

# 8 Design Discourse

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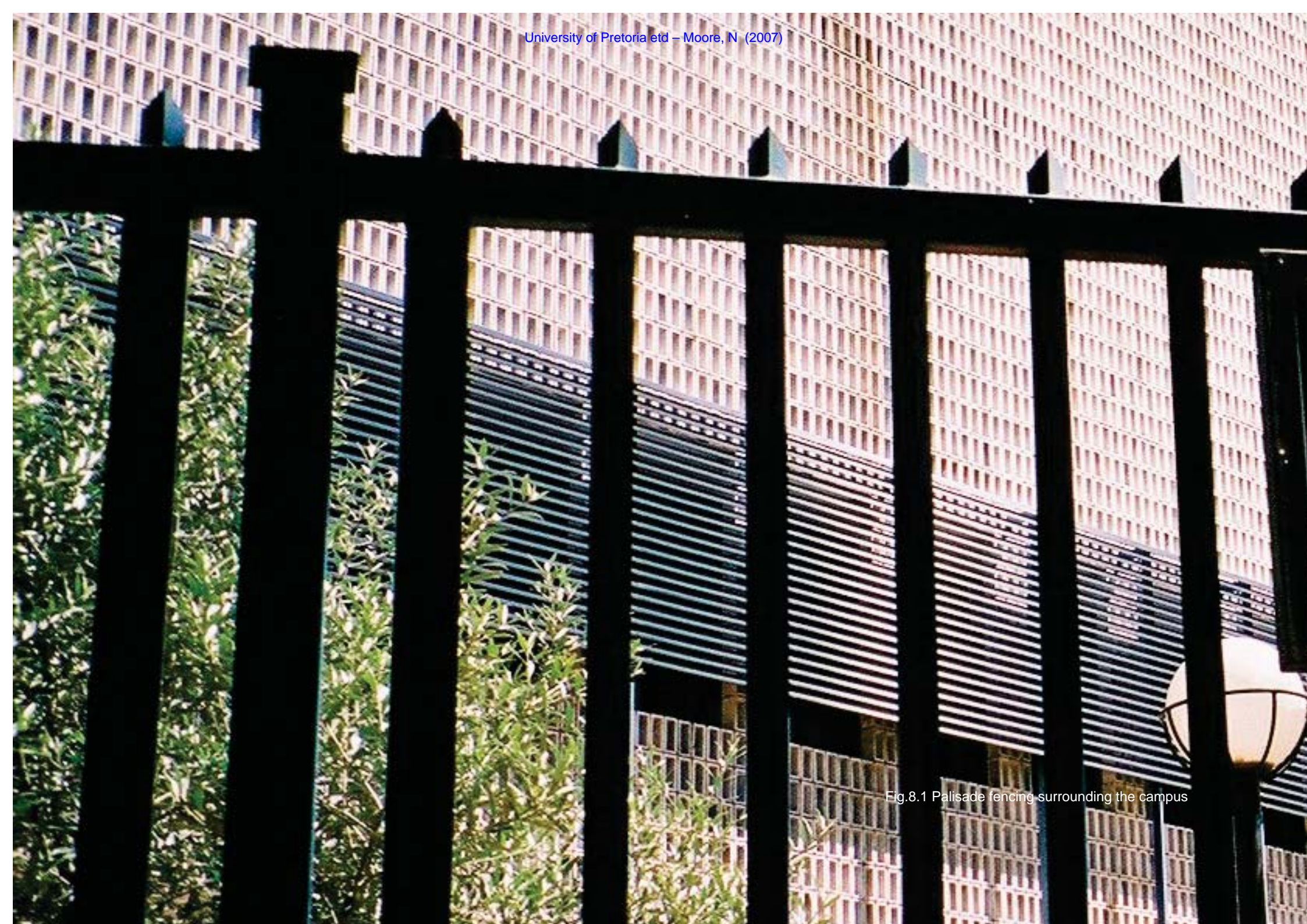


Fig.8.1 Palisade fencing surrounding the campus

## **8.1 Campus Framework**

### **8.1.1 Introduction: The Nature of the Problem**

- The campus exists as a fortified island in the city grid.
- Its resultant isolation does not provide for increased safety as would normally be assumed.
- People on the campus do not know where they belong as there are no defined public and private spaces.
- Open spaces are not utilized and facilities are used incorrectly.
- The campus shuts down after 17:00 and becomes an unsafe environment for students attending evening classes.



Fig.8.2 Identification of Phase I & II

### **8.1.2 Identification of Phase I and II**

The context analysis identified that the city block functions as two separate campuses, where one utilizes its facilities and the other regards certain spaces as cold and therefore uses other spaces incorrectly. The Tshwane North College, on the western side of the city block and is a vibrant buzz of energy where commercial activities that can be accessed by the public are already taking place. The Tshwane University of Technology, located on the eastern half of the city block, although also fragmented open spaces, fails to use these spaces effectively, resulting in areas such as the library being used for social instead of study space. Therefore, it is essential that the first intervention takes place on the Tshwane University of Technology Campus, as this is where the greatest need lies.

### **8.1.3 Phase I**

Phase I is the development of an incubation facility on the south-east corner of the block, creating a defined public space and facilities for students after 17:00. For the purposes of this dissertation the design will focus on Phase I of the campus framework.

### **8.1.4 Phase II**

Phase II will entail the conversion of the North, Middle and South Blocks into loft apartments from the first floor up. Commercial activities take up the entire ground floor. This floor will be expanded so as to open up onto the street and create an interactive street edge.

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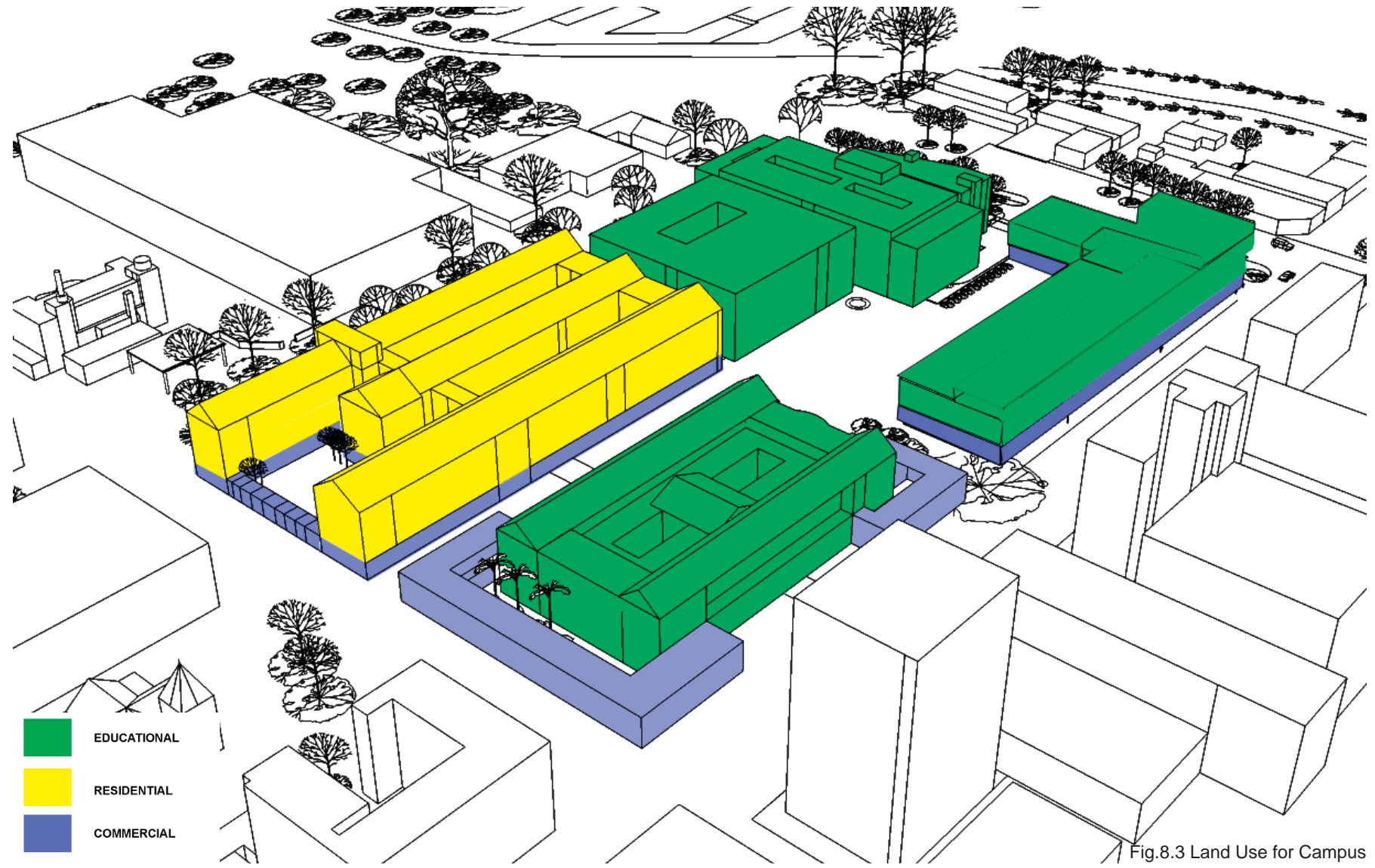


Fig.8.3 Land Use for Campus

### 8.1.5 Creation of a Public Square

It is important that the buildings of historic or architectural importance be celebrated to create an awareness of their value. It is suggested that a public square be created to celebrate the lattice work of the East Block building. The creation of a visual axis leading from this square towards the Hervormde Kerk to the west would create an awareness of the College Building.

### 8.1.6 Conclusion

The vision for the campus would entail the demolition of various structures and walls, thereby opening the campus to the public. It is hoped that the successful creation of a city block full of people and energy would encourage development round the site, thereby making the campus a generator for urban renewal by harvesting and optimizing the energy of the site.

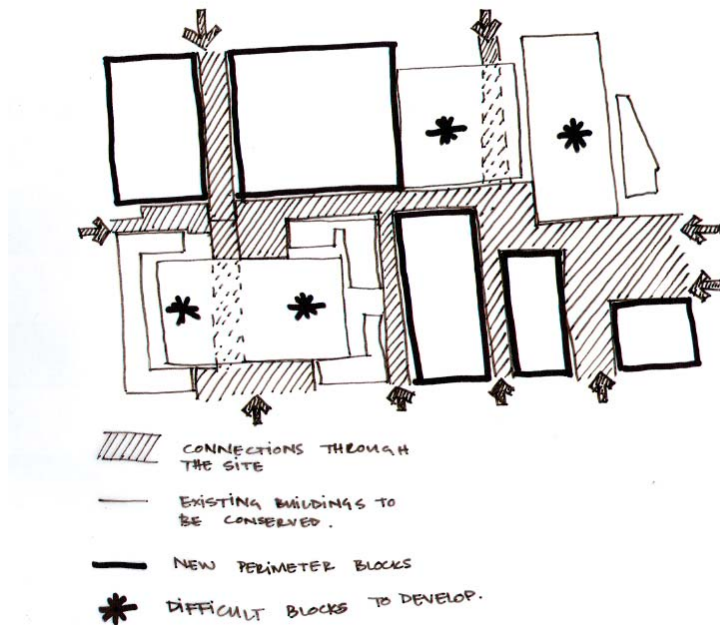


Fig.8.4 Existing Connections through the site

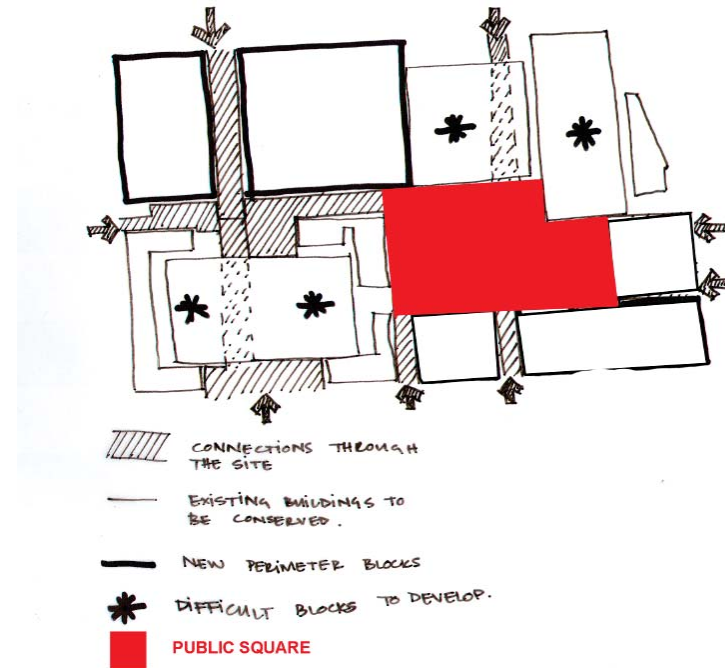


Fig.8.5 Proposed Location of Public Square

## 8.2 Programme

### 8.2.1 Summary of Primary Elements

#### Market

- >> Provide a large market to allow for the informal trade of African spices.
- >> The market should have easy access to water and washing facilities.
- >> It is to be easily accessible to students and public users and is to be open, but with areas sheltered under roofs.

#### Line Shops

- >> Provide line shops, to allow for adequate retail space along Church Street.
- >> Window treatments should be transparent to allow optimum interaction between interior and exterior.
- >> The line shops should be standardized and designed to be easily refitted every two years.

#### Studios

- >> Allow for studios linking with the line shops.
- >> Additional studios to function as pre-incubation facilities are required .
- >> Studios should be visually linked to the outside to allow for increased student-public interaction.

#### Food Court

- >> Provide a food court to facilitate pre-incubation kitchens and take-away facilities.
- >> The food court should encourage the use of public open space.

#### Restaurant

- >> Allow for an incubation restaurant bordering a courtyard.
- >> The restaurant should be such that it can be easily refitted every two years.

### Studio

- >> Allow for a studio large enough to facilitate examinations and functions.
- >> The studio should open onto the public square to create a transitional space between interior and exterior.

### Study Centre

- >> Provide a study centre large enough to accommodate students who need to study during the day and at night.
- >> It should be located on a secondary level and air-conditioned to for optimum privacy.

### Knowledge Centre

- >> Provide facilities for internet access linking to the main campus of Tshwane University of Technology.
- >> This facility can be semi-public and should be treated informally.

### Offices

- >> Provide facilities for the relocation of administration offices that have been demolished.
- >> Ensure that offices for mentors, link easily with pre-incubation studios.

### 8.2.2 Accommodation – with approximate sizing

>>	Market	500 m <sup>2</sup>
>>	Line Shops	600 m <sup>2</sup> (15)
>>	Studios linked with Line Shops	350 m <sup>2</sup> (14)
>>	Pre-Incubation Studios	700 m <sup>2</sup> (9)
>>	Food Court Outlets	150 m <sup>2</sup> (6)
>>	Pre-Incubation Kitchen	150 m <sup>2</sup>
>>	Restaurant	200 m <sup>2</sup>
>>	Incubation Kitchen	145 m <sup>2</sup>
>>	Studio	240 m <sup>2</sup>
>>	Study Centre	650 m <sup>2</sup>
>>	Knowledge Centre	50 m <sup>2</sup>
>>	Food Court Outlets	150 m <sup>2</sup> (6)
>>	Mentor Offices	240 m <sup>2</sup> (6)
>>	Administration Offices	480 m <sup>2</sup> (12)

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Fig. 8.6 Demolition

### 8.3 Introduction: The Site

As discussed in previous chapters the development of Phase I will require the demolition of 6 buildings on the campus. An analysis of these structures and their current functions is given in Appendix E.

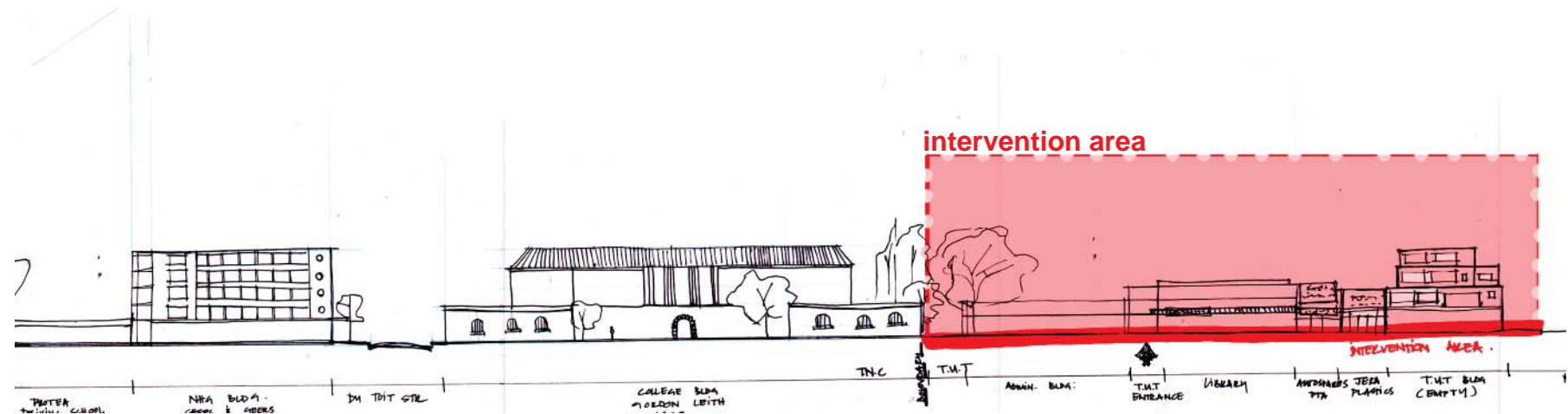


Fig.8.7 Elevation of existing

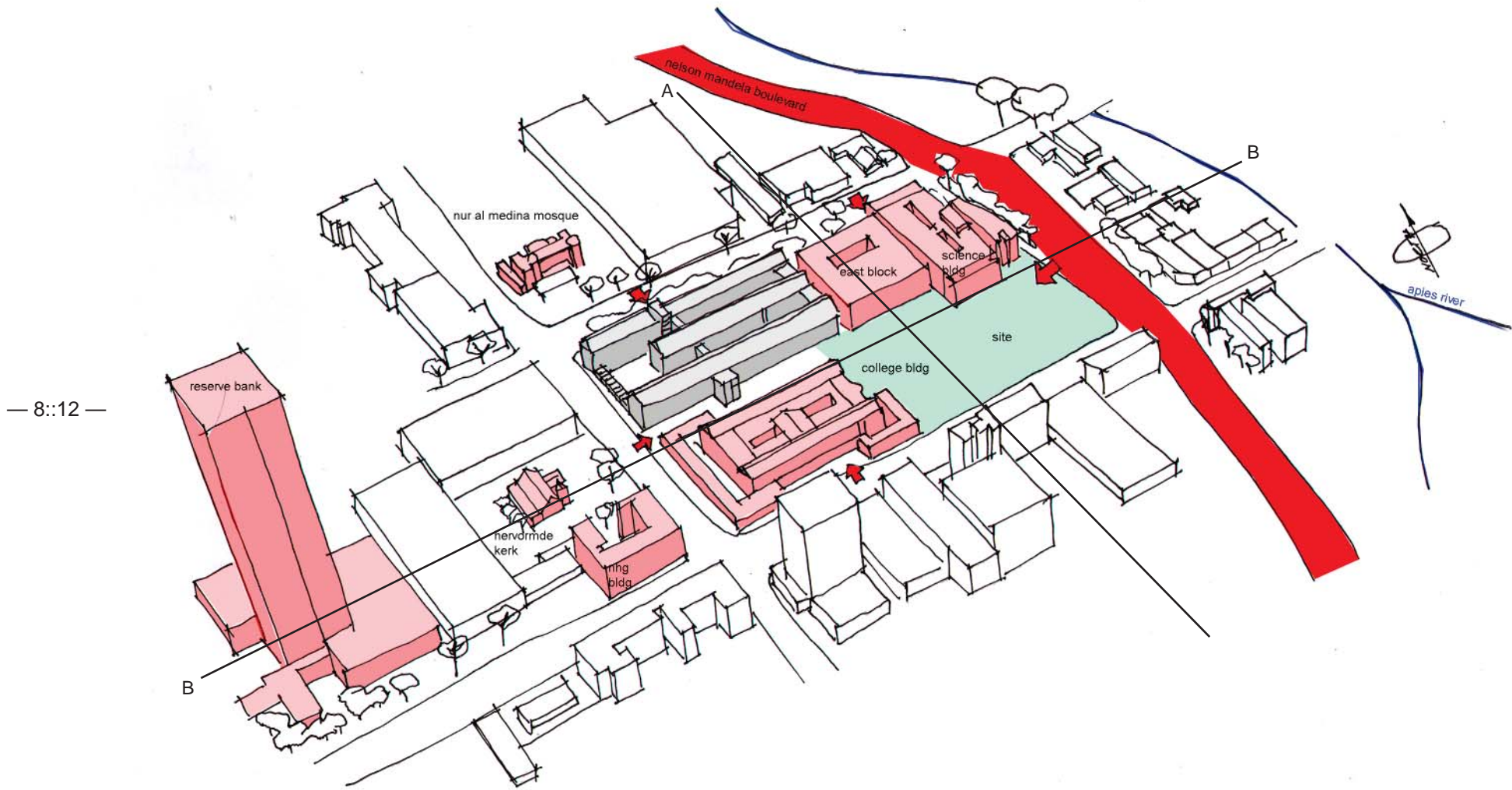
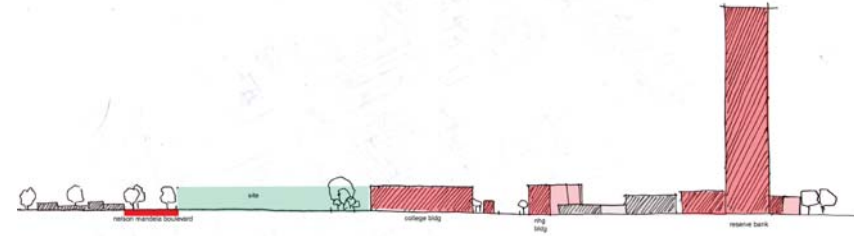


Fig.8.8 Site Forces

## 8.4 Site Forces

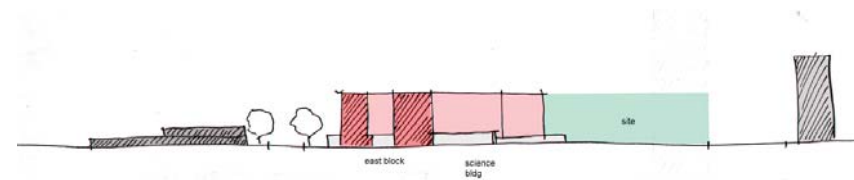
### 8.4.1 Roads & Access

- Nelson Mandela Boulevard, east of the proposed site, can be described as a river of traffic flowing past at a fairly high pace past. This roadway is mainly vehicular with limited pedestrian movement. The mezzanine and basement parking in the Science Building is accessed from Nelson Mandela Boulevard.
- Currently controlled access to the site results in limited public access and congestion at most entrances, especially at the Church Street entrance (as discussed in Chapter 5).



### 8.4.2 Urban Fabric

- The urban fabric surrounding the site is of a strong geometric nature.

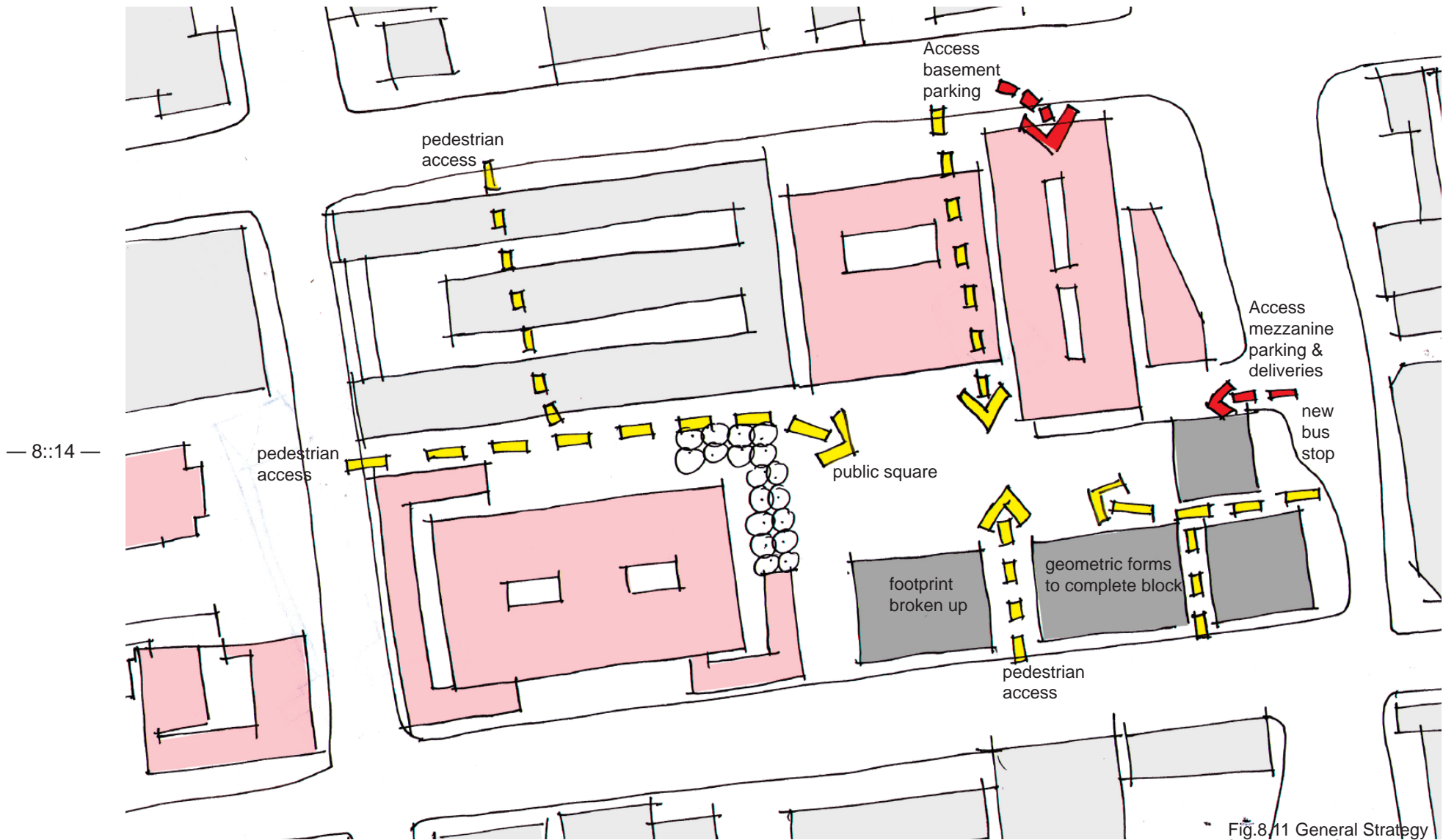


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### 8.4.3 Safety

- Even though the site functions as a fortified island in the city grid, this does not result in improved safety.

Fig.8.9 Section through site A  
 Fig.8.10 Section through site B



## **8.5 General Strategy**

- 8.5.1 Roads & Access:** Use busy roads to provide access to services.  
Enhance existing movement patterns to avoid congestion at entrances by breaking up the building footprint.
- 8.5.2 Urban Fabric:** Make use of strong geometric forms to complete the urban edge.
- 8.5.3 Safety:** Optimize passive surveillance and limit isolated passages to improve the safety of the campus.

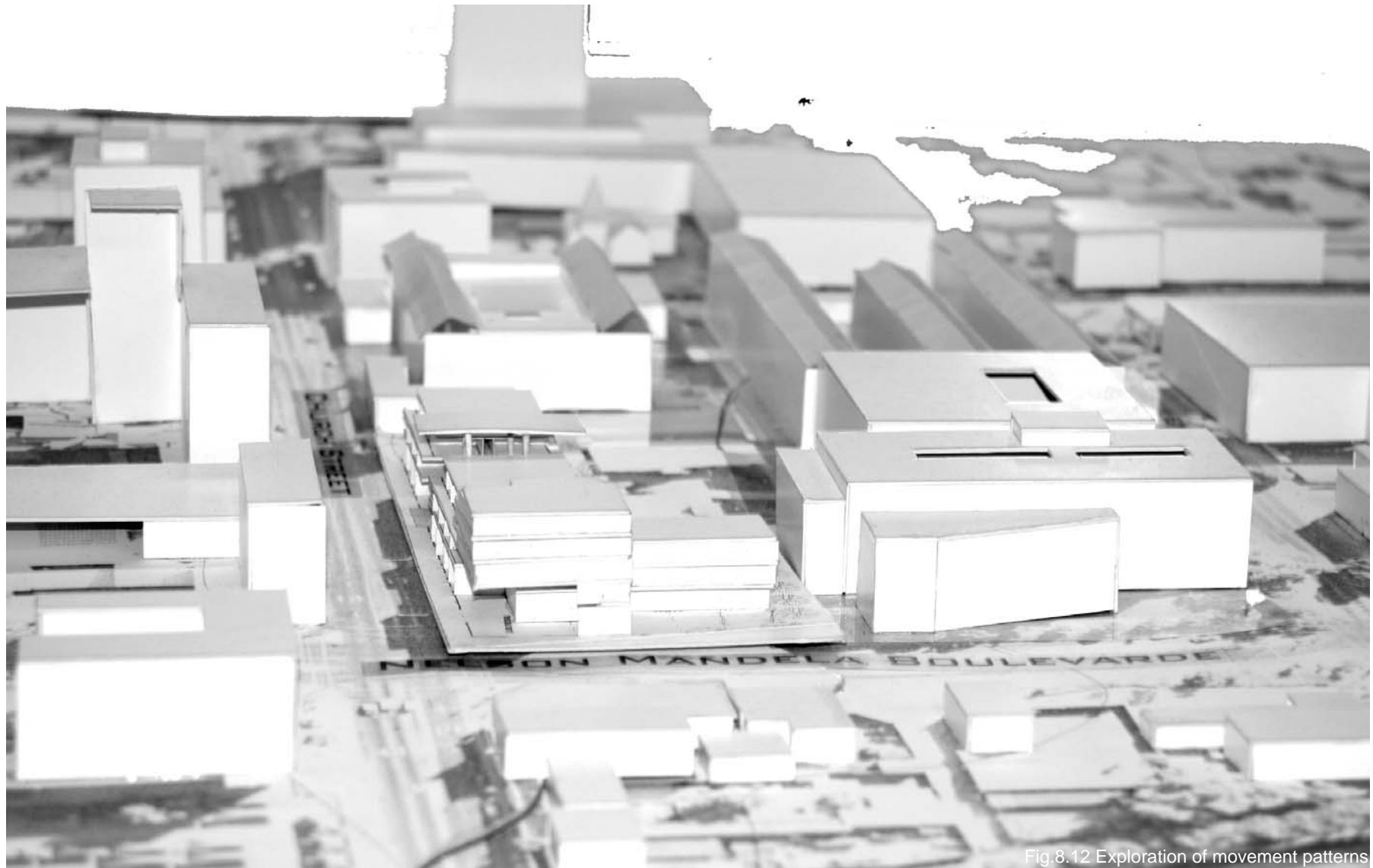


Fig 8.12 Exploration of movement patterns

## 8.6 Addressing Movement, Access and Permeability

### 8.6.1 Access

- Existing pedestrian movement patterns were analysed and the possibility of allowing movement through the new building was investigated in an attempt to increase the permeability of the site.
- The relocation of the bus stop to Nelson Mandela Boulevard allows for pedestrian access to the site from Nelson Mandela, through the market and from Church Street.
- It is envisaged that students would wait for busses in the food court, but in the event of their waiting at the bus stop, a threshold has been created by the continuation of trees between the building and the roadway.
- The possibility of creating a hierarchy of entrances was investigated, but eventually overpowered by the importance of the south-eastern corner aimed at creating a focal point.
- Access to the basement parking was reinstated at its original entrance on Vermeulen Street.
- Access to mezzanine parking on Nelson Mandela Boulevard would have to be retained and had to be designed for.

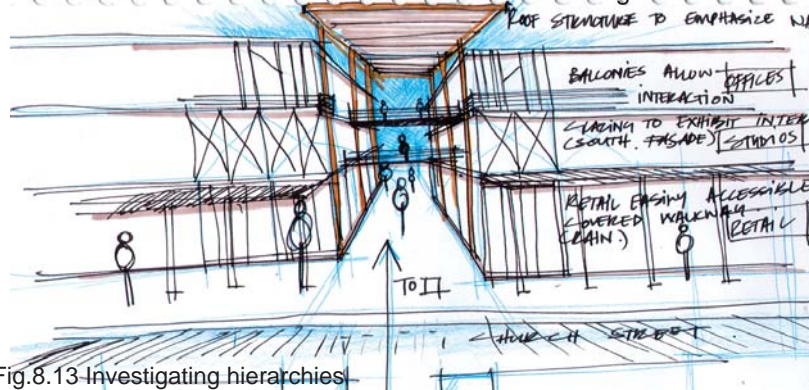


Fig.8.13 Investigating hierarchies

### 8.6.2 Private Spaces

- The courtyard and the spaces that would not be used for interaction with passers-by were placed along Nelson Mandela, so that they could be treated in a more private manner than the rest of the building.

### 8.6.3 The Public Square

- Where movement patterns converge, the opportunity arose for creating a public square.
- Taking into consideration the lattice work of the East Block and its architectural importance, it was decided to have the square step back from the building to highlight its importance.

### 8.6.4 Services and Deliveries

- Services are limited to cores.
- Deliveries and refuse collection are allocated to Nelson Mandela, with limited deliveries from Church Street in case of the possible pedestrianisation of Church Street.
- Not to interfere with the flow of traffic into parking areas, restaurant deliveries are to be limited to between 08:00 and 10:00.
- The wind direction was taken into account to determine the placement of the refuse yard.

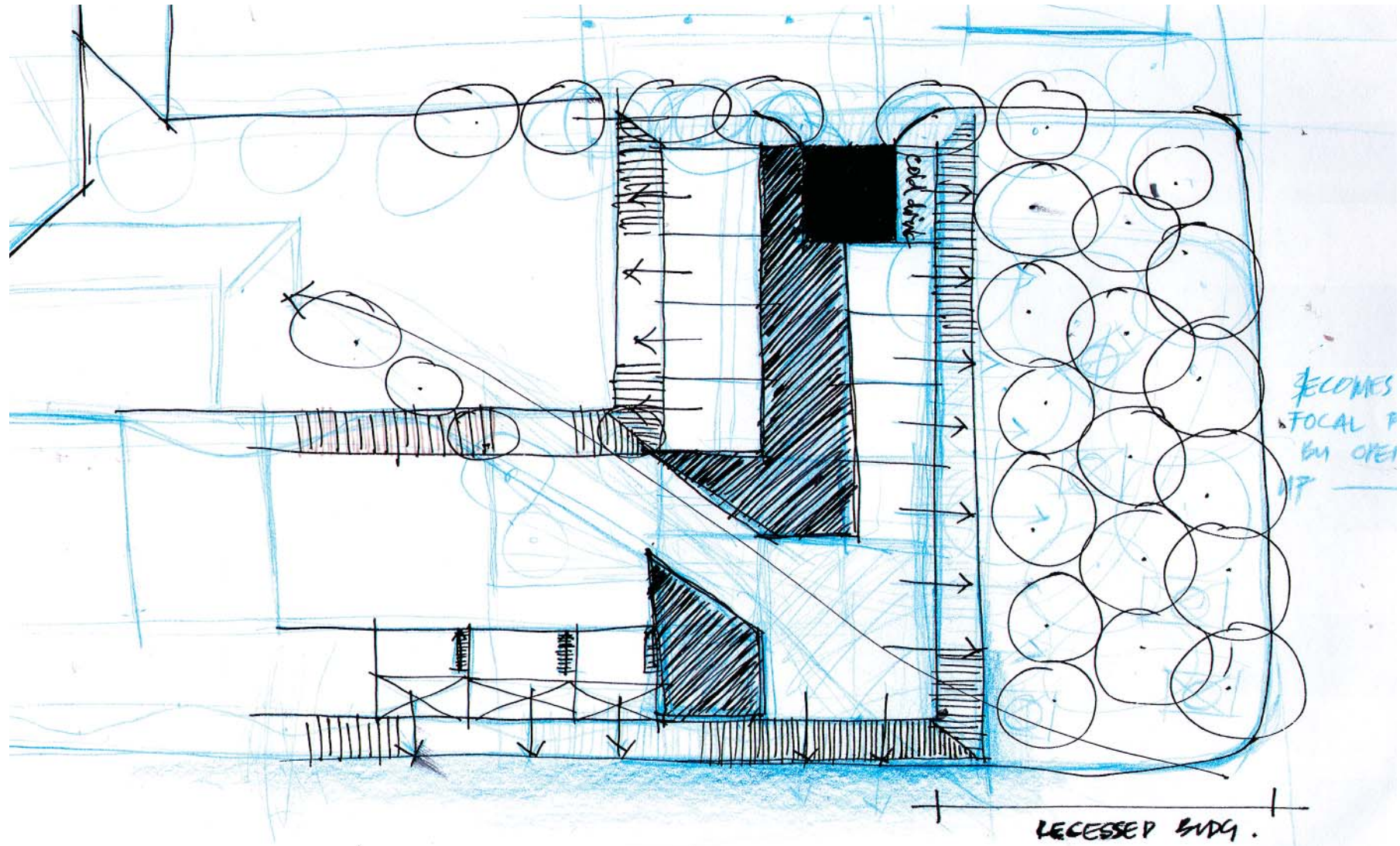


Fig.8.14 Exploration of corner

## 8.7 Addressing the Urban Fabric

### 8.7.1 Gateway

- As discussed in Chapter 4, the site is at the eastern gateway of Tshwane's inner city.
- The design would have to enhance a sense of arrival at the inner city.
- This is achieved by accentuating the corner of the proposed building, to create a 'gateway'.

### 8.7.2 The Corner

- The corner of the building was approached as a 'picture frame' where the activities of the occupants could be highlighted for passers-by and attract them to the development.
- The function of the corner needed to be carefully considered concerning its proximity to deliveries and the bus stop.
- It was resolved to treat the corner as not merely an event space, but also as a function allowing movement to the courtyard.
- The market was thus placed at the corner as to provide enough activity to attract the passer-by and facilitate movement into the food court and public square.

## 8.8 Addressing Issues of Safety

- Passive surveillance is optimised by allowing work spaces to look out onto public spaces and vice versa.
- The building is to step down towards the courtyard to create a human scale and balconies are used to enhance opportunities for passive surveillance.
- The façade bordering Church Street is on an urban scale, with glazing to enhance inside/outside interaction.

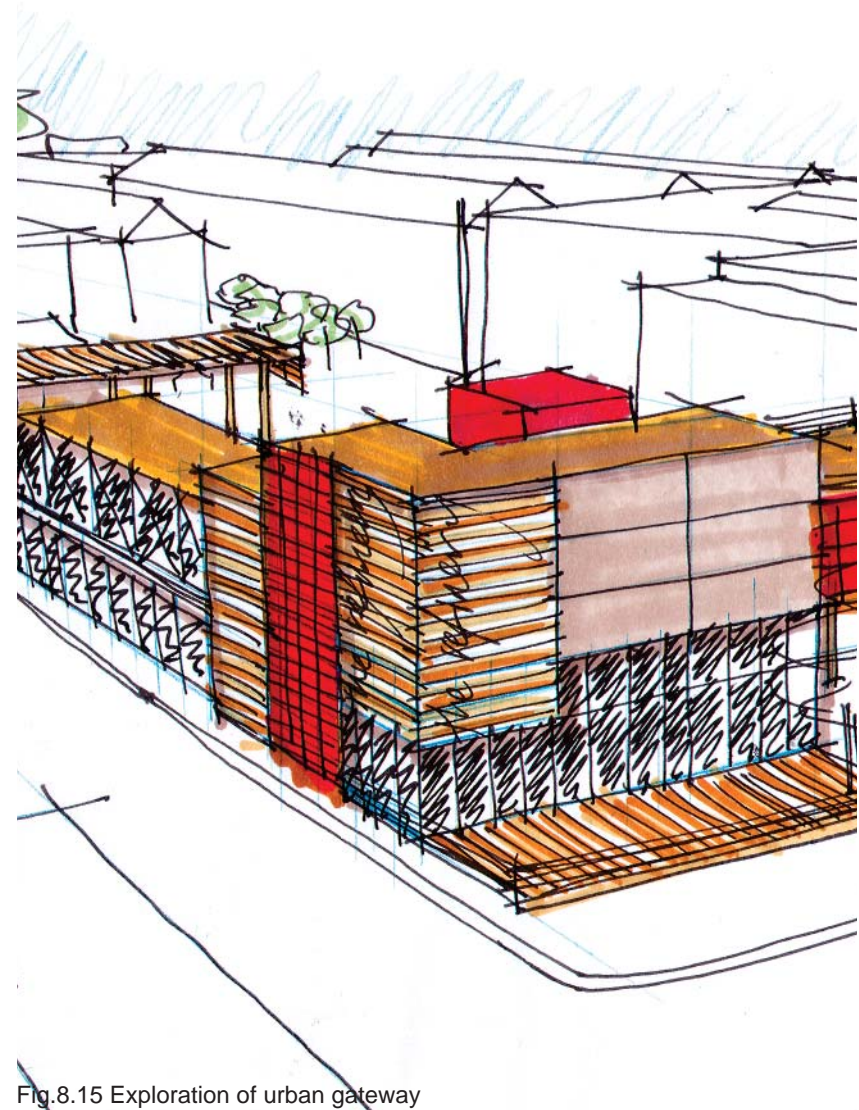
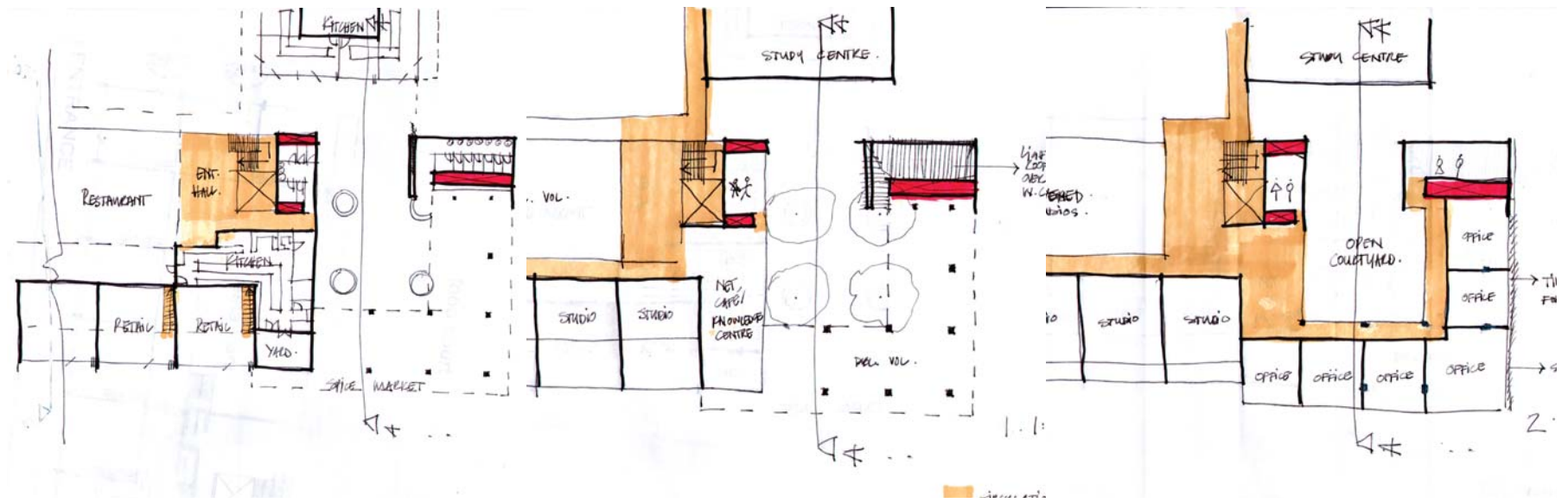


Fig.8.15 Exploration of urban gateway

Fig.8.16 Conceptual plans of Market and Administration Block

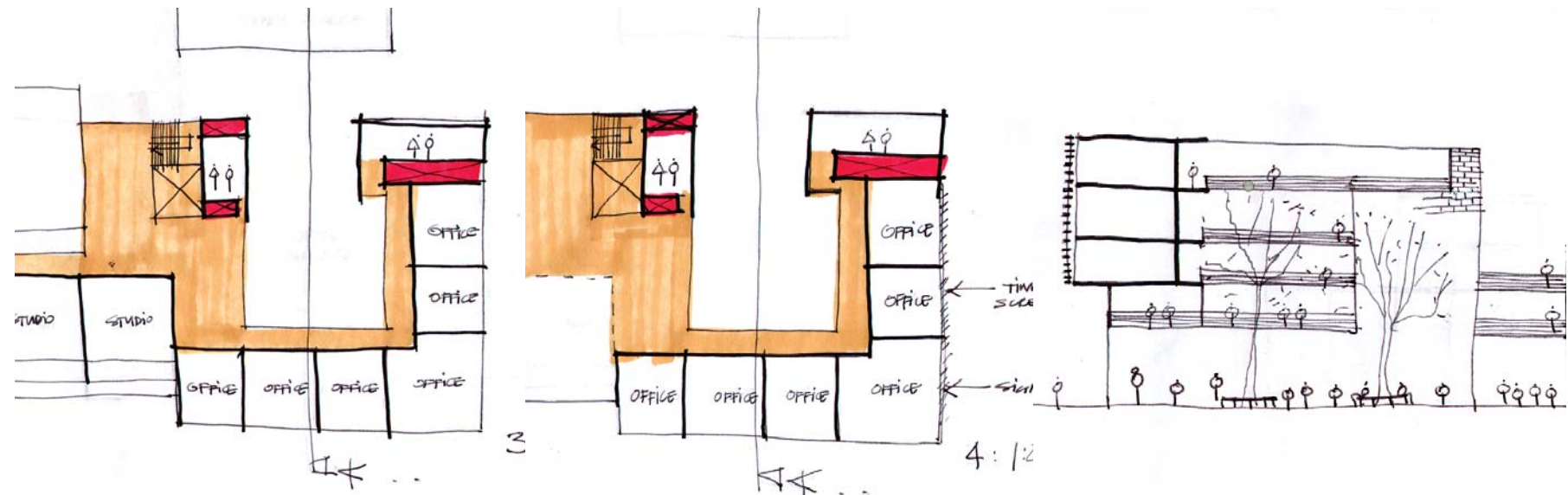
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## 8.9 4 Buildings

### 8.9.1 5 Storey: Market & Administration Block

The market is to be the stage on which activities will be set. Reflecting on the urban context of Tshwane, the double-volume market and line shops will function as an 'activity' plinth for the building. The trees form a focal point in the concrete city and provide natural shade for users. The market also allows for filtration into the food court and public square. The administration block above does not need to interact with the public, thus it is treated in a solid manner and located nearer to Nelson Mandela Boulevard.



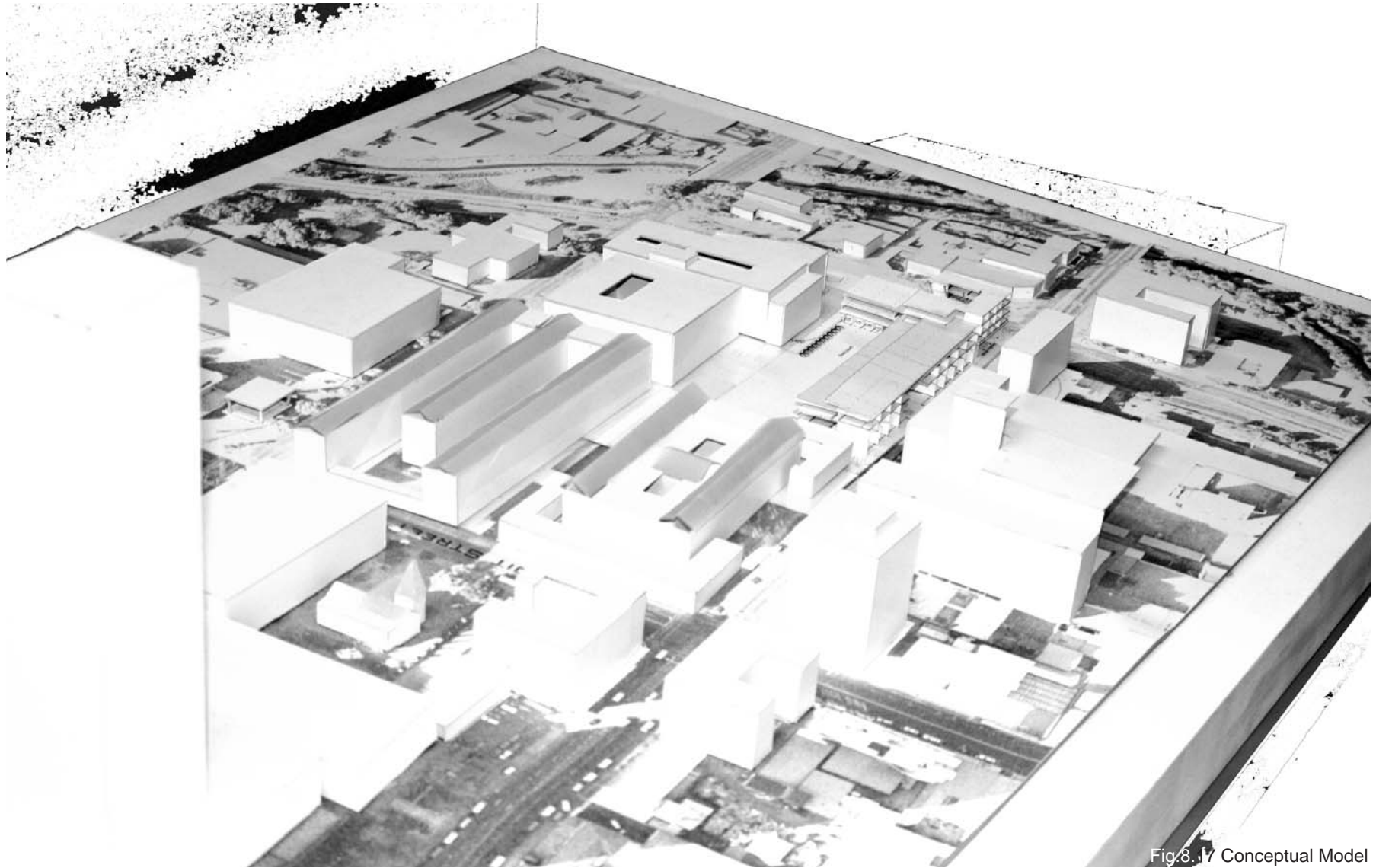


Fig.8.17 Conceptual Model

### **8.9.2 3 Storey: Line Shops, Studios & Restaurant**

As discussed, the aim of the line shops is to enhance an 'activity' plinth. Their south façades are glazed to allow optimum interaction between students and public. The restaurant spills out onto the courtyard and is a double-volume to distinguish it from the single-storey food court outlets. The circulation routes to the studios look into the restaurant, once again optimizing interaction between students and public.

### **8.9.3 3 Storey: Line shops, Studios & Main Studio**

The line shops and studios function as above while the main studio is fully accessible from the square and is also used for functions and overflow examination space.

### **8.9.4 Food Court and Study Centre**

The food court outlets are served by a centralised kitchen to allow mentors to teach multiple students simultaneously. As in the case with the administration offices, the study centre is also located near Nelson Mandela Boulevard as its function is more private.

## 8.10 Conclusion

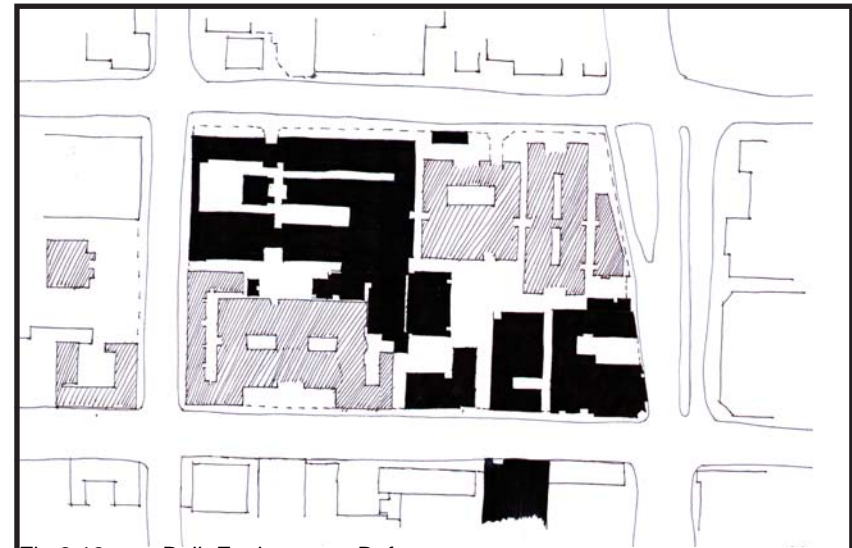


Fig.8.18: Built Environment Before

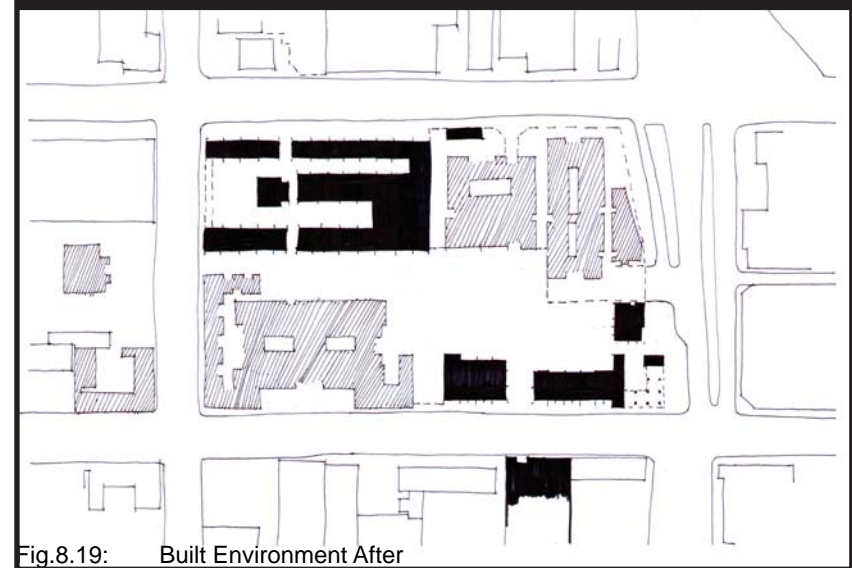


Fig.8.19: Built Environment After

