are commonly used as spaza shops, cosmetic or hair salons, clothing stores, electronic good repairs or motor vehicles spare parts store<sup>62</sup>.

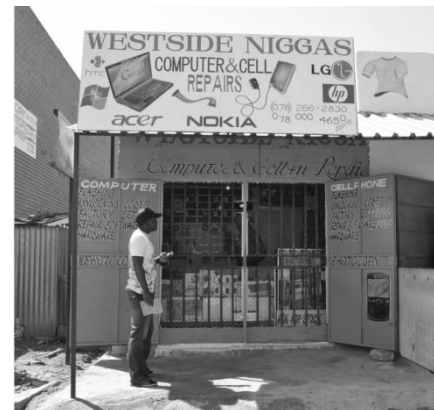


Figure 49: 'L' – Building

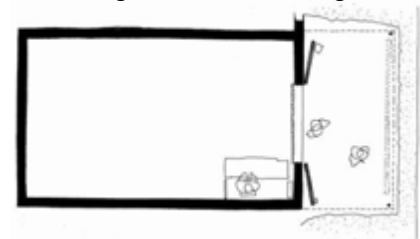


Figure 50: 'L' – Building Sketch

<sup>61</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

<sup>62</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

**OPEN LAND - 'XL'**

Micro-enterprises which are non-dependant on any infrastructures but require large spaces to operate, favour open land beyond street verge, servitudes or common land. Such micro-enterprises include car washes, mechanics for motor vehicles or micro-manufacturers of furniture. These micro-enterprises have non-permanent connection to water and electricity services and operates with portable tools and equipment which they carry daily to their working or trading location<sup>63</sup>.



Figure 51: 'XL' – Open Land



Figure 52: 'XL' – Open Land Sketch

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<sup>63</sup> Sustainable Livelihoods Foundation – Street Life, 2016.

**CHAPTER V**

**The Regulations  
&  
The City Of Cape Town Spatial Planning Principles**

*This chapter aim at understanding which authorities regulate the informal traders and trading activities in Cape Town. It also aims at highlighting important regulations documented in the Section 3.0 of the Informal Trading By-Law 2009. Furthermore, this chapter also explore the City of Cape Town Spatial Planning Principles regarding informal traders, which includes; Prioritised Areas, Spatial Allocation and Infrastructural Provision.*

## 9.0 CITY OF CAPE TOWN INFORMAL TRADING

### LAW ENFORCEMENT - INFORMAL TRADING UNIT

Informal trading activities contribute approximately up to 12% of Cape Town's economy while also being an important creator of employment. The Informal trading Unit using the Informal Trading by-Law and policy regulates all informal trading activities. It regulates the informal activities by establishing where trading should take place, the types of trading activities permitted and also the operating hours while further establishing the obligations and responsibilities of traders.

Informal Trading in Numbers<sup>64</sup>:

- 4000: number of informal trading business sites managed
- 12%: % contribution by informal trading to Cape Town's economy
- 18%: % of Cape Town's economically active residents employed
- 2497: number of trading sites registered on City of Cape Town e-permit system

The Constitution of the Republic of South Africa (section 22) state that every individual has the right to trade including the informal traders. Informal traders are required to apply for a trading permit which allows them to operate legally<sup>65</sup> and it is a prerequisite for Informal traders that engage with food selling to hold for a licence which conforms to the Health Act 63 of 1977: Regulation 918<sup>66</sup>. Trading activities at intersections which can be a potential threat to the safety of pedestrian and perturbing vehicular flows are condemned as illegal trade. Trading activities at road intersections need to abide to the Regulation 322 of the National Road Traffic Regulations, 2000<sup>67</sup>.

Furthermore, the informal Trading Unit condemned illegal outdoor advertising, the selling of counterfeit products or the illegal placement of shipping containers on privately own land or city land<sup>68</sup>. The aim of the informal trading unit is also to prevent the proliferation of 'containers cities'<sup>69</sup> – illegal installation of several containers in a location to sustain informal trading activities. Subsequently, to install a container on a trading site, the stakeholder must apply for authorisation from the City's Economic and Human Development Department<sup>70</sup>. Failure to conform to the

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<sup>64</sup> Sassen, 2015 - Future Cape Town

<sup>65</sup> City of Cape Town, 2014 - Law Enforcement: Informal trading unit.

<sup>66</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 3.0, pg. 2086-2087

<sup>67</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 3.0, pg. 2086-2087

<sup>68</sup> City of Cape Town, 2014 - Law Enforcement: Informal trading unit.

<sup>69</sup> 'Container cities' is defined as large groups of containers assemble in one location for the purpose of trading.

<sup>70</sup> City of Cape Town, 2014 - Law Enforcement: Informal trading unit.

authorisation process might result in confiscation of the container and perpetrators will be susceptible to fines and removal charges.

The City of Cape Town holds various 'types' of informal trading activities namely; Seasonal trading which is the seasonal or on-off and short term trading activities, the street or kerb side trading, trading in a pedestrian mall or public markets such as flea or craft market. It also includes trading at road intersections<sup>71</sup>, trading at transport interchanges, parks or other public open spaces, and trading at special events or beach trading. Trading activities are also in the types of mobile trading through caravans and light delivery vehicles, roving traders and mobile or removable kiosks<sup>72</sup>.

### 9.1 THE CITY OF CAPE TOWN SPATIAL PLANNING PRINCIPLES

The City of Cape Town principles of spatial planning includes three main points namely: Prioritised Areas, Spatial Allocation and Infrastructure Provision. The 'prioritised areas' principles engage with the identification of potential trading areas – holding a high density of pedestrian flow – and the development of these areas to sustain the viability and sustainability of the informal micro enterprises. These areas might be of metropolitan or district significance. Other spatial structural elements such the City's Bus Rapid Transport System, transport interchange hubs, commercial centres and pedestrian routes should also be essential tool to reinforce informal trading activities and vice versa. Trading activities within the vicinity of transport interchange hubs requires the approval of the Interchange Management Authority and must not be of any kind of obstruction to vehicular and other traffic flow<sup>73</sup>. Subsequently, the 'Spatial Allocation' principles relate to the allocation of space for informal trading areas but however, it should be in accordance with the City spatial planning framework and the Spatial development frameworks of the local Area. The 'Infrastructure Provision' engages with the appropriate level of infrastructure for the purpose of informal trading and this may vary according to the types of trading activities. It is essential that the infrastructural delivery is accompanied by a maintenance plan – including electricity, water, sanitation, drainage, shelter and storage facilities - so as to be effective for a long term<sup>74</sup>.

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<sup>71</sup> Trading at road intersections need to abide to the Regulation 322 of the National Road Traffic Regulations, 2000.

<sup>72</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 3.0, pg. 2086-2087

<sup>73</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 9.7.5.1, pg. 2086-2087

<sup>74</sup> City Of Cape Town - Informal Trading By-Law 2009. Sect. 5.1.8 & Sect. 6.2, pg. 2086-2087

## CHAPTER VI - *Adaptation...*

### Towards a Relevant 'Urban Renewal Development' for the Wynberg Precinct

*The aim behind this chapter is to explore how the theories and principles of Transit Oriented Development, composed with the Principles of 'Placemaking' around transport interchanges – highlighted in **Appendix A** - can be adapted to the Wynberg Precinct. The aspiration of this chapter is to start conceptualising a progressive redevelopment of 'cross-programmed and multi-functional spaces' for the Wynberg precinct. Subsequently, this chapter aim at comparing several aspects of the local and foreign urban renewal projects – highlighted in **Appendix B and Appendix C** – primarily regarding; Spatial Planning & Typologies, Materiality, Shelter and Associated Amenities so that design informants can be gathered for the redevelopment of the Wynberg precinct. The aspiration behind this chapter is to start conceptualising on the typologies, materials and amenities which can sustain both the 'street trading and mass commuting' phenomenon arising in the Wynberg Precinct.*

## 10.0 LEARNING FROM THEORETICAL FRAMEWORK

The Wynberg precinct is an arena for contest for spaces; taxis contest for clear streets without any obstructions, pedestrians contest for clear sidewalks, while traders contest for a space to trade. Since, traders occupy the sidewalks, pedestrian are forced to find alternative routes or path to reach their destination, sometimes the street being the only mean but which is also an important amenity for the proper flow of taxis. Wynberg precinct is a platform which sustains those legitimate contests hence on the other hand also calling for a progressive redevelopment of 'special places' which will support the realm of both street trading and the phenomenon of mass commuting.

Wynberg precinct has the potential to provide for a 'one-stop' form of service which caters for a broader accessibility which will further stimulate commuter's activities and experience in one single trip. The actual configuration of the Wynberg train station precinct is relatively similar to the conventional layout the "station in a parking lot" – highlighted in **Appendix A part 15.2.1**. Primarily, it is due to such configuration that the Wynberg Precinct is vulnerable to the contest for spaces.

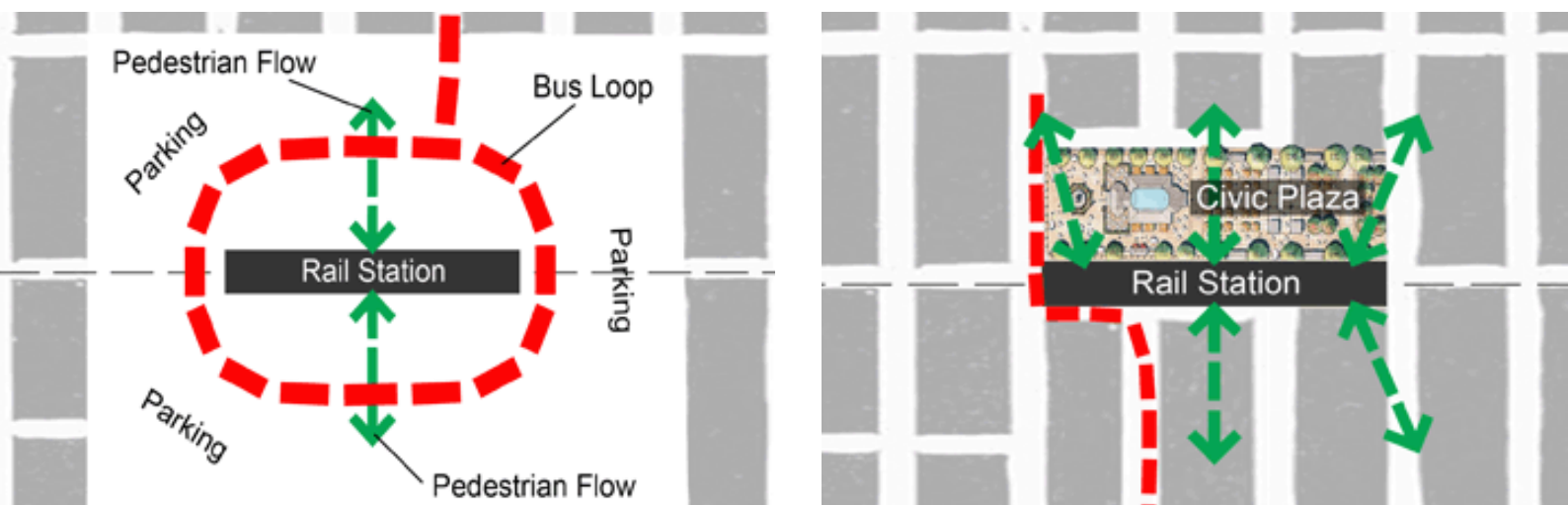


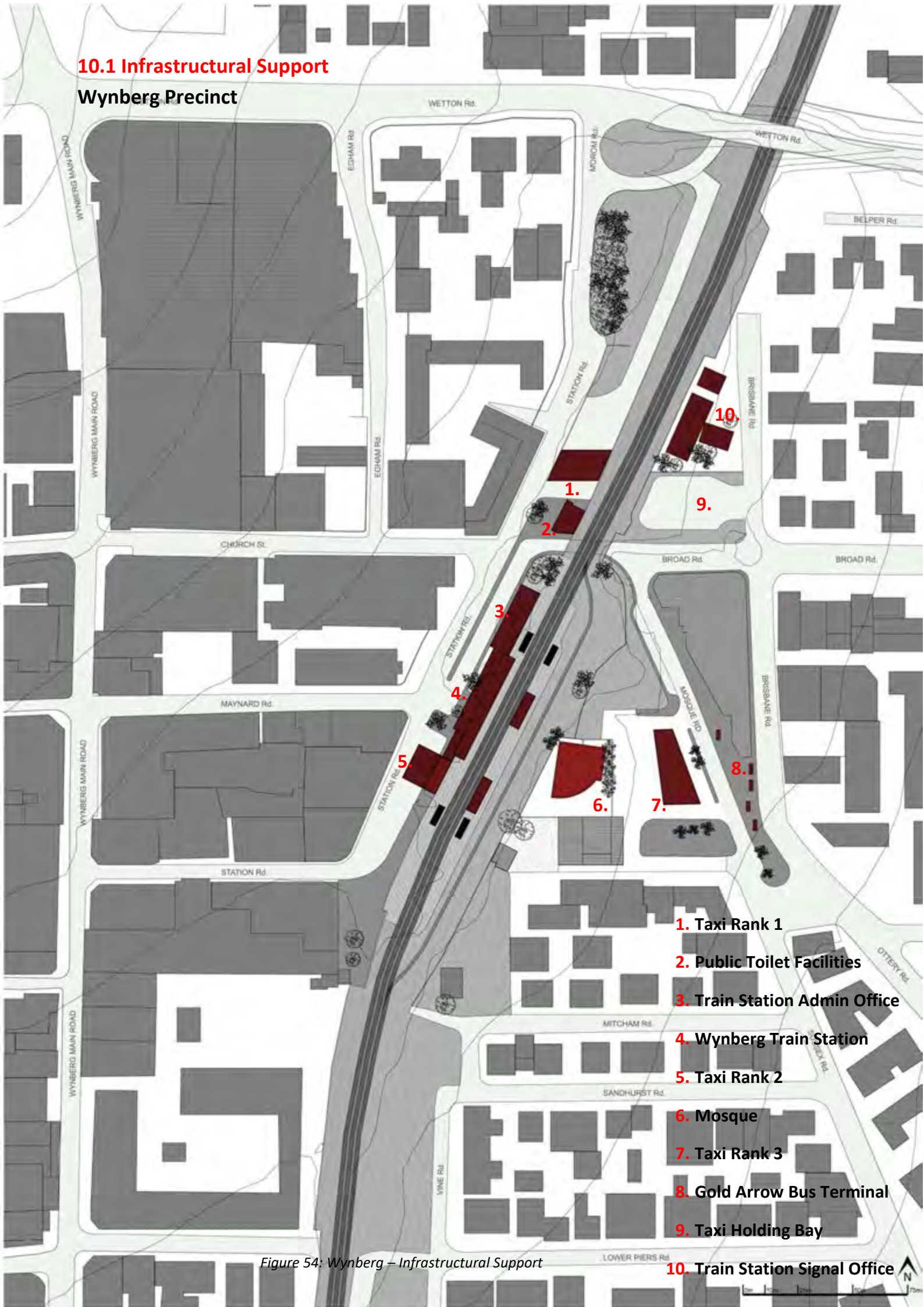
Figure 53: Conventional Layout of Station V/s Preferred Layout of Station

Taxis ranks are scattered around the train stations leaving very little spaces for street traders. Such design scheme has the tendency to generate dangerous and unpleasant spaces for pedestrians subsequently being unfavourable for the commuters to walk from and to the infrastructure. If we can aim at redeveloping the precinct into the layout of "station in the city" – highlighted in **Appendix A part 15.2.2**. – this will tend to cater for a civic plaza which have the potential to sustain the realm of street trading. Such layout has the potential to optimise the liveability of the precinct and can further stimulate pedestrian flow to and from the transport interchange<sup>75</sup>.

<sup>75</sup> TOD Institute, 2016 - Transit Oriented Development Stations

# 10.1 Infrastructural Support

## Wynberg Precinct



- 1. Taxi Rank 1
- 2. Public Toilet Facilities
- 3. Train Station Admin Office
- 4. Wynberg Train Station
- 5. Taxi Rank 2
- 6. Mosque
- 7. Taxi Rank 3
- 8. Gold Arrow Bus Terminal
- 9. Taxi Holding Bay
- 10. Train Station Signal Office

Figure 54: Wynberg – Infrastructural Support



# 10.2 Road Connection Wynberg Precinct

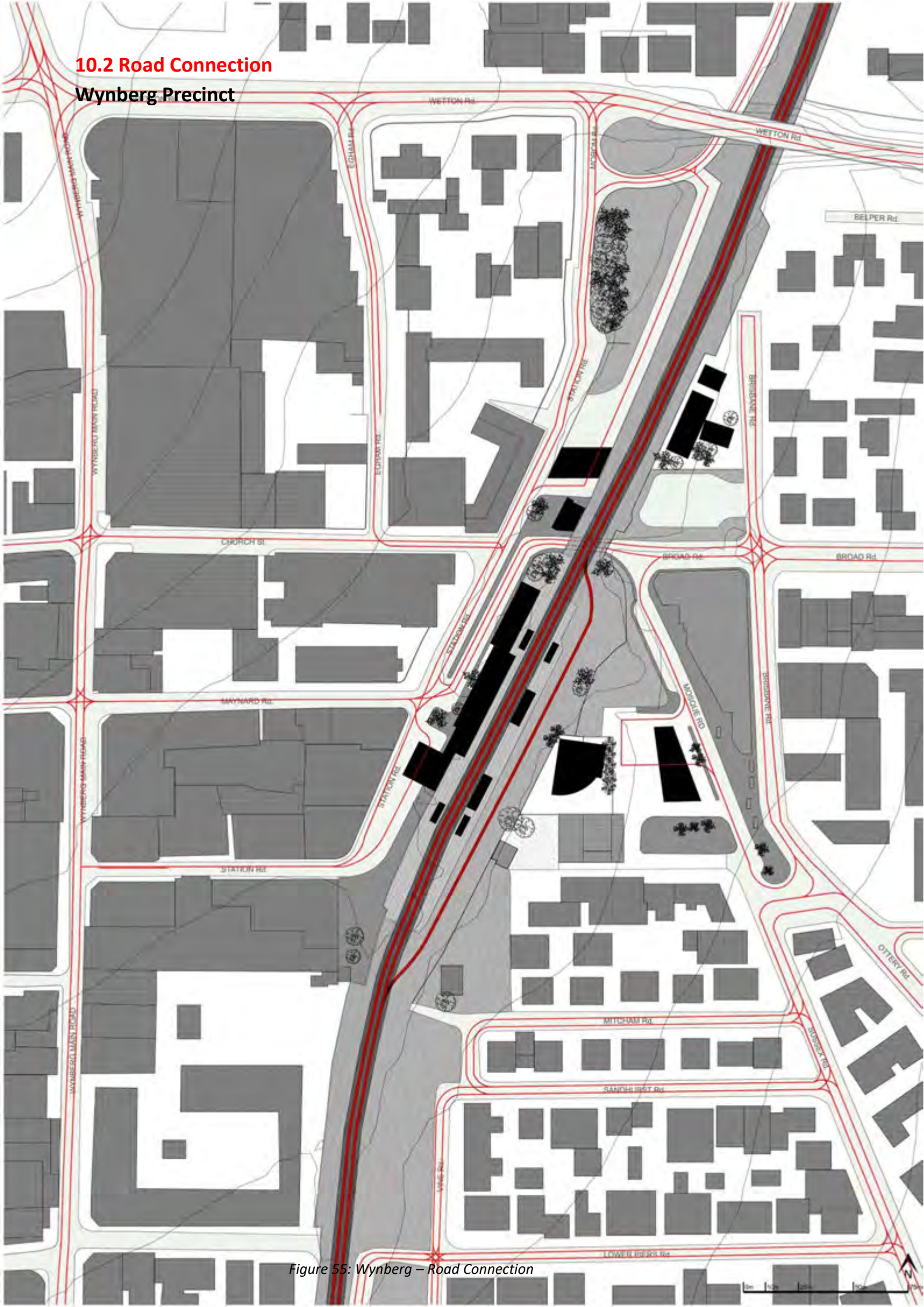


Figure 55: Wynberg – Road Connection

However, aiming at integrating street traders in the redevelopment of the Wynberg precinct should also consider the infrastructural and planning challenges. The street traders within the Wynberg precinct lack access to trading amenities, they make use of temporary and moveable structures to trade. Furthermore, these structures need to be assembled and disassembled daily. The street traders of the Wynberg precinct don't have access to onsite storage and shelter. They are also vulnerable to weather hazards which significantly affect their operations. The redevelopment of the Wynberg precinct should associate the street traders with workplace amenities which include water, sanitation, waste removal, shelter and storage<sup>76</sup>. The redevelopment should not only cater for the public to experience public life but also its should cater for the needs of street traders while also creating more dignified working spaces for them<sup>77</sup>.

Furthermore, the "station in the city" configuration might also be further stimulated by incorporating the several principles of 'placemaking' – highlighted in **Appendix A part 15.4.** – in the redevelopment of the Wynberg precinct. The streets connecting to the Wynberg train station holds the pre-existing condition of being Active Ground-Floor Retail, which is also one of the principles of placemaking. There is a variety of retails which lined these streets leading to the Wynberg train station and caters for services which sustain the people daily needs. If we can start incorporating the principles of 'Well Defined Public Spaces - Outdoor Rooms', 'Mix of Uses - Lively, Vibrant Places' and 'Pedestrian Scale - Comfortable, Safe, Enjoyable', while combining these principles with the theory behind the 'Progressive Development Of 'Special Places' Around Transport Interchange' - highlighted in **Appendix A part 15.0** - ; the Wynberg Precinct can be composed with several facilities which will promote multi- multi-functional use and communal use. This will be beneficial in regards to public fiscal resources to promote spaces which are cross-programmed, multi-functional and shared which are essential to stimulate the effectiveness and the sustainability of social service delivery<sup>78</sup>. Using these theories and principles, the Wynberg precinct has the potential to be redeveloped into precinct of utilitarian nature, catering for both street trading and the phenomenon of mass commuting, with 'less' contests for spaces while also being an urban amenity of civic prominence .

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<sup>76</sup> Roever, 2014 pg. 59

<sup>77</sup> Nteta - Cape Town Partnership, 2015

<sup>78</sup> Dewar & Todeschini, 2004 pg.58



*Figure 56: Wynberg Street Trader V/s Rain weather Condition*



*Figure 57: Wynberg Street Trader V/s Rain weather Condition*

## 11.0 LEARNING FROM TECHNOLOGICAL RESEARCH

Achieving efficient and integrated public transport system is arguably one of the greatest priorities in South African Cities<sup>79</sup>. Public infrastructures – primarily transport interchanges – are places of opportunities for street traders. As such recognizing the significance of informal trading activities - which is a prominent employment generator and also substantial economic contributor – by integrating them together with transport system is also an infrastructural challenge. Street traders hold different modes of operations - if we refer to **Chapter 4** of this paper - and have different infrastructural needs. Furthermore, while designing these type of civic infrastructures, the challenge is also to provide the community with a representative architecture that can suite their endeavours while on other hand also creating a sense of ownership and identity or possibly a sense of pride<sup>80</sup>. In South Africa, the Urban renewal projects are in various scale, spatial planning and typologies. However they are all driven toward the same aspiration of catering for a civic building which responds functionally to trading and transit.

**Appendix B part 16.0** elaborates on the Metro Mall Transport Facility and Traders Market in Johannesburg, the Baragwanath Transport Interchange and Traders Market in Johannesburg and the Warwick Junction in Durban while **Appendix C** elaborates on a foreign Urban Renewal Project in Spain. It is essential to learn from existing urban renewal projects so as to gather design informants while further combining the findings with other literature, so that we can start conceptualising on the typologies, materials and amenities which can sustain both the 'street trading and mass commuting' phenomenon arising in the Wynberg Precinct.

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<sup>79</sup> Dewar & Todeschini, 2004 pg. 56

<sup>80</sup> Ludwig Hansen - Architects + Urban designers, 2016

### 11.1 Spatial Planning & Typologies

Wynberg precinct is a dense fabric with the train station being the main structure and the three taxi tanks being plugged into precinct so as to support the transport system. However, not much consideration has been placed on the street trader's structural needs. It is essential to understand what kind of spatial planning and 'building' typology will optimise the service delivery – both transport and trading services – while also stimulating the civic life in the precinct.

If we refer to the Metro Mall Transport Facility and Traders Market in Johannesburg, the building adheres to the perimeter-block typology hence subsequently being a three storey ranking facility. The building spatial planning caters for permanent facilities for a density of 200 taxis and 25 buses which are located at the core of the building. Subsequently along the edges of the core, are located the pedestrians routes and also the Traders. The building holds approximately 800 shops and stalls which are further being associated with considerable storage spaces and sanitary facilities. The Metro Mall also includes offices which are used by the transport management staffs and hawkers organisations<sup>81</sup>.

Compared to the Metro Mall Transport Facility and Traders Market – being composed into a one building - the Baragwanath Transport Interchange and Traders Market development is driven towards a series of buildings. The development stretches over 1300 metres in length and holds a 'narrow' width of 50 metres<sup>82</sup>. The primary design and planning attitude of the Baralink was the implementation of an arcade along the full length of site, which also acts as a structural spine onto which all the logistics and functional necessities are attached<sup>83</sup>. As such commuter walk along the arcade from one end of the site to the other, while switching from one public facility and transport station to the next. The Baralink development accommodates 500 street traders and similarly to the metro mall development, it also includes associated amenities such as storage facilities, management offices and support infrastructure.

However, compared to the metro mall development composed as one infrastructure, the Baralink through a series of buildings caters for a broader flexibility of facilities for commuters during peak hours while also reducing congestions within the arcade<sup>84</sup>. Such typology has the potential to reduce contest for spaces and congestion arising currently in the Wynberg precinct.

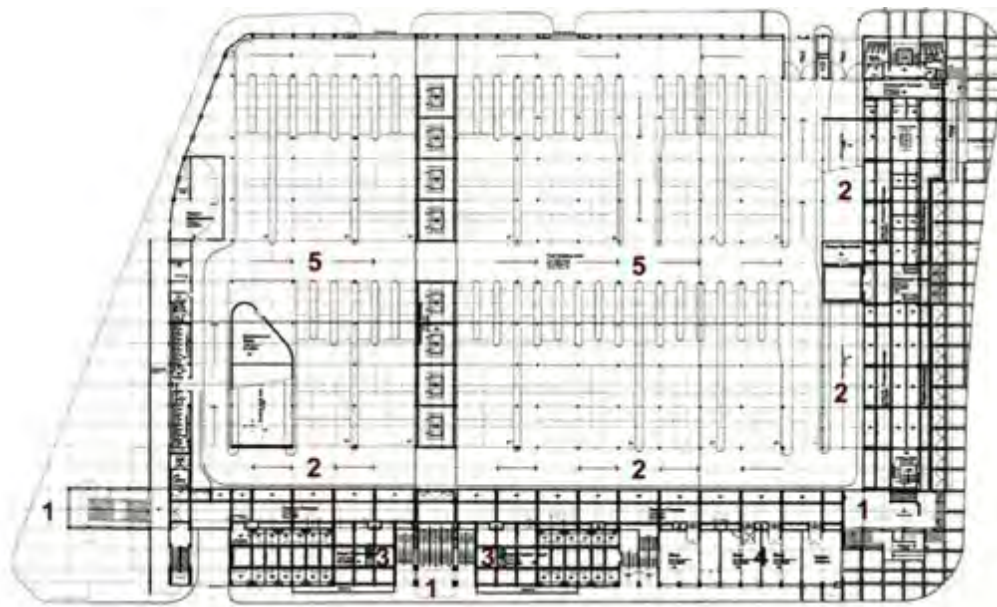
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<sup>81</sup> Joubert, 2009, pg. 144

<sup>82</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>83</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>84</sup> Mathenge - Archi Datum, 2015



1. Entrance Tower
2. Trader Stores
3. Food Court
4. Formal Retail
5. Taxi Ranking Area

Figure 58: Metro Mall - Ground Floor Plan

1. Taxi Holding Area
2. Market
3. Bus Rank
4. Taxi Rank



Figure 59: Baragwanath Transport Interchange and Traders Market- Site Plan

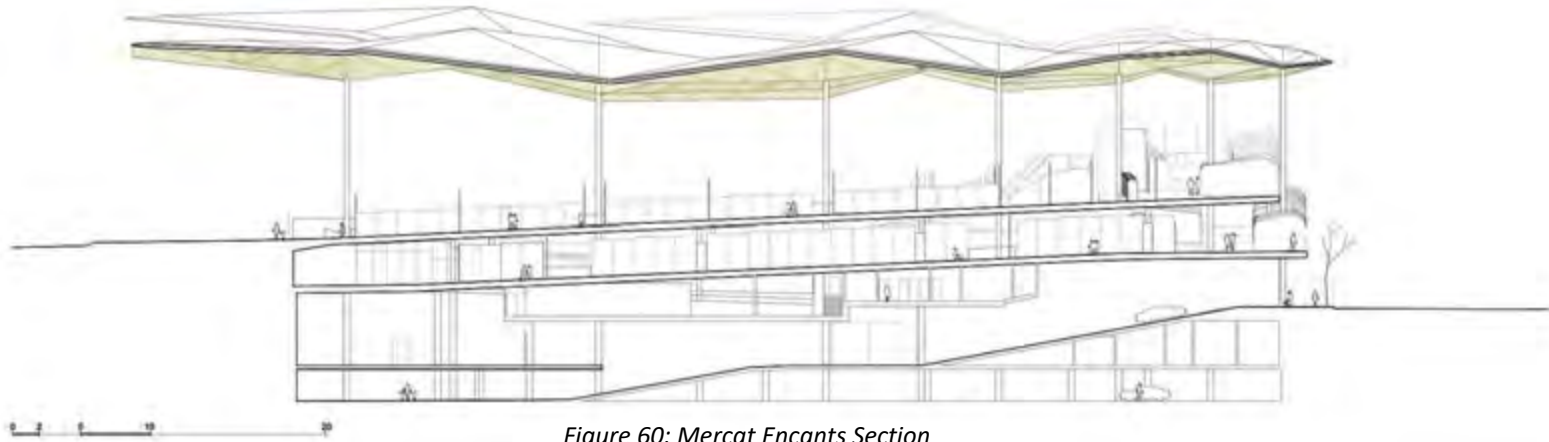


Figure 60: Mercat Encants Section

The Mercats Encants proposed an interesting way of minifying the image of a modern shopping centre through gently inclining floor planes, intertwining and creating infinite loops which connect to the trading stalls and shops<sup>85</sup>. By using such typology, the whole market becomes an architectural promenade which is further properly integrated in the site topography. Further the loops and inclination of the trading deck reconcile the building with the different levels around the market hence making it accessible from all sides and preserving the typical typology of a flea market<sup>86</sup>.

<sup>85</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

<sup>86</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

## 11.2 Materiality

The building materials used in the Urban Renewal Projects in South Africa are primarily driven towards robustness and durability. The materials used in the three South African Urban Renewal projects are primarily Bricks and off shutter concrete.

Bricks are considered to be economical, hard and durable, and highly fire resistant<sup>87</sup>. Bricks as a building material requires very low maintenance and typically will not require painting or any finish, hence catering for wider life-span with little burden on the maintenance budget. Furthermore, the appearance especially when well crafted, can impart the expression of solidity and permanence. Regarding the South African climatic condition, brick is an ideal material since it is resistant to cold and moist weather conditions and can further increase the thermal mass of building<sup>88</sup>. When dealing with complex logistic such as transport interchanges, traders and high density of commuters, such material properties is highly needed.

Similarly off-shutter concrete has several properties which make it an ideal building material for transport interchanges and markets places. Concrete is primarily used as a construction material for load-bearing and non-load-bearing elements. By utilising concrete's aesthetic potential and its structural properties, cost-effective building solutions can be achieved<sup>89</sup>. Off-shutter concrete finishes can be made in either smooth or textured finishes. The smoothness of the formwork will determine the smoothness of the finish. Consequently, textured finish can be achieved by attaching textured materials – such as form liners or using profiled-form-face materials - to the formwork or by using other treatments such as bush hammering and abrasive blasting. SANS 2001-CC1: 2007 describes a smooth surface finish, which could be referred to<sup>90</sup>.

The urban renewal projects in South Africa are expressed as evocative brick and concrete structures that have been adapted to a highly dense urban fabric and which reflect the phenomenon of mass commuting and also recognising the significance of this type of public buildings for the community<sup>91</sup>. Similarly, the Wynberg Precinct might also benefit such building material properties.

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<sup>87</sup> About Civil, 2014

<sup>88</sup> QS Articles - Engineering, Technology, Project Management, 2012

<sup>89</sup> Van der Merwe, D. – Cement and Concrete Institute, 2012

<sup>90</sup> Van der Merwe, D. – Cement and Concrete Institute, 2012

<sup>91</sup> Ludwig Hansen - Architects + Urban designers, 2016



Figure 61: Baralink – Off Shutter Concrete + Bricks + Mosaics



Figure 65: Metro Mall – Off Shutter Concrete + Bricks + Steel



Figure 62: Baralink – Off Shutter Concrete + Bricks



Figure 66: Metro Mall – Off Shutter Concrete



Figure 63: Baralink – Off Shutter Concrete



Figure 67: Metro Mall - Bricks



Figure 64: Baralink – Off Shutter Concrete

### 11.3 Shelter

Due to the climatic conditions in South Africa, shelter is a highly needed infrastructural support for street traders and market place. Being part of a complete redevelopment, the Metro Mall and the Baragwanath Transport Interchange and Traders Market had new roofs built as part of the redevelopment. The metro mall consists of solid concrete roofs and also light steel roof structures which are cladded iron sheeting and supported by colonnades so as to provide shade and cover alongside shops and stalls. Similarly the Baralink uses the same types of roof system. However, regarding the markets of Warwick, the urban renewal projects are predominantly 'acupunctural' which means; one part of the market or one market at a time. For instances, the roof for the multi market have been provided as an infrastructural relief and as part of the relocation of the old market to an unused freeway. On the other hand, regarding the Brook Street market, a proper metal roof canopy made of steel truss structure and iron sheeting cladding was built. The roof extends on a total length of 200metres and was constructed over several phases over a period of three years.

Light roof constructions made of steel truss structure and cladded with iron sheeting or more solid types of roofs made of concrete slabs, are the two most common types of roof system used in the urban renewal projects in South Africa. However, can we be inspired by contemporary roof architecture similar to the roof of the Mercat Encants? The roof caters shelter for an area of 9800m<sup>2</sup>. The main concept behind such roof architecture was to link 'elements' between the new market and the city. The surrounding urban fabrics and elements are reflected through the roof panels into market and subsequently, the activities within the market are reflected outside hence, creating a deep connection between the building and the city. The interior finish of the roof surfaces is a layer of polished gilded stainless steel which reflects the activity below like a broken mirror<sup>92</sup>.

The roof architecture of the Mercat Encants provides new ways of recognising the value of such civic buildings. It will be interesting to explore how a roof system can both functionally responds to the need for shelter from the street traders while on the other hand, also aiming at recognising the significance of street trading and also providing the community with a representative architecture.

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<sup>92</sup> Bordas, D.B. - CCCB, 2015.



Figure 68: Metro Mall - Roof



Figure 69: Baralink Roof



Figure 70: Muthi Market – Before



Figure 71: Muthi Market – New Steel Roofing



Figure 72: Brook Street – Before



Figure 73: Brook Street – New Steel Roofing

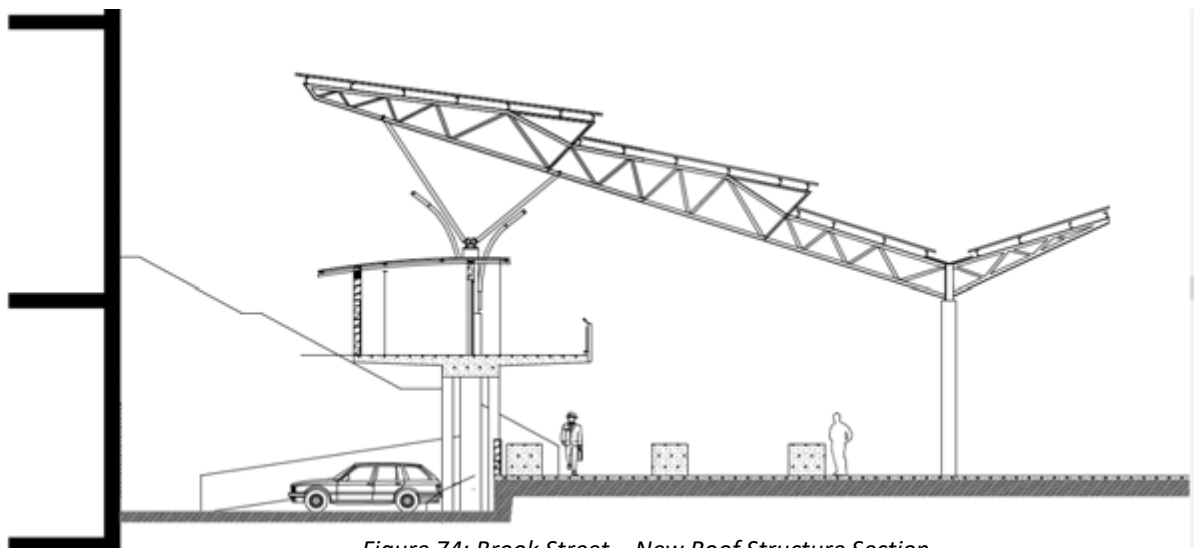


Figure 74: Brook Street – New Roof Structure Section



Figure 75: Mercat Encants Roof Canopy

1. Pilar formed by welded steel plates
2. Beams made from laminated profiles steel soldiers
3. Substructure support perimeter finials made from hollow sections of steel soldiers
4. Cladding system formed by shaped trays with raised seal aluminium, zinc finish
5. Steel plate tube with TPO- FPA membrane placed on board supports the waterproofing membrane
6. Rigid insulation
7. Maintenance galvanized grills - galvanized steel fixed joints raised above cladding.
8. Rounding off the folded composite panel trays with zinc finish and hidden fixation
9. Laminated glass transparent
10. Tubular Stainless Steel frame for fixation of glass fin
11. False ceiling panels - composite honey comb. Outer cover : inox steel plate. Inside cover : pre- painted steel AISI 304 mirror polished.
12. Adjustable aluminium Stanchions
13. Substructure false ceiling fixation - Open sections of galvanized steel
14. Rain Water Channel

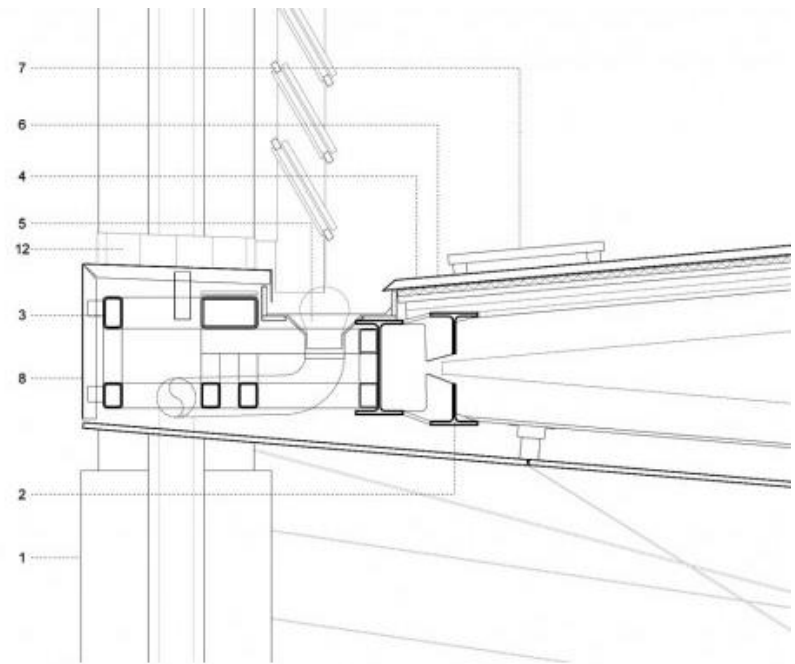


Figure 76: Mercat Encants Roof Detail

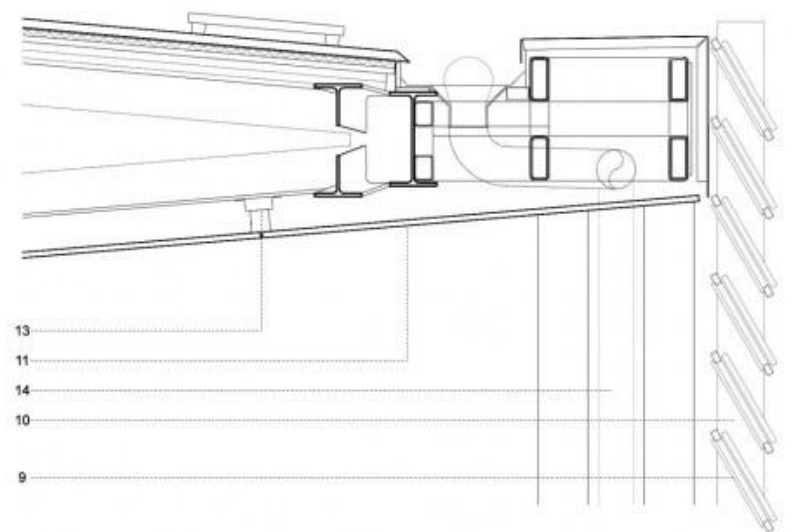
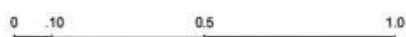


Figure 77: Mercat Encants Roof Detail



### 11.4 Associated Amenities

In the Baragwanath Transport Interchange and Traders Market Trader’s, trading tables are built in concrete and they vary in sizes, so as to cater for the needs of a wider range of street traders. In the Warwick junction more thoughts were given towards the design of the trading table, which were first made from concrete and included light steel lock-up storage underneath them. However, the storage compartment were broken into since they generated the feeling that valuable items were stored there. The storages were subsequently left opened hence allowing people to sleep in them which consequently, created health and cleanliness issues. The most responsive design was just a concrete table with no closed space underneath it.



Figure 78: Trader Table with lockup storage

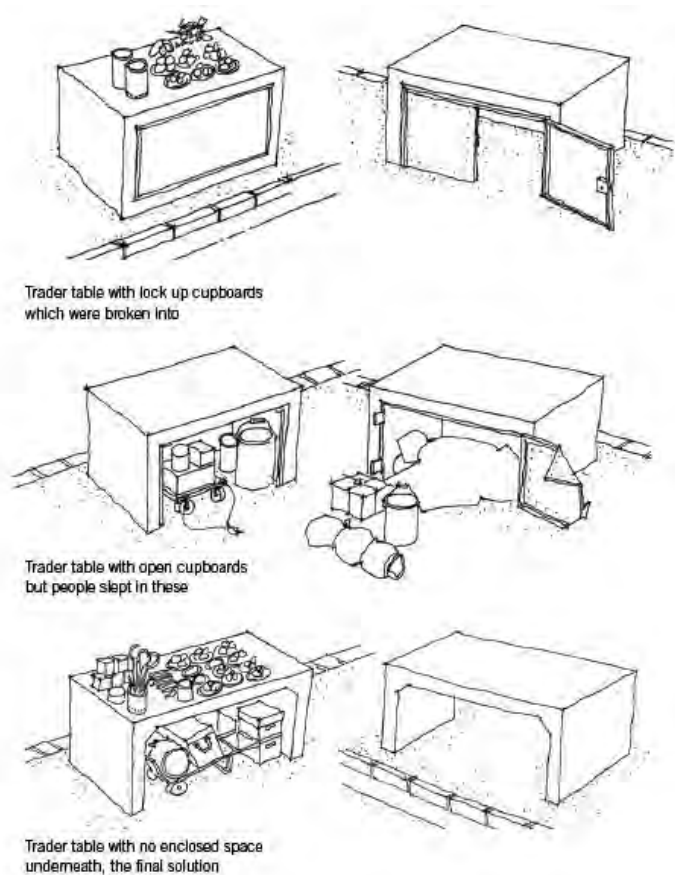


Figure 79: Street Trader table design

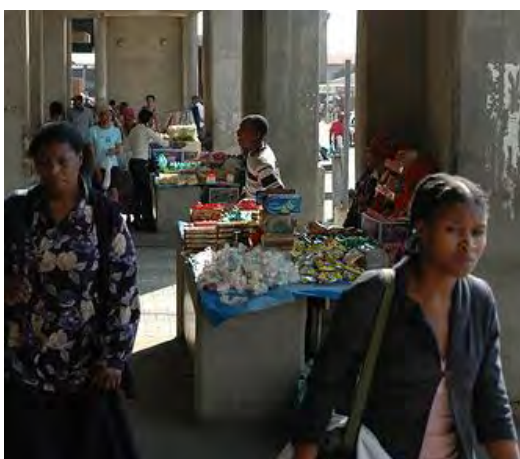


Figure 80: Baralink Trading Table



Figure 81: Metro Mall Trading Table

Can we be inspired by the Mercat Encants stall and shops for the design of new structure for the traders in the Wynberg Precinct? The Mercat Encants hold a total of 479 metal stalls of 2m or 1m wide, x 0.9m deep. The stalls are made from precast metallic - 35 mm thick Araquil Panel<sup>93</sup> - and have a table at the front to display the trader's products. Each stalls and shops can be individually lock up and securely closed. The new Mercat Encants also holds a total of 266 shops and similarly, the shops are also from precast metallic – 0.75mm thick curved Hacierco sheets<sup>94</sup> - and are 5.0 x 2.0 x 3.5 m in size. Due to the size of the shops and their modular design, they cater for sale inside the structure itself<sup>95</sup>. The curved Hacierco sheets are made of purely metallic coated steel which consist of 55% aluminium, 43.4 % zinc and a touch of silicon. This alloy coating ensures an excellent corrosion protection while further offering an exclusive appearance<sup>96</sup>.

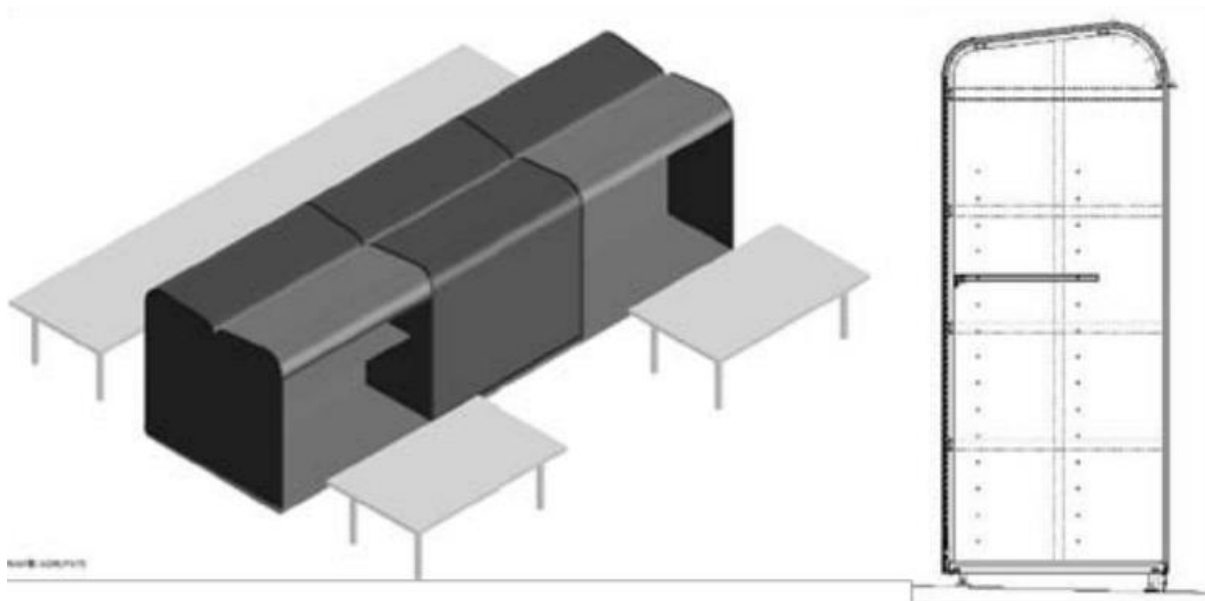


Figure 82: Stalls of 2m wide x 0.9m deep – 35mm Araquil Panel



Figure 83: Shops of 5.0 x 2.0 x 3.5 m – 0.75mm thick curved Hacierco sheets

<sup>93</sup> Constructalia – Steel Construction, 2015

<sup>94</sup> Constructalia – Steel Construction, 2015

<sup>95</sup> BCN - Dossier de Premsa, 2013.

<sup>96</sup> Constructalia – Steel Construction, 2015

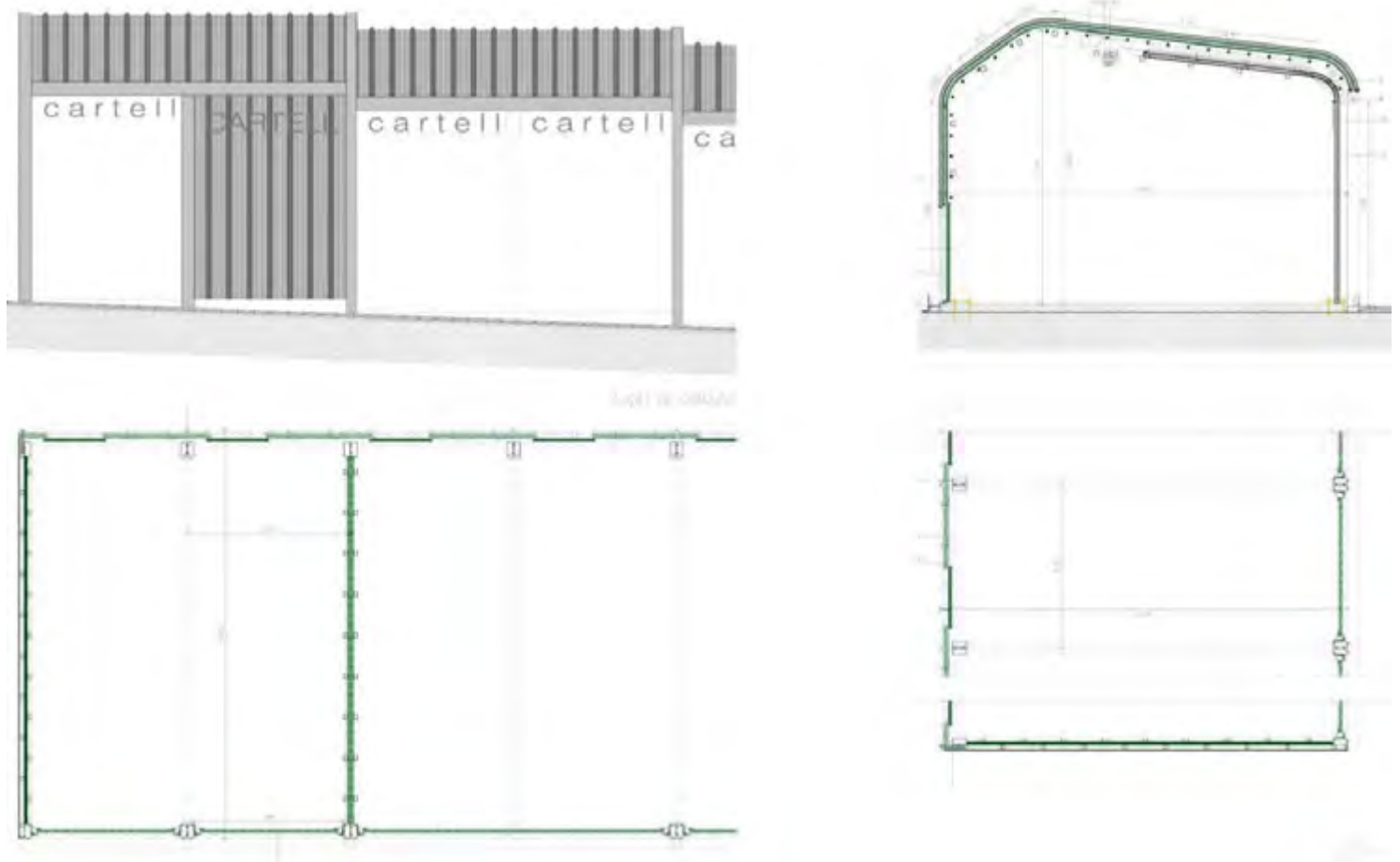


Figure 84: Shops of 5.0 x 2.0 x 3.5 m – Structures



Figure 85: Shops of 5.0 x 2.0 x 3.5 m – Height V/s Views towards other levels

### 11.5 Iconography and Representations

The architectural expression of the Metro Mall is more focus towards the exterior façade facing the streets. The entrances are designed as landmarks and include light wells made from oxidized steel screens. The screens design is inspired from the African marimba instruments and they are used as sun filters while also contributing to the visual interest of the development. Subsequently, several colourful mosaics are used to decorate walls<sup>97</sup>. Similarly in the Baragwanath Transport Interchange and Traders Market, we can see similar the integration of art works and mosaics in the architecture of the infrastructure. Landmarks structures have been integrated at focal points while serving as canvas for the artworks done by the locals and subsequently contributing to the sense of identity and ownership. However, the Baragwanath Transport Interchange and Traders Market overruled the usual lightweight steel assemblies used for such civic buildings. The Baralink has been built as a sculptural concrete structure which consists of diverse series of cautiously proportioned orthogonal voids which are then contrasted with solid walls.



Figure 86: Metro Mall Mosaics



Figure 87: Baralink Mosaics

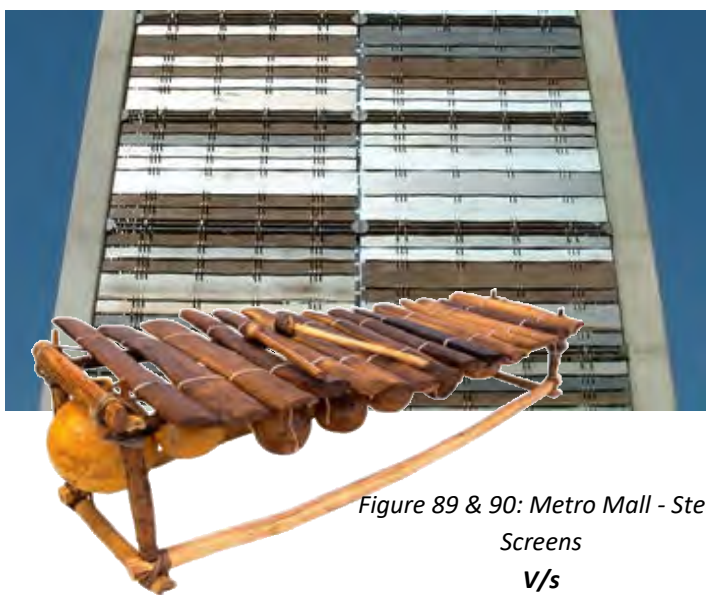


Figure 89 & 90: Metro Mall - Steel Screens  
V/s  
African Marimba Instrument



Figure 88: Baralink Landmarks structures

<sup>97</sup> Ludwig Hansen - Architects + Urban designers, 2016

Wynberg train station is a dense fabric with the train station being the main structure and the three taxi tanks being plug into precinct to support the transport system. These Urban Renewal Projects – both local and foreign – provide interesting design informants – primarily through; Spatial Planning & Typologies, Materiality, Shelter, Associated Amenities, and Iconography and Representation – which can be adapted to the Wynberg precinct so as to respond to the current infrastructural challenges face by street traders operating in the precinct and also to further provide the community with a civic building of utilitarian nature and civic prominence.

## CHAPTER VII

### Programming + Siting + Design Proposal

*The aim of this chapter is to develop the brief for the new building. It explores the types and structural typologies of the street traders operating within the Wynberg precinct. It further analyses the commuter's realm and the street trader's realms. The aim of this chapter is also to find other programs which can be adapted to further stimulate the civic life within the precinct. The chapter also aims at exploring how the transport infrastructures can be connected and how the intervention can reconnect the western and eastern fabric of Wynberg. The aim of this chapter is to bring forward the concept, ideas, design intention and programmes for the proposed building.*

## 12.0 PROGRAMMING

### 12.1 WYNBERG PRECINCT STREET TRADERS - TYPES & STRUCTURAL TYPOLOGIES

#### **'XS' - EXTRA SMALL type of structures**

The Wynberg Precinct holds two kinds of **'XS type of structures'** primarily the **Mobile Traders** and the **Trolley Traders**. The mobile traders frequently operate at the taxi rank locations and they usually sell vegetables, fruits, drinks and snacks to commuters. Their trading operations are relatively fast and temporary. The trolley traders sell items such as cool drinks, fruits and vegetables.

#### **'S' - SMALL type of structures**

The Wynberg Precinct holds three kinds of **'S type of structures'** primarily **Stand and Umbrella, Table and Vehicle**. The 'Stand and Umbrella' and the 'Table' type of street traders are primarily involved in the selling of vegetables, fruits, drinks and snacks. Each morning the traders installed their trading structures and after working hours, the structures are disassembled and carried away by the traders. They are primarily located at the entrance of the train station and also close to the taxi ranks. The vehicles types of street traders are more temporary. These types of street traders at specific hour of the day park their vehicles on the side of the road and trade directly from their vehicles.

#### **'M' - MEDIUM type of structures**

The Wynberg Precinct holds two kinds of **'M type of structures'** primarily the **Tarpaulin and Post and the Sidewalk Ground** street traders. They are both involved in the selling of vegetables, fruits, drinks, snacks, electrical goods and second hand items. However The Tarpaulin and post street traders are more permanent compared to sidewalk ground street traders. The Tarpaulin and post street traders installed their structures each morning and after working hours the trading structures are disassembled and carried away. The sidewalk street traders are more temporary. Their modes of trading are more related to peak times with high numbers of commuters and also to weather hazards – Heavy sun and rain conditions. Furthermore, the sidewalk ground type of street traders are the most common type of trading activities in the precinct.

#### **'XL' - EXTRA LARGE type of structures**

The Wynberg Precinct holds one kind of **'XL type of structures'** primarily the **Open Land**. Such trading activity is non-dependant on any infrastructures. In the Wynberg precinct the open land street traders are the 'taxi washer's. They have no permanent connection to water and operate usually at the taxi ranks. The taxi washer operates with portable tools and equipment which they carry daily to the precinct.

**Street Traders – Trading Locations**  
**Wynberg Precinct**

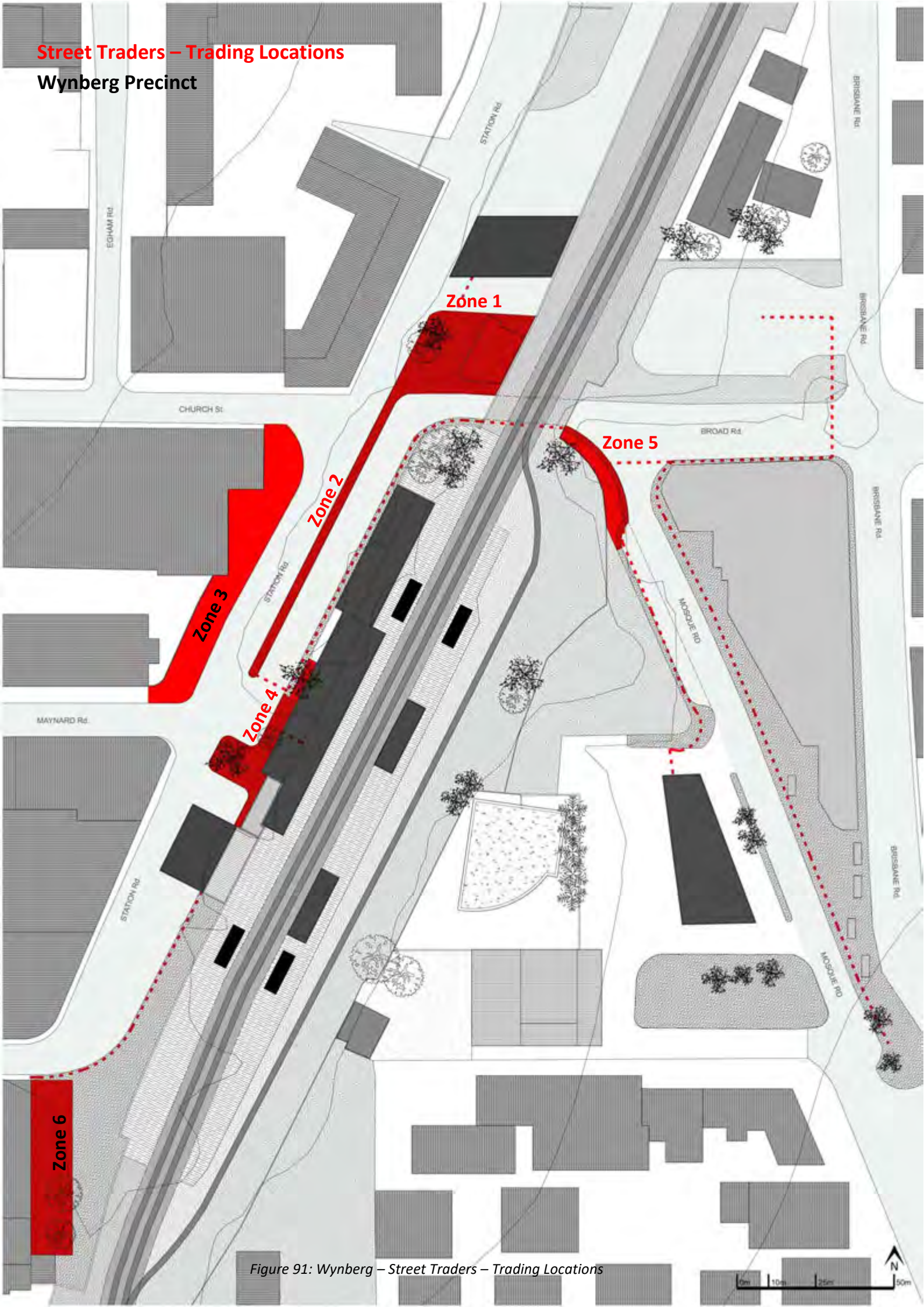


Figure 91: Wynberg – Street Traders – Trading Locations

**12.1.1 WYNBERG PRECINCT STREET TRADERS - TYPES & STRUCTURAL TYPOLOGIES**

<b>Types &amp; Structural Typologies</b>	<b>Zone</b>	<b>Items</b>	<b>Temporary/ Semi-Permanent</b>
XS - Mobile Traders	–	Vegetables, fruits, drinks and snacks	Temporary
XS - Trolley Traders	–	Vegetables, fruits, drinks and snacks	Temporary
S - Stand and Umbrella	1 – 4 – 5 – 6	Vegetables, fruits, drinks and snacks	Semi-Permanent
S - Table	1 – 4 – 5 – 6	Vegetables, fruits, drinks and snacks	Semi-Permanent
S - Vehicle	2 – 3	Vegetables & fruits	Temporary
M - Tarpaulin and Post	1 – 5	Vegetables, fruits, drinks, snacks, electrical goods and second hand items.	Semi-Permanent
M - Sidewalk Ground	1 – 2 – 3 – 4 – 5 – 6	Medicinal Herbs, Garments, electrical goods and second hand items.	Semi-Permanent <i>(Peaks times and Weather Hazards)</i>
XL - Open Land	–	Taxi Wash	Temporary

Figure 92: Wynberg – Traders Types and Structural Typologies

No infrastructural supports have been incorporated to support the realm of street trading. The street traders operating within the Wynberg precinct strive to have access to infrastructural supports associated with water, sanitation, waste removal, shelter and storage. The street traders lack access to trading amenities, they make use of temporary and moveable structures to trade. Furthermore, these structures need to be assembled and disassembled daily. The street traders of the Wynberg precinct don't have access to onsite storage and shelter. They are also vulnerable to the climatic conditions and weather hazards which significantly affect their operations.



Figure 93: Wynberg – Trading Locations Zone 1

### Zone 1



Figure 94: Wynberg – Trading Locations Zone 1



Figure 95: Wynberg – Trading Locations Zone 2

## Zone 2



Figure 96: Wynberg – Trading Locations Zone 2



Figure 97: Wynberg – Trading Locations Zone 3

### Zone 3



Figure 98: Wynberg – Trading Locations Zone 3



Figure 99: Wynberg – Trading Locations Zone 4

### Zone 4



Figure 100: Wynberg – Trading Locations Zone 4



Figure 101: Wynberg – Trading Locations Zone 5

## Zone 5



Figure 102: Wynberg – Trading Locations Zone 5



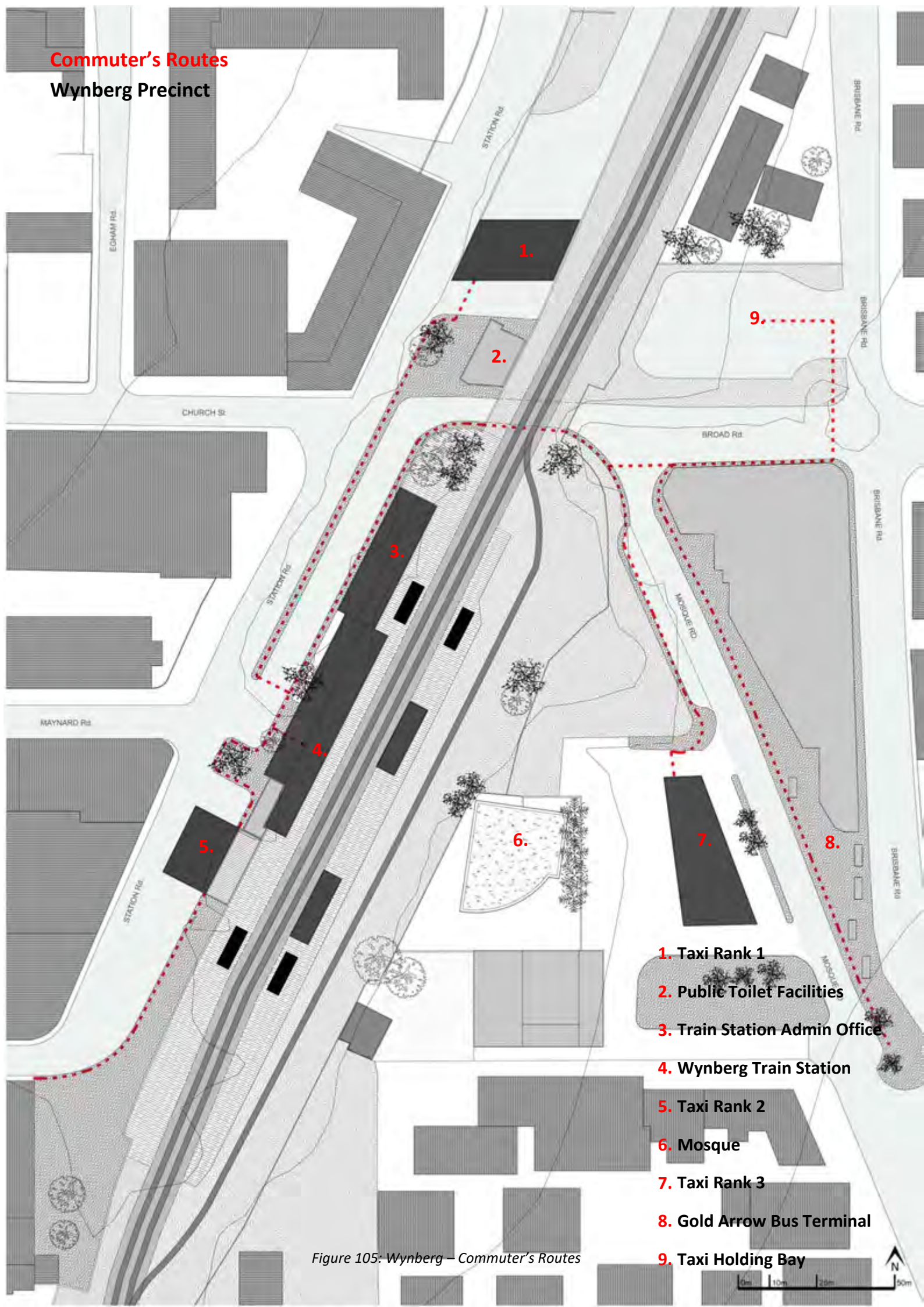
Figure 103: Wynberg – Trading Locations Zone 6

### Zone 6



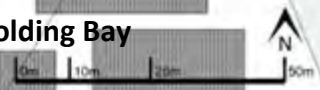
Figure 104: Wynberg – Trading Locations Zone 6

# Commuter's Routes Wynberg Precinct



- 1. Taxi Rank 1**
- 2. Public Toilet Facilities**
- 3. Train Station Admin Office**
- 4. Wynberg Train Station**
- 5. Taxi Rank 2**
- 6. Mosque**
- 7. Taxi Rank 3**
- 8. Gold Arrow Bus Terminal**
- 9. Taxi Holding Bay**

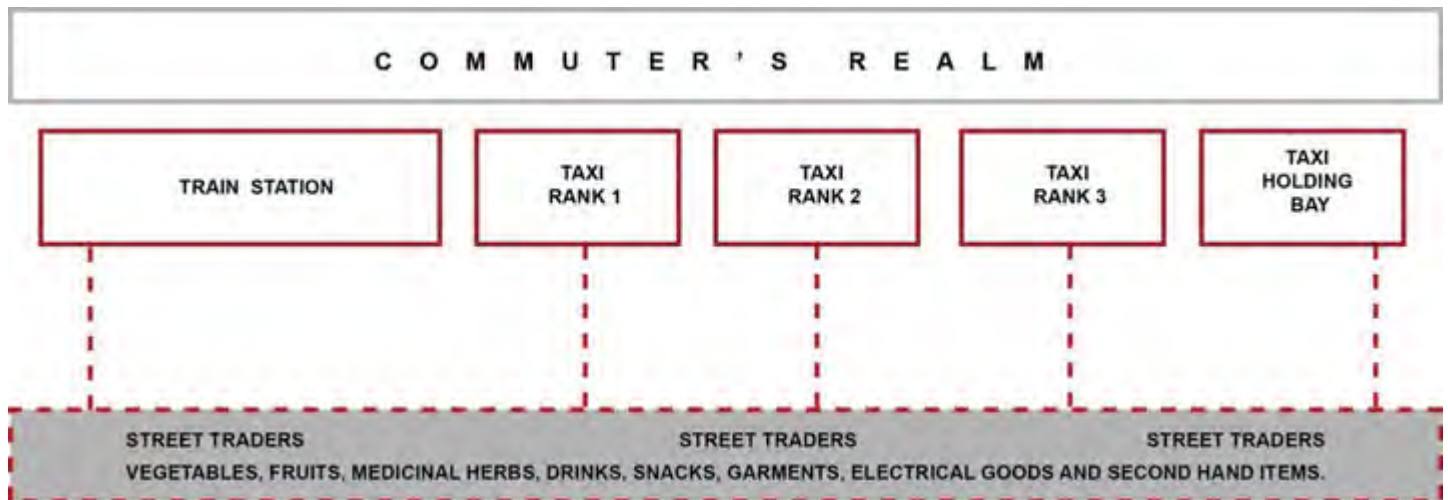
Figure 105: Wynberg – Commuter's Routes



## 12.2 EXISTING WYNBERG PRECINCT’S REALM

### 12.2.1 Existing Commuter’s Realm

Figure 106: Existing Commuter’s Realm



The commuter’s realm is predominantly link with the street traders. While changing from one transport facility to the other, the commuters are directly linked to the street traders. The street traders are in a way the link between each transport facilities. The street traders provide the commuters with items such as Vegetables, fruits, Medicinal Herbs, drinks, snacks, garments, electrical goods and second hand items.

### 12.2.2 Existing the Street Trader’s Realm

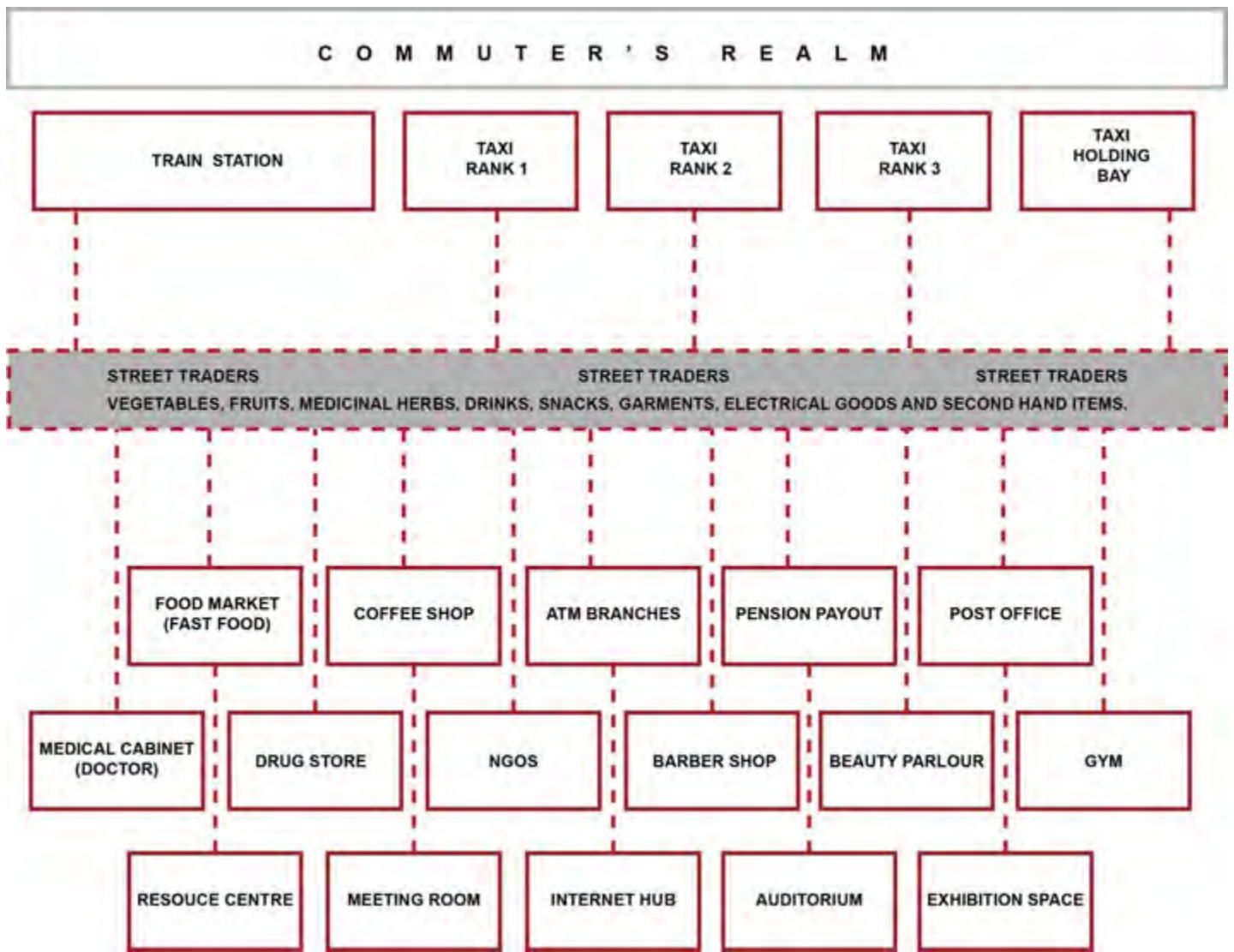
Figure 107: Wynberg – Existing the Street Trader’s Realm



The street trader’s realm within the Wynberg precinct is part of a survival strategy since no infrastructural supports have been incorporated to support the realm of street trading within the precinct. The street traders lack access to trading amenities, they make use of temporary and moveable structures to trade. Each morning, the street traders carry their goods and their trading structures to their respective trading location and assemble them. Subsequently, at the end of trading hours, the structures are disassembled and both the goods and the structures are carried away. They are also vulnerable to the climatic conditions and weather hazards which significantly affect their operations. The street traders operating within the Wynberg precinct strive to have access to infrastructural supports associated with water, sanitation, waste removal, shelter and storage.

12.2.3 Enhancing the Commuter’s Realm

Figure 108: Wynberg – Enhancing the Commuter’s Realm



12.2.4 Enhancing the Street Trader’s Realm

Figure 109: Wynberg – Enhancing the Commuter’s Realm



Wynberg precinct has the potential to provide for a 'one-stop' form of service which caters for a broader accessibility which will further stimulate commuter's activities and experience in one single trip. If we refer to the theories of 'Progressive Development Of 'Special Places' - highlighted in **Appendix A part 15.0.** - the Wynberg Precinct can be composed with several facilities which will promote multi- multi-functional use and communal use. Hence the project, aim at enhancing the Street trader's realm by providing these micro-enterprises with basic work amenities which they are actually striving for. However, the intervention should also be responsive to the actual realm of street trading within the precinct. On the other hand, the intervention also aim at stimulating the commuter's realm by introducing new programs which can be adapted to further stimulate the civic life within the precinct.

It aims at bringing new programs to the civic life for example;

- Food market & Coffee shop – Providing the commuters with moment of pause to consume food and relax before moving towards their respective transport interchange.
- ATM Branches, Pension pay-out, Post office, Drug Store, NGO's, Medical Cabinet, Gym, Barber Shop, Beauty Parlour – Providing the commuters with communal facilities which have the potential to optimise service delivery.
- Resources, Meeting Room, Internet Hub – Providing the community with a resource centre and internet hub so as to bring forward an educational input to the community. The resource centre might also include meeting rooms which can be used by street traders and taxis organisations hold meetings.
- Auditorium, Exhibition Space – Providing governmental service providers or social services a platform to reach people.

Introducing these new programs into the realm will be beneficial in regards to public fiscal resources to promote spaces which are cross-programmed, multi-functional and shared; which are essential to stimulate the effectiveness and the sustainability of social service delivery<sup>98</sup>.

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<sup>98</sup> Dewar & Todeschini, 2004 pg.58

### 12.2.5 PROGRAM PROPOSAL

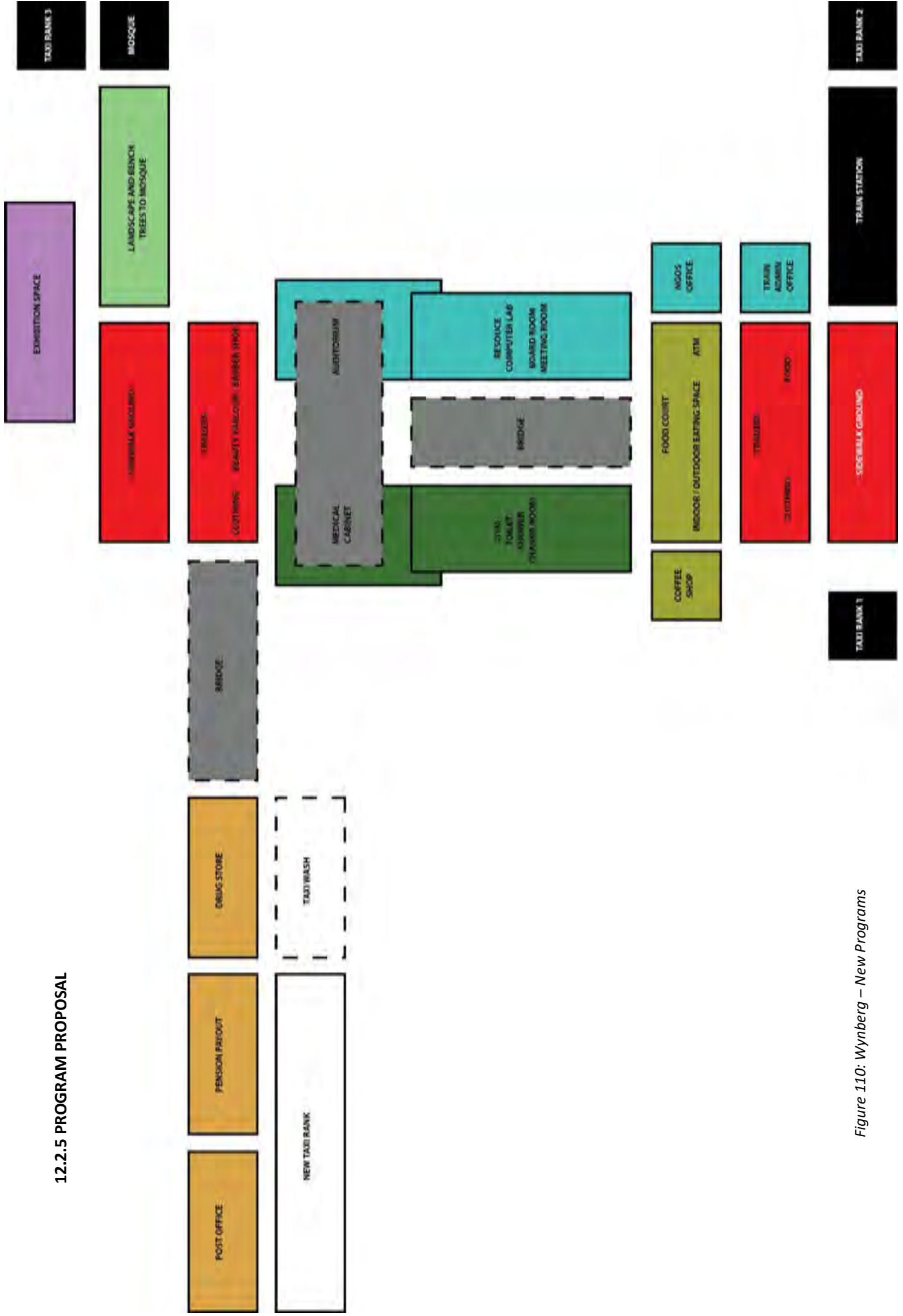


Figure 110: Wynberg – New Programs

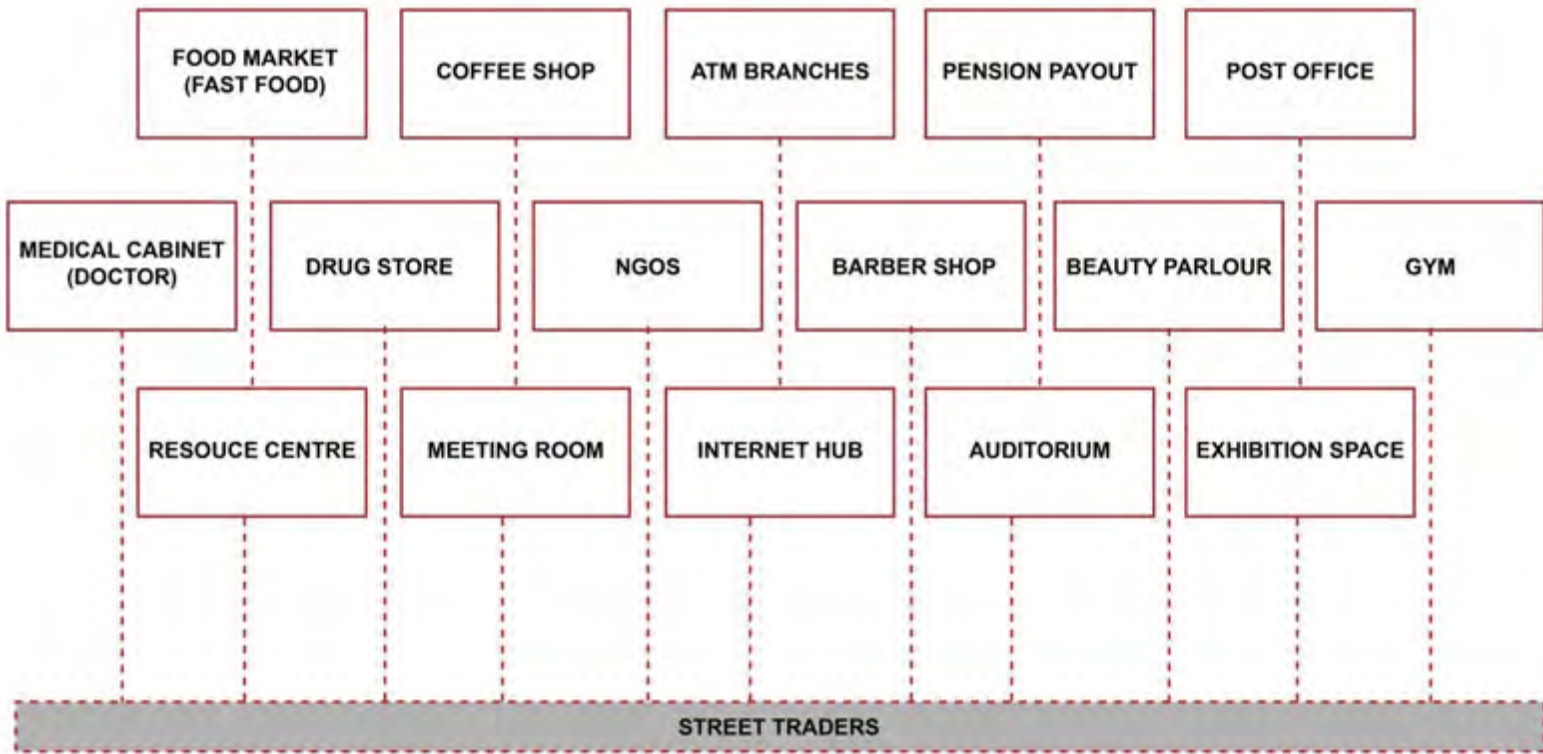
## 13.0 SITING

### 13.1 Context

#### Wynberg Precinct



Figure 111: Wynberg – Context



## Re-Connecting...

TAXI RANK 2  
 TRAIN STATION  
 TAXI RANK 1  
 TAXI HOLDING BAY  
 TAXI RANK 3



## 13.2 Land Availability Wynberg Precinct



Figure 112: Wynberg – Land Availability

**13.3 Land Availability**

**Wynberg Precinct**

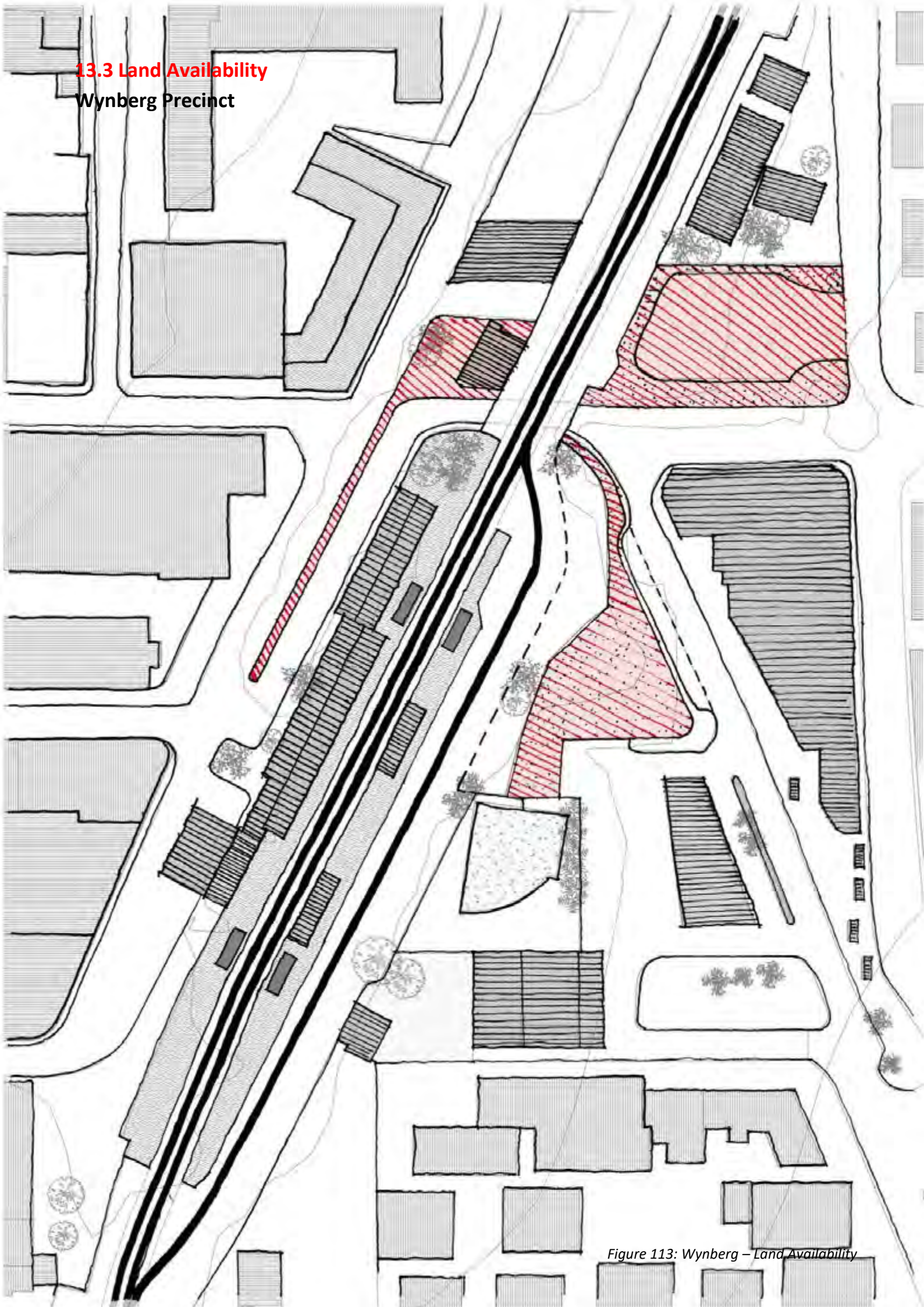


Figure 113: Wynberg – Land Availability

## 13.4 Reclaiming

### Wynberg Precinct

According to the South African Transport Services (SATS) Bridge Code (1983), the horizontal clearance from track centreline to the proposed structure supports should be a minimum of 3.0 m.

The framework includes reclaiming part of the precinct by relocating the existing train station administration office and the existing public toilet facilities.

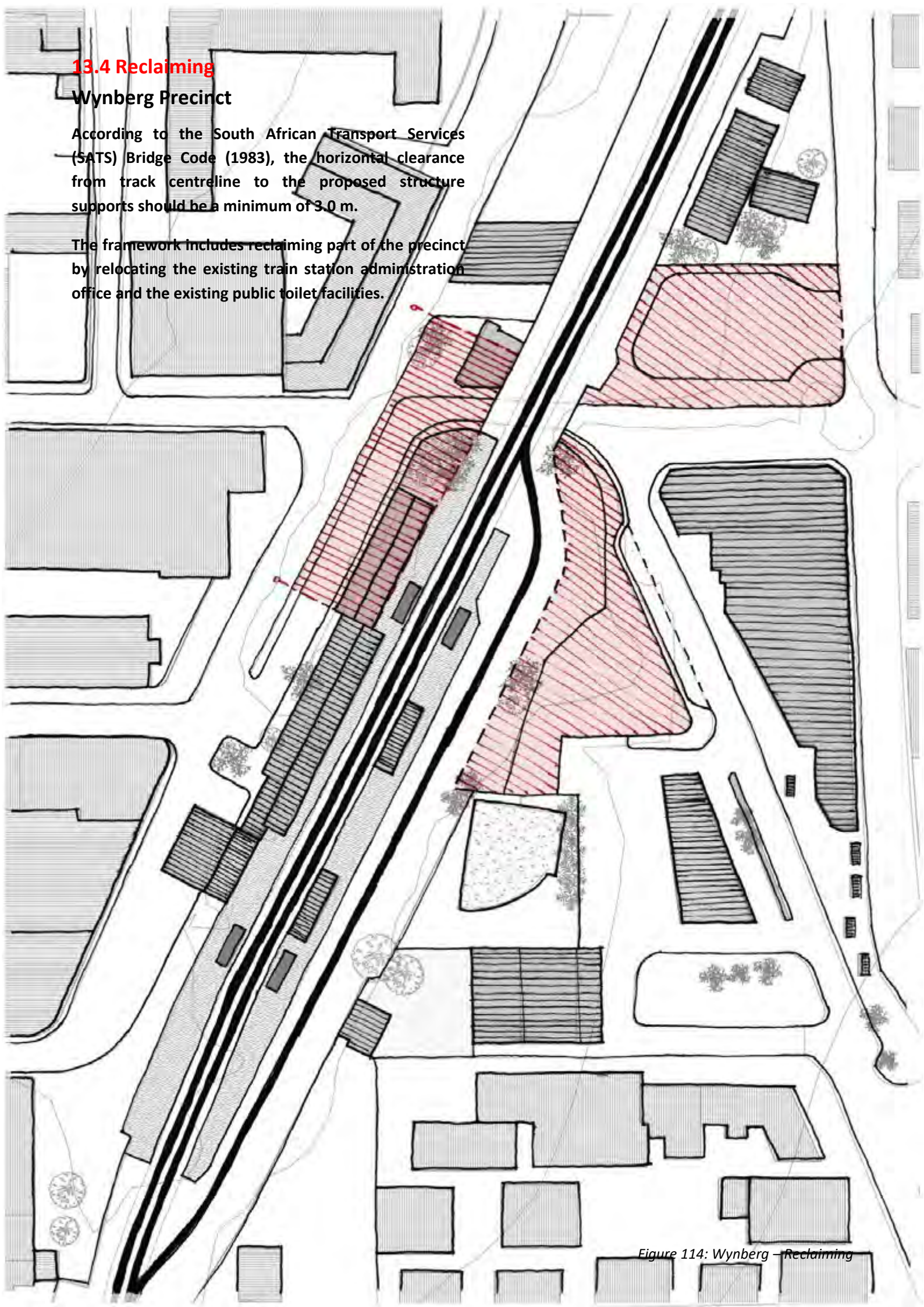


Figure 114: Wynberg – Reclaiming

**13.5 Reconnecting - Commuter's Routes**  
**Wynberg Precinct**

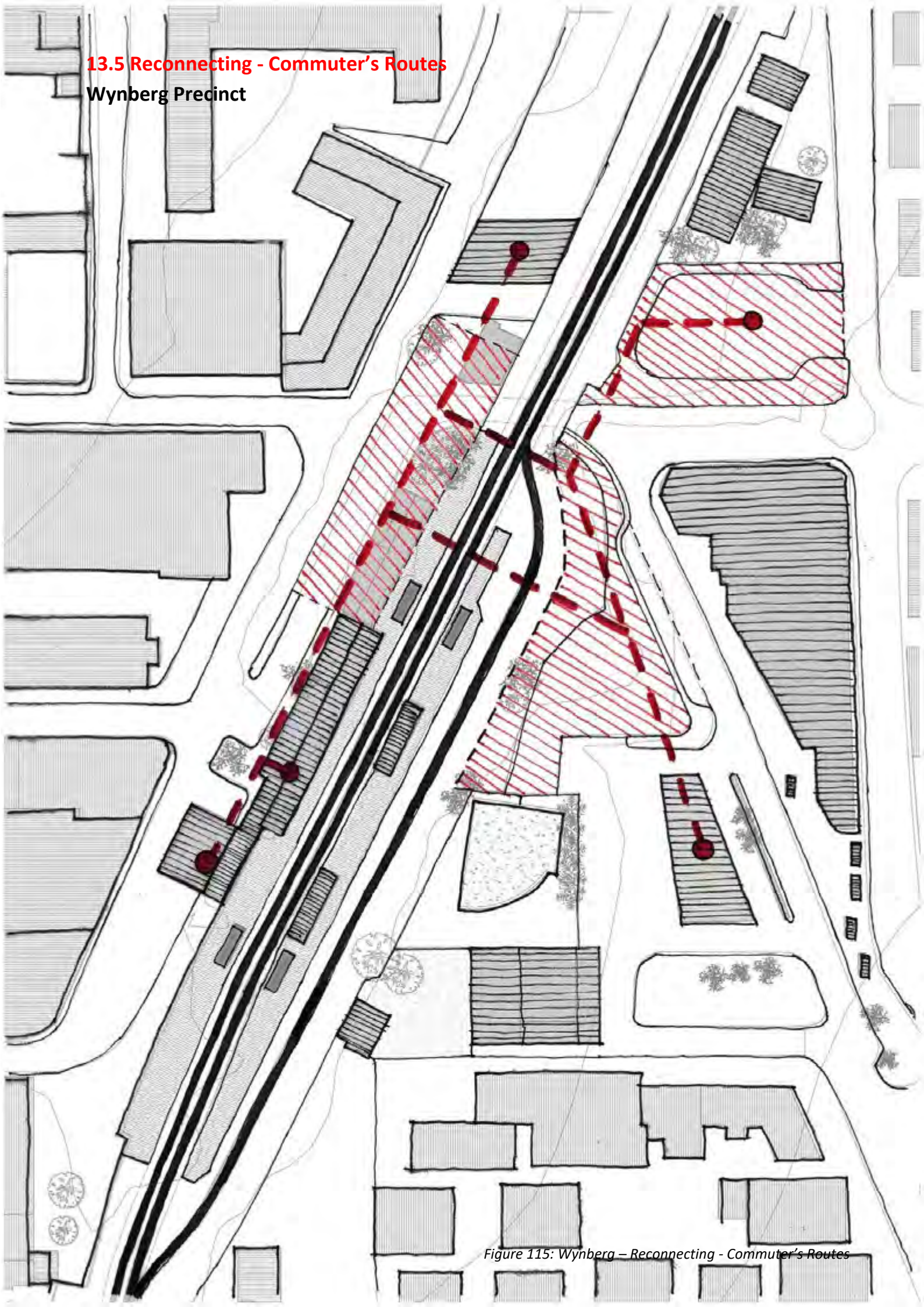


Figure 115: Wynberg – Reconnecting - Commuter's Routes

**13.6 Framework - Reconnecting  
Wynberg Precinct**

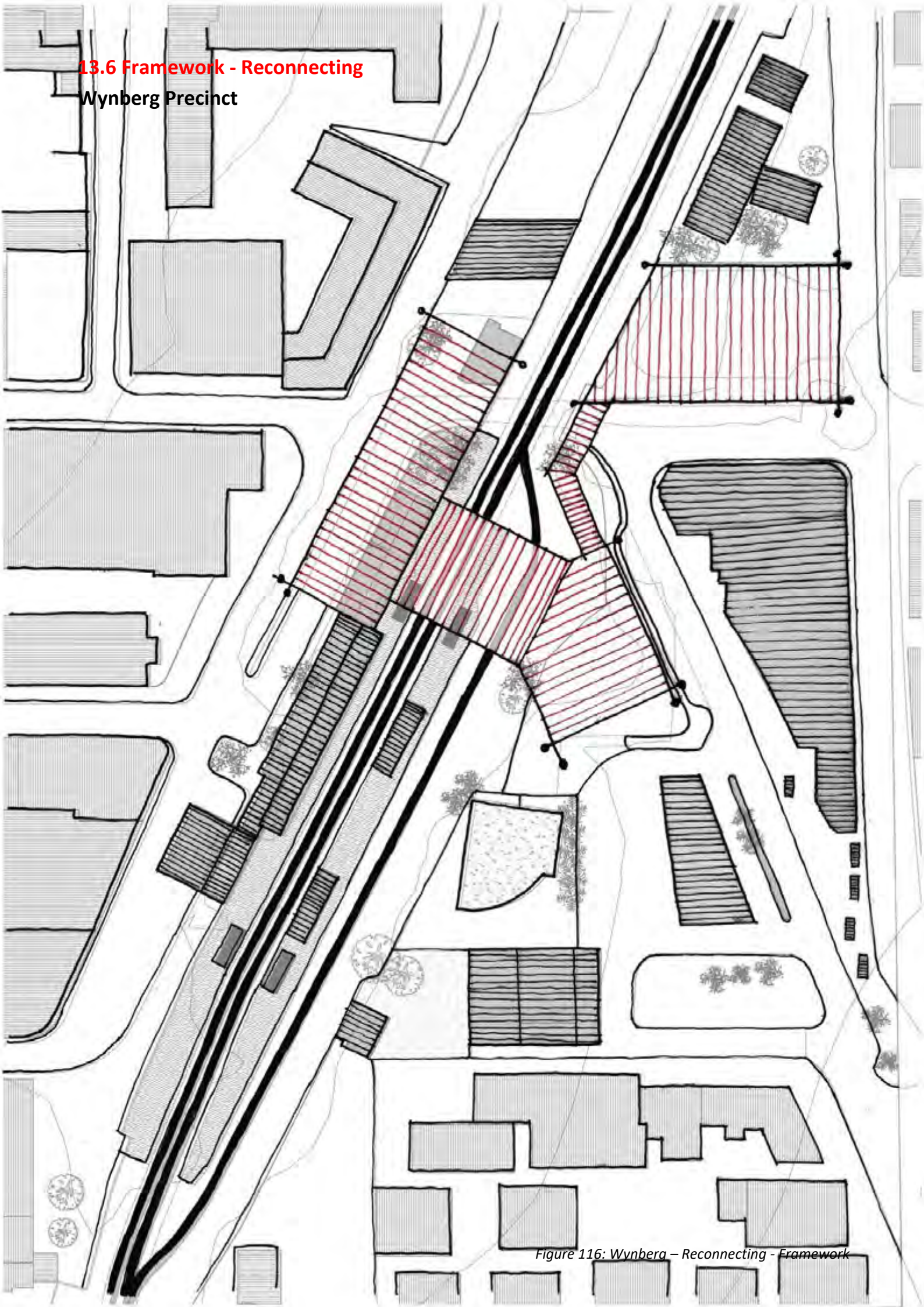


Figure 116: Wynberg – Reconnecting – Framework

**13.7 Framework – Reconnecting – Commuter’s Routes – Vehicular Routes**  
**Wynberg Precinct**

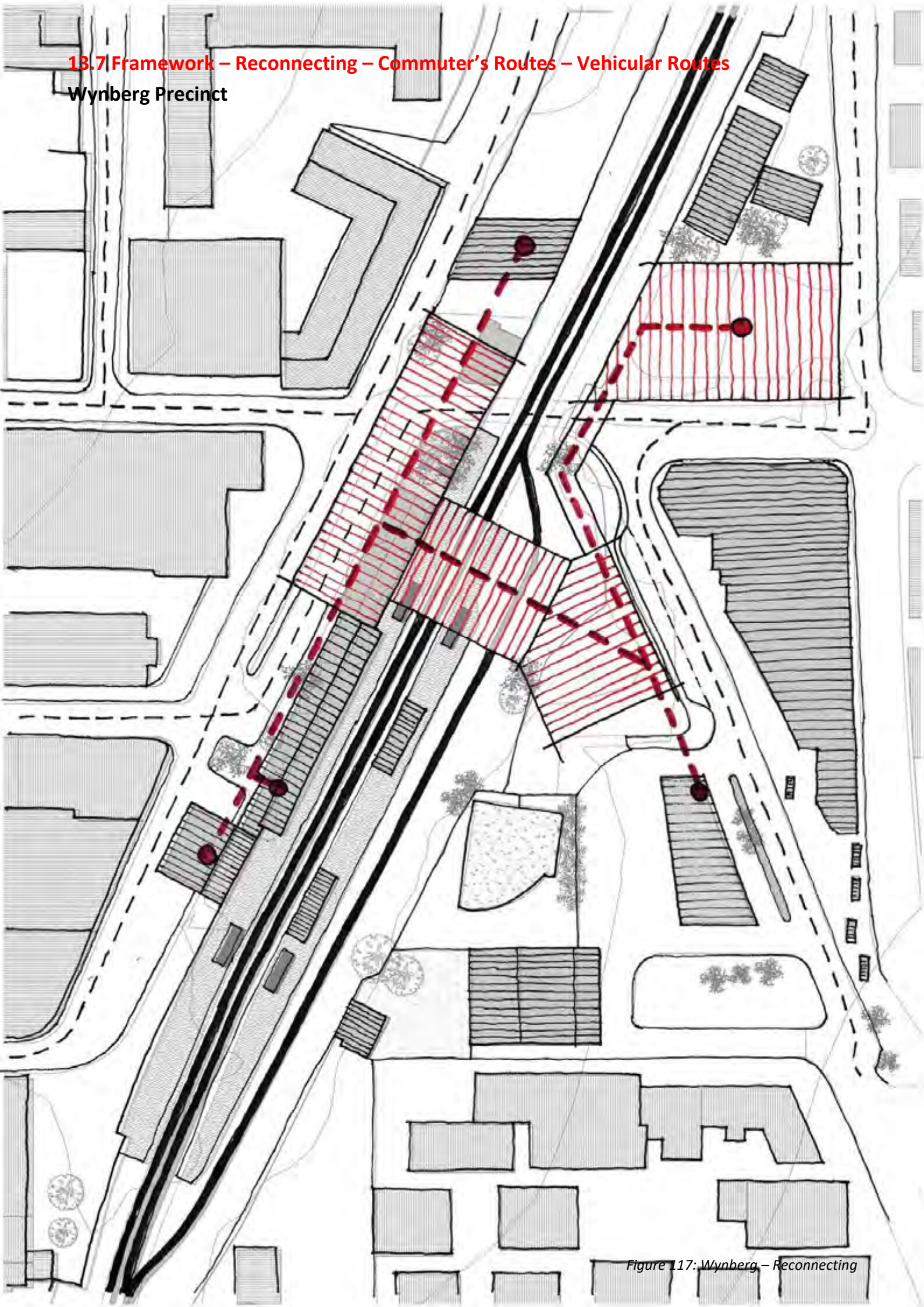


Figure 117: Wynberg – Reconnecting

## 14.0 DESIGN PROPOSAL

### 14.1 FRAMEWORK

The integration of the transport infrastructures - the train station and the taxi ranks - has resulted into the division of the suburban context. The Wynberg train station is a 'scar' into the suburban fabric which had subsequently created a disjunction between the western and eastern part of the fabric. The Wynberg Precinct is a very dynamic site – transport system, commuters, and street traders - which however holds severe constraint regarding land-availability. The under path which is currently used by both commuters and vehicles is deemed ineffective. The land availability around the precinct is relatively left-over-spaces / in-between-spaces from the integration of existing infrastructures on the site – train stations and taxi ranks.

The design proposal looked at the transport infrastructures as condenser of opportunities for street traders and commuters. It looks at the precinct at a broader scale, re-imagining the precinct with a new structure – artificial ground - which can bind all these transport elements while also being a platform for street trading and social engagement. The proposal aimed at reimagining and reconnecting the two worlds which have been divided by the rail tracks with a new structure which would sustain the existing social dynamics within the precinct (street traders + commuters).

The design proposal aims at being a response to ease the contest for spaces within the Wynberg precinct. Furthermore, part of the aim of reconnecting, the commuters routes are also questioned. An average of 21000 commutes transit through the Wynberg precinct daily. The design proposal aimed at catering for integrated connection between the transport facilities. It aims at integrating a continuous connection between each transport facilities while being supplemented with street trading activities.

14.2 DESIGN DEVELOPMENT

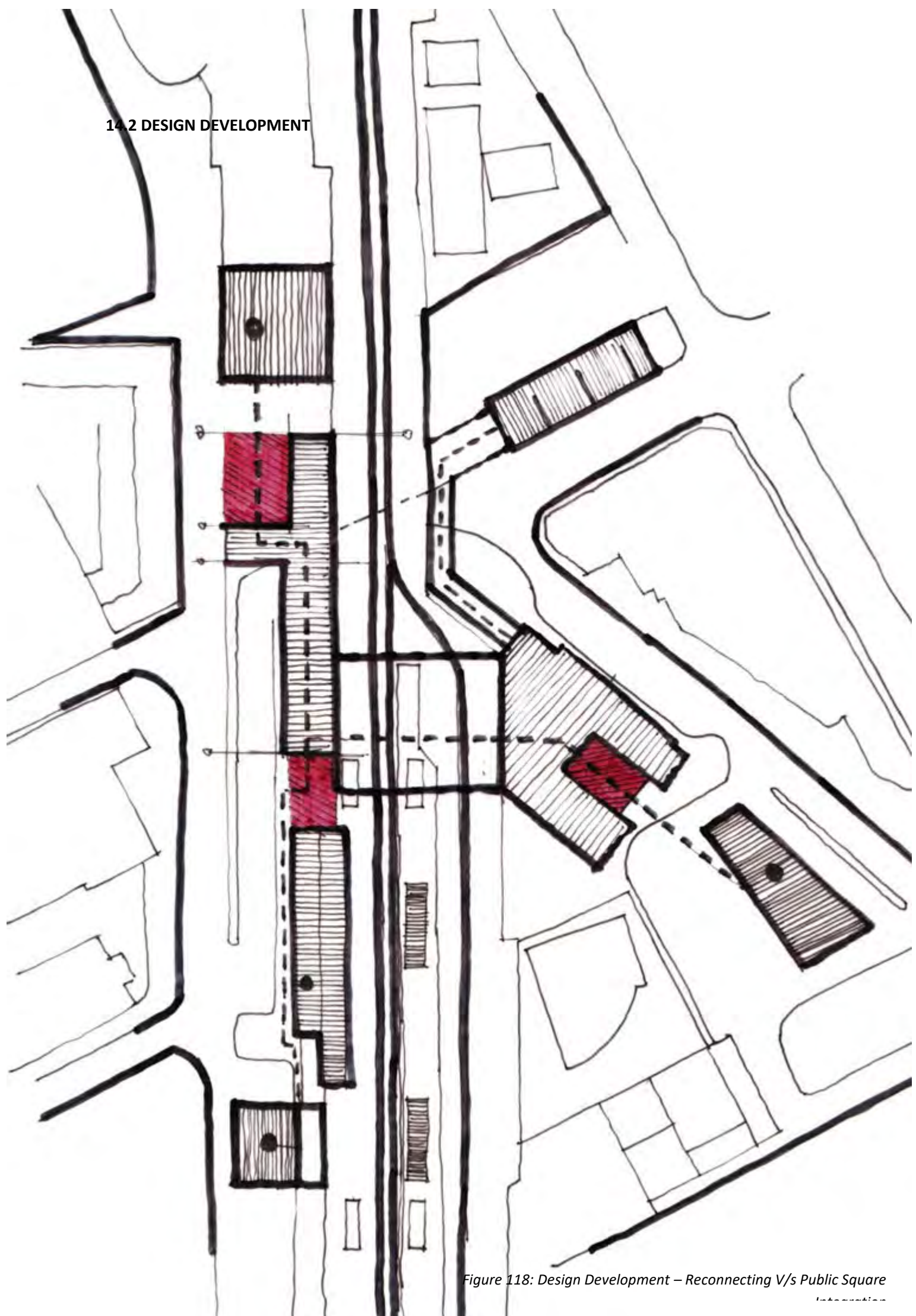


Figure 118: Design Development – Reconnecting V/s Public Square

Interpretation

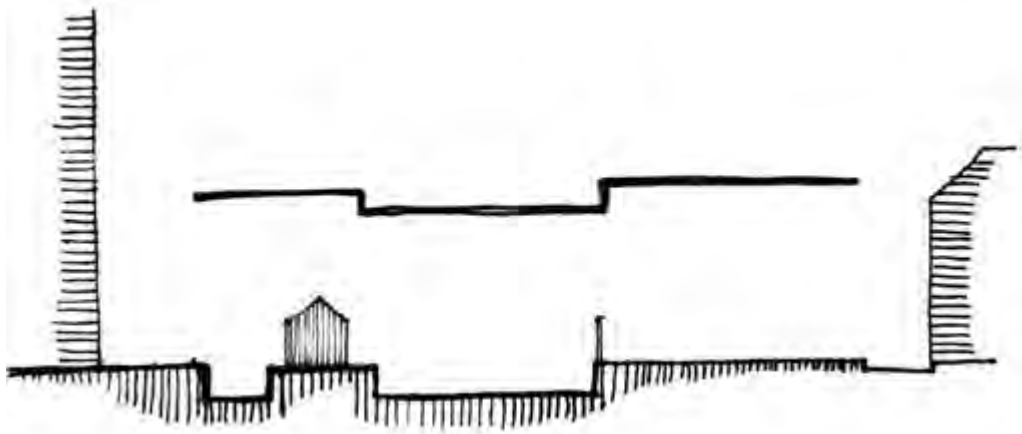


Figure 119: Design Development – Artificial Ground

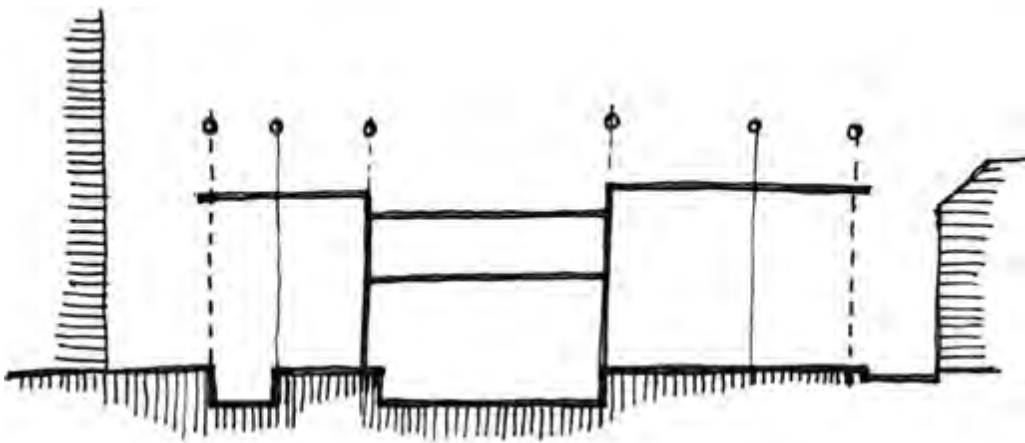


Figure 120: Design Development – Artificial Ground & Reconnecting West to East

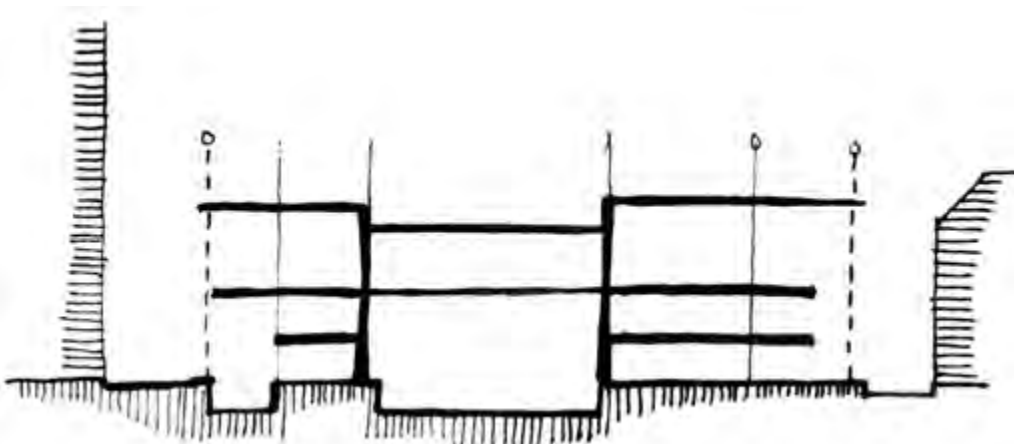


Figure 121: Design Development – Artificial Grounds

According to the South African Transport Services (SATS) Bridge Code (1983), the horizontal clearance from track centreline to the proposed structure supports should be a minimum of 3.0 m. Furthermore, the Rail Clearances for the bridge structure of the design proposal should be a minimum of 5.08 m in accordance with the SATS Bridge Code.

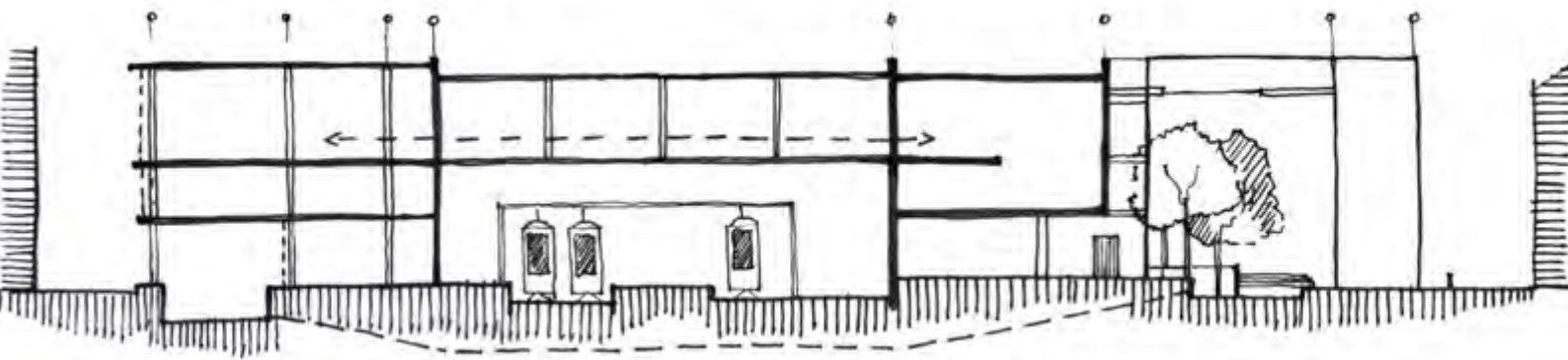


Figure 122: Design Development – Circulation

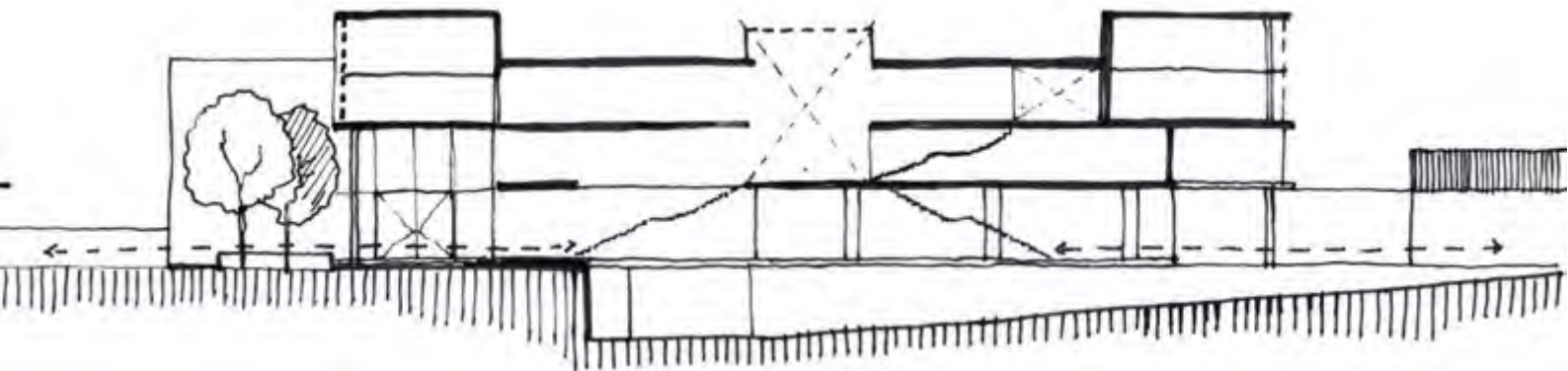


Figure 123: Design Development – Circulation

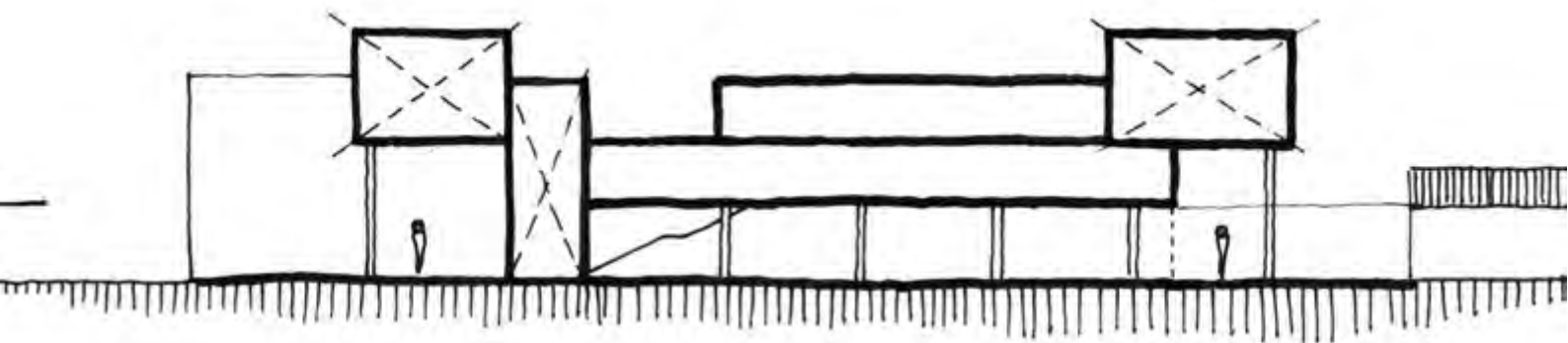


Figure 124: Design Development – Architectural Language

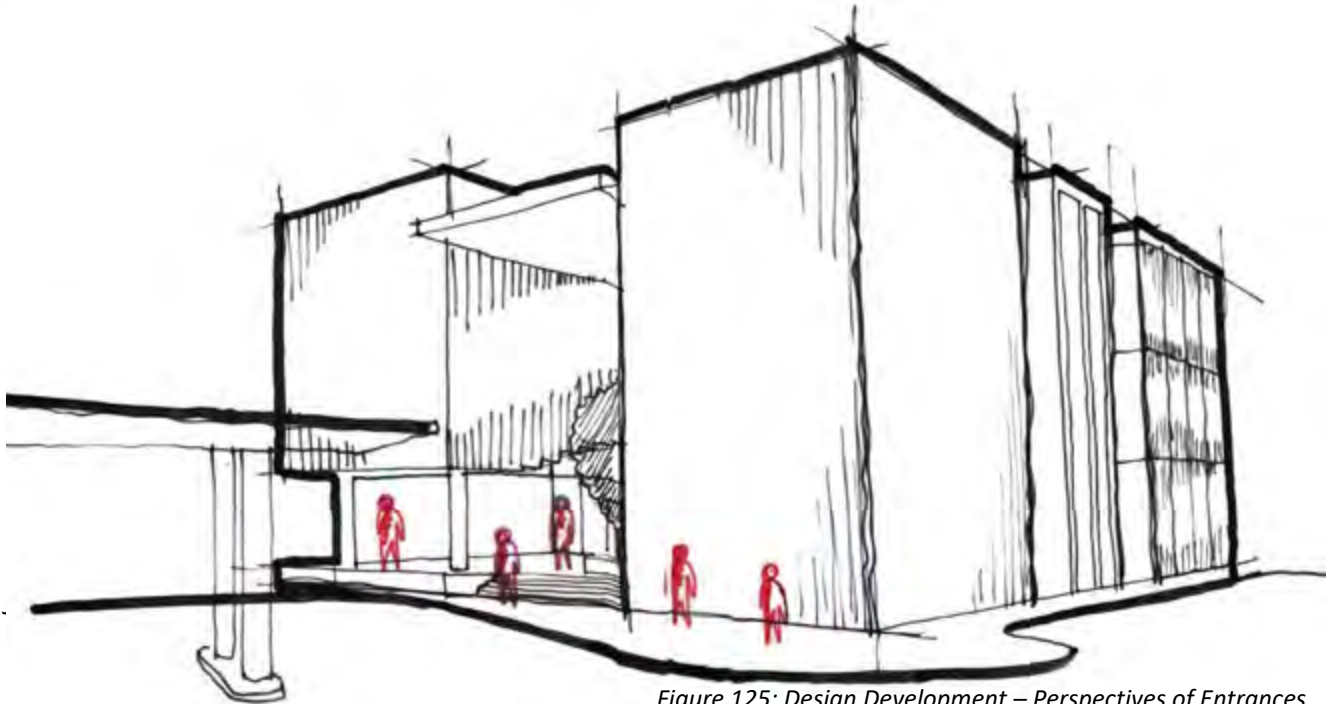
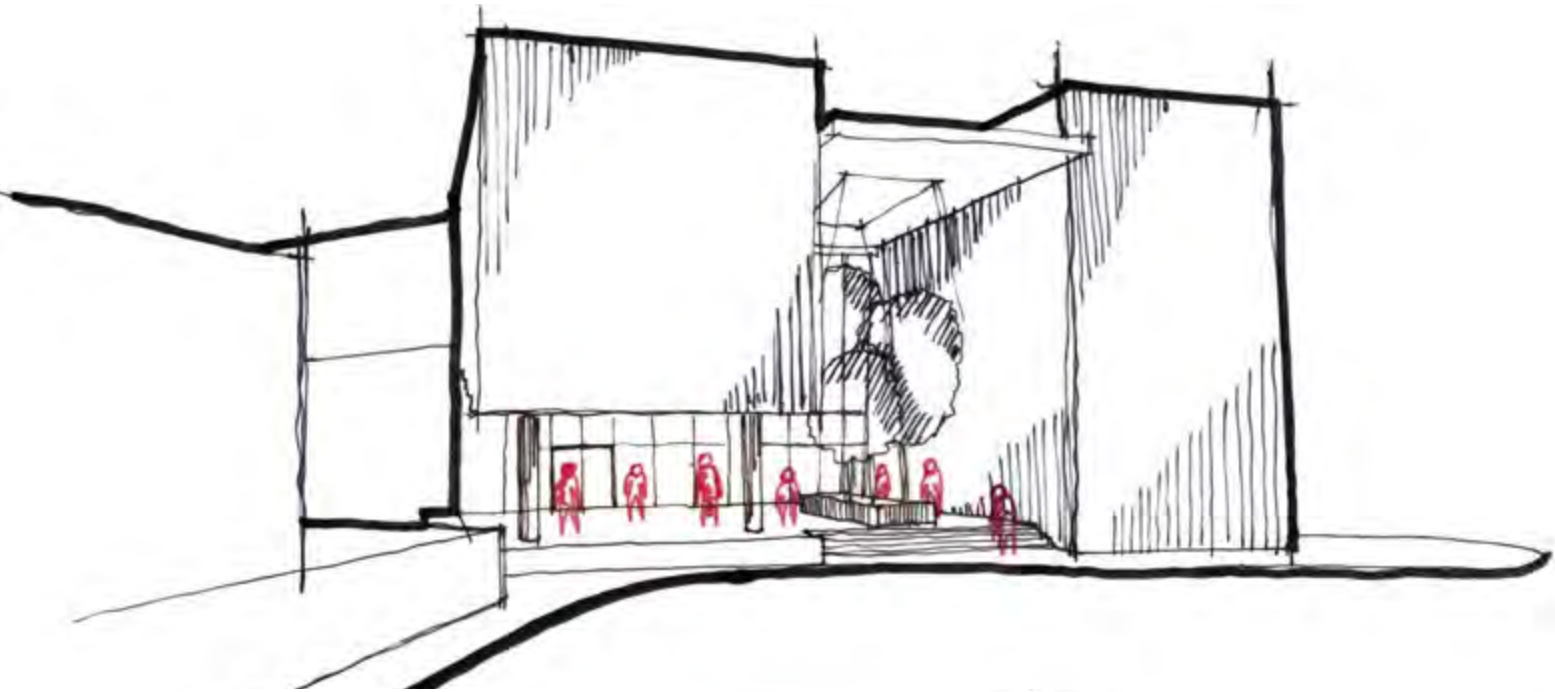
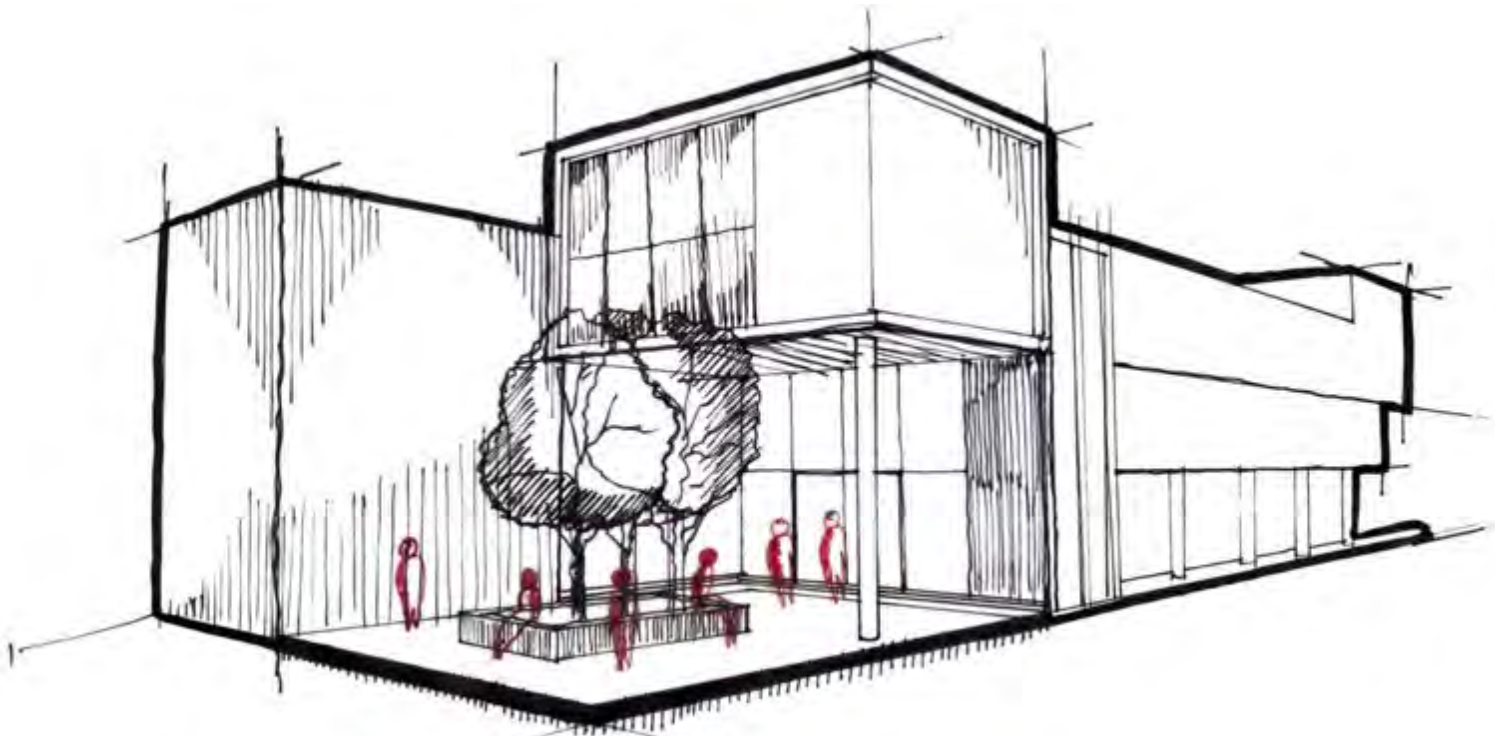


Figure 125: Design Development – Perspectives of Entrances





### 14.3 THRESHOLD CONDITIONS / PUBLIC SQUARES

Since the precinct is a narrow precinct holding an oblong shape, there is not much space available on the station road side. As such the main entrances on the western side of the precinct – Station road - are placed on the side of the new development which also supplements the continuous flow of commuters from the taxi ranks and the train station. The connections between each transport infrastructures are treated as public squares thresholds which create breathing spaces and further accentuate and celebrate the entrances of the design proposal. Similarly, on the eastern side – mosque road taxi rank -, the main entrance is also treated as a public square.



Figure 126: Threshold and Public Square

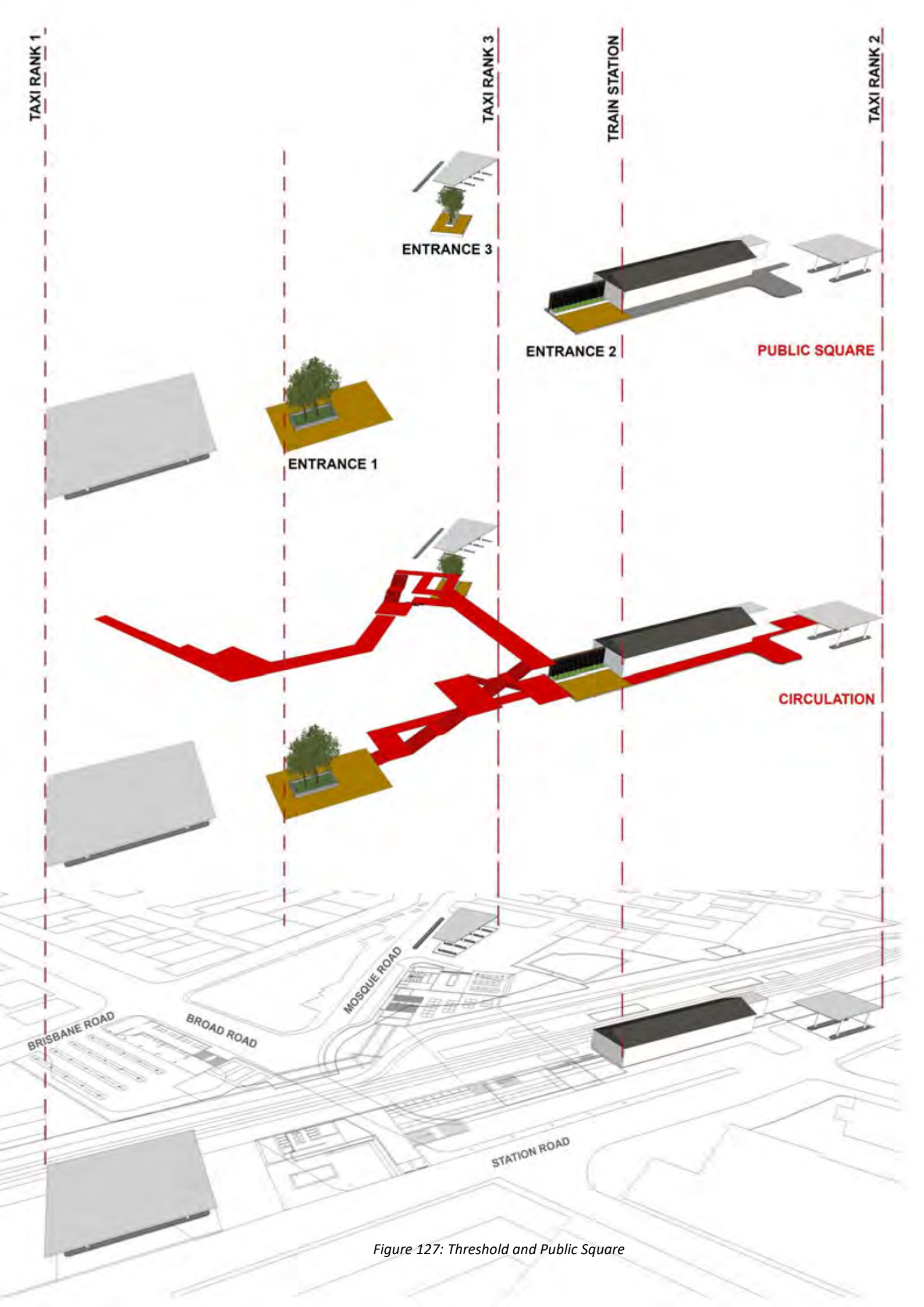


Figure 127: Threshold and Public Square

#### **14.4 HIERARCHY – Ground Floor V/s Artificial Ground**

The design proposal also responds to the existing realm of street trading activities. The Wynberg precinct holds permanent and semi-permanent street traders. The permanent types of street traders are the 'Stand and Umbrella traders', the 'table traders' and the 'tarpaulin and post traders'. The semi-permanent typologies are the 'sidewalk ground street traders' and this is the most common typologies of street trading activities on the Wynberg precinct.

So as to be site responsive and not abruptly force the street traders into new forms of street trading typologies, the design proposal caters for clear platforms on the ground floor to accommodate for the semi-permanent 'sidewalk ground street traders' activities. Such design intention aims at preserving the existing trading realm on the ground floor while further providing them with primary work necessities which are shelter, storage and sanitation. On the first floor - which acts as the new layer and artificial ground – new permanent trading amenities including trading table and storage are integrated so as to create a hierarchy of trading facilities.

#### **14.5 WALK-THROUGH**

##### ***Western Wing – Station Road***

The ground floor of the design proposal holds the 'sidewalk ground street traders' to maintain the existing realm of street trading happenings within the precinct. However, the street traders are sheltered and provided with storage and sanitation facilities. On the first floor, a new hierarchy of street trading activities has been created with the integration of permanent trading table and also storage. The ground floor and first floor of the design proposal are predominantly trading floors while on the second floor, a food market and café have been integrated as new form of programs aiming at optimising service delivery to commuters. It provides the commuters with moment of pause to consume food and relax before moving towards their respective transport interchange. Furthermore, NGO's offices are also located on that level so as to be in contact with people at moment of pause – who are transiting at the café and food market.

##### ***Bridge***

The bridge architecturally and structurally reconnects the western side to the eastern side of the precinct. Furthermore, programmatically, it also aims at reconnecting the two different fabric of Wynberg. The western side of Wynberg is a commercial fabric while the eastern side of Wynberg is predominantly a residential fabric. As a way to reconnect those two different fabrics, new programs such as a gym and a resource centre have been integrated in the design proposal. The resource

centre includes a library and a computer lab (internet Hub). It also holds meeting rooms which can be used by NGO's, street traders and taxis organisations. Programmatically the bridge aims at reconnecting the western commercial fabrics to the eastern residential fabrics by providing the community and commuters with shared resource while bringing forward a sport and an educational input to the community. The gym and resource centre cater for communal use between commuters, employees working on the western side of Wynberg and resident of the eastern side of Wynberg.

Furthermore, the Rail Clearances for the bridge structure of the design proposal should be in accordance with the South African Transport Services (SATS) Bridge Code (1983). The vertical clearance of the bridge structure should be a minimum of 5.08 m in accordance with the SATS Bridge Code.

### ***Eastern Wing – Mosque Road***

On the second floor of the eastern wing, the programmatically sport and an educational input of the bridge conclude with a medical cabinet and also an auditorium which further acts as a secondary element to the resource centre and the NGO's office. On the first floor of the eastern wing, a new hierarchy has been created with the integration of new programs such as beauty parlour and barber shops. The first floor of the eastern wing further connects to the new taxi rank facility – Broad road - which also holds a post office, pension pay-outs counter and a drug store which provide the commuters with facilities which have the potential to optimise service delivery in a single trip. Similar to the Western Wing, the ground floor of the eastern wing holds sidewalk ground street traders and they are also provided with stores and sanitation. Furthermore, there is also a cross programmed platform at the entrance – underneath the auditorium - which might be used by street traders and also be used as a space for exhibition by NGO's for awareness campaign.

## **14.6 CIRCULATIONS**

The design proposal aims at integrating a continuous connection for commuters between each transport facilities while being supplemented with street trading activities. Furthermore, architecturally the circulation inside the design proposal tends to be also expressed externally. The external facades are punctured to show vertical movements such as stairs and lifts. Consequently, the stairs are 4m wide while the clear circulation routes inside are at an average of 3-4 metres wide so as to optimise commuters flow within the design proposal.

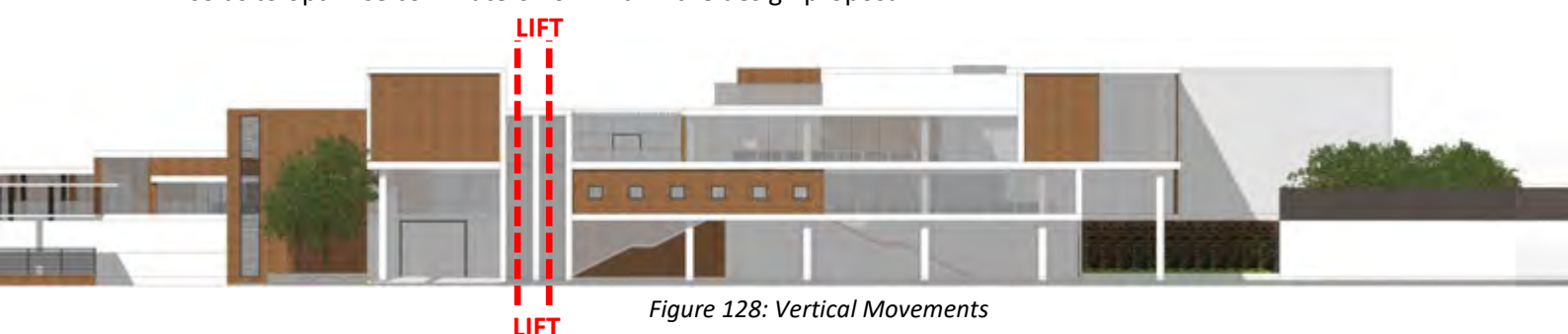


Figure 128: Vertical Movements

### 14.7 ARCHITECTURAL LANGUAGES FOR A UTILITARIAN CIVIC BUILDING - TECTONICS

The architectural language and tectonics tend to follow the Urban Renewal Projects in South Africa – The Metro Mall Transport Facility and Traders Market and also The Baragwanath Transport Interchange and Traders Market (Baralink). The building materials used in the Urban Renewal Projects in South Africa are primarily driven towards robustness and durability. The materials used in the South African Urban Renewal projects are predominantly Bricks and off shutter concrete.

Similarly for the design proposal brick is the main tectonics of the building. Bricks are considered to be economical, hard and durable, and highly fire resistant<sup>99</sup>. Bricks as a building material requires very low maintenance and typically will not require painting or any finish, hence catering for wider life-span with little burden on the maintenance budget. Furthermore, the appearance especially when well crafted, can impart the expression of solidity and permanence. Regarding the South African climatic condition, brick is an ideal material since it is resistant to cold and moist weather conditions and can further increase the thermal mass of building<sup>100</sup>. When dealing with complex logistic such as transport interchanges, traders and high density of commuters, such material properties is highly needed.

The design proposal tend to be expressed as an evocative brick structure that can sustain a highly dense suburban fabric and which reflect the phenomenon of mass commuting and also recognising the significance of this type of public building for the community. The design proposal tends also to replicate parts of the architectural language of the South African Urban Renewable project. Some elements and spaces such as entrances are highly accentuated and emphasized.



Figure 129: Baralink Entrance



Figure 130: Accentuating Vertical Features

<sup>99</sup> About Civil, 2014

<sup>100</sup> QS Articles - Engineering, Technology, Project Management, 2012



Figure 131: Perspective Explorations

### 14.8 TECHNICAL STUDY – CAVITY WALL

#### Recommended practice for insulated cavity wall construction

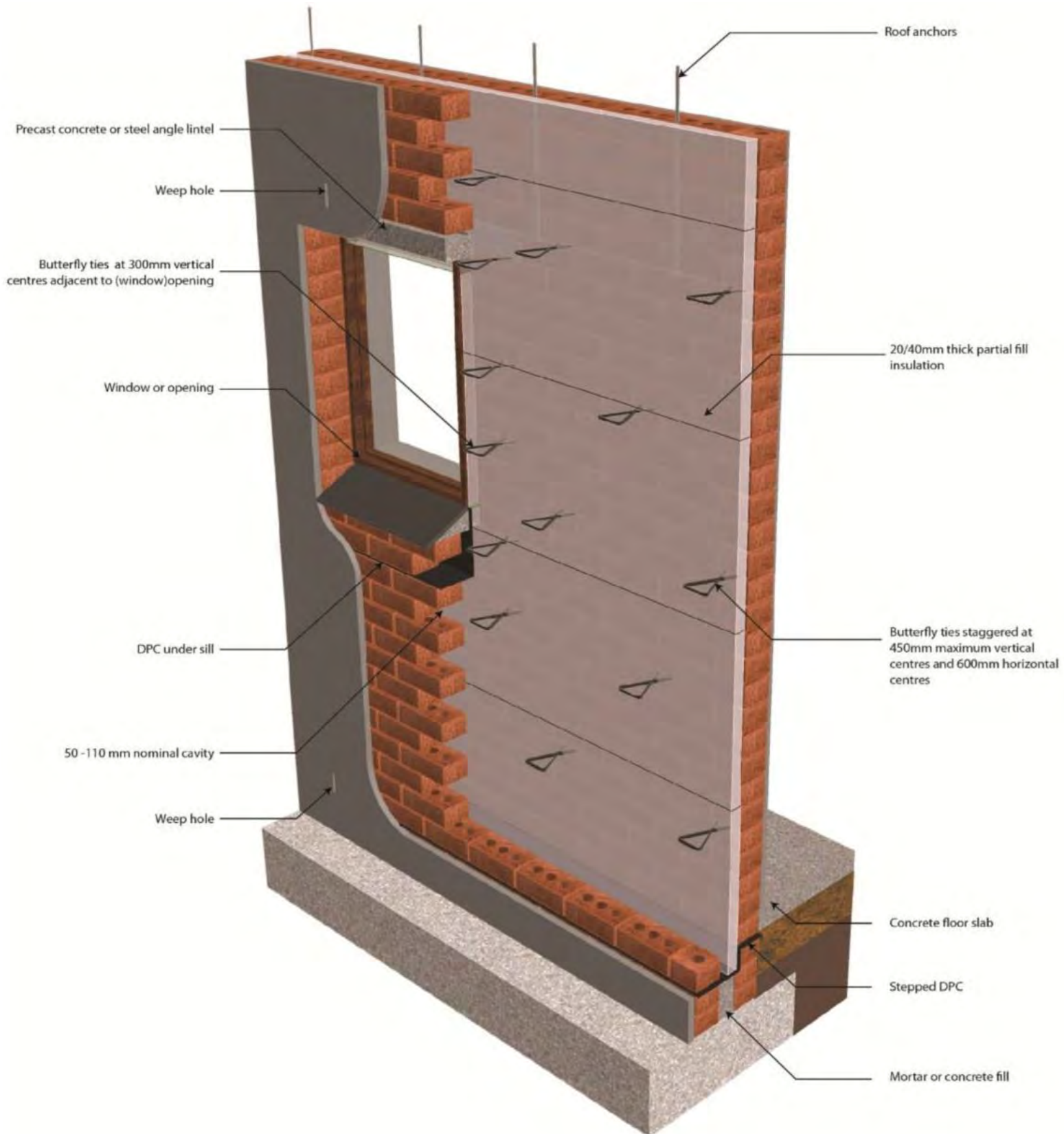


Figure 132: Recommended practice for insulated cavity wall construction

## 14.9 CLOSING SUMMARY

### Re-Connecting...

'Informal trading and mass commuting' phenomenon, Division of the Wynberg fabric due to the train station, Contest for spaces between taxis, street traders and commuters had fuelled this inquiry. The aims of this dissertation had primarily been to motivate a redevelopment of the Wynberg precinct which aim at reconnecting the western and eastern fabric which has been divided due to the installation of the train station and also at reconnecting the commuter's routes between the transport interchanges while further optimising the realm of street trading by responding to the current infrastructural challenges face by street traders operating in the precinct.

However, the Wynberg precinct holds severe constraint regarding land-availability. The design proposal included reclaiming part of the precinct by relocating the existing train station administration office and the existing public toilet facilities. Subsequently, the precinct was then re-imagined with a new intervention which would act as an artificial ground, binding together the western fabric to the eastern while further reconnecting the different transport infrastructures and the commuter's routes. On the other hand, the design proposal also aimed at stimulating the commuter's realm by introducing new programs which were adapted to further stimulate the civic life within the precinct.

The Wynberg precinct was re-imagined with a civic building which would reconnect the western and eastern fabric of the precinct while sustaining both the 'street trading and mass commuting' phenomenon and further acting as one 'one-stop' form of service which caters for a broader accessibility by stimulating the commuter's activities and experience in one single trip.

## **Appendix A**

### **The Theoretical Framework**

*The aspiration behind this chapter is to explore the theories on Progressive Development of 'Special Places' around Transport Interchange. It aims at analysing how transport interchanges in African cities can be composed with other facilities to act as a 'one-stop' form of service which caters for a broader accessibility for commuters. Furthermore, the aim of this chapter is to explore the theories and principles of Transit Oriented Development. It aims at exploring the principles of planning station so as to optimise the integration of public spaces. It further explores the Principles of 'Placemaking' around transport interchanges through TOD Districts and Neighbourhoods.*

## 15.0 PROGRESSIVE DEVELOPMENT OF ‘SPECIAL PLACES’ AROUND TRANSPORT INTERCHANGE

Transport Interchange points are the points where people change mode of transport and direction, subsequently being particular points of opportunity. Transport Interchange points by definition are highly accessible thus generating significant flows of people and making the precinct very dense. Due to their accessibility and generative potential, transport interchange points are further potential spaces to sustain decentralisation pattern of urban opportunities. However, the exploitation of such potential spaces needs to be reinforced by public spending<sup>101</sup>.

Transport Interchange points which are highly active in generating large flows of people should also be composed with pleasant landscaped public spaces which can further be used as a platform for informal microenterprises. The effervescence and pleasantness of the public space, composed with the transport interchange and informal microenterprises, will significantly increase the amount of commuter transiting in the vicinity. Transport Interchange points of similar character should also be associated to other essential services. For instance; pension pay-out points should also be integrated within the precinct and this might further help to stimulate public spending hence, reinforcing the informal microenterprise economy. Due to their accessibility and publicness, such spaces will also be ideal points of exchange for governmental service providers or social services to reach people. Hence, it is will essential that the transport Interchange points hold clusters of social services. However, there should also be a hierarchical level of accessibility between the integrated facilities. The lowest level of hierarchy should be associated with lower order facilities<sup>102</sup>.

Transport Interchange points with other facilities composed to it, acts as ‘one-stop’ form of service which caters for a broader accessibility subsequently stimulating commuter’s activities and experience in one single trip. Furthermore, it will also help to promote multi-functional use and sharing of facilities. In South Africa, due to limited public fiscal resources, it would be beneficial to promote spaces which are cross-programmed, multi-functional and shared. This is fundamental to stimulate the effectiveness and the sustainability of social service delivery<sup>103</sup>.

Associated with good design and focussing public investment towards a single ‘complex’ which can cater for a wider range of services, will also have a positive impact on informal stakeholder’s confidence. The system will generate opportunities for developing microenterprises, subsequently being a vibrant and promising precinct for transportation, retailing and manufacturing

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<sup>101</sup> Dewar & Todeschini, 2004 pg.57

<sup>102</sup> Dewar & Todeschini, 2004 pg.57

<sup>103</sup> Dewar & Todeschini, 2004 pg.58

opportunities<sup>104</sup>. Over time, the transport interchange precinct will then be developed into a high activity urban ‘centre’ being a ‘special place’ in the local landscape and successively transformed into a social centre. These centres will be communally owned by transiting commuters and people residing in the surrounding vicinity. They will be the precincts where people will go for promenade and socialise. Those centres will also have the potential to host public activities and events. If properly designed and composed with essential facilities which stimulate the public realm, transport interchange precincts can generate a sense of dignity to the users regardless of the context and poverty in surrounding areas<sup>105</sup>.

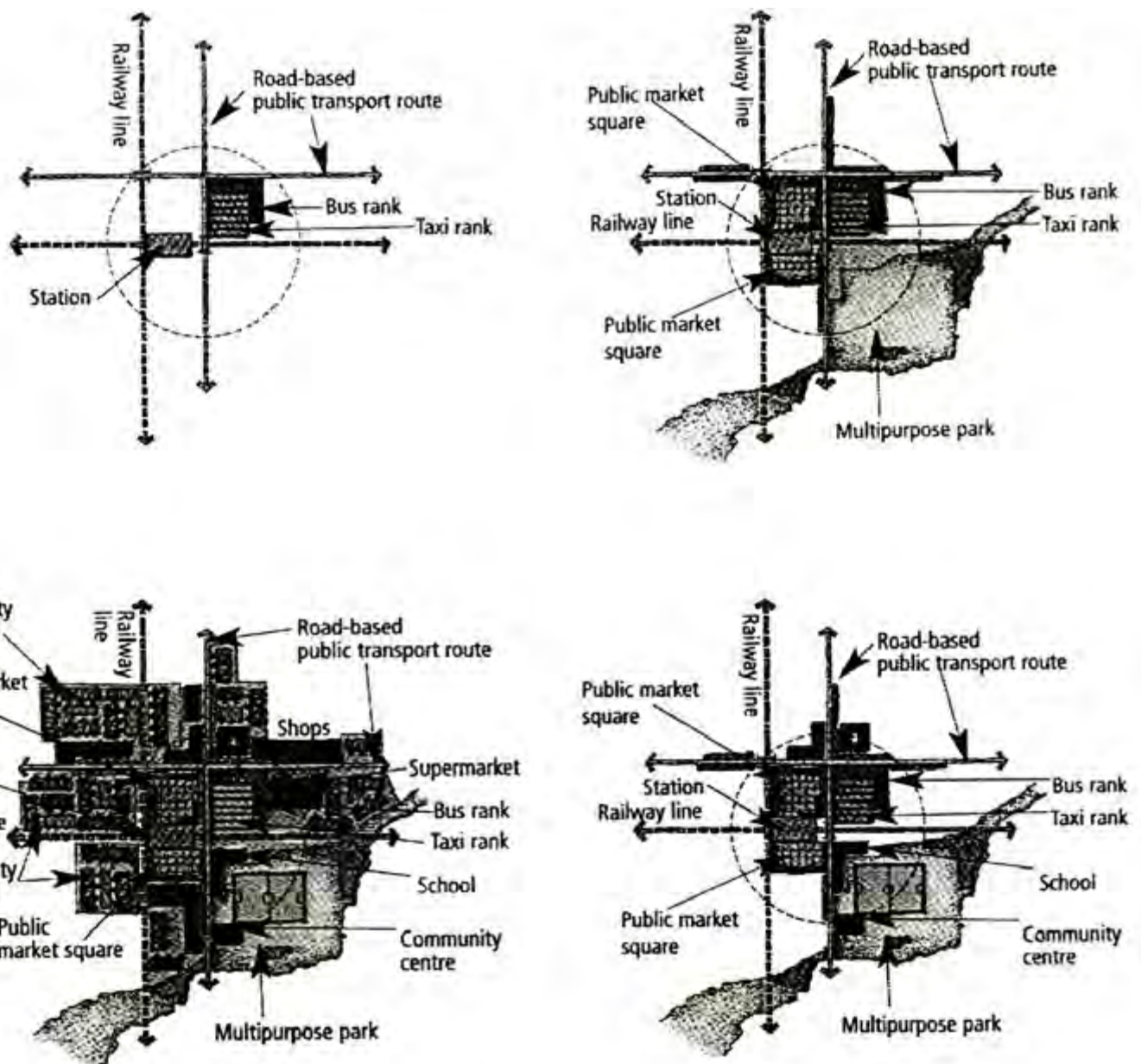


Figure 133: Progressive Development of ‘Special Places’ Around Transport Interchange Points (Clockwise from top left)

<sup>104</sup> Dewar & Todeschini, 2004 pg.58

<sup>105</sup> Dewar & Todeschini, 2004 pg.58

The process by which these ‘special places’ can be promoted is graphically represented in Diagram 1. The significance of public transport interchanges as essential element in restructuring urban precincts raises major concerns in relation to South African Transportation policy. Currently in South Africa, there are various modes of transportation and also several hierarchical levels within roads transportations, with all being funded by different agencies which have dissimilar agendas<sup>106</sup>.

### **15.1 THE CITY OF CAPE TOWN – INTEGRATED PUBLIC TRANSPORT NETWORK PLAN 2032**

#### **TRANSIT ORIENTED DEVELOPMENT**

The ‘Transport for Cape Town’ recognises that Transit Oriented Development Projects are of vital importance to address the imbalances resulted from the apartheid era; lower-income working groups must travel long distances to reach their workplace, lack of housing density and further lack of land use intensification<sup>107</sup>. The ‘Transport for Cape Town’ has decided to implement Transit Oriented Development to support their Integrated Public Transport Network Plan – ‘IPTN 2032’<sup>108</sup>.

The City of Cape Town aspires to become one of the most efficient cities in Africa by the year 2032. It aims at enhancing the management of the metropole while also creating better life conditions for the millions working and living in the metropole<sup>109</sup>. Transit Oriented Development offers means for the City of Cape Town to restructure its socio-spatial patterns and ensure that residents are brought closer to their place of work while further improving the efficiency of public transport across the metropole<sup>110</sup>.

Transit oriented development provide means to; enhance urban quality and street connectivity, reduce traffic and parking space, cater for mixed use land, more convenient and effective transport stations and infrastructures which are cycling and walking friendly<sup>111</sup>. The ‘Transport for Cape Town’ aims at exploring how transport sites can be more accessible and generate more opportunities to economic happenings and freeing up income<sup>112</sup>. Through the implementation of Transit Oriented Development, ‘Transport for Cape Town’ intend to develop precincts around train stations and major bus stations which will subsequently enhanced property and land values. It will also include development rights above Transport facilities, so as to enable the

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<sup>106</sup> Dewar & Todeschini, 2004 pg.58

<sup>107</sup> Transport for Cape Town, 2016

<sup>108</sup> Luyt - Future Cape Town, 2015

<sup>109</sup> City of Cape Town, 2014 - Transit-oriented development

<sup>110</sup> Luyt - Future Cape Town, 2015

<sup>111</sup> Open Streets - Cape Town, 2014

<sup>112</sup> Transport for Cape Town, 2016

emergence of multi-functional urban communities<sup>113</sup>. Transit oriented development is a tool to revisit land use so as to stimulate density, promote diversification and intensification while also aiming at enhancing the quality of life within a precinct that caters for access to transport, shopping, amenities and employment<sup>114</sup>.

## 15.2 TRANSIT ORIENTED DEVELOPMENT STATIONS

Stations are the connecting points between the city to other locations and also the connecting points to other transitional spaces which include transit services such as buses, taxis, automobiles, bicycles. Stations and their precincts are complex infrastructures which influence commuters' accessibility, comfort and safety while also influencing service reliability, ridership levels, operating speed and frequency. Well-designed stations which are composed with active precincts have the potential to be developed as important civic icons of a city. Planning of stations together with their precincts is complex. But it is essential to get it right since, it will dictate desirable or undesirable patterns. The layout of the station and its precinct will have a broader effect on the overall quality of the vicinity; the vehicular and pedestrians flow around the stations and also the quality of development around the station which includes commercial or recreational spaces<sup>115</sup>.

### 15.2.1 Conventional Layout - "station in a parking lot" - should be avoided

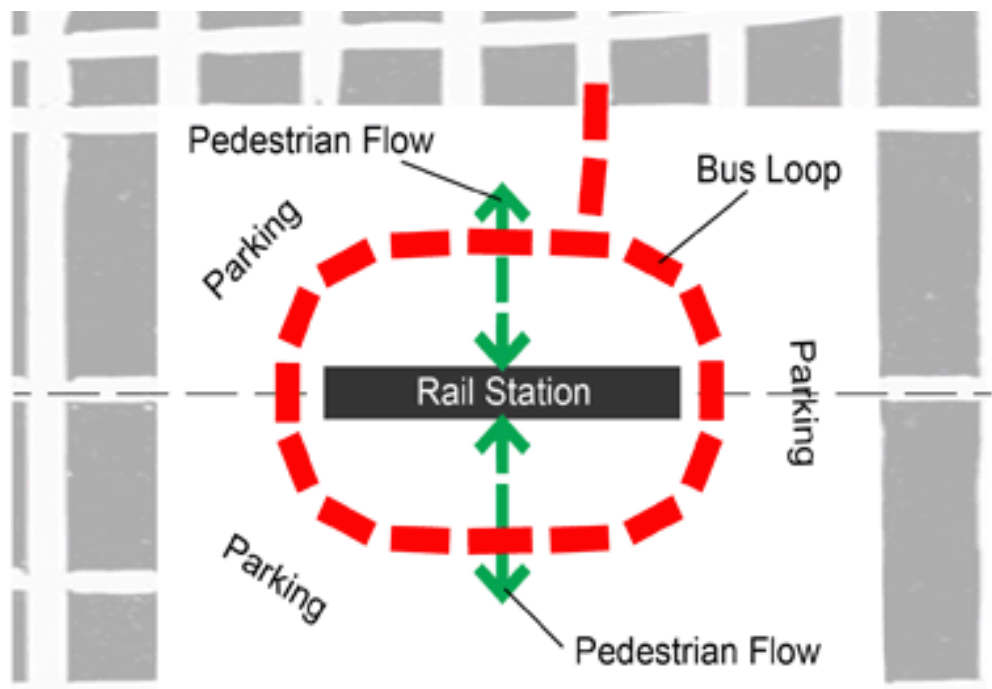


Figure 134: Conventional Layout of Station

Stations which are modelled as isolated infrastructures from the city and which can only be connected by cars or buses, are ineffective and will further contribute delays and add inconvenience

<sup>113</sup> Transport for Cape Town, 2016

<sup>114</sup> City of Cape Town, 2014 - Transit-oriented development

<sup>115</sup> TOD Institute, 2016 - Transit Oriented Development Stations

to commuter's travel. Such design scheme has the tendency to generate dangerous and unpleasant spaces for pedestrians subsequently being unfavourable for the commuters to walk from and to the infrastructure. Furthermore, this design layout and configuration will also increase vehicular congestion around the station while contributing to pollution and being unsustainable. The conventional design layout has the tendency to be disconnected from its surrounding vicinity and be isolated from the public realm which subsequently discourages the development of retails or commercial stalls<sup>116</sup>.

### 15.2.2 Preferred Layout - "station in the city"

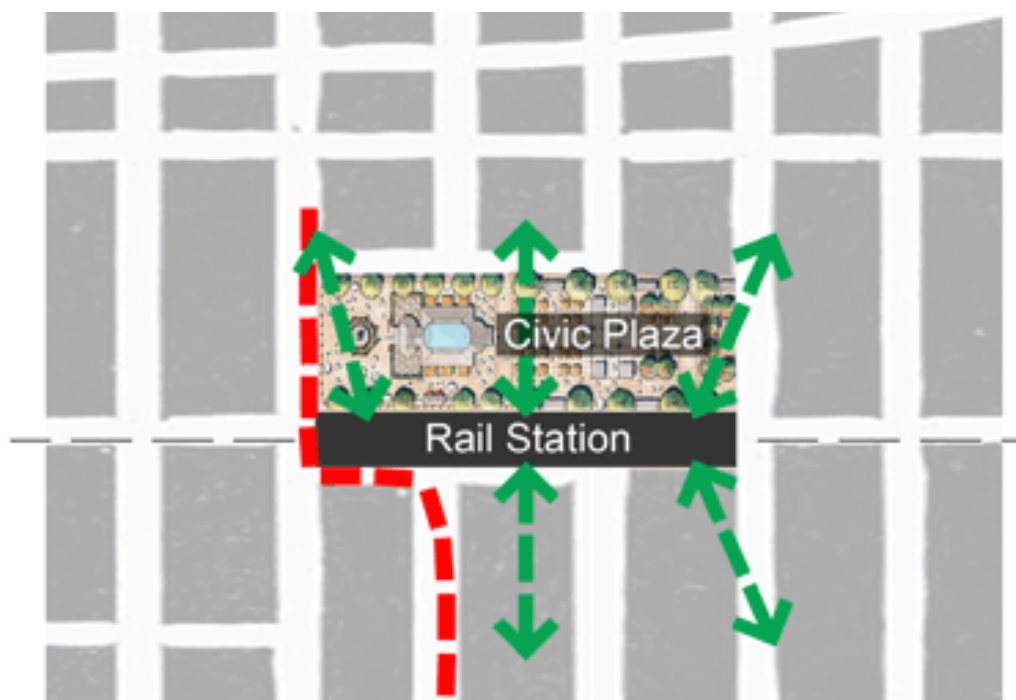


Figure 135: Preferred Layout of Station

Stations which are modelled and integrated into the city's public realm are more accessible by walking and can further be easily access by cars, taxis or bus. Stations which are designed following such configuration are safer and livelier and stimulate pedestrian flow to and from the stations. They contribute to the liveability of the precinct and further encourage walking hence, reducing vehicular traffic around the station. Such design configuration promotes the integration of public spaces to hang out and to socially engage while also promoting other communal facilities such as retails, commercial stores, restaurants and cafés around the station and right up to the door of station<sup>117</sup>.

<sup>116</sup> TOD Institute, 2016 - Transit Oriented Development Stations

<sup>117</sup> TOD Institute, 2016 - Transit Oriented Development Stations

### 15.3 TRAIN STATION - TOD DISTRICTS AND NEIGHBOURHOODS.

Transit oriented development includes several principles regarding the design of train station in relation to the planning of TOD districts and neighbourhoods. According the Transit oriented development principles, stations should be planned and located in vicinities which hold prominent ridership potentials and such vicinities should also have the potential to accommodate other development opportunities. A range of 400 - 800 metres around the station should be developed as higher density, mixed-use, walkable opportunities<sup>118</sup>. Densities should also be control and stimulated in reference to the surrounding; with a higher density around the station while tapering it down to the existing neighbourhoods. The vicinity around the station should optimise pedestrian connections to the surrounding fabrics and developments. Public Plaza might be an element to be incorporated, adjoining one or more sides of the station building to stimulate the public realm around the station. Furthermore, the pedestrian routes leading to the station should also hold retails facilities and services for instance; open-air markets or grocery stores. The station 'complex' should be use as a catalyst for the major redevelopment of the surrounding precinct and this should also be associated with good placemaking<sup>119</sup>.

### 15.4 TRANSIT ORIENTED DEVELOPMENT - PRINCIPLES OF 'PLACEMAKING'

Transit Oriented Development promotes several principles to achieve 'placemaking'. 'Placemaking' is the art of combining essential physical and operational elements so as to activate and generate a vibrant precinct sustaining a vibrant public realm. It requires the orchestration of people flows, integration of both economic and design elements, which when composed together create successful places<sup>120</sup>.

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<sup>118</sup> TOD Institute, 2016 - Transit Oriented Development Stations

<sup>119</sup> TOD Institute, 2016 - Transit Oriented Development Stations

<sup>120</sup> TOD Institute, 2016 - Elements of Placemaking

### 15.4.1 Close proximity

For TOD projects to be successful, it should be located close to rail stations and should promote pedestrian activities which encourage walking and cycling to and from the station. 'Projects' and other opportunities need be located within a range of 400metres to 800metres around the train station, hence being in close proximity and allowing people to get to the station within a walking period of 5-10minutes. The walk should ideally promote pedestrian friendly experiences sustained by safe and comfortable routes<sup>121</sup>.



Figure 136: Close Proximity

### 15.4.2 Well Defined Public Spaces - Outdoor Rooms

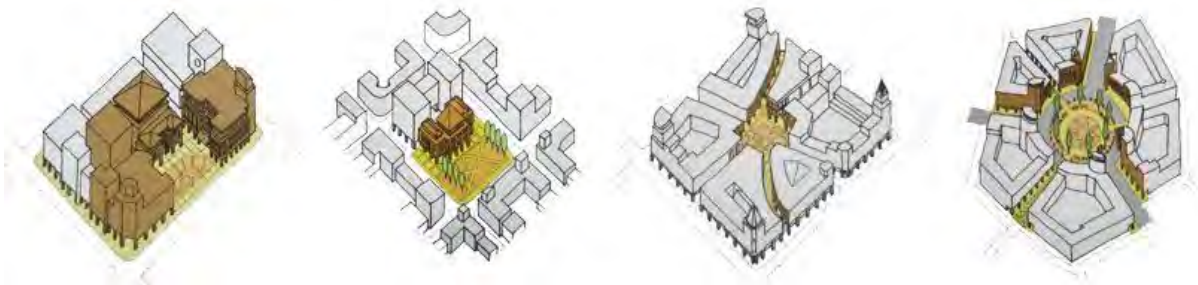


Figure 137: Well Defined Public Spaces

Composed together; buildings and public spaces define a precinct. Public spaces are the places in the city where people will converge to socially engage and enjoy the city. Public spaces should cater for high quality life in the city and should further have a sense of enclosure. Public spaces vary between grand squares, plazas to small parks. Enclosure can be achieved through well designed and human-scaled infrastructures - scaled to proportions that are comfortable and safe for pedestrians to walk along - wrapping around the public space. The perimeter and frontage of these infrastructures should also be activated. The combination of well-designed infrastructures composed with the public space will help to generate a vibrant precinct<sup>122</sup>.

<sup>121</sup> TOD Institute, 2016 - Elements of Placemaking

<sup>122</sup> TOD Institute, 2016 - Elements of Placemaking

### 15.4.3 Mix of Uses - Lively, Vibrant Places



Figure 138: Mix of Uses - Lively, Vibrant Places

Within the close proximity of 400metres to 800metres, there should be an appropriate mix of uses which will generate synergy and diversity and which will further keep the precinct active both during the day and night time. There should be an appropriate mix of uses of buildings and infrastructures catering for civic, commercial, recreational, residential and work purposes. Subsequently these buildings and infrastructures should also be functionally integrated in regards to the pedestrian flows<sup>123</sup>.

### 15.4.4 Pedestrian Scale - Comfortable, Safe, Enjoyable



Figure 139: Pedestrian Scale - Comfortable, Safe, Enjoyable

To make pedestrian-scale walkable places; buildings and spaces should be designed and scaled to proportions that are comfortable and safe for pedestrians to walk along. The sidewalks should also be linked to a variety of uses; open-air markets, services, grocery stores, squares, parks among others. Furthermore, the buildings lining the sidewalk should promote active store frontages – with lots of openings – subsequently bringing life and safety to the street while also generating more interests and happenings during the day and as well as during night time<sup>124</sup>.

<sup>123</sup> TOD Institute, 2016 - Elements of Placemaking

<sup>124</sup> TOD Institute, 2016 - Elements of Placemaking

### 15.4.5 Active Ground-Floor Retail



Figure 140: Active Ground-Floor Retail

Active Ground-Floor Retail is a fundamental element to support Transit Oriented Developments. Active ground floor retails are continuous line of retails or stalls which activates the sidewalks and street edge. Ground-Floor Retails are more effective when designed as continuous element through blocks and without any breaks or ‘dead frontages’. There should be a variety of retails that provide services catering for people daily needs<sup>125</sup>.

### 15.4.6 Tree Lined Streets



Figure 141: Tree Lined Streets

Tress and vegetation add beauty and grandeur to streets and public spaces while further contributing to urban liveability and catering for pedestrian comfort. Trees help to provide shades, cool the air and moderates winds, hence generating comfortable sidewalks while further adding a sense of enclosure to street space. Furthermore, using trees and vegetation on the street edges might also serve as a water absorption feature, hence can potentially reduce the need for costly storm water drainage system<sup>126</sup>.

<sup>125</sup> TOD Institute, 2016 - Elements of Placemaking

<sup>126</sup> TOD Institute, 2016 - Elements of Placemaking

#### **15.4.7 Reduced and Hidden Parking**

Parking is an important element in an urban fabric and for Transit Oriented Development, it is essential to integrate them properly so that they don't generate any interference with the liveable spaces. Parking should be clustered in strategic locations and should also act as an element which promote walking and focus pedestrian's attention towards the civic, commercial or recreational happenings within the precinct. Large parking lots negatively influence the concept of place-making and dehumanize large spaces which also have the tendency to be unsafe. Transit Oriented Developments promote reduced parking numbers by implementing central shared parking between different uses<sup>127</sup>.

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<sup>127</sup> TOD Institute, 2016 - Elements of Placemaking

## **Appendix B**

### **Local - Urban Renewal Projects**

*South Africa has initiated several developments forming part of an Urban Renewal Strategy aiming at integrating marginalised communities, primarily integrating street traders and taxi operators into the public realm. This chapter aim at exploring how these projects respond in terms of function and architectural dynamism. It is essential to explore how these civic projects responds to the realm of informal trading and mass commuting while further generating a sense of ownership.*

## 16.0 METRO MALL TRANSPORT FACILITY AND TRADERS MARKET

Johannesburg - South Africa – 2001



Figure 142: Metro Mall Transport Facility and Traders Market

The Metro Mall Development - a transport-cum retail facility - was initiated by the Johannesburg Development Agency as a major infrastructural improvement being also an essential part of the City's Urban renewal strategy<sup>128</sup>. Metro Mall Development was completed in 2001<sup>129</sup>. The main intention behind the Metro mall project was the integration of marginalised communities, primarily integrating street traders and taxi operators into the public realm.

The Metro Mall Development is a conscious development which acknowledges the significance of informal trading activities at transport interchange. The complex caters for permanent facilities for large amount of taxis and street traders. The Metro Mall Development holds a daily density of 200 taxis, 25 buses and 150 000 commuters. Besides holding 800 shops and stalls facilities, the complex also incorporates considerable storage spaces for traders, sanitary facilities and also offices used by the transport management staffs and hawkers organisations<sup>130</sup>.

<sup>128</sup> Joubert, 2009, pg. 144

<sup>129</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>130</sup> Joubert, 2009, pg. 144

The Metro Mall complex adheres to the perimeter-block typology. It is a three storey ranking facility for buses and taxis which are situated at the core of the building. Subsequently, along the edges of core are the located the pedestrians and also the Traders. The complex also connects to a former four-storey parking garage at one edge of the site and the infrastructure is now used as a holding area for taxis<sup>131</sup>. The retail activities within the metro mall vary between trading behind counters, cubicles with roller shutter doors and shops with glazed frontage. Shops are mostly place on the Bree Street side of the Building so as to subsequently connect to the existing trading realm and vibrancy across the road. Consequently, informal trading activities took place along the edges and routes leading to and from arrival and departure zones<sup>132</sup>.

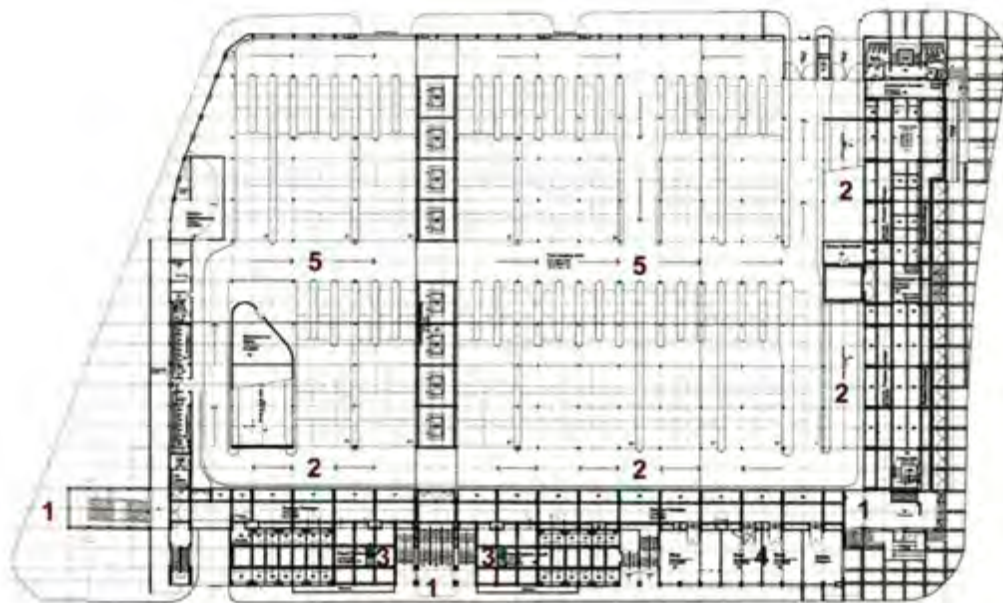


Figure 143: Metro Mall - Ground Floor Plan

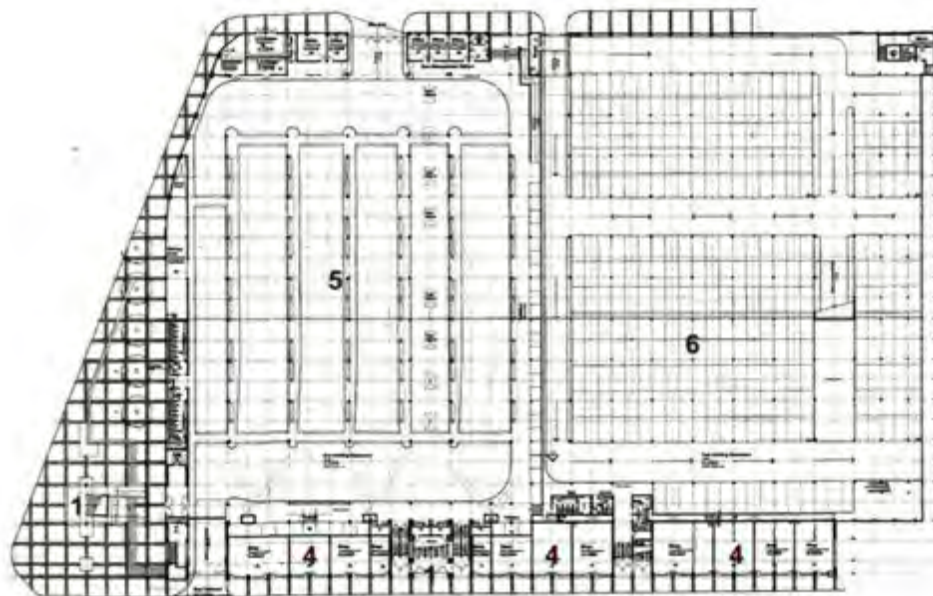


Figure 144: Metro Mall - Lower Ground Floor Plan

1. Entrance Tower
2. Trader Stores
3. Food Court
4. Formal Retail
5. Taxi Ranking Area
6. Bus Ranking Area

<sup>131</sup> Joubert, 2009, pg. 144

<sup>132</sup> Joubert, 2009, pg. 144

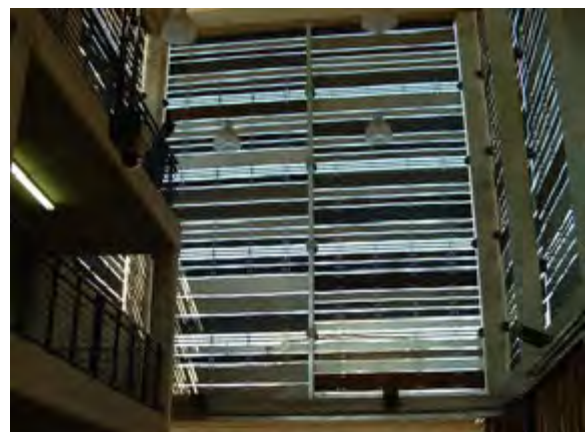


*Figure 145: Metro Mall - Bree Street Facade*

Due to its complex logistics, The Metro Mall has a spatial and structural organisation which is modular. Consequently, they are also skilfully articulated to avoid monotony. The architectural expression is more focus towards the street facades. The entrances are expressed as landmarks and light wells, turrets are used to accentuate corners while colonnades are used to provide shade and roof shelter alongside shops and stalls. Furthermore, the metro mall also holds iconography features such the oxidized steel screens which are inspired from the African marimba instruments. The screens are used as sun filters while on the hand they also contribute to the visual interest to the complex<sup>133</sup>. The finishes of the Metro Mall are deeply concentrated to a range of robust materials so as to bear up with the high density of commuters transiting daily through the infrastructure. Furthermore, to stimulate visual interest, several public arts enliven the complex. Colourful mosaics are used to decorate walls while the bollards which are direct commuters are made from sculpted wooden busts. Indigenous trees are also incorporated around the surrounding of the complex<sup>134</sup>.



*Figure 146: Metro Mall - Oxidized Steel Screens*



*Figure 147: Metro Mall - Oxidized Steel Screens*



*Figure 148: African Marimba Instrument*

<sup>133</sup> Joubert, 2009, pg. 144

<sup>134</sup> Joubert, 2009, pg. 144



Figure 149: Metro Mall – Mosaics



Figure 150: Metro Mall – Mosaics



Figure 151: Trader's Stalls



Figure 152: Trader's Stalls



Figure 153: Colonnades & Steel Canopy



Figure 154: Brick Finish



Figure 155: Off-Shutter Concrete Finish

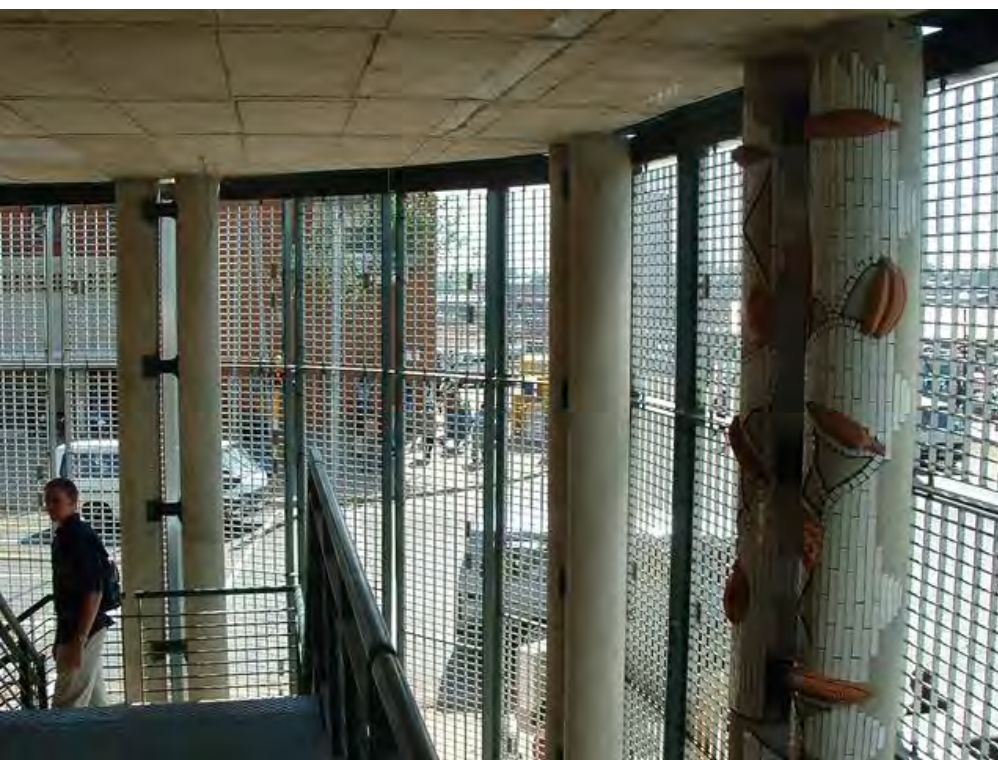


Figure 156: Oxidized Steel Screens



Figure 157: Oxidized Steel Screens

The metro mall as part of a wider urban design framework adheres to sound urban design principles. Pedestrian routes are kept fluid throughout the precinct and mixed-used developments ensure the livelihood and vibrancy of the precinct while also ensuring passive surveillance. The retails on the fringe of the complex recognise the significance of street as a public space. The metro mall deviates from rigid and internalised terminal buildings. It effectively sustains the realm of transport, transiting and trading without being highly regimented. Metro mall development besides its utilitarian nature is also an urban amenity of civic prominence<sup>135</sup>.

<sup>135</sup> Joubert, 2009, pg. 14

## 17.0 BARAGWANATH TRANSPORT INTERCHANGE AND TRADERS MARKET – BARALINK

Johannesburg - South Africa - 2008



Figure 158: Baragwanath Transport Interchange and Traders Market – Baralink Main Entrance

Forming part of the Greater Johannesburg Metropolitan Council's Baralink Development Framework, the Baragwanath Transport Interchange and Traders Market was initiated with the aim of integrating and uplifting the Baralink gateway in Soweto. The project aimed at ensuring the proper integration of the Greater Soweto with Johannesburg<sup>136</sup>. The Baragwanath Transport Interchange and Traders Market was completed in 2008. The Baralink is considered to be one of the major interchange hubs in Johannesburg and the site of the development stretches over 1300 metres in length and holds a 'narrow' width of 50 metres. The oblong shape of the site was a challenge regarding to the functionality of the development and also regarding the accommodation of the logistics. The primary design and planning attitude was the implementation of an arcade along the full length of site, which also acts as a structural spine onto which all the logistics and functional necessities are attached<sup>137</sup>. The arcade is the main feature of the development since it holds significant amount of traders, public spaces and amenities. Subsequently, commuters would walk along the arcade from one end of the site to the other, while switching from one public facility and transport interchange to the next.

<sup>136</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>137</sup> Ludwig Hansen - Architects + Urban designers, 2016



Figure 159: Baragwanath Transport Interchange and Traders Market- Context

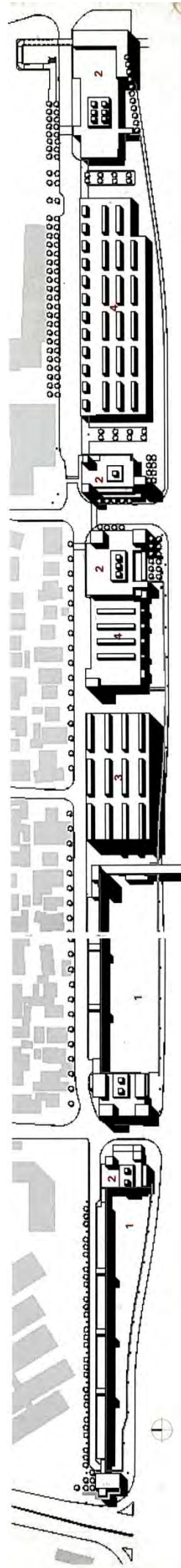


Figure 160: Baragwanath Transport Interchange and Traders Market- Site Plan

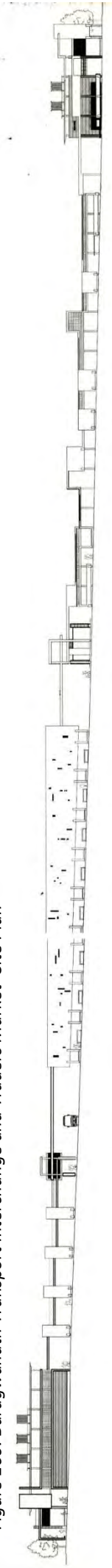


Figure 161: Baragwanath Transport Interchange and Traders Market- South Elevation

1. Taxi Holding Area
2. Market
3. Bus Rank
4. Taxi Rank

The architectural and planning approach was dominated by a several practical concerns. For instance, the road around the development was modified to cater for driveways and holding zone for taxis and buses. Taxis routes are distinct and are linked to sheltered areas where passengers board<sup>138</sup>. The Baralink sustain 20 bus ranking facilities which cater for the needs of both long and short distance bus operators. The Baralink also holds approximately 800 taxi ranking and holding bays to adhere to the requirements from 12 different taxis operators.



*Figure 162: Market - Interior*

The Baralink development accommodates 500 street traders with associated amenities such as storage facilities, management offices and support infrastructure. Salient factors regarding hygiene, delivery and storage for perishables were also part of the requirements<sup>139</sup>. Trader's stands vary in size so as to cater for the needs of wider range of street traders. Furthermore, each market 'square' – halls - can be closed independently hence optimising surveillance through patrols<sup>140</sup>. Subsequently, there is visual connection between each trading halls which creates a networks between all the traders in the Baralink, hence catering for a broader flexibility of facilities for commuters during peak hours while also reducing congestions within the arcade<sup>141</sup>.

<sup>138</sup> Joubert, 2009, pg. 140

<sup>139</sup> Joubert, 2009, pg. 140

<sup>140</sup> Mathenge - Archi Datum, 2015

<sup>141</sup> Mathenge - Archi Datum, 2015



Figure 163: Covered-Walkway and Trading Area



Figure 164: Covered-Walkway and Trading Area



Figure 165: Exterior - off-shutter Concrete



Figure 166: Exterior - Brick & off-shutter Concrete



Figure 168: Covered-Walkway and Trading Area



Figure 167: Baralink - Concrete Sculpture & Mosaics



Figure 169: Taxi Rank

The arcade - though holding a significant length of 1300 metres- is spatially differentiated in relation to the range of functions that occurs along it. The public entry in Baragwanath Transport Interchange and Traders Market ensure a greater sense of orientation. Landmarks structures have been integrated at focal points while serving as canvas for the artworks done by the locals and subsequently contributing to the sense of identity and ownership. The architectural language of the Baragwanath Transport Interchange and Traders Market overruled the common use of lightweight steel assemblies used for such civic buildings. The Baralink is an evocative concrete structure that have been adapted to a highly dense urban fabric and which reflect the phenomenon of mass commuting. The finishes of the Baralink are deeply concentrated to a range of robust material. However, the materials were elegantly articulated to avoid monotony in the architectural expression of the development<sup>142</sup>. The Baragwanath Transport Interchange and Traders Market is a sculptural concrete structure which consist of a diverse series of cautiously proportioned orthogonal voids which are then contrasted with solid walls, cantilevered seating and floating platforms<sup>143</sup>. Off-shutter concrete and bricks are primarily used to provide for more robust permanent structures aiming at recognising the significance of this type of public buildings for the community<sup>144</sup>. Nearly 70% of all Soweto commuters use the Baralink interchange and it is a vibrant civic space for a significant number of Soweto inhabitants<sup>145</sup>.

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<sup>142</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>143</sup> Joubert, 2009, pg. 141

<sup>144</sup> Ludwig Hansen - Architects + Urban designers, 2016

<sup>145</sup> Ludwig Hansen - Architects + Urban designers, 2016

## 18.0 WARWICK JUNCTION

### City Of Durban - South Africa



Figure 170: Warwick Junction – Key Plan

Warwick Junction – also known as the Warwick triangle - is located on the edge of Durban inner-city. It is a primary transport interchange for the City of Durban and it is estimated that the precinct accommodates an average of 460 000 commuters daily. Due to the confluence of rail, taxi and bus transport, the precinct had generated opportunities for street trading activities and subsequently it had been developed into an informally structured market. However, during the apartheid era, the informal trading activities were harshly controlled<sup>146</sup>. Nowadays, The Warwick Junction sustains both formal and informal businesses<sup>147</sup>. The Markets of Warwick holds between 5000 and 8000 vendors trading in 9 distinct markets, namely: the English Market, Early morning Market, Bovine head Market, Berea Station Market, Brook Street Market, Music Bridge Market, Lime Market, Muthi Market (traditional medicine), and associated street markets among others<sup>148</sup>. The Warwick Junction sustain the wide of range of trading activities including; clothing, fruits and vegetables, herbs and traditional medicines, spices, fish, meat, cooked mielies (corn) and also bovine-head.<sup>149</sup>.

<sup>146</sup> SAIA- Warwick Junction iTRUMP, 2015

<sup>147</sup> SAIA- Warwick Junction iTRUMP, 2015

<sup>148</sup> Markets of Warwick, 2010.

<sup>149</sup> Markets of Warwick, 2010.

The Inner Thekwini Regeneration & Urban Management Program – iTRUMP – was formed in the 1990's by the eThekwini municipality and the Warwick Junction has been the focus of the Municipal Warwick Junction Urban Renewal Project. The renewal project aimed at enhancing cleanliness, servicing, trading amenities, employment opportunities, safety and maintenance of health standards. It also includes the upliftment of the precinct and the efficiency of public transport by working in collaboration with existing social organisations of traders and authorities<sup>150,151</sup>. The Warwick Junction is a precinct which sustains intense movement, trade, exchange and engagement in the area. The precinct requires very particular infrastructural support and amenities such as innovative service system or storage facilities for traders<sup>152</sup>.

### 18.1 MUTHI MARKET - WARWICK JUNCTION



Figure 171: Unutilised Freeway Before



Figure 172: Unutilised Freeway After



Figure 173: Muthi Market Before



Figure 174: Muthi Market After

One of the very major urban renewal initiatives was the construction of a market for the traditional medicine traders. For several years, the traders from the Muthi Market – trading Herbs and Traditional medicine - used to operate on the sidewalk/pavement which was also hazardous working conditions. Furthermore, due to the lack of storage facilities, several traders were sleeping on the trading site, next to their goods and stocks so as to keep them protected. In the 1998,

<sup>150</sup> SAIA- Warwick Junction iTRUMP, 2015

<sup>151</sup> Smithsonian Cooper, 2011.

<sup>152</sup> SAIA- Warwick Junction iTRUMP, 2015

following consultation with the Herbs and Traditional medicine traders, they were provided with a trading space on an unutilised freeway spur while further being provided with shelter, water and ablutions facilities. The Muthi Market sustains the trading activities of approximately 800 traders<sup>153</sup>. The new Muthi Market consists of 232 roofed stalls along the length of the unutilised freeway and each of them is of an average area of around 6m<sup>2</sup>. There are also 103 open-air trading spaces which are at an average area of 2m<sup>2</sup> each and also at total of 48 semi-closed kiosks. The kiosks also include roller shutters for locking purposes. Furthermore, the market is locked when trading hours is over and security guards patrol the areas hence, eliminating the need for traders to sleep onsite to protect their product<sup>154</sup>.



*Figure 175: Muthi Market – New Steel Roofing*



*Figure 176: Muthi Market – New Steel Roofing*

<sup>153</sup> SAIA- Warwick Junction iTRUMP, 2015

<sup>154</sup> Dobson, R. & Skinner, C. 2009. pg. 69

## 18.2 THE BROOK STREET MARKET - WARWICK JUNCTION

The Brook Street is located between the Berea Station and a cemetery. The three stairways from the Berea station which was designed during the apartheid era have immediate access from the station to the Brook Street hence, making a promising place to trade. A vendor who worked in the Brook Street for more than 10 years claimed that the area before its redevelopment was dangerous and disorganised, there was little path to walk since there shacks disorderly place<sup>155</sup>. The redevelopment entailed the redesigning the whole precinct of the Brook Street and it was staged on 6 phases over a period of seven years. One of the priorities was re-establishing a market with clear pedestrian routes. Previously, the Brook Street was heavily congested and pedestrian were also vulnerable to criminals. As such the new design of Brook Street aimed at connecting the market to the mezzanine floor of the station and also to the Muthi Market, subsequently generating more options for the commuters to move around Brook Streets. Trading kiosks with roller shutters were integrated on the mezzanine floor, subsequently generating a lively informal food court<sup>156</sup>. Consequently, by providing more connection to the precinct and reducing congestion, made it easier to service and to maintain healthier working conditions. Furthermore, the trading surface along the street was also paved to facilitate the maintenance of the precinct.



Figure 177: Brook Street trading before redevelopment



Figure 178: Brooke Street 1990



Figure 179: Brook Street 2013

<sup>155</sup> Dobson, R. & Skinner, C. 2009. pg. 87

<sup>156</sup> Dobson, R. & Skinner, C. 2009. pg. 89

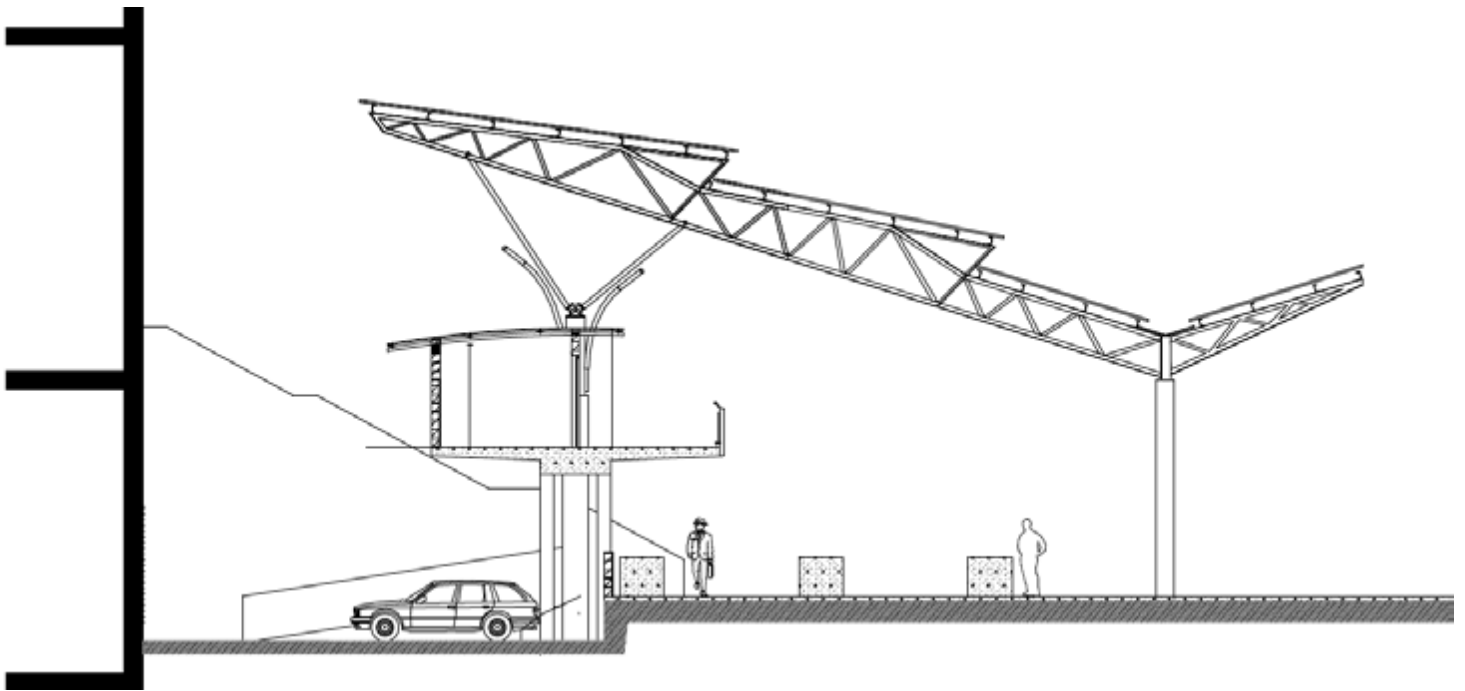


Figure 180: Brook Street – New Roof Structure Section

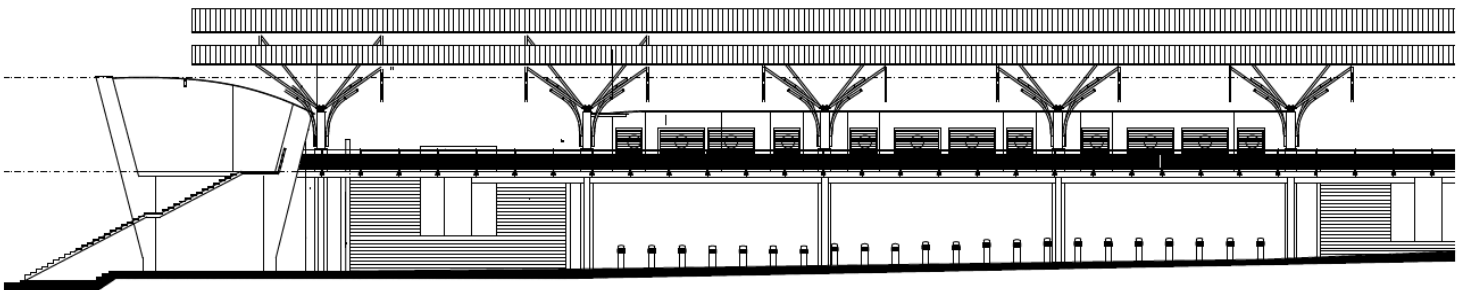


Figure 182: Brook Street – New Roof Structure Elevation

A new roof structure – made from steel truss structure and iron sheeting cladding - was also implemented to cater for shelter for both the vendors and the thousands of commuters transiting and shopping along the Brooke Street Market. The new roof structure over the brook street was initiated in the year 2000 and was constructed over several phases over a period of three years. The roof extends over a total length of 200metres<sup>157</sup>.

<sup>157</sup> Dobson, R. & Skinner, C. 2009. pg. 89

### 18.3 BOVINE HEAD MARKET - WARWICK JUNCTION



Figure 182: Bovine Head Market

The Bovine Head Market consists of an average of 130 traders involved in such cooking and trading activity. Traders who were operating in the Bovine Head Market formerly boiled the Bovine Heads – a Zulu Delicacy – into open fires which were set on the sidewalks. As such, this initiated several issues since such cooking method was hazardous and also dangerous in regards to pedestrians utilising the sidewalk. Furthermore, such cooking method was also significantly damaging the pavements and further, the excess of water and grease where drained into the storm water drainage of the City<sup>158</sup>. However, rather than prohibiting such trading activities, the council officials worked in collaboration with the cooks and established appropriate infrastructure for the market<sup>159</sup>. The renewal of the Bovine Head Market involved the redesign of cooking cubicles, trading counters and kiosks and storage amenities. The redesigned of the Bovine Head Market included the implementation of pre-cast concrete for the cooking cubicles and steel for the serving counters, aiming at reducing pollution and hazards<sup>160</sup>. New drainage system was also implemented for the excess of grease.

<sup>158</sup> <http://opencityprojects.com/the-bovine-head-market/>

<sup>159</sup> <http://opencityprojects.com/the-bovine-head-market/>

<sup>160</sup> SAIA- Warwick Junction iTRUMP, 2015

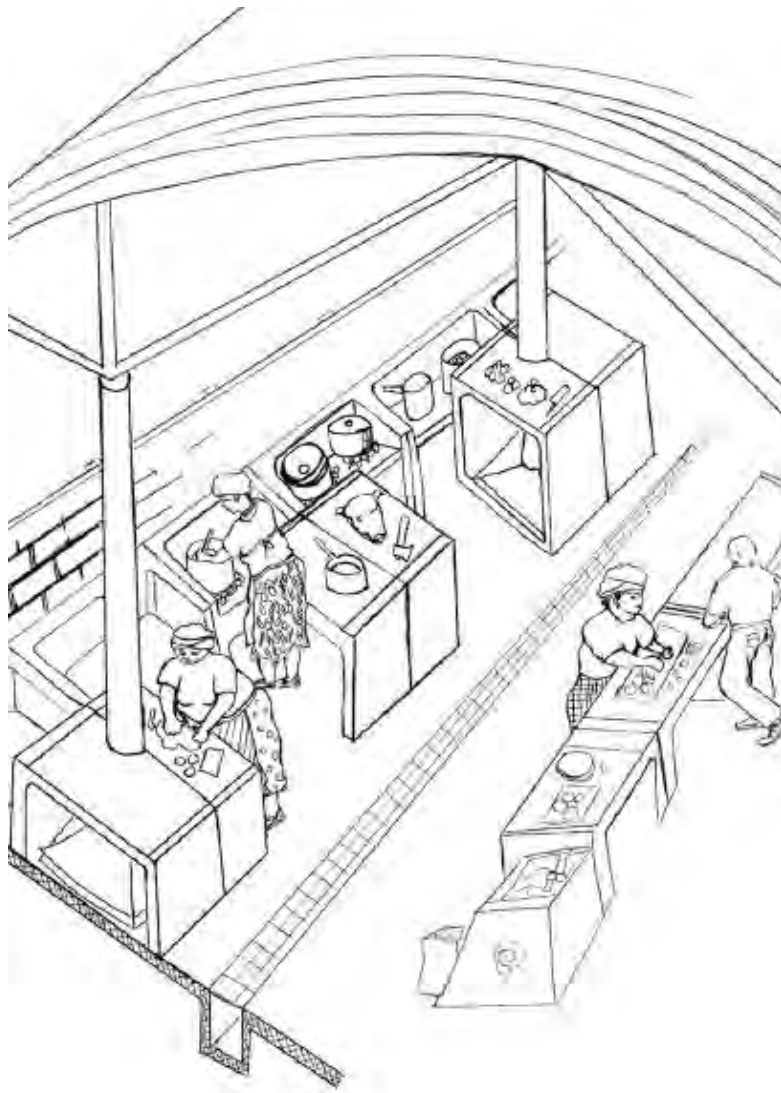


Figure 183: Sketch design of the Bovine Head Market



Figure 184: Trader Table with lockup storage



Figure 185: Trader storage before the project

Jason Allan Chokupermall - CHKJAS001



Figure 186: New trader storage facilities

#### 18.4 STORE

Furthermore, new storage facilities were also part of the redevelopment program. The containers which were formerly used as storage were removed and new storage facilities were constructed along the edge of Brook Street.

## 18.5 TABLE DESIGN

Tables is vital trading furniture, however in the context of Warwick Junction it had generated various controversial issues. Having uniform trading tables may contribute to orderliness and contribute to the overall aesthetic of the place. Trading tables has the tendency to get in the way of street cleaners and also, if not maintained properly they may be potential health hazards for customers. Authorities dealing with hygiene standards requested that the traders dealing with comestible item should have steel table. However, besides being heavy and not easily portable, steel is also a valuable material thus making the table worth stealing. As such in the Warwick Junctions, traders agreed that table should be made foldable and taken away when trading hours is over so that subsequently, the pavements will be freed up and street cleaners can service the precinct properly. Furthermore, part of the agreement include that the traders dealing with food should cover the tables with an impervious plastic tablecloths for hygiene purposes<sup>161</sup>.

Besides the new regulations, new trading tables were also designed and it was through a ‘trial and error process’ that a proper design was obtained. The first design of the trading table was made from concrete and included light steel lock-up storage underneath it. However, the storage compartment was soon broken into since they generated the feeling that valuable items were stored in. As such after several replacements of the locks the storage were then left opened and this generated the opportunities for people to sleep inside hence, generating health and cleanliness issues. As such the most responsive design was a concrete counter table with no enclosure space underneath it<sup>162</sup>

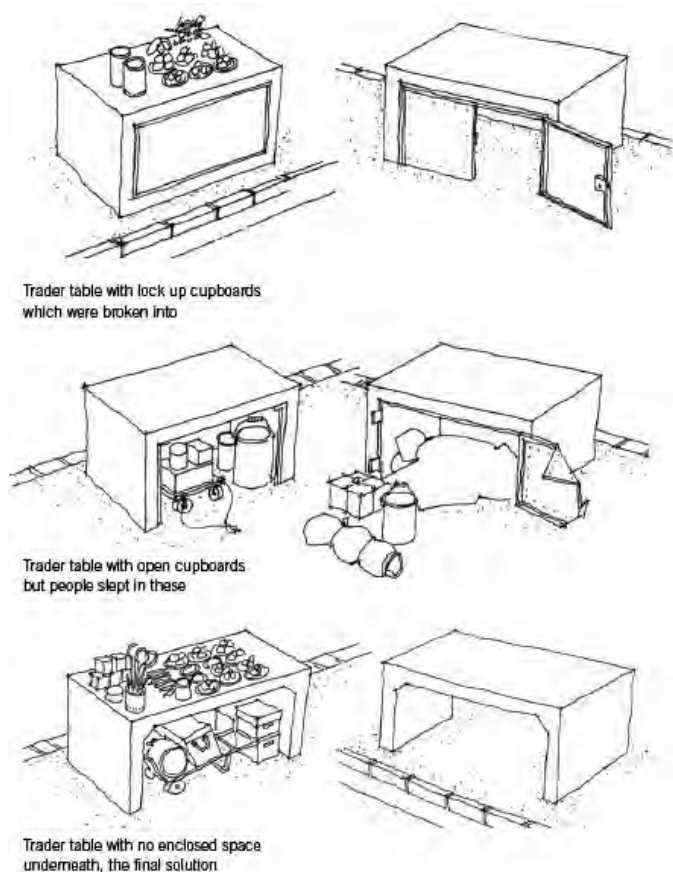


Figure 187: Street Trader table design

<sup>161</sup> Dobson, R. & Skinner, C. 2009. pg. 100

<sup>162</sup> Dobson, R. & Skinner, C. 2009. pg. 100

## **APPENDIX C**

### **Foreign- Urban Renewal Project**

*This chapter explore a foreign Urban Renewal Project regarding a former flea market. The aim of this chapter is explore how urban renewal project are achieved compared to the one in South Africa. The aim of this chapter is to explore how the building integrate into the site and further what kind of structures have been developed to support the trading activities.*

## 19.0 MERCAT ENCANTS

### Avinguda Meridiana – Barcelona – Spain – 2013



Figure 188: Mercat Encants

The Mercat Encants also known as the Els Encant was part of an urban renewal project for a former centenarian marketplace which has traditionally been an informal outdoor market place<sup>163</sup>. The city of Barcelona wanted to recognise the importance of this flea as a needed and useful part of the city. An average of 90000 people shops from Mercat Encants weekly<sup>164</sup>. Formerly, the market was set on



Figure 189: Former Mercat Encants

a vacant ground of an area of 15000m<sup>2</sup>. However, the project's primary objective was to preserve the existing nature of the market - open air, informal and 'transitoriness'<sup>165</sup> - but on a significantly

<sup>163</sup> ArchDaily - Mercat Encants, 2016.

<sup>164</sup> BCN - Dossier de Premsa, 2013.

<sup>165</sup> Bordas, D.B. - CCCB, 2015.

reduced foot print area of 8000m<sup>2</sup>. The limited area of the new brief initiated a challenge since the initial design aspiration was also to avoid projecting the image of a shopping centre through a multiple floors building<sup>166</sup>.

As such, the Architect Fermín Vázquez designed a continuous commercial area through gently inclining floor planes intertwining and creating infinite loops which connect to the trading stalls and shops. By slightly inclining the trading decks, the various levels of the streets around the market were subsequently reconciled. As such, the complex is then made accessible from all sides which preserve the essence of the former flea market while subsequently minifying the image of a modern shopping centre<sup>167</sup>. Furthermore, through such typology, the market is subsequently made as an architectural promenade which is properly integrated in the local topography and the customers experience is similar to a stroll on the sidewalks of Barcelona<sup>168</sup>. The new Mercat Encants have a total area floor area of 35440m<sup>2</sup>.

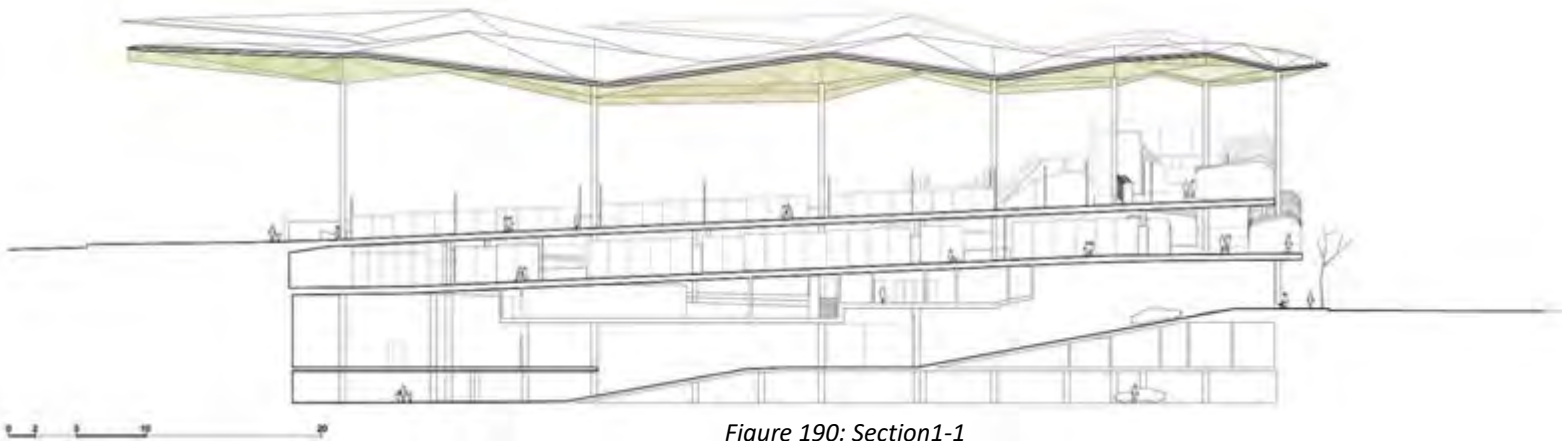


Figure 190: Section1-1

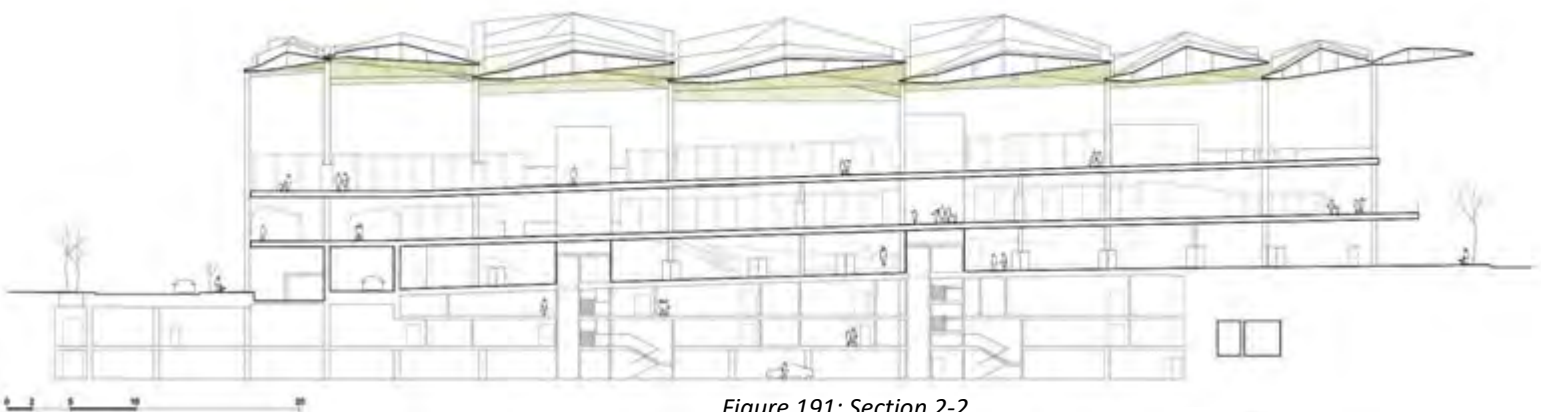


Figure 191: Section 2-2

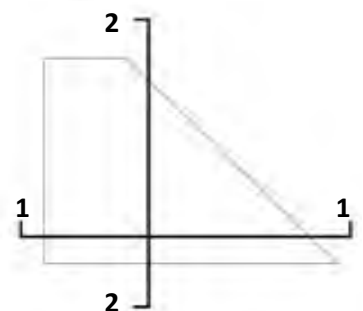


Figure 192: Section- Key

<sup>166</sup> ArchDaily - Mercat Encants, 2016.

<sup>167</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

<sup>168</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

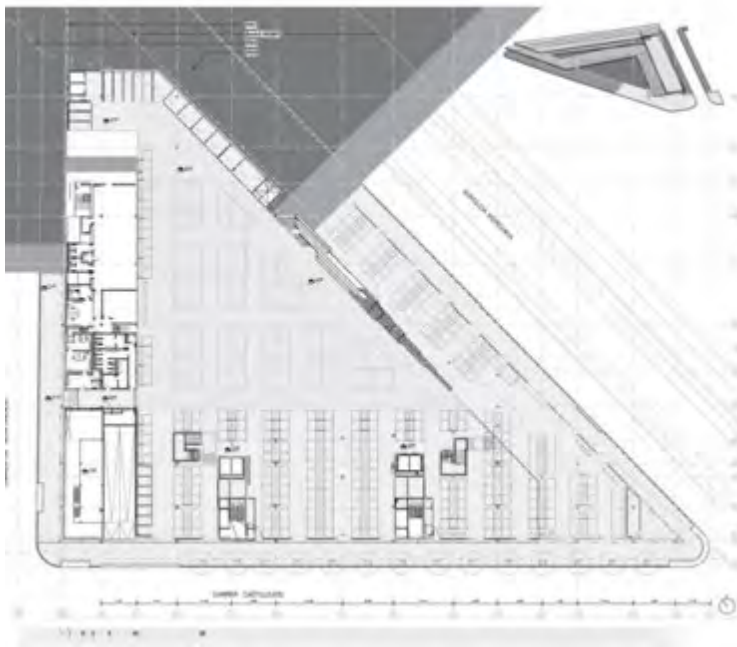


Figure 193: Ground floor of the Market at the level of the Square



Figure 194: Intermediate Level

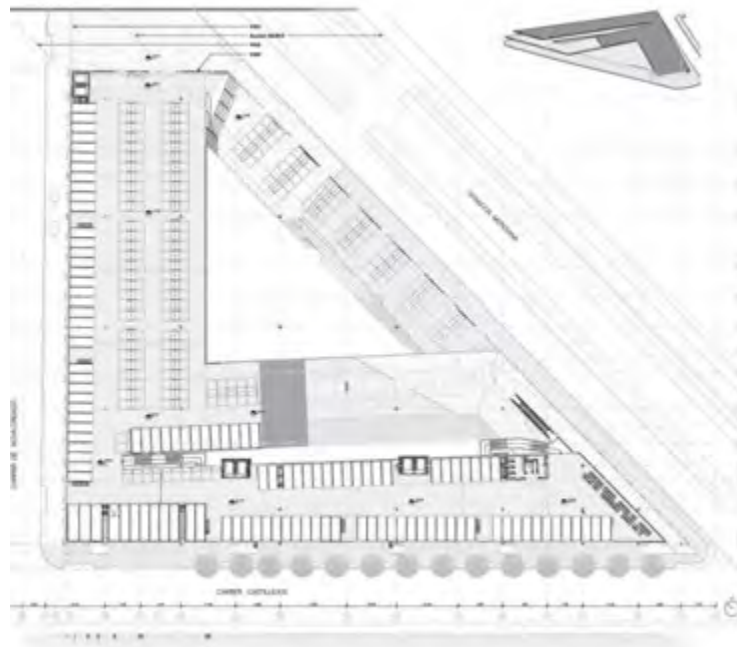
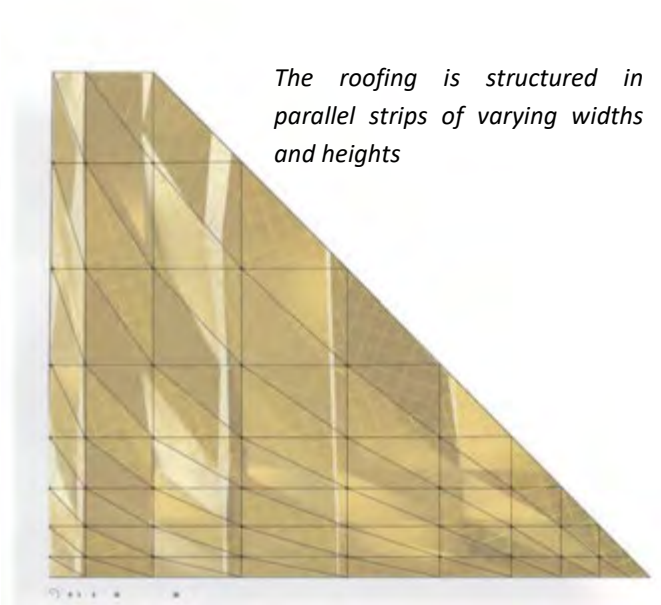


Figure 195: Upper Level



The roofing is structured in parallel strips of varying widths and heights

Figure 196: Plan of the Roofing

The new market also holds two underground levels with the first level catering for the logistic need of the market - loading and unloading and storages - while the second underground level holds the parking facilities for the customers<sup>169</sup>. The Mercat Encants holds a restaurant at street level and a total of 6 other restaurants – serving ‘fast food’ - on the upper level associated with sitting and eating areas. Furthermore it also comprises of a central multipurpose square on the ground floor, just as it was in the old market<sup>170</sup>. The Mercat Encants houses a total of 266 stores and 479 stalls. The market holds six elevators to facilitate the loading and unloading of products from the

<sup>169</sup> ArchDaily - Mercat Encants, 2016.

<sup>170</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

first underground level to the trading stalls and shops and also includes three public elevators connecting the different levels and the parking. The building also holds an escalator which links the intermediate level to the upper level<sup>171</sup>.



*Figure 197: Intermediate Level - Trading Square*



*Figure 198: Upper Level - 'fast food' restaurants*



*Figure 199: Escalator Connecting Intermediate Level to the Upper Level*

<sup>171</sup> BCN - Dossier de Premsa, 2013.

In the former Mercat Encants, approximately half of all the traders initially had a ‘closet-like’ structure - located at the back of the space they occupied- which they used as a small store or to display their goods. Similarly, in the new market, the architect had designed a total of 479 metal stalls of 2m or 1m wide, x 0.9m deep. The stalls are made from precast metallic - 35 mm thick Araquil Panel<sup>172</sup> - and have a table at the front to display the trader’s products. The new Mercat Encants holds a total of 266 shops and similarly, the shops are also from precast metallic – 0.75mm thick curved Hacierco sheets<sup>173</sup> - and are of 5.0 x 2.0 x 3.5 m in size. Due to the size of the shops and their modular design, they cater for sale inside the structure itself<sup>174</sup>.

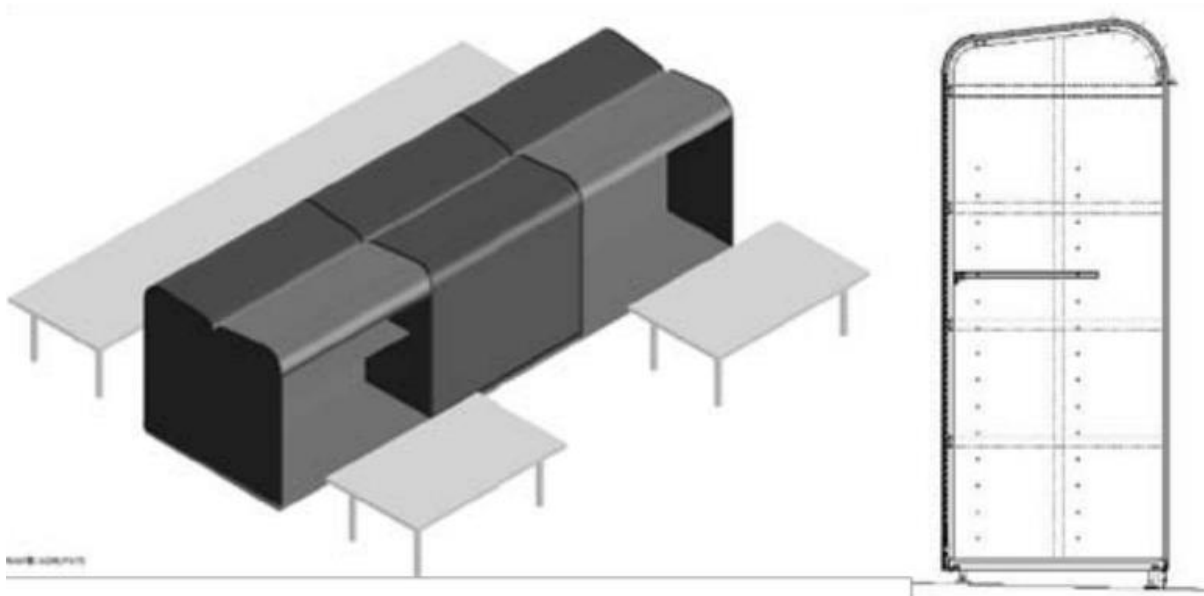


Figure 200: Stalls of 2m wide x 0.9m deep – 35mm Araquil Panel



Figure 201: Shops of 5.0 x 2.0 x 3.5 m – 0.75mm thick curved Hacierco sheets

<sup>172</sup>Constructalia – Steel Construction, 2015

<sup>173</sup>Constructalia – Steel Construction, 2015

<sup>174</sup>BCN - Dossier de Premsa, 2013.



Figure 202: Shops of 5.0 x 2.0 x 3.5 m



Figure 203: Shops closed with Roller blinds

A giant kaleidoscopic roof structure of 25 metres high caters for a sheltered area of 9800m<sup>2</sup>. The roof was designed to appear as a lightweight structure while on the other hand maximising daylighting on all levels of the new market<sup>175</sup>. Supported by a matrix of very slender pillars, the roof is structured in parallel strips of varying widths and heights. Each strip is broken up into triangular facets of different surface areas and angles. The interior finish of the roof surfaces is a layer of polished gilded stainless steel which reflects the activity below like a broken mirror<sup>176</sup>.



Figure 204: The Mercat Encants Reflective Roof Canopy

<sup>175</sup> BCN - Dossier de Premsa, 2013.

<sup>176</sup> Bordas, D.B. - CCCB, 2015.



Figure 205: Mercat Encants Roof Canopy

1. Pilar formed by welded steel plates
2. Beams made from laminated profiles steel soldiers
3. Substructure support perimeter finials made from hollow sections of steel soldiers
4. Cladding system formed by shaped trays with raised seal aluminium, zinc finish
5. Steel plate tube with TPO- FPA membrane placed on board supports the waterproofing membrane
6. Rigid insulation
7. Maintenance galvanized grills - galvanized steel fixed joints raised above cladding.
8. Rounding off the folded composite panel trays with zinc finish and hidden fixation
9. Laminated glass transparent
10. Tubular Stainless Steel frame for fixation of glass fin
11. False ceiling panels - composite honey comb. Outer cover : inox steel plate. Inside cover : pre- painted steel AISI 304 mirror polished.
12. Adjustable aluminium Stanchions
13. Substructure false ceiling fixation - Open sections of galvanized steel
14. Rain Water Channel

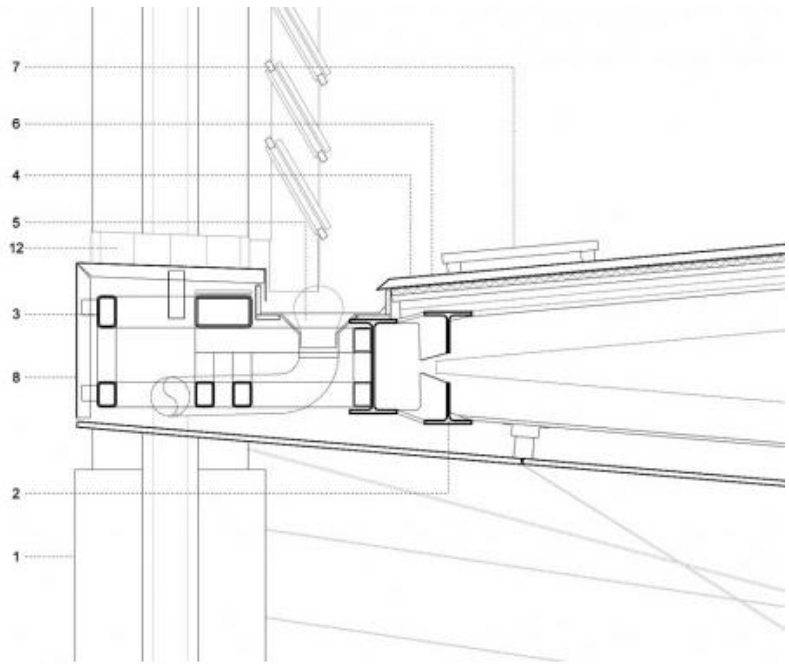


Figure 206: Mercat Encants Roof Detail

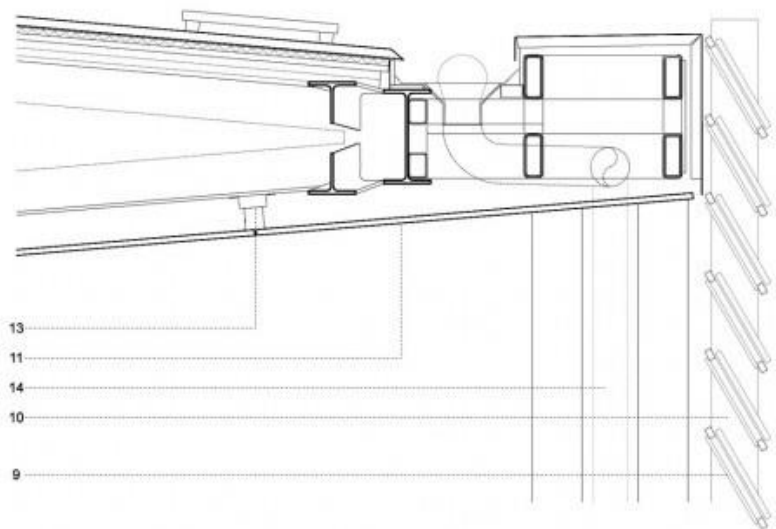
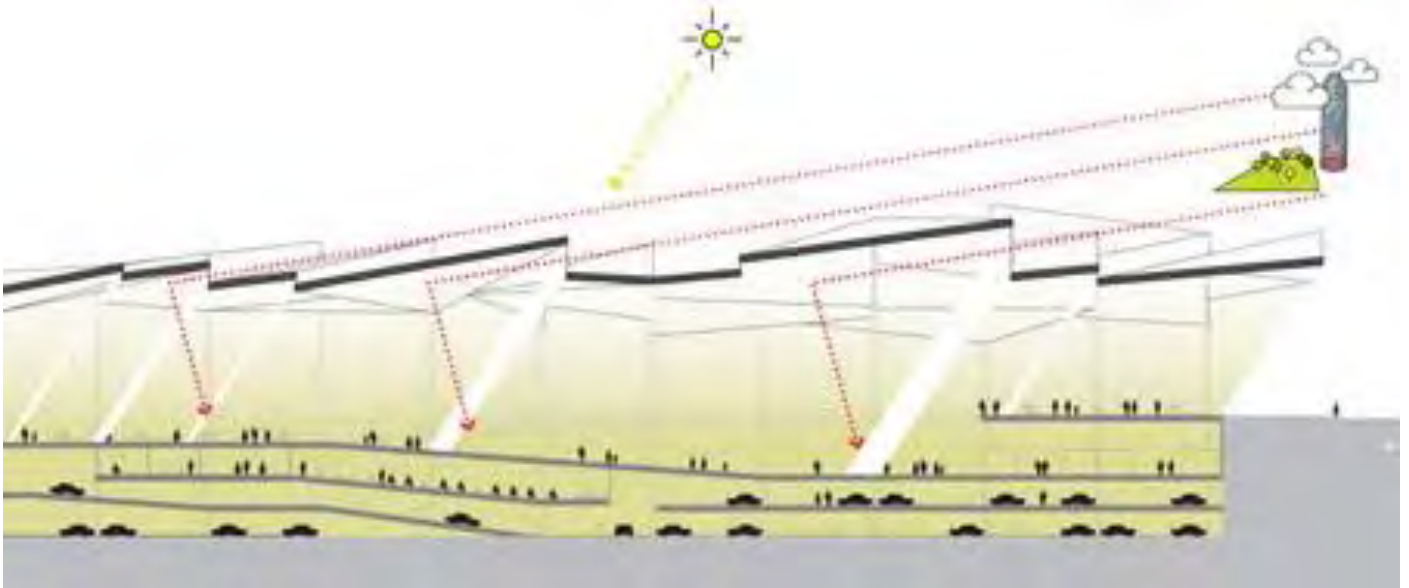


Figure 207: Mercat Encants Roof Detail



*Figure 208: Roof Canopy – Views and Sun Diagram*

The Architect Fermín Vázquez state that the aspiration behind such roof designed was to link ‘elements’ between the new market and the city. The urban fabrics and elements surrounding the market are reflected through roof panels hence making those entities being part of the building. Subsequently, the bustling and chaotic trading happenings inside the building are also reflected towards the outside. Fermín Vázquez describes that besides having a functional purpose, the roof structure serves as a binding element which caters for ‘mutual inclusion’ and ‘visualized belonging’. Mutual inclusion and visualized belonging have a significant urban importance in dignifying the flea market while further giving character and identity to the building<sup>177</sup>. He further highlights that roofs are common structural representation of large civic facilities such as markets or train stations and they are further used as an element that give the proper urban scale to such civic buildings<sup>178</sup>.



*Figure 209: Roof Canopy – Exterior View*



*Figure 210: Roof Canopy – Interior*

<sup>177</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

<sup>178</sup> Lomholt. I - Nou Mercat dels Encants Barcelona, 2013

**APPENDIX D**  
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**Policy Number 12664**

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Site Visit

[2016, April 15]

**Figure 57: Wynberg Street Trader V/s Rain weather Condition**

Site Visit

[2016, April 15]

**Figure 58: Metro Mall - Ground Floor Plan**

Available: BOOK

[2016, May 1]

**Figure 59: Baragwanath Transport Interchange and Traders Market- Site Plan**

Available: BOOK

[2016, May 1]

**Figure 60: Mercat Encants Section**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 61: Baralink - Off Shutter Concrete + Bricks + Mosaics**

Available: <http://www.archdatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 62: Baralink – Off Shutter Concrete + Bricks**

Available: <https://www.flickr.com/photos/47014403@N02/4313401104/in/photostream/>

[2016, May 1]

**Figure 63: Baralink – Off Shutter Concrete**

Available: <https://www.flickr.com/photos/47014403@N02/4312664829/in/photostream/>

[2016, May 1]

**Figure 64: Baralink – Off Shutter Concrete**

Available: <https://www.flickr.com/photos/47014403@N02/4313400548/in/photostream/>

[2016, May 1]

**Figure 65: Metro Mall – Off Shutter Concrete + Bricks + Steel**

Available: [http://able.wiki.up.ac.za/index.php/Metro\\_Mall,\\_Sauer\\_Street,\\_Johannesburg](http://able.wiki.up.ac.za/index.php/Metro_Mall,_Sauer_Street,_Johannesburg)

[2016, May 1]

**Figure 66: Metro Mall – Off Shutter Concrete**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=11](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=11)

[2016, May 1]

**Figure 67: Metro Mall – Bricks**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=10](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=10)

[2016, May 1]

**Figure 68: Metro Mall –Roof**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=16](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=16)

[2016, May 1]

**Figure 69: Baralink Roof**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 70: Muthi Market – Before**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 72: Muthi Market – New Steel Roofing**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 73: Brook Street– Before**

Available: <https://africanurbanspace.files.wordpress.com/2014/08/brooke-street-market.png>

[2016, May 1]

**Figure 74: Brook Street – New Steel Roofing**

Available: <https://africanurbanspace.files.wordpress.com/2014/08/brooke-street-market.png>

[2016, May 1]

**Figure 75: Brook Street – New Roof Structure Section**

Available: <http://aet.org.za.www12.flk1.host-h.net/wp-content/uploads/2014/02/Brook-Street-Project-Design-Process-Poster.pdf>

[2016, May 1]

**Figure 76: Mercat Encants Roof Canopy**

Available: <http://www.vitruvius.com.br/revistas/read/projetos/14.157/5027?page=2>

[2016, May 7]

**Figure 77: Mercat Encants Roof Detail**

Available: <http://www.vitruvius.com.br/revistas/read/projetos/14.157/5027?page=2>

[2016, May 7]

**Figure 78: Trader Table with lockup storage**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_5.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_5.pdf)

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**Figure 79: Street Trader table design**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_4.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_4.pdf)

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**Figure 80: Baralink Trading Table**

Available: <https://www.flickr.com/photos/47014403@N02/4313398368/>

[2016, May 1]

**Figure 81: Metro Mall Trading Table**

Available: [http://joburg.org.za/index.php?option=com\\_content&task=view&id=1291&Itemid=75](http://joburg.org.za/index.php?option=com_content&task=view&id=1291&Itemid=75)

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**Figure 82: Stalls of 2m wide x 0.9m deep – 35mm Araquil Panel**

Available: <http://www.bimsa.es/uploads/images/noticias/120921%20DP%20Encants.pdf>

[2016, May 1]

**Figure 83: Shops of 5.0 x 2.0 x 3.5 m – 0.75mm thick curved Hacierco sheets**

Available: <http://www.bimsa.es/uploads/images/noticias/120921%20DP%20Encants.pdf>

[2016, May 1]

**Figure 84: Shops of 5.0 x 2.0 x 3.5 m – Structures**

Available: <http://www.archello.com/en/project/mercat-dels-encants/2574590>

[2016, May 7]

**Figure 85: Shops of 5.0 x 2.0 x 3.5 m – Height V/s Views towards other levels**

Available: <http://www.archello.com/en/project/mercat-dels-encants/2574590>

[2016, May 7]

**Figure 86: Metro Mall Mosaics**

Available: BOOK

[2016, May 1]

**Figure 87: Baralink Mosaics**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

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**Figure 88: Baralink Landmarks structures**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

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**Image 89 & 90: Metro Mall - Steel Screens V/s African Marimba Instrument**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=13](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=13)

Available: <http://www.musicwithease.com/marimba-pictures.html>

[2016, May 1]

**Figure 91: Wynberg – Street Traders – Trading Locations**

Personal Drawing

**Figure 92: Wynberg – Traders Types and Structural Typologies**

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**Figure 93: Wynberg – Trading Locations Zone 1**

Site Visit

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**Figure 94: Wynberg – Trading Locations Zone 1**

Site Visit

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**Figure 95: Wynberg – Trading Locations Zone 2**

Site Visit

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**Figure 96: Wynberg – Trading Locations Zone 2**

Site Visit

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**Figure 97: Wynberg – Trading Locations Zone 3**

Site Visit

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**Figure 98: Wynberg – Trading Locations Zone 3**

Site Visit

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**Figure 99: Wynberg – Trading Locations Zone 4**

Site Visit

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**Figure 100: Wynberg – Trading Locations Zone 4**

Site Visit

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**Figure 101: Wynberg – Trading Locations Zone 5**

Site Visit

[2016, September 23]

**Figure 102: Wynberg – Trading Locations Zone 5**

Site Visit

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**Figure 103: Wynberg – Trading Locations Zone 6**

Site Visit

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**Figure 104: Wynberg – Trading Locations Zone 6 \ Site Visit**

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**Figur 105: Wynberg – Commuter’s Routes**

Personal Drawing

**Figure 106: Existing Commuter’s Realm**

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**Figure 108: Wynberg – Enhancing the Commuter’s Realm**

Personal Drawing

**Figure 109: Wynberg – Enhancing the Commuter’s Realm**

Personal Drawing

**Figure 110: Wynberg – New Programs**

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**Figure 111: Wynberg – Context**

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**Figure 112: Wynberg – Land Availability**

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**Figure 113: Wynberg – Land Availability**

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**Figure 116: Wynberg – Reconnecting – Framework**

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**Figure 119: Design Development – Artificial Ground**

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**Figure 120: Design Development – Artificial Ground & Reconnecting West to East**

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**Figure 123: Design Development – Circulation**

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**Figure 124: Design Development – Architectural Language**

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**Figure 125: Design Development – Perspectives of Entrances**

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**Figure 126: Threshold and Public Square**

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**Figure 127: Threshold and Public Square**

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**Figure 128: Vertical Movements**

Personal Drawing

**Figure 129: Baralink Entrance**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

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**Figure 130: Accentuating Vertical Features**

Available: <https://www.flickr.com/photos/47014403@N02/4313401104/in/photostream/>

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**Figure 131: Perspective Explorations**

Personal Drawing

**Figure 132: Recommended practice for insulated cavity wall construction**

Available: <http://claybrick.org/sites/default/files/downloads/technical%20notes/TN%2317%20Recommended%20practice%20for%20insulated%20cavity%20wall%20construction.pdf>

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**Figure 133: Progressive Development of 'Special Places' Around Transport Interchange Points  
(Clockwise from top left)**

**Figure 134: Conventional Layout of Station**

Available: <http://www.tod.org/stations.html>

[2016, April 1]

**Figure 135: Preferred Layout of Station**

Available: <http://www.tod.org/stations.html>

[2016, April 1]

**Figure 136: Close Proximity**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 137: Well Defined Public Spaces**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 138: Mix of Uses - Lively, Vibrant Places**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 139: Pedestrian Scale - Comfortable, Safe, Enjoyable**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 140: Active Ground-Floor Retail**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 141: Tree Lined Streets**

Available: <http://www.tod.org/placemaking.html>

[2016, April 3]

**Figure 142: Metro Mall Transport Facility and Traders Market**

Available: [http://able.wiki.up.ac.za/index.php/Metro\\_Mall,\\_Sauer\\_Street,\\_Johannesburg](http://able.wiki.up.ac.za/index.php/Metro_Mall,_Sauer_Street,_Johannesburg)

[2016, May 1]

**Figure 143: Metro Mall - Ground Floor Plan**

Available: BOOK

[2016, May 1]

**Figure 144: Metro Mall - Lower Ground Floor Plan**

Available: BOOK

[2016, May 1]

**Figure 145: Metro Mall - Bree Street Facade**

Available: BOOK

[2016, May 1]

**Figure 146: Metro Mall - Oxidized Steel Screens**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=2](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=2)

[2016, May 1]

**Figure 147: Metro Mall - Oxidized Steel Screens**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=13](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=13)

[2016, May 1]

**Figure 148: African Marimba Instrument**

Available: <http://www.musicwithease.com/marimba-pictures.html>

[2016, May 1]

**Figure 149: Metro Mall – Mosaics**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=7](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=7)

[2016, May 1]

**Figure 150: Metro Mall – Mosaics**

Available: BOOK

[2016, May 1]

**Figure 151: Trader’s Stalls**

Available: [http://joburg.org.za/index.php?option=com\\_content&task=view&id=1291&Itemid=75](http://joburg.org.za/index.php?option=com_content&task=view&id=1291&Itemid=75)

[2016, May 1]

**Figure 152: Trader’s Stalls**

Available: BOOK

[2016, May 1]

**Figure 153: Colonnades & Steel Canopy**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=16](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=16)

[2016, May 1]

**Figure 154: Brick Finish**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=10](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=10)

[2016, May 1]

**Figure 155: Off-Shutter Concrete Finish**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=11](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=11)

[2016, May 1]

**Figure 156: Oxidized Steel Screens**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=18](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=18)

[2016, May 1]

**Figure 157: Oxidized Steel Screens**

Available:

[http://www.artefacts.co.za/main/Buildings/image\\_slide.php?type=2&bldgid=10412&rank=12](http://www.artefacts.co.za/main/Buildings/image_slide.php?type=2&bldgid=10412&rank=12)

[2016, May 1]

**Figure 158: Baragwanath Transport Interchange and Traders Market – Baralink Main Entrance**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 159: Baragwanath Transport Interchange and Traders Market- Context**

Available: <http://able.wiki.up.ac.za/index.php/File:Googleplan.jpg>

[2016, May 1]

**Figure 160: Baragwanath Transport Interchange and Traders Market- Site Plan**

Available: BOOK

[2016, May 1]

**Figure 161: Baragwanath Transport Interchange and Traders Market- South Elevation**

Available: BOOK

[2016, May 1]

**Figure 162: Market - Interior**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 163: Covered-Walkway and Trading Area**

Available: <https://www.flickr.com/photos/47014403@N02/4313400548/in/photostream/>

[2016, May 1]

**Figure 164: Covered-Walkway and Trading Area**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 165: Exterior - off-shutter Concrete**

Available: <https://www.flickr.com/photos/47014403@N02/4312664829/in/photostream/>

[2016, May 1]

**Figure 166: Exterior –Brick & off-shutter Concrete**

Available: <https://www.flickr.com/photos/47014403@N02/4313401104/in/photostream/>

[2016, May 1]

**Figure 167: Baralink – Concrete Sculpture & Mosaics**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

[2016, May 1]

**Figure 168: Covered-Walkway and Trading Area**

Available: <https://www.flickr.com/photos/47014403@N02/4313398368/>

[2016, May 1]

**Figure 169: Taxi Rank**

Available: <http://www.archidatum.com/projects/baragwanath-transport-interchange-and-traders-market-urban-solutions-architects-and-urban-designers/>

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**Figure 170: Warwick Junction – Key Plan**

Available: <http://www.designother90.org/solution/itrump-warwick-junction/>

[2016, May 1]

**Figure 171: Unutilised Freeway Before**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 172: Unutilised Freeway After**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 173: Muthi Market Before**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 174: Muthi Market After**

Available: <http://www.rudi.net/books/20057>

[2016, May 1]

**Figure 175: Muthi Market – New Steel Roofing**

Available: <http://graspmag.org/urbanism/urban-informality/need-start-respecting-informal-workers/>

[2016, May 1]

**Figure 176: Muthi Market – New Steel Roofing**

Available: [http://www.urbanlandmark.org.za/downloads/case\\_studies\\_integration.pdf](http://www.urbanlandmark.org.za/downloads/case_studies_integration.pdf)

[2016, May 1]

**Figure 177: Brook Street trading before redevelopment**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_4.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_4.pdf)

[2016, May 1]

**Figure 178: Brooke Street 1990**

Available: <https://africanurbanspace.files.wordpress.com/2014/08/brooke-street-market.png>

[2016, May 1]

**Figure 179: Brook Street 2013**

Available: <https://africanurbanspace.files.wordpress.com/2014/08/brooke-street-market.png>

[2016, May 1]

**Figure 180: Brook Street – New Roof Structure Section**

Available: <http://aet.org.za.www12.flk1.host-h.net/wp-content/uploads/2014/02/Brook-Street-Project-Design-Process-Poster.pdf>

[2016, May 1]

**Figure 181: Brook Street – New Roof Structure Elevation**

Available: <http://aet.org.za.www12.flk1.host-h.net/wp-content/uploads/2014/02/Brook-Street-Project-Design-Process-Poster.pdf>

[2016, May 1]

**Figure 182: Bovine Head Market**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_1.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_1.pdf)

[2016, May 1]

**Figure 183: Sketch design of the Bovine Head Market**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_1.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_1.pdf)

[2016, May 1]

**Figure 184: Trader Table with lockup storage**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_5.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_5.pdf)

[2016, May 1]

**Figure 185: Trader storage before the project**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_4.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_4.pdf)

[2016, May 1]

**Figure 186: New trader storage facilities**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_4.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_4.pdf)

[2016, May 1]

**Figure 187 Street Trader table design**

Available: [http://wiego.org/sites/wiego.org/files/publications/files/Working\\_in\\_Warwick\\_Ch\\_4.pdf](http://wiego.org/sites/wiego.org/files/publications/files/Working_in_Warwick_Ch_4.pdf)

[2016, May 1]

**Figure 188: Mercat Encants**

Available: <http://www.metalocus.es/en/news/mercat-dels-encants-b720>

[2016, May 1]

**Figure 189: Former Mercat Encants**

Available: <http://www.publicspace.org/en/works/h078-nou-mercat-dels-encants>

[2016, May 1]

**Figure 190: Section1-1**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 191: Section 2-2**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 192: Section- Key**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

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**Figure 193: Ground floor of the Market at the level of the Square**

Available: <http://www.publicspace.org/en/works/h078-nou-mercat-dels-encants>

[2016, May 1]

**Figure 194: Intermediate Level**

Available: <http://www.publicspace.org/en/works/h078-nou-mercat-dels-encants>

[2016, May 1]

**Figure 195: Upper Level**

Available: <http://www.publicspace.org/en/works/h078-nou-mercat-dels-encants>

[2016, May 1]

**Figure 196: Plan of the Roofing**

Available: <http://www.publicspace.org/en/works/h078-nou-mercat-dels-encants>

[2016, May 1]

**Figure 197: Intermediate Level - Trading Square**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 198: Upper Level - 'fast food' restaurants**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 199: Escalator Connecting Intermediate Level to the Upper Level**

Available: <http://www.metalocus.es/en/news/mercat-dels-encants-b720>

[2016, May 1]

**Figure 200: Stalls of 2m wide x 0.9m deep – 35mm Araquil Panel**

Available: <http://www.bimsa.es/uploads/images/noticias/120921%20DP%20Encants.pdf>

[2016, May 1]

**Figure 201: Shops of 5.0 x 2.0 x 3.5 m – 0.75mm thick curved Hacierco sheets**

Available: <http://www.bimsa.es/uploads/images/noticias/120921%20DP%20Encants.pdf>

[2016, May 1]

**Figure 202: Shops of 5.0 x 2.0 x 3.5 m**

Available: <http://www.bimsa.es/uploads/images/noticias/120921%20DP%20Encants.pdf>

[2016, May 1]

**Figure 203: Shops closed with Roller blinds**

Available: <http://premsa.bcn.cat/wp-content/uploads/2013/09/20130921-Dossier-Encants-Barcelona.pdf>

[2016, May 1]

**Figure 204: The Mercat Encants Reflective Roof Canopy**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 205: Mercat Encants Roof Canopy**

Available: <http://www.vitruvius.com.br/revistas/read/projetos/14.157/5027?page=2>

[2016, May 7]

**Figure 206: Mercat Encants Roof Detail**

Available: <http://www.vitruvius.com.br/revistas/read/projetos/14.157/5027?page=2>

[2016, May 7]

**Figure 207: Mercat Encants Roof Detail**

Available: <http://www.vitruvius.com.br/revistas/read/projetos/14.157/5027?page=2>

[2016, May 7]

**Figure 208: Roof Canopy – Views and Sun Diagram**

Available: <http://travelwithfrankgehry.blogspot.co.za/2009/12/encants-market-by-b720-arquitectos.html>

[2016, May 1]

**Figure 209: Roof Canopy – Exterior View**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]

**Figure 210: Roof Canopy – Interior**

Available: <http://www.archdaily.com/453829/mercat-encants-b720-fermin-vazquez-arquitectos>

[2016, May 1]