

Reclaiming the City

Housing for inner-city Johannesburg

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Abstract

The way in which a city is spatially laid out effects the natural environment of the planet (for example: pollution and the depletion of natural resources) as well as the social environment (the community and daily life) of its residents.

Through the exploration of various modern urban planning theories, I will begin to look at some different approaches to urban planning.

This document favours the compact city approach which advocates higher densities, mixed use development, public transport and community living. This approach relates to initiatives currently underway in the inner city of Johannesburg.

This document is about the exploration of how people live in the city and the issues surrounding housing in the urban context.

The proposed architectural project is a housing scheme located in Newtown, Johannesburg.

Central concepts include: urban regeneration, inner city living, visual variety in the urban realm, street edge conditions and public to private hierarchies.

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Introduction

The way in which cities are spatially laid out, and the manner in which they grow over time can damage their natural as well as their social environments. An obvious example is that, as cities start to expand outwards, detached houses on single stands start to become the norm. This results in low residential densities, which can create a number of undesirable ripple effects.

The idea of having one family on one plot of land means that people are spread out over a wide area. They end up not being within walking distance of their places of work, or of shops and social amenities. This leads to a massive rise in private car use, and to ever-increasing numbers of cars on the roads. The environment suffers as more pollution is generated by car fumes, and fossil fuels are depleted by the demand for petrol. There is also an economic burden on private car owners, as the rise in petrol prices means that they have to pay more to get to their destinations, which tend to be situated far from home. Another disadvantage for the owners of vehicles is the heavy volume of traffic on the roads, and the congestion at the busier times of the day. Many economically active people waste hours of potentially productive time stuck in traffic.

The distribution of low-density houses places additional and costly burdens on the local infrastructure (roads and water, electricity and sewage networks).

Not only do the networks have to extend great distances, but they become cost-inefficient owing to the relatively small number of people using these services. There are also social drawbacks. Because many activities, for example recreational, educational or cultural, take place beyond the confines of the local neighbourhood, community life tends to be limited. The nature of the street is altered by the isolation between residents who merely use the street to drive along. Chance encounters between the inhabit-



Sprawl

(INTERNET. www.treehugger.com/images)



Sprawl increases the dependency on private car use.

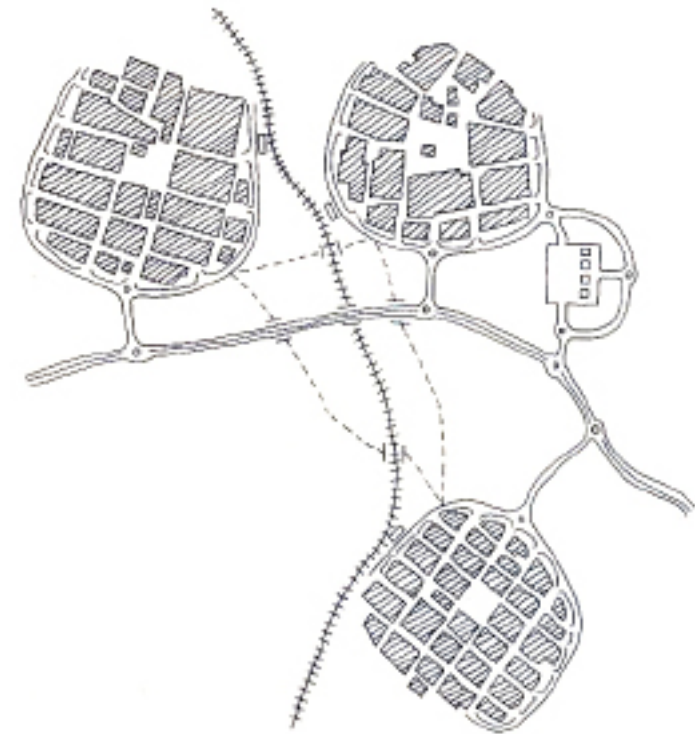
(Congress for new urbanism. INTERNET. www.lightrailnow.org)

ants of the same area that would occur if they were walking, are no longer possible. Streets become mere channels for motor vehicles. These disincentives to walking or cycling to work, the shops or any other place in the neighbourhood also mean that the general population also lose a good way of keeping fit.

Architects, designers and urban planners have a responsibility to recognize that what we design and build affects both the natural and the social environment. By designing buildings and spaces that promote community development and also show respect for the natural environment, we can contribute to society in a positive way.

One solution to the problems created by suburban sprawl is to advocate the idea of the compact city. This concept revolves around encouraging people to move into higher-density urban environments that are made up of mixed-use developments in which buildings and the spaces between them are devoted to multiple (residential, commercial, religious, cultural and recreational) uses. Allied to these should be an efficient public transport system that makes it simple and convenient to move between home and work. An important focus of the compact city is to create sustainable urban neighbourhoods.

The term 'sustainable urban neighbourhood' can be broadly explained as relating to social and economic stability in an area. This means that there are sufficient work opportunities, residential components and amenities such as shops, schools and public spaces available to cater for the needs of the residents. Each neighbourhood should also be located within a fully-developed infrastructure that includes an efficient public transport network. Because residents come into contact on a regular basis, these neighbourhoods develop a sense of



A cluster of urban villages
(Jenks et al 1996: 62)

community, which in turn promotes a varied and interesting public life. This encourages residents to feel a sense of ownership of, and responsibility for, their environment.

Because people who live in the inner city are central to the idea of a vibrant urban environment, housing becomes an integral element of the compact city. So how do we create urban residential environments of higher density that promote community living, form a part of the city and provide for the various levels of privacy required by those who live in city neighbourhoods?

The answers lie in the interaction between the individual resident and the collective neighbourhood. It is in the spaces between private and public, and through casual interactions between different people living their everyday lives in the same city, that urbanity — a sense of the sophistication, colour and rhythm of city life — is generated.

One of the ways in which one can explore various aspects of residential environments in the city, and the constant movement between the private and public domains by the city-dweller, is to look at the variations of scale, which also map the gradation between private and public domains: the urban block, the residential unit and the transitions between the two.



Residents form the basis of the communities of urban neighbourhoods.





NEWTOWN HOUSING



CHAPTER 1 MODERN URBAN PLANNING

1.1 The theoretical context

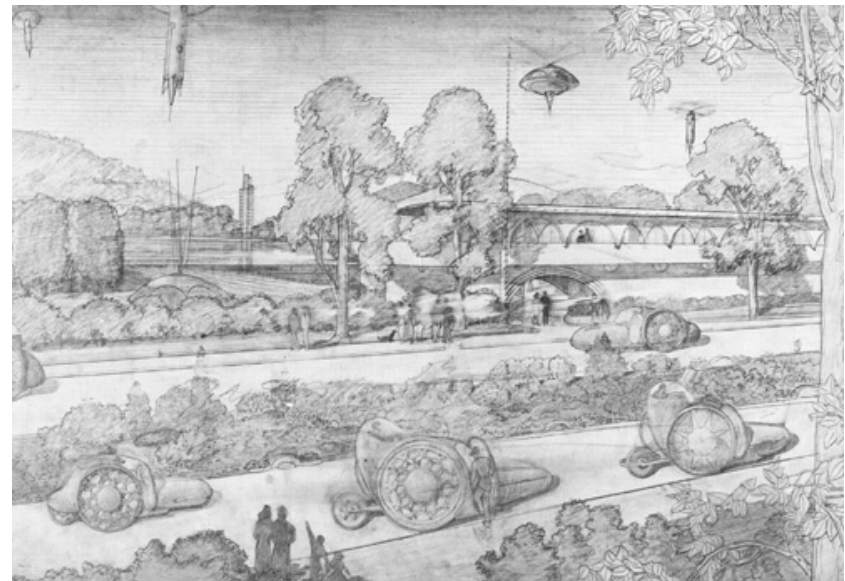
Throughout the twentieth century there have been two predominant but conflicting schools of thought regarding appropriate forms of urban development. These are the centrists (who promote urban environments and higher densities) and the decentrists (who advocate decentralisation in the form of spread-out communities and lower densities). These two schools tend to be based on two models: Frank Lloyd Wright's Broadacre City, which is a prototype for decentralisation; and Le Corbusier's Radiant City, which proposes a formula for high-density living. Although both present grandiose utopian views that offer extreme solutions to the problems of urban planning, they open the way to an investigation of a middle ground. The 'in-between' ideas of Jane Jacobs and her views on urban diversity provide a route towards the model that I am advocating — the compact city.

1.1.2 Frank Lloyd Wright and Broadacre City

Wright (1867–1959) was a prominent American architect and theorist of the twentieth century. His Broadacre City model was based on the idea that each family should be able to follow a self-sufficient lifestyle on one acre of land. This he proposed as an alternative to the highly-industrialised notion of a city which often resulted in poor conditions for the working class. His was an anti-urban conception in which infrastructure such as factories, schools and shops formed centres, while homesteads built on land divided into one-acre blocks occupied a fundamentally agricultural landscape (Jenks et al 1996: 17) on the periphery. In this way Wright wished to free people to move to the countryside with the idea of living, working and socialising within a radius of 10 to 20 miles of their homes. This decentralised model was to be planned and controlled, however: he did not



Typical view of the Broadacres countryside. Helicopter seen in foreground and, beyond, automatic overpass enabling continuous, uninterrupted traffic four ways. (Wright 1958: 198)



Typical street view at civic centre with new type vertical car and helicopter in flight. (Wright 1958: 138)

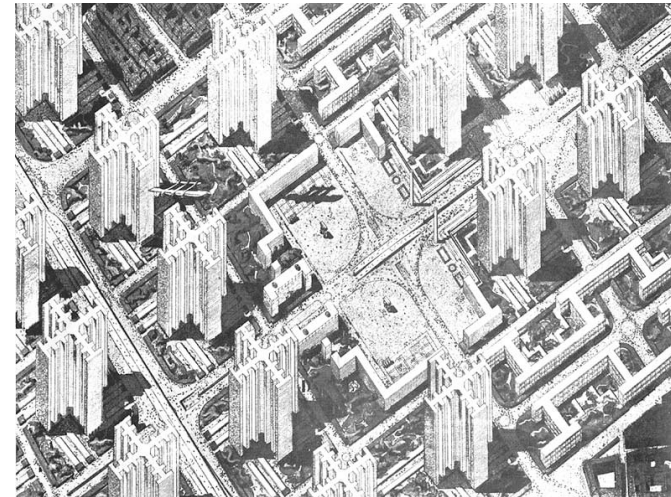
envisage a free-for-all sprawling city. (An interesting aspect of this early model is that the low-rise, low-density urban housing he proposed relies heavily on private car use rather than an organised transport system.) Wright's decentralised vision became extremely popular, and resulted in mass suburbanisation in the United States from the 1920s onwards. The problems that arise from suburban sprawl (greater use of private cars, increasing air pollution and overburdened infrastructure) have already been discussed in the introduction.

1.1.3 Le Corbusier and La Ville Radieuse

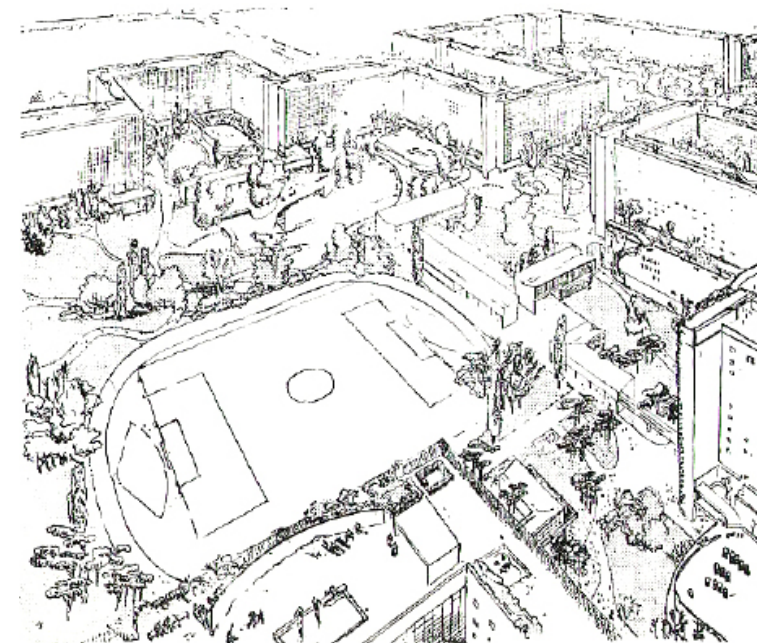
Le Corbusier (1887–1965) was a Swiss-born architect, designer, theorist and writer who is famous for his contributions to modern architecture. He was particularly interested in high-density city living, as manifested in his utopian idea of La Ville Radieuse (1935).

This model aimed to increase urban density while relieving congestion in the city centres. His way of achieving this was to house the city's population in high-rise apartment blocks, raised on pilotis (columns) and standing in isolation from each other. These high-rise buildings would free increased amounts of open space at ground level, and thus improve circulation for pedestrians and vehicles. The city was to be laid out in a hierarchical manner so as to separate functions and transport systems. However, in application this idea presages the death of the street due to the lack of well populated, busy streets which are crucial to the city dwellers sense of place, as all modes of transport operate divorced from one another.

Le Corbusier's ideas were adopted in the period that followed World War II, in the form of numerous proposals for high-rise apartment blocks. Many were built in England in the 1960s, especially in the erection of vertical 'council estates' that were intended to house the poor. Similar developments can be seen across the urban landscape in most of the cities of the



The 'Voisin' plan for Paris: 5% built up, 95% free. Super Density of 3200 inhabitants per hectare.
(Le Corbusier 1964: 206)



Parks, schools and recreational space are placed between the tower blocks.
(Le Corbusier 1964: 206)

developed world. Yet these tower blocks, especially those associated with low-income housing, have in many cases become associated with social problems that include crime (especially gang activity and drug dealing), lawlessness and vandalism. Even the better-maintained high-rise blocks tend to suffer from a high rate of tenant turnover.

1.1.4 Jane Jacobs and high-density living

Jane Jacobs was an urban theorist of the 1960s who favoured centralisation but opposed Le Corbusier's authoritarian approach, especially as regards the separation of functions. Jacobs advocated high-density living in cities on the grounds that density creates diversity, and that diversity creates richness in urban life (Jenks et al 1996: 18).

In The Death and Life of American Cities, Jacobs described how the texture created by different people moving along her street changed during the day. The commuters would leave for work in the morning, to be followed by the arrival of the local office workers and the departure of children going to school. Later in the morning, mothers with young children and 'bums' would tend to dominate the street scene. This would be followed by the frenetic activity of people emerging to buy food from vendors or visit cafes and restaurants at lunchtime; and so on, throughout the day.

This cycle of activity continues day after day as part of a wider weekly and annual cycle, so that the constantly changing street scene is accommodated within a regular and unchanging structure. It was this concept of a relatively stable framework within which the flux of working and living could find a happy equilibrium that informed Jacobs's model. However, although her advocacy for the protection of neighbourhoods and



Jane Jacobs' neighbourhood in New York City
(INTERNET. www.wirednewyork.com)



Jane Jacobs' neighbourhood in New York City
(INTERNET. www.wirednewyork.com)

diversity may have greater appeal today, at the time her views were seen as romantic and unrealistic. Her theory was unable to check the massive trend towards decentralisation, the decline of inner cities and the dominance of urban sprawl that characterised the decades that followed.

The theories discussed above encompass three of the main ideas behind urban planning in the twentieth century.

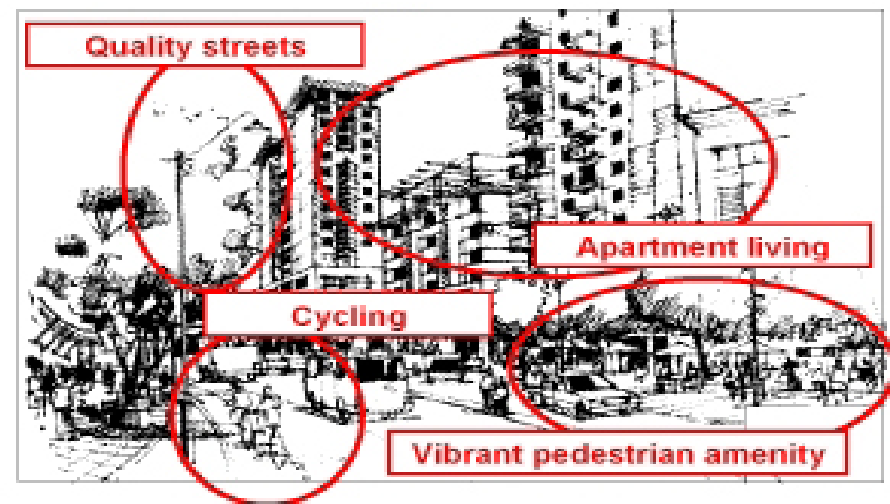
The challenge now is to develop new approaches to urban living as we move forward into the twenty-first century and address new social and environmental problems.

1.1.5 The compact city

A theory that has relevance today is that of the compact city, which entails a positive move to address the current state of our sprawling cities, and in particular, inner-city decay. Its main idea is to promote environmental and social sustainability within an urban context.

The theory is that great benefits can be gained by increasing urban densities and providing mixed-use development, for example by shortening the distances people have to travel between home and work, and limiting the extent of infrastructure (such as roads, rail, and piping for water and sewage).

Another strong argument for adopting the compact city approach is its contribution towards preserving the natural environment, by reducing harmful emissions and greenhouse gases (and consequently curbing global warming) and protecting greenfield sites (that is, undeveloped land) from being built on. By lowering our consumption of fossil fuels the compact city can help its residents achieve a more sustainable lifestyle in which they spend less on transport, heating and lighting; reduce pollution; rely less on motorised travel; and do



The concept of the compact city
(INTERNET. www.joelcayford.com/growthpic.jpg)

more walking and cycling, which also improves their health and fitness. The idea behind the compact city model is to provide more attractive cities where residents can enjoy living in close proximity in urban environments that will last and prosper over time. Mixed-use development, that is, providing different land uses including housing in the same geographical area, is seen as the main factor to be considered when creating urban environments, and a positive contribution to city planning policy (Coupland 1997: 1). It is this model that I propose to use as the basis for my thesis.

The benefits of mixed-use development can be summarised as providing:

- more convenient access to facilities
- reduced travel-to-work congestion
- greater opportunities for social interaction
- socially diverse communities
- the visual stimulation and delight created by different buildings in close proximity
- a greater feeling of 'eyes on the street' (passive surveillance)
- more efficient use of space and buildings
- wider range of choices of lifestyle, location and building type for the consumer
- urban vitality of street life
- greater viability for urban facilities and support for small business (like corner shops).

(English Partnerships urban design compendium: 2000).



Gloucester Green, Oxford

Managed to encourage a range of smaller specialist shops and restaurants in a highly acclaimed mixed use scheme with flats, offices and the market. (Coupland 1997: 105)



Dorrington House, Leather Lane, London
Offices over shops (originally to be converted for residential use)
(Coupland 1997: 120)

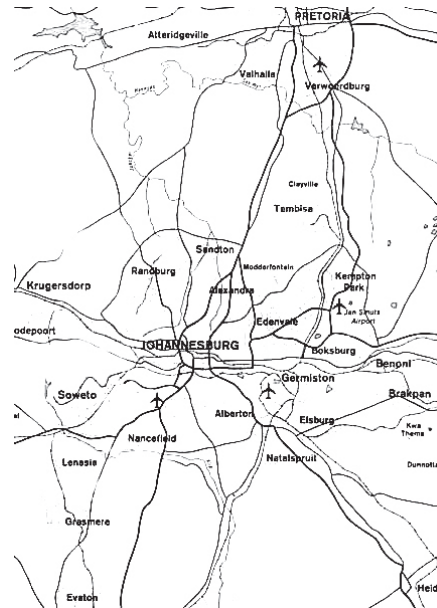
1.2 Johannesburg as a case study to which the idea of the compact city can be applied

1.2.1 A brief history of Johannesburg from a spatial planning perspective

Many different factors determined the form Johannesburg has today. It first started out as a mining camp in the 1800s, and expanded quickly in order to provide services for the labourers working in the gold mines on the Witwatersrand. Within a short period formal neighborhoods were established to accommodate the ever-increasing population.

The Central Business District (CBD), which grew rapidly in the 1900s, was formalised into a grid system. Many buildings in the European style replaced the temporary accommodation and buildings. As the influx of immigrants descending on the city continued, Johannesburg expanded further. Transportation was limited, but this did not curb the exponential physical growth of the CBD. In the 1930s the automobile was introduced to South Africa. This aid to mobility allowed residents to move to suburbs just outside Johannesburg, from which they could commute into the city.

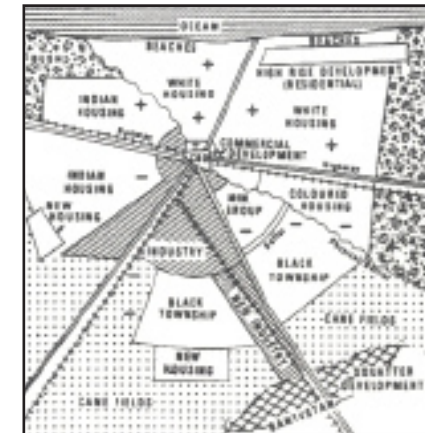
The 1948 elections marked the rise of the National Party to government. It was under the Nationalists that the system known as apartheid — in essence a legal framework that imposed distinctions based on race — was introduced. Under this ideology, spatial planning entailed the separation of races into different areas. A large proportion of the population were compelled to live on cheap and inhospitable land situated on the periphery of the city. These 'townships' were separated from the affluent suburbs by buffer zones, often in the form of highways or industrialised areas.



Map of Johannesburg and surrounding suburbs.
(after: INTERNET www.johannesburgcitytourist.com)



Early Johannesburg with new formal buildings
(INTERNET. www.joburgheritage.co.za)



The spatial segregation of racial groups into distinct residential areas separated by 'buffers' was the primary spatial planning instrument of the apartheid government of the 1950's. (Burdet, Sudjic 2007: 206)

Many highways (the N1, N3 and M2, for example) were constructed to link Johannesburg to the rest of South Africa. These too contributed to the mass sub-urbanisation of the city. Because public transport remained underdeveloped, the vast majority of 'wealthy' residents of the Northern suburbs opted to own vehicles in which they could travel to work.

1.2.2 Johannesburg Central

In the 1990s, when apartheid came to an end and the African National Congress was voted into power, major changes occurred in the CBD. After the Group Areas act was abolished, thousands of people formerly forbidden to live in the city moved from the townships into the city centre, joined by many immigrants from other African countries. Unemployment and poverty among these new denizens of the city caused crime levels to rise dramatically. Along with the deterioration in security, the quality of life for those who lived and worked in the inner city fell into decline. Many businesses relocated to the Northern suburbs, which saw a massive rise both in residential population and the number of companies opening offices there. Sandton became the new financial CBD of Johannesburg, while the former business nucleus in the inner city was left empty and abandoned. Illegal immigrants moved into the unused buildings, and the city centre became a dangerous no-go zone.

1.2.3 Johannesburg's sprawling suburbs

Johannesburg extends over a large area. Many households in the suburbs live in single-storey, detached houses, especially in those suburbs catering for families in the middle to high income brackets, in exclusive residential estates and in the state-sponsored low-cost housing projects on the edges of the city. The levels of density are too low to sustain a feasible public transport system. This in turn results in high levels of private car use. (This trend is not exclusive to Jo-



Looking from Johannesburg towards the suburbs
(INTERNET. www.johannesburgcitytourist.com)

Johannesburg and is pretty much a world wide phenomenon). Another disadvantage of these suburbs, which characteristically have one house on each stand, is that the networked water, energy and sanitation systems are extremely difficult to manage efficiently.

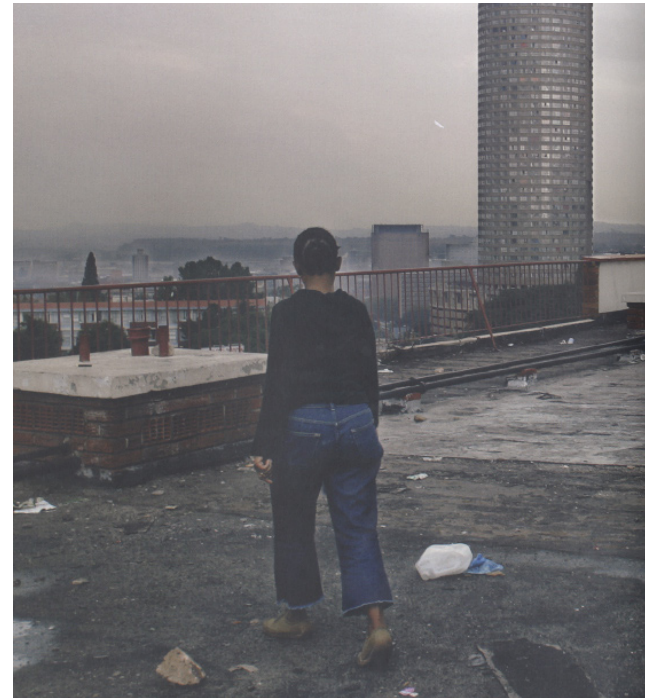
1.2.4 Johannesburg and the separation of land use

Because of parts of the city have been zoned for mono-functional uses (such as industrial, retail, commercial, social and residential), Johannesburg central experiences periods during which the streets and buildings appear virtually empty of people, for example at night or over the weekends. If a mixed-use model were to be adopted instead of the earlier single-use system, a vibrant centre that is populated and busy at all hours (a 24-hour city) can be created in Johannesburg.

1.2.5 Urban regeneration

The inner city of Johannesburg represents a diverse series of built environments that range from severely degraded residential developments (such as Bertrams) to the thriving commercial area of Braamfontein.

The inner city has an officially estimated population of 217 000, but this number does not include illegal (and therefore undocumented) immigrants, so the true figure is unknown. The suburbs close to the CBD, including Joubert Park and Hillbrow, contain a large number of high-rise apartment blocks which have, owing to the increase in the crime rate, become severely neglected and run-down as more of the wealthier members of the population have moved to the outlying suburbs. The existing housing stock in the CBD is insufficient to meet the demands of its current population. As a consequence, many under-utilised or abandoned buildings have been



View from a roof top in Johannesburg
(Burdet, Sudjic 2007: 194)



Flats in downtown Johannesburg
(Burdet, Sudjic 2007: 197)

converted into residential housing or taken over by squatters.

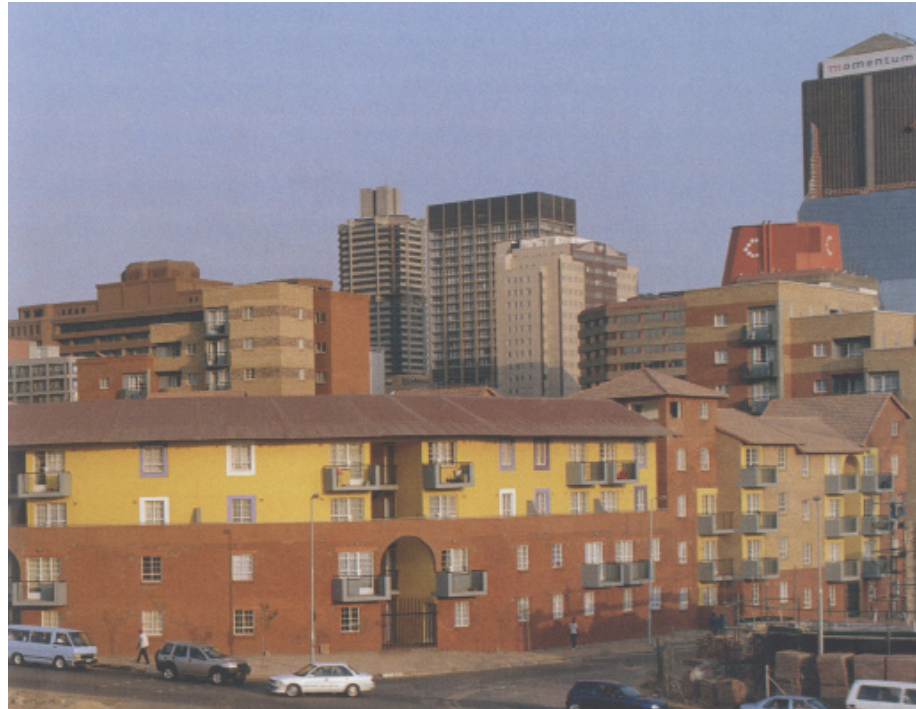
Johannesburg is currently undergoing a process of urban regeneration.

The urban renewal projects already in hand involve precinct plans targeting major nodes of the inner city.

These include:

- Newtown (which will acquire additional cultural facilities, new housing units and the upgrading of existing historical buildings),
- Constitution Hill (which will be provided with a new home for the Constitutional Court, various museums and a hotel),
- Jewel City (which will comprise 40 000 sq m of factory and office space intended to house 80% of Gauteng's diamond and jewellery industry)
- Joubert Park (which will become the site of the R10-million Greenhouse Environmental centre) (www.joburg.org.za).

Many more initiatives are being undertaken to revitalise the inner city and, in doing so, to provide a better quality of urban environment for those people residing there. Another aim is to encourage more people to invest in Johannesburg's future.



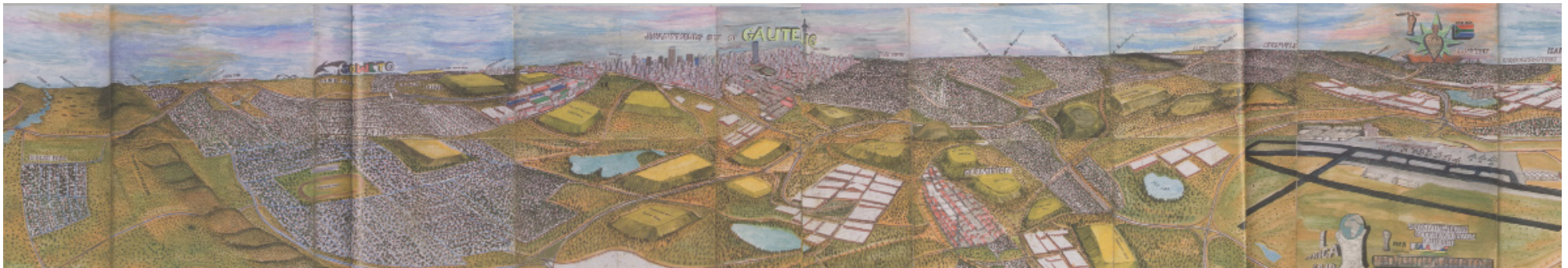
Brickfields social housing project which has brought a mix of much-needed affordable and private housing in the downtown area, going against the grain of so much of Johannesburg's unsustainable suburban expansion.
(Burdet, Sudjic 2007: 208)

1.2.6 Johannesburg as a compact city

Johannesburg's former CBD represents a classic example of a sprawling city and underused inner city centre. In order to promote higher-density living in Johannesburg as an attractive option, I would argue that a much greater component of affordable residential housing should be built, and that it should be serviced by mixed-use development.

This would include shops, buildings such as offices and restaurants that provide jobs, an efficient public transport system and varied social amenities. There should be a blend of residential accommodation that caters for both the lower and upper income brackets.

It is important to bring people who have disposable income into the area, because their spending-power will encourage the establishment of supermarkets, cafes and restaurants. All of these elements will help to transform Johannesburg into a 24-hour city.



Urban landscape. Johannesburg
(de Kler 2007: 63)





2.1 Urban housing typology

Before determining what type of housing typology is to be used in a particular case, it is important to summarise the various forms that housing can take.

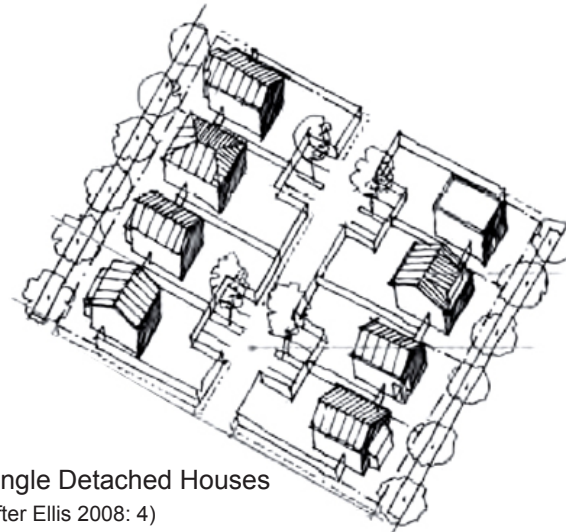
The typological and collective arrangements of housing are highly significant factors in shaping the morphology, character and experience of urban form and space. Kevin Lynch, an American urban planner and author, places emphasis on the importance, when defining the characteristics of a city, of the texture and mix of built types in residential environments.

2.1.1 Single detached houses

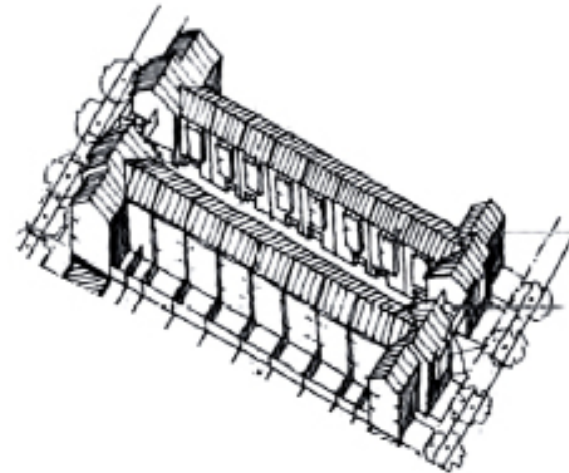
This model is one of the most popular kinds of housing in South Africa, and is most commonly seen in the suburbs inhabited by families in the middle to high-income bracket, in exclusive residential estates and in the state-supported low-cost housing projects on the outer peripheries of cities. As already mentioned, this type of housing not only results in suburban sprawl but creates levels of density too low to sustain a workable public transport system, and to manage networked water, energy and sanitation systems efficiently. High levels of private car use also create pollution and congestion on the roads.

2.1.2 Attached houses : row houses : town houses

These three house types can be multistoreyed. Usually, two or more houses sharing "party" walls with their neighbouring units are built in a row (Alexander, 1977). This type of housing can create an environment in which the occupants of all units are able to gain access to the ground. Houses can be entered from private yards or through common spaces. These



Single Detached Houses
(after Ellis 2008: 4)



Attached houses- row houses- town houses
(after Ellis: 2008 6)

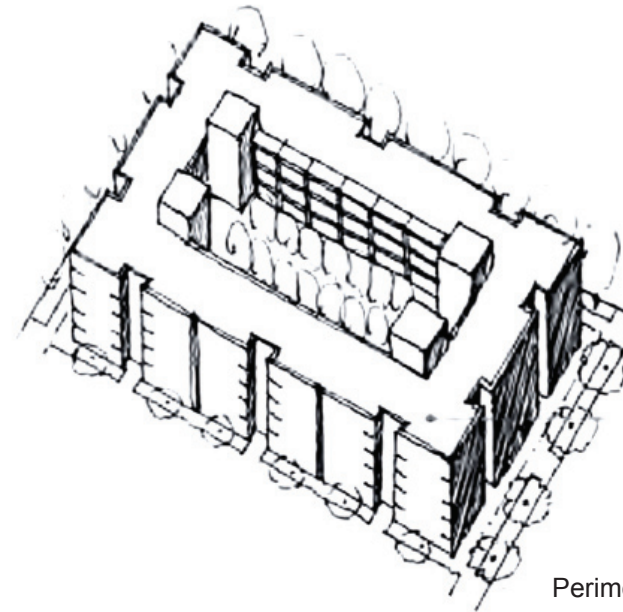
types of housing can be arranged as single or double back-to-back units, or adjoining each other to form a row (Lynch, 1981). However, if long rows of houses next to one another are built, the units in the middle will have a tendency to lack sufficient light. This consideration makes it necessary for the architect to limit the depth of the residential unit, to allow light to enter from both the front and the back.

2.1.3 Courtyard houses

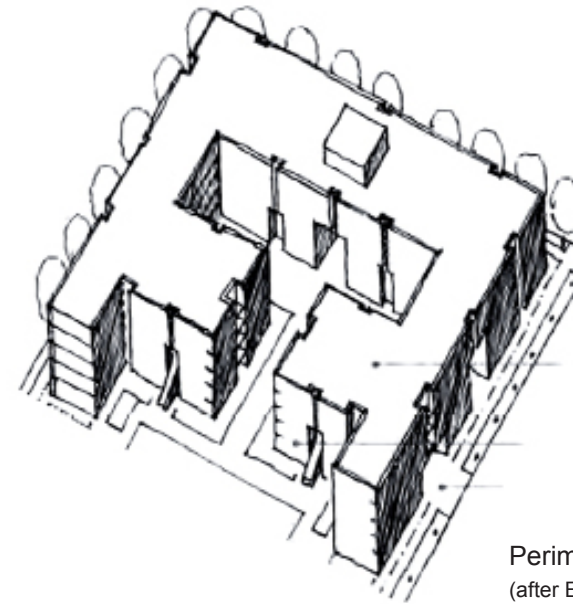
These units are grouped around a central space, which forms a courtyard. Ideally, courtyards should create positive spaces that can serve as common public areas for the residents. According to Lynch (1981), this model is usually proposed as a way of achieving urban density, with single-family houses that turn inward rather than outward for light and air. This kind of design choice makes it unnecessary to depend on light that comes from public space. Urban environments that are walled-in and dense are particularly suitable for this type of housing. A central courtyard (or a series of courtyards) in a single house provides light for every room as well as becoming the “living area of the house”. It sets up a public-to private hierarchy that governs the spatial character of the dwelling, with the person becoming the central focus of the house.

2.1.4 Urban blocks

A unit that is larger than an individual home but smaller than the neighborhood helps to contribute both to a sense of scale and to a sense of belonging and community for the people who live there. This form of housing includes the perimeter block, which is made up of one- to five-storey buildings surrounding an internal courtyard. The perimeter block structure has proved popular over time, because it provides for efficient use of land, makes a clear distinction between public and private realms, and, having windows and doors that face out onto both the street



Perimeter courtyard blocks
(after Ellis 2008: 8)



Perimeter courtyard blocks
(after Ellis 2008: 8)

and the courtyard, ensures good natural passive surveillance.

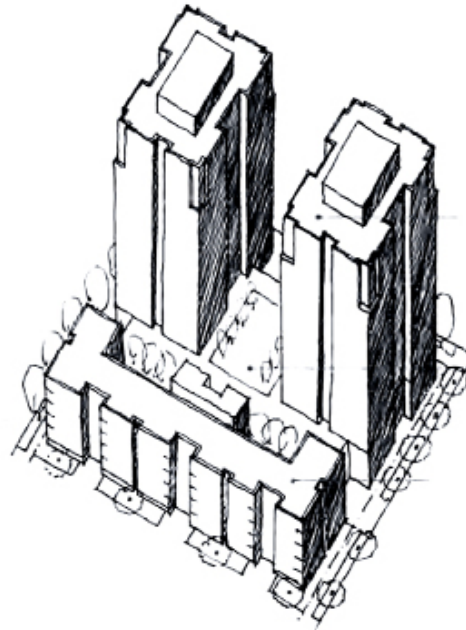
One of the design elements of this housing type praised by Lynch in *Good City Form* (1981) is the opportunity it offers the architect to arrange open spaces in a manner that is most favourable to community needs. These enclosed areas provide spaces for children to play safely, and areas where people can gather.

The issue of parking has to be given careful consideration by the designer, as it should not be allowed to encroach on the space allotted to the communal areas.

2.1.5 High towers : high-rise buildings

Usually this model constitutes buildings that are more than six storeys high, and therefore require an elevator. In high-rise buildings, private space is often limited to the inside of the residential units and private balconies. As a result, play areas for children tend to be situated some distance from their homes. This model allows for very high densities to be achieved in terms of occupancy, and require minimal amounts of land. One of the problems associated with this type of housing, however, is that areas of open ground are often required for parking, and therefore create spaces that stand empty and desolate for most of the day. The internal communal areas, corridors and elevators often discourage neighbourly interaction amongst the residents because they are dark, unfriendly spaces.

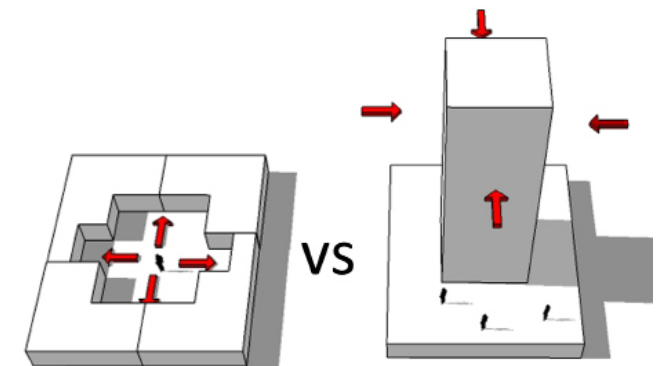
One of the advantages of apartment blocks is that, in comparison with low-rise suburban houses, they reduce infrastructural costs (such as the supply of water, power, roads and public transportation). However, they are expensive to build and maintain (Lynch, 1981, Alexander, 1977). Alexander argues that because many outdoor spaces “left over” between buildings will, in general, not be used, it is essential to make all the outdoor spaces in the surroundings and between buildings positive. By this he means that there should



Highrise blocks
(after Ellis 2008: 8)



Different building typologies seen in central Johannesburg: the highrise pavilion and the courtyard residential block.



be some degree of enclosure. Defining each space with trees, fences, walkways, and features will make it individual and interesting, and therefore attractive to the residents of the apartment blocks (Alexander, 1977:532).

2.2 Domestic architecture and urbanism

Lively urban neighbourhoods cannot be created independent of housing, as it is the people who live in the city who make up urban communities. In Johannesburg there is an increasing demand for housing that is situated close to places of work. Because very little land is available for development, the solution to the problem is to increase residential densities. Density is an integral element of urban housing.

Ian Colquhoun, an architect and town planner who has written books on housing design and urban regeneration, and is cited in the book Urban Housing Forms by Jingmin Zhou, gives the essential features successful high-density developments require:

- accessible location near public transport routes
- generous internal space and storage.
- high standards of management and maintenance.
- adequate facilities for children in the vicinity
- good infrastructure, including shops, schools and other amenities in the area
- some personal outdoor spaces, for example a balcony in cases where there are no gardens
- good security (especially relevant in South Africa).
- high standards of finish that can be achieved using durable building materials
- appropriateness of the development to the urban scale.



Homes for Change. Manchester . U.K
(Zhou 1995: 184)



Housing on Lindenstrasse. Berlin, Germany
(Zhou 1995: 155)



Kinuta Terrace. Tokyo, Japan
(Zhou 1995: 106)



Housing in Kobe. Kobe, Japan
(Zhou 1995: 116)

Essential characteristics for public spaces should include qualities that create safe, comfortable and attractive environments. These should include walks that act as pathways connecting frequently-visited destinations. Safety measures, notices containing information on where the pathways lead and the distances between destinations should be supplied, as these contribute to the way people use public spaces.

2.3 Making places for people to live in the city

After having explored the fundamentals of urban living in terms of higher densities and mixed-use neighborhoods, I discuss various issues related to people living in the city.

2.3.1. Urbanity as a way of life

In exploring the spatial qualities of urban residential environments, the analyst should focus upon people and their existential space, within which individual and common expression can occur (Bobic 2004:14). Instead of focusing on the city centres and placing emphasis on the city as a whole, we should be exploring its parts, and the relationships between the urban blocks and open spaces. These individual elements, such as one block, a group of houses or a single street, do not exist in isolation: they cannot generate an urban character divorced from their context. Put another way, cities are not just simple compositions of different elements, forms and functions; instead, the very nature of a city is dependent on the interrelation of its components.

Dewar, Uytenbogaardt et al, in their book, Housing, a Comparative evaluation of Urbanism in Cape Town, interpret urbanity as being the generic term used for the positive qualities that exist in urban areas. It is the quality of urbanity which distinguishes rich urban environments from urban agglomerations; the quality



Urban Streetscape. New York
(Bobic 2004: 38)



Urban Streetscape. Amsterdam, Haarlemmerdijk
(Bobic 2004: 55)

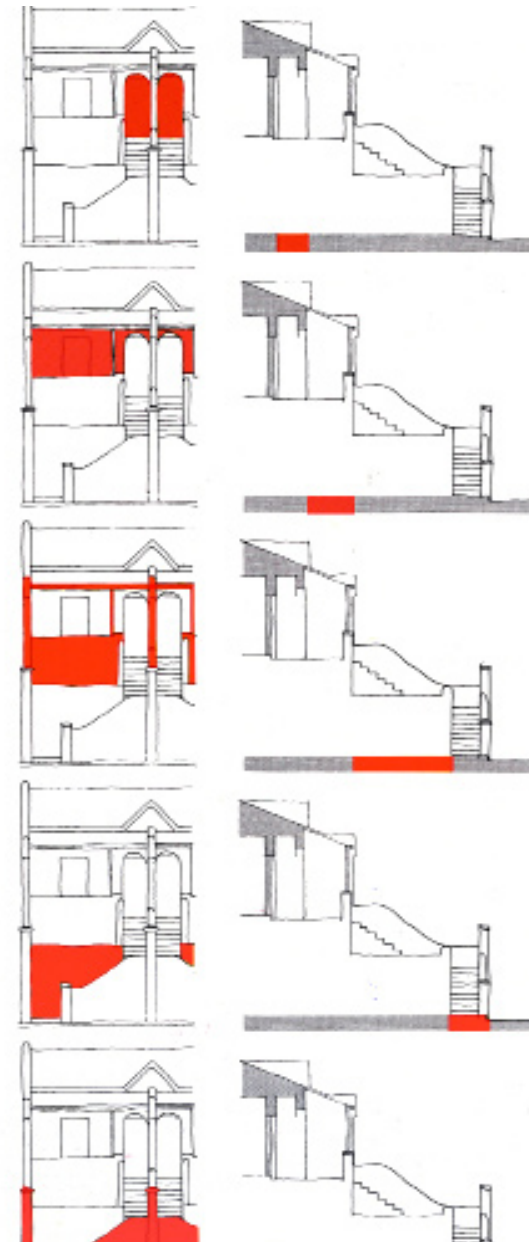
of 'cities' from suburbia. The essence of urbanity lies in the potentialities realised when people are brought into close contact with each other: a sense of the richness and complexity created by many individuals and cultures sharing their lives in one place. It is through chance encounters between people living their everyday lives in the same city, that urbanity — a sense of the sophistication, colour and rhythm of city life — is generated.

When looking at the individual and the collective, tensions and conflicts between residents and public space are inevitable. There can be conflicts of different interests, cultures, claims or of a simple human nature. However, these conflicts are not necessarily destructive in their effects. They prompt people to communicate, and by this means make it possible for them to get to know each other. With acknowledgement of difference in views and lifestyles can come assimilation into an urban community. Such relationships are vital to the creation of urban culture.

2.3.2 Public and private hierarchies

All private properties in the city are located within the public realm because they are dependent on public infrastructure. Streets create the communication pattern of the city. The public spaces are the places within which people experience the city and engage, both formally and informally, in city life (Dewar, Uytendogaardt 1995:9). It is important that city planners should achieve the right balance between the public (collective) and the individual (private) spaces in order to achieve a hierarchy that defines these two realms, and the semi-public and semi-private transitions between the two.

The intersection of public and private occurs where the different elements meet and are negotiated by the residents of the city. The edge between the city block and the street is the most common place where the very nature of the city is expressed. It is at this point that three different scale levels are confronted — those of city, block and house.

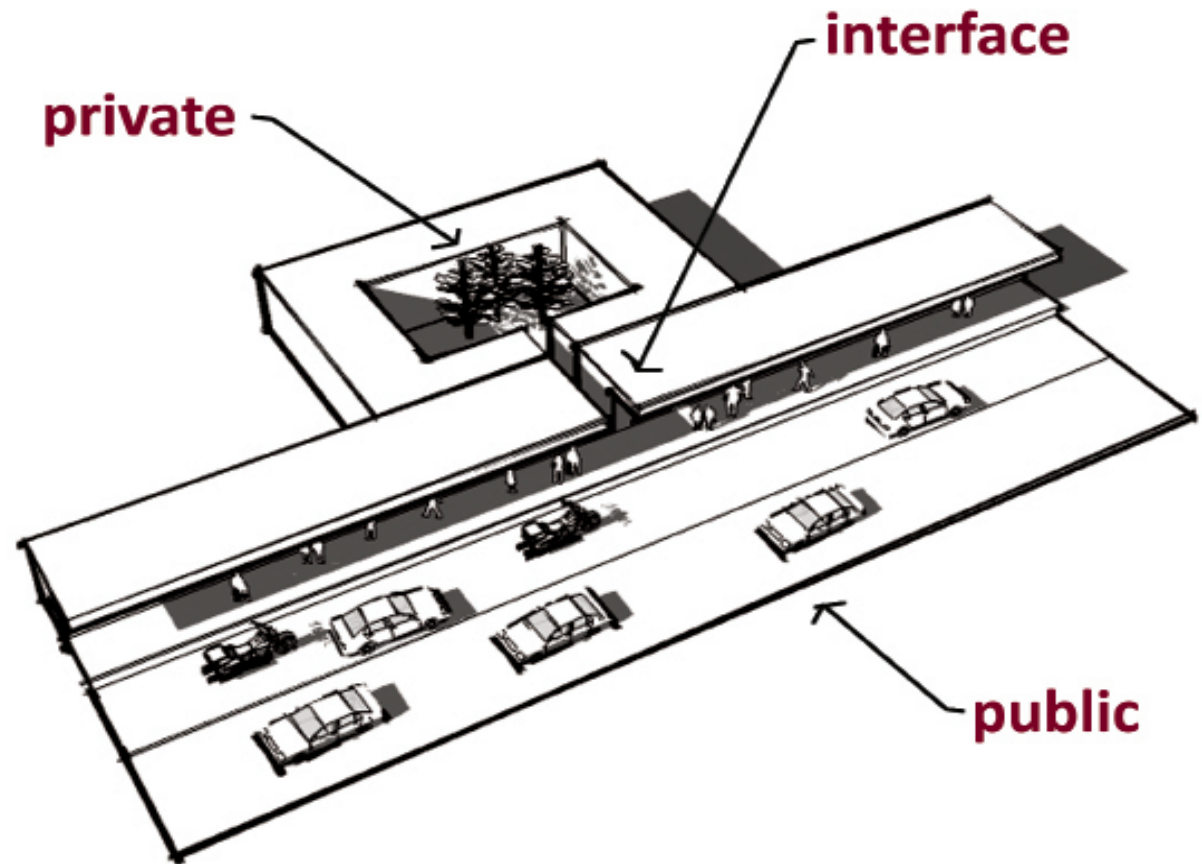


Privacy hierarchies

(After Dewar, Uytendogaardt et al 1977: 200)

Differences in street edge conditions can determine how a person reads a street: for example, a commercial street is different in character to a residential street. Commercial streets are busy and service a number of people entering and exiting the shops. Large windows display goods and are a main feature to entice in customers. Residential streets are quieter and require a different street edge condition. Privacy thresholds need to be clear and doors and windows need special consideration especially at ground level. The boundary defined by the street and the block is where the public domain meets the private realm, and where the individual meets the collective. The privacy gradients are further developed within the block, where edges occur that mark the separation between the residential community and the private residence.

There are overlaps between public and private space at street level, where shops, cafés and workshops are accessible through public spaces, and are an extension of the public realm at certain times. Another example of the overlap of public and private territories occurs when vendors take occupancy of the pavement, temporarily claiming it as private territory. By extending the functions of the buildings to include public space and vice versa by various means (not only through barriers), the designer can control and adapt physical boundaries between the building and open space (Bobic 2004:56).

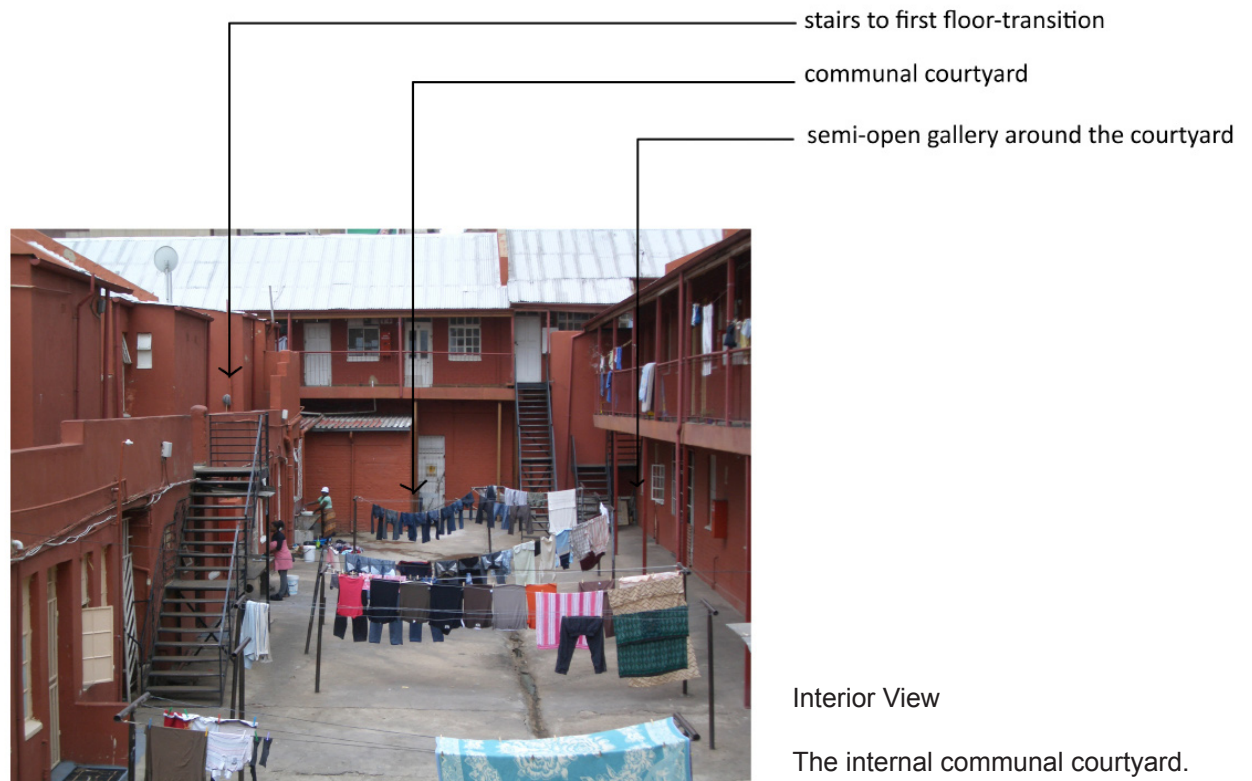


Example of transition from public to private space within the city infrastructure



Exterior View

A perimeter building situated in the inner city of Johannesburg demonstrating a perimeter block development with ground floor retail and a residential component above.



Interior View

The internal communal courtyard.



Considering all the issues surrounding the designing of residential environments in the city, it is important to look at relevant examples of housing in South Africa that have been built recently.

The case studies I have chosen represent local housing schemes, aimed at tenants in the middle to lower-income brackets, that have been developed in South Africa over the last few years. The schemes are of medium density. All of the examples below try to address various aspects of community living, urban environments, mixed-use development and the use of low-cost materials.



3.1 Brickfields social housing project (2005), Savage and Dodd Architects, Newtown, Johannesburg. 275 du/ha

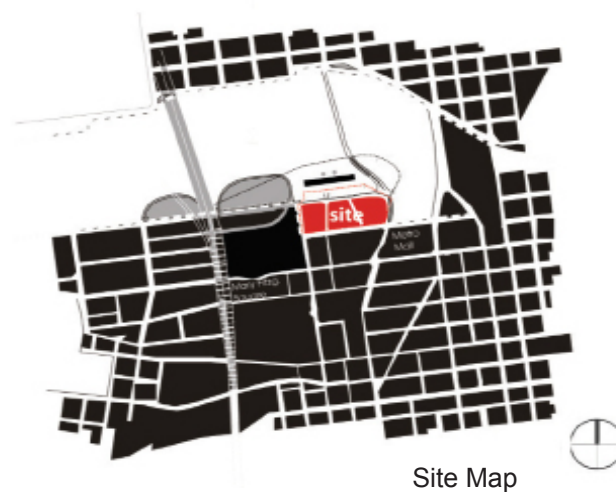
3.1.1 Background and site

The Brickfields social housing development, which was finished in 1995, formed part of the residential component of the Newtown redevelopment scheme in the inner city of Johannesburg. The project is owned and managed by the Johannesburg Housing Company (JHC), which was formed in 1995 to focus on the development of housing in the inner city, with the aim of bringing about urban renewal. It is also part of the Presidential Job Summit Programme, which, through key urban regeneration projects, promotes job creation in central Johannesburg.

The site is located in Newtown, Johannesburg, close to Nelson Mandela Bridge and the Metromall taxi rank. In the 1890s this area was occupied by the historic brickfields of Johannesburg.

3.1.2 Urban planning

Gapp Architects and Urban Designers developed the urban design framework for Brickfields. Roads already in existence split the 2.7 hectare site into three different precincts: Brickfields (on which 345 units were built), Legae (192 units) and Phumulani (178 units). The site has a 5m fall from the south-west corner down to the north-east corner. This could not be levelled because of the roads that feed traffic onto the Nelson Mandela Bridge. The urban design framework governed the layout of each precinct, and the architects adapted their design principles accordingly. The site was zoned as industrial 1, and could therefore be converted to residential use.



view of interior courtyard
(Damon-Chrysler award 2007: 61)



view looking over the brickfields precinct
(INTERNET. www.idacomputing.com)

3.1.3 The Brickfields project

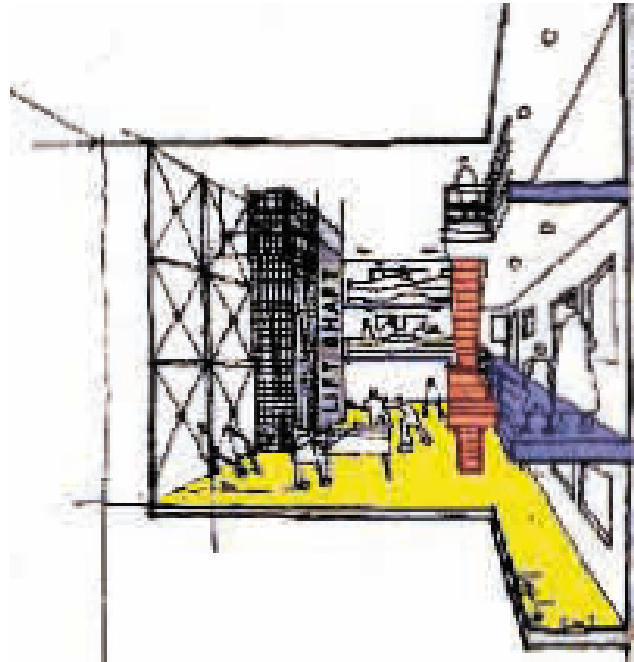
Each of the three precincts contains two nine-storey tower blocks (without basement parking) and three- to four-storey walk-ups. The original scheme envisaged building 14–15-storey tower blocks with basement parking, but this proposal was rejected by JHC on grounds of financial constraints.

The tower blocks are designed to divide up the core into double or triple-storey volumes by spanning the floor slab across the core, in this way reducing the wind tunnel effect. These floor slabs also provide open space outside the units on every third floor, providing areas in which children can play and adults can socialise. The development is mixed-use, as it contains retail and live/work units, and community facilities that include a crèche and a media room for the use of older children.

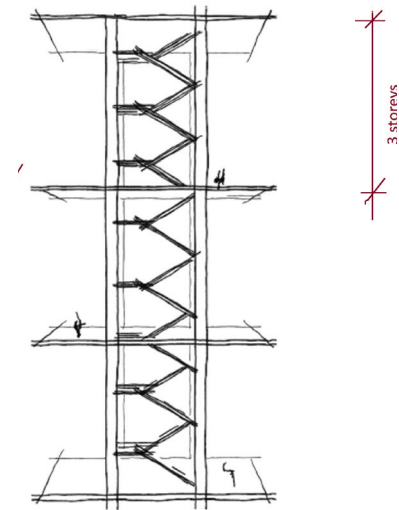
3.1.4 Units

All of the units in the housing project were designed to face both into interior courtyards and out onto the surrounding areas, to provide appropriate visual and physical links with the communal and the urban contexts.

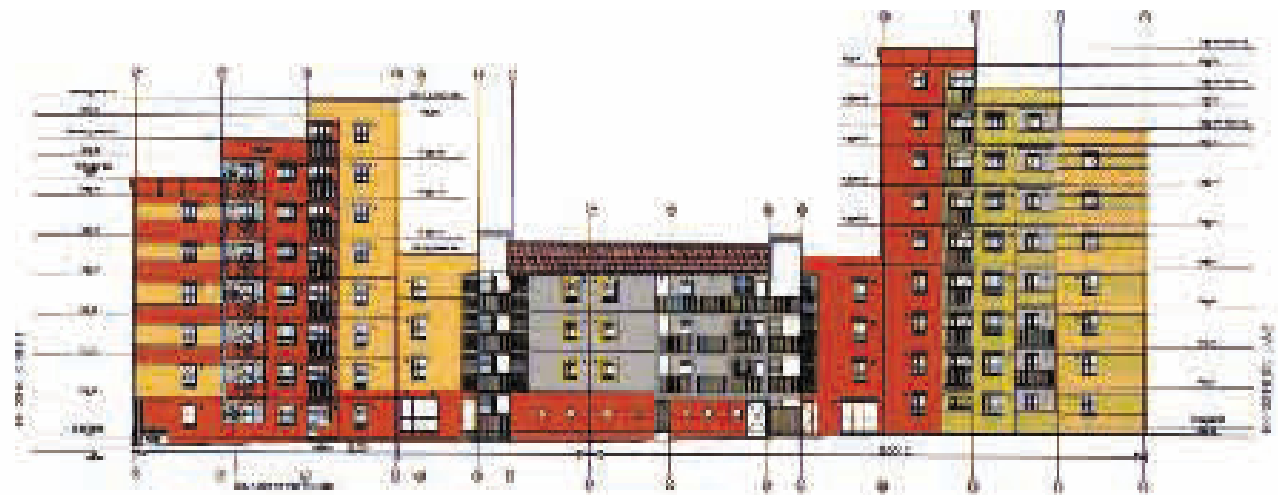
One-bedroom (35 sq m–45 sq m), two-bedroom (40 sq m–60 sq m) and three-bedroom (67 sq m–80 sq m) units are provided. Some include lofts (to make use of the roof space). Commercial units are also incorporated into the Brickfields precinct on the ground floor, along with some live/work combinations, which have a 20 sq m shop with roller shutters and grid gates along with a toilet, basin and sink unit at ground-floor level, and a two-bedroom living unit above. Most of the units have balconies. The architects provided variations in the façade by using a cottage pane glass door for the back door and a wooden door for the front.



View of triple volume in the tower block
(Existens Maximum 2008: 56)



The slab is extended over every three storeys
(Authors own)



South elevation of Legae precinct
(Leading Architecture and design
Journal 2006:76)

They also adopted certain design criteria for the units:

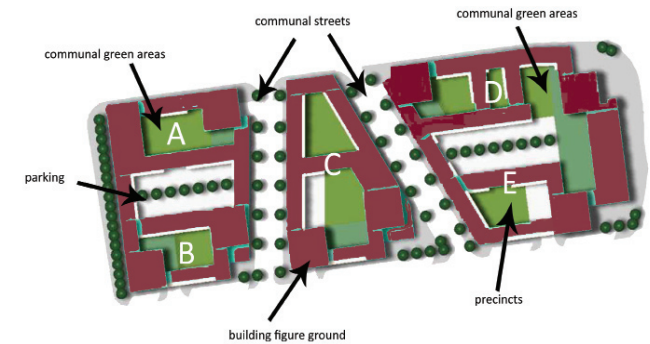
- A bath was installed instead of a shower, as it was considered more convenient for washing clothes as well as humans. However, provision was made to allow a shower facility to be installed in each unit later.
- A modular geyser system was provided to save on costs, to ensure easy access for maintenance, and to make installation uncomplicated.
- Sufficient plug, tv and plumbing points were provided to discourage the use of extension leads.
- All units were equipped with tiled finishes in the kitchen and bathroom areas and carpets in the living areas and bedrooms.
- A kitchen sink, worktop and double-door standing cupboard were provided in each unit.

3.1.5 Materials used

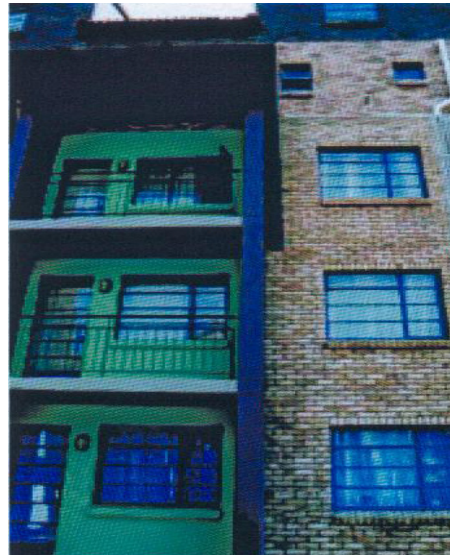
The materials used for Brickfields were selected with low maintenance and durability in mind. A mixture of different types of face brick and plaster and variously coloured paints were used in this scheme to provide visual character in the facades. The walkways were constructed cost-effectively out of concrete that had been wood-trowelled and brushed, without finishes. Steel staircases for easy assembly were used, and the first floor was enclosed to provide a storeroom and bin area. Cement fibre boards, cut to represent concrete blocks, were used to hide service pipes.



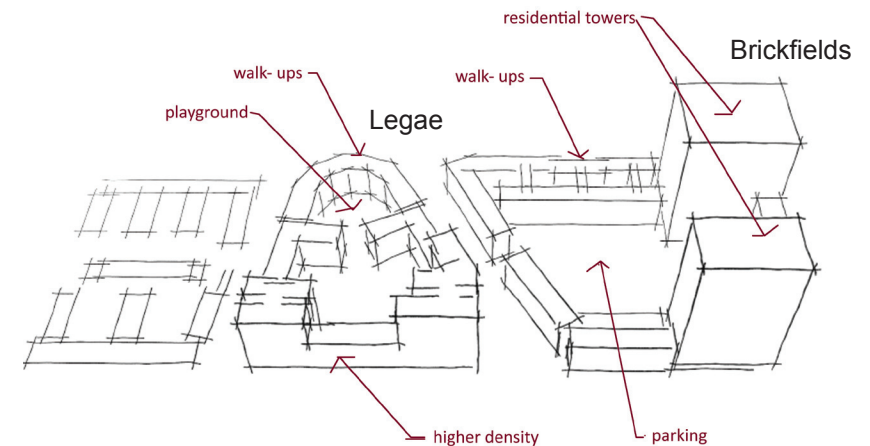
Legae precinct
(Shift project review series 2005 : Issue 6)



Site map showing the Brickfields housing project before basement parking was eliminated
(After Gapp Urban Design Framework 2003)



Plaster and brickwork
(Shift project review series 2005 : Issue 6)



Massing model of the brickfields and Legae precincts

3.1.6 Security

Because the scheme is located in the inner city, security was a major concern. There is one pedestrian and one vehicle entrance into each precinct. Access is controlled through the use of cards, which allow pedestrians to enter through turnstiles, and vehicles to be admitted through an electronic gate. Visitors to the precinct are issued with temporary cards, and the managers prevent subletting and overcrowding in units. Passive surveillance is a vital element of the design. Clear lines of sight have been established to create “eyes on the street”.

3.1.7 Amenities

Play areas are allocated for both younger and older children in each precinct. The site development also provides a meeting-room for elderly persons, and a crèche with a street-level entrance. The latter is also open to other residents in the area. Clothes-drying courtyards, secured by a metal gate, are to be found on each floor. Each of these is shared by six units. Every household is allotted one day in the week on which to hang up clothes in the yard. Each unit has a wheelie bin, which is stored under the stairs in the walkups, and on the same floor in the tower blocks. The bins are emptied into a refuse skip on site. This in turn is cleared once a week by the municipality.

3.1.8 Landscaping and communal areas

Shrubs and planted areas are provided between the residential blocks to soften the appearance of both the buildings and the open community areas. The four-storey walk-up units are grouped around open staircases, which divide the spaces between the buildings into smaller courtyards. This creates a degree of privacy between the main communal areas, which are the parking lot and the green central island. The smaller courtyards are shared between a limited set of units.

3.1.9 Parking

As it proved impracticable to supply basement parking for the scheme (as originally intended), all provision for parking has been located in the interior courtyards, where Savage and Dodd have allowed 0.4 parking bays per unit which may or may not prove to be enough over time. These encroach on the area allotted to open communal spaces.



External semi-private courtyard situated around 4 storey walk-up units
(Existens Maximum 2008: 58)



Open stairwell at Legae which gives visual links for the residents to their surroundings
(Existens Maximum 2008: 60)

3.2 Elengeni gardens. Savage and Dodd

Elengeni Gardens

Savage and Dodd Architects (1998)

Johannesburg. 313 du/ha

3.2.1 Background and site

The Elengeni housing project is owned by the JHC. The project occupies an entire city block that is bounded by Albert, Troye, Delvers and Frederick Streets, and is located within walking distance of the Johannesburg CBD. The surrounding buildings comprise a number of mixed-use facilities, including retail outlets, offices and schools.

3.2.2 Units

The scheme comprises 52 one-bedroom and 116 two-bedroom units, making a total of 168 apartments. The parking ratio is 1 parking bay per 3 units. The size of these residences ranges from between 35 to 50 sq m. The whole scheme is based on a 3.3 m grid.

3.2.3 The perimeter block

The building is a perimeter block development set back from the street, on the north side of the property. The entire scheme constitutes a continuous series of four-storey walk-ups arranged around the site. The units are entered by means of staircases located in the communal courtyard on the north side of the building, which faces Albert Street. The live/work units are located on Troye Street, which is a busier thoroughfare, to avoid congestion in pedestrian traffic in other parts of the block. The retail outlets located on this edge include two barber shops, three small grocery stores and two phone shops that offer copier and fax services.



Elengeni Gardens site map
(INTERNET. www.maps.google.com)



View of live/work units from Troye Street
(INTERNET. www.joburg.org.za)

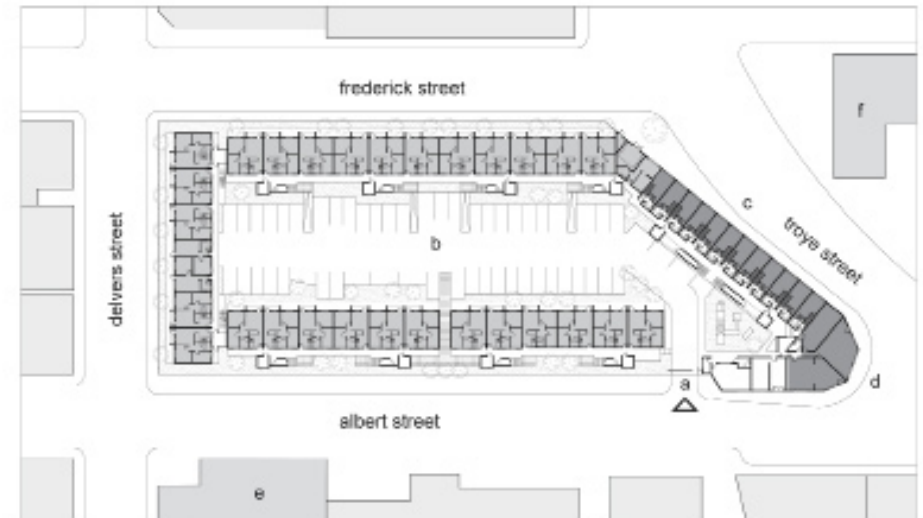
3.2.4 Parking and communal spaces

In this particular scheme, communal space is limited because the interior courtyard created by the perimeter block is used as a parking lot. This leaves little space in which the residents can gather. There is a playground for small children near the entrance to the property, but no provision has been made for children over six years old. This means that many of them play hazardously in the parking lot, at risk of being run over by the cars. Most residents complained of the lack of space in which to socialise and hold residents' meetings.

3.2.5 Materials

The building is constructed from structural brickwork, and finished in face brick in varying colours in order to break up the scale of the building. The sheltered walls are plastered and painted to provide visual variety. A porous airbrick screen is used to allow air to flow through the communal drying yard. Low-maintenance steel staircases and canopy structures are used for vertical circulation.

- a. single entrance point to 4.5 storey perimeter block on albert street
- b. central courtyard / parking
- c. commercial activity on troye street level (live /work units)
- d. single storey shops
- e. refuge for abused woman and children (former pass office)
- f. filling station



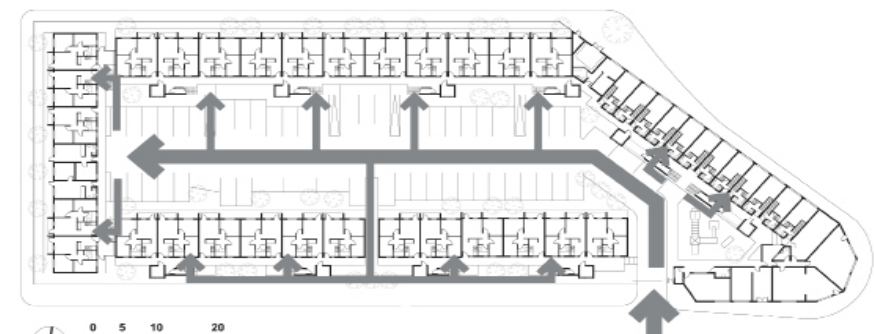
Elengeni housing project
(Existens Maximum 2008: 44)



Cross section showing vertical circulation
(Existens Maximum 2008: 48)



typical units on a 3.3m grid
(Existens Maximum 2008: 49)



Plan showing circulation
(Existens Maximum 2008: 48)

3.3 Joe Slovo Park. Lucien le Grange Architects (2005). Cape Town. 132 du/ha

3.3.1 Background and site

Joe Slovo Park is located on the south-eastern periphery of the oldest township in Cape Town, Langa, which was established in the 1920s as a location for people who could not be accommodated within Ndabeni (the area designated for Africans at the time). Under the Natives (Urban Areas) Act of 1923, these 'surplus persons', mainly from the Eastern Cape, were forcibly moved to the new township of Langa. More than 80 years later, this site has been identified by the City of Cape Town as a strategically-positioned area suitable for medium-density housing, as it is situated within the urban fabric of Cape Town, close to the amenities offered by the city. It lies north of the N2 gateway, and this development forms part of the bigger National N2 Gateway project, which aims to build 25 750 affordable housing units in total. In this way the initiators of the project hope to address the need for housing and development in informal settlements adjacent to the N2 highway (Shift Project Review Series 2006: Issue 3).

At present there are a variety of housing types to be seen in Langa. These include single-storey, freestanding formal housing, informal freestanding shacks, single-storey row housing and one- to four-storey hostels (Ewing, Mammon 2005:1).

The brief for Joe Slovo Park required that the framework plan for the site provided a vibrant medium-density residential development that also allowed for a mix of land uses within an integrated and thriving urban environment. The designers were also expected to provide well-designed public spaces and pedestrianised roads.



Courtyards between buildings
(Shift Project Review Series Issue 3: 2006)



Stairway to drying yard
(Shift Project Review Series Issue 3: 2006)

3.3.2 Planning

The quality of public space was an important consideration for the designers of Joe Slovo Park, because their aim was to achieve a high-quality urban environment that would promote a sense of community in the residents. The design elements included gathering points, community facilities, paths, pedestrian zones, trees and landscaping.

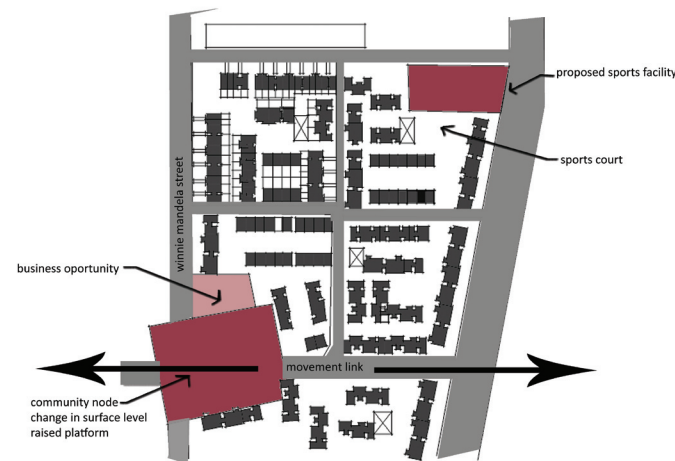
There are 705 rental units, comprising 54 bachelor, 333 one-bedroom and 218 two-bedroom units (providing an overall density of 132 units/hectare). Each of these has open-plan living, dining and kitchen areas, and a bathroom with a shower.

The units were designed around internal courtyards. Access to second-storey units was provided via staircases. The ground-floor units were designed with gardens separated by low walls, to allow for social interaction amongst the residents. The units were designed to form edges to the courtyards and communal areas, thereby defining them.

The roads were designed as social spaces in which residents could meet and children could play. A number of other public spaces were included in the scheme to encourage informal interaction. A crèche and a multipurpose sports hall were also provided.

The development is fully fenced, with an access gate manned by a security guard. Car parking was kept to a minimum, as the scheme was based on a pedestrianised environment. Road markings and kerbs were limited, to reduce the visual impact made by the parking spaces. Each block was given access to a courtyard with washing and drying areas. There are also free-standing drying yards enclosed by brickwork in the open spaces between the blocks.

Landscaping was provided by areas of grass and trees, which define the public spaces, and the courtyards were paved with compacted crushed brick and gravel.



Site plan showing community spatial structure
(After Mammon, Ewing 2005:7)



Blocks, internal courts and nodes
(Mammon, Ewing 2005:7)

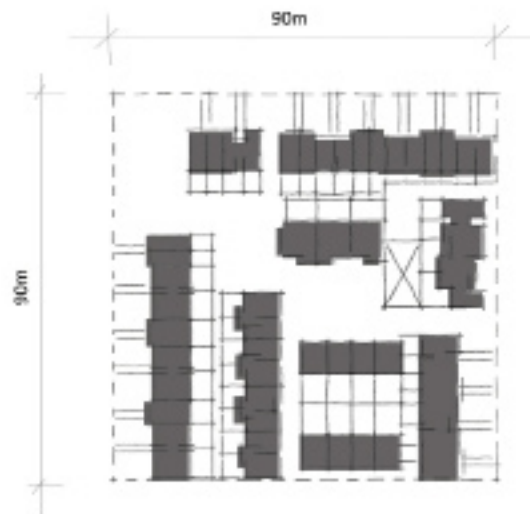
3.3.3 Materials

All materials selected were quick to assemble and easy to maintain. Standard cavity walls were built, bagged and painted in a variety of colours. Pre-cast elements were used in order to speed up construction, for example pre-cast hollow-core floor slabs and pre-cast concrete window and door frames. Metal sheets were used on the mono-pitched roofs.

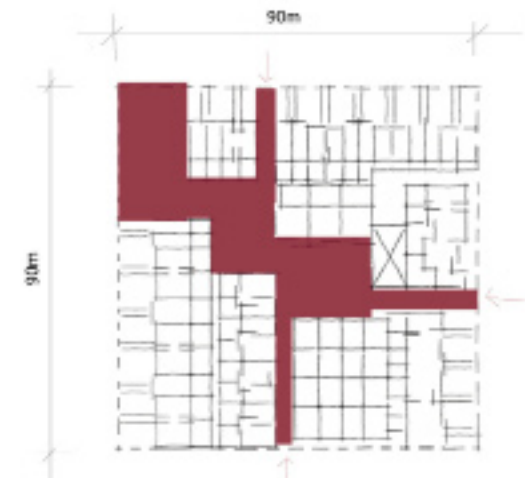
3.3.4 Urban blocks

The block dimensions were based roughly on a 90x90 m grid, which represents a comfortable walking distance between streets. The average density for the block is 129 units/hectare. Each internal court is adjacent to a community facility that is bounded by the residential blocks.

The urban design framework for Joe Slovo Park aims to achieve an integrated mixed-use urban environment, with emphasis on collective living spaces rather than on isolated residential dwellings.



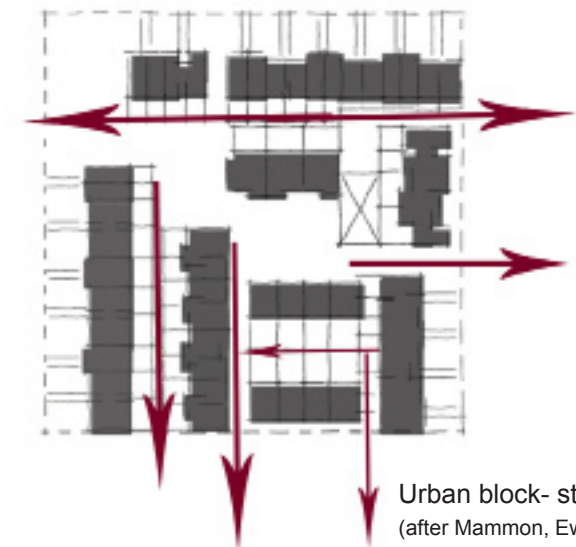
Urban block- built form
(after Mammon, Ewing 2005:7)



Urban block- courtyards
(after Mammon, Ewing 2005:7)



Urban block- density
(after Mammon, Ewing 2005:7)



Urban block- storm water
(after Mammon, Ewing 2005:7)



Hard Landscaping forms courtyards and squares.
(Shift Project Review Series Issue 3: 2006)



Roads for pedestrians are used as social spaces.
(Shift Project Review Series Issue 3: 2006)



Units look onto public spaces helping with passive surveillance
(Shift Project Review Series Issue 3: 2006)



Grass and trees add greenery between the blocks
(Shift Project Review Series Issue 3: 2006)

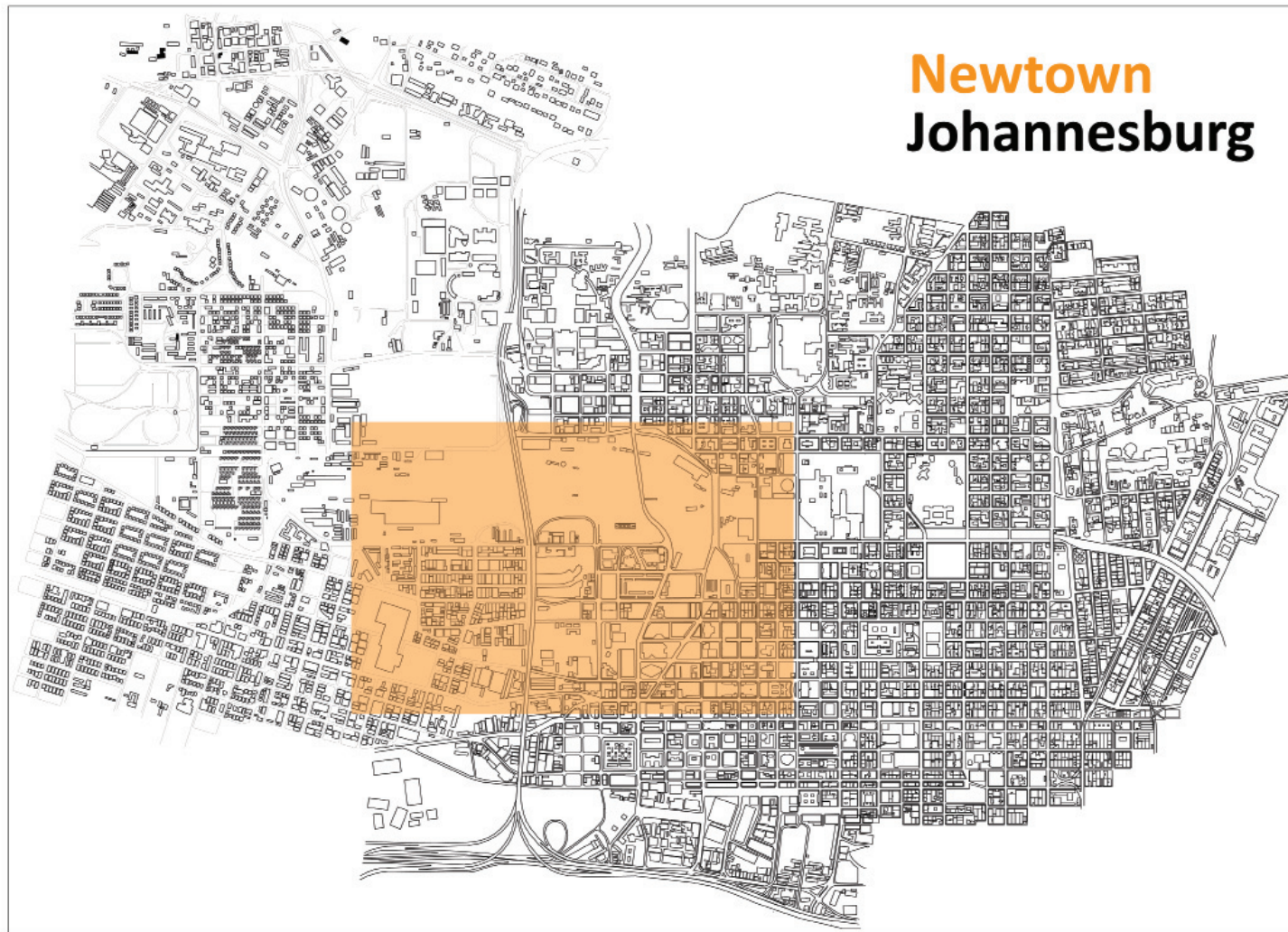


NEWTOWN HOUSING



CHAPTER 4
SITE CHOSEN FOR MY THESIS
NEWTOWN JOHANNESBURG





Map of Johannesburg highlighting Newtown



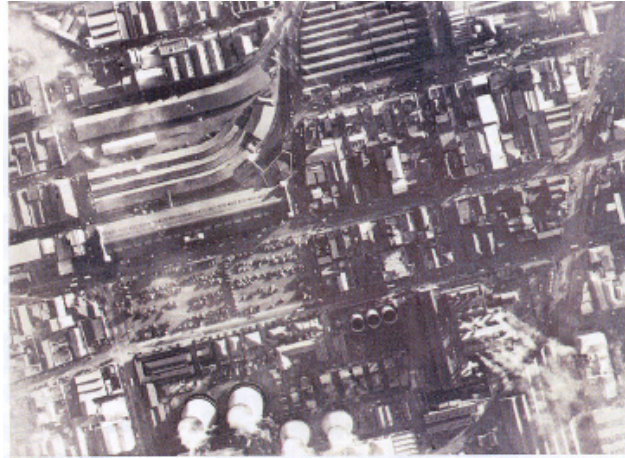
Newtown, Johannesburg

4.1 Historical background

Newtown is located in the western sector of the Johannesburg city centre, and covers an area that stretches from the marshalling yards and railway lines to the north, the M2 motor-way in the south, West Street in the east and Quinn Street in the west.

At the turn of the 19/20th century, the Newtown precinct was originally known as the Brickfields. The area was home to a racially mixed working-class population of approximately 7 000 residents. Bricks were manufactured there, using the abundance of clay-rich soil to be found in the area. In the late 1890s, the brickworks were closed down to make way for the Kazerne Marshalling Yard, which was the first of its kind in Johannesburg. Until early 1904 the area remained working-class and with a mix of racial groups that included Africans and Indians. When bubonic plague broke out in the area, the members of these two race groups were compelled to move out by the Johannesburg City Council, in one of the first forced removals to take place in Gauteng (Beavon 2004: 77). The African residents were relocated to Klipspruit, and the Indian residents to Pageview. The area was declared insanitary, and Brickfields was burnt to the ground.

The Johannesburg City Council then bought back the land. By October 1904 the Council had had it surveyed and re-planned, and had renamed the area Newtown. The precinct was reinvented as a hub for agricultural trade by the introduction of a fresh produce market, an abattoir and a mill. A new power station, which became one of Johannesburg's main sources of power, was also built there. Newtown continued to house a number of working-class residents, and was the site of two major worker protests, the 1911 Tramway Strike and the 1918 Wage Campaign. In the 1930s, the open area in front of the market was named after Mary Fitzgerald,



Ariel photo of Newtown 1956
(Brink 1994: 25)



Ariel photo of Newtown 2002
(The Johannesburg Council 2002)



View over Newtown bridge
(INTERNET. www.joburg.org.za)

who was known as a fierce labour activist, and who had been Johannesburg's deputy mayor in the 1920s.

The 1970s saw another drastic change in Newtown. The market and the power station were moved to other premises. The cooling towers of the defunct power station, an iconic landmark on the Johannesburg horizon, were declared structurally unsound and imploded in 1985. The eastern part of the market building became the Market Theatre, and the Africana Museum was given permission to use the main fruit hall of the old market. However, these new developments were not enough to prevent the area from becoming run-down and derelict.



Turbine Hall. Newtown, Johannesburg



Museum Africa
(INTERNET. www.1.southafrica.net)



Old industrial building. Newtown, Johannesburg



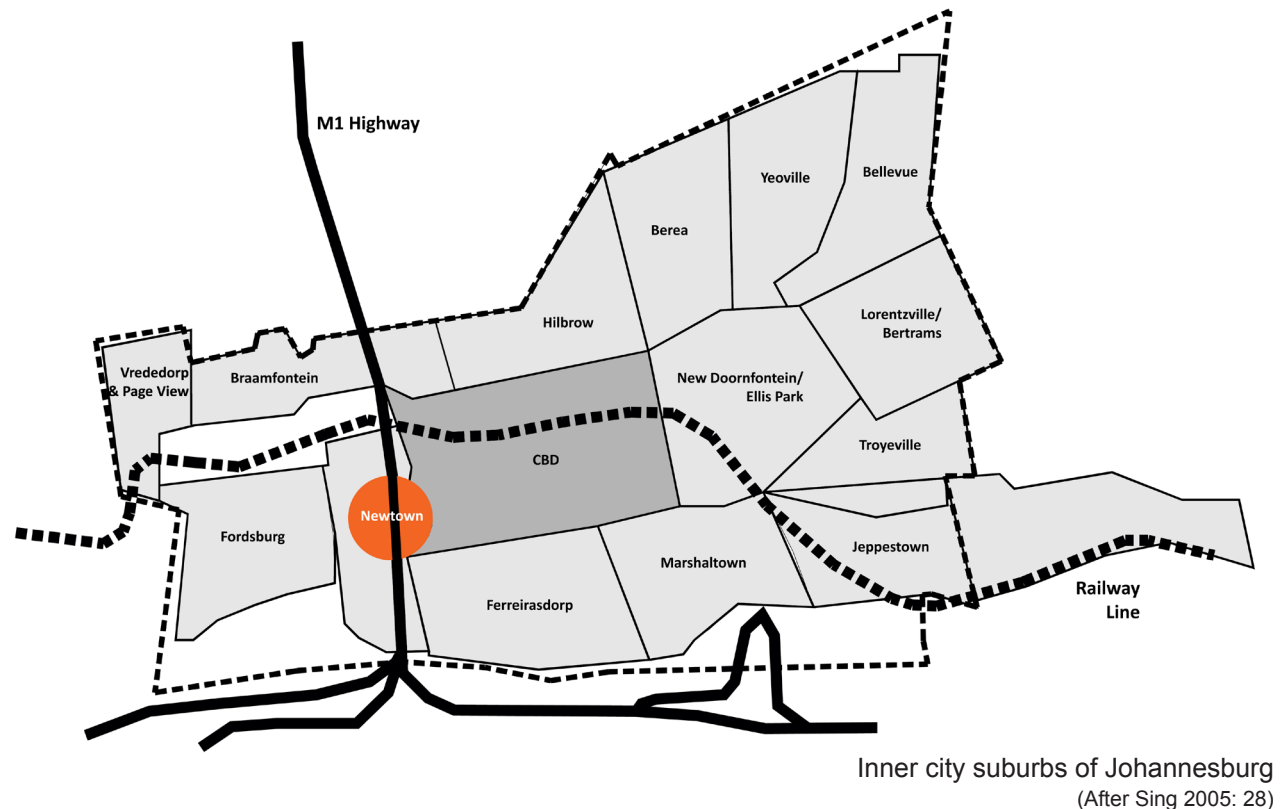
Mary Fitzgerald Square
(INTERNET. www.joburg.org.za)

4.2 Why I have chosen Newtown for my project site

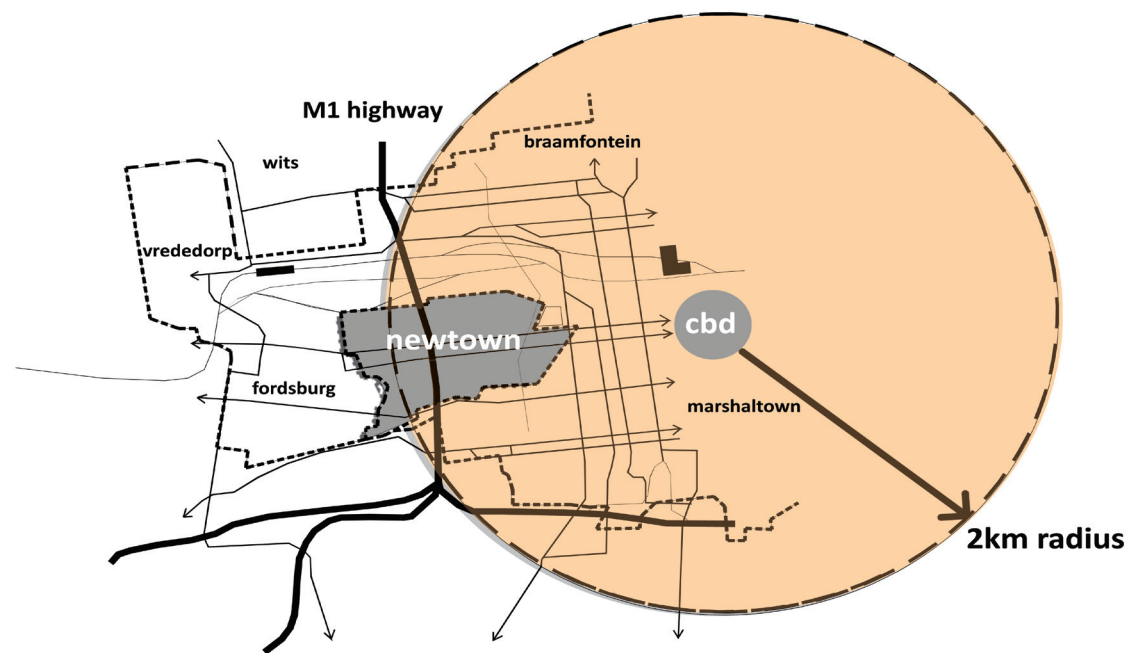
Newtown is currently undergoing a process of urban regeneration. A partnership has been formed between a Gauteng agency, Blue IQ, the Johannesburg City Council and the Johannesburg Development Agency (JDA), to transform Newtown into a more attractive place in which to live, work and visit (see www.jda.co.za/newtown/index.stm). The aim of the partnership is to re-launch Newtown as a mixed-use area. Because it already has many cultural facilities (several theatres, the museum and a jazz club), the area has a unique feel, and is a magnet for artists, musicians and actors. The inner-city regeneration project aims to make Newtown even more attractive. Another positive factor is that the opening of the Nelson Mandela Bridge in 2003 has made the area more accessible to visitors. The bridge has been hailed as “the new gateway to the North”.

4.3 How will a housing project be relevant to Newtown?

Newtown is being remodelled into a vibrant mixed-use area. As already argued in this thesis, housing plays a vital role in creating a mixed-use urban neighbourhood. Another good reason for suggesting a housing component is that Newtown has a pivotal location near the city's centre, where there are many sources of employment. In the words of Neil Fraser, an expert on urban renewal and the executive director of the Central Johannesburg Partnership, “If you're hoping to have a 24/7 city, you have to have residential property. But you have to have a blend of residential accommodation that brings in your lower income areas with your high income.” He adds, “What's important is to have people who have income that they spend in the area. That will bring the supermarkets, the cafés, the restaurants and all the other things that are important. You need that disposable income to be able to do that.”

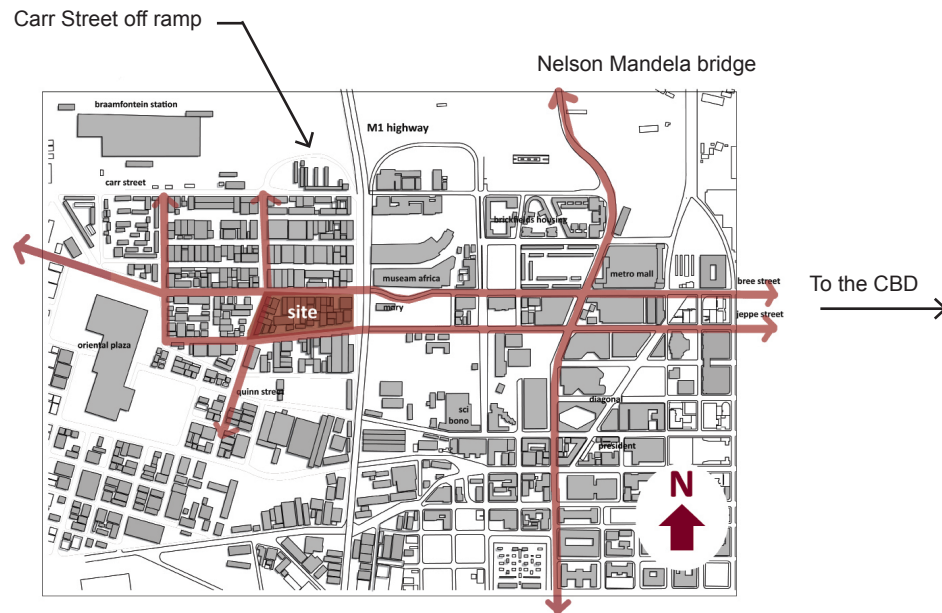


The idea is that if people can be induced to live in the city, the centre doesn't 'die' at night. Thousands of people move through Johannesburg every day, but at present the city's vibrancy can be felt only by daylight. At night a few places like 24-hour food outlets and clubs are open for business, but for the most part the city is deserted. If there were more residents in the inner city, they would create a demand for services and entertainment that will begin to realise the 24-hour city ideal.

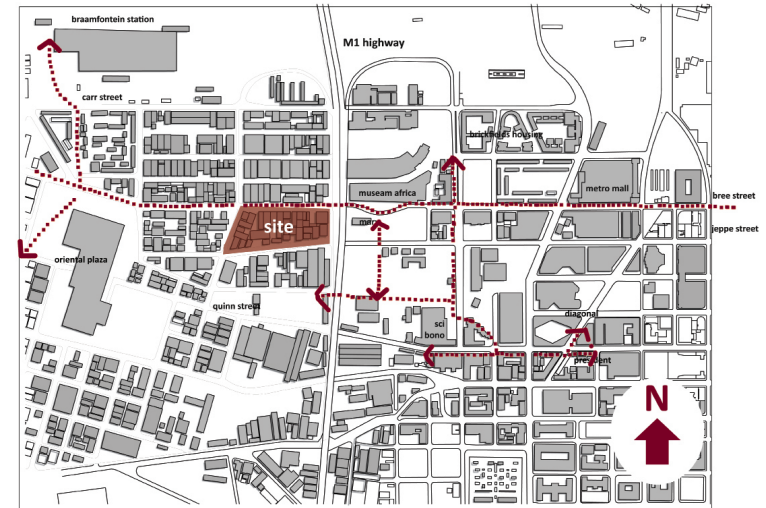


Proximity to the CBD of Johannesburg

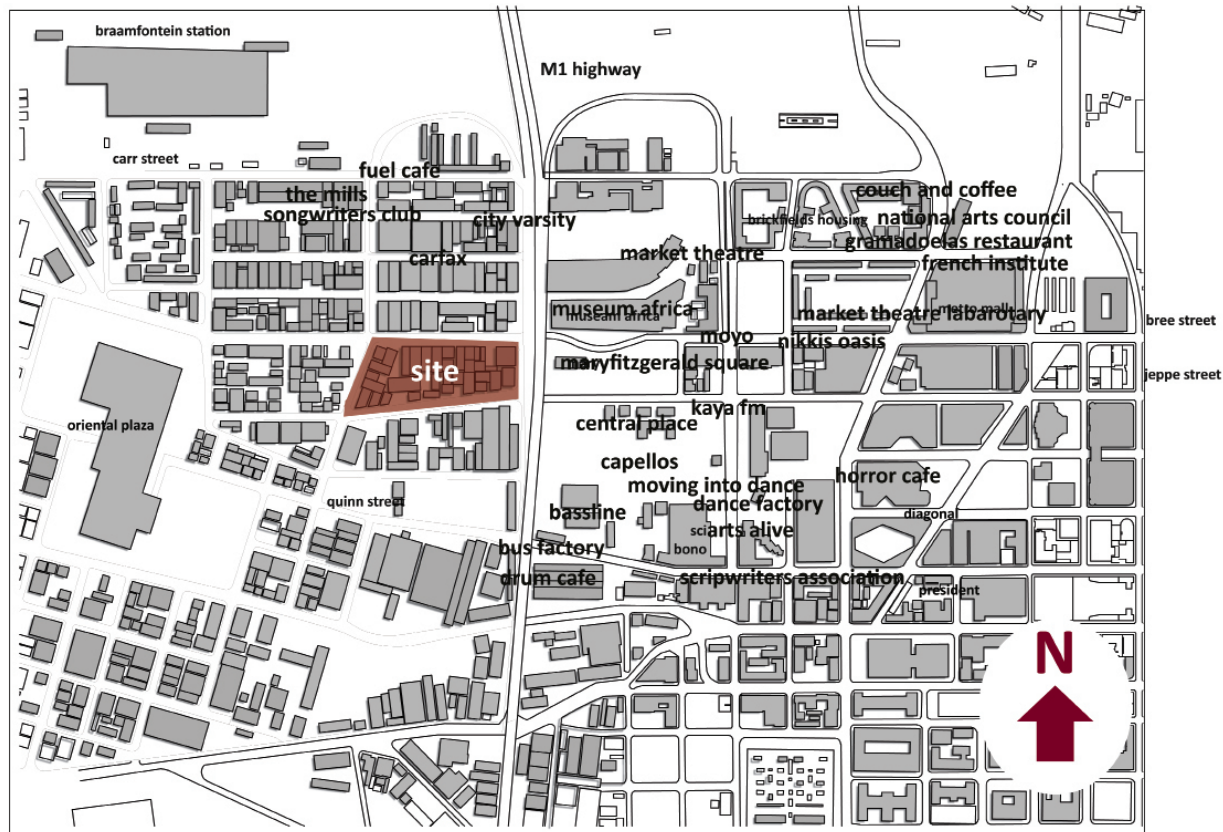
4.4) Mapping



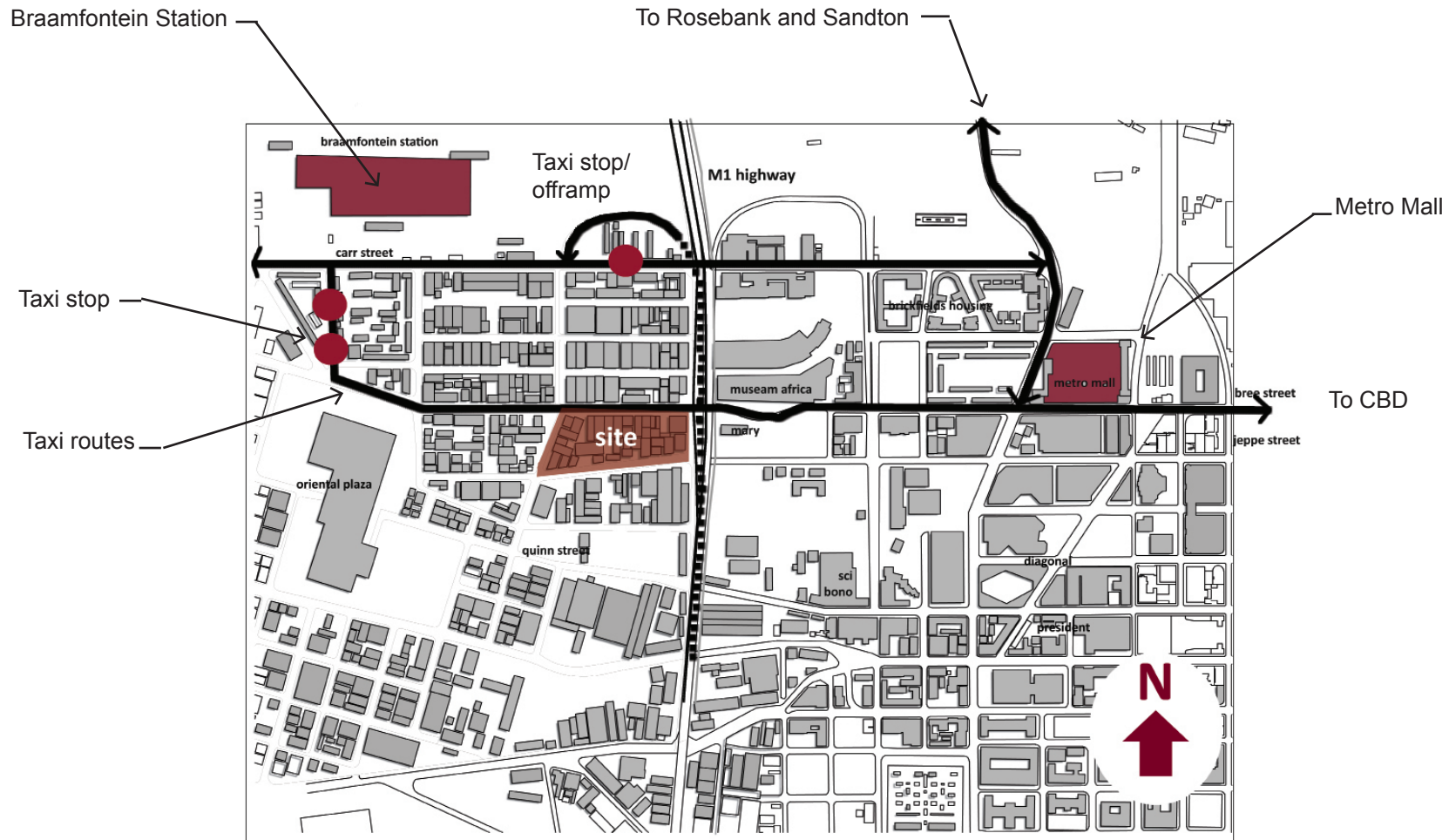
4.4.1 main vehicular routes



4.4.2 pedestrian routes

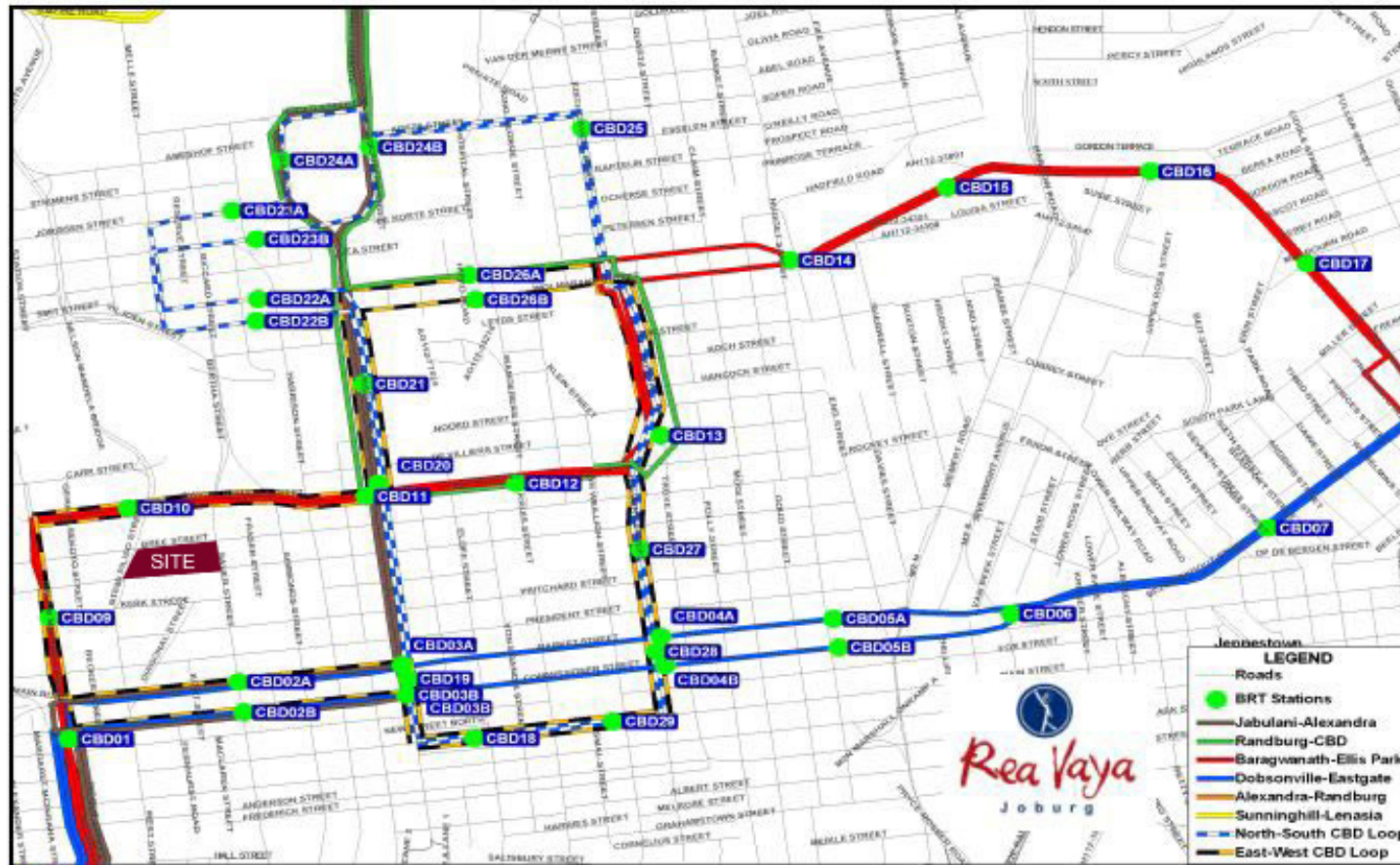


4.4.3 Social amenities



4.4.4 Public transport
Taxis, stations

Phase 1 Inner City routes



13

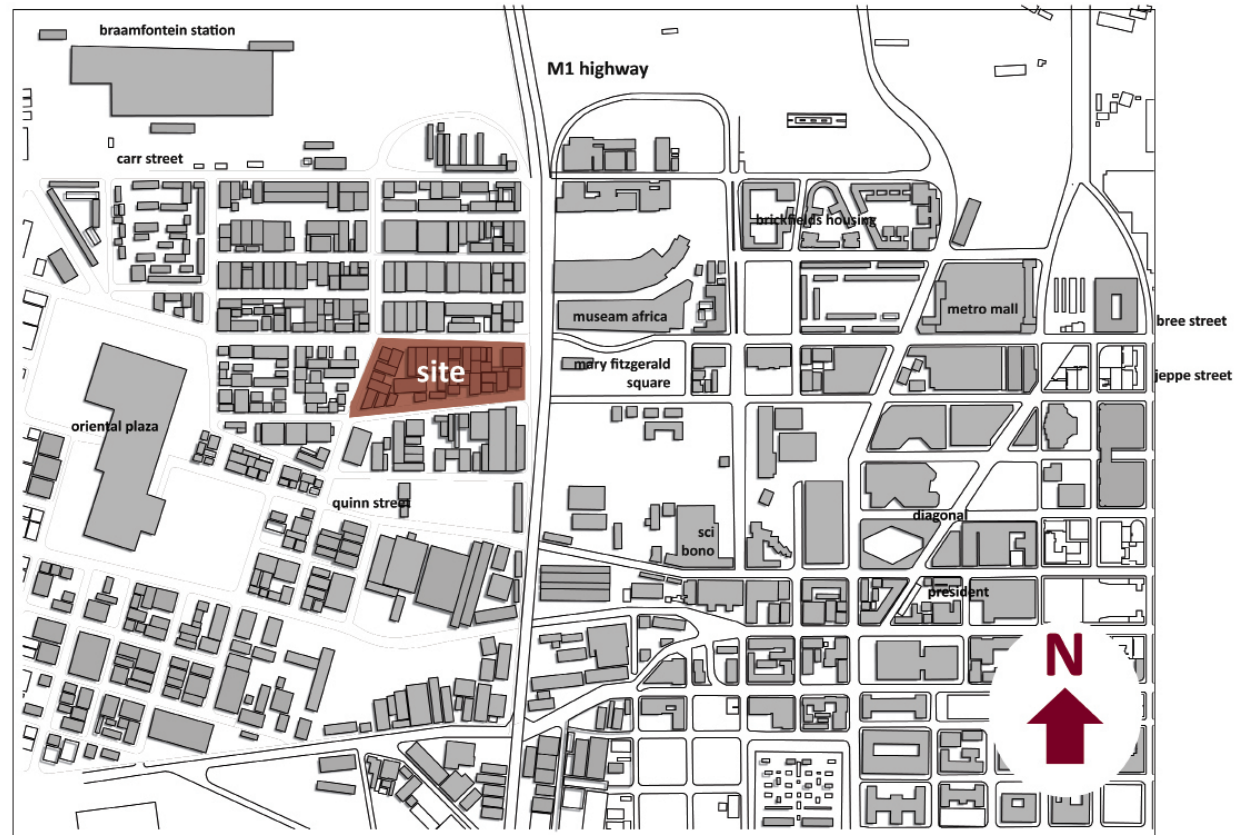
4.4.4 Public transport
BRT
(Rea Veya 2008: 1)

4.5 The project site

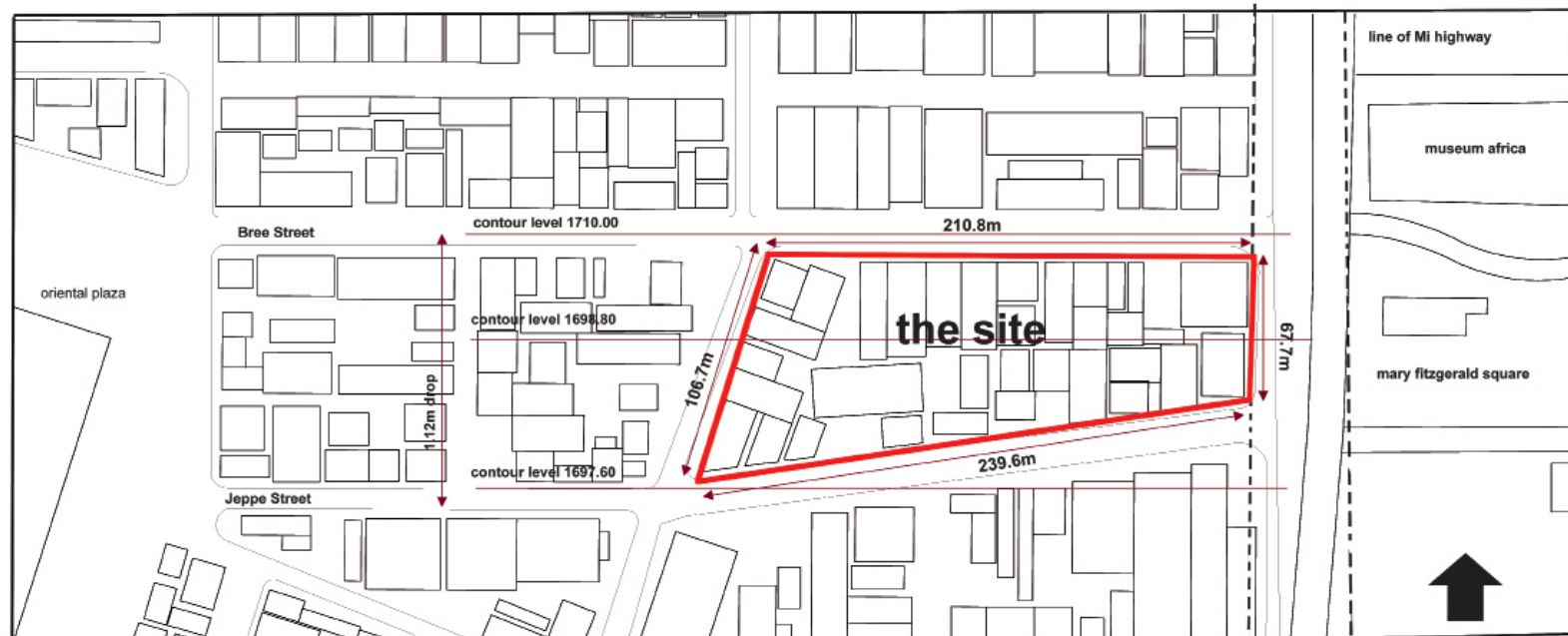
The 1.6 hectare site I have chosen is located to the west of Mary Fitzgerald Square and the M1 highway and to the east of the Oriental Plaza. It is a city block bounded by Bree Street to the north, Jeppe Street to the south, Quinn Street to the west and Goch Street to the east.

This particular site clearly demonstrates two very different street edge conditions on the two main streets, Bree and Jeppe. Bree Street is a very busy thoroughfare, and boasts a number of commercial enterprises. Some of the buildings are sheds with facades tacked onto them. I am proposing to take down the sheds and replace them. Jeppe Street is a very quiet road, and presents very poor street edge conditions. Most of the buildings are run down and derelict. I feel that by reintroducing this edge as residential, I can forge a strong link between the Oriental Plaza and Mary Fitzgerald Square on the ground floor level. This Square also provides a public space near the proposed scheme that can be used by the residents of the development I envisage.

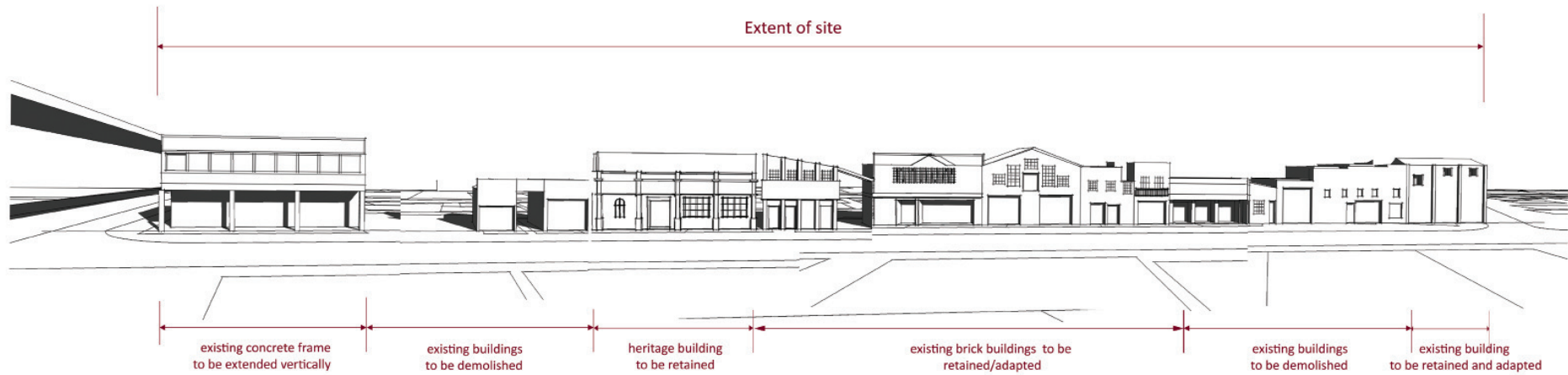
I am using the site to demonstrate how a mixed-use perimeter block scheme, most of which is devoted to housing, can add value to this area. The scheme is based on principles concerned with ways of dealing with different street edge conditions. It is also intended to provide housing for a mixed-income group to ensure diversity and promote community living in the inner city.



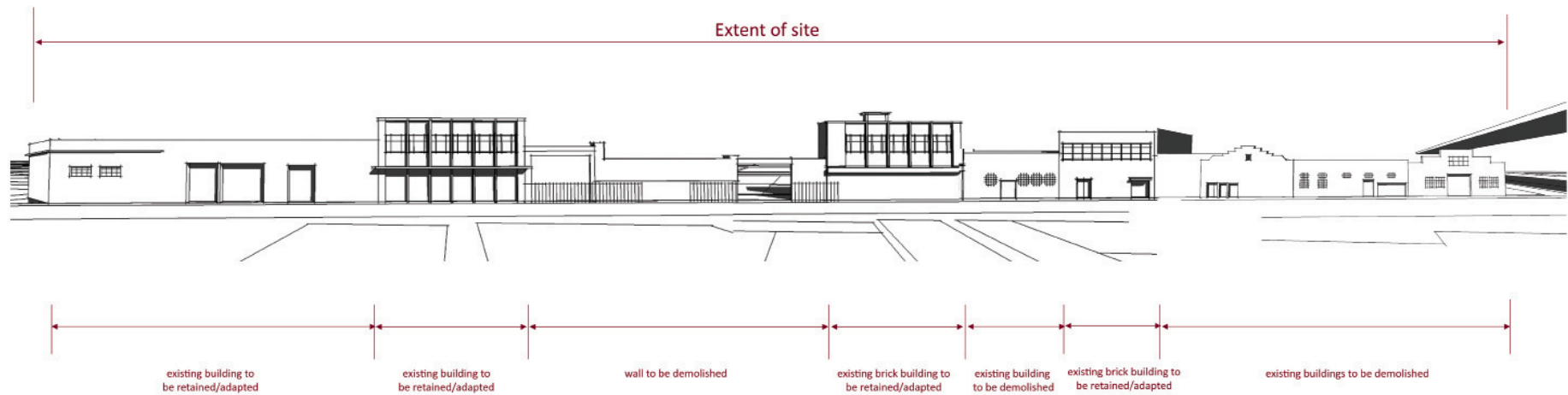
Site Map



Site map showing contours and size of the block



Existing buildings on Bree Street



Existing buildings on Jeppe Street

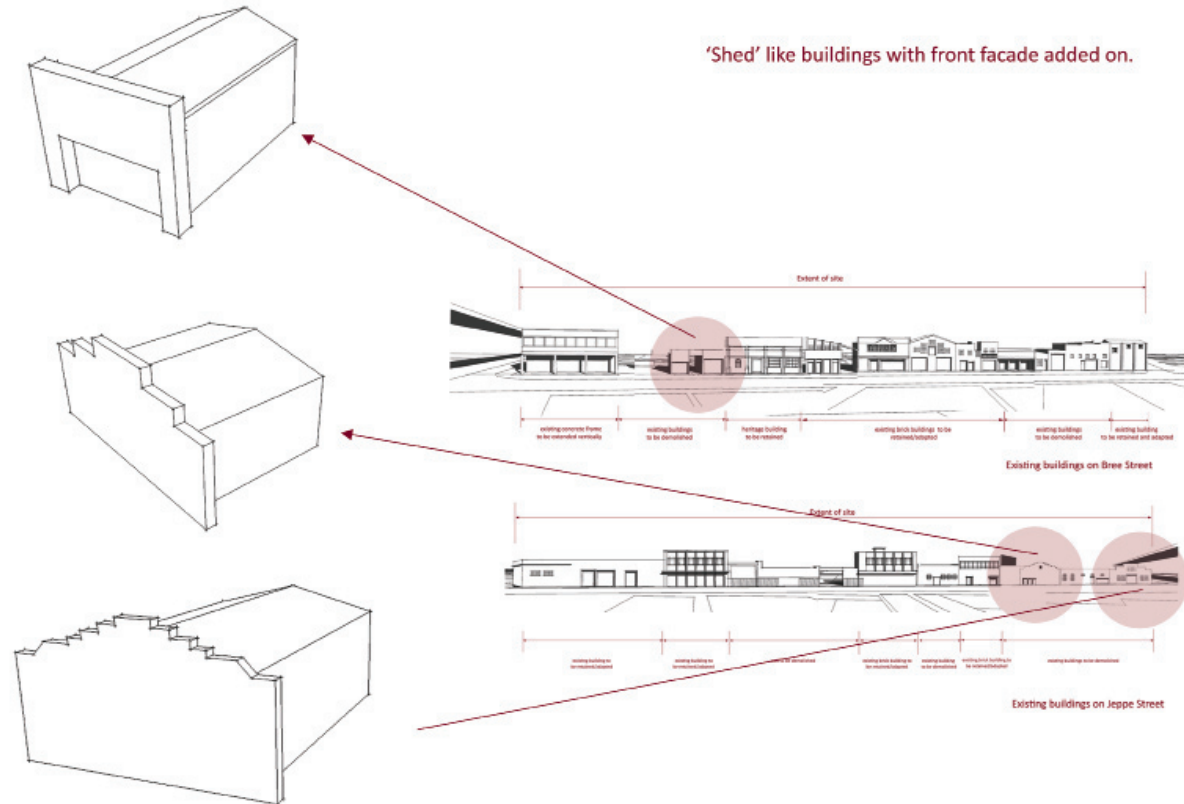
4.5.1 Existing buildings on the site

The block I have chosen to develop as my site already has some buildings of various conditions situated on it.

I have done an analysis of the existing buildings on the site and have decided to retain some buildings as they are still in relatively good shape.

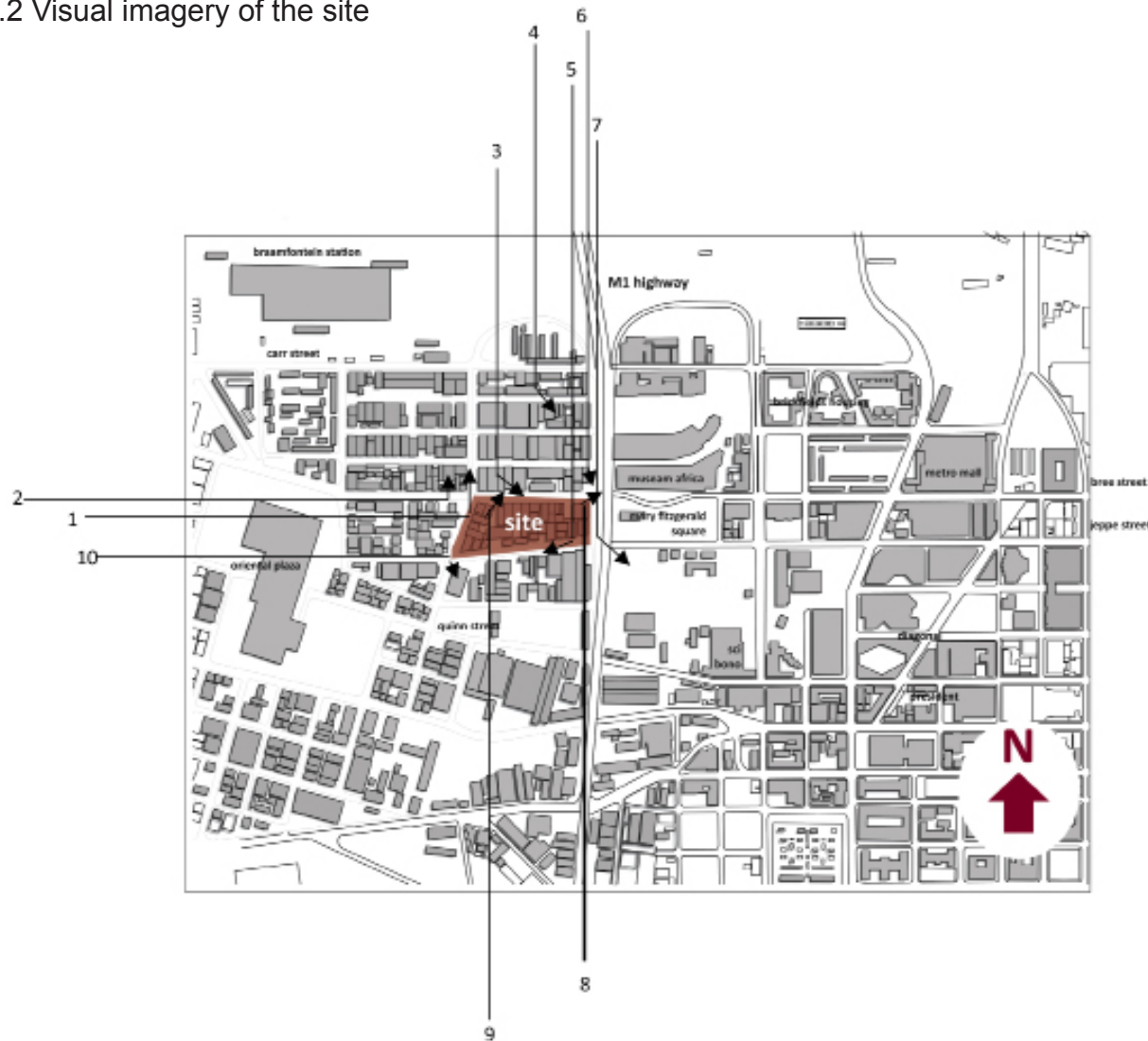
Some of the buildings are derelict and don't show any positive street edge conditions at this pivotal location next to Mary Fitzgerald Square and near to the Oriental plaza.

Some 'shed' like buildings with facades tacked on are to be taken down and replaced.



Some of the existing buildings on the site which are to be taken down

4.5.2 Visual imagery of the site



1) Industrial conversions underway on Bree Street



2) View looking North towards a medium rise residential block



3) View looking down down my site from Bree Street



4) Industrial warehouses which have been converted into a nightclub



7) View looking under the highway towards Turbine Hall



8) View from the corner of Bree and Quinn



5) View looking down my site from Jeppe Street



5) View from the corner of Jeppe and Goch



Urban graffiti



6) View looking South under the highway



7) Industrial units on Bree street

4.5.3 Existing housing in the area

Newtown already has various kinds of housing. These consist of courtyard blocks (image 2), single-storey houses (image 3), double-storey houses (image 4), three-storey walk-ups (image 6) and gated housing developments (image 7). The latter development illustrates a poor street interface, having residential units situated at ground level, as shown in image 7.

The busier streets towards Fordsburg demonstrate a good street interface, having commercial outlets situated on ground floor and residential units on the upper floors with a colonnade (image 4). It is character of this kind that I propose to incorporate into my scheme.

Most of the houses in the area are situated towards the Fordsburg side of Newtown, where a thriving Indian community is settled.

The scheme I am proposing aims to create a housing development that is integrated into the existing built environment of the area. This will help to promote a sense of community both in the area and in the new housing precincts. As most amenities, for example crèches, are located near the Fordsburg side, I intend to incorporate more facilities of the same kind into my scheme. The site is also close to various cultural amenities, restaurants and clubs. All of these will benefit from having a local urban community that supports them.



Image 4 :good street interface with commercial ground floor and flats above



Image5
single storey house



Image 6
four storey walk up
commercial ground



Image 7
poor street interface



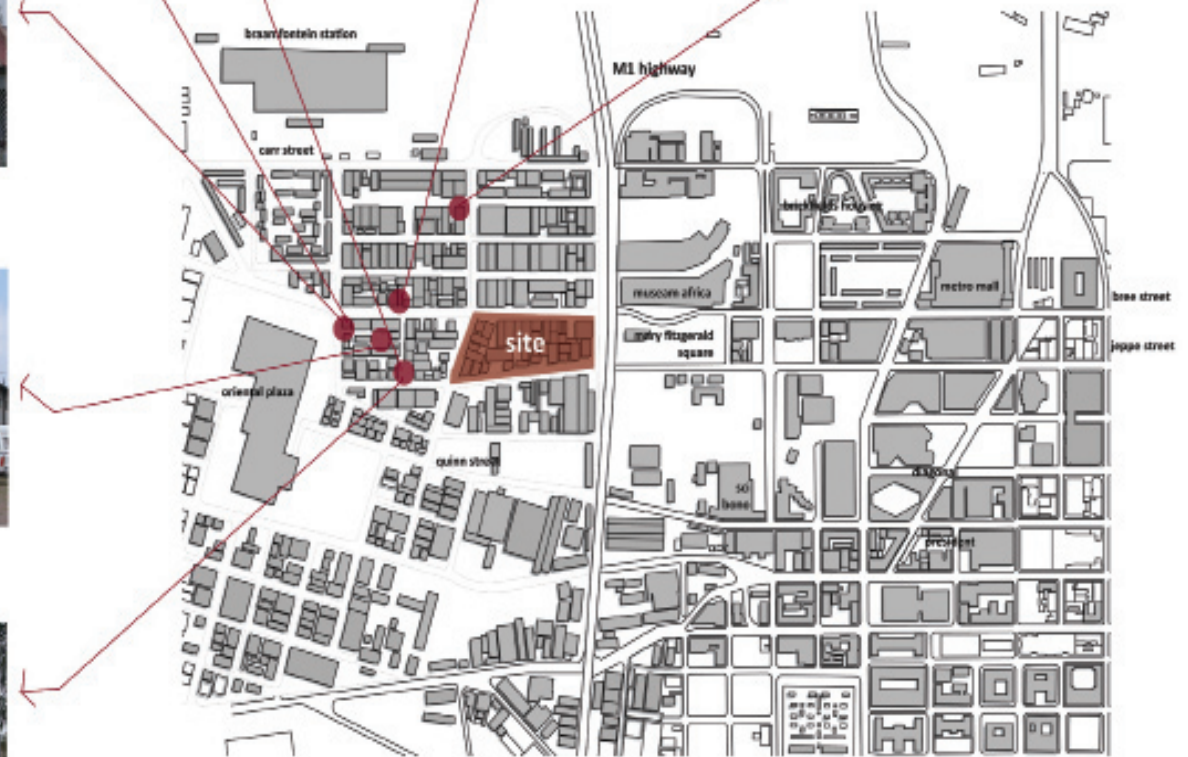
Image 3 variation in
scale



Image 2 courtyard block



image 1
residential units on
ground floor



Location of some of the existing housing in the area





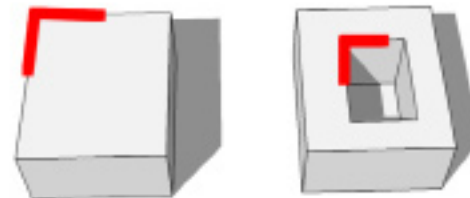


Main design principles

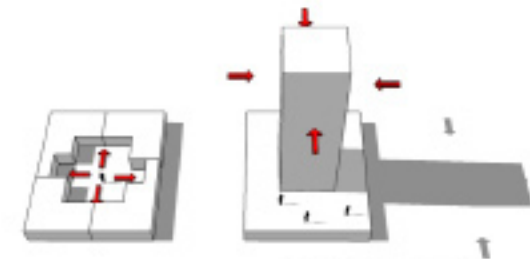
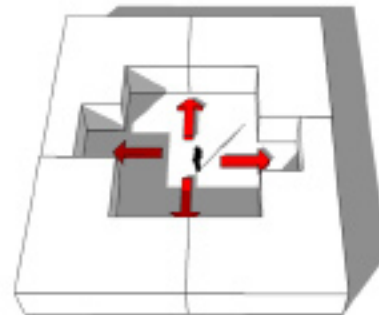
5.1. Perimeter/courtyard block development vs pavilion block development

When choosing the form the development was to take, I looked at two models, the pavilion 'stand-alone' building and the perimeter block. Stand-alone pavilion buildings tend to result in poor street definition, unused space, and large areas both of blank wall and of parking. In the perimeter block model, buildings front onto the street, and thus are able to define it in a dynamic way.

The most fundamental requirement in structuring the form of block developments is to make a clear distinction between public fronts and private backs. It is this consideration that led me to choose a perimeter block as the form best suited to my purpose.



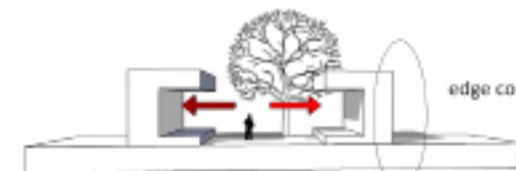
*3-d inversed
corner takes you in and makes space*



space vs object



sculptural object



edge condition

person being celebrated

Study of pavilion buildings vs courtyard buildings

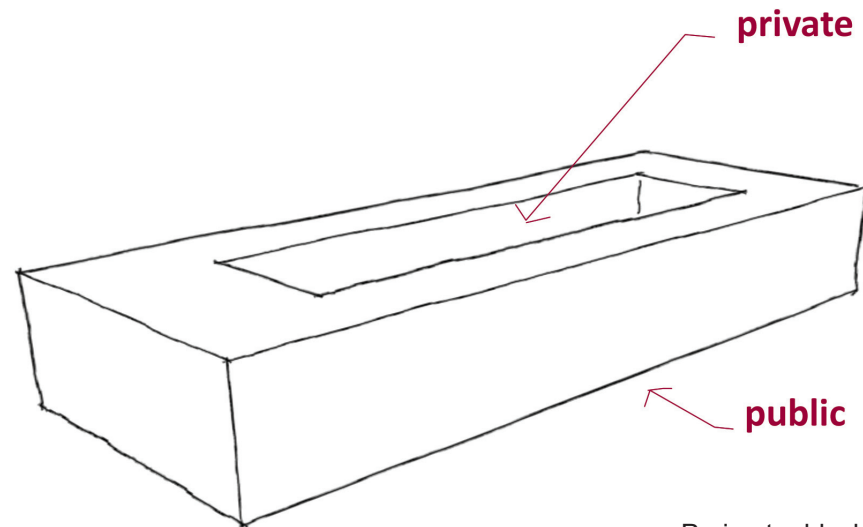
5.2 The perimeter block

The perimeter block

- is a type of city block
- is built up on all sides
- allows for a hierarchy of public-to-private spaces
- provides active street frontages
- allows for high densities without the need for highrises.

The main principles governing the design of a perimeter block lay down that the architect should give preference to:

- common building lines
- continuous frontages
- good enclosure
- frequently-placed openings for doors and windows
- clear distinctions between public and private spaces.



Perimeter block model

5.3 Individuality and variety at the interface between building and street

The number and composition of elements in the facade of the buildings provide richness and visual interest to the pedestrian in the public realm.

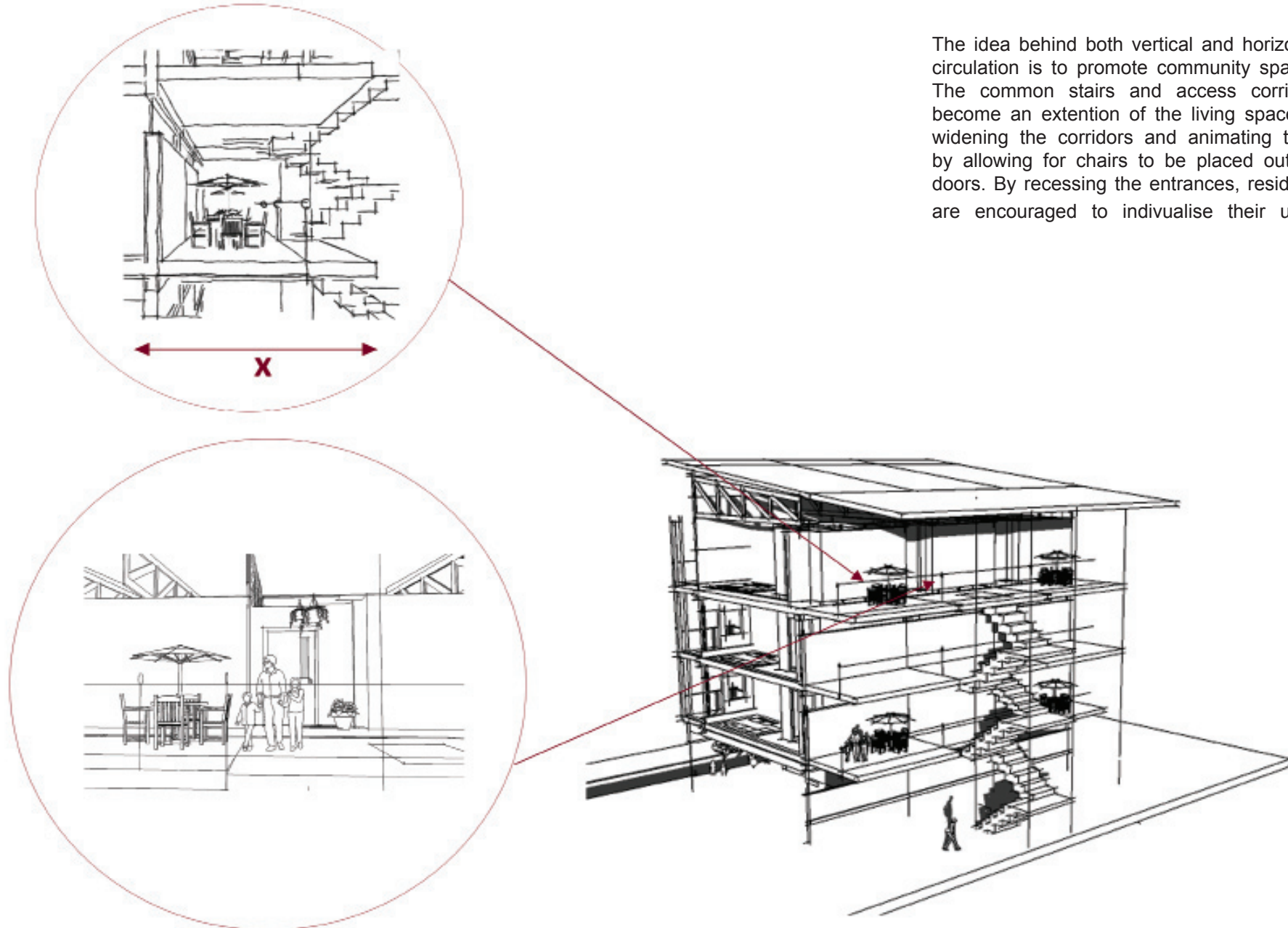
The scale of the buildings should be considered not only in relation to the pedestrian but to the surrounding urban context. By allowing for residents to personalise the facades of their units, the architect can encourage them to develop a sense of ownership and pride.



Building/ street interface
individuality within an urban structure
(after Dewar, Uytenbogaardt et al: 200)

5.4 Vertical Circulation.

The idea behind both vertical and horizontal circulation is to promote community spaces. The common stairs and access corridors become an extension of the living space by widening the corridors and animating them by allowing for chairs to be placed outside doors. By recessing the entrances, residents are encouraged to individualise their units.



5.5 Architectural guidelines



red brick and earth colors



industrial aesthetic



continuous street frontage
England



human scale buildings



retain the character in the area
roofs should be treated as a facade



individual character of each building within a continuous facade
Dublin



passive surveillance



enclosure of the sidewalk should be of human scale using colonnades, canopies

Greenwich Village



buildings should fit in with the surrounding scale of buildings



buildings engage with the adjoining public environment

Greenwich Village



Colonnades



ground floor commercial with flats above



creation of semi-private courtyards



car parking should not dominate the scheme



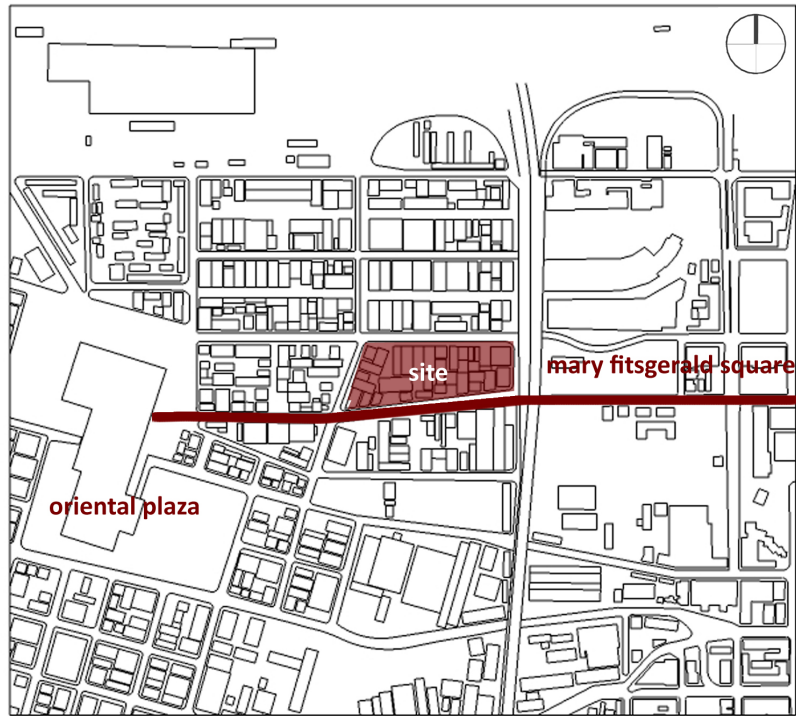
celebrate entrances



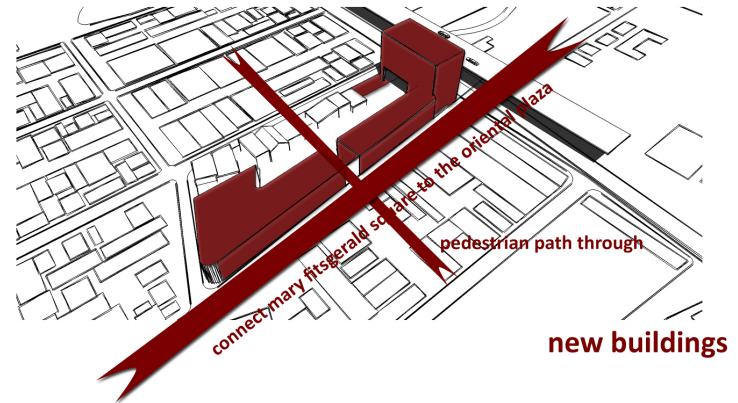
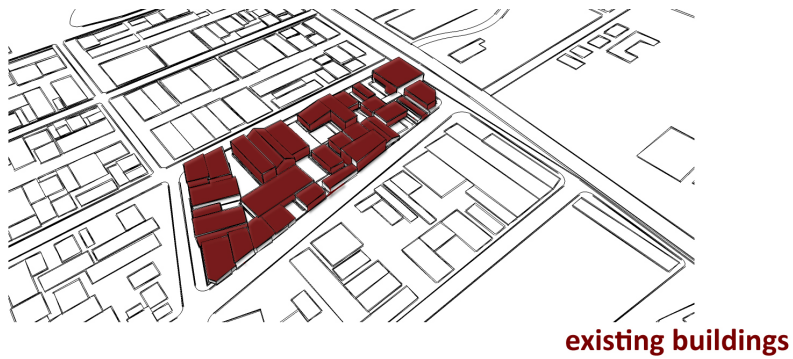
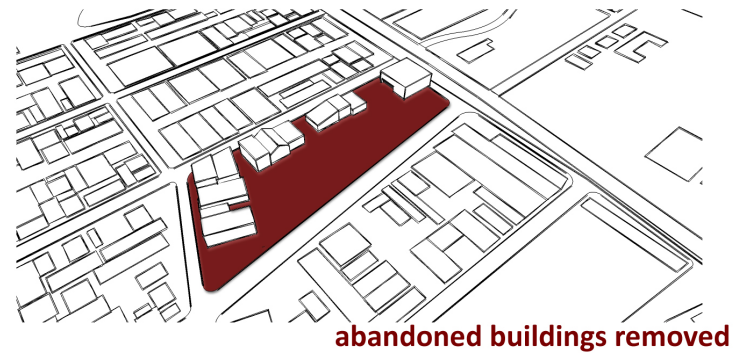
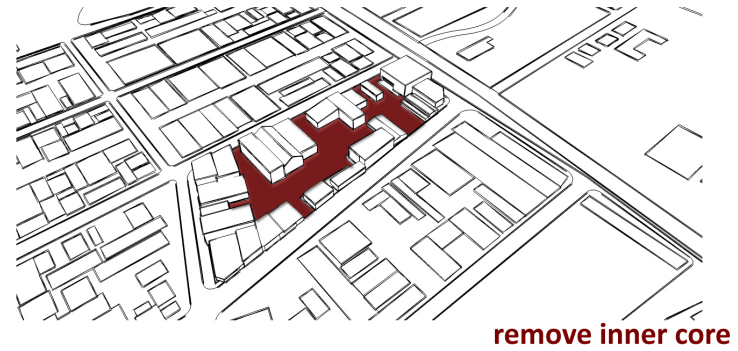
give corner buildings particular attention



6.1. Overall concept for the scheme

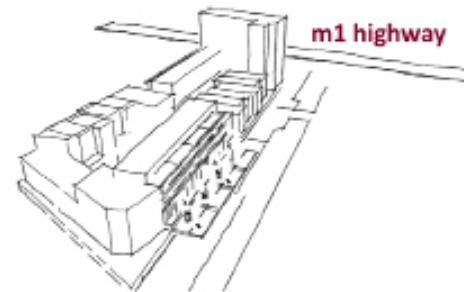


site plan

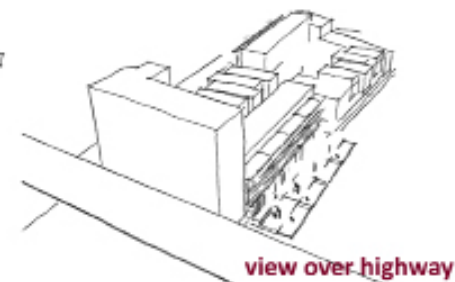




site plan



m1 highway



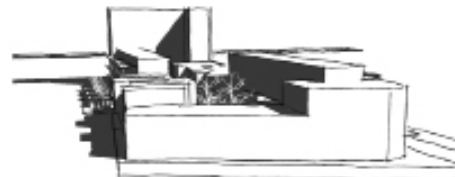
view over highway

medium density residential block

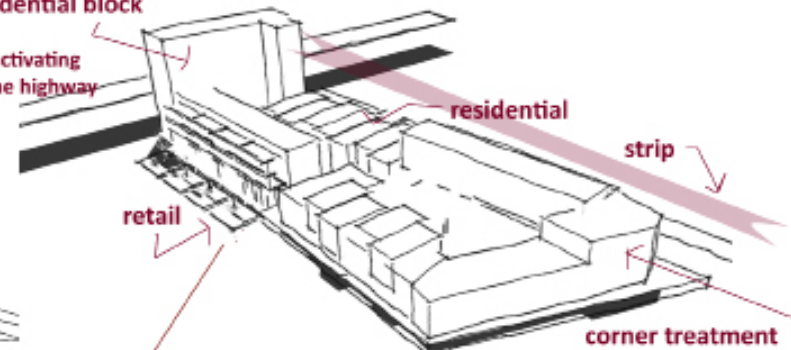
Issues:
noise, pollution, activating
the road beneath the highway



roof plan



west elevation

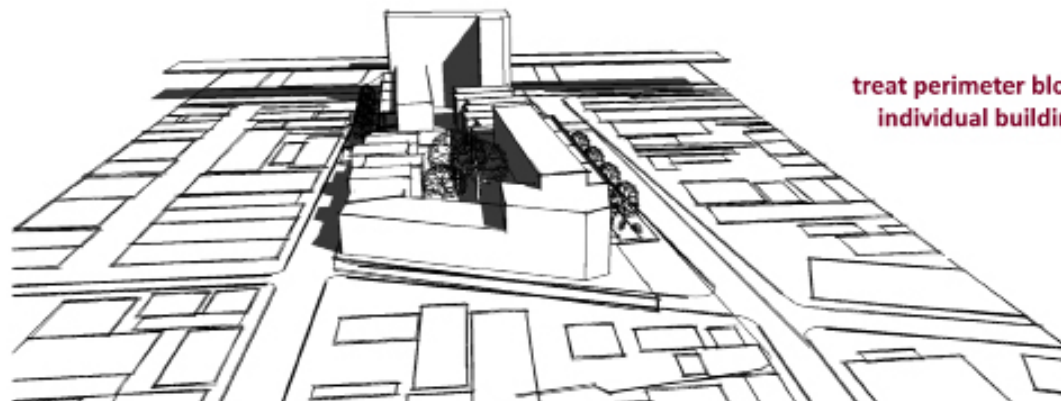


retail

residential

strip

corner treatment



view towards highway

treat perimeter block as
individual buildings



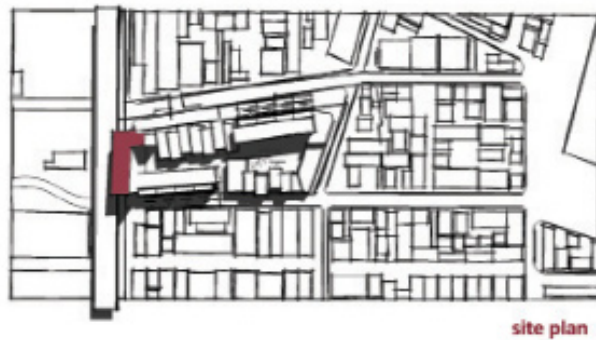
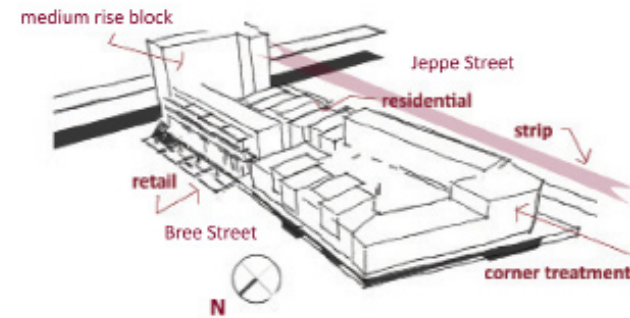
passive surveillance

retail strip

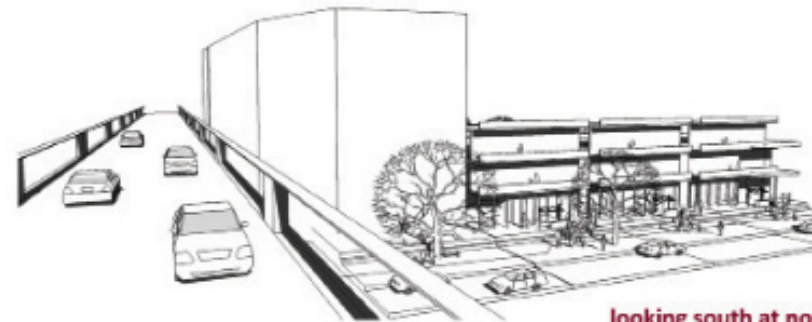
6.1.2 Block next to the highway

The building next to the highway is a medium rise block which is to buffer the rest of the scheme from the noise of the highway.

Circulation is to be located on the east side of the building to create a buffer within the building itself.



tower on Gogh street acts as a sound barrier to the highway



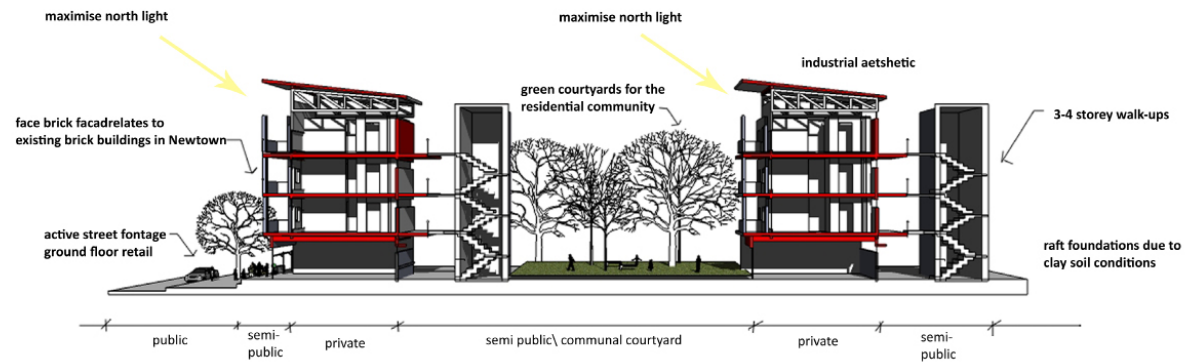
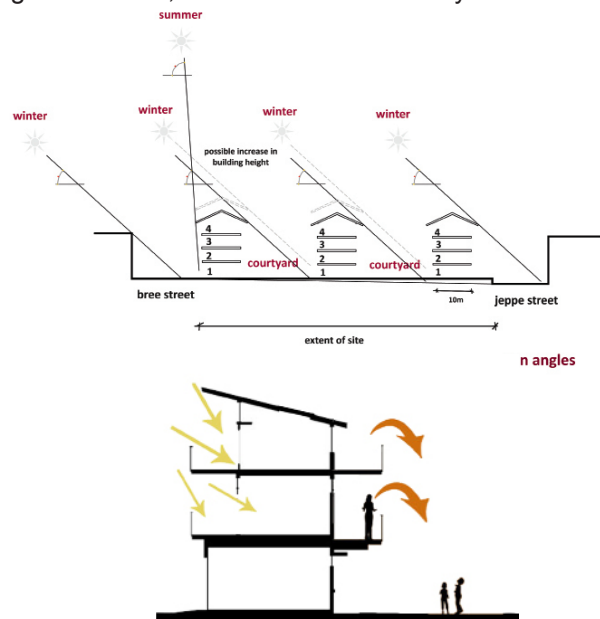
6.1.3 Elevations and sections- general

The idea is to treat the perimeter block development as individual buildings. As the scheme is a whole city block, I feel it is important to have visual variety for both the pedestrian and the residents of the housing precincts.

The whole scheme consists mainly of three to four storey walk ups

By creating a module to apply to the site, a flexible form can be achieved and adapted to suit the retail shops on ground level, increasing the active frontage seen in elevation.

This section starts to explore privacy gradients, street edge conditions, materials and the courtyard.

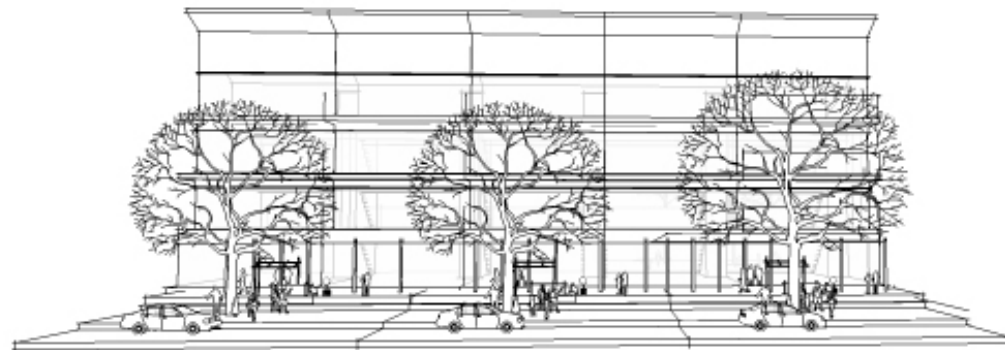
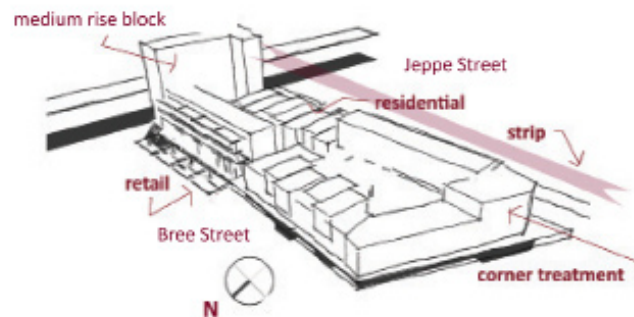
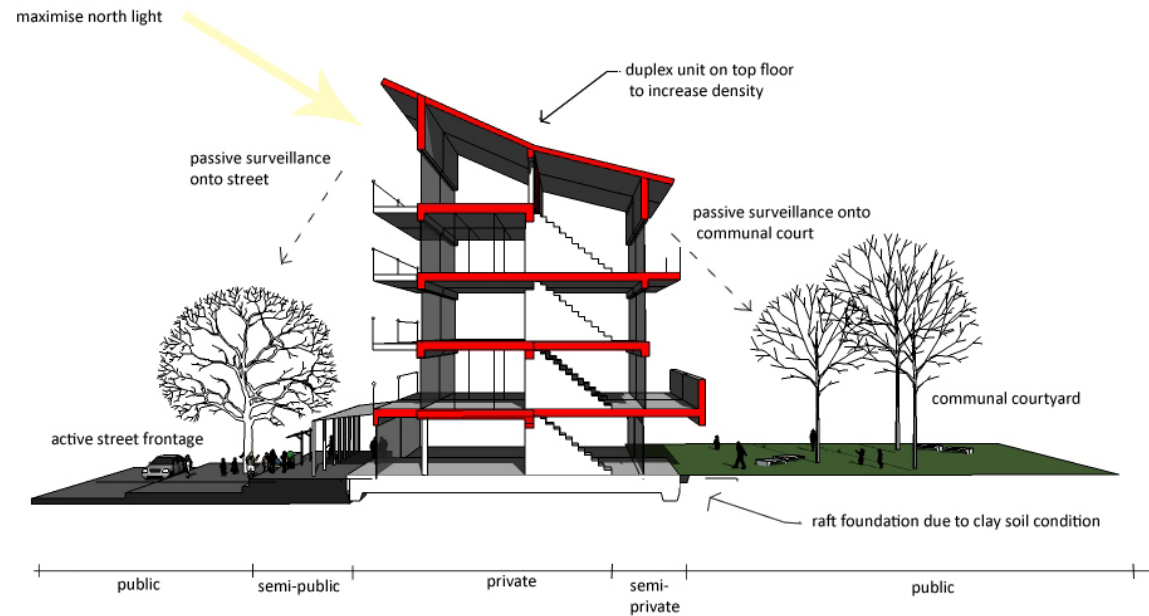


6.1.4 Duplex units on the top floor

In order to increase densities within the four storey walk ups, a duplex unit is to be located on the top floor. An internal staircase will provide access to the upper floor of this double storey unit.

'Eyes on the street', passive surveillance is created through the use of balconies and circulation.

This section starts to explore the commercial street edge of Bree Street

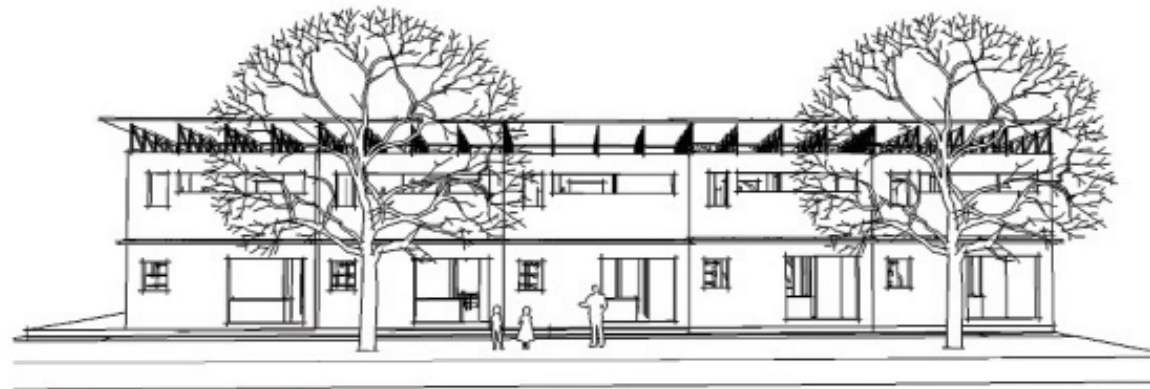
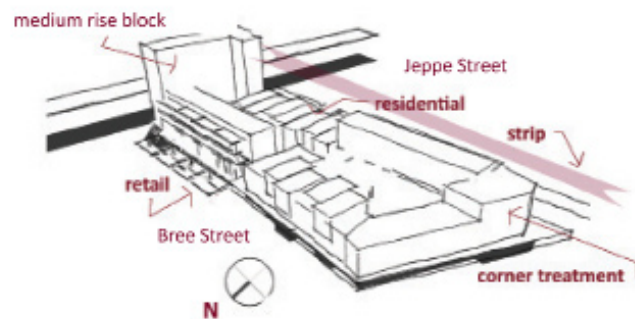
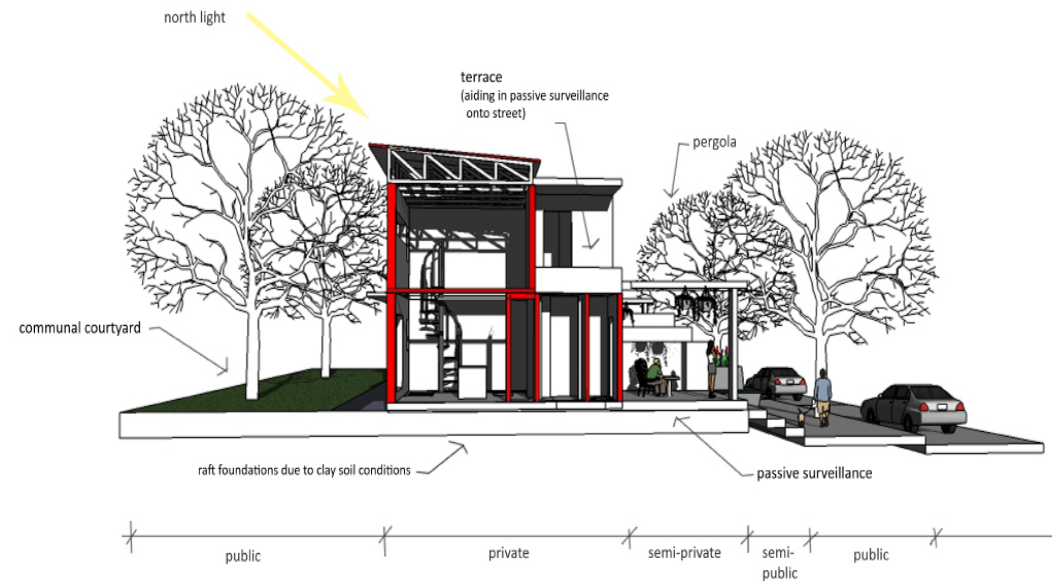


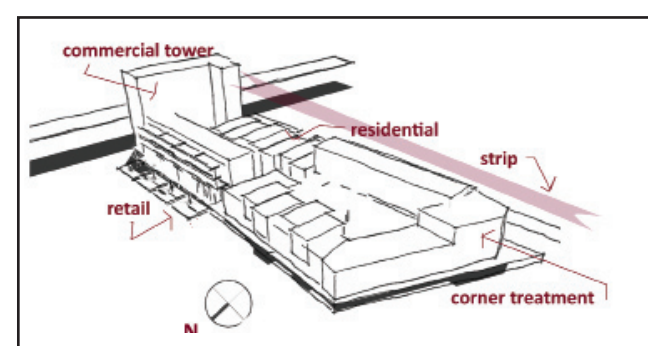
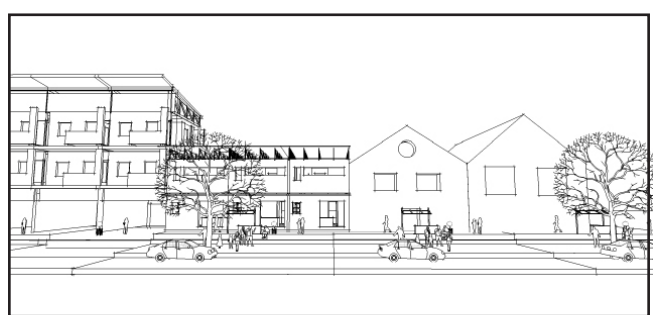
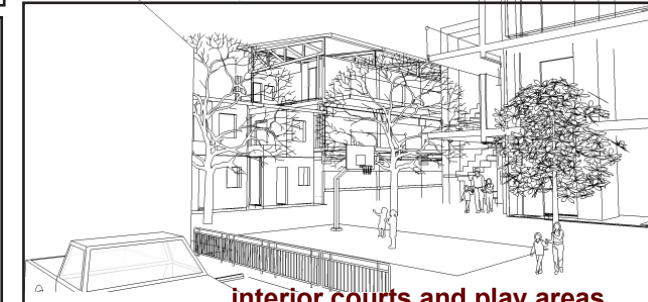
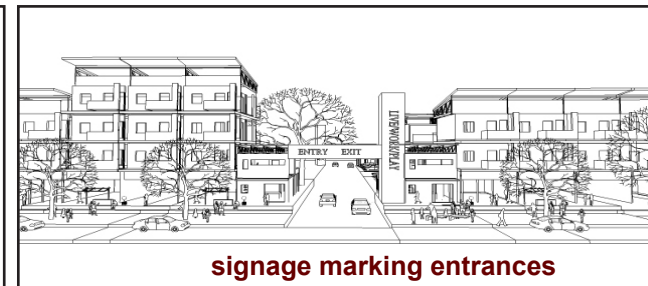
6.1.5) Live work units

Some ground floor units are to provide economic opportunities in the form of live work units.

There is an opportunity to open up onto the busier streets to trade and increase activity at the street edge promoting community interaction.

This is the first concept for the live work units but was discarded as it is too low a density for the part of town I am working in. Also, space was not being maximised by having a mezzanine level.





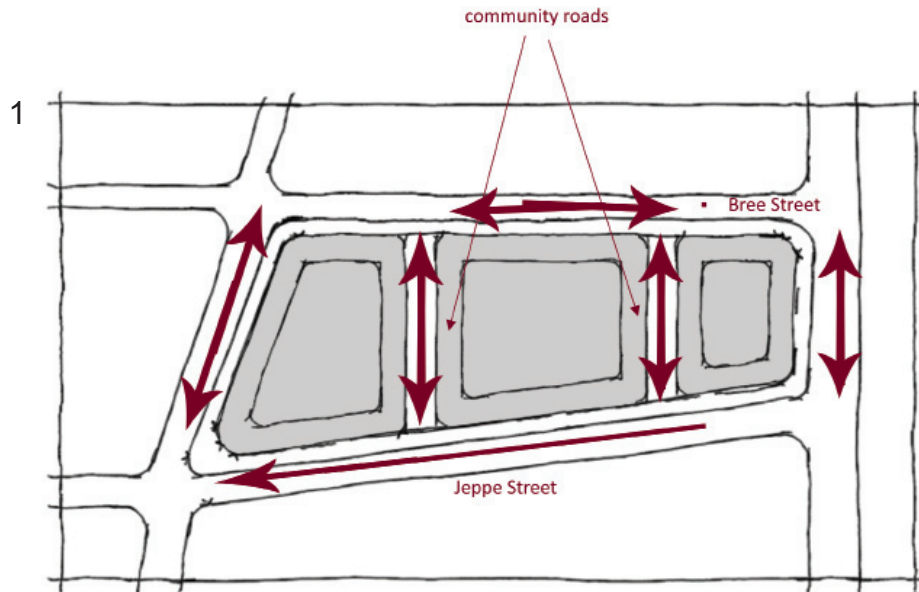
Bree Street

individual buildings make up the perimeter block

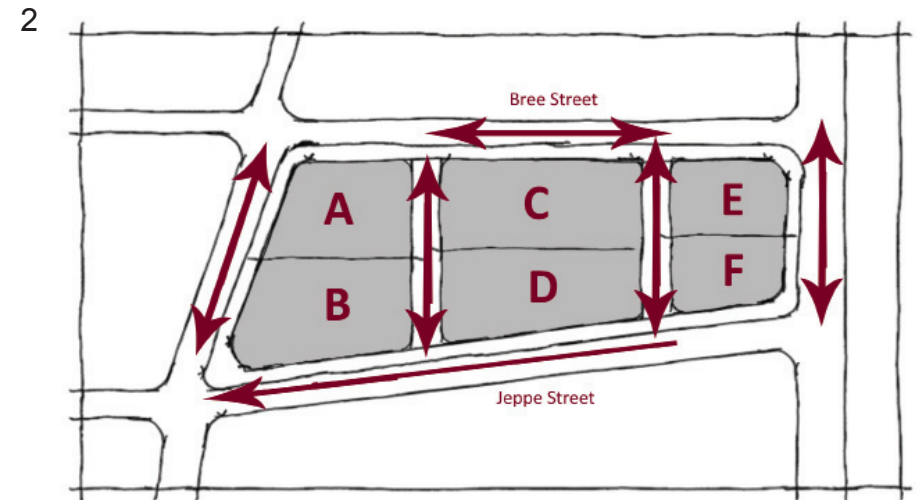
Sketch design ideas



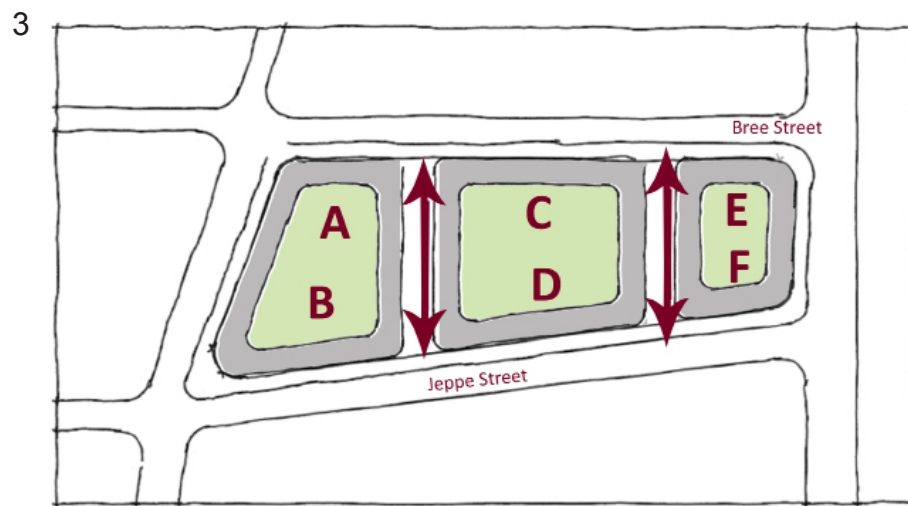




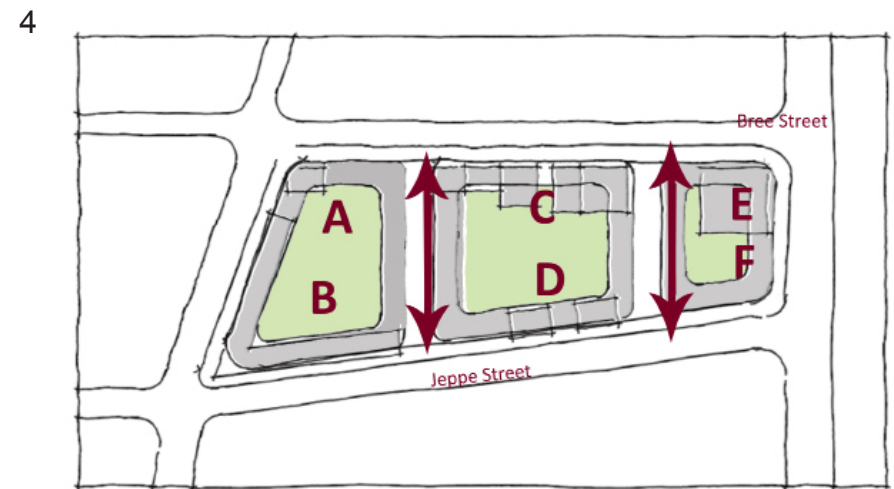
Dissect the site with two new roads



Divide the site up into manageable housing precincts

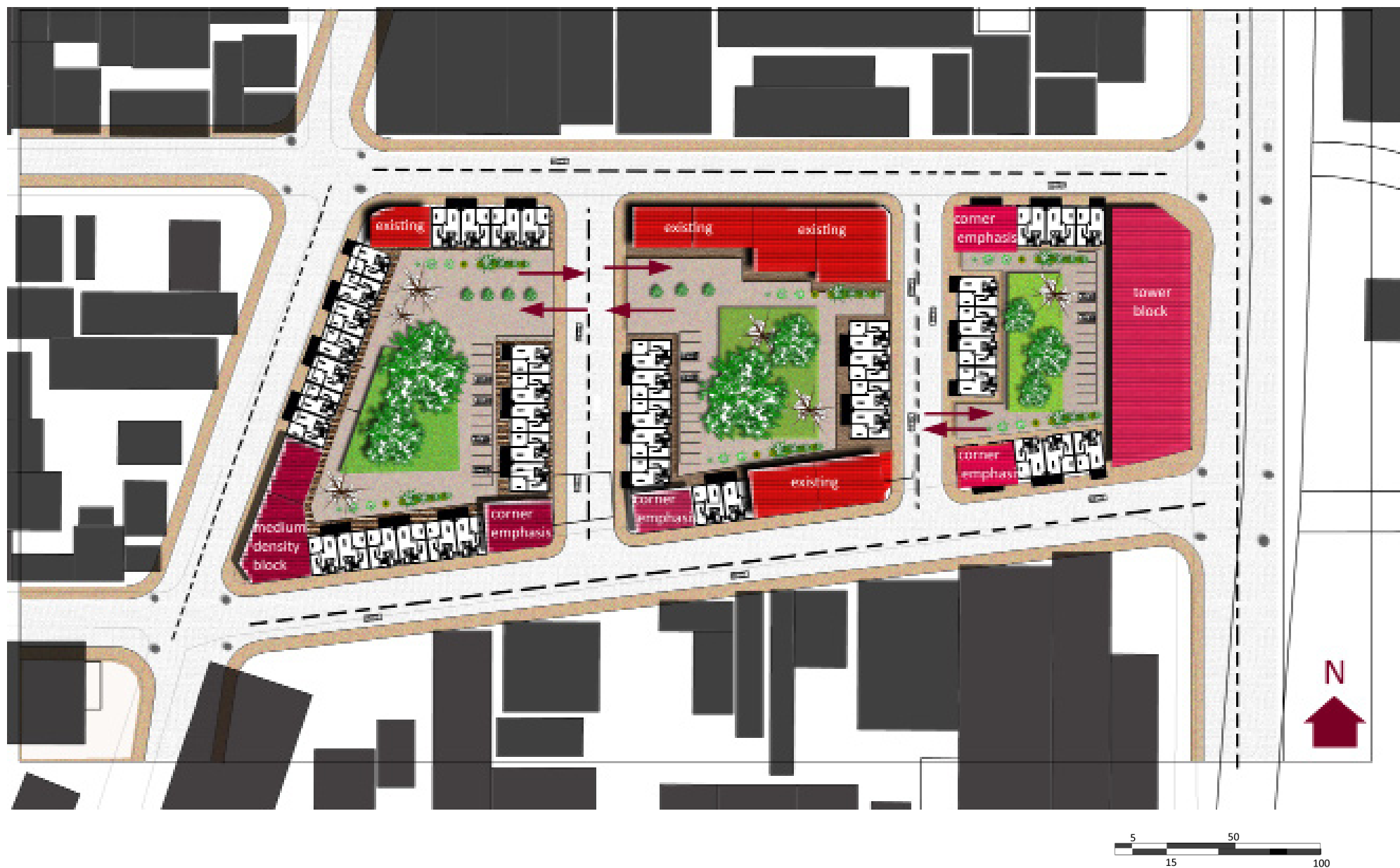


Create perimeter blocks around communal courtyards



Overlay existing buildings

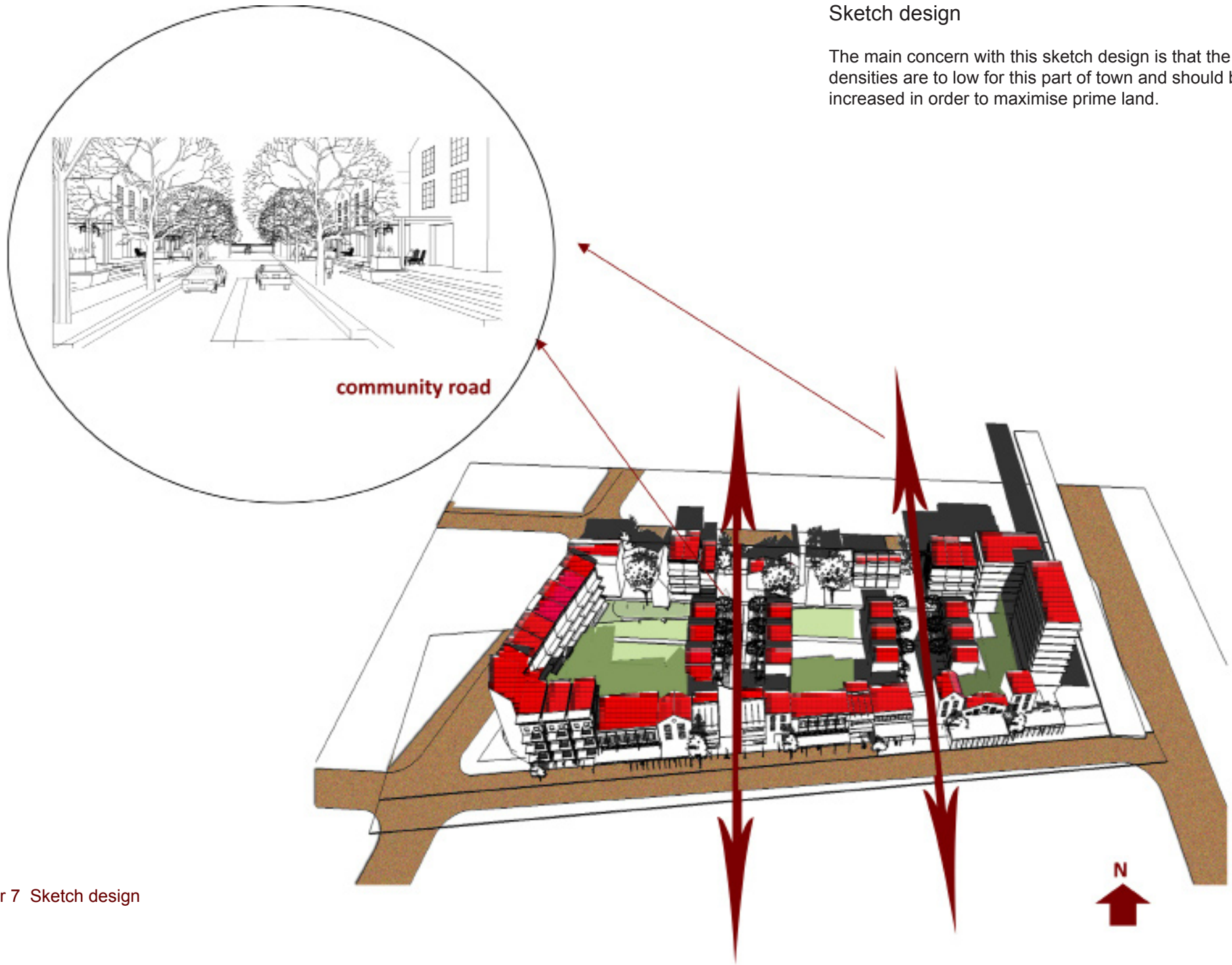
Plan Design Principles



Site plan

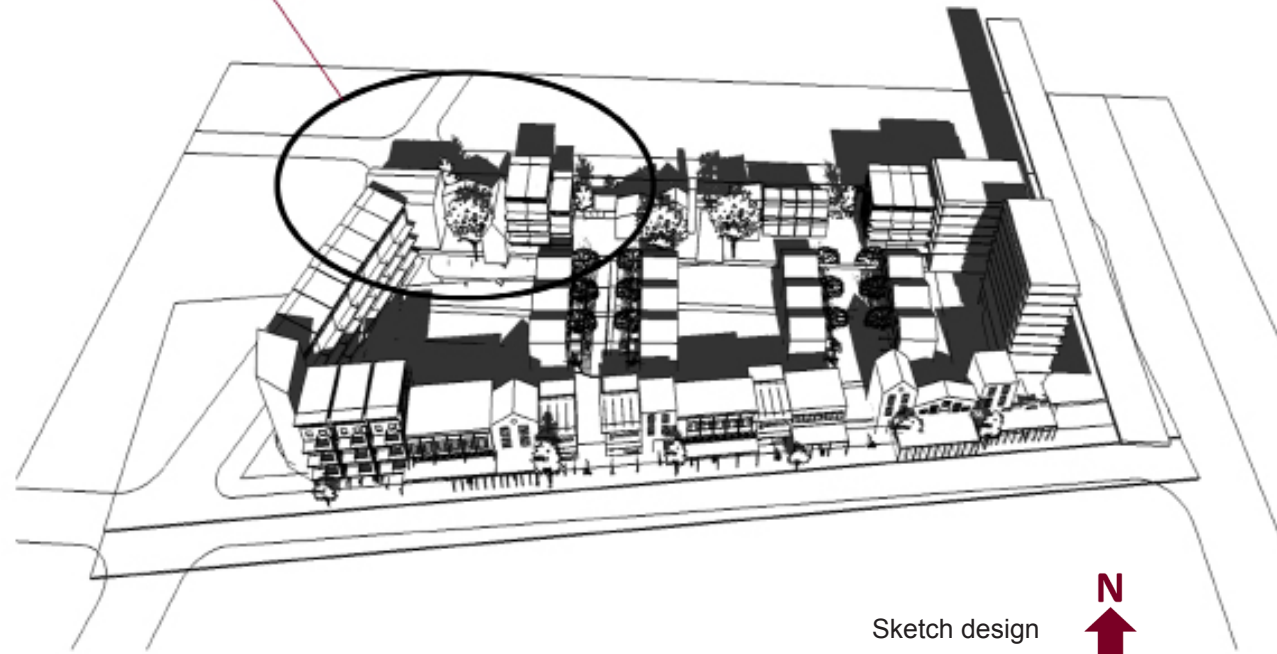
Sketch design

The main concern with this sketch design is that the densities are too low for this part of town and should be increased in order to maximise prime land.





elevation

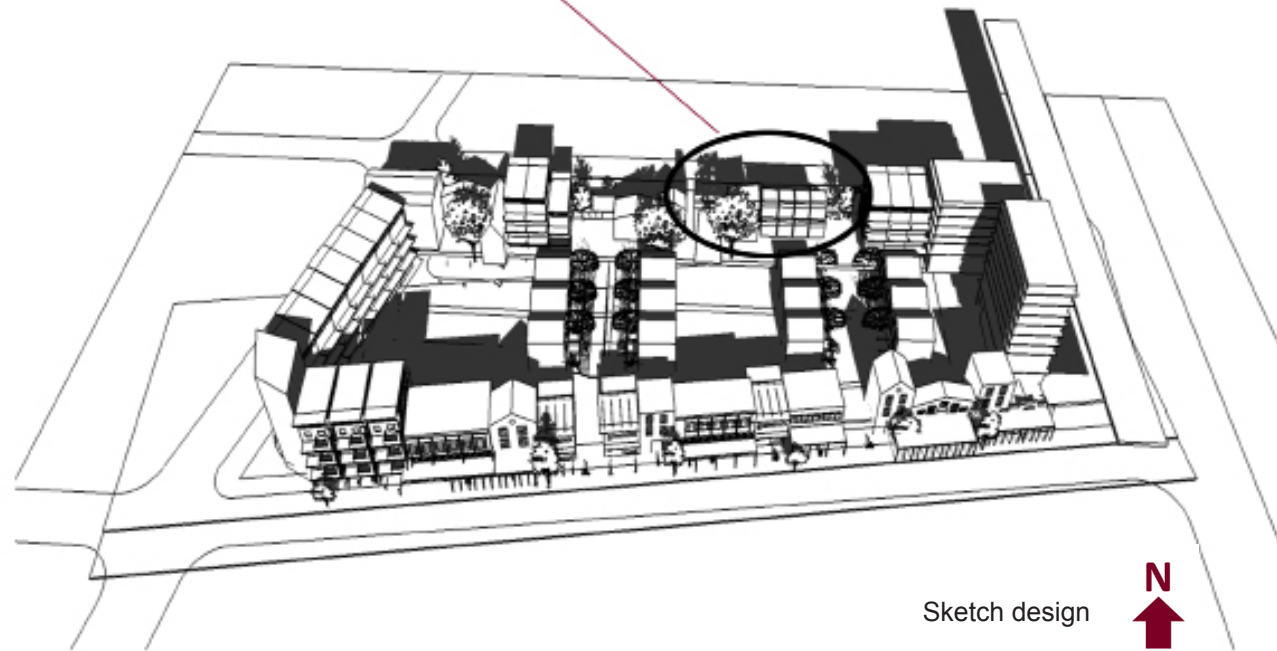


Sketch design





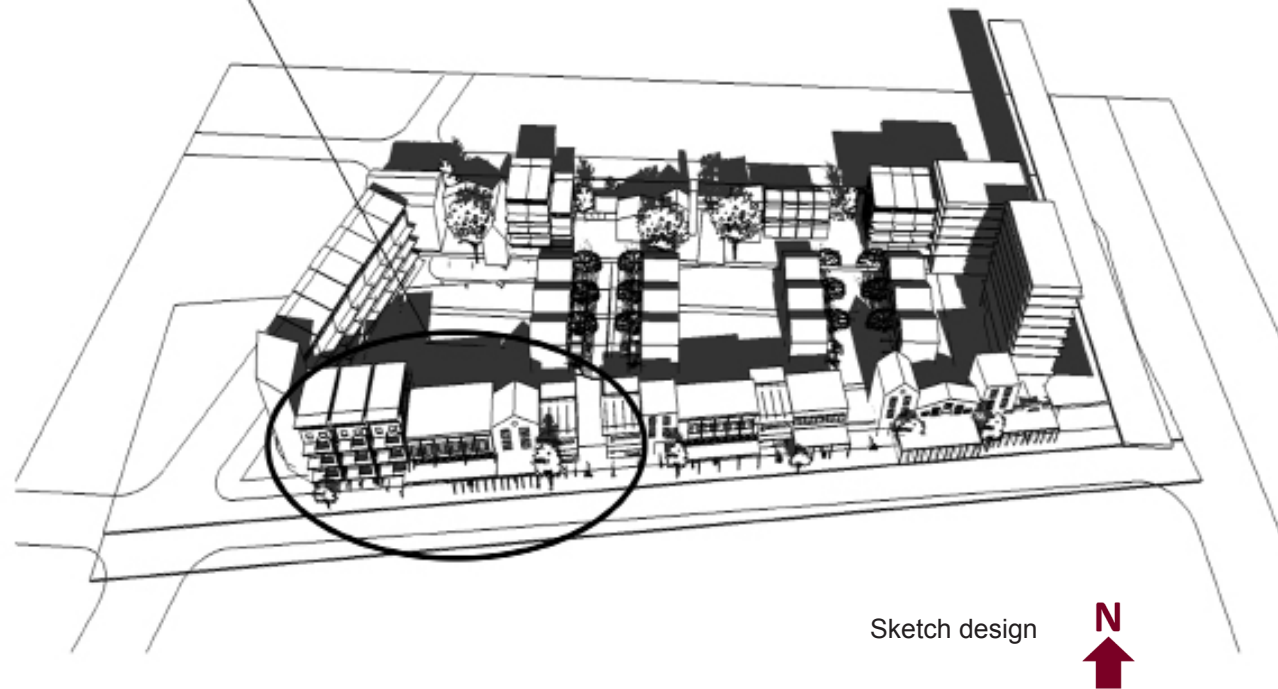
elevation



Sketch design



elevation

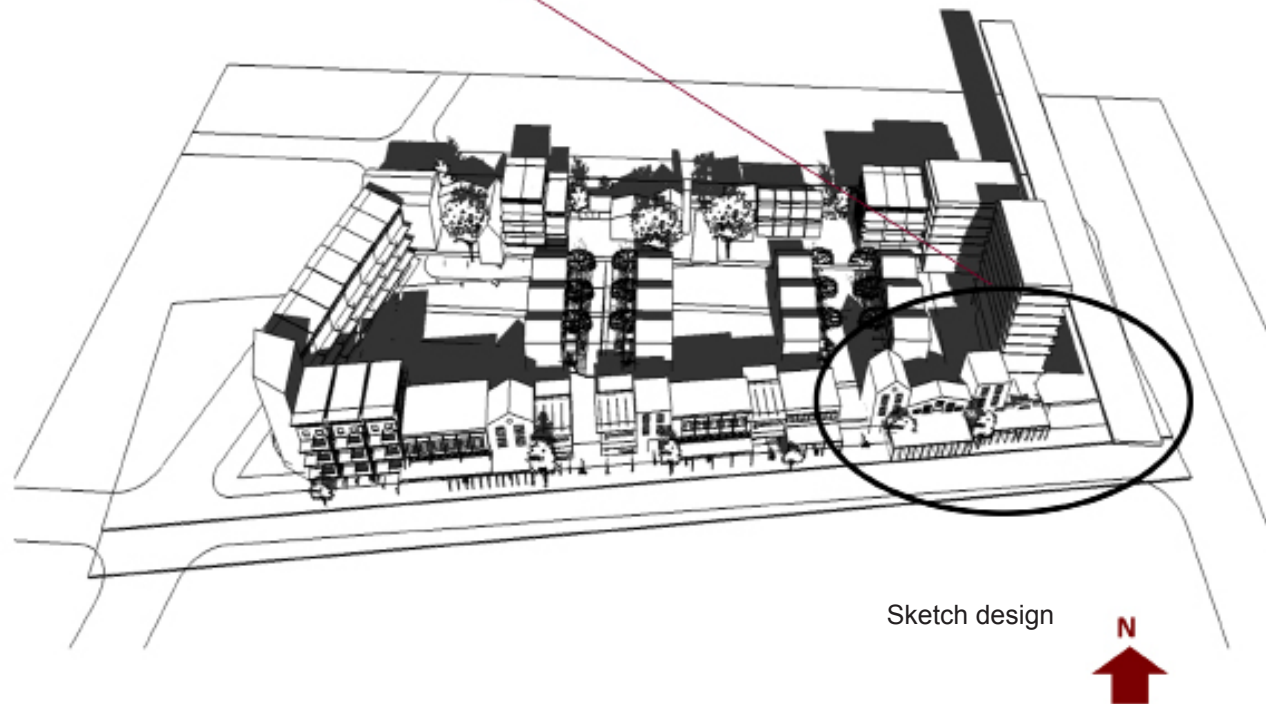


Sketch design





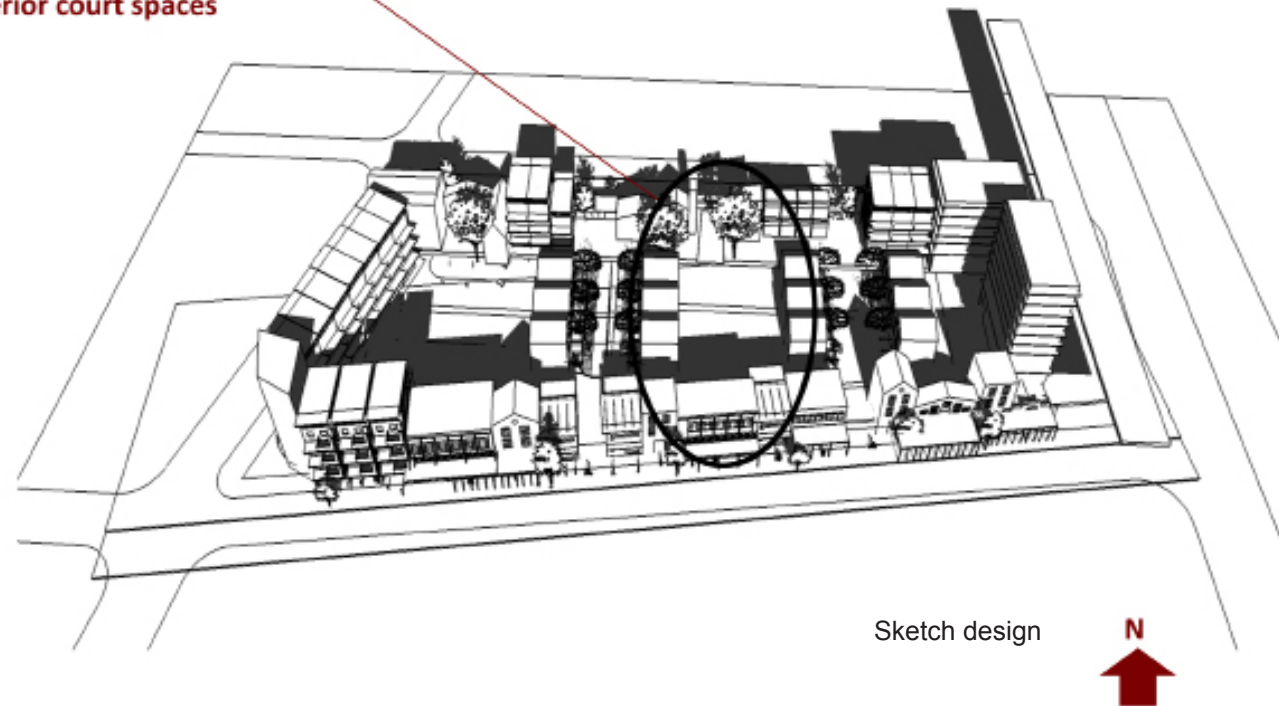
elevation



Sketch design

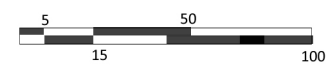


interior court spaces



Sketch design





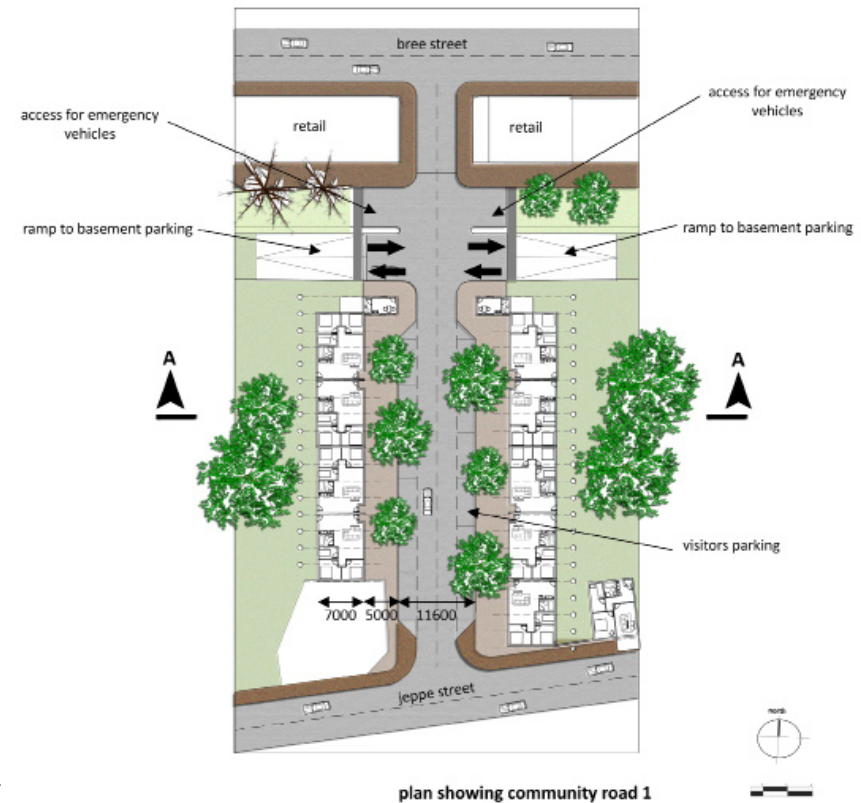
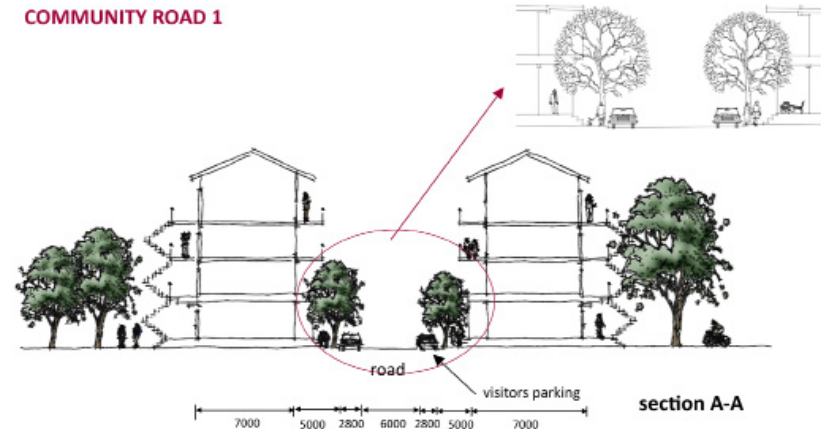
Site plan

The roads dissecting the site

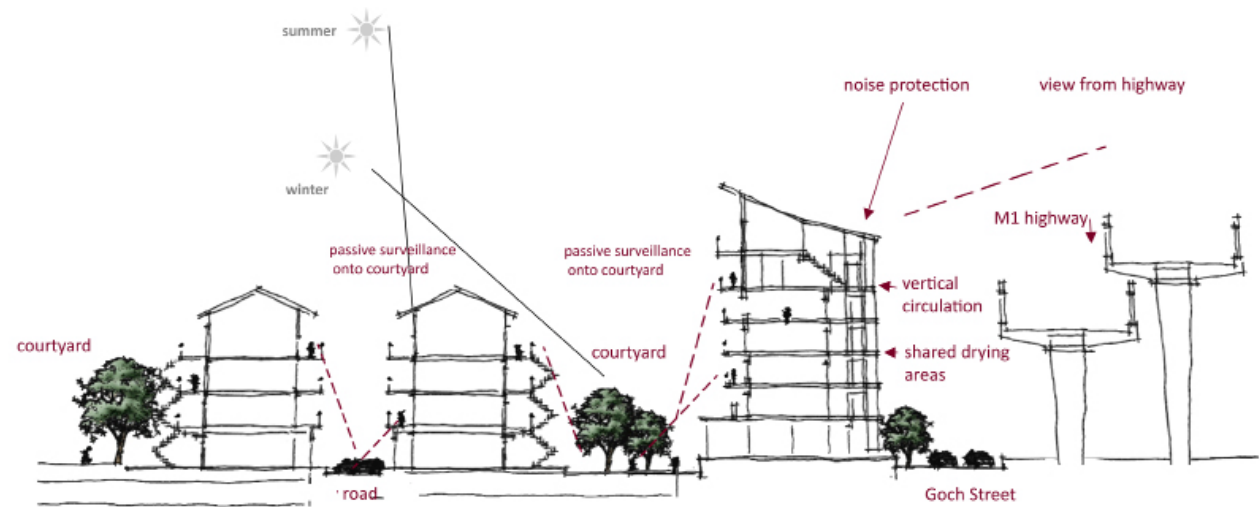
The two roads which dissect the site are meant as community roads from which the precincts are accessed. The idea is that these roads slow down traffic, provide some visitors parking and can be closed at night for security reasons.

The main concerns with this concept design on the right is that the roads become throughway for traffic and a quick getaway through the scheme in this part of town.

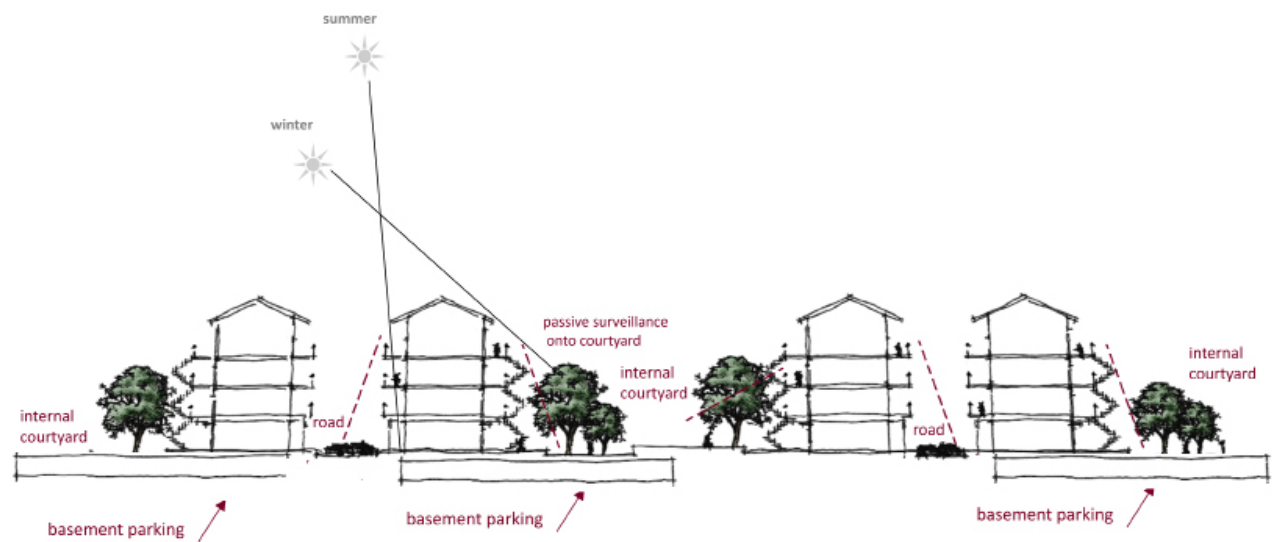
Also, that an opportunity to provide some public space is lost.



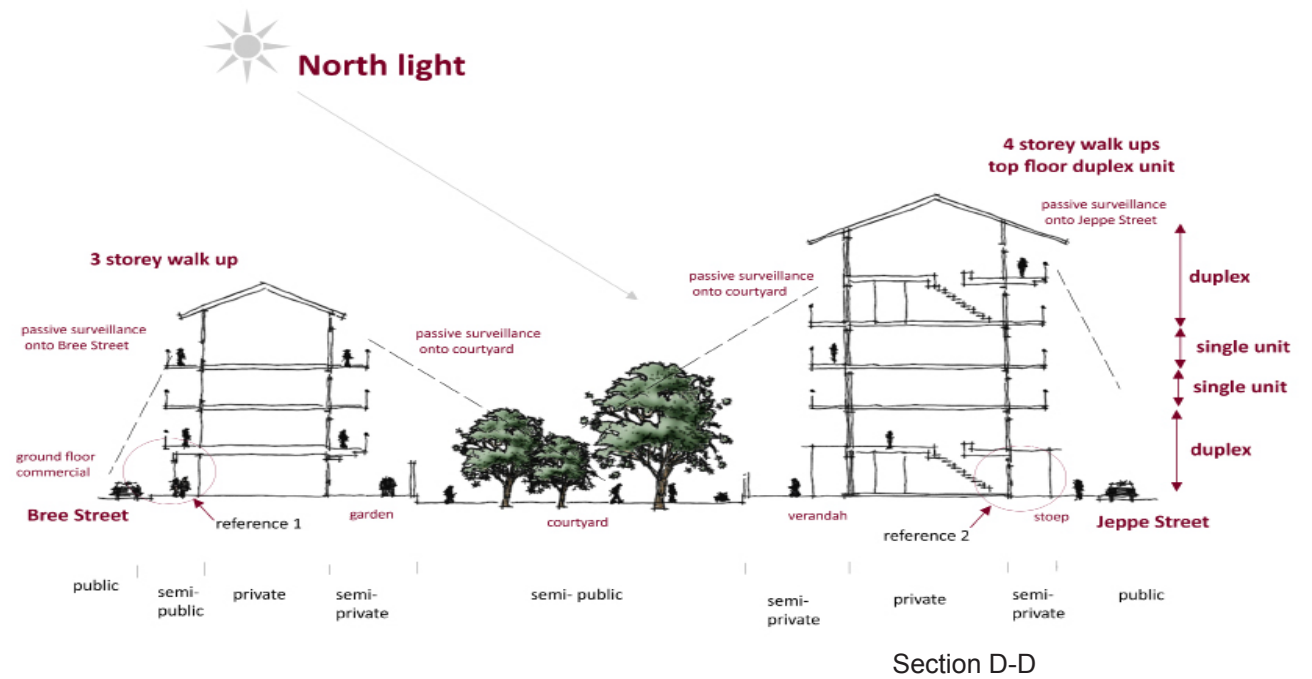
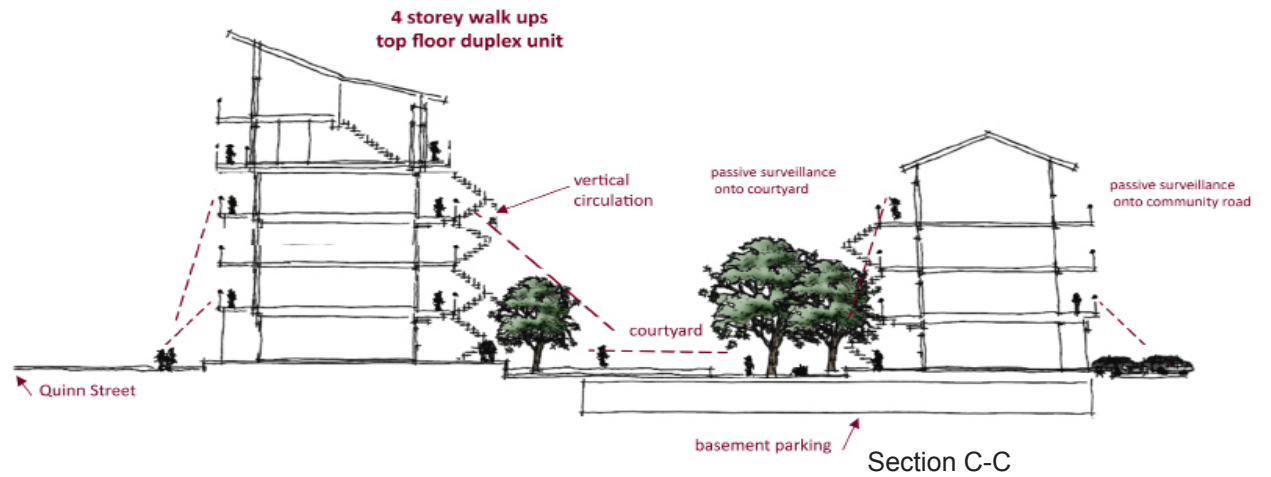
Roads dissecting the site - concept 1

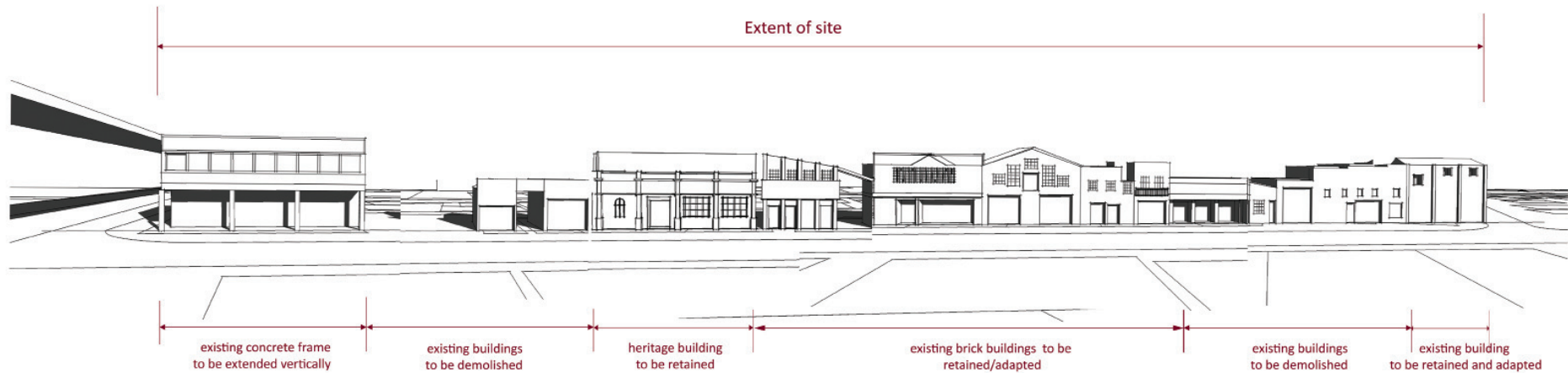


Section A-A

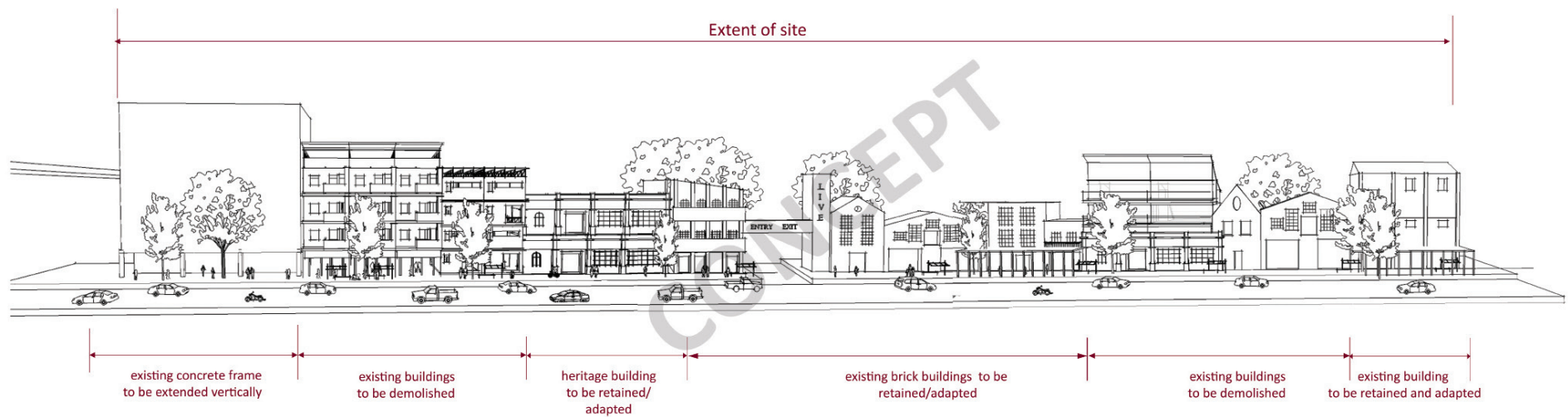


Section B-B

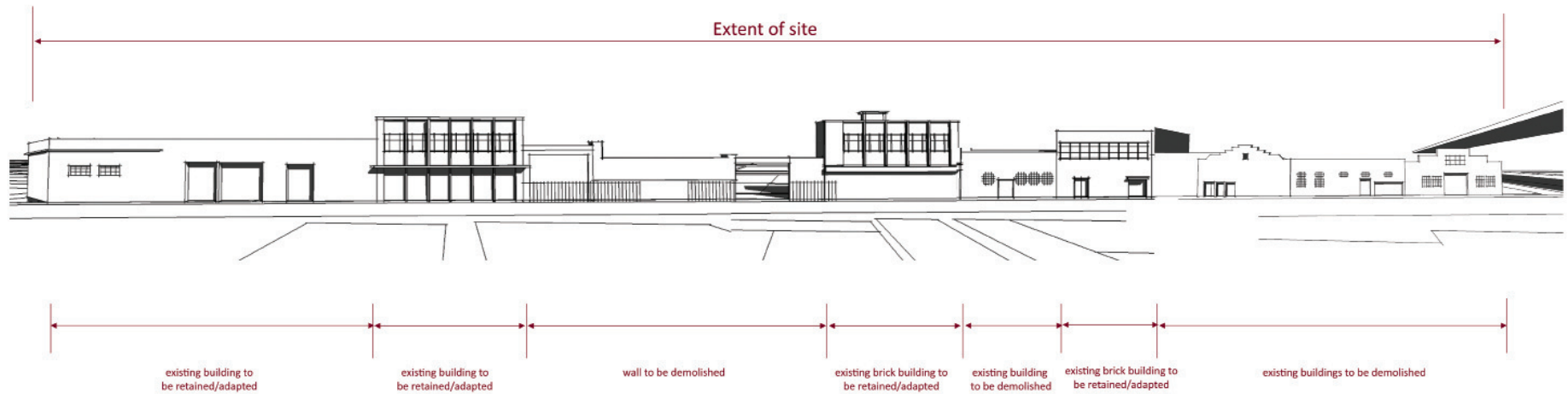




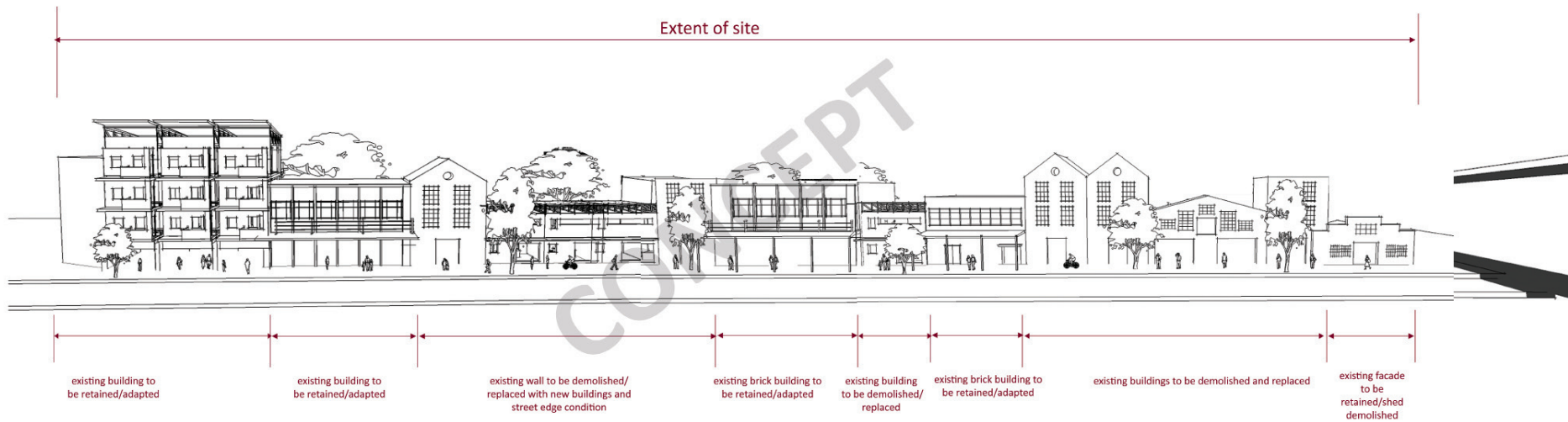
Existing buildings on Bree Street



Elevations
Bree Street



Existing buildings on Jeppe Street



Elevations
Jeppe Street







Current Bree street edge conditions



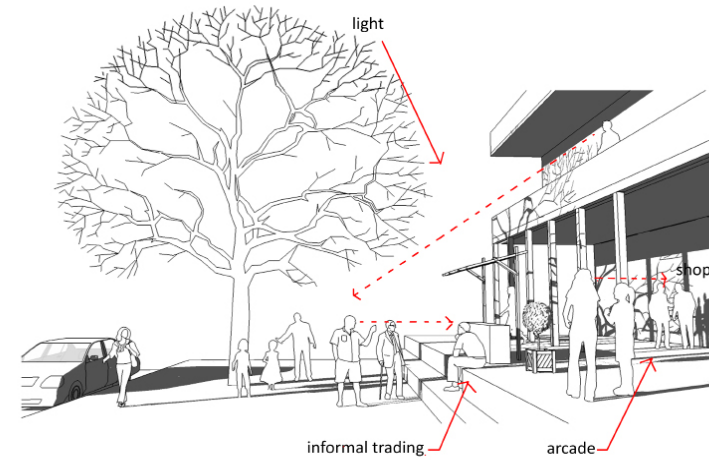
Current Jeppe street edge conditions

8.1. Principles for designing street edge conditions

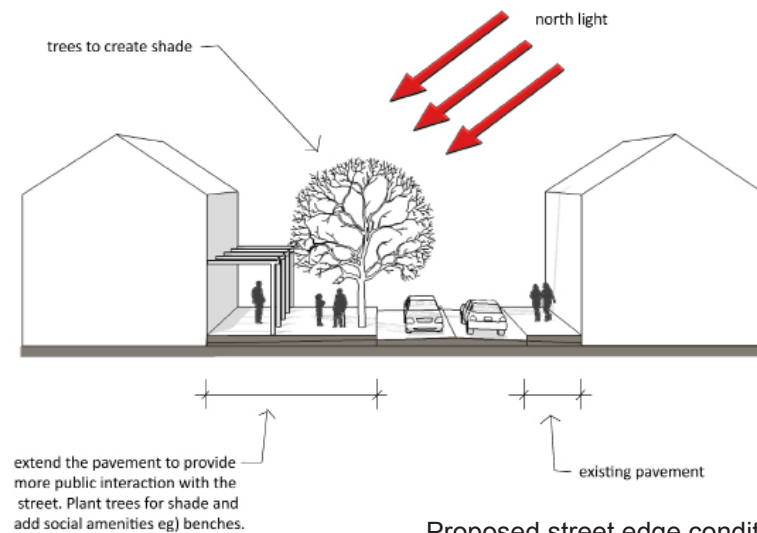
The ground floor of all buildings, and the relationships between the ground floor and the street are both important. All activities located on the ground floor should interact positively with the adjacent public environment.

Blank walls at ground level should be avoided. The walls can be made interesting by placing doors and windows at frequent intervals along the continuous façade. In this way the pedestrian will be better able to relate to the building.

Building entrances should be 'celebrated', that is, given a distinct character of importance through being clearly visible and architecturally emphasised. They should engage with the street and relate to the surrounding buildings. The treatment of corners also gives the architect an opportunity to make the most of the urban vista.



Proposed street edge conditions-retail street, colonnade



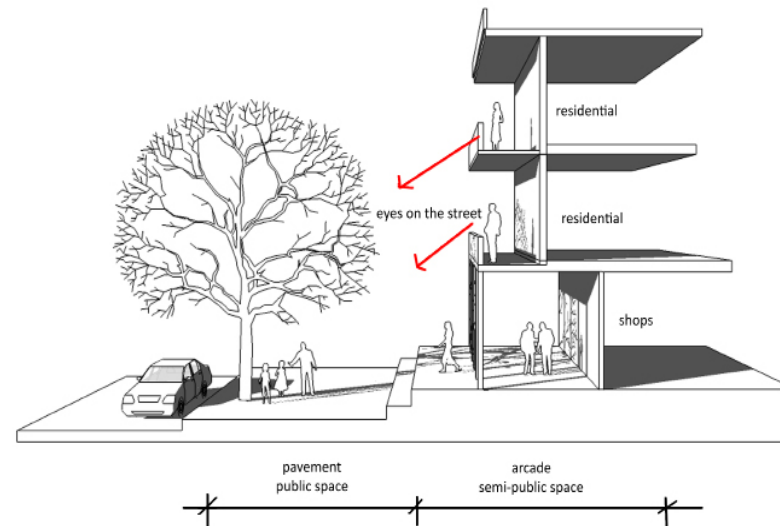
Proposed street edge conditions-widen pavement

To promote pedestrian activity in the street outside the development, the architect can specify that trees be planted to provide shade, that benches are provided, and encourage traders to sell their wares on the pavement.

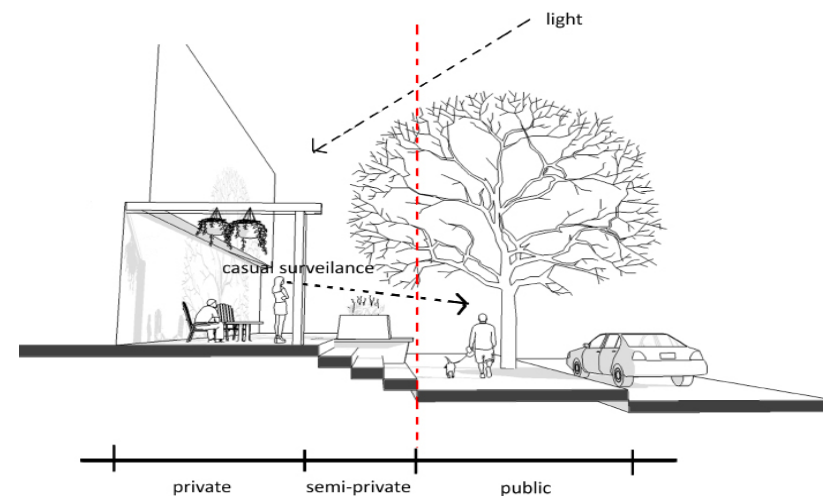
Windows and balconies overlooking both the public spaces inside the scheme and the street provide passive surveillance, a vital component of crime prevention in the community. (This is known as the 'eyes on the street' approach to security.)

In cases where ground floor units are positioned facing onto the street, some principles should be borne in mind. Privacy gradients should be observed, and can be emphasised by raising the level of entry to the unit and using stairs to reach the door. Other elements that define the privacy gradient are bushes, low walls, patios and gardens. All allow residents to keep an eye on the street while interacting with other members of the community.

The placement of windows, bedrooms, and entries to the units should be designed with care.



Proposed street edge conditions-
retail street

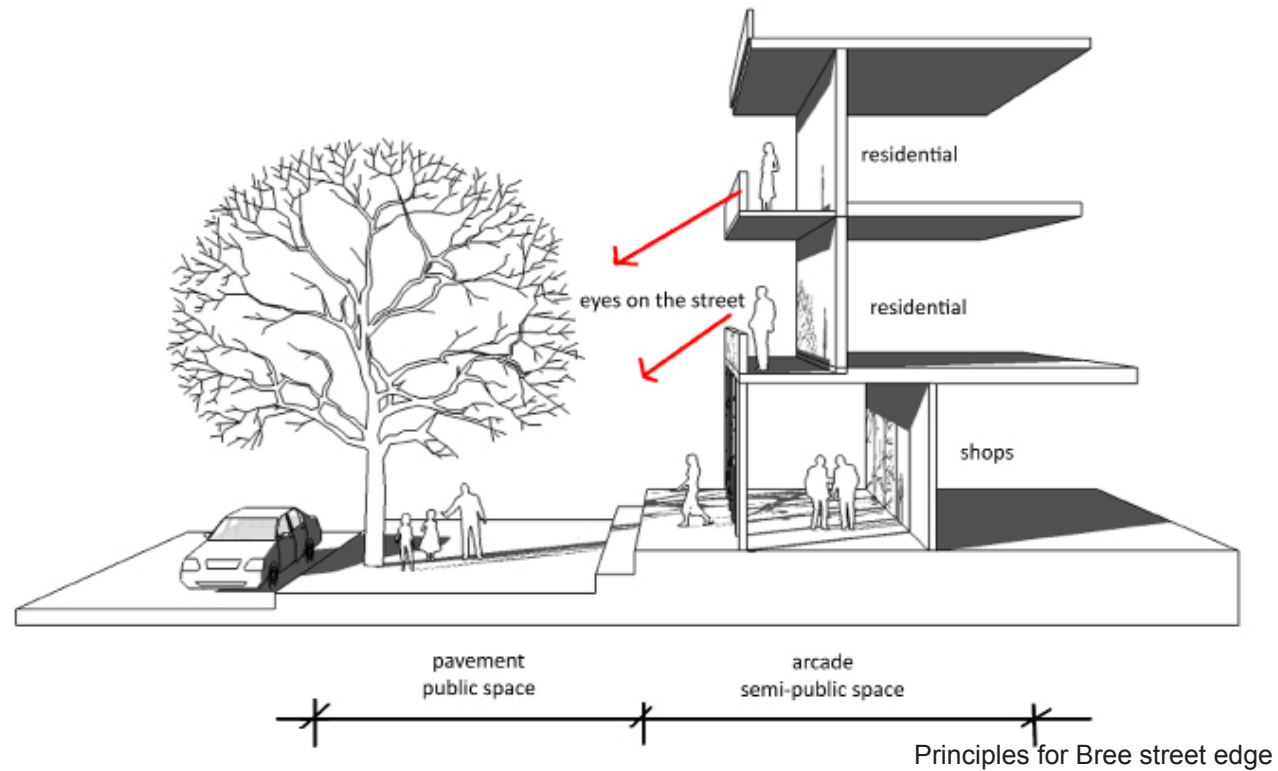


Proposed street edge conditions-
residential street

8.2 Bree street edge condition.

Keeping Bree Street as a commercial street, I propose to introduce upper floor commercial space with balconies and horizontal circulation overlooking the street. This increases passive surveillance through people standing or walking along this edge.

By introducing a colonnade at some points, threshold is achieved between the busy street and the retail shops as well as bringing the scale of the buildings down to human level and providing shelter from the rain. Colonnades are evident in the nearby suburbs of Fordsburg and Vrededorp.



Collonade
Fordsburg, Johannesburg



Collonade
Vrededorp, Johannesburg



Collonade
Fordsburg, Johannesburg



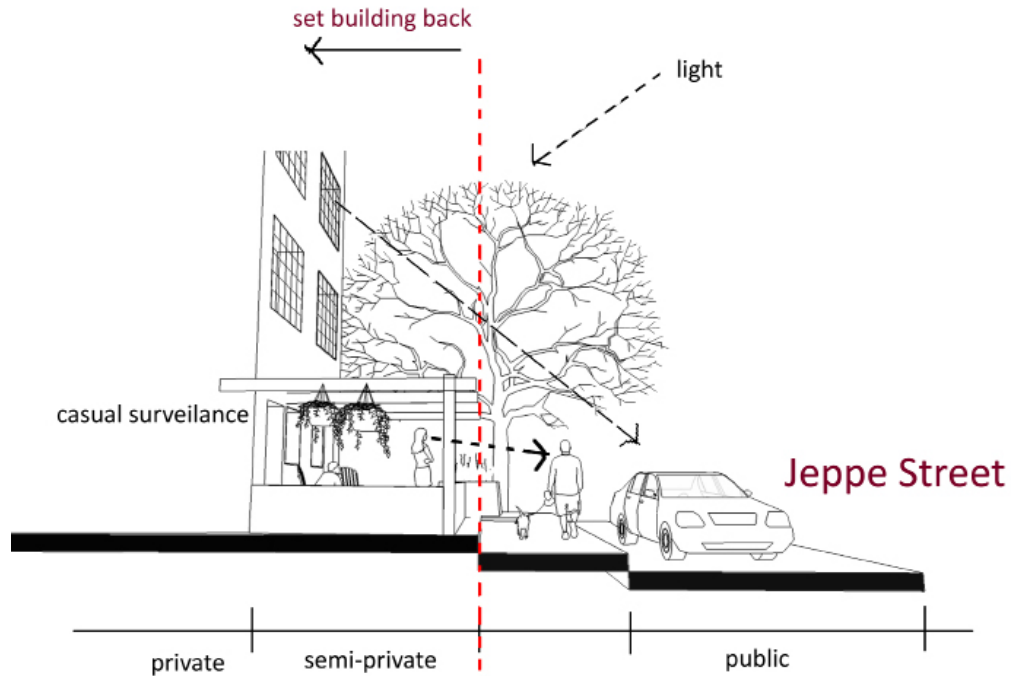
Bree Street
Proposed Street Edge

8.3 Jeppe Street edge condition

Jeppe Street is proposed to be a residential street with residential units all the way down to ground floor. The reasons for this is to create a different street edge condition as Jeppe is a much quieter street as well as to increase the density of the block.

Thresholds and privacy gradients are extremely important to consider when dealing within the residential unit on the ground floor of a city block.

Security is maintained within the block as the residents with front gardens or 'stoeps' have a vested interest in keeping their unit secure.



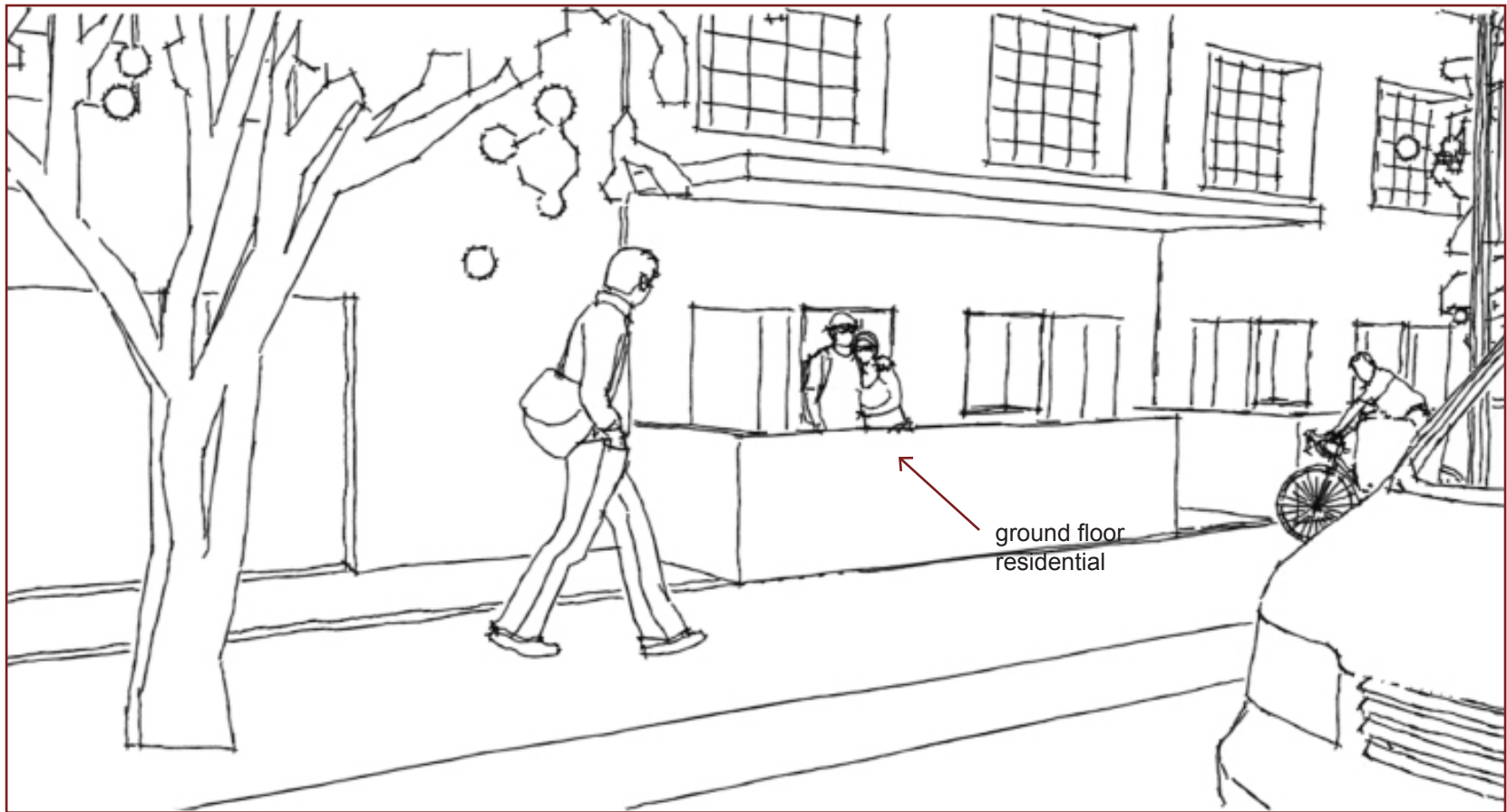
Principles for Jeppe street edge



Stoep
Vrededorp, Johannesburg

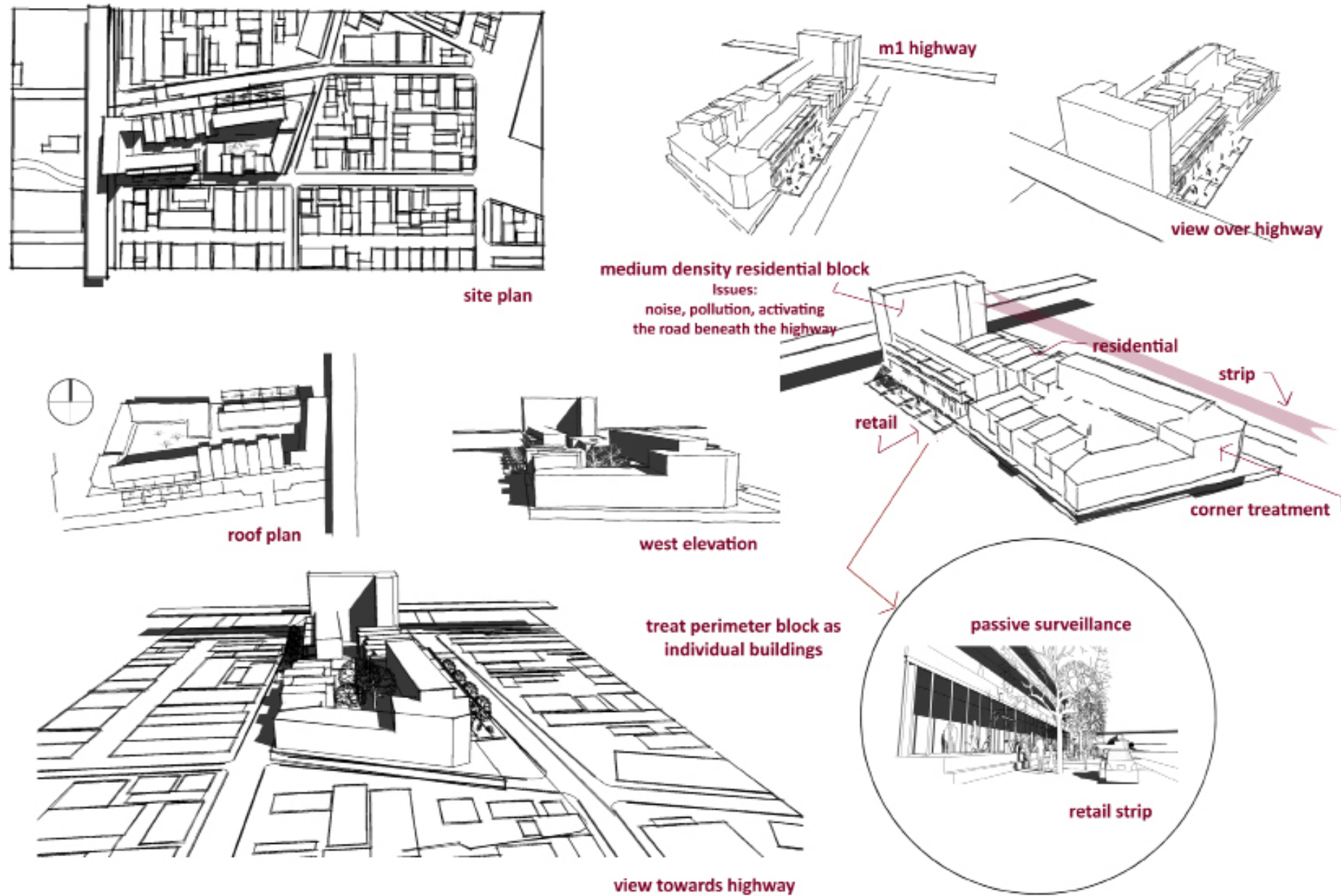


Stoep
Vrededorp, Johannesburg

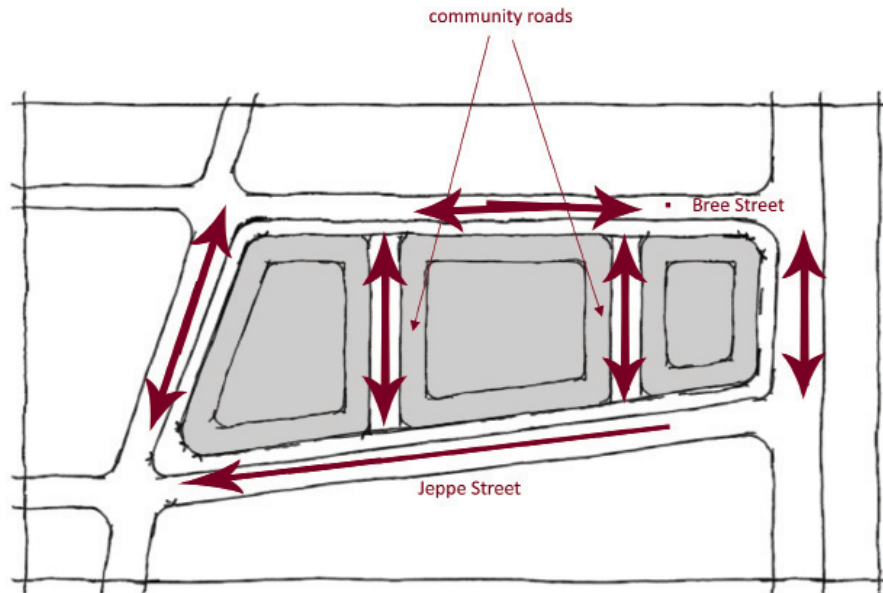


Jeppe Street
Proposed Street Edge



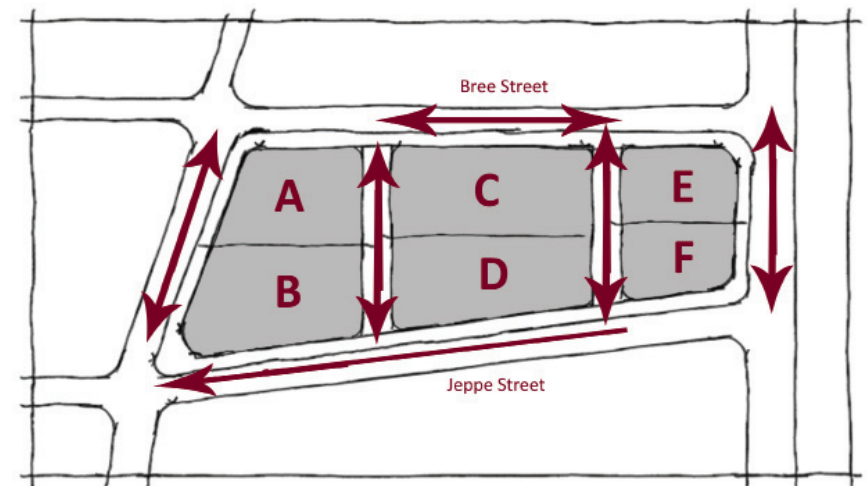


1



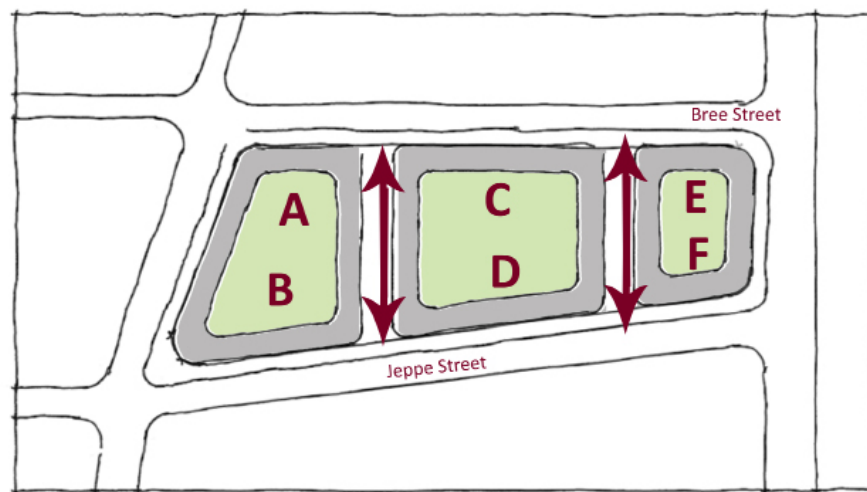
Dissect the site with two new roads

2



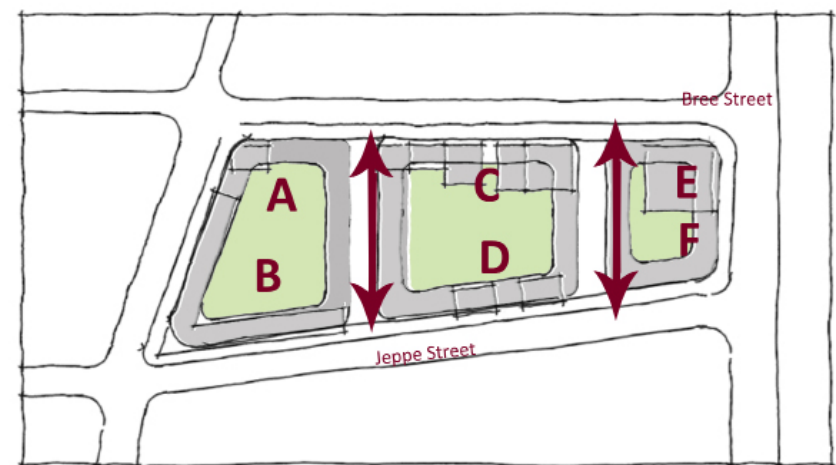
Divide the site up into manageable housing precincts

3



Create perimeter blocks around communal courtyards

4



Overlay existing buildings

Plan Design Principles

Ground Floor Plan

My project is aimed primarily at the lower to middle income bracket initially.

The project is to be run by a housing institution with the view to rent out the units, some of which are subsidised, to pay off loans.

The long term view is to sell off the units and plough the money back into more housing stock.

Some of the larger top floor units are aimed at the higher income bracket in order to have a cross section of the economy throughout the scheme.

The revisions to the plan have been made in red and primarily consist of moving the access stairs into the scheme and not allowing for street access to upper levels of the residential units.

Access to the live work units and the ground floor residential units are still off the street as well as the internal courtyard as the residents have a vested interest in the security of their units.

I also feel it is important to activate the street through ground floor stoeps and gardens, increasing passive surveillance.

The family units are located on the ground floor as they have close access to the courtyard for the children to play and be supervised.

The elderly residents are also to be placed on the ground floor as they will help in the passive surveillance of the scheme as they will predominantly be at home during the day.

The one bedroom units are located on the upper floors and in the residential tower and are aimed at couples with-

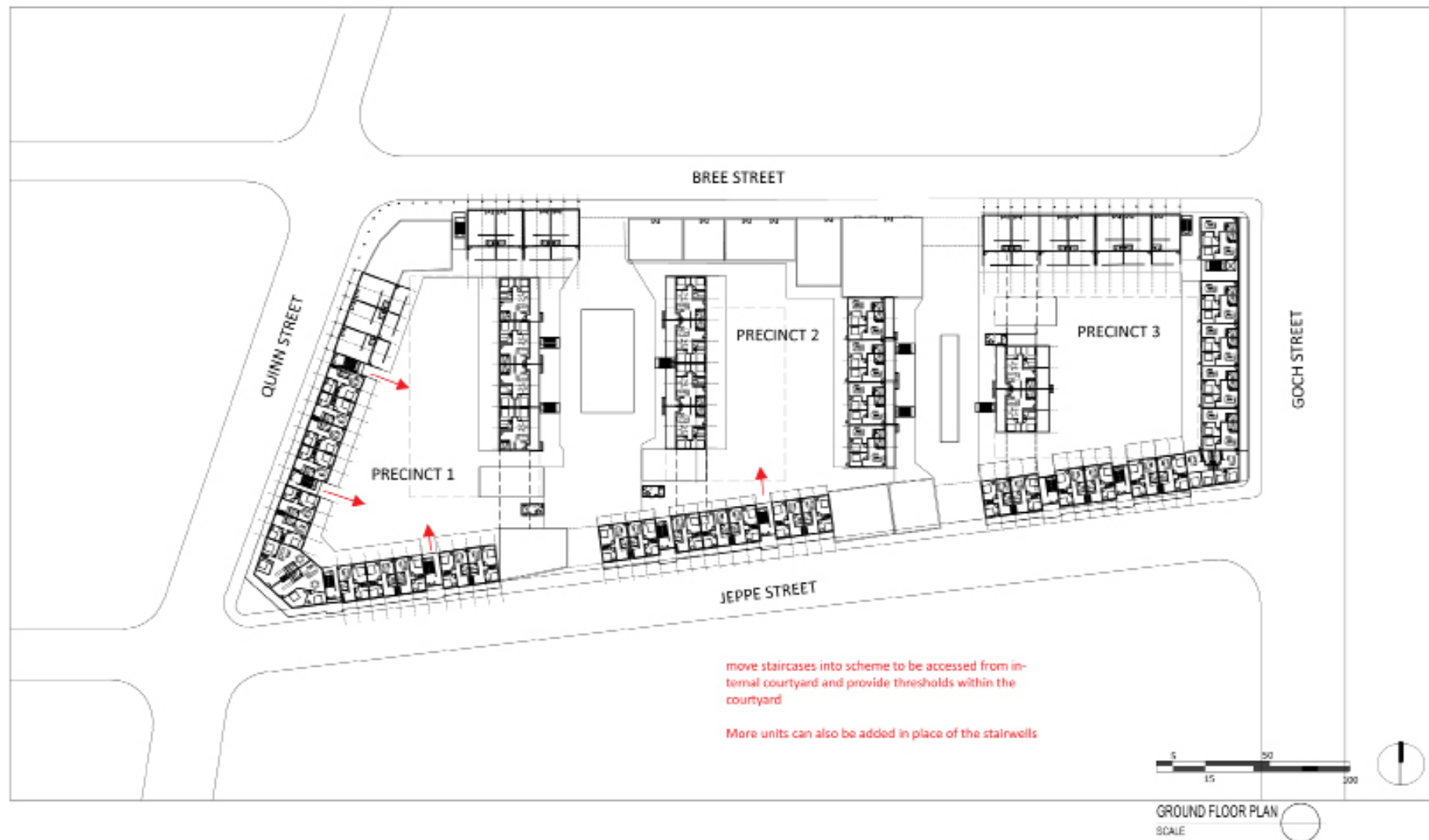
out children as access to the courtyard is further away.

The top floors of the four storey walk ups are duplex units or have a mezzanine level to increase density.

The corridors are to be made wide enough to allow for social space throughout the scheme.

The existing buildings on Jeppe Street are to be utilised as a creche, meeting rooms and home work rooms.

The existing buildings on Bree Street are to be retained for commercial use.



NEWTOWN HOUSING



MH [2005-10-06] SKETCHPLAN 001

MH

38, STEVENS ROAD, BURRIDGEVILLE, OHIO 44021
TEL: 440.870.7833 FAX: 440.870.7834



The roads dissecting the scheme

These roads are aimed at dividing the site up into three smaller housing precincts in order to make them more manageable.

The roads are to be used for visitors parking and the ground treatment is to aid in the slowing down of traffic. Access to each precinct is off these roads and underground residential parking is provided at a ratio of one car to every three units as is acceptable in social housing schemes and this scheme in particular as public transport in this part of the city is good.

The internal streets have a courtyard effect with social space being created as an island in the middle. A gated playground under supervision can be located here as it can be accessed from all precincts and provide public social space.



NEWTOWN HOUSING



MH [2006-10-06] SKETCHPLAN 001

38, STEVENS ROAD, BLAIRGOWRIE, HANOVER, 2104
TEL: 082 875 7823 • FAX: 082 875 7824 • email: mh@mh.co.za

Elevations

The two main elevations I am dealing with are Bree Street (the north elevation) and Jeppe Street (the south elevation).

Bree Street is a busy commercial road and Jeppe Street is a quieter residential edge.

Overall, the main concept is to develop individual 'buildings' within the scheme to provide visual interest at street level as well as from the highway.



Bree Street

NORTH ELEVATION

SCALE



Jeppe Street

SOUTH ELEVATION

SCALE

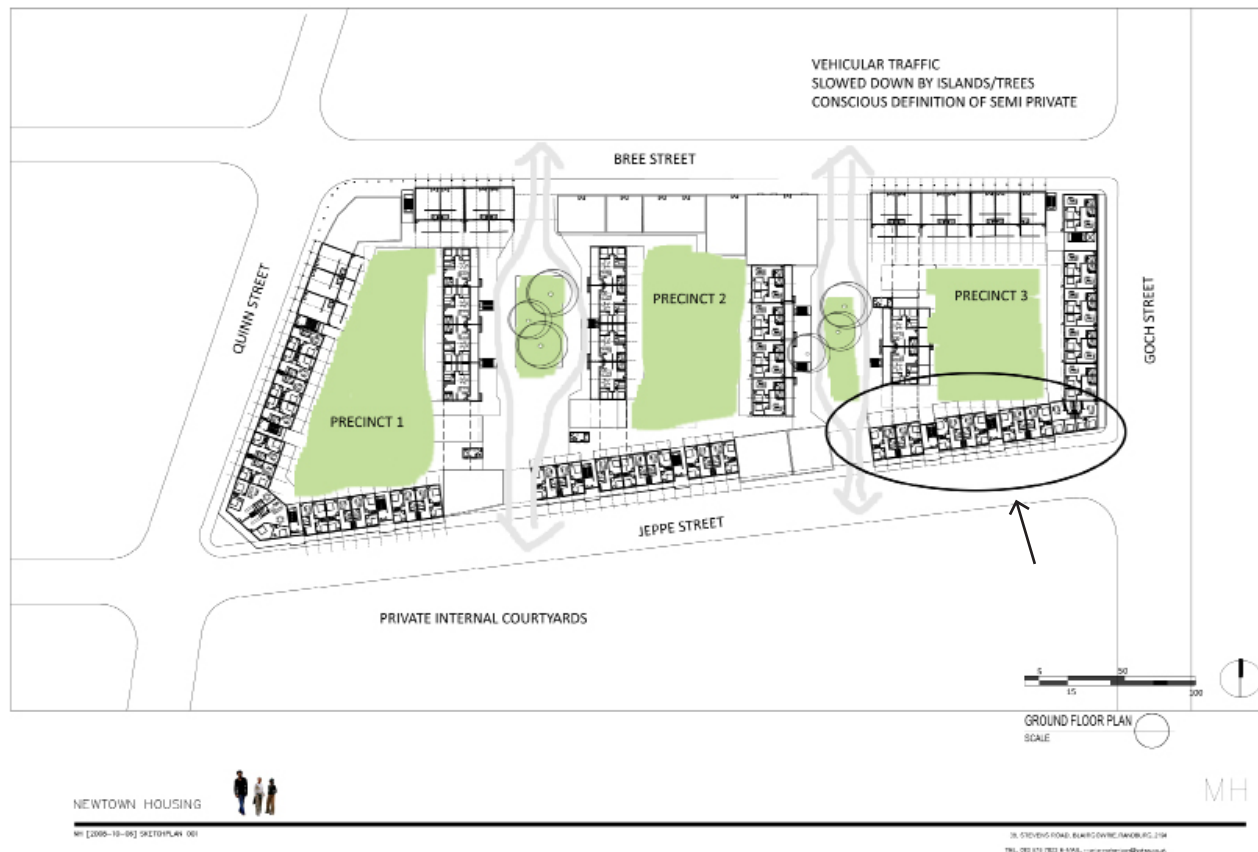
MH

RECLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG



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This is a rendered partial South facade showing the elevation facing onto the street as indicated on the plan.

Revisions to be made are highlighted in red and consist of the following:

Concerns about having street access into the buildings:

- In this part of town, security is a concern so I have moved the staircases into the scheme and controlled access is located by the guardhouse.
- Management is also easier as overcrowding could become a problem if controls are not put in place.

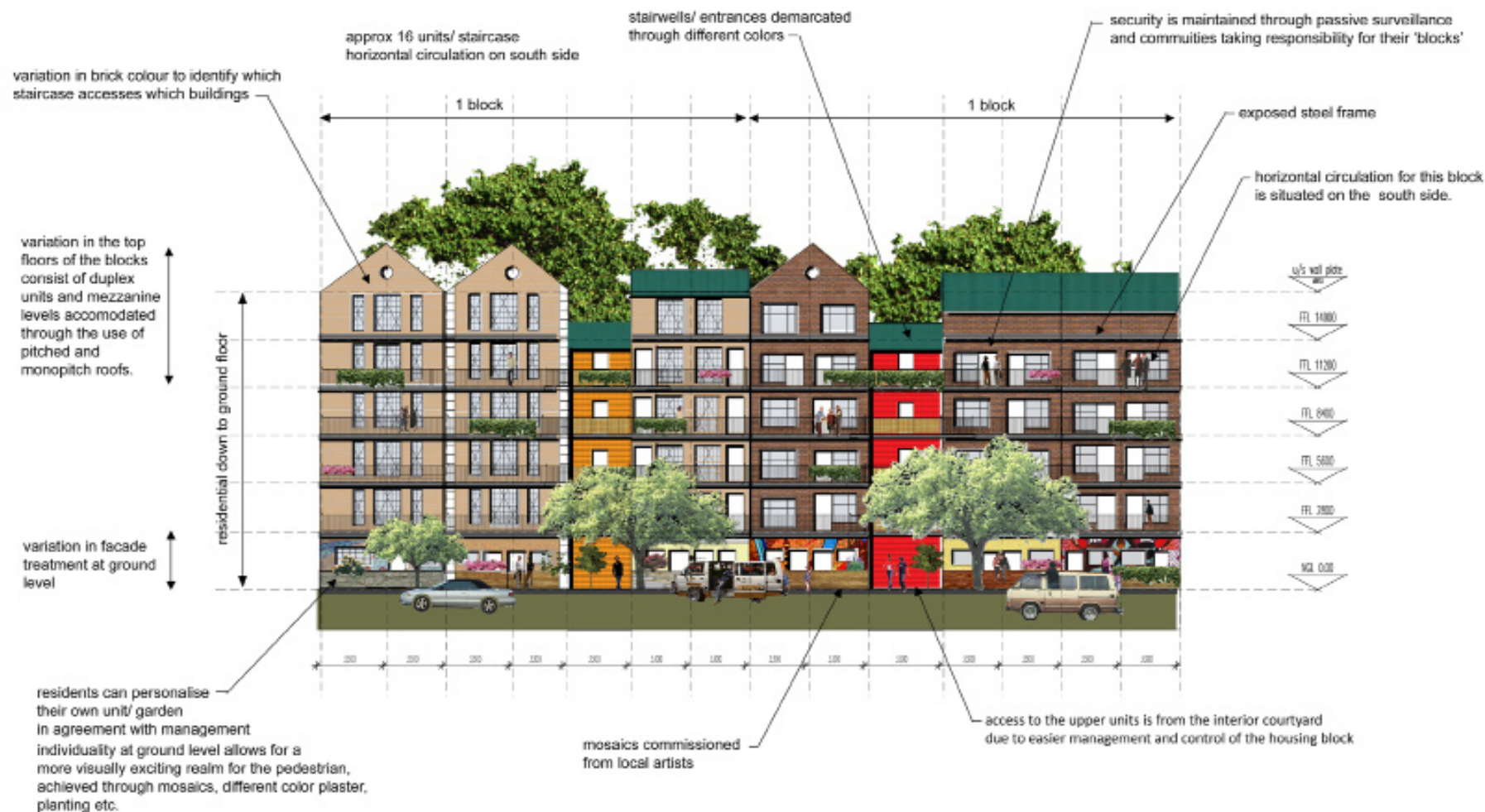
Although the view is to sell off the units in the long term, initially controls have to be put in place to avoid the sub-letting of the units.

116

This is a revised elevation where the buildings are no longer accessed from the street. The access has been moved into the internal courtyard.

One staircase still only accesses a minimal amount of units so as to create communities within the scheme.

In order to create legibility in terms of which staircases access which units, the same colour brick is applied to those buildings as well as using the same windows. One further step is to give all the doors the same colour as well as applying this colour to the staircase.



RECLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG



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NEWTOWN HOUSING



MP [2008-10-08] SKETCHPLAN 001

38 STEVEDS ROAD, BURRIGONG NSW 2586
TEL: 02 675 7828 & 0411 111 111
www.mharc.com.au

New Buildings



Two existing buildings to be retained as a creche and elderly persons meeting room

Partial elevation of Jeppe Street as indicated on the plan

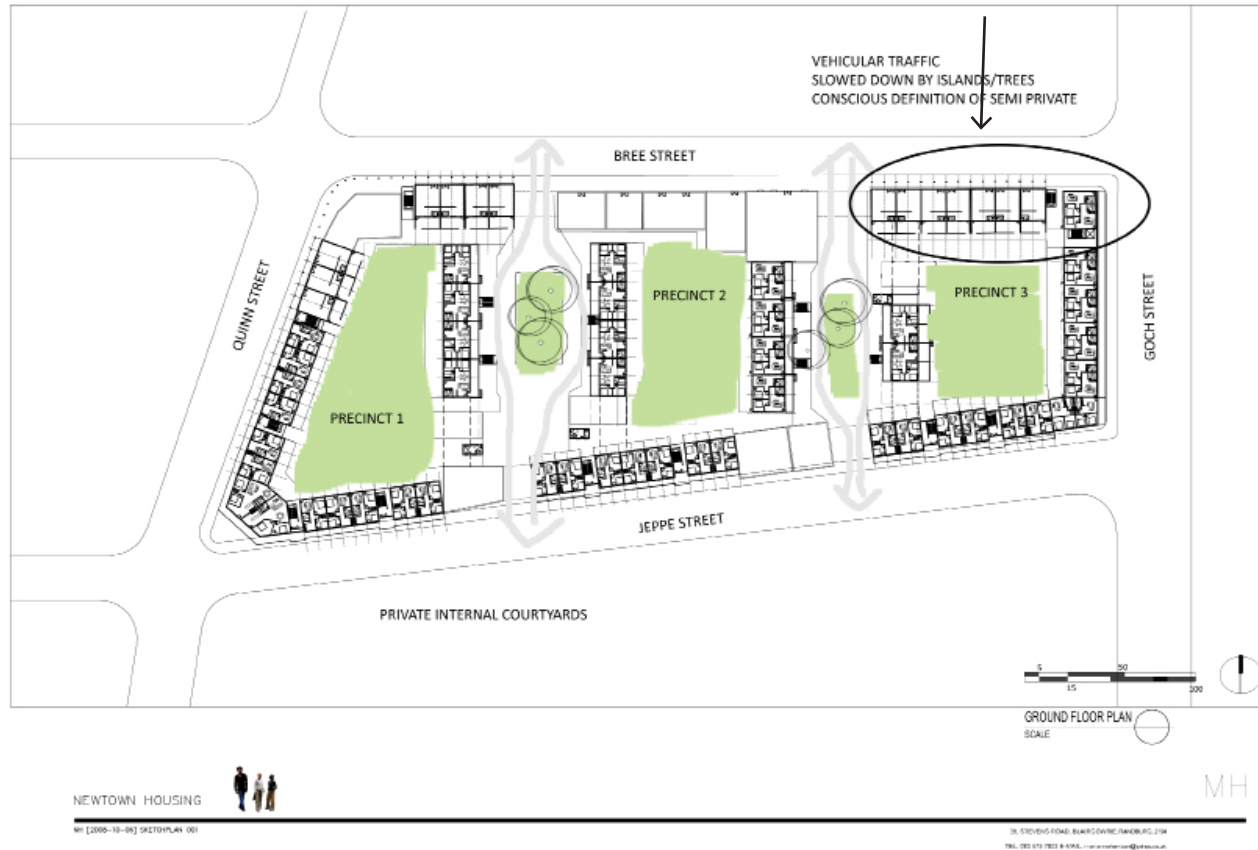
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Elevations

Bree Street is a busy commercial street and I intend to keep it this way. By introducing new ground floor retail units and commercial space above, the street is activated and passive surveillance is increased. Colonnades are introduced to provide shelter as well as define thresholds.

New buildings



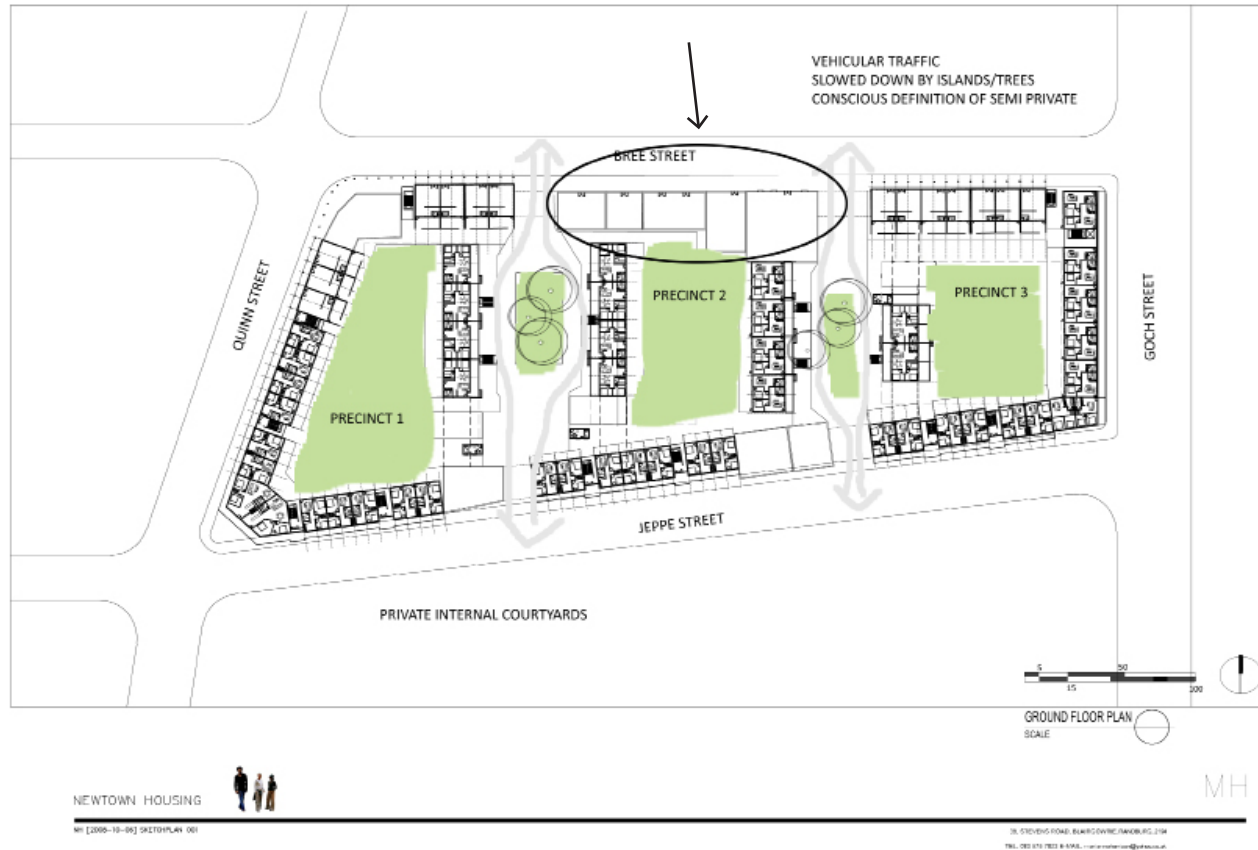
NEWTOWN HOUSING

NH [2008-10-09] SKETCH ELEVATION 001



MH

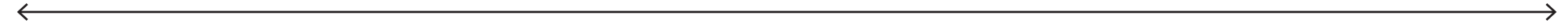
DR. STEPHEN FOWLE, BLACKDOWN, HANOVER, 2104
TEL: 080 875 7100 W: 0800 111 111 E: stephen.fowle@blackdown.co.uk



Elevations

Some existing buildings have been retained and are to be used for a commercial nature.

Existing buildings



Existing buildings on Bree Street

NEWTOWN HOUSING



NH [2008-10-06] SKETCH/ELEVATION 001

PARTIAL ELEVATION
SCALE



MH

10, KATAPURU ROAD, W. BAY OF PLEASANT, PLEASANT BAY, 7104
TEL: 080 510 1700 / 0800 444 111 / WWW.HANSONDESIGN.CO.NZ







NEWTOWN HOUSING



UNITS





Units

Unit Size

This should be seen as a guide related to the economic aspects of the scheme:

- 1 Bedroom: 35 to 45 square metres
- 2 Bedroom: 48 to 65 square metres
- 3 Bedroom: 75 to 100 square metres

Consideration should be given to inclusion of a proportion of units from 10% to 15% at the upper end of these norms in order to address market demands for some of the higher income unsubsidised units.

Unit locations

In general, 3 bedroom units should be located in low-rise units, at or in close proximity to the ground floor, in order to enable family supervision of children playing outdoors.

Smaller, 1 bedroom and 2 bedroom units should be located within low, mid, or high-rise building types.

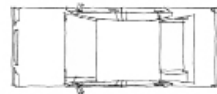
Ground floor units should be designed, where practical, to have front and rear entries, enabling the residents of such units to have dual access to the privatised courtyard spaces in each precinct as well as common walkways within the development and along public sidewalks on public street on the perimeter. This dual orientation will provide an active surveillance of residents along common walkways and external roads, increasing security and making common spaces defensible.

Housing precincts should be designed to form smaller social groupings within the overall development.

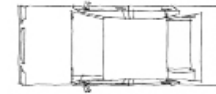
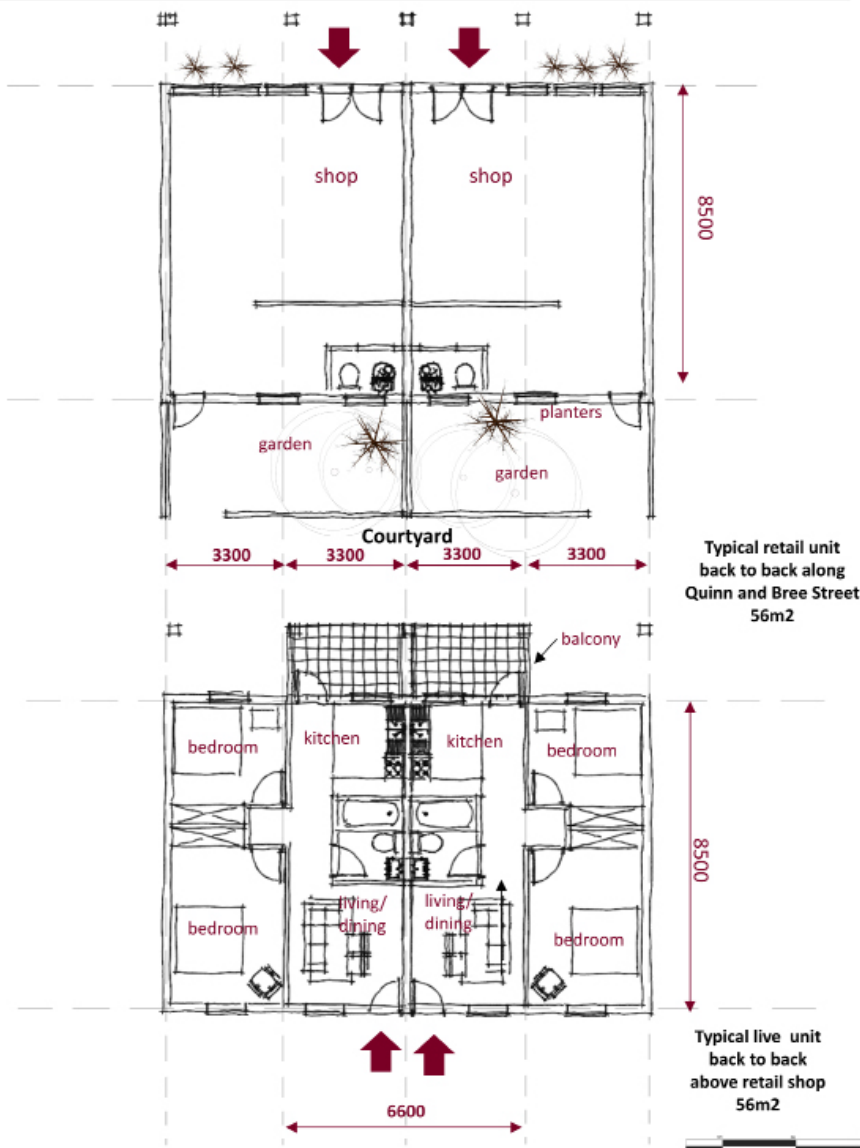
Each precinct should have a comparable balance of unit sizes and building types, making each precinct relatively similar in terms of

number and types of families who live in them.

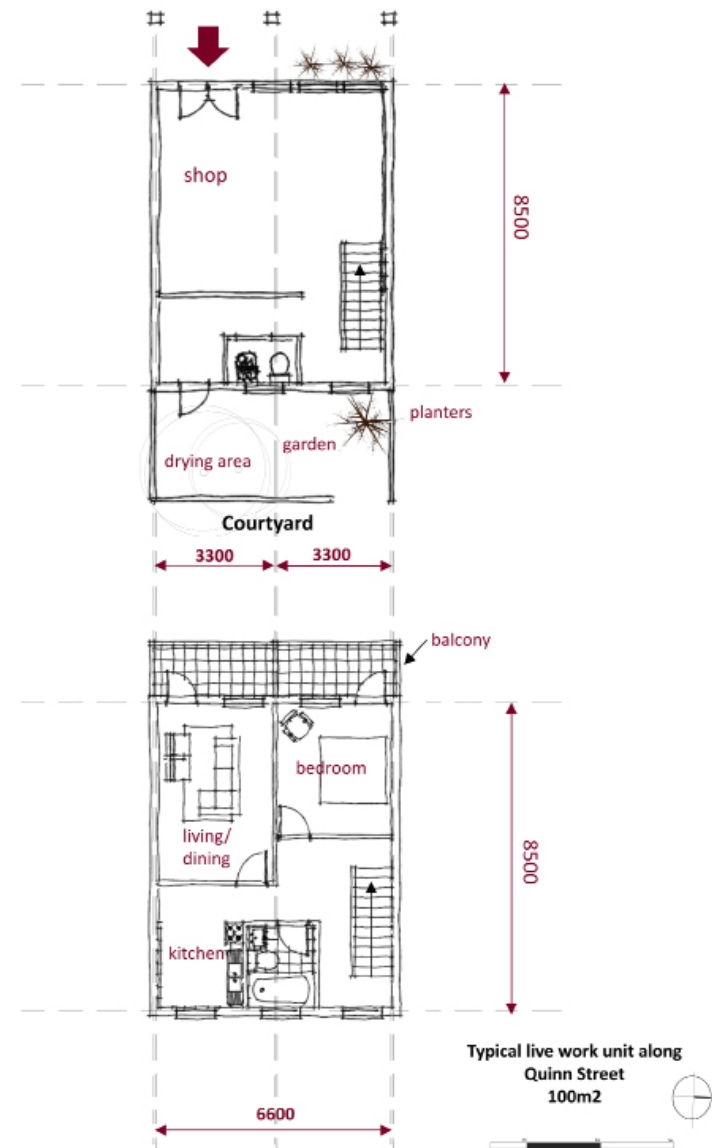
Subsidised units should not be isolated in a single precinct or building type, but rather should be evenly distributed across the three precincts and building types of this Newtown development.

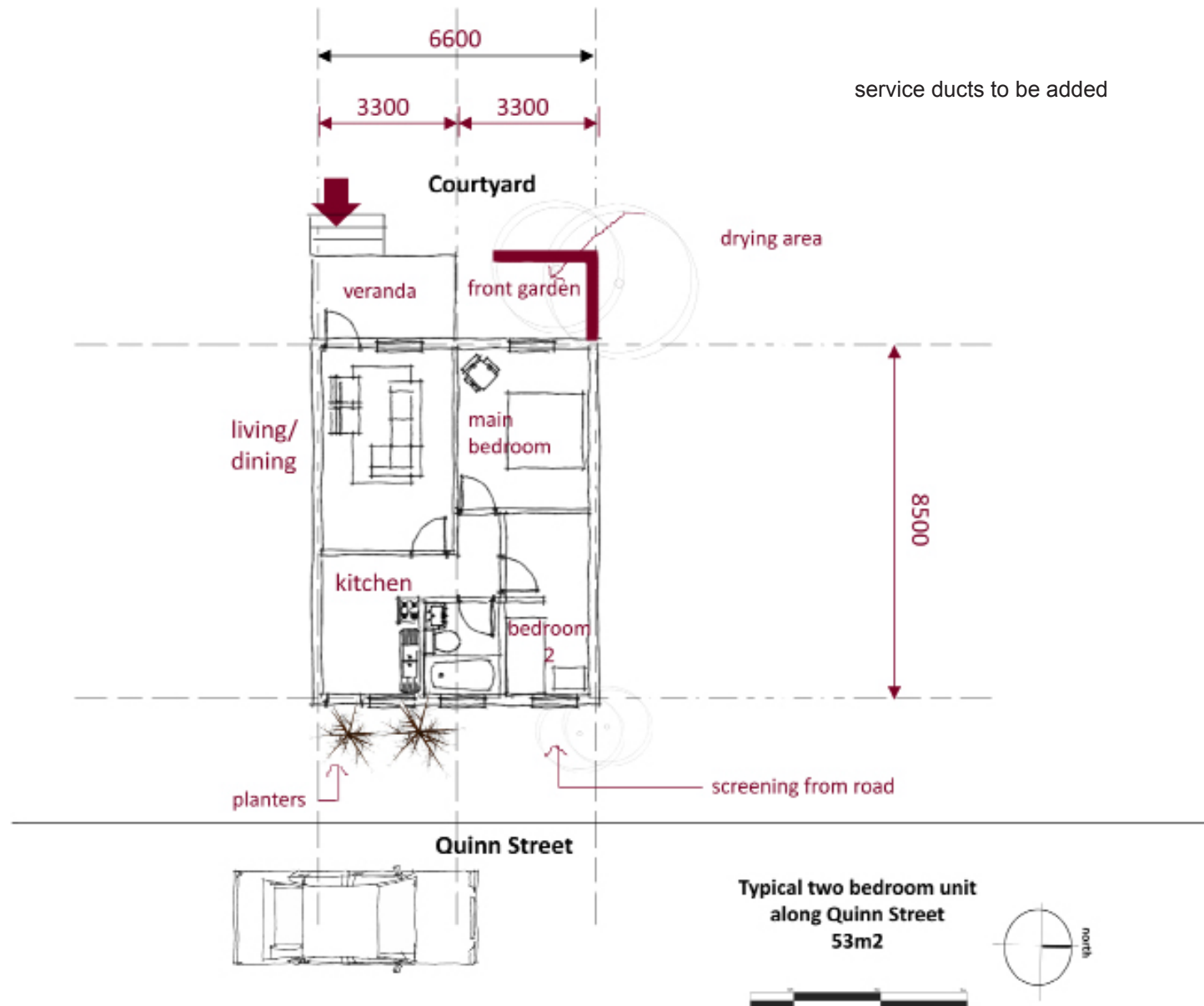


Quinn Street / Bree Street

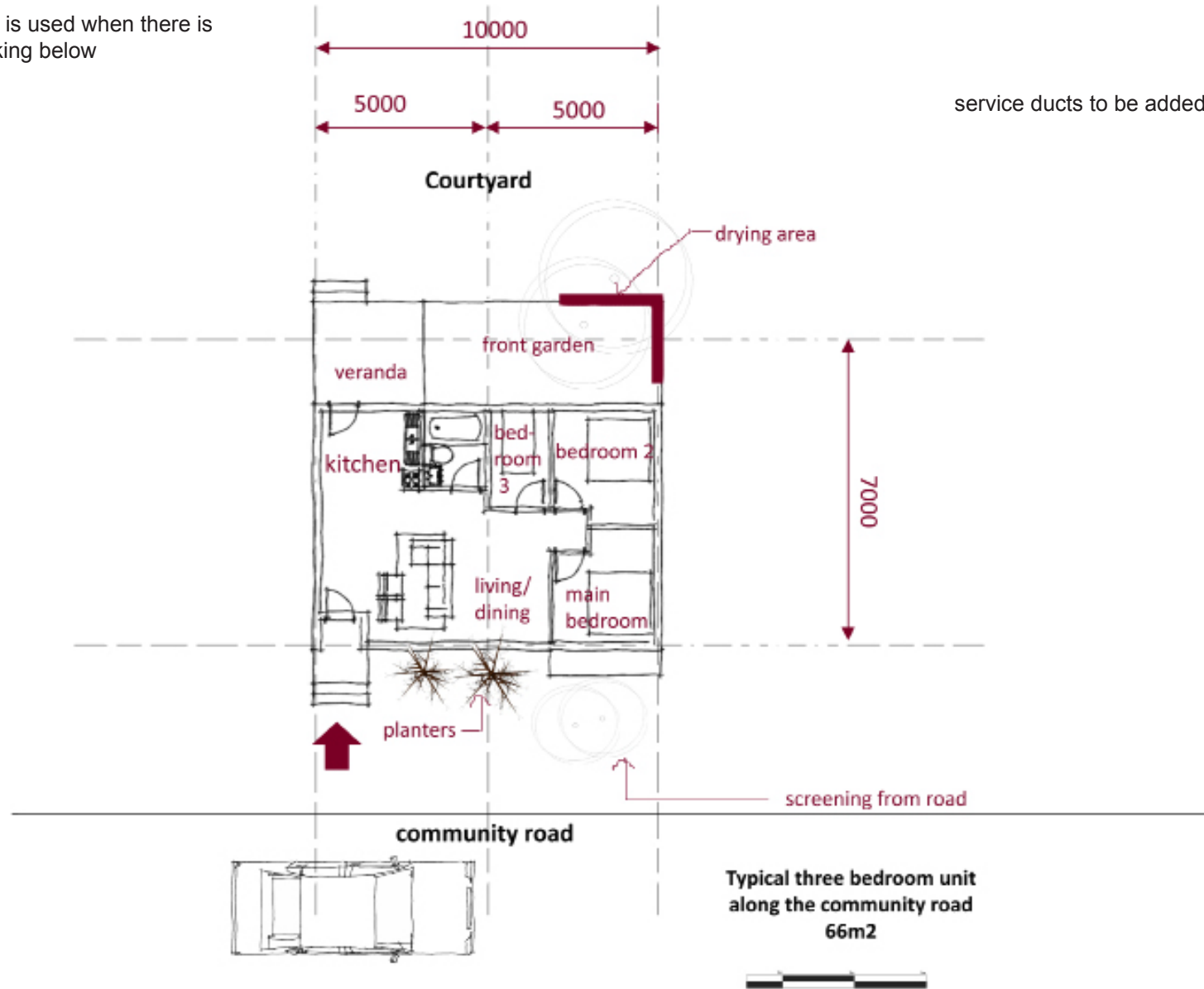


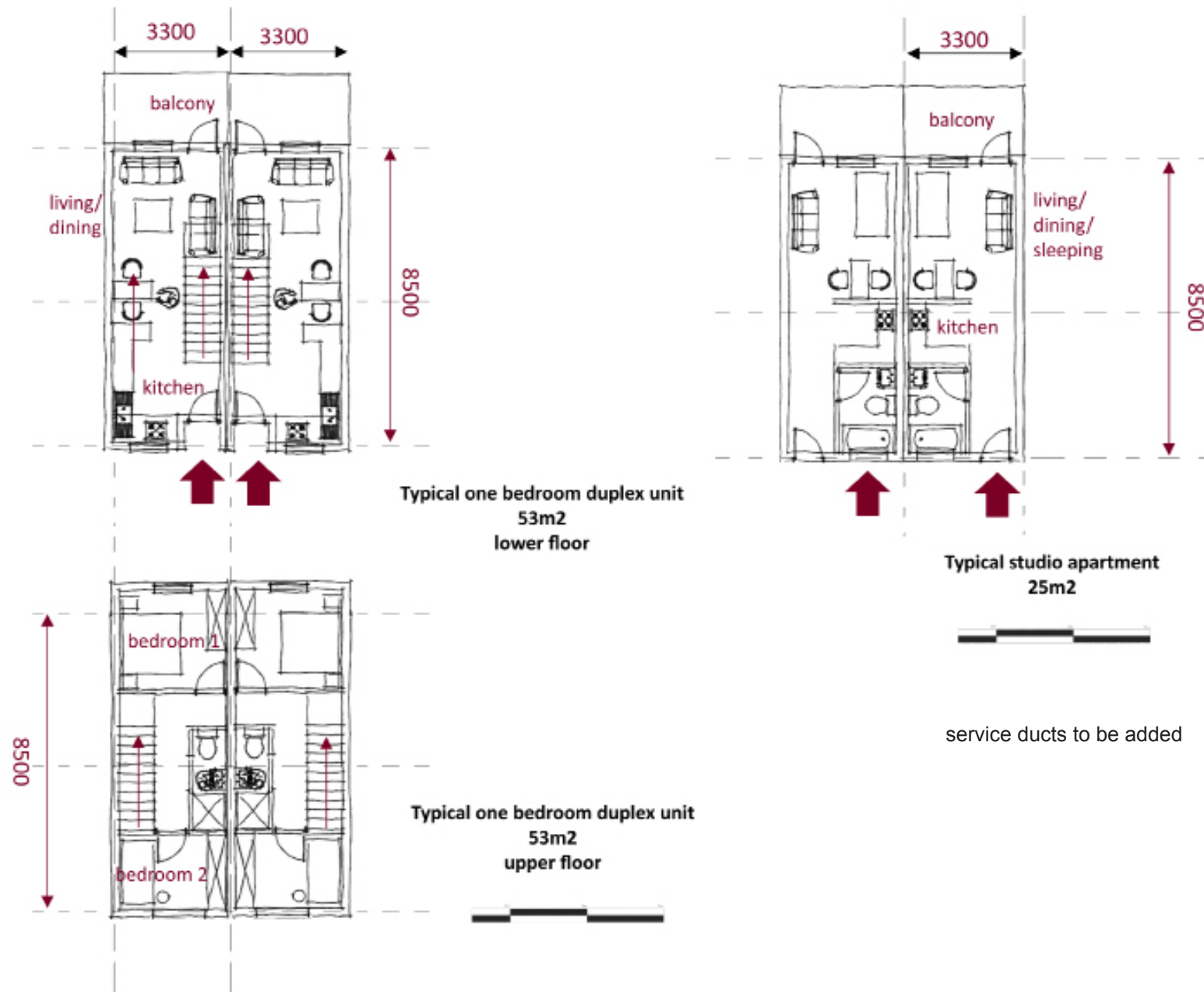
Quinn Street



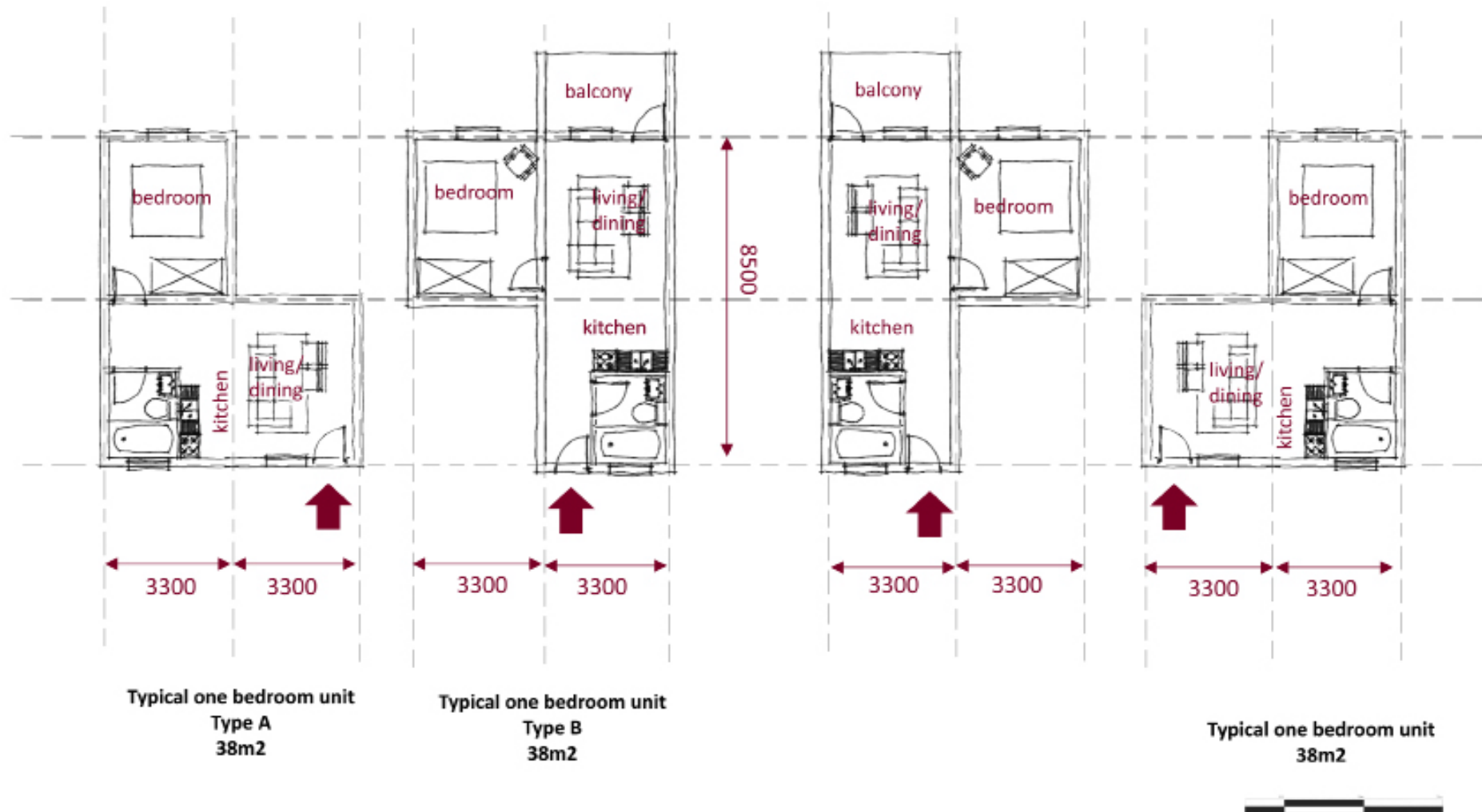


A different grid is used when there is basement parking below

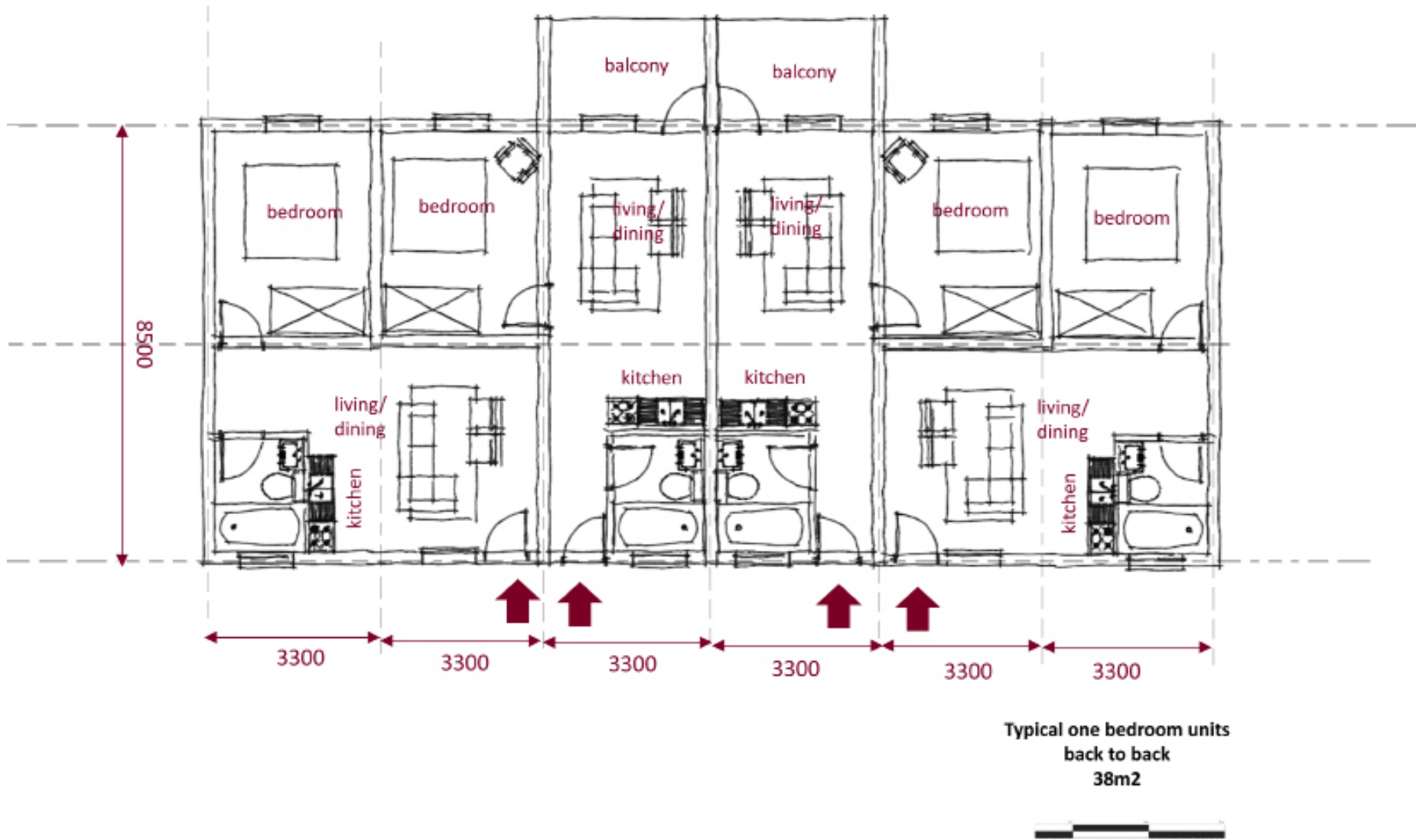




service ducts to be added



service ducts to be added







Structure and Materials

Frame

The structure is made out of a steel frame consisting of 254 x 145 X 21 I Beams.

Walls

Brick is to be used for the walls and the steel beams are to be exposed on the facade.

Floors

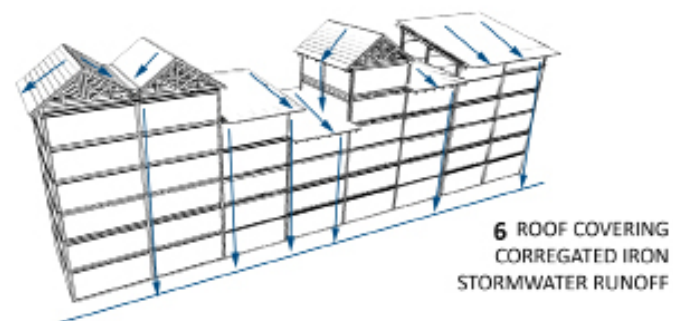
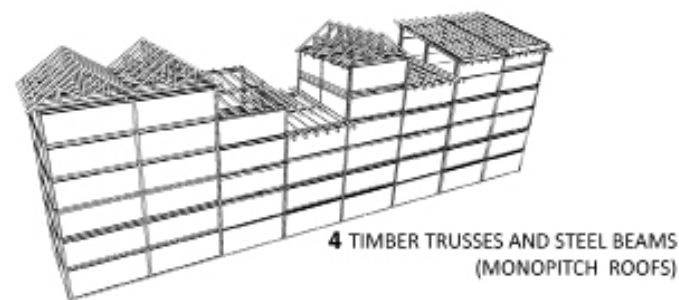
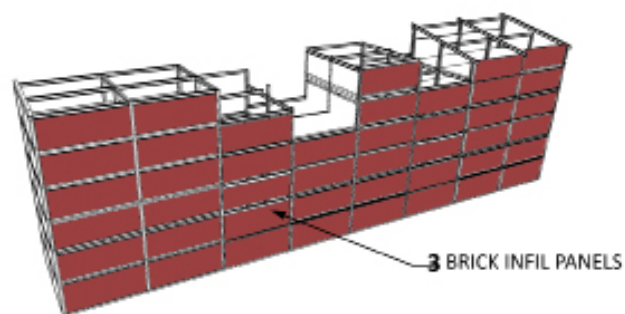
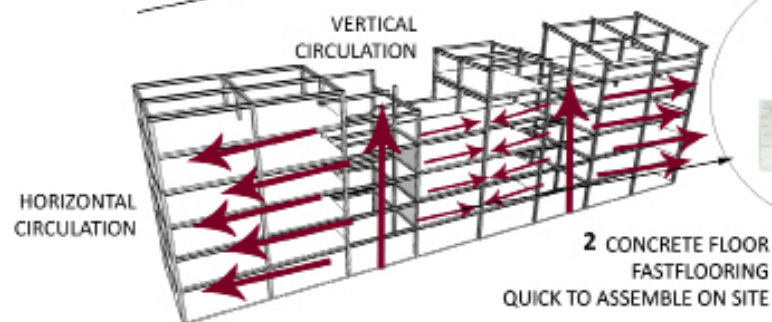
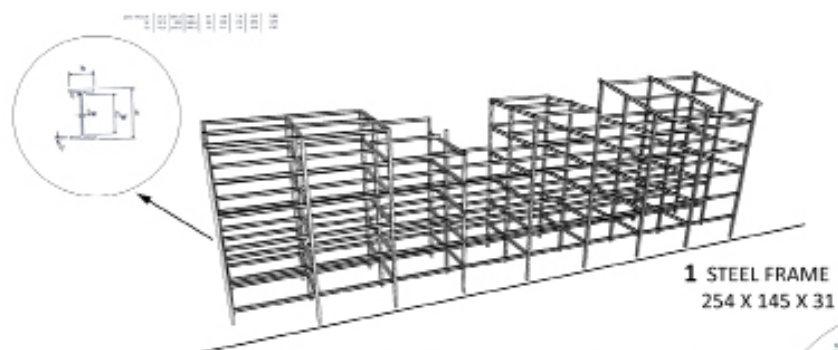
The floors are concrete slabs which are manufactured off site and arrive on a lorry. They are quick to assemble on site and are compatible with the steel frame.

Foundations

The soil is of a clay nature and due to the height of the buildings, pile foundations are to be used.

Roof

The roofs are to be timber trusses for the pitched roofs and steel rafters for the monopitch roofs. The variation in roofs are to accommodate for stormwater which is dispersed via gutters and down pipes and released into the city's stormwater drains.



STRUCTURE
SCALE no scale



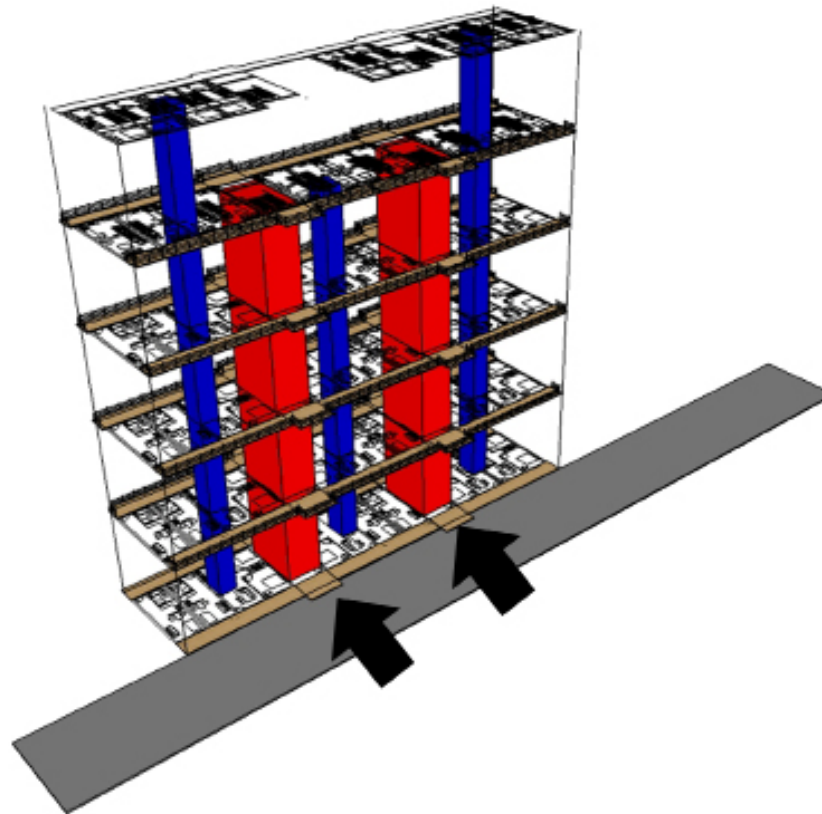
NEWTOWN HOUSING



MH (2008-10-08) SKETCH ELEVATION 001

MH

30, STYFURUS ROAD, NEWTOWN, SAUSTRALIA 5000
TEL: 080 010 1000 FAX: 080 010 1000



All wet services are located above one another. Horizontal circulation is on the exterior and the staircases are either located within the building or the internal courtyard.

Access is off from the internal courtyard and not off the street,

—
 VERTICAL CIRCULATION █
 HORIZONTAL CIRCULATION █
 WET SERVICES █

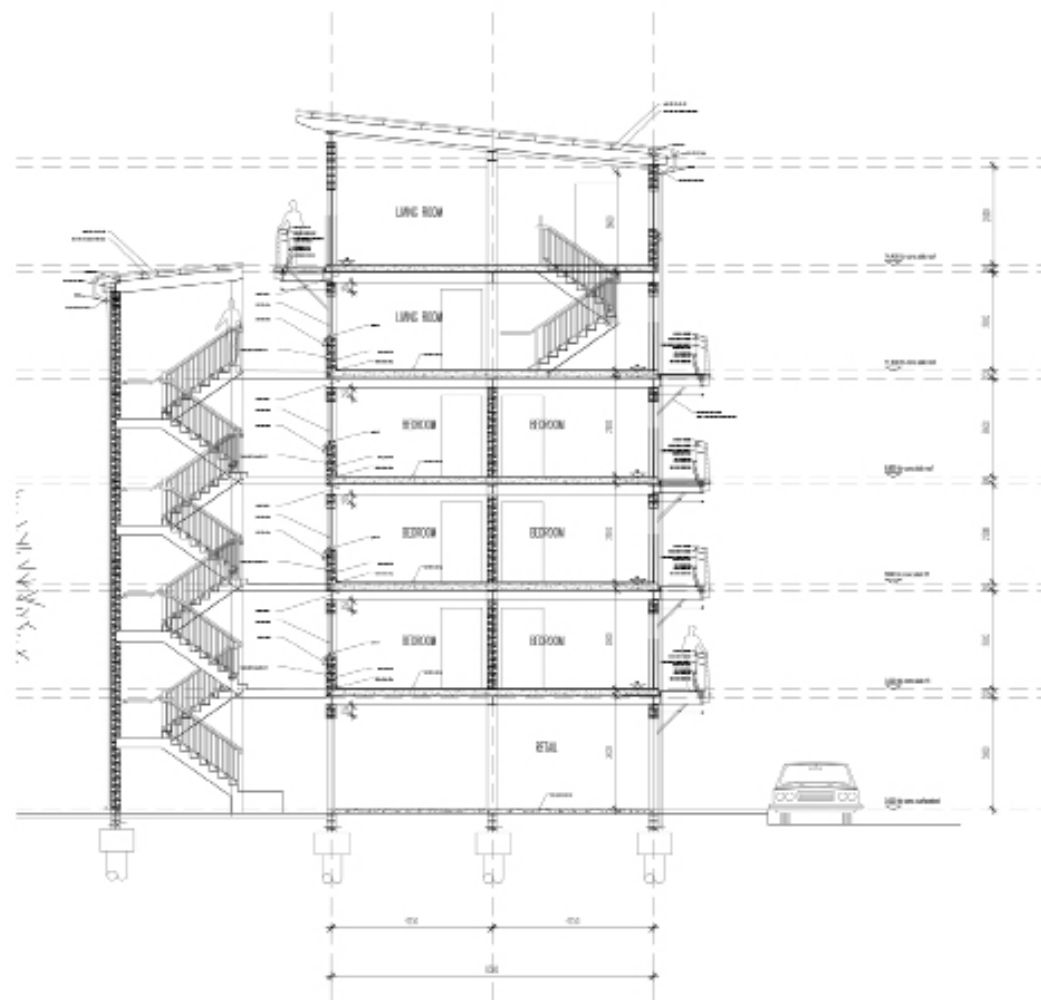
SERVICES
 SCALE 1:1000

MH

NEWTOWN HOUSING

MH [2008-10-06] SKETCH/ELEVATION 001

38 STEVENS ROAD, BLAIR GOWRIE, HANDBURG, 2194
 TEL: 083 315 7833 E-MAIL: hannah@hannahguy.com



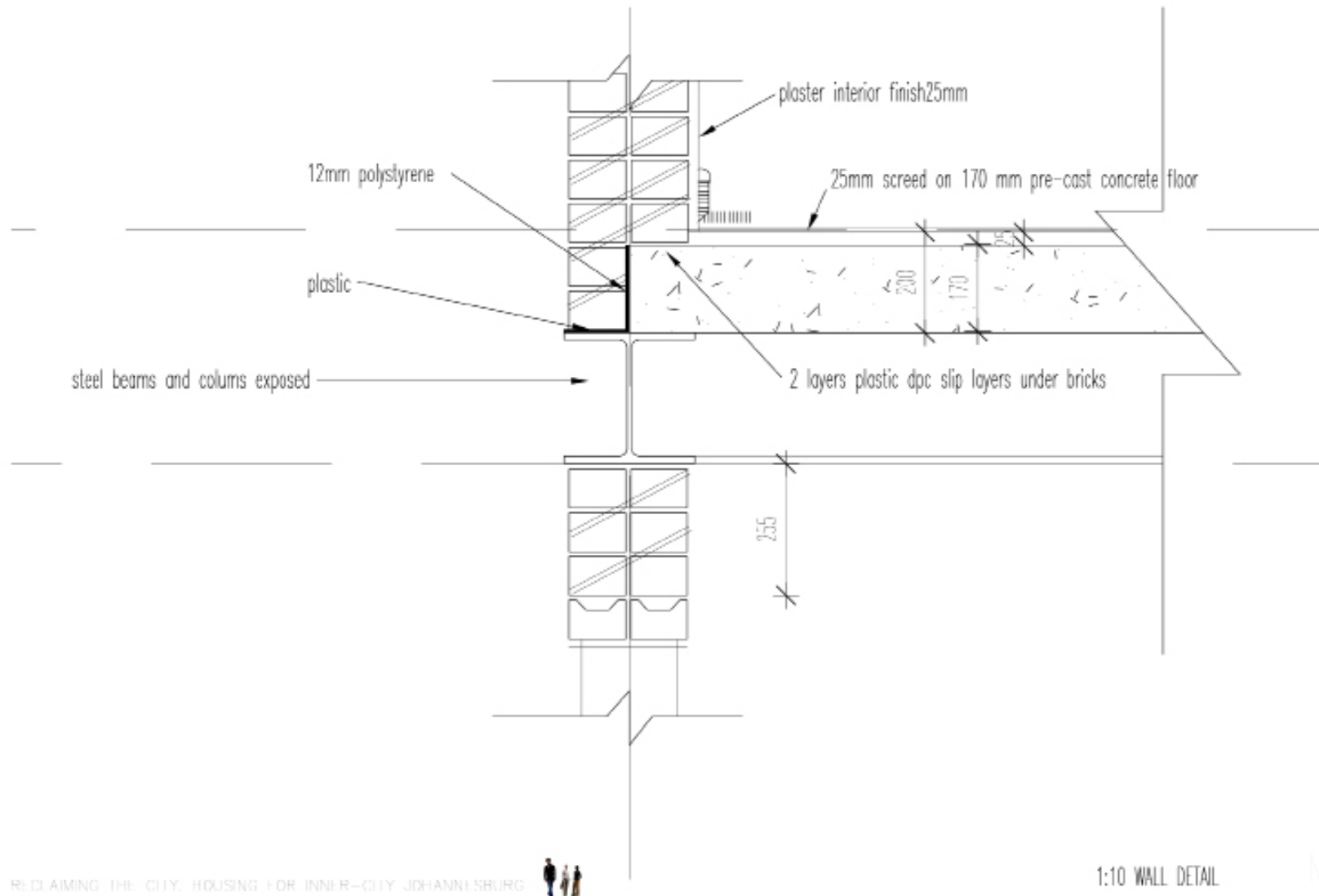
RECLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG



TYPICAL CROSS SECTION

WORKBOOK CHAPTER 9 - STUDENT NO. 00000000 - SUBMISSION FOR MARCH 2008

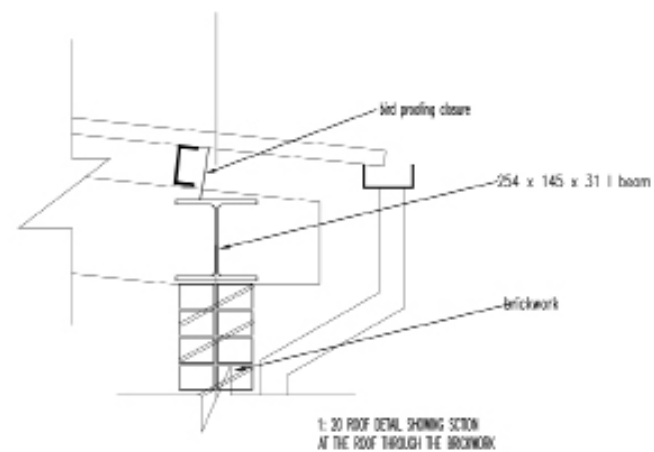
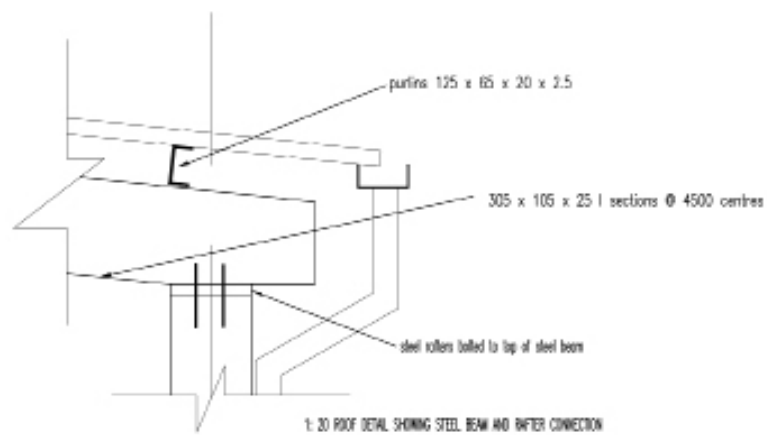
3A, RIVINGTON ROAD, JOHANNESBURG, 2196
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RE-CLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG

BRUNNEN LAMPSON - STUDENT ARCHITECTURE - SUBMISSION FOR MARKET 2008

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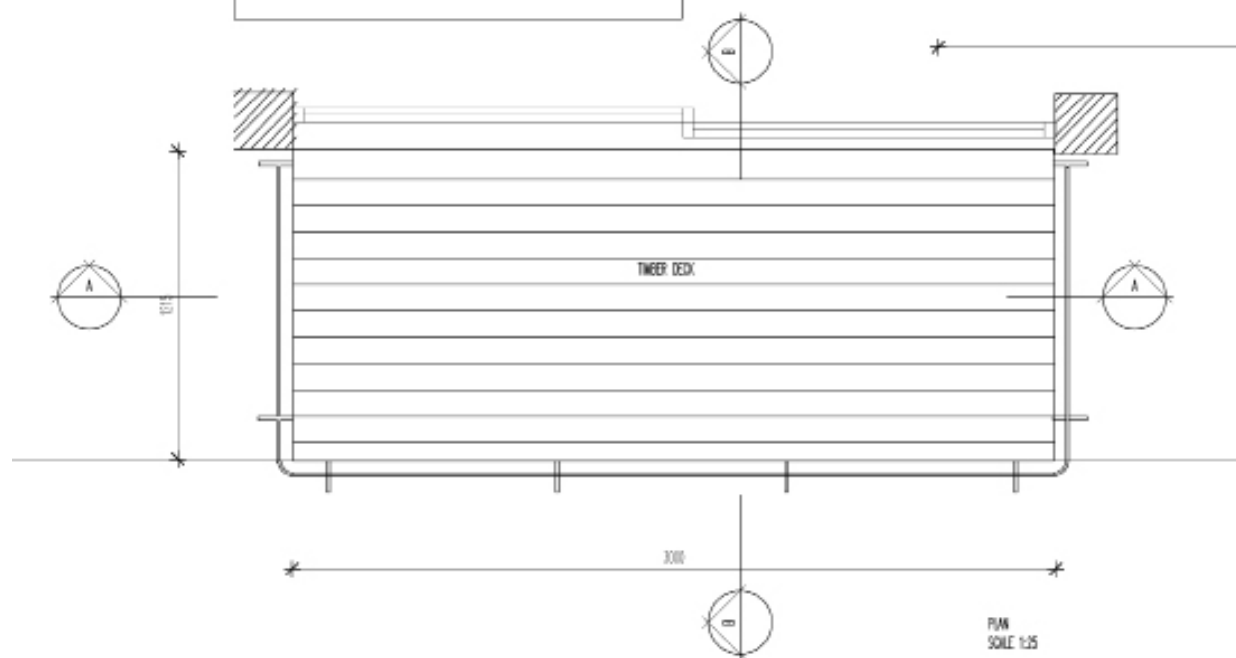


NOTES

1. STEEL WORK TO BE PRIMED AND PAINTED BLACK
2. ALL STEEL THICKNESS, SIZE OF MEMBERS AND FIXINGS TO ENGINEER'S SPECIFICATION



ELEVATION
SCALE 1:25



PLAN
SCALE 1:25

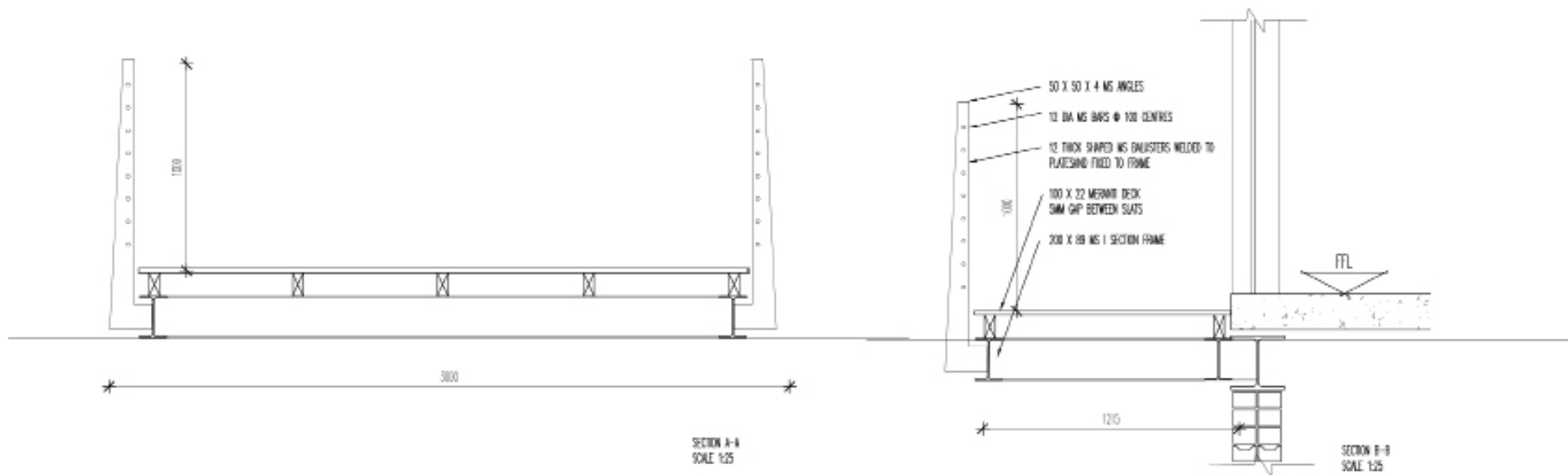
RECLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG

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RECLAIMING THE CITY: HOUSING FOR INNER-CITY JOHANNESBURG



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NEWTOWN HOUSING



FINAL MODEL





OVERALL SCHEME LOOKING NORTH WEST



VIEW INTO DISSECTING ROAD



SOUTH ELEVATION



OVERVIEW LOOKING SOUTH WEST



DETAIL ELEVATION-
JEPPE STREET





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