

# LOUIS BOTHA AVENUE DEVELOPMENT CORRIDOR

STRATEGIC AREA FRAMEWORK



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# 01. POINT OF DEPARTURE

- A. Challenges & Issues
- B. Contextualising the Corridors
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- F. Broad Outcomes
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- H. Supplementary Studies



# 01. POINT OF DEPARTURE

## 01A Challenges & Issues

Past spatial planning practices have left Johannesburg with sprawling low-density areas of settlement, lacking viable public transport systems. The majority of working class and poor citizens are still living on the fringes of the city, commuting daily, often at considerable cost, long distances to access work and economic opportunities. Private car use is a significant driver of energy consumption and greenhouse gas emissions in the City.

The “Corridors of Freedom” are one of the ways in which the City will transform entrenched settlement patterns that have kept many marginalised communities at the outskirts of the City, away from economic opportunities and access to jobs and growth.

Future growth in and around these corridors is envisaged as medium to high-rise residential developments growing around the transit nodes, gradually decreasing in height and density as it moves further away from the core. Social infrastructure, schools, clinics, police stations and government offices will be strategically located to support the growing population.

Such a compact City is energy efficient, provides residents with greater access, promotes social cohesion and creates a vibrant urban environment. For the average Johannesburg resident, the option to live in close proximity to public transport facilities with easy access to the City and to make use of an improved transport system can be a life-changing experience.

The social fabric of families in the city is compromised as a result of absent parents, already on their way to work when their children prepare for school and arrive back at home late, unable to share a family meal, supervise homework or spend quality time with their spouse and children.

The Corridors of Freedom will usher a new era of access to opportunity and a choice for residents to work, stay and play within the same space without the inconvenience and high costs of travelling over long distances every day.

The majority of South Africans have been forced by apartheid social engineering to live on the outskirts of cities and towns. In terms of these policies they were temporary sojourners, fit only to provide cheap labour to industry and commerce, unable to share in the fruit of their production.

Although the transition to democracy in 1994 brought fundamental changes in political freedom to the majority of South Africans many of the racially-based settlement patterns remained in place.

These patterns can change through the development of the corridors of freedom based on an effective public transport system and high-density neighbourhoods closer to the places of economic opportunity giving rise to sustainable human settlements.

*“...We envisage a future where the city will consist of well-planned transport arteries - the “Corridors of Freedom” – linked to mixed-use development nodes with high density accommodation, supported by office buildings, retail developments and opportunities of education, leisure and recreation....”*

Extract taken from “Corridors of Freedom” Re-stitching our city to create a new future”



The National Household Travel Survey (2003) conducted by Stats SA found that the average travel time between home and work for commuters making use of public transport is 59 minutes.

More than 1.3 million South Africans spend more than two hours a day travelling to and from their places of residence. To this can be added at least 30 minutes per trip spent on walking towards a station and stop and waiting for the bus or train to arrive.

For the Johannesburg resident living in areas such as Diepsloot, Orange Farm or Ivory Park, this means waking up before dawn every working day to access transport that will take them to working places in the city or the Northern Suburbs. In the evening the process is repeated.

The survey also showed that 16.4% of Gauteng residents spend more than 20% of their monthly income on transport.

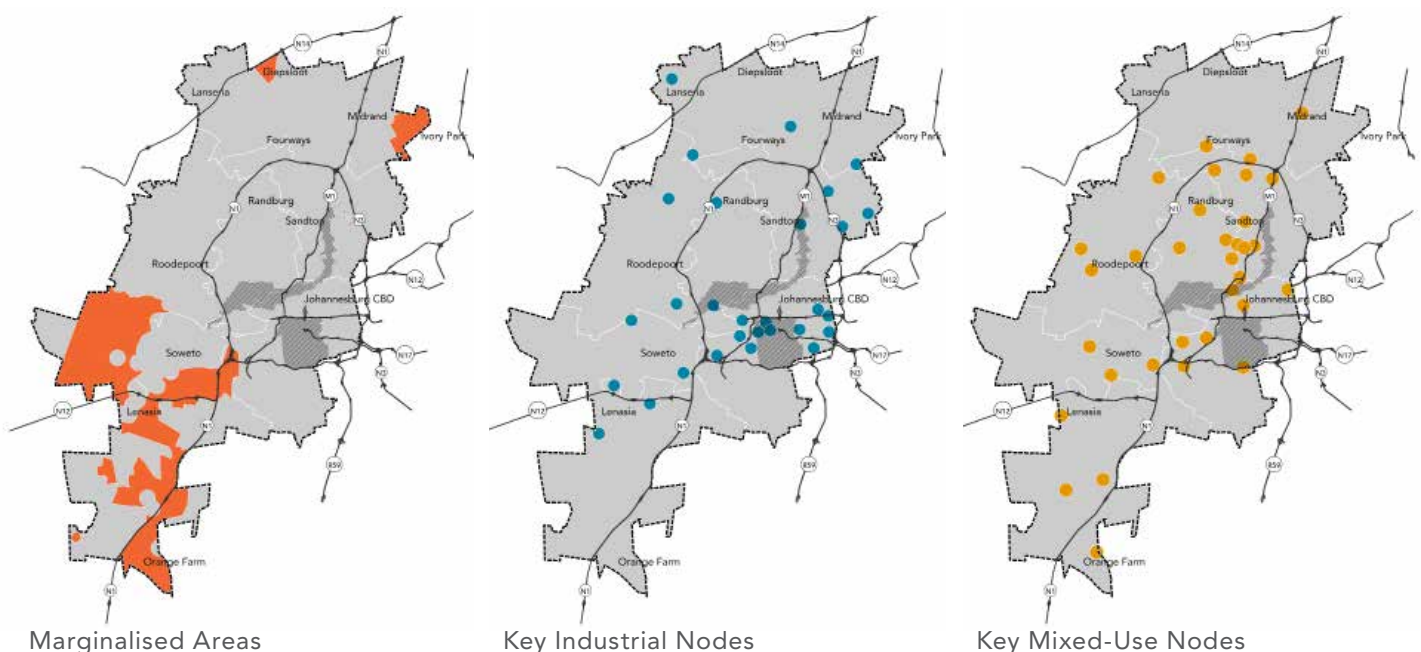
The “Corridors of Freedom” are designed to reverse these trends. Medium- and high density housing will be encouraged next to the transport arteries and around the transport hubs – linking home and work. Travel time will be significantly reduced because of shorter distances and more effective public transport.

The cost of transport will also be significantly lowered for many residents, leaving households with more money to spend on food, education, shelter and other basic necessities of life. The quality of life enjoyed by families will be improved because parents will be able to spend more time with their families, sharing experiences and supporting their educational and leisure activities.

The average Johannesburg resident will in future be able to work, live, stay and play within the same geographical space. Neighbourhoods will be supported by social infrastructure – local shops, local parks, local schools, local clinics and local police stations. Residents will be given a wider range of choices of housing with a strong emphasis on rental accommodation in well-located and managed developments.

Cutting down on carbon emissions and exhaust fumes will lead to a cleaner environment and improvements in the health of the population and the quality of life they enjoy. Johannesburg will continue to lead South Africa towards a low-carbon economy – ensuring a sustainable future for all its citizens.

**FIGURE 1:**  
Spatial Imbalances  
Underpinning the SAF





A 10% shift of private car users to public transport for their daily commute will result in an 8% reduction in energy consumption. Future planning must address both the issues of sustainability and inequity.

The most efficient urban form is compact, mixed land-use with an extensive public transport network that includes high intensity movement corridors and with attractive environments for walking and cycling.

The development of dedicated transport corridors hold a number of advantages for Johannesburg:

- The City will focus productive land use and economic activities in areas where transport infrastructure – both rail and road – are already present or being planned
- The demand for private motorised transport will be reduced and the average trip length will be shortened
- Public transport will become a viable alternative because residents will live in closer proximity to work, shopping and leisure opportunities
- High-density housing will stimulate opportunities for the SMME sector and small-scale operators in the informal economy
- The environmental impact of public transport in high-density areas will be significantly smaller than in the case of low-density urban sprawl reliant on private cars
- Residents will benefit because they will not have to spend so time and money on transport
- Learners will benefit because they will be closer to school  
Unemployed people will benefit because it will easier to get to places to look for work
- Factories will benefit because workers will come to work on time
- Shopping centres and hawkers will benefit along the corridors and nodes due to increased number of people passing their shops
- Our environment, and health. will benefit with less private car use and dangerous carbon emissions
- Construction and other related industries will benefit because of the job opportunities throughout the lifetime of the project



**FIGURE 2**  
The Rea Vaya BRT  
System: The Backbone  
of the Corridors of  
Freedom

## 01B. Contextualising the Corridor

The City of Johannesburg is characterised by severe urban inefficiencies and an urban form and social profile that makes it one of the most inequitable cities in the world. The distribution of urban densities, the low productivity of land use, high levels of energy consumption and carbon emissions, as well as unsustainable and distorted per capita expenditure on infrastructure are but some of the issues the City have to address in changing course to ensure a better urban future.

The City is developing a new approach to face its challenges of urban inefficiency and inequality head-on.

In line with national plans and strategies, which call for urban restructuring and improving urban efficiencies, the City is embarking on a distinctive interventionist approach to re-stitch the city together, using the philosophy of Transit Oriented Development and its associated strategies. The City is pursuing the national objective of building unity, by working towards social transformation and cohesion through spatial transformation.

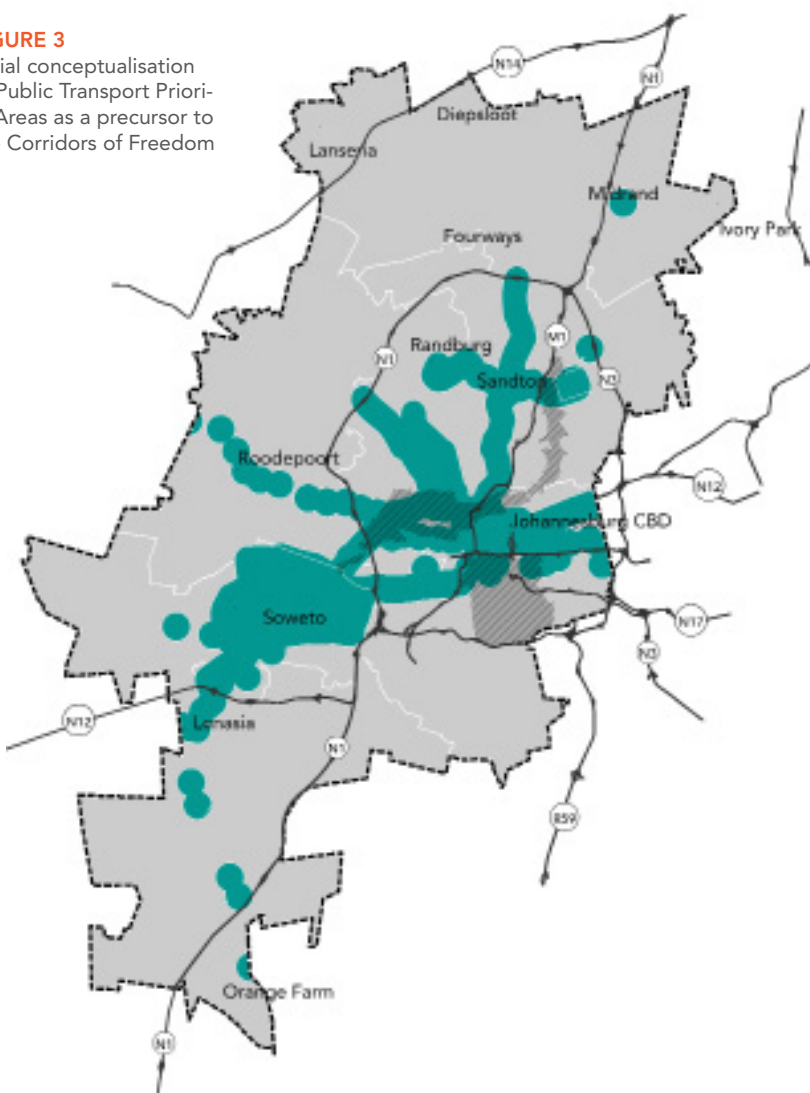
The City is driving a programme of transformation that responds to the triple challenges of poverty, inequality and unemployment - therefore inclusive growth is how success will be measured.

Corridors are fundamentally about realising the agreed to national programme of building a non-racial, non-sexist, socially and economically cohesive South Africa, using instruments such as Transit Oriented Development and corridor development to transform space and our relationship to it.

The Corridors of Freedom are an initiative that seeks to build a new city along and around mass transit movement lines in selected areas of the City to create housing, jobs and social opportunities in proximity to each other.

The objectives of energy efficiency, climate change mitigation, economic growth and social inclusion are re-enforcing and can be simultaneously achieved by compact, connected and resilient communities centered around the transit nodes in the Corridors of Freedom. Corridors of Freedom will be achieved through incentives to capture value and increase investment and will result in reorganised city space with increased overall economic efficiency and productivity.

**FIGURE 3**  
Initial conceptualisation of Public Transport Priority Areas as a precursor to the Corridors of Freedom



## 01C. Intentions

The City has recently completed its Strategic Integrated Transport Plan Framework which identifies a high level public transport network for 2040, based on population growth, areas of employment growth, projected densities and has identified a number of key public transport corridors.

Some of the public transport corridors will function mainly as transit corridors, transporting large numbers of people from one part of the city to another. Other public transport corridors have the potential to grow into development corridors, with the opportunity to not only link mixed-use development nodes, but to articulate public transit with housing, new employment activities and social amenities, while optimising investment capacities.

These development corridors, the Corridors of Freedom, have the potential to transform entrenched settlement patterns and guide future city growth towards areas best serviced by transit infrastructure and the full range of vibrant urban amenities and services.

The intention of the current initiative is to optimise development in and around high intensity movement corridors, to create more inclusive and accessible opportunities for the residents of Johannesburg and create economies of scale that are attractive to investors.

The future vision is premised largely on theories and best practices around the notion of Transit Oriented Development of TOD, which seeks to create urban spaces with a vibrant mix of high density residential developments, office, retail and recreational spaces within walkable precincts anchored by transit facilities, serviced by high quality social amenities.

The Corridors of Freedom and their priority transit precincts will be the priority focus for the City's investment programmes over the next decade, which includes:

- Investing in bulk infrastructure to accommodate significant increases in development densities
- Releasing and developing municipal land to achieve the precinct development vision
- Expanding and improving public transit infrastructure and facilities
- Investing public funds in public environment upgrading and the provision of public amenities and community facilities to serve a significantly larger and denser population
- Fast-tracking development of privately owned properties to achieve higher densities, and more intensive mixed land uses
- Capturing the value generated through proximity to improved transit facilities by introducing special rating districts where appropriate
- Implementing place-making interventions to ensure that the precincts are activated

## 01D. The Corridors of Freedom & Transit Oriented Development

### THE CORRIDOR AS A GROWTH MECHANISM

There are some fundamental characteristics of corridors that underpin their role as growth mechanisms in the urban context:

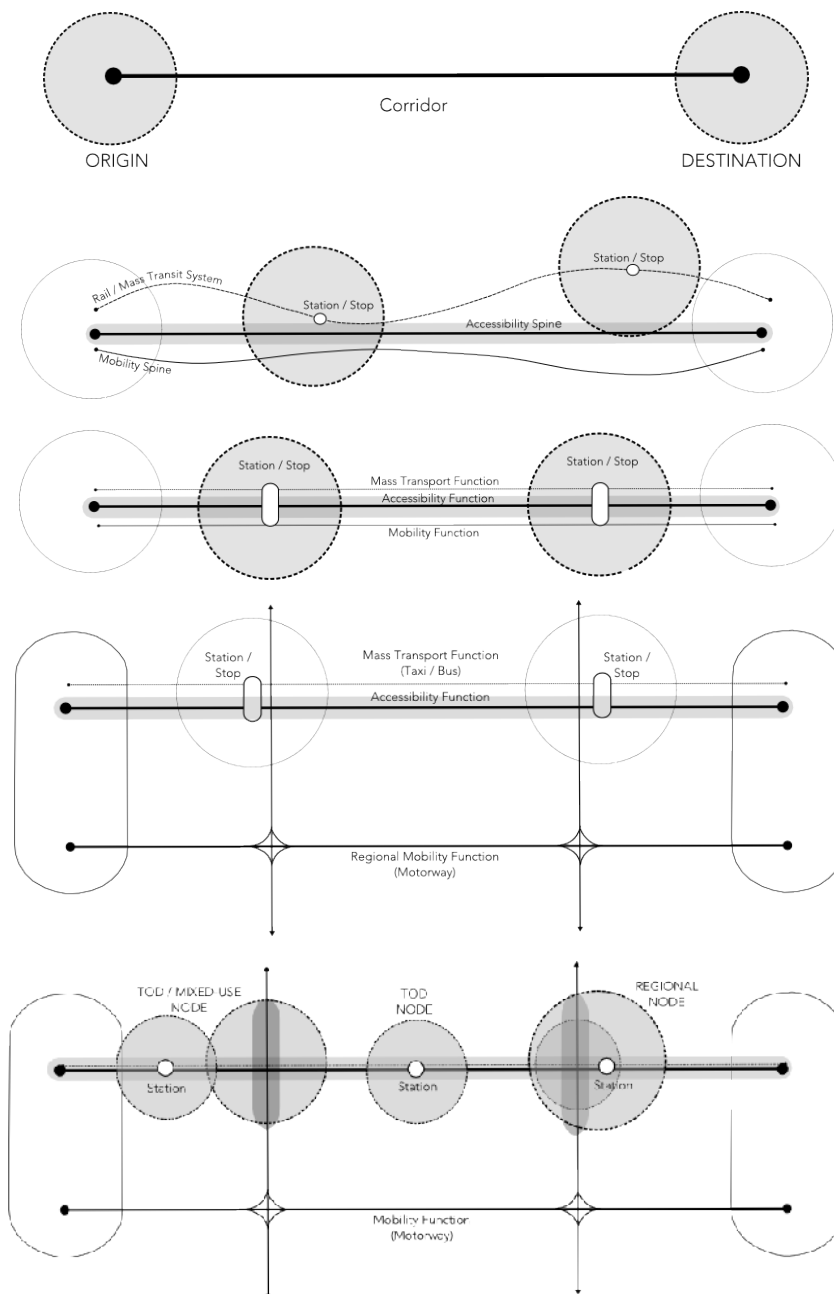
- Corridors are fundamentally origin and destination driven – i.e.: they start somewhere and end somewhere.
- Corridors are generally made up of a series of multi-stranded movement systems, predicated on some form of Public or Mass Transit, with stations within walking distance. The main roads form an important feature of the corridor, often including metropolitan or regional Freeways.
- In many contexts, a corridor is characterised by road based, overlapping, and often duplicated bus and taxi systems, as it is in the case in the Corridors of Freedom.
- The streets that link the different movement systems together, the “rungs” of the ladder, are integral to the broader corridor system, very often developing as “high streets”;
- The points of intersection of the cross streets and the major corridor elements become significant nodal areas, with the propensity to become major metropolitan and regional nodes, depending on the generative capacity of the system at these points;
- In cases where the cross-streets are limited in their capacity to generate and sustain, much of the urban energy and development potential is channelled towards the points of intersection, emphasising their role in the corridor system; If the

points of intersection are limited, in terms of capacity or integrative potential, their role in the overall corridor system is reduced.

It is around the above broad understanding of the role of corridors that the basis of an approach to intervention can be structured. This approach is based on an interpretation that:

- Development corridors function both in terms of mobility and accessibility. The proposed Corridors of Freedom are significant both as mobility spines from a high level perspective within the Gauteng City Region, as well as a public transport and pedestrian spines, supported by existing active street edges and land-uses
- In their present form, the corridors already acts as a significant spine on which diverse sectors of the city move and interact
- The proposed BRT systems, and related forms of public transport, will form the backbone to the corridors, adding significant economic and social value
- The development of the study area needs to be directed in such a way so as to attract private investment, while not compromising the public realm and associated social amenities
- The study area will be approached on both a macro and micro scale, analysed through the larger scale forces that draw land uses into the corridor, and the finer scale forces of attraction which draw users between one point and another.

The catalytic potential of the investment in infrastructure in and around the corridor is intended to generate significant investment from the private sector in new residential and mixed-use opportunities, a factor that is critical in areas that are currently characterised by relatively low levels of new investment from this sector.



**FIGURE 4:**  
The Corridor as a  
Growth Mechanism

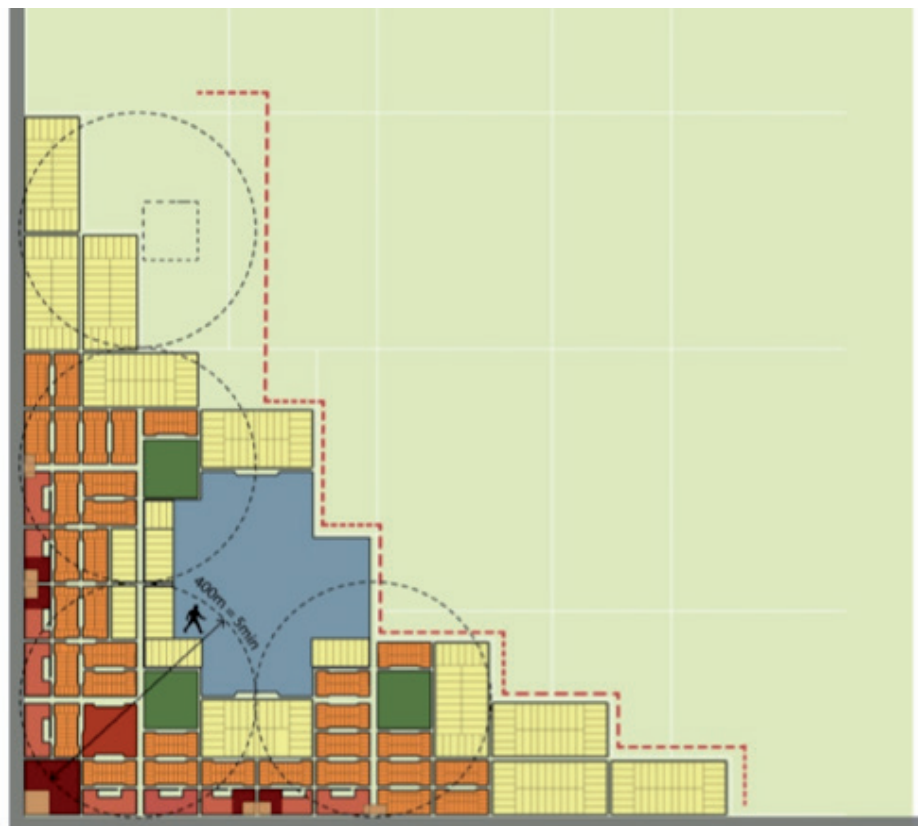
## THE RATIONALE AND CHARACTERISTICS OF TRANSIT ORIENTED DEVELOPMENT (T.O.D.)

Transit Oriented Development, or TOD, is an approach to development that focuses high intensity mixed land uses within walking distance of a transit station or within a transit corridor.

Redeveloping existing urban fabric around transit nodes within the Corridors of Freedom is a critical component of the development

strategy. A successful TOD strategy requires the creation of a hierarchy of TOD centres (not all transit hubs and nodes have the same potential); a focus on creating compact, mixed-use, walkable urban environments supported by civic spaces and amenities and the ability to leverage investment opportunities.

**FIGURE 5**  
TOD is premised on the notion of high intensity mixed use development and social infrastructure within walking distance of a transit node





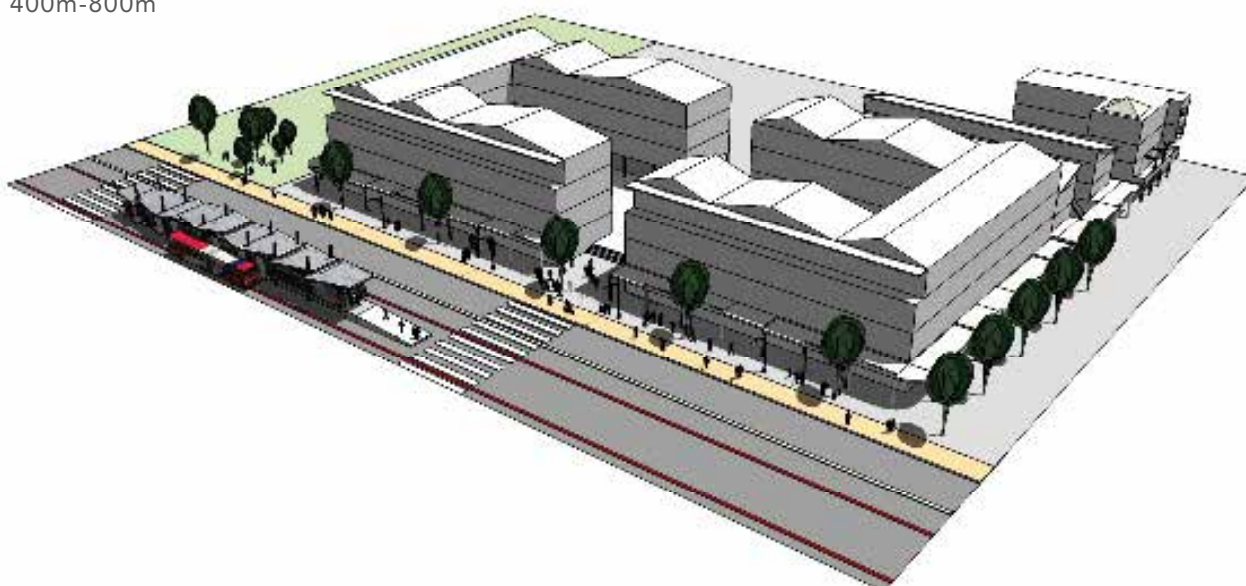
Successful Transit Oriented Development is generally characterised by:

- A vibrant mix of land uses including residential, employment, social services and retail activities, stimulating economic activity and significant provision for public or civic spaces
- Moderate to higher density, with housing typologies that engages with the public environment
- Prioritised pedestrian orientation/connectivity, including safe neighbourhoods designed for walking and cycling with sufficient facilities and attractive street conditions
- Transportation choices, but with discouragement of the use of private vehicles
- Limited managed parking to reduce the amount of land devoted to parking and discourage the use of private transport
- A road network laid out in the form of a topologically open grid
- Convenient transit stops and stations; extend to an easy walking distance radius of 400m-800m

The benefits of Transit Oriented Development as a mechanism for guiding growth in cities are numerous, in both the short and long term, and include:

- Increased land values and rentals in both residential and commercial property markets
- Reduced per capita motor vehicle travel, manifests in lower city-wide aggregate vehicle-kms travelled which reduces overall road congestion levels and travel times, with beneficial environmental consequences
- TOD neighbourhood residents are more likely to use public transport services easily accessible to them, increasing ridership levels and improving levels of operating cost
- Provision made for walking and cycling movements, and additional public spaces enhances the general liveability of neighbourhoods

**FIGURE 6**  
Public Transport  
Stations as a basis for  
redevelopment



## 01E. The Role of the SAF

The Strategic Area Framework provides the basic (spatial) mechanism for planning and implementation of the Corridors of Freedom. The document outlines the desired spatial response to the intent of the Corridors of Freedom vision, and the projects and programs required to realise this spatial vision. In short, the Strategic Area Framework:

- Provides spatial context for future development
- Guides investment decisions
- Identifies requirements and opportunities for transformation.

From a spatial policy perspective, however, the SAF does not exist in isolation to other levels of planning, but is considered rather as a key component within a broader package of plans, namely:

1. The GDS, which provides the over arching strategic vision for the City, identifying priorities and key challenge, growth targets, and a broad vision for the future City;
2. The IDP/SDF, which translate the intent of the GDS into a city scale policy framework, based on a thorough situational analysis and a development perspective;

3. The Regional Spatial Development Framework (RSDF), which provides the overall structure for an area defining key structuring elements and broad zones for development within an administrative region;

### 4. THE SAF (The Current Initiative)

5. Precinct Plan, which provides detail design and development guidance for specific local areas or nodes.

This relationship is elaborated in the adjoining table, which details the specific scope of each of the components of the “Package of Plans”






The proposals emanating from the SAF will be focused on Spatial Policy on the one hand, providing locational guidance and response guidelines for growth and intensification within the broader corridor area.

On a more programmatic level, the SAF also identifies specific spatial projects and interventions that would be required to realise the spatial vision of the Corridor, including:

- Public Transit Projects
- Bulk Infrastructure Projects
- Social Infrastructure Projects
- Public Environment Project



**TABLE 1**  
The SAF In the Context of a Package of Plans

Growth & Development Strategy (GDS)		
The GDS provides the overarching strategic vision for the City, identifying priorities and key challenge, growth targets, and a broad vision for the future City	<ul style="list-style-type: none"> <li>• Basis for future growth strategy,</li> <li>• Considers long term strategies and growth priorities</li> </ul>	
IDP/SDF		
The IDP and accompanying SDF translate the intent of the GDS into a city scale policy framework, based on a thorough situational analysis and a development perspective. This stage of planning should set out clearly the overarching Vision for future development and the potential role of the City within the broader context.	<ul style="list-style-type: none"> <li>• Should be based on an integrated analysis and assessment.</li> <li>• Should contain a clear statement on vision and an attainable set of development goals, objectives and targets</li> </ul>	
Regional Spatial Development Framework (RSDF)		
Provides the overall structure for an area defining key structuring elements and broad zones for development. Should translate the Policy Framework spatially into a clear framework. May comprise a series of iterations including the evaluation from an infrastructure planning point of view.	<ul style="list-style-type: none"> <li>• Requires a detailed assessment of the overall area across a range of sectors.</li> <li>• Delivers a broad structure, identification of corridors, spines, nodes and the intentions and development intensity for zones.</li> </ul>	
Strategic Area Framework (SAF)		
Should translate the spatial framework into distinct local areas and provide more detail guidance at a local area scale. This may be developed at a scale of an existing small town as part of an Urban Renewal Plan and or for defined precincts within a spatial framework for larger urban areas.	<ul style="list-style-type: none"> <li>• Delivers a set of spatial structuring mechanisms and broad development guidelines</li> <li>• Makes proposals for desired uses, intensity with form and space directives.</li> <li>• Identifies Spatial Projects and interventions required to realise the Vision</li> </ul>	
Precinct Plan		
Provides detail design and development guidance for specific local areas, nodes or corridors. This should extend beyond land use guidance and deal specifically with the overall urban form and public space intentions. May be referred to as an Urban Design Framework and include a detailed Action or Implementation Plan for projects within the study.	<ul style="list-style-type: none"> <li>• Requires detailed base data including topographic conditions, land audit etc.</li> <li>• Should include preliminary Traffic Road Layouts</li> <li>• Delivers detailed use, desired urban form directives, building guidelines and public space intentions.</li> </ul>	

## 01F. Broad Outcomes of the Strategic Area Framework

The Corridors of Freedom represent a significant key opportunity to address and successfully implement the developmental goals of the city as outlined in the 2012/2016 COJ IDP.

The approach outlined in the Strategic Area Framework therefore recognises the potential of the corridor to realise a number of high level outcomes and long-term benefits:

### *IMPROVED URBAN EFFICIENCIES*

- Viable public transport service
- Reduced car dependency and shorter trip lengths
- More people closer to work, shopping and leisure opportunities
- Lower per capita infrastructure cost
- Efficient service provision
- Accessibility to economic and social opportunities

### *ECONOMIC, SOCIAL AND ENVIRONMENTAL SUSTAINABILITY*

- Reduced energy consumption and carbon emissions – environmental benefit and improved health and quality of life
- Neighbourhoods supported with full range of social amenities
- Higher land productivity

- Residents will have a wider range of choices of housing – more rental in well located areas
- Residential and economic activities in areas where public transport is present
- Solid basis and support for long-term investment
- Increased land value and social value in critical areas of the city
- Enhanced liveability of neighbourhoods with improved public spaces

### *SPATIAL AND SOCIAL TRANSFORMATION*

- Housing options for range of income group
- Connected neighbourhoods
- Curtailed urban sprawl, with densification and infill-development overcoming the burden of fragmentation of urban areas
- Restructuring (Spatially and economically) the apartheid city toward a more integrated city form, which seeks to make the city more accessible to disadvantaged groups
- More efficient relationship between low-income housing, informal economies and public transport
- Integrative development that can benefit areas beyond the limit of the study area

**FIGURE 7**  
Urban growth structured along public transit spines



## 01G. Approval and Update of the Strategic Area Framework

The intent is for the Strategic Area Framework for the Louis Botha Avenue Corridor to be approved by Council and to serve to guide the overall development intent for the study area. By virtue of the proposals emanating from the study, it will be necessary for the SAF to replace the relevant sub-area tables in the 2010/11 approved Regional Spatial Development Frameworks applicable to the area.

More detailed planning may be undertaken for specific precincts in the SAF, such as the Balfour Park

Precinct area for example. These precinct plans will be formulated with the required technical and stakeholder inputs.

Further specialist studies and investigations may also be undertaken for various aspects within the SAF to guide decision making and projects, such as heritage assessments, environmental assessments and infrastructure investigations and plans, subject to their own procedures and requirements.

## 01H. Supplementary Studies

The Strategic Area Framework for the Louis Botha Avenue Development Corridor is focussed fundamentally on the spatial aspects of the initiative. Additional studies of the Corridors of Freedom corridor areas are proposed to

look more specifically at issues related to Heritage and economic development. In addition to these, there will be a process to undertake more detailed Traffic Impact Assessments in strategic areas.

## HERITAGE STUDY/STRATEGY

The Strategic Area Framework for the corridor area will ultimately lead to increased growth and development within existing areas, a number of which are characterised by heritage resources of different kinds. Heritage conservation must thus form an integral part of a broader planning process in order to preserve key historic elements within the new development.

In the shorter term, the existing processes and applications relating to heritage properties must be respected and supported as growth moves forward. A priority of the city in the context of the corridors, however, is to undertake a more comprehensive heritage study and strategy. The aim of such a study would be to identify, document and assess heritage resources within the survey area.

In accordance with the National Heritage Resources Act (NHRA), heritage sites shall be assessed in terms of their cultural value, architectural and aesthetic qualities, and social history. It is envisaged that such a study would be undertaken in partnership with heritage bodies, and would explore, inter alia:

- Criteria for the identification of heritage resources and cultural significance.
- Documenting of heritage resources.
- Opportunities for adaptive reuse which is compatible with the cultural significance of a heritage resource.
- The identification of significant elements within the townscape which form part of the character of an area which should be maintained.

## ECONOMIC STUDY

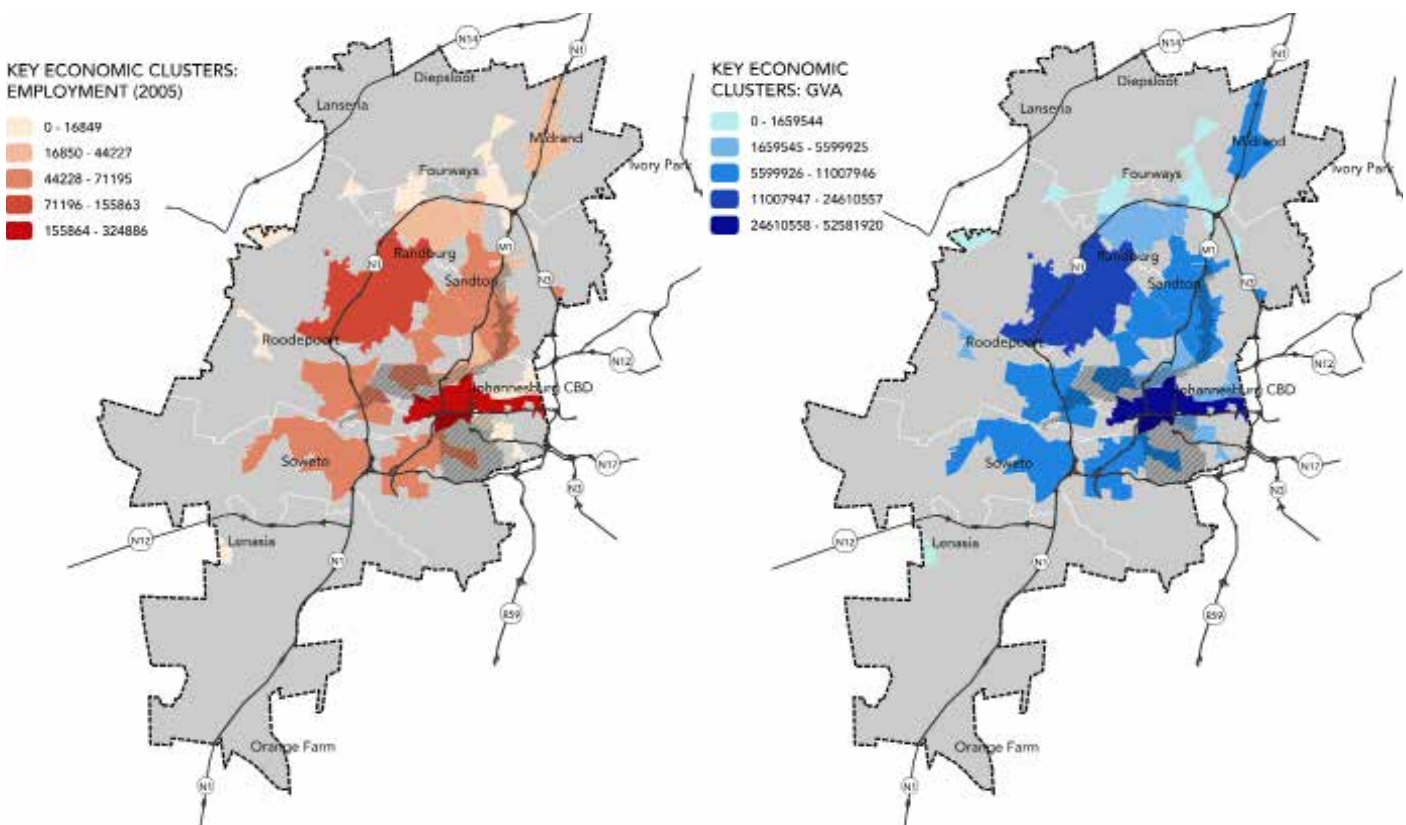
Whilst the Strategic Area Frameworks are focussed largely on the spatial dimension of the corridor framework, and thus the structure and role of the spatial economy within the study area, it is anticipated that a more extensive Economic Study will be undertaken to explore, at a broad level, the economic structure and prospects of the corridor area, and to identify specific economic opportunities that may exist in the area.

Whilst a detailed scope of works would still need to be finalised for this study, the following issues and opportunities could inform the work to be undertaken in this regards:

- Opportunities in and around existing industrial and related economic zones within the corridor area, specifically in terms of enhancing job creation potential and introducing new economic interventions where appropriate;

- Possible extensions to the Urban Development Zones (UDZ) for the city to include key industrial and employment zones;
- The use of key employment drivers such as tourism and heritage and the integration of existing resources in this regard as a means of optimising and extending their influence;
- The possibility of a specific "Incentive Package" that could drive development in specific economic sectors, or spatial clusters, where the opportunities exist (Such as the establishment of a Medical Precinct or related spatial cluster as a driver for the corridor;

**FIGURE 8**  
Key Economic and  
Employment Clusters  
in the City



# 02. STRATEGIC ASSESSMENT

- A. THE STUDY AREA
- B. KEY ISSUES & OPPORTUNITIES
- C. THE ROLE OF THE CORRIDOR
- D. OPTIMISING THE IMPACT OF THE BRT
- E. LINKAGES & CONNECTIVITY
- F. INFRASTRUCTURE
- G. HERITAGE SUMMARY





# 02. STRATEGIC ASSESSMENT

## 02A. Study Area

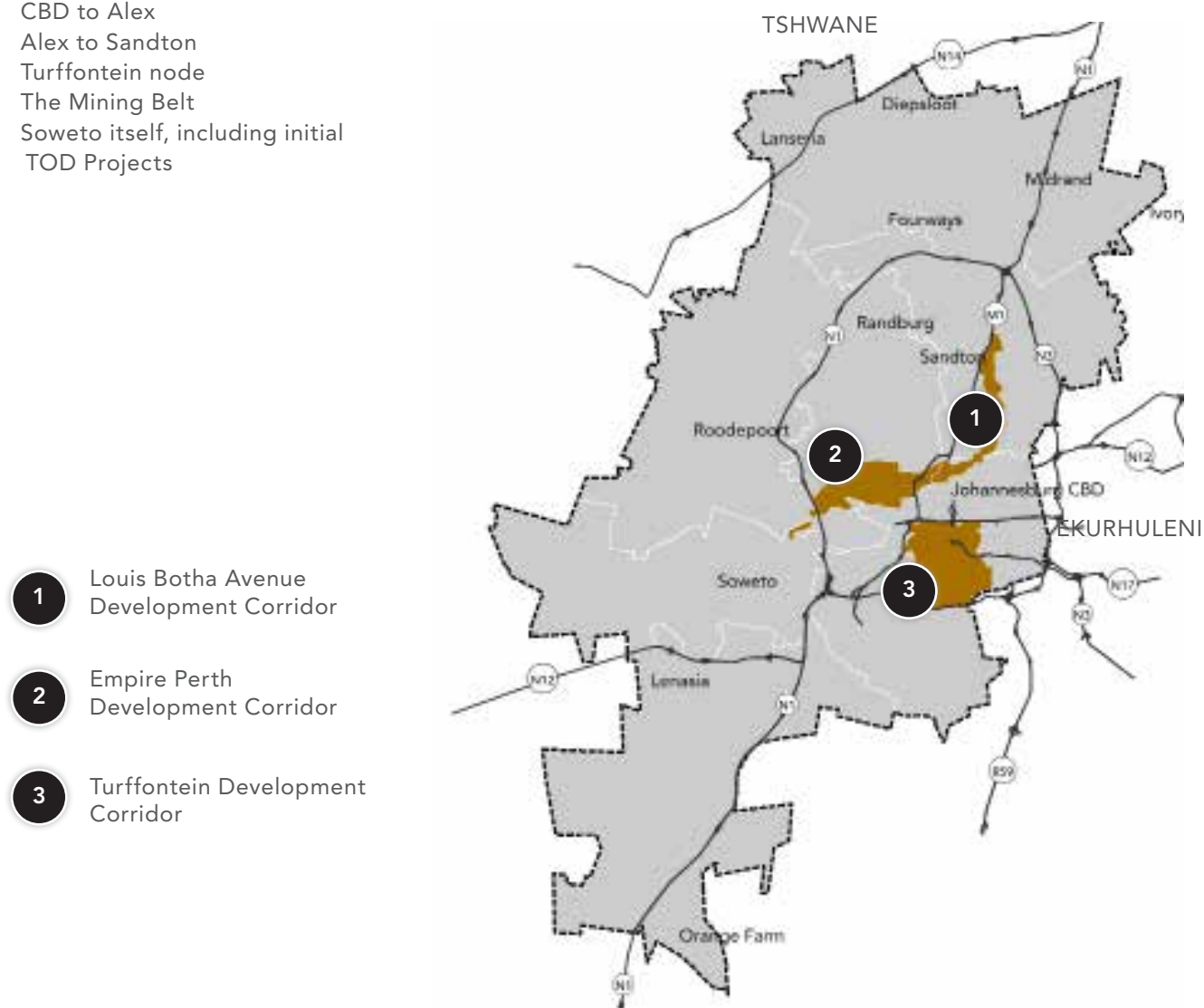
The Louis Botha Avenue Development Corridor represents one of three strategic frameworks that deal with the medium term scope of the Corridors of Freedom, the other two being the Empire Perth Corridor, and the Turffontein Corridor.

In the short to medium term - 2016

- Soweto to CBD along Perth Empire
- CBD to Alex
- Alex to Sandton
- Turffontein node
- The Mining Belt
- Soweto itself, including initial TOD Projects

**FIGURE 9:**

Medium Term Corridor Priorities

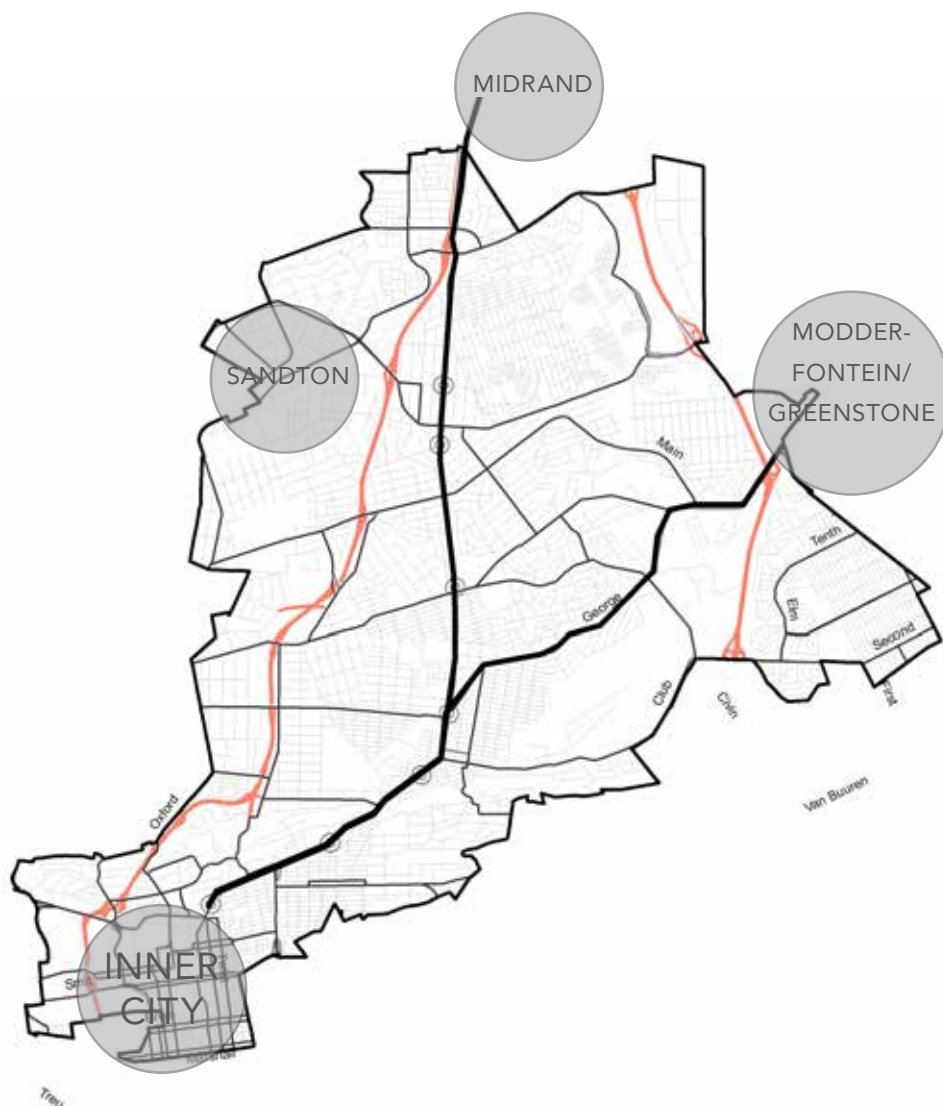


## METROPOLITAN CONTEXT

The Louis Botha Avenue Development Corridor is located to the north-east of the Inner City, between the CBD and northern parts of the City around Alexandra. The southern parts of the corridor study area are predominately residential in nature, encompassing some of the oldest residential suburbs in the City. Further northwards, the corridor passes through a number of key commercial and industrial areas, such as Bramley, Kew and Wynberg.

The corridor as a whole is well connected to existing key nodes and elements in the City, including Midrand to the north, a key growth and employment node; the Modderfontein/Greenstone area, a significant future growth opportunity for the City; and Sandton, one of the key economic nodes to the north of the City.

The corridor furthermore links to adjoining metropolitan Municipalities, and is one of the main connectors bringing together people and jobs from neighbouring municipalities. Planned inter-modal facilities, such as the envisaged terminal at Watt Street, will strengthen this function.



**FIGURE 10:**  
Regional Context



## 02B. Key Issues & Opportunities

### KEY OPPORTUNITIES

- Established residential communities & development visions
- Significant scope for densification and intensification around key nodal points & stations
- Equity Availability and Reinvestment Potential
- Cultural and Heritage Route Development
- Existing mixed-mode transport system
- Infrastructure – investment in upgrading and maintenance
- Opportunities for increasing built form scale, particularly around key mixed use nodes, especially in and around proposed stations
- Integrate the bulk infrastructure requirements and the social infrastructure
- Potential for key economic drivers in specific nodal developments, i.e. Medical, Transport, Heritage and Cultural, Services and Retail.

### KEY ISSUES

- Existing shortfalls in Urban Management across the study area, which can limit the full potential of future development in the area;
- Heritage constraints in some areas that may constrain intensive (re) development, but at the same time present opportunities for heritage related initiatives such as trails, conversions, etc;
- Constraints to increasing built form scale in certain areas as a result of heritage resource value
- Time and cost implications in dealing with issues such as building invasions and illegal conversions;

## 02C. The Role of the Corridor

Based on prevailing land use and activity patterns, the Louis Botha Avenue Corridor is predominantly residential in nature, catering for a range of income groups and spatial preferences.

Supporting this role as a residential area is a fairly equitable distribution, across the corridor area, of supporting social infrastructure, such as schools, parks, and related community facilities, many of which have significance beyond the corridor (Such as the St Johns/KES cluster)

The corridor also has a role to play in terms of providing opportunities for economic activity, and related employment potential. The northern areas are more significant in this regard, providing some of the best located industrial land in the city.

As the corridor grows, these key functions are likely to remain, and grow with the corridor. Given the nature of Transit Oriented Development, and the opportunities that it offers in the context of the Corridors of Freedom, the corridor is likely to become a destination of choice for both residents, as well as business owners (and ultimately employees) and future economic role players.

The nature of the Transit Corridor also suggest that the Louis Botha area could play a key role as a transport hub in the future, particularly the areas around the future BRT Interchange at Watt Street (Alexandra and Wynberg)



BROAD LAND USE	PERCENT
Mines and quarries	0.46
Cluster Housing	3.85
Commercial	14.60
Cultivated	0.87
Erosion	0.01
Industrial Heavy	0.39
Industrial Light	4.71
Municipal services	0.92
Natural	6.30
Parks	1.66
Residential roads	16.08
Smallholdings	1.33
Sport and recreation	7.29
Urban formal flatland	1.14
Urban formal residential	38.46
Urban informal residential	1.89
Waterbodies	0.05
	100.00

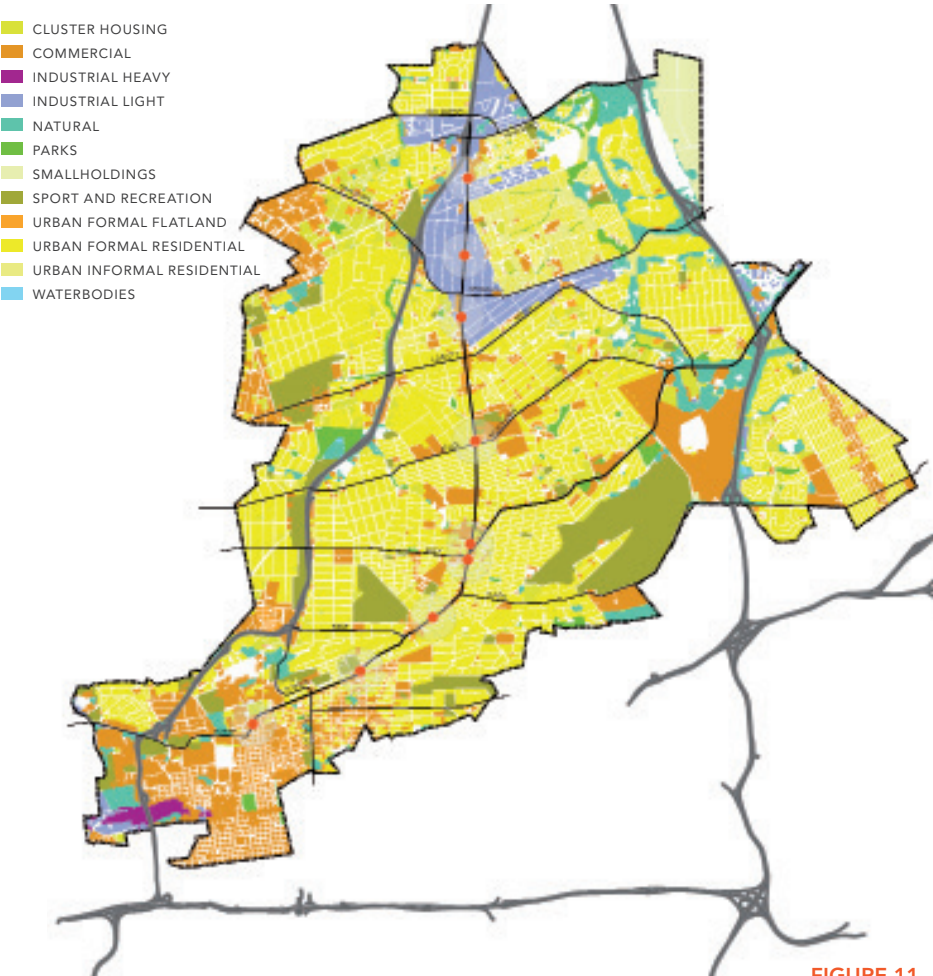


FIGURE 11  
Broad Land Use Patterns

## 02D. Optimising the Impact of the BRT

The Louis Botha corridor forms part of Phase 1C of the Rea Vaya Bus Rapid Transit System. Louis Botha Avenue will function as the trunk route along which services will operate between the CBD and the Alexandra and Sandton Nodes, connecting with the existing Phase 1A and 1B service. Along this trunk route, buses will operate within the median of the roadway within segregated rights of way.

Trunk route stations (in the median) facilitate the physical integration between trunk routes, complementary/feeder services and other public transport systems and provide strategic locations for future development.

Minibus taxis and rail transport constitute the largest proportion of the existing public transport mode share. The Phase 1C of the Rea Vaya System aims to strengthen public transport services between the CBD and Alexandra/Sandton. This Public Transport Spine should be supported by complimentary modes of public transport, including conventional Bus networks and Taxis. The BRT Stations remain the key generators of growth potential, and it is around these points that the SAF needs to identify and unlock their inherent potential.

## SUPPORTING PUBLIC TRANSPORT SYSTEMS

### GAUTRAIN FEEDER AND DISTRIBUTION SERVICES

Most parts of the study area are serviced by the Gautrain Feeder and Distribution service. It is imperative to promote integration between the Rea Vaya and Gautrain Services as a large number of Gautrain users from Marlboro Station could potentially access the numerous economic opportunities and institutional and educational facilities in the corridor by means of public transport. The stations forming part of the BRT system are critical interventions in terms of realising the benefits of Transit Oriented Development

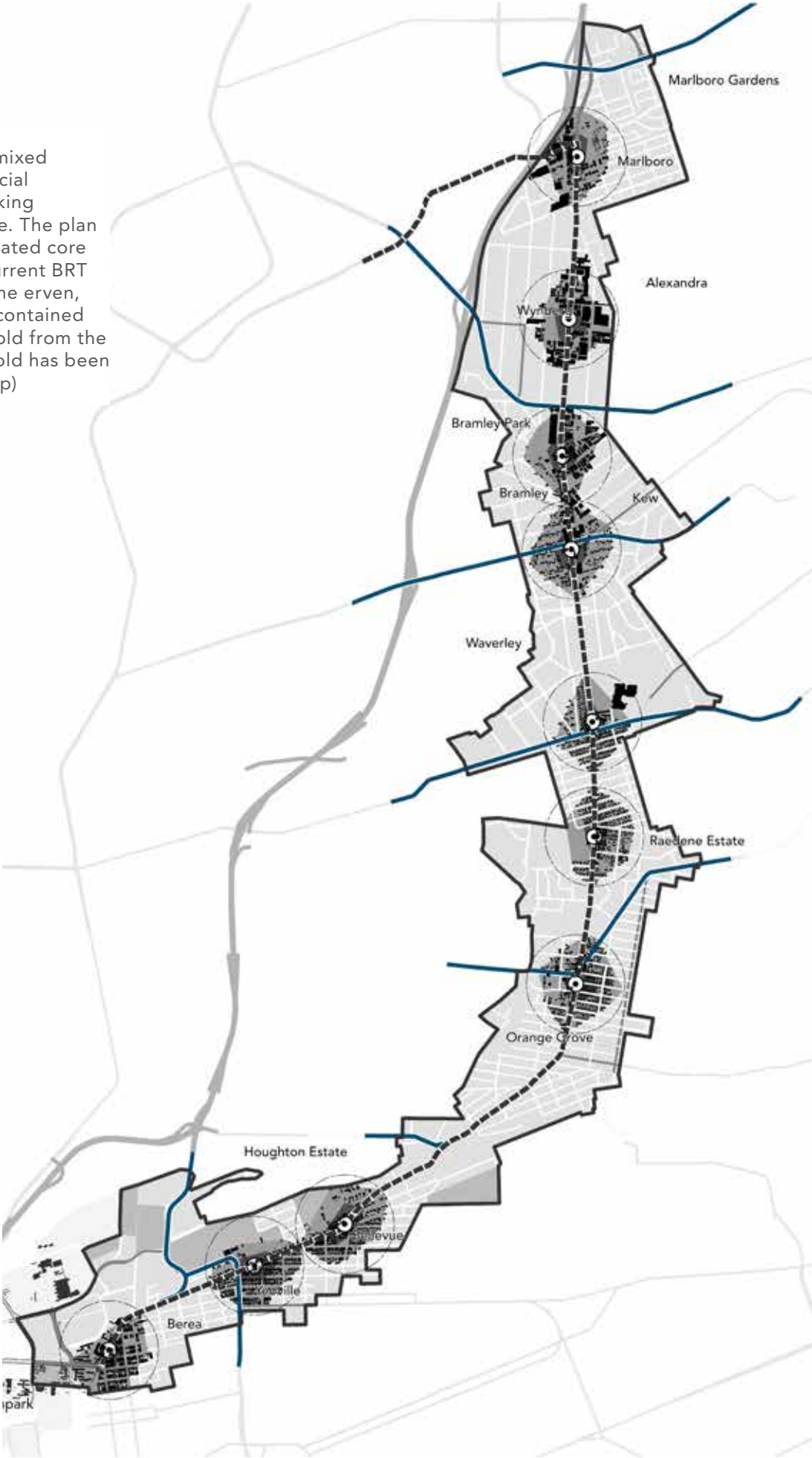
### MINIBUS TAXIS

The area is served by a number of taxi routes, all providing linkages between the northern and eastern suburbs (including areas such as Midrand, Ivory Park, etc), Sandton, and the CBD area. The existing taxi services are envisioned to change as soon as the trunk route along Louis Botha Avenue becomes operational, as the affected taxi associations will become part of the BRT Operating Entity. The long-term role of taxi services within this corridor is likely to be that of localized feeder service, as the BRT trunk route will to a degree duplicate the services currently servicing the study area and a strong aim of the system will be the removal of competing services and the creation of complimentary, supporting services. Going forward, the use of minibus taxis should be leveraged for this purpose and in so doing, taxi facilities should be provided at certain strategic public transport facilities to promote intermodalism within the corridor.

### NON-MOTORISED TRANSPORT

It is imperative that the infrastructure provided for pedestrians is according to the minimum standards that need to be justified to accommodate the specific needs of pedestrians. Furthermore, the area where people work stay and live should be secure enough for them to walk and cycle. Non-Motorised Transport (NMT) is a crucial part of the transport system and everyone should have access to urban opportunities and mobility with the necessary safety precautions in place.

TOD is premised on the notion of high intensity mixed use development and social infrastructure within walking distance of a transit node. The plan below relects the anticipated core catchment area of the current BRT Trunk System, showing the erven, and structures, that are contained within a walkable threshold from the stations. (a 400m threshold has been used in the adjoining map)



**FIGURE 12:**  
BRT Station Catchments



Accessibility is defined the opportunity for all individuals to utilize the pedestrian environment as fully as possible. Furthermore to achieve a walkable environment in the study area, people of all ages and abilities should have easy access to the public transport and community facilities on foot. An accessibility and connectivity analysis was carried out on the road and rail base on public transport to identify the existing barriers or discontinuity of walkways that affect pedestrian travel

The shapes, sizes, pattern and arrangement of plots, street blocks and buildings produce very different results in terms of permeability, connectivity and accessibility.

These patterns have a direct influence on route choice preference, ease of movement and legibility within urban environments. Different areas within the study are currently characterised by different types of streetscape and layouts which inevitably influences the movement of people between areas, including to and from transport facilities.

Sidewalk facilities have been provided on most Class 2 and Class 3 roads, but are inadequate as the network is discontinuous and poorly maintained. In many cases, street furniture has reduced the effective width of sidewalks. No dedicated cycle facilities currently exist though CoJ is currently busy implementing cycle lanes in selected areas.



**FIGURE 13:**  
Connectivity levels within the Study Area  
(Warmer colors equate to higher levels of connectivity)

## METROBUS

The Study Area is currently fairly broadly serviced by the city's existing MetroBus service, with most suburbs having some degree of walkable access to this service.

With the introduction of the Rea Vaya network, however, a process of alignment is likely in the short term, which should see the optimisation of the MetroBus system with reference to integrating public transport with systems such as the BRT.

## 02E. Infrastructure

The development of the optimal future corridor is dependent on the availability of functional infrastructure to support economic and residential users. Infrastructure enables current functions and future expansions which makes it a pre requisite to any development. An assessment of the current infrastructure was done to determine its current capacity and the requirement for additional capacity in line with the projected developments. The infrastructure assessment is done upfront due to the size of the required investment and the extended timeline to upgrade or replace current infrastructure.

An initial investigation was carried out in order to assess the capacity and condition (where possible) of the existing bulk water, sewer and stormwater infrastructure, and identify existing backlogs.

The assessment is based on a review of previous reports, collected data and capacity analysis studies done during the period 1998 – 2007. The information on the current condition, maintenance issues and recent upgrades was obtained from communication with the relevant representatives of Johannesburg Water (JW) and Johannesburg Roads Agency (JRA).

### WATER SUPPLY

#### EXISTING NETWORK CAPACITY AND CONDITION

There are seven separate water supply Districts/Sub-Districts within the boundary of the proposed development:

- Linbro Park and Alexandra Water Sub-District
- Marlboro Water Sub-District
- Illovo Water Sub- District
- Linksfield and Parktown No. 1 Water Sub- District (District 1 NE of M1)
- Radjieslaagte Water District
- Parktown 2 and Dunkeld Water Supply District
- Yeoville Water District (District 5)

#### *Linbro Park and Alexandra*

Potable water is supplied from the Linbro Park reservoirs (2 reservoirs with total capacity of 42 Ml) supplied by the Rand Water bulk supply line. The High Level area is supplied directly from the Rand Water high pressure main. The reticulation network of Linbro Park is 30 years old and consists of 75mm diameter and 100mm diameter AC-COD pipes. The Alexandra old pipes network was replaced recently. The existing network has sufficient capacity for the present and future development.

#### *Marlboro*

The sub-district has three inter-connected reservoirs, total capacity of 39.0 Ml. The area under investigation is supplied by the gravity feed. The system consists of 120mm diameter and some of 100mm diameter AC-COD pipes. There is sufficient network and storage capacity for the existing development.

#### *Illovo*

The Illovo Water District is supplied with potable water from the Illovo Reservoir Complex of eight reservoirs, total capacity of 48 ML. The following suburbs are supplied from that District: Sandton CBD, Illovo, Atholl, Stathavon, Sandown, Morningside, Sundhurst and Hurlingham. The High Level area is fed from a tower capacity of 1,0ML. The system consists primarily of 100mm AC-COD pipes and some 120mm Ac-COD. The system is 30 years old and there are no records of burst pipes in the area. The previously performed hydraulic analyses indicated some network capacity problems.

#### *Linksfield and Parktown No.1*

The Linksfield and Parktown No.1 Water Sub-District, situated to the North-East of the M1 Motorway, is supplied by two separately located reservoirs: the Linksfield Reservoir, capacity of 31,3ML, and the Parktown 1 Reservoir complex consisting of Parktown No.1 – capacity of 22,7ML and Parktown No. 2 – capacity of 45,5ML Reservoirs. The Parktown No1 reservoir is linked to the Linksfield supply area through the water reticulation mains downstreams of the reservoirs. Some operational problems are presently experienced with the supply to the two reservoirs. The Linksfield reservoir is 50 years old and its remaining life is close to the end. The system consists primarily of 90mm diameter HDPE pipes with some 100mm diameter steel pipes and PVC and AC pipework.

A very high UAW (accounting for losses) of 50% was confirmed in this area, mostly due to flow out of the District to the lower situated Randsjieslaagte District and to Bedfordview. Previous analyses indicated insufficient pressure in some areas. A construction of a new 550mm diam bulk main along 9th Avenue in Orange Grove and Sydenham, Viljoen Street in Rouxville and Joseph Street in Highlands North was suggested. Some other smaller upgrades were proposed to improve sub-standard pressures within the district.

Analyses indicated sub-standard pressures in Highlands North and Oaklands. Suggested 110mm diam main along Club and Gemmil Street in Linksfield. The most prominent area where sub-standard pressure is experienced is Highlands North.

#### *Randsjieslaagte*

The reservoir has two compartments with a combined capacity of 90ML. At present only the South compartment (capacity of 28ML) is operational due to poor reservoir condition. The North compartment is out of commission due to excessive cracking of the reservoir structure. The re-construction date of the reservoir is unknown. The water reticulation system consists primarily of 110mm diameter PVC pipes with some 100mm diameter steel and some HDPE pipework.

#### *Yeoville*

The Yeoville Water District consists of both a high level and a low level sub-district. The gravity sub-district is supplied from three ground level reservoirs with a combined capacity of 106 ML. Presently, Yeoville reservoir No1 and No 2 is operated at 1,5 m below the design level due to the leakage problems experienced at higher levels. The Yeoville pump station intake is directly from the reservoir No3. The pumping system consists primarily of 150mm diameter and some 100mm diameter steel pipework. The pump sub-district doesn't have a tower to supply the high lying area. Water is instead pumped from the Yeoville reservoir No.3 by a series of 3 pumps.

In 2004 it was established that UAV is very high (36% and 45% for the pump and gravity sub-district subsequently).

The sub-pressure conditions were proven in some areas of the gravity feed. There were no sub-standard pressures observed in the pumping system. It was confirmed that the Yeoville Pumpstation capacity exceeds by 30% the demand of present development.

### RECENTLY COMPLETED/ONGOING PROJECTS AND PROPOSALS

The following projects were completed in the last few years:

- Lombardy East – replacement of the existing old water pipes
- Wynberg - replacement of the existing old water pipes
- Glenhazel – upgrade of the existing bulk water mains
- Parktown – replacing of the old water pipes
- 600 mm diameter new main in Linksfield
- Yeoville – pressure management project (upgrade of bulk mains)
- Sundown – replacement of the existing water pipes
- Marlboro – replacement of the old water pipes
- Alexandra – replacement of the old water pipes, bulk mains upgrades
- Orange Groove – meters replacement

Projects included in JW strategic planning for the near future:

- Upgrading of Yoville pump station (2 additional pumps)
- Linksfield new pump station capacity of 68,5l/s
- Upgrades to the Linksfield reservoir
- Linbro Park new reservoir capacity of 15Ml
- Illovo new reservoir

### CONSTRAINTS TO DEVELOPMENT

- In the Linbro Park and Alexandra area, additional storage capacity will be required for the future development.
- In the Marlboro area, additional storage capacity will be required for the future development.
- In the Illovo area, upgrades to the existing network (trunk mains), as well as an additional storage capacity, will be required for the future development demand.
- In the Linksfield and Parktown areas, with the future development demand, some major upgrades to the bulk network will be required in the Highlands North area in order to improve the expected low pressures. For the future development, a further extension of a 550mm diam main along Joseph and Athol Street up to Louis Botha Avenue is proposed to improve the sub-standard pressure in the area. Measures should be taken to separate the district reticulation system from other areas and such way reduce the UAW.
- In the Yeoville area, the existing pump station has to be upgraded to cater for future demand.



## SEWER

### CAPACITY AND CONDITION

The investigated area is located in the Northern Drainage Basin and, due to the advantage of being on a ridge, almost all wastewater flows by gravity to its treatment works. includes the following outfalls:

#### *Bruma Northern Outfall*

- Some capacity problems were observed in the past.
- This outfall is regarded as one of the highest sanitation priorities as it services the growth point area earmarked for development around Alexandra.

#### *Bruma Extension Outfall*

- The Bruma Extension Outfall has sufficient capacity to service the existing development and the ultimate planning horizon.
- The Bruma South Outfall is currently operating at capacity. Construction of a new 1500mm diameter pipe parallel to the existing outfall was recommended for the future development.

#### *Cydna Outfall*

- According to the previous analyses' results, some sections of the Cydna Outfall are currently operating close to capacity.

### PUMP STATIONS

The Longmeadows Pump Station South is the only existing sewer pump station in the area of investigation, and is situated in Lombardy East. The pump capacity is 10l/sec. With the current inflow of 3.71 l/sec, the pump station has a spare capacity of 6,3 l/sec available for the future development requirements.

### THE WASTE WATER CARE WORKS (WWCW) NORTHERN DRAINAGE BASIN

The Northern WWCW is the largest treatment plant, out of six in the city. It treats 400 million litres of waste water every day and operates close to capacity. Some major upgrading needs to be done. With the increased future capacity, the sludge dewatering and disposal should be given special consideration. It is situated in the Diepsloot area. The treated water from the plant is either discharged to Jukskei River, used for irrigation of farmland, or as cooling water used by the Kelvin Power Station.

### RECENTLY COMPLETED / ONGOING PROJECTS AND PROPOSALS

- New Longmeadow Pumpstation North capacity of 10 l/sec. With present inflow of 5.4 l/sec the pump station has spare capacity of 4,6 l/sec.
- Alexandra – replacement of the old vitrified clay sewer pipes.
- Yeoville /Berea – replacement of old reticulation pipes
- Construction of sludge drying area and 2 x sedimentation tanks at Northern Waste Water Treatment Works.
- The Cydna outfall bridge upstream of the Northern WWCW is prone to accidental or deliberate damage which may result in a major pollution catastrophe. This aspect should be investigated and addressed in the future.

- The three stage plant upgrade project will provide an additional capacity of 460 megalitres a day for each stage. Stages will be scheduled according to the future development requirements.
- The pipes replacement program is carried out by JW on annual bases until all aged water and sanitation related pipelines have been completed.

### CONSTRAINTS TO DEVELOPMENT

- A pump link between the end of the Bruma Extension Outfall and the inlet of the Diepsloot Tunnel was recommended for the future development.
- The major upgrades to the WWCW capacity will be required as well as a sludge drying beds area increase for the future development.

## STORMWATER

### CATCHMENT CHARACTERISTICS AND EXISTING STORMWATER DRAINAGE

The area of the Louis Botha Development Corridor is located in the valley, sloping northwards. The total catchment area of 100.036 km<sup>2</sup> and average slope of 1.6% is divided by the reach along the Louis Botha Avenue into two sub-catchments: eastern and western.

The Western sub-catchment drains into the Jukskei River which originates under Ellis Park and flows towards Bruma Lake then around the Linksfield Reach heading north east towards Alexandra and into a Hartebeespoort Dam.

The Eastern sub-catchment drains into the Sandspruit which originates in three places. Orange Grove Stream which starts in the Mountain View, flows along Houghton Drive and as a closed channel along the edge of the Houghton Golf Course, then through Peterson Park and at Melrose North meets with the second stream which generates in the Houghton Golf Course area and flows as burried through Norwood. The third stream has two sources: in Pine Avenue near St John's College, and it is joined near to the Johannesburg Zoo by another stream starting from Oxford Road at Saxonwold. These three streams join together north east of the Melrose Birds Sanctuary in the concrete channel which emerges as at Sandspruit at Corlette Drive, and joins the Jukskei River in Woodmead.

Rain water from the impervious areas is collected by the reticulation network of pipes, culverts, open drains and lined channels, and is discharged into the streams and rivers. Louis Botha Avenue runs along the reach, and there is no major stormwater drainage structures crossing.

### PROPOSALS AND ONGOING PROJECTS

Besides the regular maintenance carried out twice a year (which includes cleaning of the drains, kerb inlets and open channels), there is no major ongoing or proposed projects for the nearest future. The JRA is, however, to initiate a Stormwater Masterplanning Process for the two sub-catchments to guide future investment in the system.

## CONSTRAINTS TO DEVELOPMENT

There are some areas of concern, which should be addressed in the future development planning.

*Alexandra and Riverpark drainage:*

The high density of development and the backyard shacks situated very close to the road servitude lead to pollution of stormwater inlets and create difficulties to clean it. People living below the floodline along the Jukskei River have to be moved to safer housing areas.

Recent problems with underground water in the Zoo Lake area investigation required.

## EGOLI GAS

The Louis Botha Avenur Corridor is on the natural gas pipeline map and any future gas requirements could be met. The system is able to produce three types of energy: electricity, heating and cooling at the same time, resulting in power, hot water, space heating and air conditioning. Natural gas is cost effective, environmentally friendly, instant and safe (when used according to specifications).

## CONDITION AND CAPACITY

Gas mains are steel mains and are generally in a good condition. Most of the main lines were laid fifty years ago. The cover to these mains should be 800mm but due to road upgrades, the cover has in some cases been reduced. HP gas mains supply Commercial and Industrial Developments and are 20 kpa. LP gas mains supply mainly residential and are 3 mpa.

There is sufficient capacity along the corridor for future growth and development. New gas requirements would have to be presented to Egoli Gas for assessment.

Wineberg and Kew are large Industrial consumers, Johannesburg Hostels and Clinics are the consumers in Alexandra and further south is mainly Commercial and Industrial users.

## RECENTLY COMPLETED/ON-GOING PROJECTS AND PROPOSALS

Maintenance on these steel gas mains is on-going which mainly entails leak repairs. When leaks are extensive, the whole line is replaced and the material used today for replaced or new gas lines is HDPE.

## CONSTRAINTS TO DEVELOPMENT

Egoli gas mains are designed, installed and maintained by Egoli Gas and therefore requirements for new installations will have to be given to Egoli Gas. The Louis Botha Corridor is on the gas line map route and there is sufficient capacity for future upgrade requirements. Upgrades or relocations due to new developments will be done by Egoli Gas at the cost of the Developer.

## ELECTRICITY

The following substations will be affected in the study area:

- Alexandra Substation
- Cydna Substation
- Westfield Substation
- Ridge Substation
- Rosebank Substation
- Gresswold Substation
- Siemert Road Substation
- Bellevue Substation

### CONDITION AND CAPACITY

Although there may be spare capacity on some of the MV distributors into the target area, with the exception of Cydna Substation, the Major Substation supplying the target area are operating at close to or over the firm capacities of the transformers.

### RECENTLY COMPLETED/ON-GOING PROJECTS AND PROPOSALS

A future substation is planned for the Modderfontein area.

### CONSTRAINTS TO DEVELOPMENT

It will be necessary to install additional feeder boards and transformers at these substations and establish a full substation in the Sandringham area. (This latter substation is required to relieve our Gresswold Substation).

Where applicable, the 88kV backbone will have to be upgraded to accommodate the load for the upgraded substations.

## 02F. Heritage Overview

The road that would become known as Louis Botha Avenue predates the city of Johannesburg and its current urban context. Sections of the road formed part of the original dirt track leading to the ZAR capital Pretoria. The road predates its urban context and was therefore influenced primarily by the natural environment, by the Witwatersrand ridges and the boundaries of existing farms and geographical features such as the break in the Houghton Ridge, where the Orange Grove Spruit emerges, forming a natural pass (Hart 2004:54).

Being the main road connecting Johannesburg and the capital Pretoria, Louis Botha Avenue was of strategic importance to the security of both cities. During the Anglo Boer South African War it was protected by both the ZAR

Government troops, with their Maxim Machine Gun outposts, from attacks from the south as well as the British Army, with blockhouses, from attacks from the north. (Shorten 1970)

Minutes of a Council meeting of 3 July 1917 records that the Johannesburg's Federation of Ratepayers Association recommended that two of the principal thoroughfares in Johannesburg be renamed after General Smuts and General Botha as a record of their appreciation for services rendered to the Empire during World War 1 (Smith 1971:304).

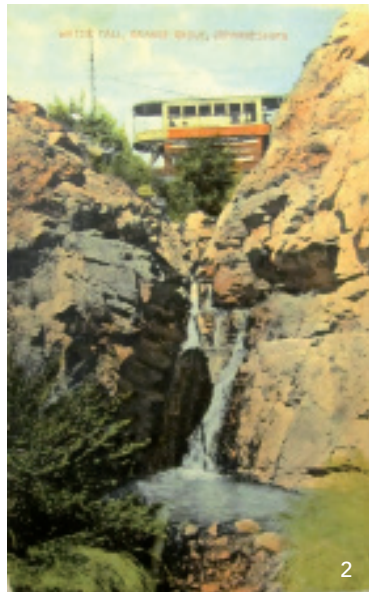
The suggestion was approved by the city council with the main arterial road from Johannesburg to Pretoria, consisting of Morgan

Road and Pretoria Main Road, being renamed "Louis Botha Avenue" in honour of the General.

Johannesburg's growth was very rapid, occurring in bursts of speculative development. Randjeslaagte, the portion of land on which Johannesburg was founded, was government owned land.

The resulting suburban development and expansion of the city occurred on what was privately owned farm land. Consequently suburban development within the study area has occurred on irregular subdivisions of former farms with layouts and connectivity being determined by individual developers.

**Figure 1:** Louis Botha Avenue, Orange Grove, circa 1914 (Museum Africa Archives)



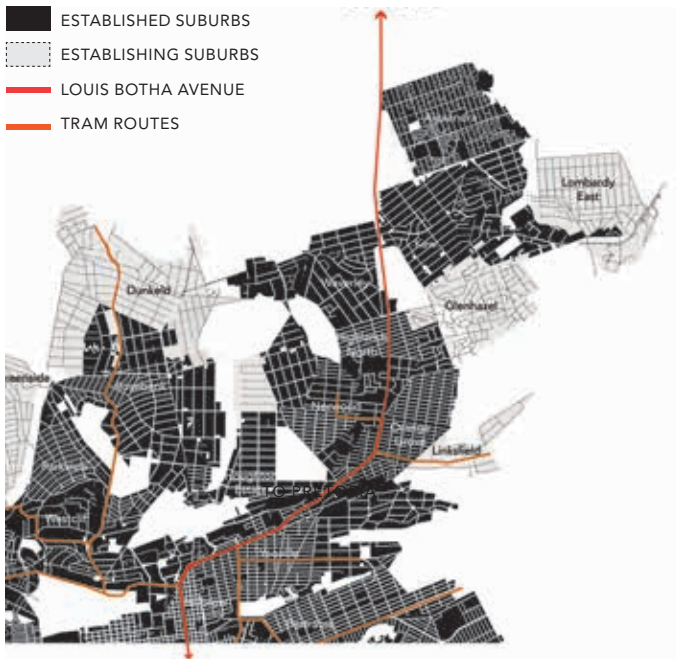
**Figure 2:** The Waterfall on Louis Botha Avenue, circa 1909 (Museum Africa Archives)

**Figure 3:** Louis Botha Avenue, circa 1935 (Museum Africa Archives)



**Figure 4:** Clarendon Place, Hillbrow & Parktown, circa 1950's (Museum Africa Archives)





1938

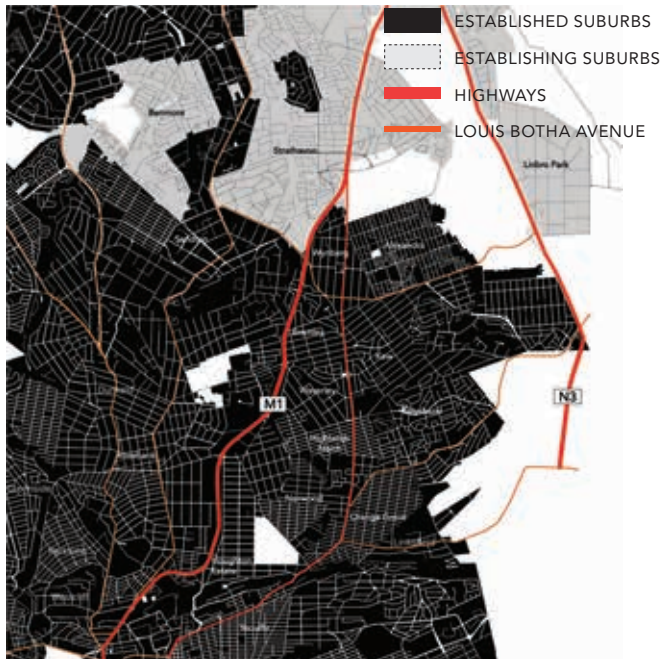
- Significant expansion of suburbs north of the ridge – away from CBD and industrial / mining land.
- Louis Botha is key north-south route, regionally connecting Johannesburg to administrative Pretoria and locally connecting northern suburbs – CBD – southern suburbs.
- North-eastern expansion of suburbs follows this significant line.
- Suburban expansion is also influenced by the tram lines of which Louis Botha and Jan Smuts are primary north-south lines.



1952

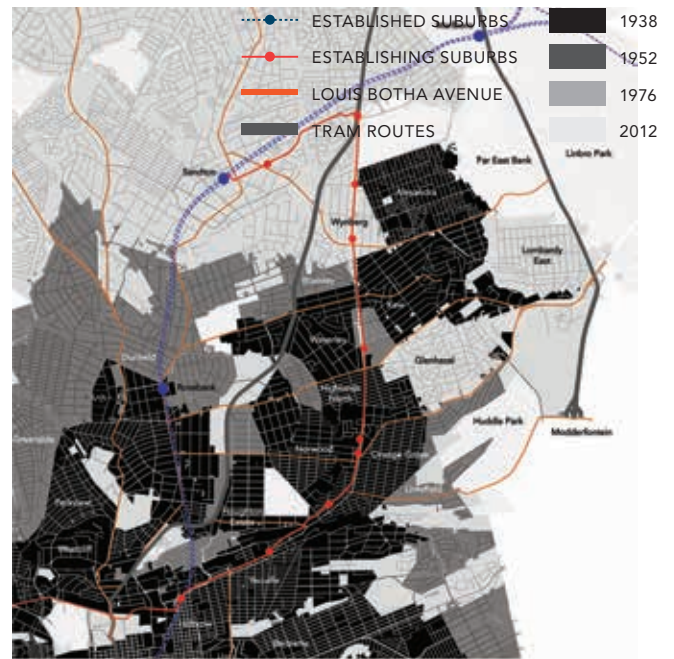
- Between 1954 and 1961 the Johannesburg tram system was decommissioned.
- Louis Botha remained the primary north-south connection between Johannesburg and Pretoria.
- Direct southern access compromised by changing CBD routes and related infrastructures but east-west connection via Empire Road strengthened.
- Oxford Road and Jan Smuts Ave compete as significant drivers of northwards suburban expansion.





### 1976

- Louis Botha's north-south primacy overwritten by the 1970s highway construction.
- Louis Botha's northern connectivity hampered.
- East-west arterials strengthened.
- North-eastern suburban expansion along Louis Botha overshadowed by northern expansion along Oxford Road and Jan Smuts Ave.



### 2013

- Louis Botha's current position and transformation from a primary regional connector to an arterial and mobility spine.
- Louis Botha's significance as north-south connection between Alex and CBD will be strengthened through its transformation as a BRT corridor.
- Western nodal growth (Rosebank and Sandton) and eastern growth (Linbro Park and Modderfontein) afford opportunity to strengthen east-west routes which intersect Louis Botha.

A desktop Study of existing Heritage Resources within the Study Area was undertaken in order to highlight possible heritage elements that exist in the area, and their implications in terms of future growth and development.

The adjoining plan reflects the outcome of this study, reflecting a larger concentration of potential heritage resources in the more southern parts of the corridor, particularly around the Upper Houghton and Parktown areas, where detailed Heritage Surveys already exist.

A recommendation coming out of this study, is to undertake similar detailed assessments for key areas within the corridor area, specifically the Alexander and Orange Grove areas, the latter of which has significant growth and development potential.

- HERITAGE STREETScape
- NATURAL HERITAGE ELEMENT
- NATURAL HERITAGE ELEMENT
- DECLARED HERITAGE SITE
- SIGNIFICANT HERITAGE SITES
- POTENTIAL HERITAGE SIGNIFICANCE
- SURVEY RELATED HERITAGE SITES
- EXISTING HERITAGE SURVEY
- PROPOSED HERITAGE SURVEY

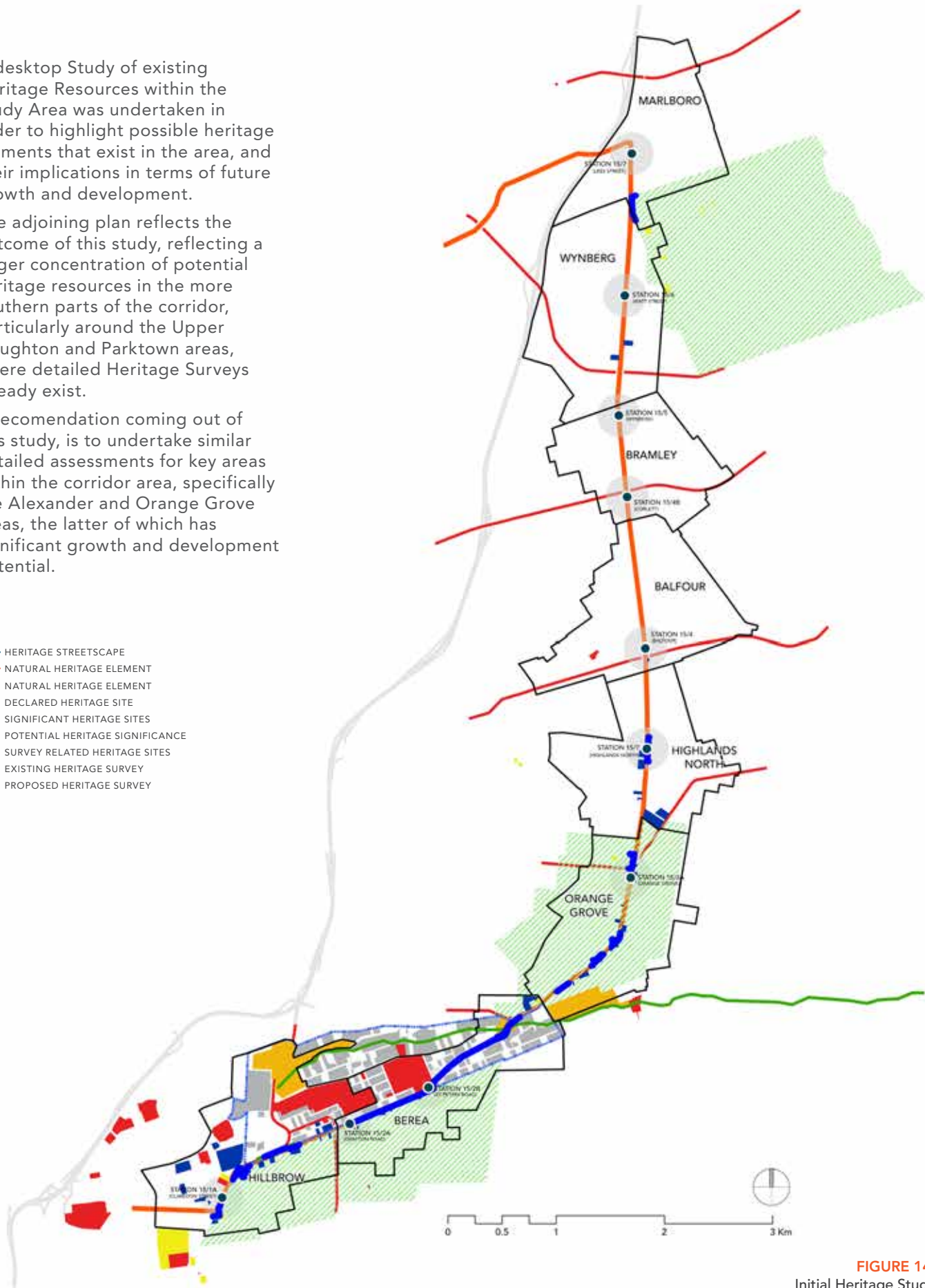


FIGURE 14:  
Initial Heritage Study



## 02G. The Spatial Economy

Overall property prices have grown ahead of the national average in both affordable and affluent suburbs of the study area. This is despite negative market factors that have affected the residential property market as a whole. The capital appreciation in average sales price is higher than the national average and the average for the Johannesburg Municipality.

The study area in the main has lagged in new investment, purchase and sale of housing properties, investment in bulk and social infrastructure and the general upgrade of services and facilities.

There is a need to stimulate investment in the study area through a host of investment promotion initiatives. A combination of investments incentives and extension of the UDZ, creating investment zones for industrial development in Wynberg, Marlboro South and Kelvin/Kew. Affordable housing development promoted through the upfront granting of incentives, which will promote affordable housing investment.

### DEVELOPMENT POTENTIAL / BEST USE

There are several opportunities of development in the area, and will meet the short term objective of corridor densification.

#### ***Conversion and Regeneration of Buildings for Affordable Housing***

There are numerous buildings along the Louis Botha spine that have fallen into disrepair, are overcrowded and have become 'slum' housing facilities. Many of these buildings have 100-120 metre flats occupied by as many as 6 families. There is a strong indication that the services are no longer paid, and that the building is in default with the City. These building should be mapped in the next stage of the study, and the full assessment done of the suitability of the building as a regenerated affordable housing development. This will assist the city or designated housing agencies to target these as potential investments.

#### ***Change of Land Use and Rezoning***

There are numerous buildings that are zoned commercial or business use, and can be targeted as residential property use. These are currently used for low level or informal trading purposes at shop front level, and for other purposes, i.e. Places of Worship, Illegal Trading facilities, Motor Repairs shops and schools. After an assessment of building inventory in the corridor, the key opportunities should be mapped, and assessed for suitability of land use for housing or more desirable business use. Areas around station nodes should be targeted as developments. Freehold Land properties that are directly on the Louis Botha spine could be rezoned for more intense housing densification, encouraging consolidation of numerous properties into a larger property suitable for a low-rise high density housing development of between 100 and 300 dwelling units per hectare.

#### ***Densification of Freehold Properties***

Land availability in the immediate study area is very low, given the levels of housing that has taken place over time. The freehold single storey housing unit is not the most effective use of space. The feasibility of converting some of these housing blocks in close proximity to the corridor into low rise housing units should be assessed. The property sizes are between 500 and 1000 square meters, suggesting that sections of 4 to 6 housing units could be affected to produce a 60 unit low rise housing development. The City could act as developer, or work with Social Housing institutions, or support private developers in the development of new housing schemes where these opportunities exist.

Public Open space could be identified as area where smaller developmental nodes can be developed. There are numerous smaller land parcels that are owned by the city, while additional land could be acquired to provide added services and facilities to support the area and future affordable housing developments.

#### ***Equity Availability and Reinvestment Potential***

Based on the overall assessment of Suburbs in the study area, there appears to be high levels of latent equity available for home owners for re-investment in upgrades, refurbishments or second properties. (The equity is the difference between market value and bond debt against the property). These older suburbs have had low levels of churn, and thus have accumulated value while reducing debt. This represents a major opportunity to suburbs, which in turn will experience higher levels of price appreciation due to infrastructure upgrades and improved market perception.

## **CULTURAL AND HERITAGE ROUTE DEVELOPMENT**

The Louis Botha Corridor has numerous cultural and heritage sections and nodes, that could be further high-lighted by the study:

#### ***Historical Schools***

The Upper Houghton area, with the strong emphasis of well-established private school establishments ( St John's, King Edward, Roedene Girls School, Sacred Heart College Observatory).

#### ***Historical Parks***

The Wilds is an established Botanical Garden with heritage status. It was established in the 30's after a Commonwealth Flora Convention in Johannesburg, in honour of General Jan Smuts, a renowned naturalist and statesman at the time.

#### ***Historical Shop Fronts and Building Facades***

Along the Louis Botha corridor there are numerous buildings established in the 30's and 40's. Many of the original buildings still stand and are economically utilised, either for retail or as housing developments.

#### ***Religious and Cultural History***

The area has numerous historical places of worship, in close proximity to Louis Botha. Churches, Shuls, Mosques and Shrines are within the study area. The various minority groupings have distinct historical and cultural links to the area, i.e. Italian immigrants, Various African immigrants, Muslim and Jewish Faith Groups.

#### ***Significant Historical landmarks***

The Radium Beer Hall is located on Louis Botha Avenue, and is a business that has been in existence for more than 100 years. Mahatma Ghandi's residence is located in close proximity to Louis Botha Avenue, in Oaklands.

#### ***Parktown and Extension of Historical Routes***

Parktown at the south end of the study area has an established heritage route, which could be extended to include heritage buildings and sites correctly earmarked and identified. This will form part of the heritage study and scoping in the next phase of this project.

## PROPERTY MARKET SUPPLY AND DEMAND

The 2008 property recession and credit crunch has a detrimental effect on demand, which negatively affected pricing in ensuing years. This led to the delay or cancellation of proposed developments, which in the medium term affected the supply and this has the effect of improving pricing in the medium term. House prices have recovered in a 3 to 5 year period. Overall the demand for housing and accommodation at the affordable housing level is very high, and is driving the densification of transport and development nodes.

Industrial developments were not yielding the returns as Residential, Retail and other commercial developments in the boom years leading up to 2008. As a result there was a lag in supply for industrial developments and industrial parks. This “artificial” demand has helped to buoy the sector, and assist with short term yields and vacancy rates. This demand has also led to the acceleration in investment in Industrial investments in the period post 2008, and the supply has almost caught up with demand.

An oversupply of retail developments and the increase in capacity in the boom years has had the effect of limited retail developments in some cases. However the injection of new investment capital from the Wal-Mart / Massmart deal resulted in over R2bn new store expansion over the last 2 years. New mixed use developments in Modderfontein, Waterfall and Melrose Arch will impact the investment decision on major retail developments, while there will be an increase in demand in the immediate corridor for neighbourhood and regional retail developments.

Depressed demand for office developments may also reduce the need to develop new office developments in the short term. The current informal office facilities along the Louis Botha spine, is stable, and has not changed in recent years, while the main office park, Houghton Office Park, near Victory Theatre, was converted to a sectional scheme. The take-on of the scheme has affected occupancy, while the scheme was converted. Demand for A grade office developments is still high, while this has affected demand for low grade office, which is in oversupply, leading to conversion to sectional schemes. The vacancy factor in Gauteng office is very high at averages of 15 to 20%.

## KEY ISSUES

### SHOPPING CENTRES & RETAIL NODES

- The key shopping centres in the study area include, Norwood Mall, Balfour Shopping Centre, Pan African Mall and Alex Mall;
- These malls are relatively new or have recently been refurbished, and show positive trading patterns with low vacancy factors;
- The market for these malls is varied from a range of LSM groups from suburbs in the area;
- Competing Retail precincts include Sandton, Greenstone, Eastgate, Melrose Arch, Killarney and Rosebank.
- The densification of the Louis Botha corridor should provide for the regeneration of the retail trade in the “High Street” and well as new retail development.

### OFFICE DEVELOPMENTS

- Office Developments are limited to the Houghton Office complex near Victory Theatre;
- The development has recently been converted to a successful sectional title scheme;
- Along the Louis Botha avenue, business zoning allows for service firms and professionals to locate offices;
- Medical Precinct along Highlands and Bagleyston;
- Numerous buildings in Orange Grove and Upper Houghton see conversions and change of use, i.e. Schools, storage facilities and crèches.
- Rentals are at affordable levels with no formal statistic on the corridor;
- Wynberg moving towards mixed use, with office use becoming more prevalent.

### WYNBERG INDUSTRIAL CHALLENGES

- Declining manufacturing usage and move toward services;
- Fragmented Ownership to smaller property sizes;
- No Defined boundary , access and security control;
- Move toward services usage, i.e. Motor Repairs & Scrap Yards;
- Change in use to storage and non-productive assets;
- Distorted vacancy factors, due to change in use.

### OVERALL

- The industrial sector has performed in line and in some cases outperformed the province;
- Slowing base Rental growth down to 4% in 2012 (Gauteng 6,5%);
- Downturn since the economic recession showing slow recovery;
- Wynberg could realign towards a mixed use model, similar to Limbro Park.

# 03. STRATEGIC FRAMEWORK PLAN

- A. Approach & Strategy
- B. Structuring Elements
- C. The Framework Plan
- D. Development Guidelines





# 03. STRATEGIC FRAMEWORK PLAN

## 03A. APPROACH & STRATEGY

The broad approach to the project is premised on the understanding that the Louis Botha Avenue development corridor is a critical spine which collects, and connects, some of the most diverse uses and users of the city. The project team therefore recognizes, firstly, that there are important quantitative layers to the study area to be addressed in order to deliver a robust and sustainable framework.

Secondly, however, the complex nature of South Africa cities (especially Johannesburg) also necessitates an 'alternative' reading, which offers due consideration to more qualitative activities and interactions between the formal and informal, which shape the 'ordinary' and 'everyday' dimensions of the city and the study area.

The strategic area framework for the Louis Botha Avenue Corridor also presents a key opportunity to address and successfully implement the developmental goals of the city as outlined in the current integrated development framework.

The vision for the Louis Botha Avenue Development Corridor espoused through the Strategic Area Framework thus seeks to entrench the principles of good urban environments, namely

- creating access to opportunity by reducing distances between home, work and education;
- creating attractive environments for walking and cycling;
- creating a vibrant, people-centred city;
- promoting transit-orientated development with high density residential development around transit stations;
- supporting mixed-use development that allows people to live, work and play in the same space; and to
- discouraging the use of private cars by providing sustainable travel alternatives and managing transport demand.

The resultant Framework Plan is predicated around four key elements or mechanisms:

- A Movement Network, optimising connectivity within the corridor, and harnessing connections with the City;
- A Structure for the Spatial Economy, that identifies key nodal and mixed-use areas and integrates them into a future corridor system;
- An underlying structure of social infrastructure (Social Clusters) that can grow and intensify over time to support growth within the corridor; and
- An approach to guiding densification within the corridor that is appropriate to the existing structure and context, but also supports a high level public transport system.

These 4 mechanisms, and their applicability to the Louis Botha Avenue Corridor, are elaborated in the sections that follow:

## 03B. Structuring elements

### MOVEMENT

Environments that perform well and that are efficient for people are those, which provide maximum choice and accessibility. Choice refers to movement at both pedestrian and vehicular levels. A key objective of sustainable urbanism is providing for improved public transport use and a shift away from the dependence of individual vehicular movement.

Sustainable transport includes the strengthening or replacing of current transport systems of an area with more fuel-efficient, space-saving and healthy lifestyle-promoting alternatives such as bus or rail rapid transport systems, cycling or pedestrian oriented movement. Sustainable transport systems, and the opportunities that they bring, contribute positively to the environmental, social and economic sustainability of the communities they serve.

A key component of sustainable transport is the provision and support for non-motorised transport (NMT) systems. In mixed-use urban environments, given the proximity of residences to employment opportunities, NMT represents an extremely viable option for everyday transportation.

Transportation solutions within the future corridor will be people orientated. In so doing:

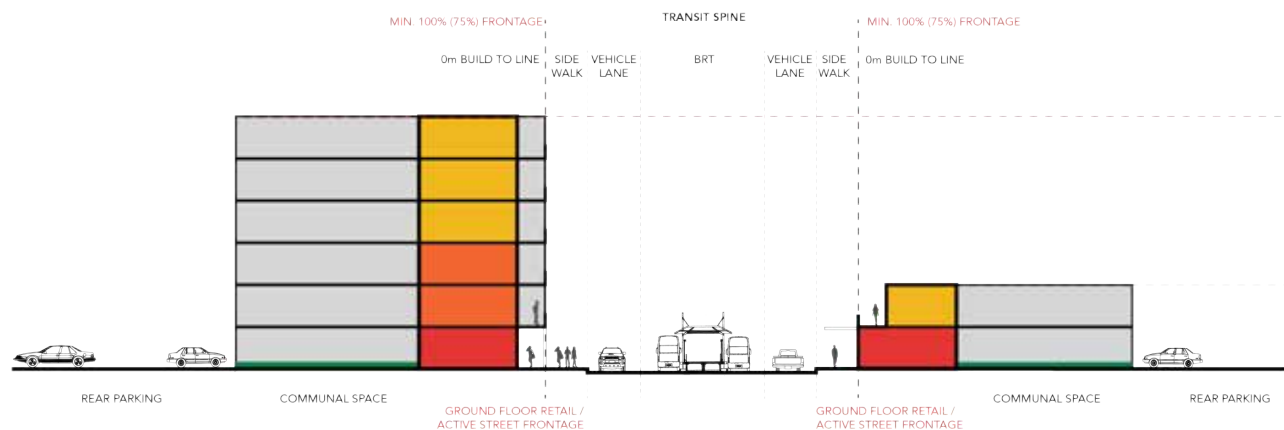
- The transport system will promote the appropriate transport mode for the appropriate trip.
- Road classifications will complement adjoining land uses in terms of accessibility and mobility supported by appropriate complete street cross sections i.e. roads that accommodate the needs of all road users.

- The road network will be designed to accommodate heavy vehicles and facilitate ease of access to relevant origins and destinations.
- The network will efficiently and appropriately manage the needs of through movement along appropriate routes.
- Safe, legible, accessible, interconnected non-motorised transport networks will be developed in line with complete streets principles to facilitate access between destinations.
- Parking policies will adequately support development but will be aligned with sustainable travel objectives
- Public transport infrastructure will contribute to quality living environments and will serve to stimulate private to public transport mode shift.
- A diverse and connected street network that promotes pedestrian accessibility - Good corridors connect communities

Within the above context, the key elements that underpin the Movement Framework for the SAF can be summarised as follows:

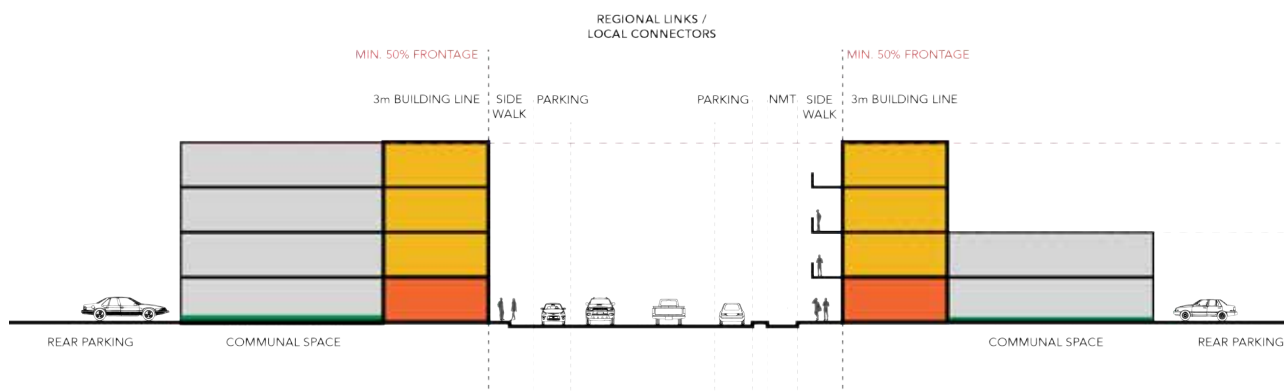
### PUBLIC TRANSPORT SPINE (TRUNK & FEEDER)

This represents the higher order public transport spine, as defined by the Rea Vaya Trunk Route along Louis Botha Avenue. The route is characterised by dedicated Bus Lanes with raised-platform (Median) Stations. The feeder routes are characterised by shared public transport lanes and at-grade (Kerb side) stops. In mixed-use areas, ground floor active edges, through retail activity or similar, will be promoted.



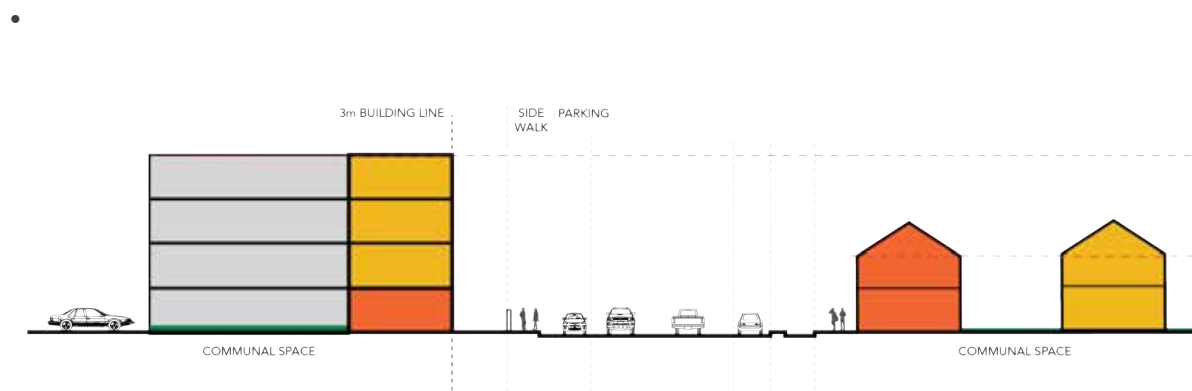
### REGIONAL LINKS

Regional Links represent key arterial connections with the broader city structure, connecting the corridor to key nodes, higher level movement systems, and related city-scale elements. They can, local circumstances permitting, provide significant scope for longer term intensification and growth.



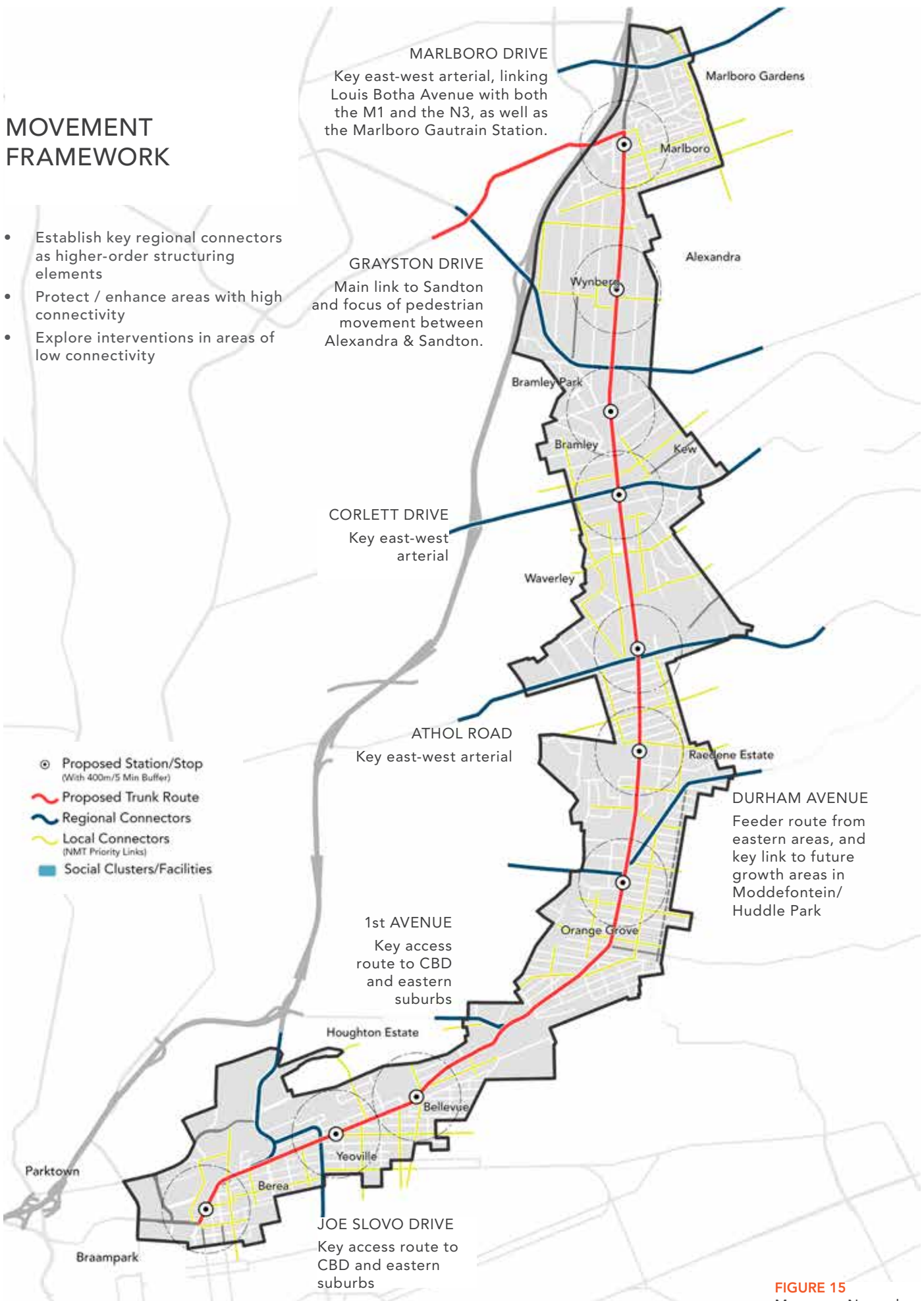
### KEY PUBLIC CONNECTOR (INCL. NMT)

These routes represent the key public connectors - movement routes (both vehicular and/or pedestrian focussed) that connect the Public Transport Spine and its secondary network with key activity focii, public facilities and existing areas within the corridor. Future NMT investment in the corridor should be guided by these routes.



## MOVEMENT FRAMEWORK

- Establish key regional connectors as higher-order structuring elements
- Protect / enhance areas with high connectivity
- Explore interventions in areas of low connectivity



**FIGURE 15**  
Movement Network



## SOCIAL CLUSTERS

The clustering of social facilities represents a key strategy in providing a basis for growth and intensification within the study area.

As an existing developed area, land available for new social infrastructure is relatively limited, and the strategy promoted through the SAF is to identify existing areas of social facilities, where there is scope for future intensification and optimisation, and plan around these areas.

The principles underpinning this approach include:

### INTEGRATION AND MULTIFUNCTIONALITY:

it is imperative to achieve integration of services particularly in contexts of limited resources and to foster multiple and shared use of facilities.

### EXPOSURE:

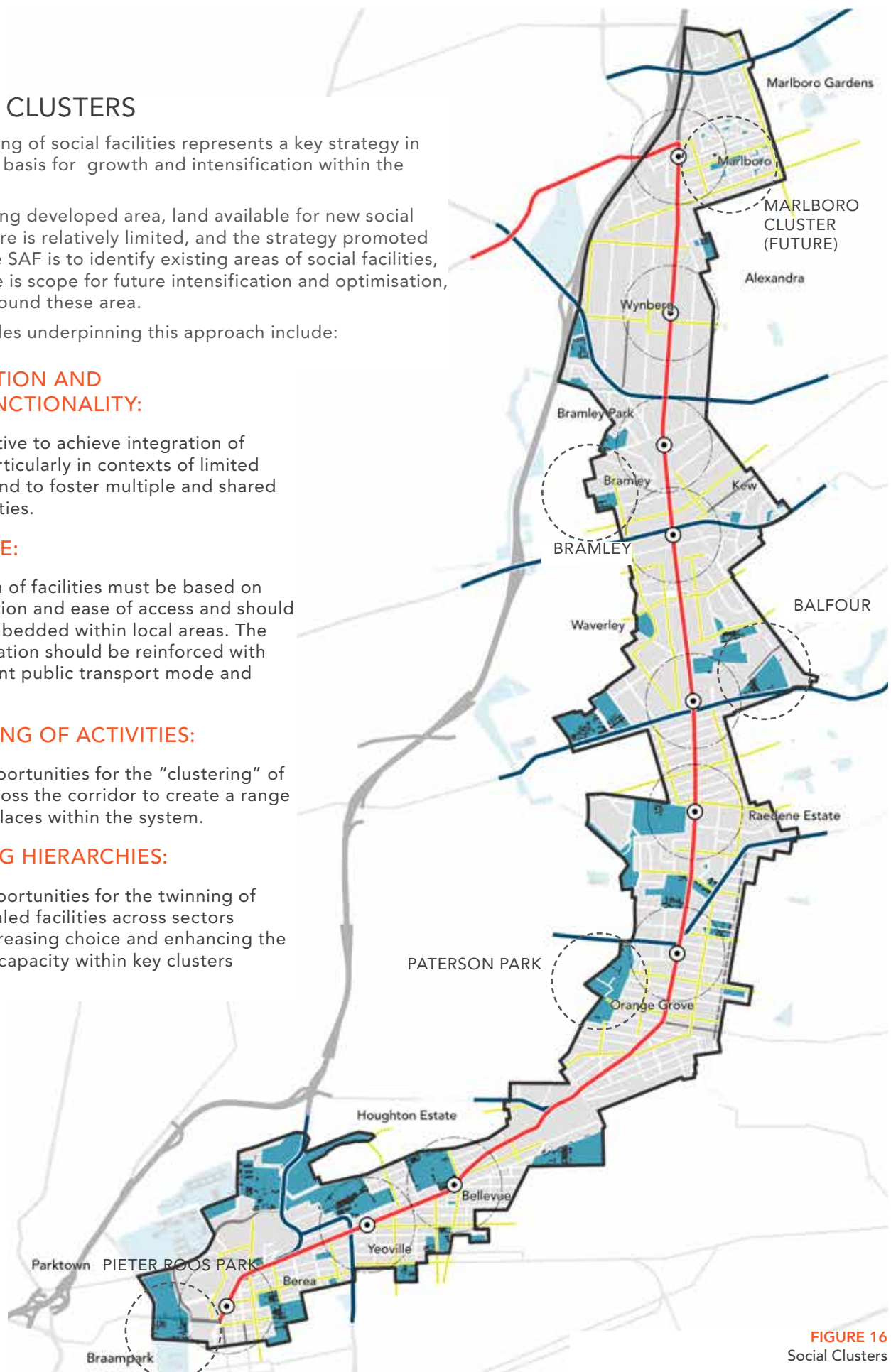
the location of facilities must be based on externalization and ease of access and should never be imbedded within local areas. The logic of location should be reinforced with the dominant public transport mode and circuit.

### CLUSTERING OF ACTIVITIES:

Explore opportunities for the “clustering” of services across the corridor to create a range of special places within the system.

### MARRYING HIERARCHIES:

Explore opportunities for the twinning of similarly scaled facilities across sectors thereby increasing choice and enhancing the generative capacity within key clusters



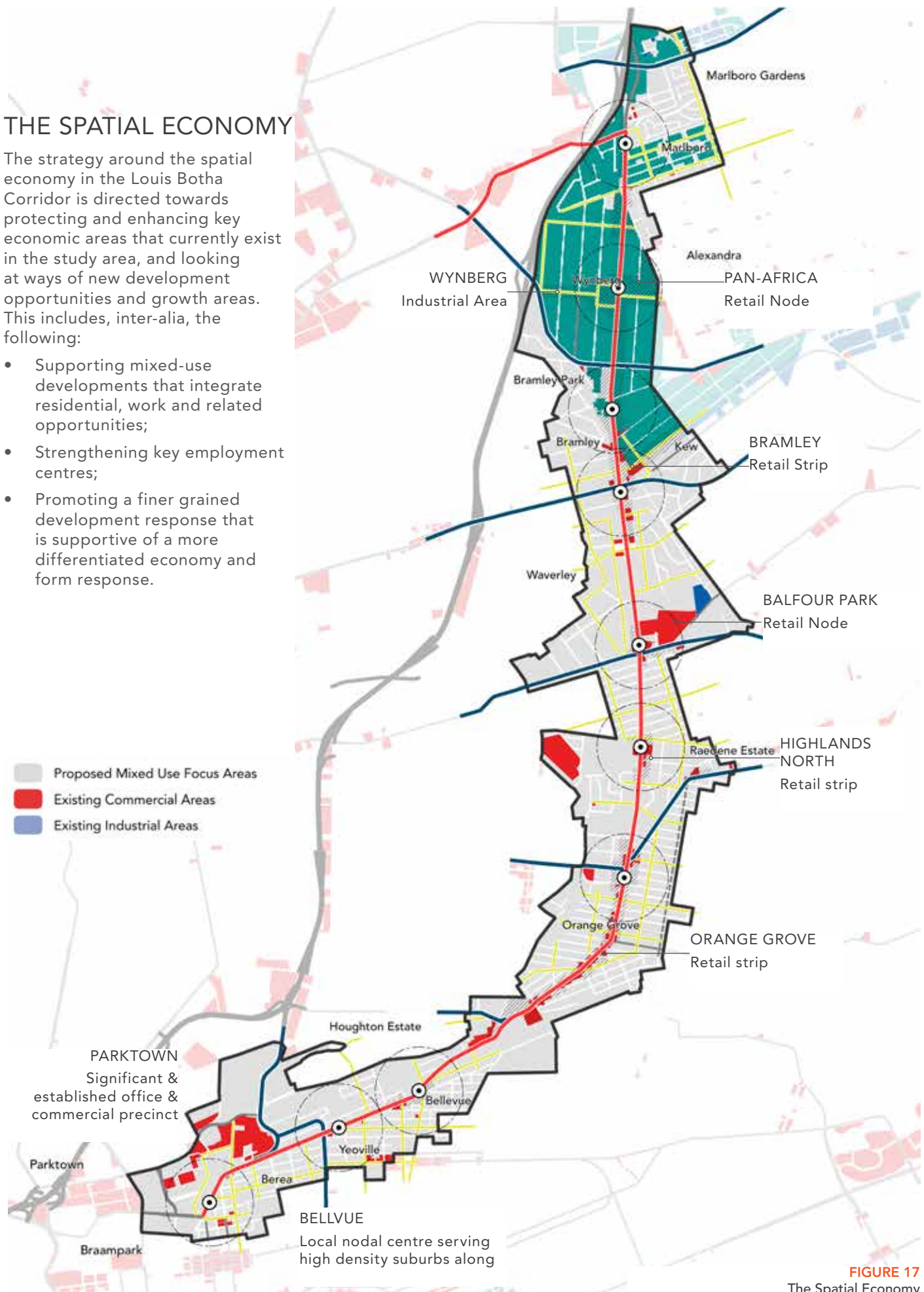
**FIGURE 16**  
Social Clusters

## THE SPATIAL ECONOMY

The strategy around the spatial economy in the Louis Botha Corridor is directed towards protecting and enhancing key economic areas that currently exist in the study area, and looking at ways of new development opportunities and growth areas. This includes, inter-alia, the following:

- Supporting mixed-use developments that integrate residential, work and related opportunities;
- Strengthening key employment centres;
- Promoting a finer grained development response that is supportive of a more differentiated economy and form response.

- Proposed Mixed Use Focus Areas
- Existing Commercial Areas
- Existing Industrial Areas



**FIGURE 17**  
The Spatial Economy



## APPROACH TO DENSIFICATION

### INTENT

The densification of existing areas within the corridor remains the cornerstone of a move towards a more sustainable structure and form of settlement. Active densification of strategic locations within the corridor will actively support the following GDS development paradigms:

- Balanced and shared growth
- Facilitated social mobility
- Settlement restructuring

Promoting more intensive patterns of development in appropriately located areas has a number of benefits for the city, including:

- Higher thresholds of support for public transport;
- More efficient service areas for infrastructure;
- Support for a wider range of social facilities within a walkable

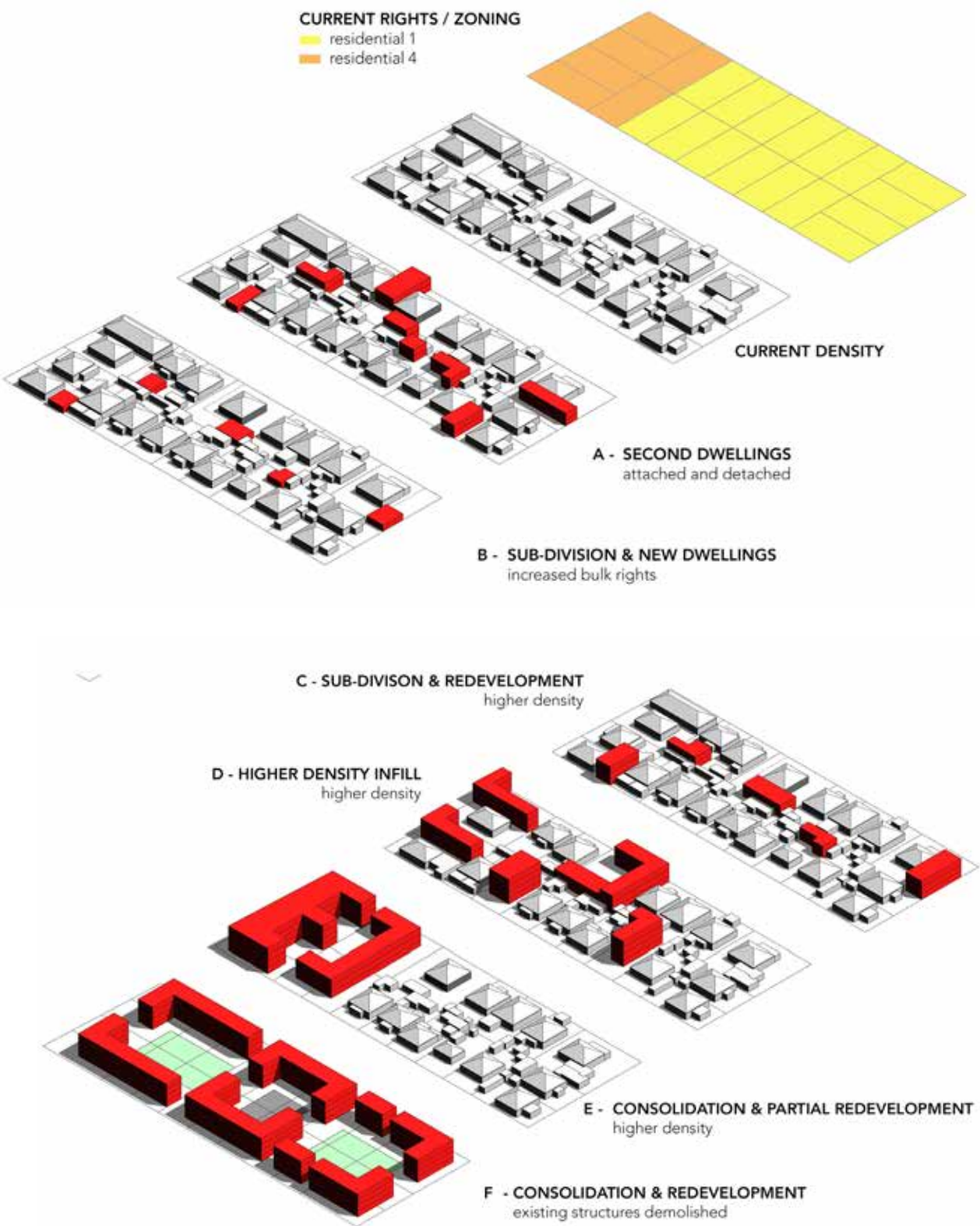
Appropriate areas of densification, in broad terms, would include the following:

- Regional Connectors;
- Key Local Connectors;
- Within existing and future economic nodes;
- Around Key Public Transport Facilities.
- Around Social Clusters

### HOW DENSIFICATION CAN TAKE PLACE

The general process of densification takes place in a number of ways and is supported by a range of land use regulations. The following describes generic ways in which densification takes place.

- Additional dwelling units, consisting of construction of attached/ detached second dwellings including the changing of non-residential buildings, or parts of buildings, to residential buildings (e.g. garages).
- Subdivisions, consisting of subdivision of land and redevelopment at higher densities.
- Consolidation and redevelopment, consisting of block consolidation of erven for redevelopment at higher densities as well as consolidation with redevelopment at higher densities including the demolition and integration of existing structures.
- Increased land use rights, consisting of increasing the existing bulk rights through the extension of the building or adding one of floors to accommodate an increased number of units.
- Higher density infill on underutilised land, consisting of higher density infill on vacant and underutilised land throughout the built area of the City, large scale precinct development, as well as consolidation of sites within a street block to create a single larger parcel for redevelopment into multi-storey units.



Based on the densification options discussed above, a few of the typical methods were omitted as being not applicable to the study area, given that these are currently occurring in the area and leading to urban decay in some locations in the study area.

In order to attain the vision articulated for study area, the following options (in order of priority) form part of the densification strategy:

- Large scale precinct development.
- Consolidation and redevelopment
- Higher density infill on underutilised land



**FIGURE 48**  
Synthesis of Densification Implications for the Louis Botha Avenue Corridor



CURRENT (BROADER AREA) - 72 250



CURRENT FOCUS AREA) - 33 438



FUTURE (FOCUS AREA) - 205 257

POPULATION



6 224



7 251



44 514

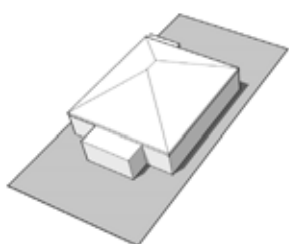
DENSITY (P/km²)

## WHAT FORM WILL DENSIFICATION TAKE

As outlined above, densification within the study area is likely to occur in a number of different ways. The physical response of densification is thus also likely to vary, depending on factors such as location, erf size, land value and development viability.

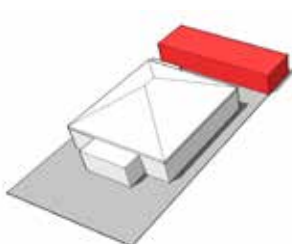
The sequence of diagrams that follow outline some of the key typological responses envisaged for the study area, taking into account existing structural conditions, existing precedent, and likely market responses.

The implications of each of these typologies in terms of density is indicated, as well as a high-level costing estimate, based on certain parameters

**T1**


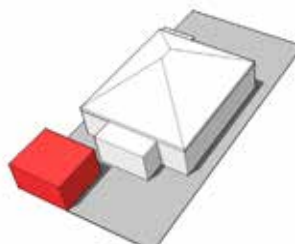
**SINGLE DWELLING  
(EXISTING)**

UNIT SIZE	235m <sup>2</sup>
NO.OF UNITS	1
RATE / M	R5,200
UNIT COST	R1,222,000
BULK	235m <sup>2</sup>
NET DENSITY	7DU/ha

**T2**


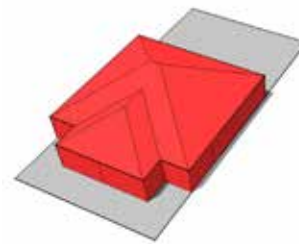
**SECOND DWELLING**

UNIT SIZE	200m <sup>2</sup>
NO.OF UNITS	1
RATE / M	R4,900
UNIT COST	R980,000
BULK	400m <sup>2</sup>
NET DENSITY	13DU/ha

**T3**


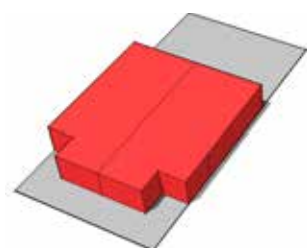
**SECOND DWELLING  
(GARAGE CONVERSION)**

UNIT SIZE	250m <sup>2</sup>
NO.OF UNITS	1
RATE / M	R4,900
UNIT COST	R1,225,000
BULK	250m <sup>2</sup>
NET DENSITY	7DU/ha

**T4**


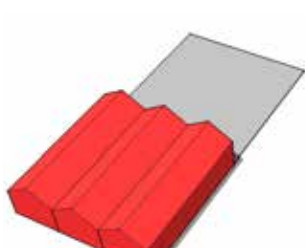
**SEMI-DETACHED**

UNIT SIZE	105m <sup>2</sup>
NO.OF UNITS	2
RATE / M	R5,500
UNIT COST	R577,500
BULK	210m <sup>2</sup>
NET DENSITY	13DU/ha

**T5**


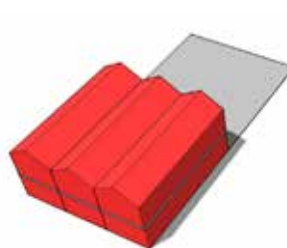
**MAISONETTE**

UNIT SIZE	105m <sup>2</sup>
NO.OF UNITS	4
RATE / M	R6,500
UNIT COST	R682,500
BULK	420m <sup>2</sup>
NET DENSITY	27DU/ha

**T6**


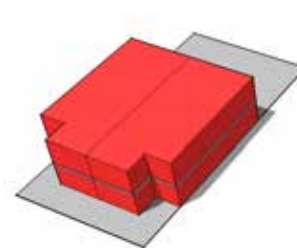
**ROW HOUSE  
(1 STOREY)**

UNIT SIZE	100m <sup>2</sup>
NO.OF UNITS	3
RATE / M	R6,000
UNIT COST	R600,000
BULK	300m <sup>2</sup>
NET DENSITY	20DU/ha

**T7**


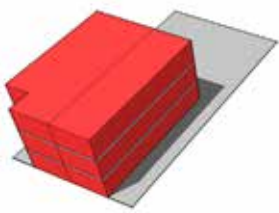
**ROW HOUSE  
(2 STOREY)**

UNIT SIZE	100m <sup>2</sup>
NO.OF UNITS	3
RATE / M	R6000
UNIT COST	R600,000
BULK	300m <sup>2</sup>
NET DENSITY	20DU/ha

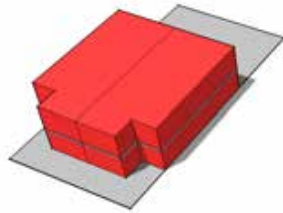
**T8**


**2 STOREY BLOCK**

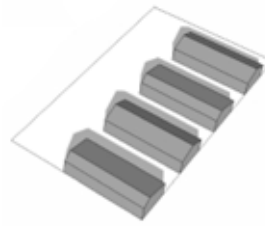
UNIT SIZE	25-40m <sup>2</sup>
NO.OF UNITS	14
RATE / M	R7,500
UNIT COST	R188-300,000
BULK	380m <sup>2</sup>
NET DENSITY	94DU/ha

**T9****3 STOREY BLOCK**

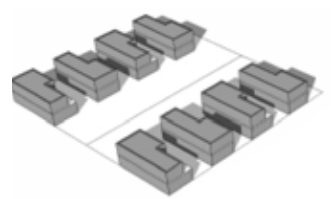
UNIT SIZE	25-60m <sup>2</sup>
NO.OF UNITS	18
RATE / M	R7,500
UNIT COST	R200-480,000
BULK	690m <sup>2</sup>
NET DENSITY	121DU/ha

**T10****2 STOREY BLOCK  
(ALTERNATE PARKING)**

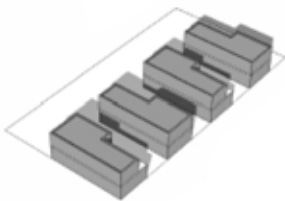
UNIT SIZE	25-40m <sup>2</sup>
NO.OF UNITS	14
RATE / M	R7,500
UNIT COST	R188-300,000
BULK	380m <sup>2</sup>
NET DENSITY	94DU/ha

**T11****COURTYARD HOUSES**

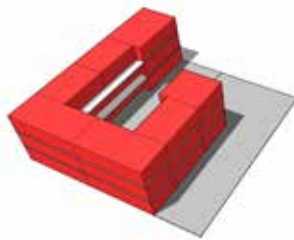
UNIT SIZE	115m <sup>2</sup>
NO.OF UNITS	4
RATE / M	R5,500
UNIT COST	R632,500
BULK	460m <sup>2</sup>
NET DENSITY	27DU/ha

**T12****COURTYARD HOUSES  
(2 STOREY)**

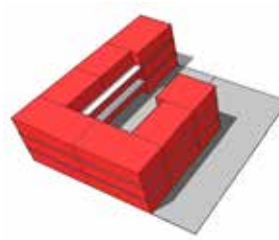
UNIT SIZE	115m <sup>2</sup>
NO.OF UNITS	8
RATE / M	R6,000
UNIT COST	R680,000
BULK	920m <sup>2</sup>
NET DENSITY	54DU/ha

**T13****DUPLEX COURTYARD  
HOUSING**

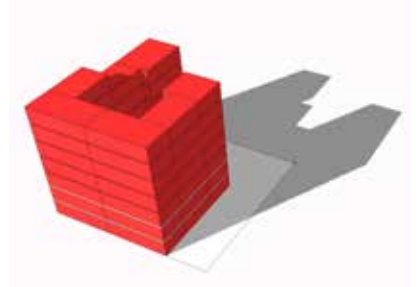
UNIT SIZE	115m <sup>2</sup>
NO.OF UNITS	16
RATE / M	R6,000
UNIT COST	R690,000
BULK	1840m <sup>2</sup>
NET DENSITY	54DU/ha

**T14****LARGE BLOCK**

UNIT SIZE	40-85m <sup>2</sup>
NO.OF UNITS	54
RATE / M	R8,000
UNIT COST	R320-680,000
BULK	2,400m <sup>2</sup>
NET DENSITY	182DU/ha

**T15****LARGE BLOCK (GF RETAIL)**

UNIT SIZE	25-40m <sup>2</sup>
NO.OF UNITS	46
RATE / M	R5,500
UNIT COST	R138-220,000
BULK	1890m <sup>2</sup>
NET DENSITY	155DU/ha

**T16****LARGE BLOCK (ALT)**

UNIT SIZE	25-50m <sup>2</sup>
NO.OF UNITS	90
RATE / M	R6,500
UNIT COST	R162 -325,000
BULK	3780m <sup>2</sup>
NET DENSITY	300DU/ha

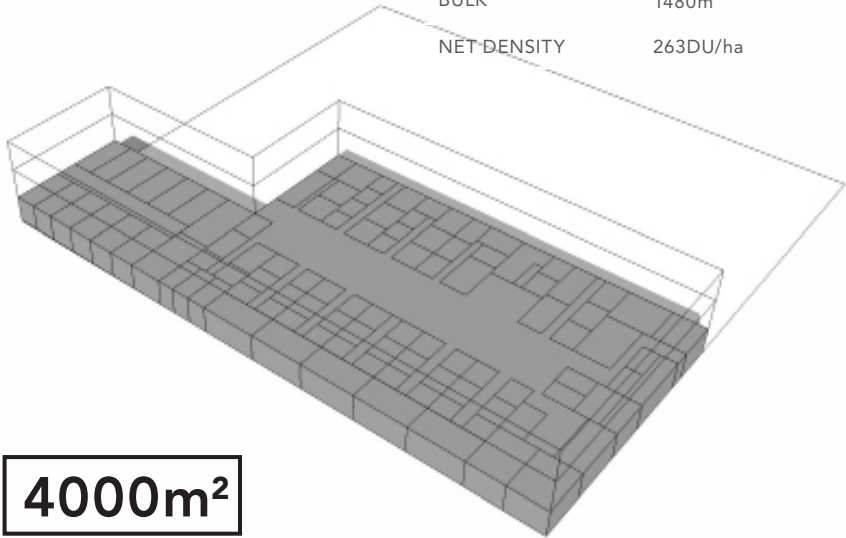




One of the unique challenges faced in the Louis Botha Corridor area with reference to densification typologies relates to some of the light industrial areas, such as Marlboro South and Kew.

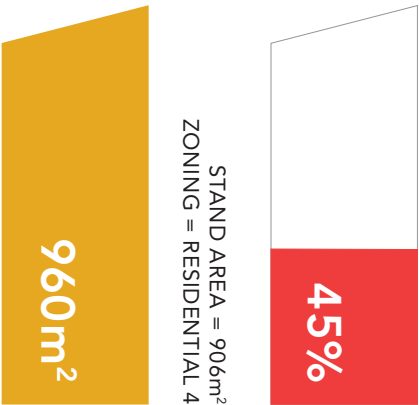
A. INFORMAL WAREHOUSE HOUSING

UNIT SIZE	7-20m <sup>2</sup>
NO.OF UNITS	105
RATE / M	R500
UNIT COST	R3,500-10,000
BULK	1480m <sup>2</sup>
NET DENSITY	263DU/ha



There are a number of recent projects within the study area that demonstrate prevailing trends towards densification that can inform the current process.

This is an example of an affordable housing project developed recently within the corridor area.



GROUND FLOOR AREA = 415m<sup>2</sup>  
COVERAGE = 45%

BUILDING AREA = 1660m<sup>2</sup>  
4 STOREYS  
32 UNITS - 8 UNITS PER STOREY  
25m<sup>2</sup> BACHELOR UNITS  
RENTAL - R3000.00 / MONTH (INCLUSIVE)  
BUILD RATE: R5641.99 / m<sup>2</sup>  
ESTIMATED VALUE: R4682030.00





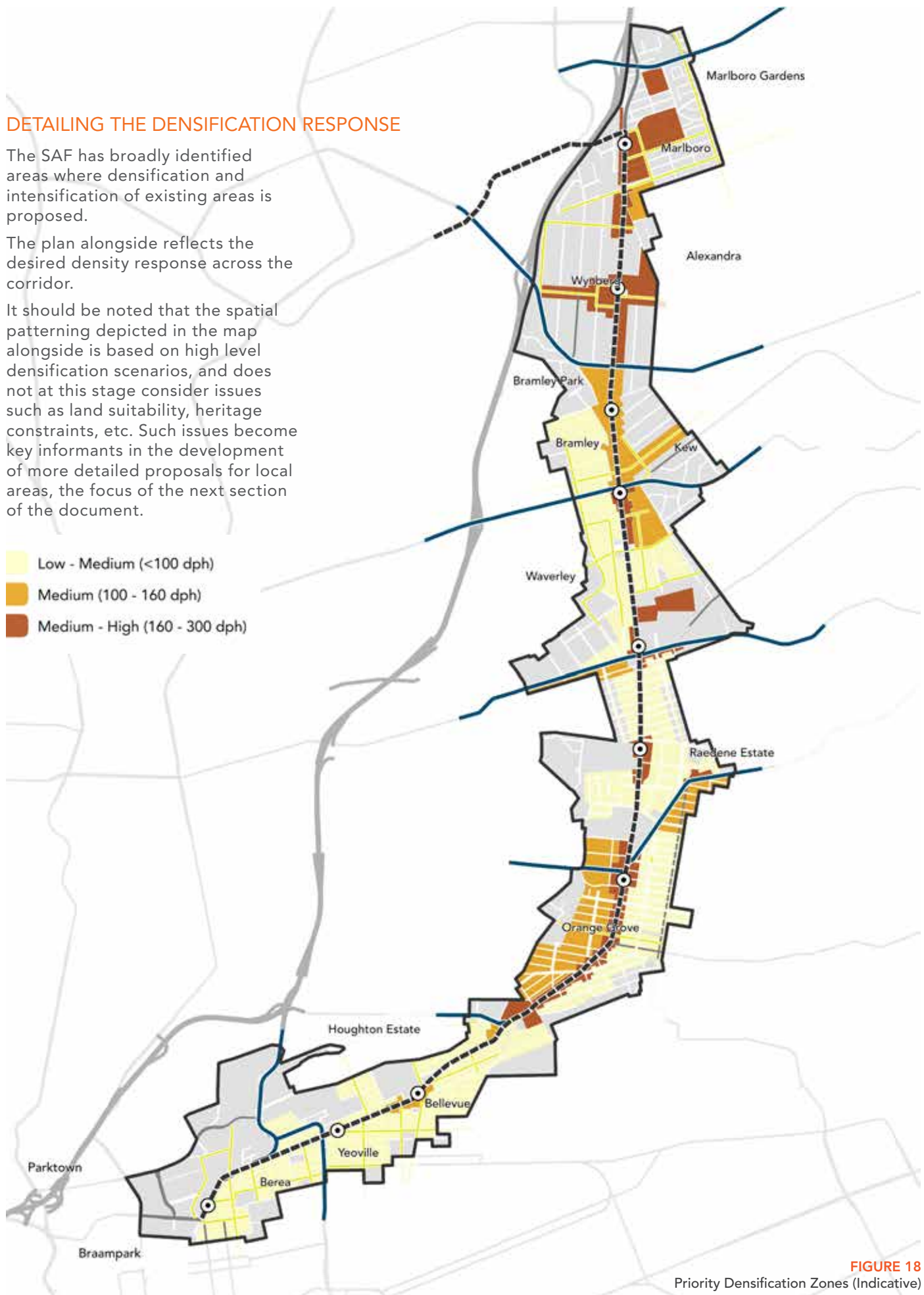
## DETAILING THE DENSIFICATION RESPONSE

The SAF has broadly identified areas where densification and intensification of existing areas is proposed.

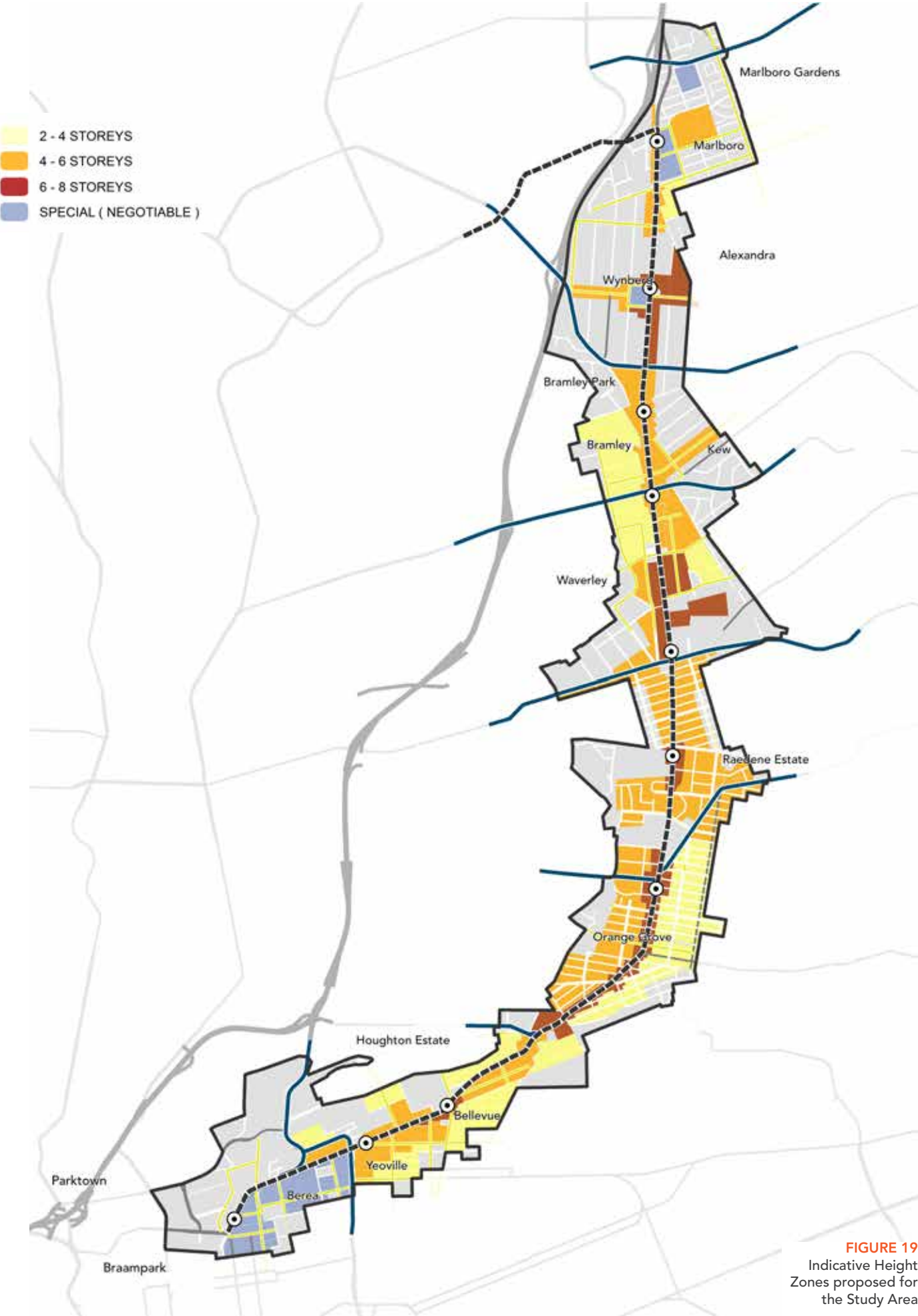
The plan alongside reflects the desired density response across the corridor.

It should be noted that the spatial patterning depicted in the map alongside is based on high level densification scenarios, and does not at this stage consider issues such as land suitability, heritage constraints, etc. Such issues become key informants in the development of more detailed proposals for local areas, the focus of the next section of the document.

- Low - Medium (<100 dph)
- Medium (100 - 160 dph)
- Medium - High (160 - 300 dph)



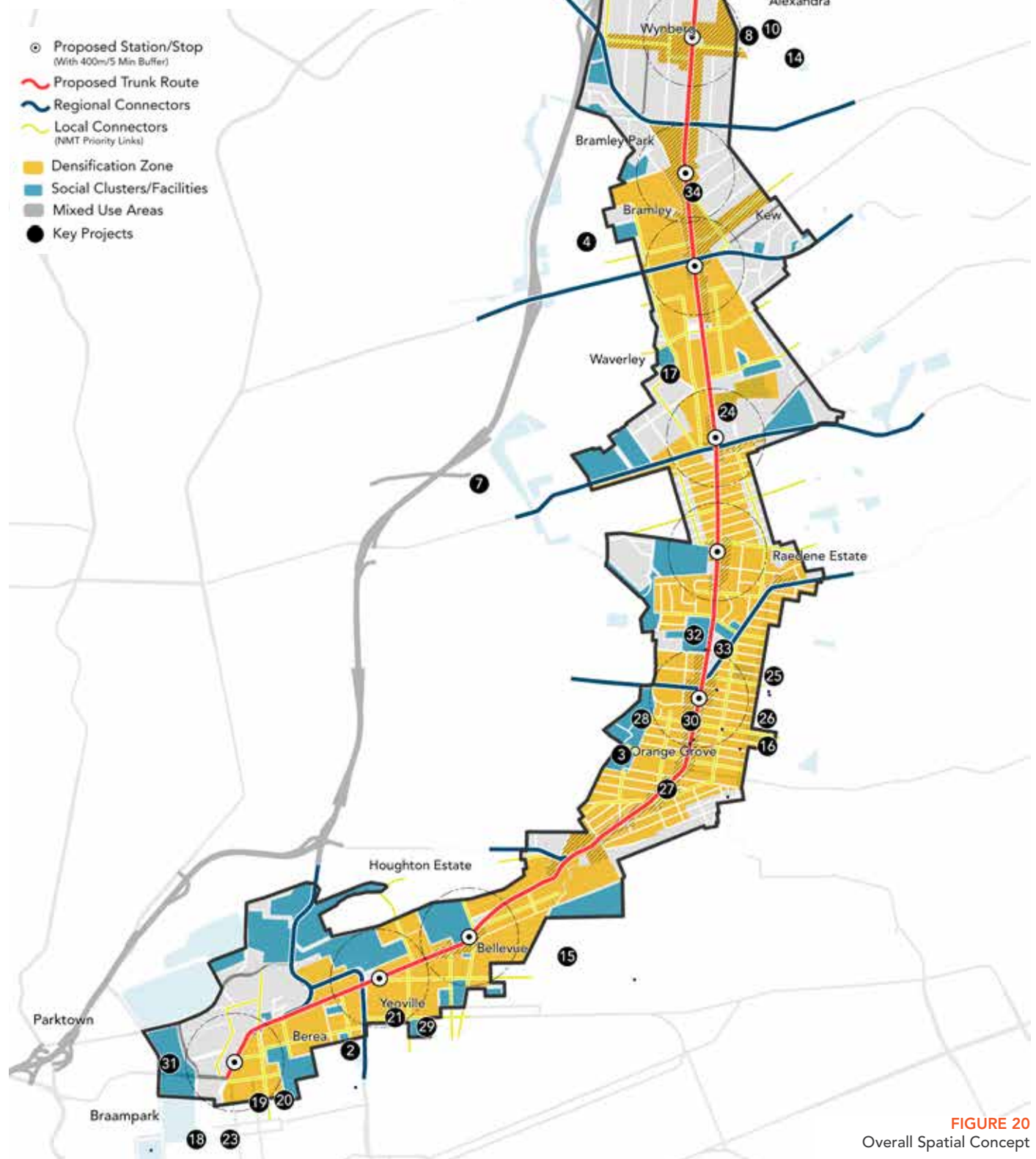
**FIGURE 18**  
Priority Density Zones (Indicative)



**FIGURE 19**  
Indicative Height  
Zones proposed for  
the Study Area

## 03C. Framework Plan

The Consolidated Framework, reflecting the overall intent of the Strategic Area Framework, is illustrated below:



## 03D. Development Guidelines

The Development Guidelines proposed as part of the Strategic Area Framework are intended to direct new development within the Louis Botha Avenue Development Corridor and to ensure that the vision of the Corridors of Freedom, to transform the urban structure by promoting urban efficiency, social cohesion and creating quality urban places can be realised.

The urban form for the Louis Botha Avenue Corridor would focus on creating human scaled environments, expressed in appropriate heights and building edges that provides definition and protection for public spaces.

These guidelines articulate a vision for the built form and a set of priority directions to ensure that new development is compatible with the existing built fabric, creates an attractive and safe pedestrian realm, supports alternative modes of transportation (i.e. walking, cycling and transit), maximises land uses and is environmentally sustainable.

New buildings within the corridor should be designed to address and frame streets and open spaces and develop a unique new urban language that promotes social interaction.

Public spaces and streets should have well designed edges, and specific buildings should serve as landmarks and visual references to the corridor area. Generally, new buildings should be appropriately massed and articulated to minimize their presence from adjacent streetscapes, and provide appropriate transitions to nearby residential neighbourhoods.

Overall, public spaces/places should meet people's needs for safety, comfort and delight in order to reinforce active participation in City life. These are factors which, in a very real way, shape people's experiences on a daily basis and the specific design guidelines are proposed to meeting that need in the corridor.

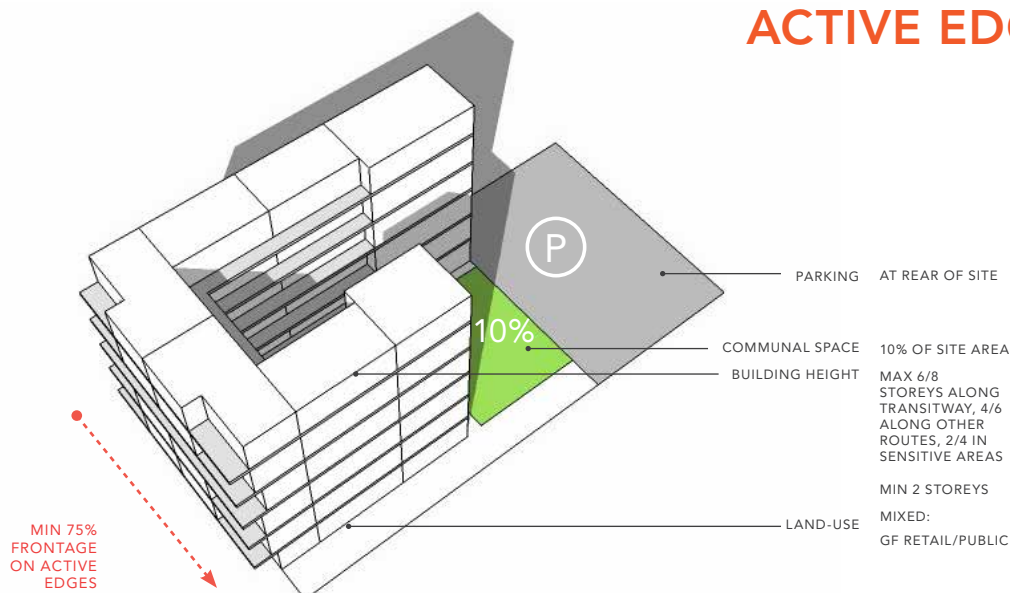


The following expresses the outcomes to be achieved through applying the various design guidelines. Site specifics and context will influence the optimal ways in which the outcomes can be realised, but it is critical that all development submissions consider, apply and adapt to ensure that the desired outcomes are achieved.

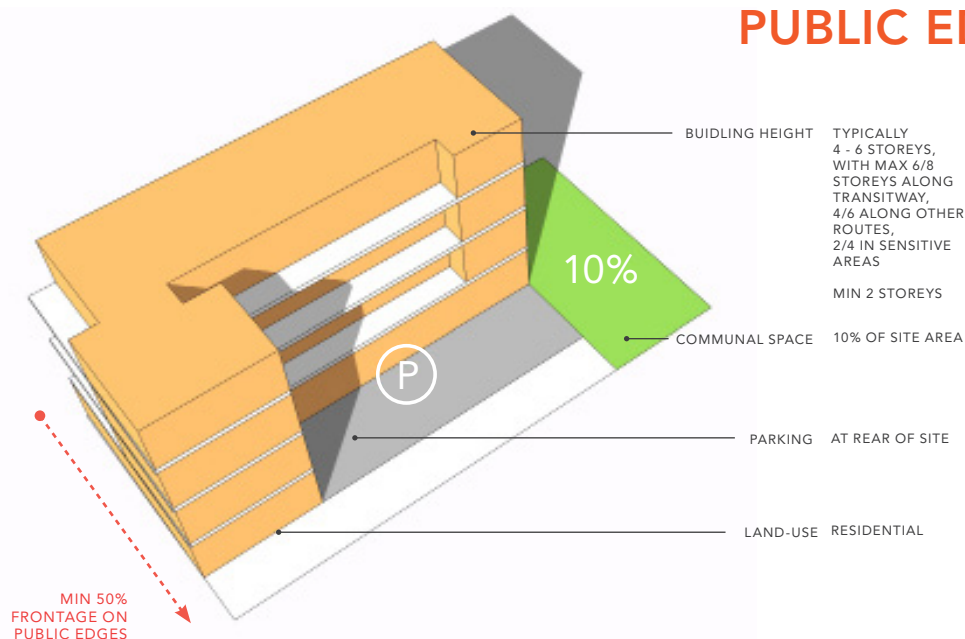
The specific guidelines proposed in the Empire Perth Corridor are summarised below with a focus on the following Urban Design aspects:

- Street - Building Interface
- Transition to neighbourhoods
- Building Articulation and Aesthetics
- Access and Parking
- Sustainable and innovative urban solutions (in terms of buildings, infrastructure and services)

## ACTIVE EDGES



## PUBLIC EDGES



**FIGURE 21**  
Key guidelines in response to Active Edges and Public Edges.

Edges are seen as those property edges directly on one of the three key movement elements (Transit Route, Regional Connector and Local Connector) and around social clusters and existing facilities and retail areas.

Edges within "Mixed-use areas" are considered active edges, those outside "Public Edges".






## STREET- BUILDING INTERFACE

**OUTCOME:**

Ensure a positive relationship between buildings and streets and to secure opportunities for natural surveillance and social interaction.

The relationship of buildings to one another, and to streets and open spaces, influences the amount of energy they consume, the comfort, safety and delight of pedestrians at the street, and the quality of interior spaces. Buildings should frame streets and open spaces, and preserve desirable views.

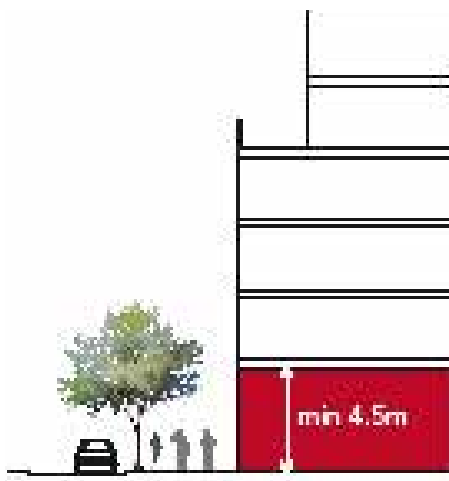
TOOLS	GUIDELINES
<p><b>BUILDING ORIENTATION AND FRONTAGE</b></p>   	<p><b>GENERAL:</b></p> <ul style="list-style-type: none"><li>• Buildings should be positioned to frame abutting streets, sidewalks, parking areas and public spaces. On corner sites, buildings should be designed to frame both the primary and the secondary street.</li><li>• Where a building abuts a natural heritage feature or open space, the interface should create opportunities for easy public access and viewing from streets and adjacent developments. It is therefore encouraged that where possible, new developments in this condition face and open towards the public open space.</li><li>• The Building’s main entrances should be directly accessible from public sidewalks.</li></ul> <p><b>ACTIVE EDGES (MIXED USE STREETS/ZONES)</b></p> <ul style="list-style-type: none"><li>• Buildings within mixed-use zones should be built to the front property Line (build-to-line), or applicable set-back line to create a continuous street wall.</li><li>• Shade and protection from rain should also be provided by means of continuous canopies over sidewalks.</li><li>• Development within active edge zones should have a 100% frontage if there is side access and 75% if there is no side access.</li><li>• Buildings along key public connectors should be built to the front property line, or applicable set-back line.</li><li>• Development within mixed use zones should have a minimum of 50%</li><li>• Frontage. The remaining 50% of the building frontage can be set back a maximum of 5 metres to accommodate lobby entrances, bicycle parking, or outdoor communal areas.</li></ul> <p><b>PUBLIC EDGES (RESIDENTIAL STREETS)</b></p> <ul style="list-style-type: none"><li>• Residential developments must incorporate the principles of Crime Prevention Through Environmental Design (CPTED), particularly in respect of allowing for passive surveillance of public areas and creating defensible private and semi-private spaces.</li><li>• Buildings in residential streets should have soft edges (smooth exchange between private and public spheres).</li><li>• Street interfaces must be (inter-)active, with verandas, balconies, building entrances and windows facing onto/overlooking streets.</li><li>• Activities are to move out to terrace or front garden in good contact with the public space.</li><li>• The edge zone must be inviting and rich in detail on the ground floor</li><li>• No blank walls, and where boundary treatments are appropriate it should be palisade, glass or other visually permeable materials.</li></ul>



## TOOLS

## GUIDELINES

### BUILDING HEIGHTS



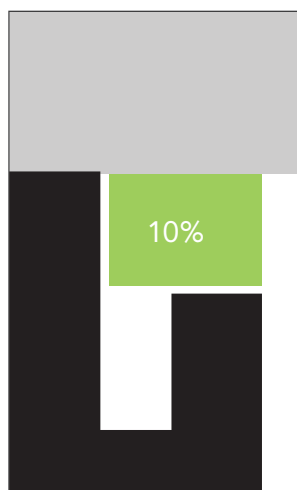
- All new buildings within mixed use zones must achieve a minimum height of 7.5 metres (2-storeys) to promote intensification and ensure the most efficient use of existing infrastructure. The ground floor height should be a minimum of 4,5 metres to allow for interactive uses with vertical façade articulation.
- Ground levels should be free of grade changes to promote barrier free access.
- New buildings along the main transit spine and in key opportunity areas should achieve a mid-rise scale (at least 4-8 storeys, with greater heights in certain places – refer to local area proposals) that promotes human-scaled development, minimises adverse impacts on adjacent streetscapes, and provides appropriate transitions to nearby residential neighbourhoods.
- New buildings along key public connectors should have a lower-rise scale (2-4 storeys, with 4-6 storeys in certain areas) that promotes human-scaled developments, minimises adverse impacts on the adjacent streetscapes and provides appropriate transitions to nearby residential neighbourhoods.

### LAND USES

#### ACTIVE EDGES

- Interactive uses are to be provided at street level, in smaller units and multiple entrances.
- Industrial uses, motor workshops (garages, panel beaters, spray painters etc), motor showrooms, depots, warehouses, scrap yards, big chain retail supermarkets/shops, office parks etc. are not considered interactive uses.
- Restricted industrial uses such as bakeries, artisans workshops etc. are permitted on active edges.
- Vertical mixing of uses should be applied with shops or community facilities etc. at the ground floor level.

### LANDSCAPING/PUBLIC SPACE



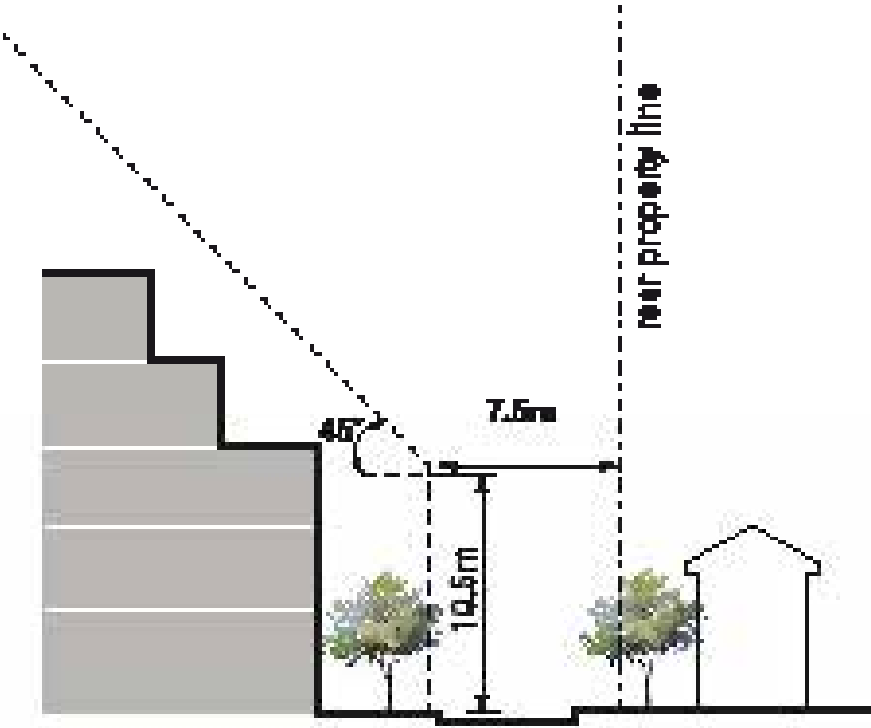
- Development with densities of more than 60du/ha should provide 10% of hard/soft, well interconnected and appropriately vegetated open space within the site.
- Internal courtyards should be landscaped and any paving, if necessary, should be done by porous materials (e.g. grass blocks) to address stormwater run-off;
- 1 tree / 7.5m frontage and shrubs below 700mm (as per Complete Streets manual)

B

TRANSITION TO NEIGHBORHOODS

OUTCOME:  
To provide a transition in height from mid-rise buildings to low-rise residential homes to reduce shadow impacts and negative perception on heights and to maintain the views and sunlight penetration.

TOOLS	GUIDELINES
SIDE BUILDING SET-BACKS	<ul style="list-style-type: none"><li>• New developments in mixed use zones should maintain as continuous a streetwall as possible, while respecting the adjacent properties access to natural light and air. As a result, new buildings should apply a minimum distance from existing buildings with side windows.</li><li>• Where a new building is adjacent to a vacant lot, buildings should be built to the side property line (with no windows) to allow for a continuous streetwall in the future.</li><li>• New buildings should maintain a minimum 5.5 metre distance from existing adjacent buildings that have windows on their side-facing walls.</li><li>• When the new building is set back at least 5.5 metres from the property line, it should incorporate glazing where possible.</li></ul>



## TOOLS

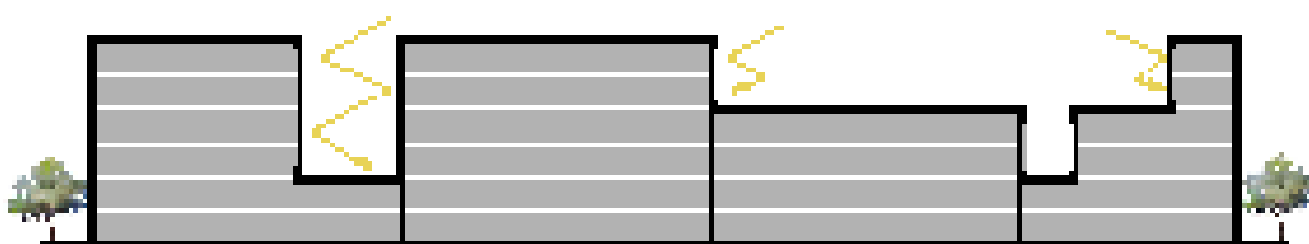
## GUIDELINES

## SIDE BUILDING STEP-BACKS

- It is important to maintain the views and sunlight penetration to public boulevards through the articulation of the sides of the building. Providing breaks in the streetwall on the upper levels achieves this, and mitigates the “canyon effect” on longer corridors.
- Where key mixed-use zones are adjacent to stable residential neighbourhoods, the application of an angular plane is recommended to provide a transition in height from mid-rise buildings to low residential homes to reduce shadow impacts on the residential properties, as well as the perception of height.
- Where properties have wider frontages, the building’s uppermost storeys can step back sideways - allowing for the application of glazing, thereby reducing the amount of blank sidewalls, should that building be built ahead of its neighbours.
- Narrow sites will not be able to reasonably achieve side step-backs at the upper levels, and as a result may not achieve their maximum permitted height.
- Above 80% of the building’s permitted height, the property should step back sideways 5.5 metres to provided sky views and sunlight penetration to the sidewalks in the right-of-way, and to other nearby properties.
- When a more “porous” wall is preferred, side step-backs should be encouraged above the minimum building height for that area.
- Upper storey side step-backs are not required for buildings that are 20 metres (6 storeys) or less.

## DISCRETIONARY ZONE

- Properties that adjoin defined densification zones, or front onto such zones could be redeveloped to a level between that of the development zone in question and that of the existing development rights.
- The maximum height of such development should remain at least one storey lower than that permitted within the development zone (notwithstanding existing building height restrictions).
- The discretionary zone can only be exercised when the property in the densification zone has exercised the rights in terms of the Empire Perth SAF.
- The discretionary zone may only be applied once and may not be extended to the second and third properties from the defined densification zone.



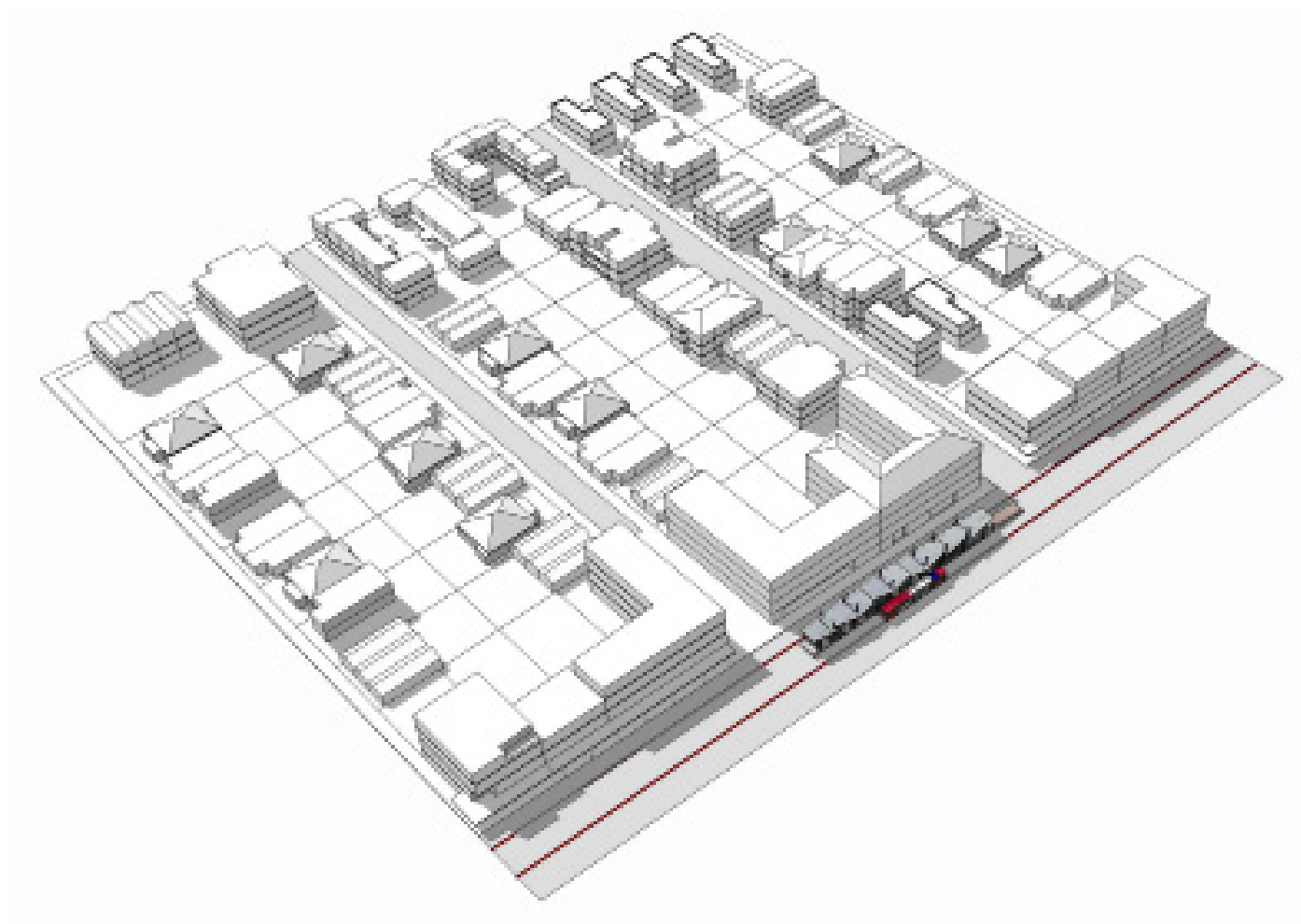


## BUILDING ARTICULATION & AESTHETICS

### OUTCOME:

To ensure that the aesthetic qualities of the buildings are maintained for positive and interesting experiences from the streets.

The aesthetic qualities of the building, its façade, roof line, windows, and access points are all vital factors in how the public perceive a building, and how that building impacts people's experience of the street.



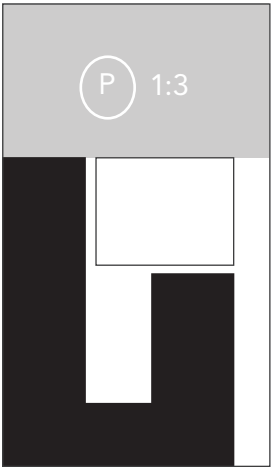
TOOLS	GUIDELINES
<b>BUILDING ARTICULATION</b>	<ul style="list-style-type: none"> <li>• The façades of large buildings should be designed to express individual commercial or residential units through distinct architectural detailing, including entrance and window design.</li> <li>• Properties that face onto parks and public spaces should be subject to architectural and landscaping controls in order to provide an optimal interface.</li> <li>• Corner buildings at key intersections should emphasize the focal nature and visibility of these buildings through elements such as bay windows, projections, recesses, special materials, and other architectural details.</li> <li>• The “perimeter block” configuration should be applied for residential buildings to ensure tight street edges, passive surveillance of the street space and defensible (semi-private) open spaces (courtyards) shared by residents of surrounding buildings for recreation, playing and car parking.</li> <li>• The circumference of a “perimeter block” should preferably be less than 450m to allow for a walkable grid of public urban spaces.</li> <li>• Buildings should incorporate architectural details such as vestibules, recessed entrances, covered walkways, canopies and awnings to provide weather protection.</li> <li>• A significant amount of the building frontage on the ground floor and at building base levels should be glass to allow views of the indoor uses and create visual interest for pedestrians. Clear glass is preferred to promote the highest level of visibility.</li> <li>• Building entrances should work in conjunction with retail uses and can be expressed and detailed in a variety of ways including large entry awnings, canopies or double-height glazing. Retractable awnings and canopies may encroach into the public right-of-way provided a minimum of 2.7 metres of vertical clearance is provided.</li> <li>• Where residential uses are included above retail uses, separate entrances should be provided.</li> <li>• Secondary entrances should not be the dominant entrance. However, they should be easily accessible and convenient for service, loading and parking areas.</li> <li>• When building frontages exceed 12 metres in width they should be divided into functionally and visually smaller units through the use of façade articulation, internal courtyards, and networks of connected walkways and landscaping</li> </ul>
<b>MATERIALS</b>	<ul style="list-style-type: none"> <li>• All new buildings and developments should utilize building materials chosen for their functional and aesthetic qualities, as well as their energy and maintenance efficiency.</li> <li>• Finished materials should extend to all sides of the building, including building projections and mechanical penthouses.</li> <li>• Within active edge zones the ground floor should incorporate a minimum of 60% glazing to enhance safety through passive surveillance.</li> <li>• Blank walls or unfinished materials along property lines where new developments are adjacent to existing parking areas or smaller-scaled buildings should be avoided.</li> </ul>



PARKING & ACCESS

OUTCOME:  
To manage the negative impacts of parking and servicing areas on the experience of the street-building interface and the safety of pedestrians.  
The objective is to reduce the use of private cars and related carbon emissions by promoting the use of public transport healthy lifestyles through walking and cycling in pedestrian friendly environments.

TOOLS	GUIDELINES
NMT	<ul style="list-style-type: none"><li>• Provision of NMT access, sidewalk and cycle path where appropriate</li><li>• City of Johannesburg Complete Streets guidelines are applicable</li></ul>
STREET PAVING, FURNITURE AND SIGNAGE	<ul style="list-style-type: none"><li>• Legible, consistent with broader TOD area, aesthetically pleasing and appropriately located. (i.e. not as a barrier to pedestrian / cycle movement)</li></ul>
PARKING RATIOS	<ul style="list-style-type: none"><li>• Parking will be significantly reduced in the corridors as a matter of principle. Site specific conditions will be considered.</li><li>• Recommendations: 1 bay per 3 units for residential. If specific parking studies are done the recommendations thereof will apply.</li><li>• The overall number of parking spaces should be minimized by sharing the parking between adjacent properties – especially in the evenings, weekends and other off-peak times.</li></ul>
STREET LEVEL PARKING	<ul style="list-style-type: none"><li>• Ideally no parking will be approved at street level frontages</li><li>• Surface parking should be located at the rear of buildings. If the stand is not deep enough, the parking should be located at the side of the building.</li><li>• Where parking is approved along street edge, it is to be screened from the street boundary.</li><li>• Where parking areas are adjacent to a public sidewalk, buffers such as landscaping, trees or bollards should be provided between the parking area and the sidewalk. This buffer should be located within the private realm to not reduce the total sidewalk width.</li><li>• Planting strips, landscaped traffic islands and/or paving articulation should be used to define vehicle routes and smaller parking courts that provide pedestrian walkways, improve edge conditions and minimise the aesthetic impact of surface parking.</li><li>• Large areas of uninterrupted parking should be avoided.</li><li>• The amount of landscaping should be proportionate to the overall parking lot size, but generally, 1 tree for every 3 parking spaces is recommended.</li><li>• Landscaping, or other parking area screening devices, should not obstruct the primary building façade or total visibility of the parking area.</li></ul>

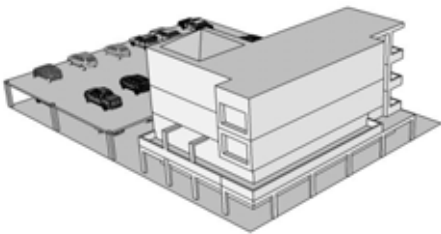




## TOOLS

## GUIDELINES

## STRUCTURED PARKING



- Underground parking is not always an economically viable option and since large surface parking lots are undesirable, above-ground structured parking should be considered. Above-ground structured parking can be incorporated into new mixed-use buildings, maintaining a positive urban environment and allowing for a greater number of spaces and a more efficient use of land.
- Parking provided within basement/parking floors should be screened from view at sidewalk level and the street-level wall should be enhanced through architectural detailing and landscaping
- When a parking structure fronts onto a street or open space it should be developed with an active at-grade use with an attractive façade that animates the streetscape and enhances pedestrian safety.
- At a minimum, 50% of the ground floor should be occupied by a use other than parking. In the case of a corner stand, 50% of the front and side of the building should be occupied by an alternative use.
- A vertical mix of parking, residential and/or office above should be considered a preferred development model, with parking on the lower floors and residential or office above. Shallow retail or office units should face the street minimizing the visual impacts of the structured parking lots.
- Vehicular access to parking structures should be located at the rear and/or side of buildings away from main building frontages and major streets.
- Pedestrian entrances for parking structures should be located adjacent to main building entrances, public streets or other highly visible locations.
- Parking within a structure should be screened from view at sidewalk level and the street-level wall should be enhanced through architectural detailing and landscaping.

## SERVICES AND LOADING

- Service and drop-off area circulation should not interfere with pedestrian circulation
- Where servicing and loading areas are required, they should not be visually obtrusive.
- Loading docks and service areas should be located at the side or rear of buildings and should be screened from public view.
- Where possible, garbage storage areas should be accommodated internally.
- Servicing enclosures should be constructed of materials that complement the main building.
- Service and refuse areas should be paved with an impervious surface of asphalt or concrete to minimize the potential for infiltration of harmful materials.
- Service and refuse areas should not encroach into the exterior side or front yard set-back.
- Loading and service areas may occupy the full rear yard if adequate landscape edge and buffer treatments are provided.



## URBAN DESIGN ADVISORY COMMITTEE

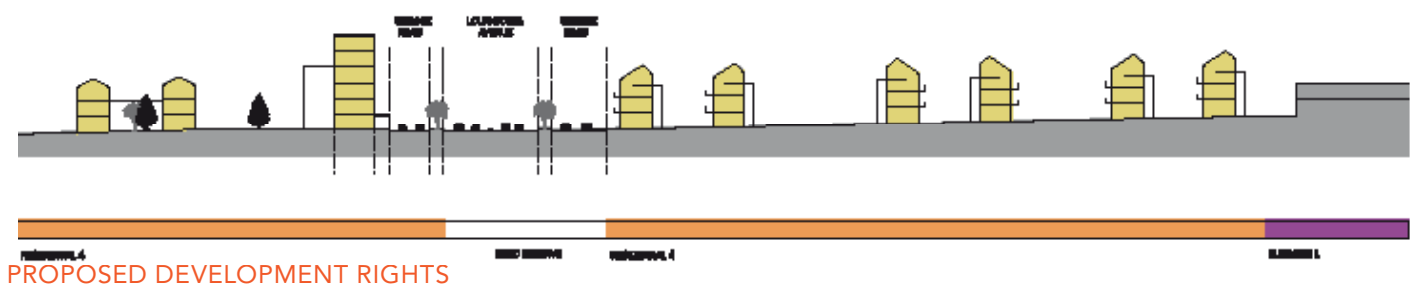
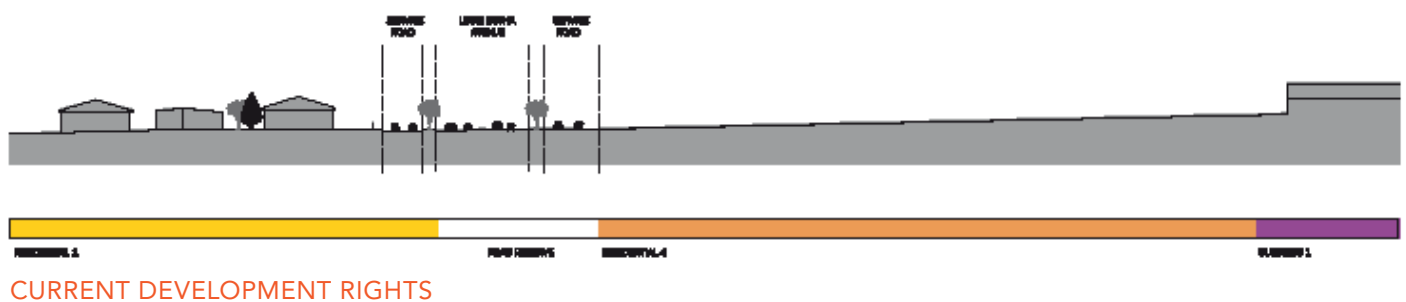
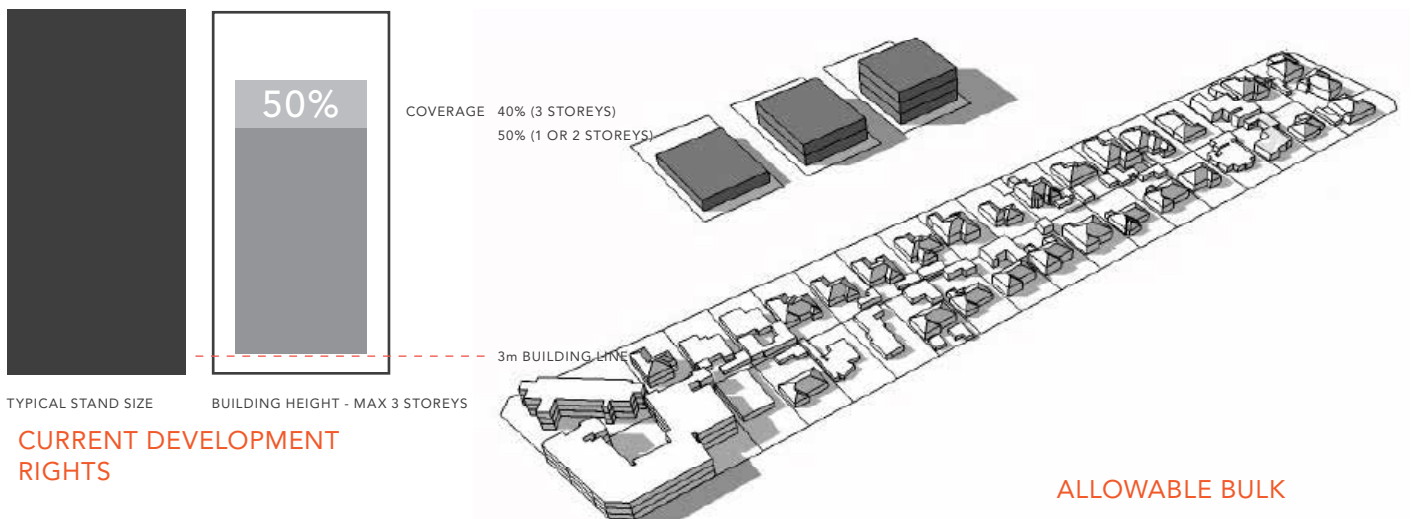
Site Development Plans and building plans submitted in response to the corridor development proposals will be evaluated using the set of guidelines outlined above, which may be amended from time to time.

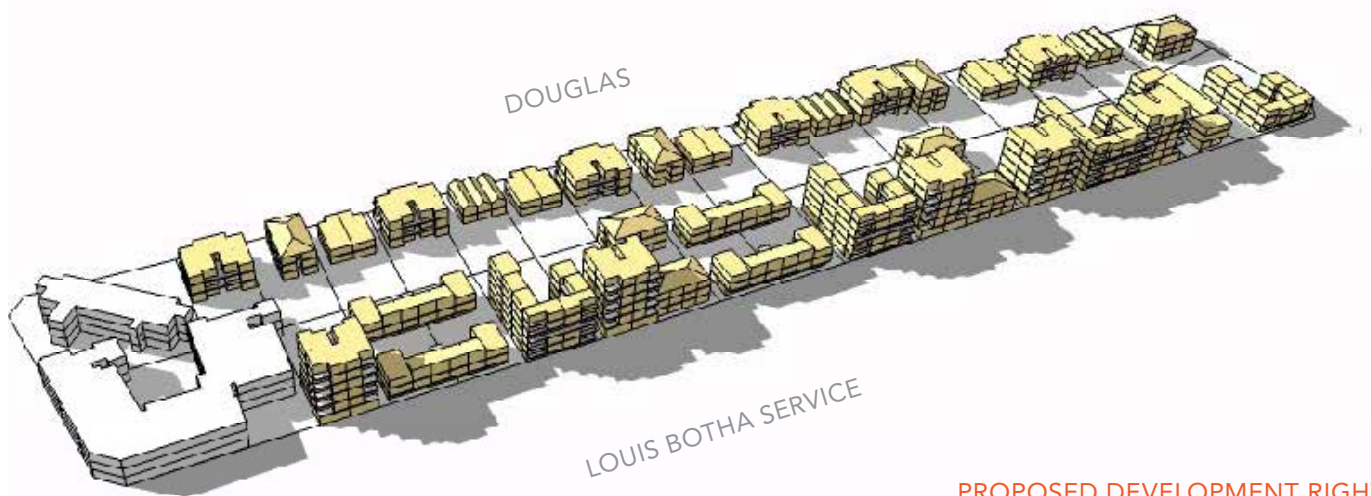
Site specific conditions will be taken into account in the application of these guidelines. The SDP's will further be assessed by the Urban Design Advisory Committee (UDAC), to ensure that the built form outcomes envisaged in the corridor are achieved.

## DEMONSTRATION PLAN: LOUIS BOTHA SERVICE RD

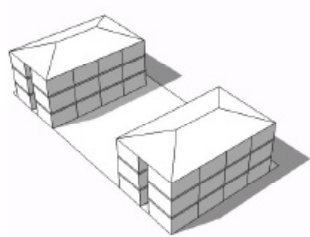
The area opposite the Balfour Shopping Centre node is ideally located for higher density development.

- The strip is protected by a service road which also offers development opportunity.
- The strip at present is zoned for Residential 1 and is occupied primarily by single storey residential scale development. The corner sites adjacent to the Athol St intersection have higher density, 3-4 storey development.
- Most development fronting onto the service road has been converted to small businesses
- The study on the following pages demonstrates the limitations of the current rights and how these can be increased to encourage development intensification.
- The rights on the stands fronting onto Louis Botha Service Road fall within the designated mixed-use zones and should be increased to allow for 4-6 storey mixed use development guided by the prescribed guidelines and controls. The development should be guided towards creating 'Active Street Frontages'.
- Douglas St has been identified in the framework as a Local Connector and the rights on the stands fronting onto this road should be increased to allow for 2-4 storey residential development guided by the prescribed guidelines and controls. The development should be guided towards creating 'Public Street Frontages'.

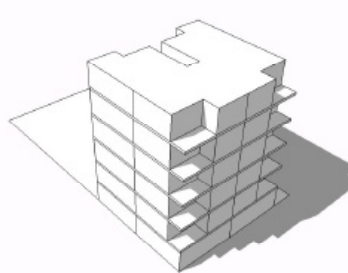




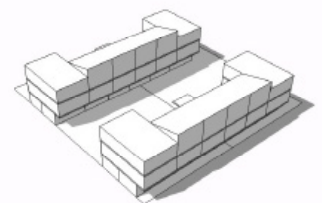
## PROPOSED DEVELOPMENT RIGHTS



1.



2.



3.

STAND SIZE	990m <sup>2</sup>	990m <sup>2</sup>	1980m <sup>2</sup> (CONSOLIDATED)
BUILDING HEIGHT	3 STOREYS	6 STOREYS	3 STOREYS
COVERAGE	50%	30%	40%
F.A.R.	1.5	1.8	1.2
BUILD TO LINE	0m	0m	0m
UNIT SIZE	25m <sup>2</sup>	35m <sup>2</sup>	35m <sup>2</sup>
NO. OF UNITS	48	42	57
GROUND FLOOR RETAIL	240m <sup>2</sup>	300m <sup>2</sup>	400m <sup>2</sup>
DENSITY	484 DU/ha	424 DU/ha	287 DU/ha





# 04. LOCAL AREA IMPLICATIONS

- A. Defining Local Precincts
- B. Anchor Precincts & Building Blocks
- C. Priority Interventions



# 04. LOCAL AREA IMPLICATIONS

## 04A. Defining Local Areas

The preceding section has, at a broad level, outlined the overall strategies guiding growth and change in the study area as a whole. The current section provides a basis for taking these higher level interventions to a more localised level of intervention, focusing on specific local areas or precincts that constitute the corridor.

The study has identified eight local areas within the broader corridor area. These areas are:

- Local Area 1: Parktown/Hillbrow;
- Local Area 2: Yeoville/Berea/Upper Houghton;
- Local Area 3: Orange Grove/Fellside;
- Local Area 4: Highlands North;
- Local Area 5: Balfour;
- Local Area 6: Bramley;
- Local Area 7: Wynberg/Alexandra



**FIGURE 22**  
Local Precincts within the Lou-  
is Botha Avenue Corridor

## 04B. Anchor Precincts & Building Blocks

### 1

### LOCAL AREA 1

Local Area 1 comprises parts of Hillbrow and Parktown, and is characterised by fairly intense levels of development. Hillbrow remains one of the key inner-city residential areas, and whilst there are isolated opportunities for densification through infill development and redevelopment of certain single dwelling structures that remain, much of the opportunity associated with the current initiative relates to ensuring good connectivity to the planned BRT stations, and consolidating and enhancing the supporting social and community infrastructure that exists in the area.

#### KEY ISSUES:

Key issues guiding intervention within this area include:

- Traffic circulation and pedestrian movement, particularly in the areas around Louis Botha Avenue and the regional links that tie it into the city and into Hillbrow/Berea;
- Overcrowding in existing buildings, particularly in the Hillbrow/Berea areas;
- Bad Buildings and visible Urban Decay in most areas around Hillbrow/Berea/Yeoville;
- Institutional Interface with the Parktown area, although connectivity between these areas, and the densely settled suburbs, remains poor, particularly around the proposed BRT Station at Claredon Street;
- Significant Heritage resources, particularly in the Parktown & Upper Houghton areas, which limits opportunities for substantial densification, but does open up opportunities for tourism related activities and connections to established heritage trails outside of the study area.



FIGURE 23  
Hillbrow/Parktown

## MOVEMENT & CONNECTIVITY

Claredon Station is the first of the BRT Stations proposed for the study area. It is located between Hillbrow and Parktown. The location of the station enjoys good accessibility to the Hillbrow side of Louis Botha Avenue, but relatively poor connectivity to the western side of the road, into the Parktown areas, due to the lack of local connections into this area. It is proposed that a pedestrian/NMT link be pushed through the block west of the Station, to tie into Park Street.



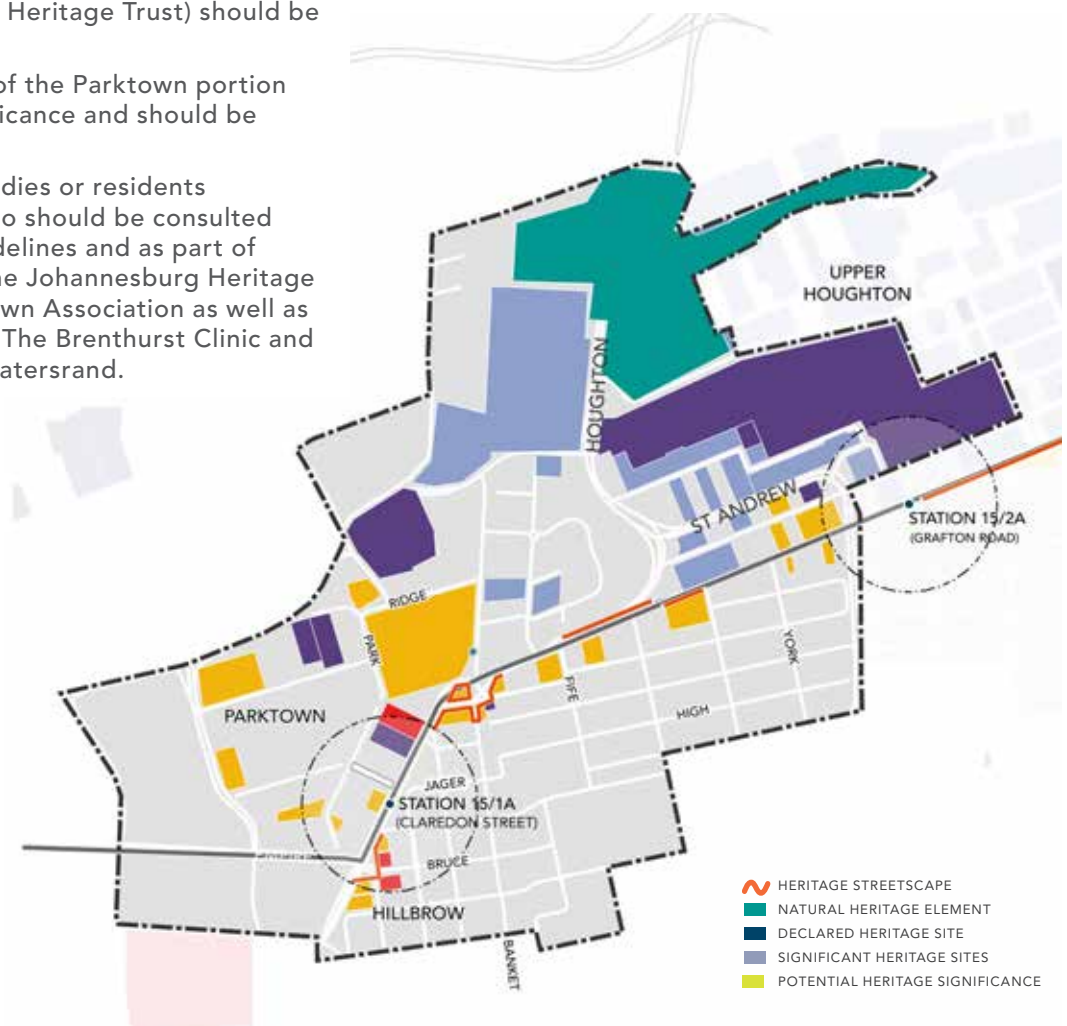
## PUBLIC STRUCTURE & FACILITIES

Hillbrow is characterised by high rise residential buildings while Berea and Parktown have a mix of high rise Residential and earlier single residential dwellings dating from the late 19th and early 20th century. The portion of Houghton included consists of late 19th and early 20th century single residential dwellings and late 20th century office development.

Heritage related interventions within this local area include:

- Existing heritage studies of this area produced by the Johannesburg Heritage Foundation (formerly the Parktown Westcliff Heritage Trust) should be consulted.
- The natural resources of the Parktown portion of the site are of significance and should be maintained.

Important conservation bodies or residents associations in the area who should be consulted in the development of guidelines and as part of heritage surveys include the Johannesburg Heritage Foundation and the Parktown Association as well as major land owners such as The Brenthurst Clinic and The University of the Witwatersrand.



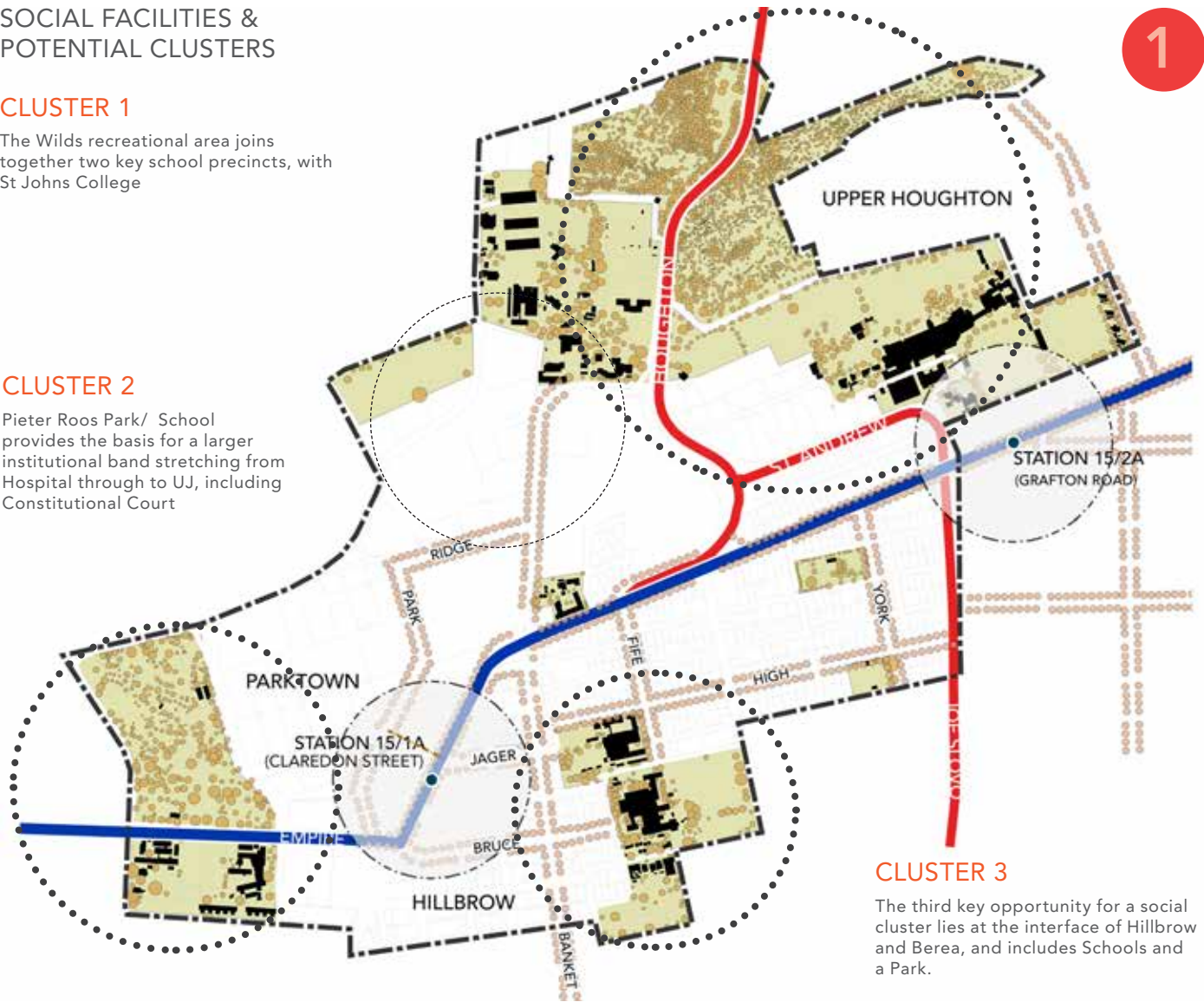
SOCIAL FACILITIES & POTENTIAL CLUSTERS

CLUSTER 1

The Wilds recreational area joins together two key school precincts, with St Johns College

CLUSTER 2

Pieter Roos Park/ School provides the basis for a larger institutional band stretching from Hospital through to UJ, including Constitutional Court



CLUSTER 3

The third key opportunity for a social cluster lies at the interface of Hillbrow and Berea, and includes Schools and a Park.

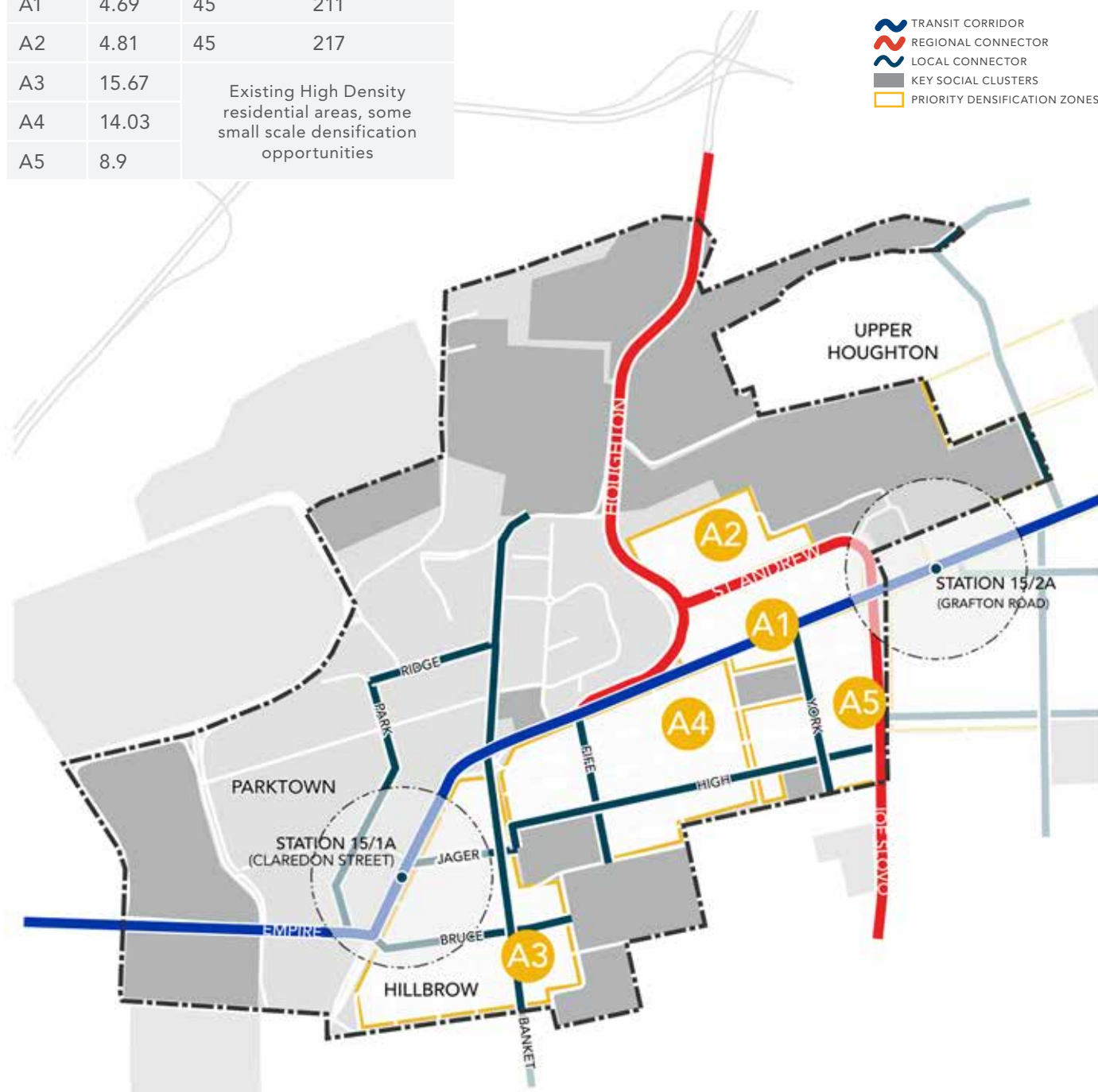


1

## KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected below.

NAME	HA	TARGET DENSITY	HOUSEHOLDS
A1	4.69	45	211
A2	4.81	45	217
A3	15.67	Existing High Density residential areas, some small scale densification opportunities	
A4	14.03		
A5	8.9		



## 2

## LOCAL AREA 2

The St Johns/KES portion of the LBDC is comprised of portions of the suburbs of Yeoville and Bellevue.

- Houghton Ridge – topographical constraints
- Medium density residential typologies
- Inactive edges

Key issues guiding intervention within this area include:

- Connectivity / Access
- Vacant Land
- Cross linkages
- Existing Character / Heritage
- High density residential apartment block contrasted with lower densities on opposite side
- Dead edges on Houghton side contrasted by infrequent active edges on Yeoville side
- Some retail and active ground floor uses
- Significant setbacks on Yeoville edge offer opportunity

The properties at the intersection of Louis Botha Avenue and 1st Avenue provide a unique and significant development opportunity, and one that can serve as an important catalyst for further densification and intensification in this portion of the Corridor.

A mixed use development is envisaged, with the possibility of initiating as a Public Private Partnership, given the fact that the City of Johannesburg owns two of the properties (RE/1076 & RE/1075).

There are heritage resources relating to the site that would need to be considered. The Heritage Study that was undertaken as part of the current process has identified this site as the historic location of a waterfall.



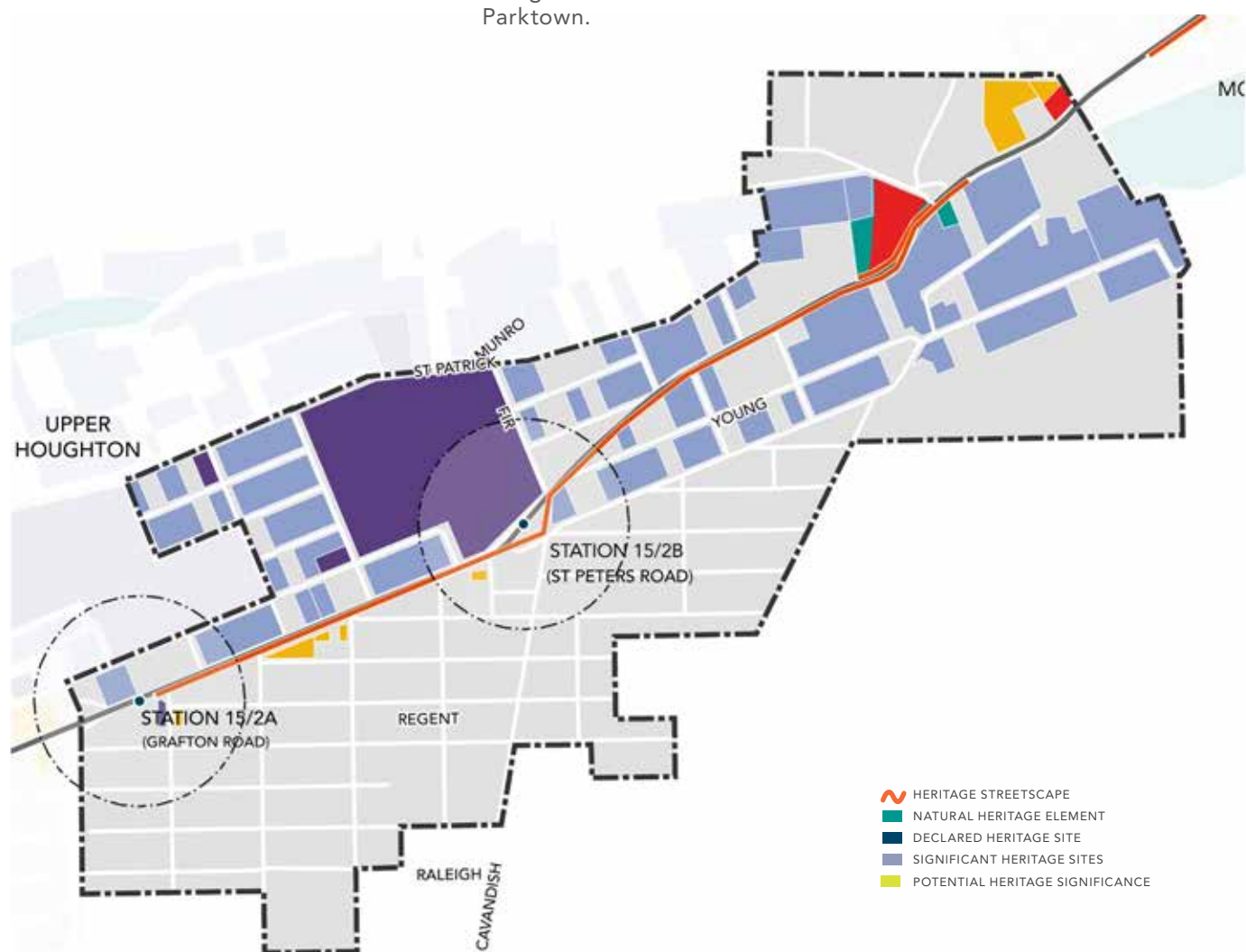
## HERITAGE RESOURCES

The St Johns/KES portion of the LBDC is comprised of portions of the suburbs of Yeoville and Bellevue. The area is rich in heritage resources including natural resources such as The Wilds, and historic schools such as St Johns and KES.

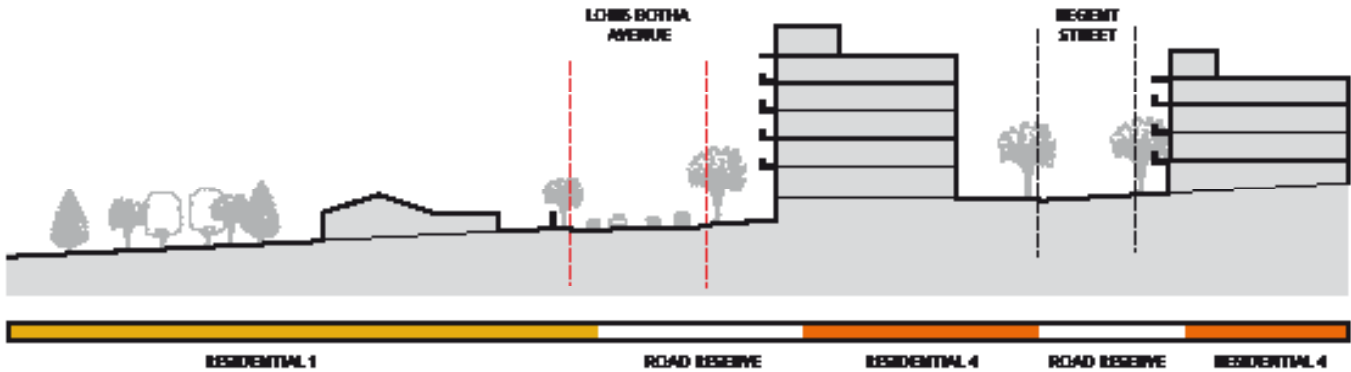
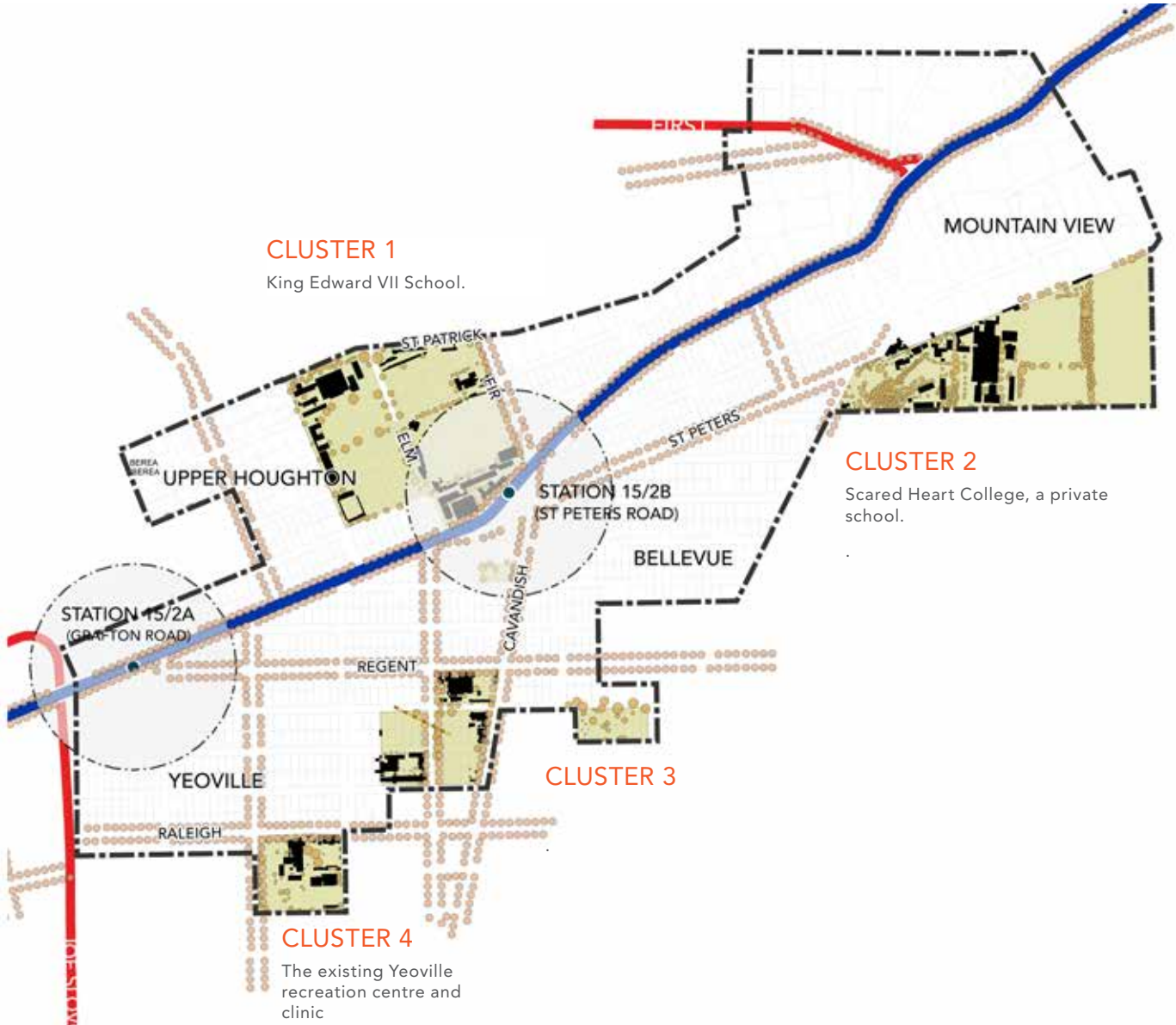
Houghton is characterised by high rise large homes on well treed streets. Yeoville and Bellevue have a mix of low and medium high rise apartment buildings and small single residential dwellings dating largely from the early 20th century.

- The 2007 Upper Houghton Heritage Survey should be consulted for developments in this area.

- The natural resources of mature trees and the ridge should be maintained.
- Development should take cognisance of the existing relationship and street frontage of properties.
- Particular sensitivity and care should be taken where Louis Botha Avenue cuts through Upper Houghton due to both its historical and natural significance.
- Good precedent for medium scale development and densification which respects existing heritage resources can be found within the Wits Junction development located along Louis Botha Avenue in Parktown.
- Important conservation bodies or residents associations in the area who should be consulted in the development of guidelines and as part of heritage surveys include the Johannesburg Heritage Foundation, the Upper Houghton Residents Association and the Yeoville Bellvue Residents Association as well as major land owners



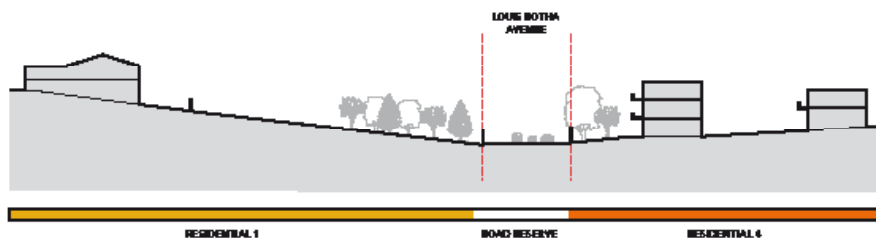
SOCIAL FACILITIES & POTENTIAL CLUSTERS



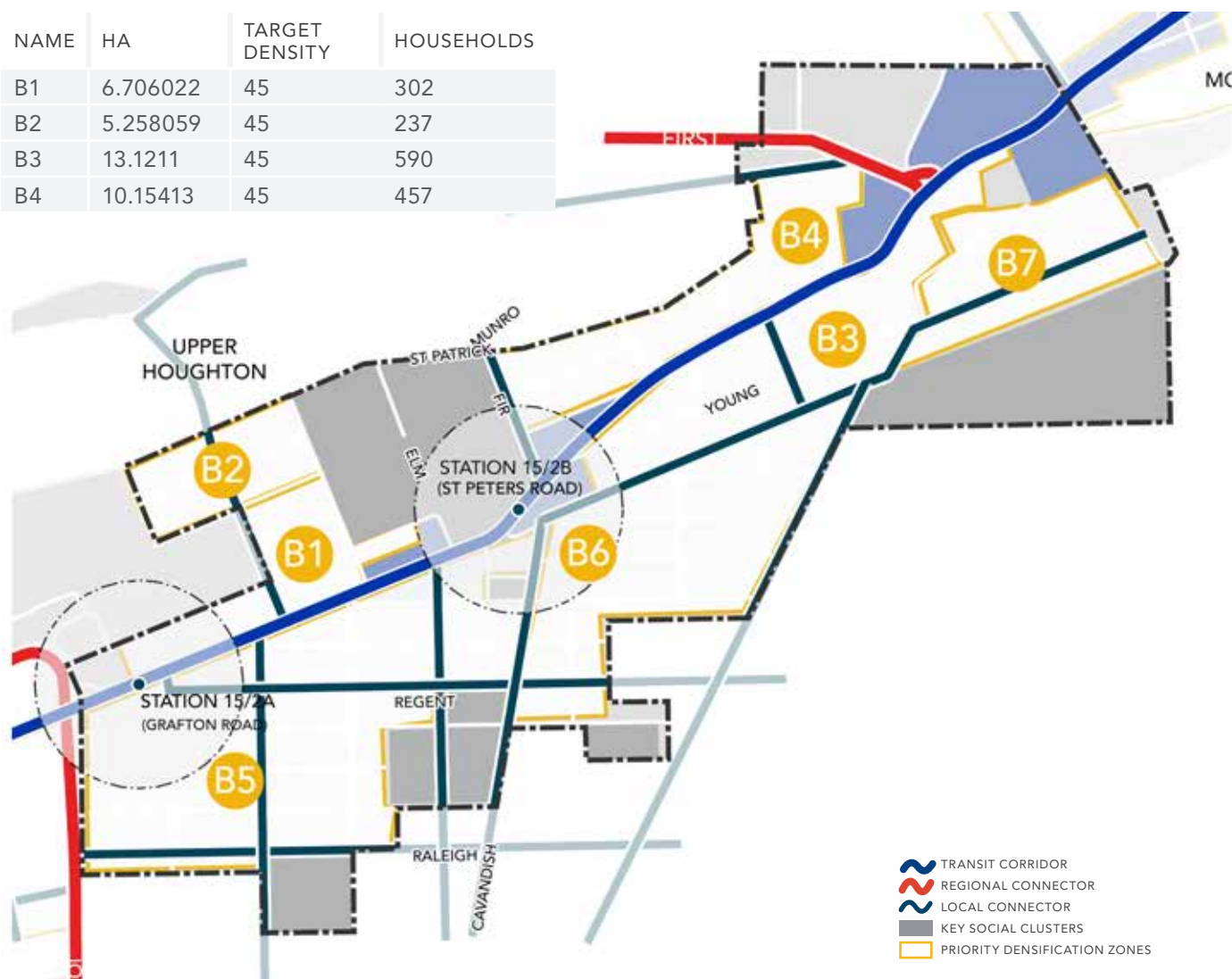


## KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected below.



NAME	HA	TARGET DENSITY	HOUSEHOLDS
B1	6.706022	45	302
B2	5.258059	45	237
B3	13.1211	45	590
B4	10.15413	45	457



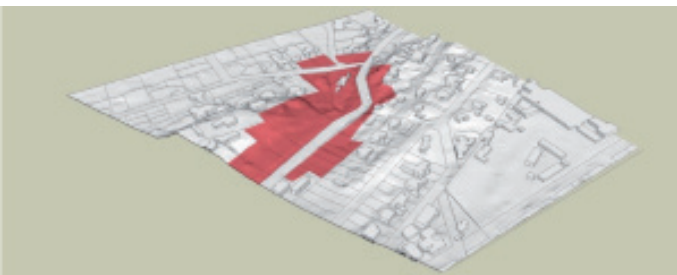
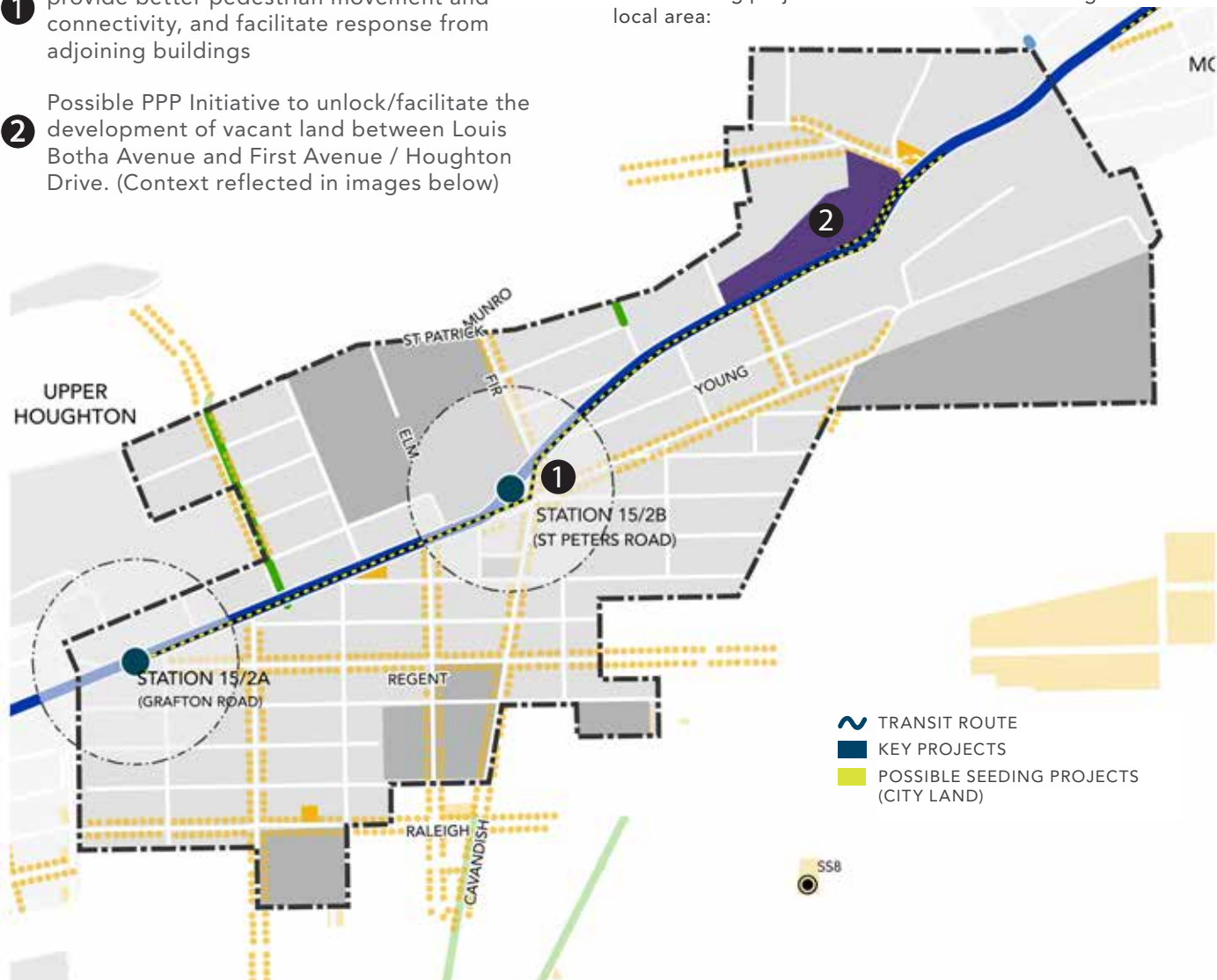
- 1

St Peters Road Station Environment - reconfiguration of public environment to provide better pedestrian movement and connectivity, and facilitate response from adjoining buildings
- 2

Possible PPP Initiative to unlock/facilitate the development of vacant land between Louis Botha Avenue and First Avenue / Houghton Drive. (Context reflected in images below)

KEY PROJECTS & INTERVENTIONS

The following projects & interventions are envisaged for this local area:





## 3

## LOCAL AREA 3

## HERITAGE RESOURCES

The Orange Grove portion of the LBDC is comprised of portions of the suburbs of Fellside, Mountain View, Orchards and Orange Grove. Although not immediately apparent and recognised the area is rich in heritage resources. These resources date from the areas early incarnation as a resort on the outskirts of the mining village of Johannesburg, a selection of early to mid 20th century architecture and the homes of numerous anti apartheid activists.

The area is characterised by low rise development and small homes on well treed streets, and the line of the ridge is a prominent feature throughout the area.

KEY ISSUES GUIDING INTERVENTION  
WITHIN THIS AREA INCLUDE:

- Urban Management / Bylaw Enforcement
- Heritage – Strip & Buildings
- Established Facilities / Underutilised
- Defined urban edge and residential behind
- Flexible typologies encourage multiple uses
- Noticeable ground floor vacancies
- Highly active edges and strong street interfaces
- Specific heritage street scape character – single story retail, colonnades, balconies
- Western edge – residential to business conversion
- Street interface strengthened by conversions – eg. Front walls demolished
- Eastern edge – higher density, mixed-use
- Noticeable ground floor vacancy levels
- Victory Theatre and Houghton Estate office park
- Eastern edge - higher density, mixed-use, ground floor retail and office above
- Western– dead edges, set-backs



MOVEMENT & CONNECTIVITY

The northern parts of this local area are characterised by a strong grid structure, with relatively high levels of accessibility and connectivity. The proposed BRT Station is well located relative to current development/ redevelopment opportunities, although the lack of a second station in the southern parts of this area will limit the potential of these areas to attract development and investment.

KEY DENSIFICATION OPPORTUNITIES

The Orange Grove area has significant potential for densification and intensification across a number of areas. The basic block and subdivision structure that characterises the area provides a particularly robust and adaptable basis for redevelopment. The initial densification scenario, based on the typologies reflected below, is reflected in the following table:

PUBLIC SPACE

A significant opportunity exists in Local Area C to introduce a new public space in a strategic location (at the Junction with Durham Avenue)

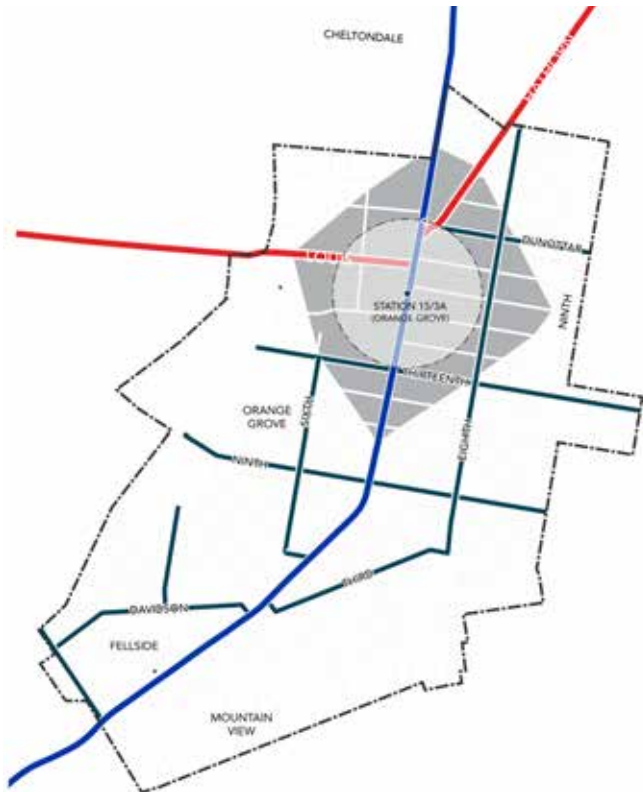
This space adjoins the planned BRT Station at this point, and has the potential to serve as a significant recreational resource for the broader Orange Grove area.

The space further has the potential to catalyze development in the immediate vicinity.

ASSESSING THE IMPACT OF ROAD CLOSURES

The road closures coupled to the introduction of the BRT system do impact on local connectivity within the broader Orange Grove area, particularly the western side of Louis Botha Avenue.

The Orange Grove portion of the Louis Botha Avenue Corridor is fairly extensively developed, although there are still areas where infill and redevelopment opportunities exist



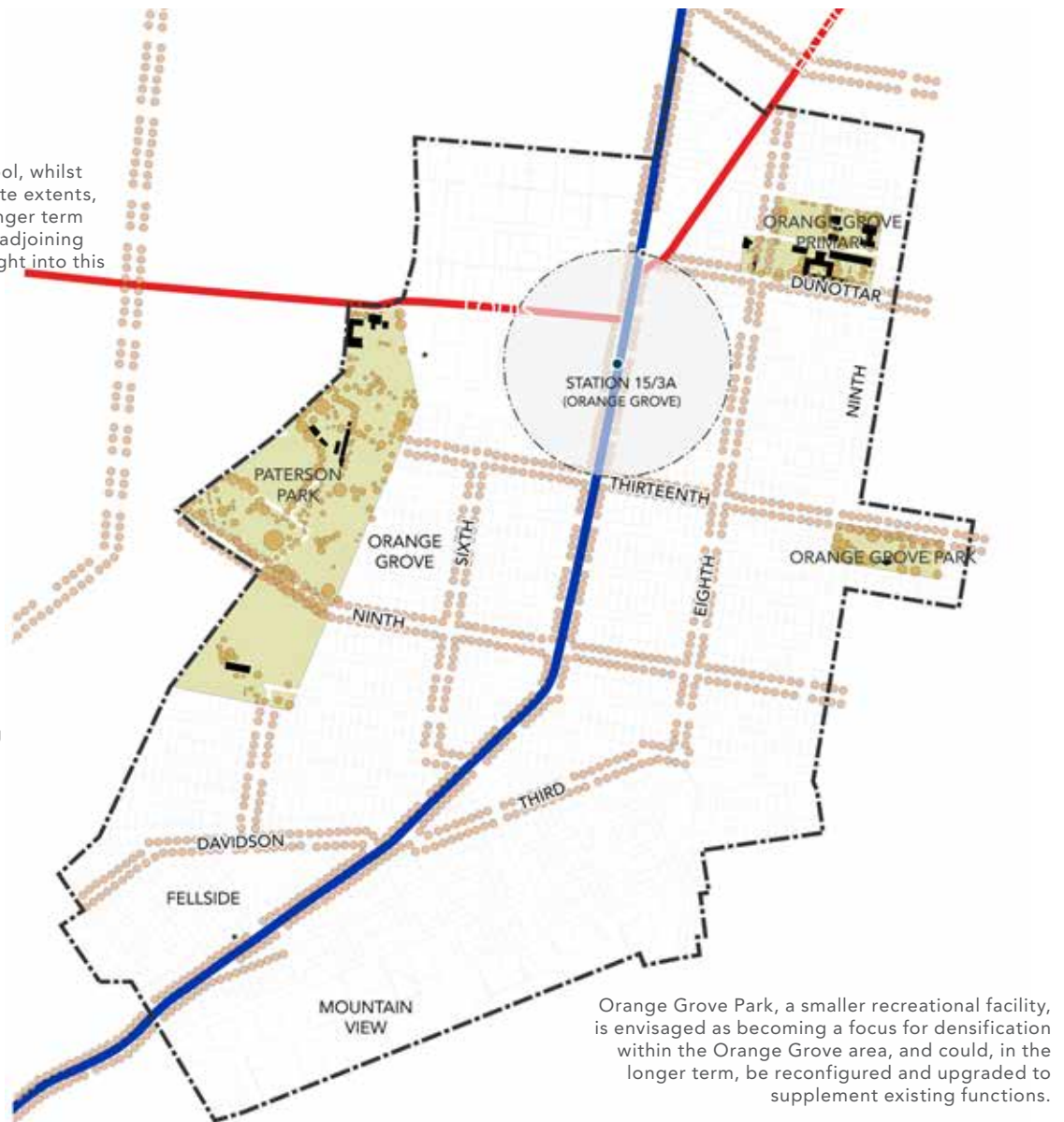
## SOCIAL FACILITIES & POTENTIAL CLUSTERS

### CLUSTER 1

Orange Grove Primary School, whilst constrained by its current site extents, could provide a basis for longer term augmentation of services if adjoining land holdings could be bought into this potential Social Cluster.

### CLUSTER 2

Paterson Park remains one of the most significant opportunities for enhancing social and community infrastructure in this local area, as well as in the Corridor as a whole.



Orange Grove Park, a smaller recreational facility, is envisaged as becoming a focus for densification within the Orange Grove area, and could, in the longer term, be reconfigured and upgraded to supplement existing functions.

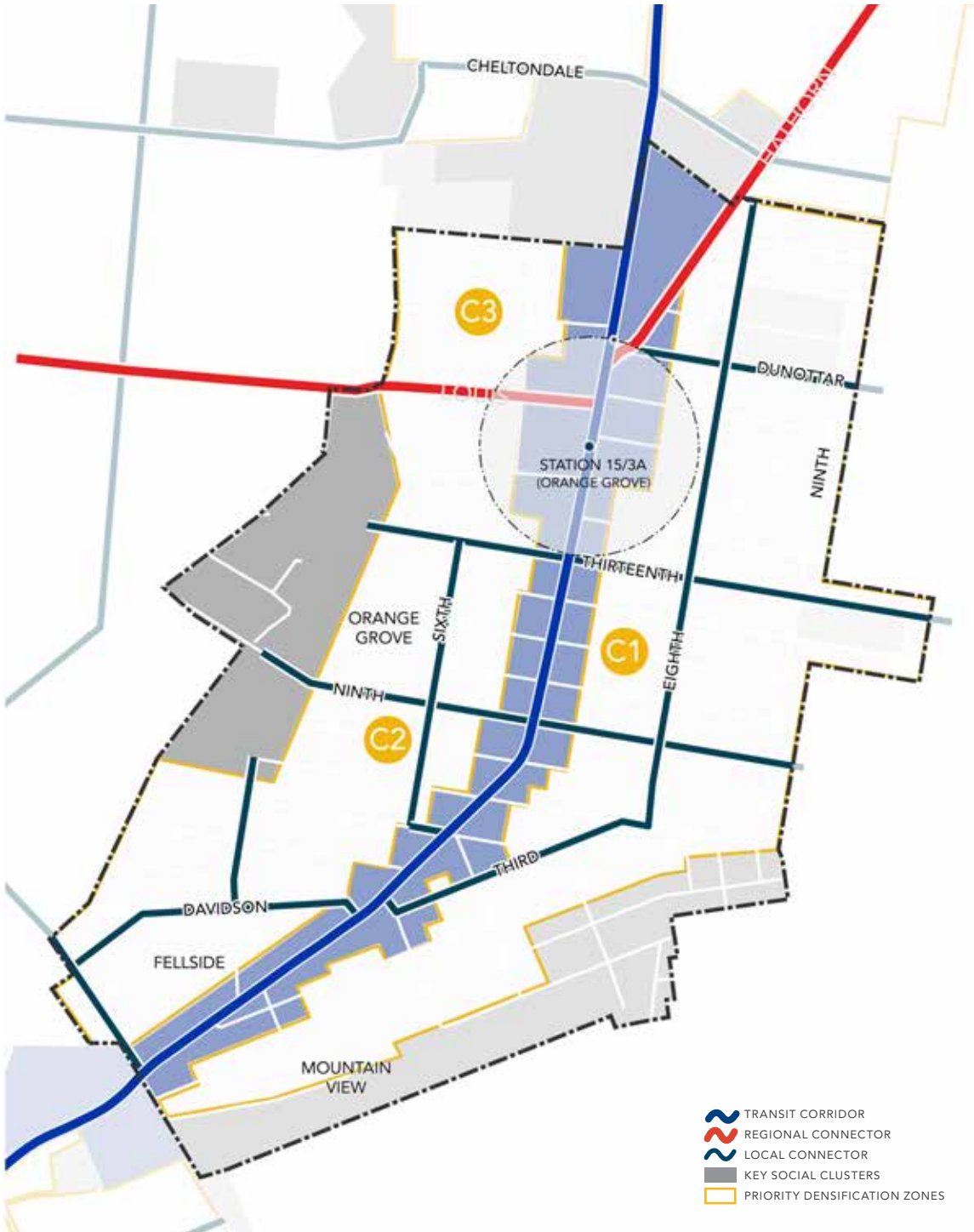
## HERITAGE CONSIDERATIONS

- The maintaining of the Louis Botha Avenue street edge and streetscape is a priority.
- Covered/colonnaded pavements are to be encouraged.
- Buildings are to be encouraged to be built up to the site boundary.
- Off street parking should not take place on the street edge of the Louis Botha Avenue site boundary.
- The maintenance of the existing scale and townscape is a priority.
- The maintenance of areas of natural and historic significance along the ridge in Mountain View is important. Development in this area should be discouraged.
- Maintenance of green spaces such as Paterson Park and its associated memorial are important.
- Important conservation bodies or residents associations in the area who should be consulted in the development of guidelines and as part of heritage surveys include the Johannesburg Heritage Foundation, the Orange Grove Residents Association and the Louis Botha Business Association.

KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected in the following table & plan:

NAME	HA	TARGET DENSITY	HOUSEHOLDS
C1	61.67885	100	6168
C2	40.07865	120	4809
C3	7.93543	150	1190

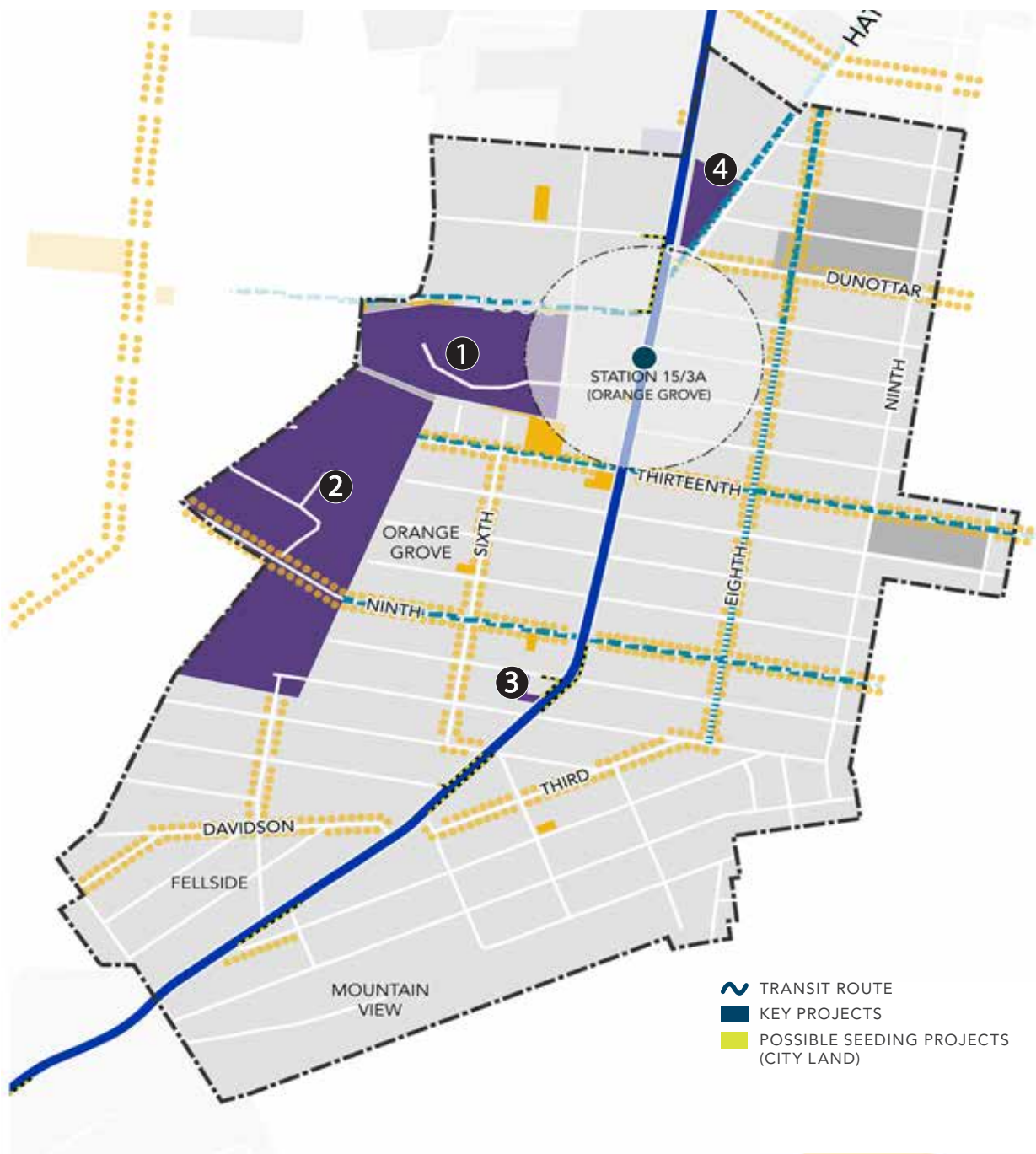




## KEY PROJECTS & INTERVENTIONS

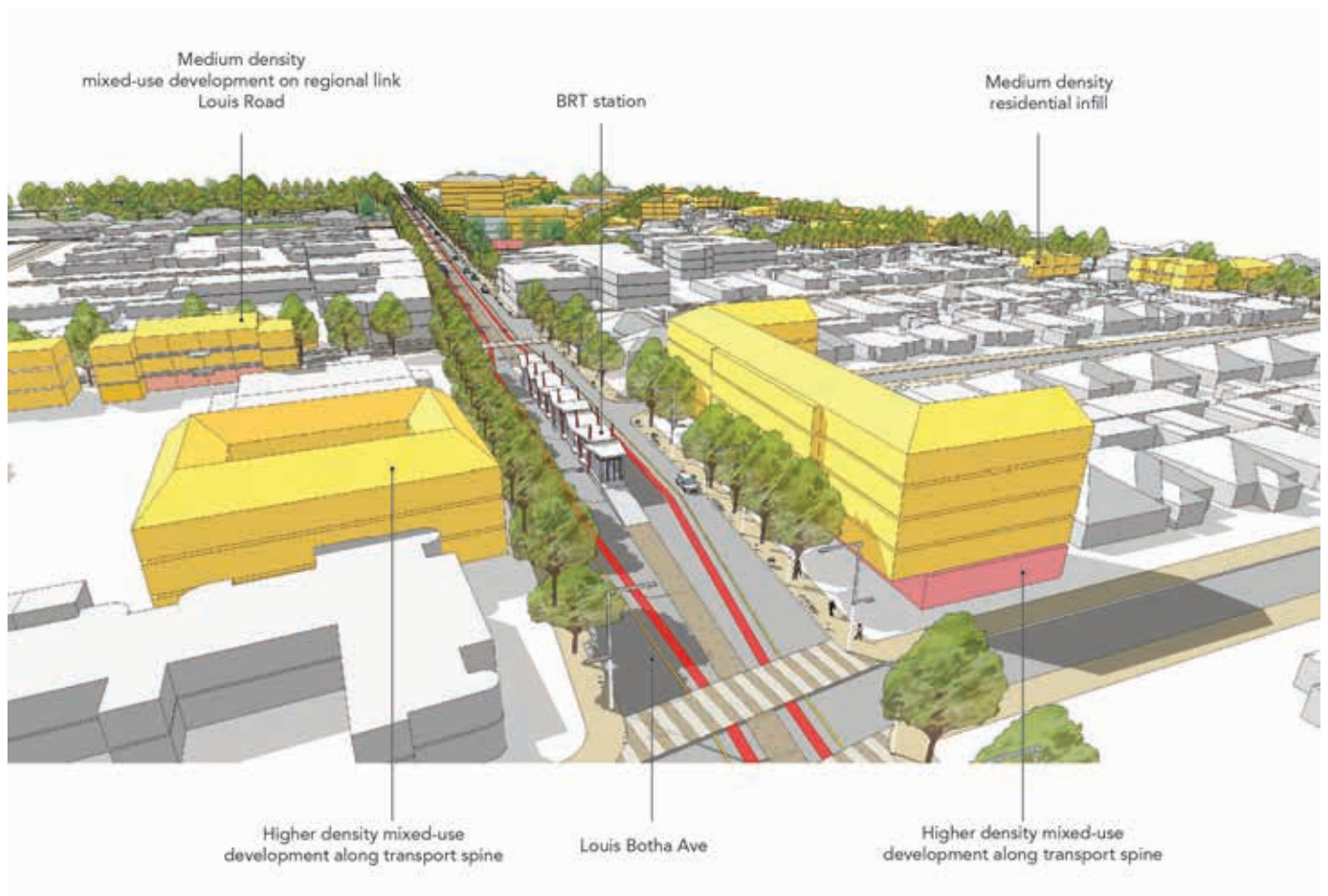
The following projects & interventions are envisaged for this local area:

- 1 Paterson Park (Northern Sections) - reconfiguration of existing facilities and longer term infill development
- 2 Paterson Park (Southern Sections) - Upgrading of existing facilities, new public facilities, upgrade of Park and pedestrian crossing
- 3 Development of ex-FNB Building as multi-use community facility / Corridor Information Centre
- 4 Orange Grove Triangle - development of key public space as focus of public environment

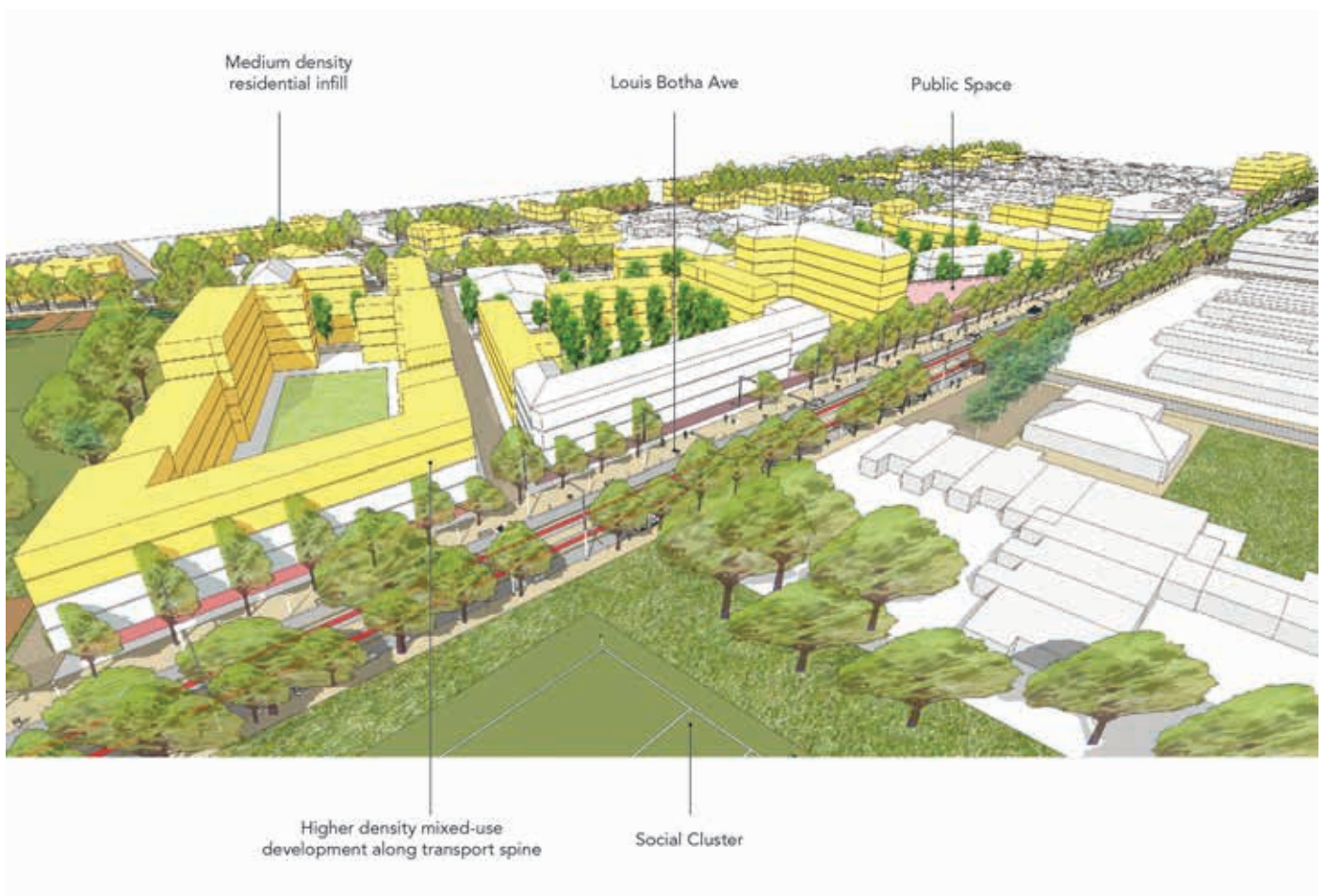








## PROJECTS & INTERVENTIONS





## 4

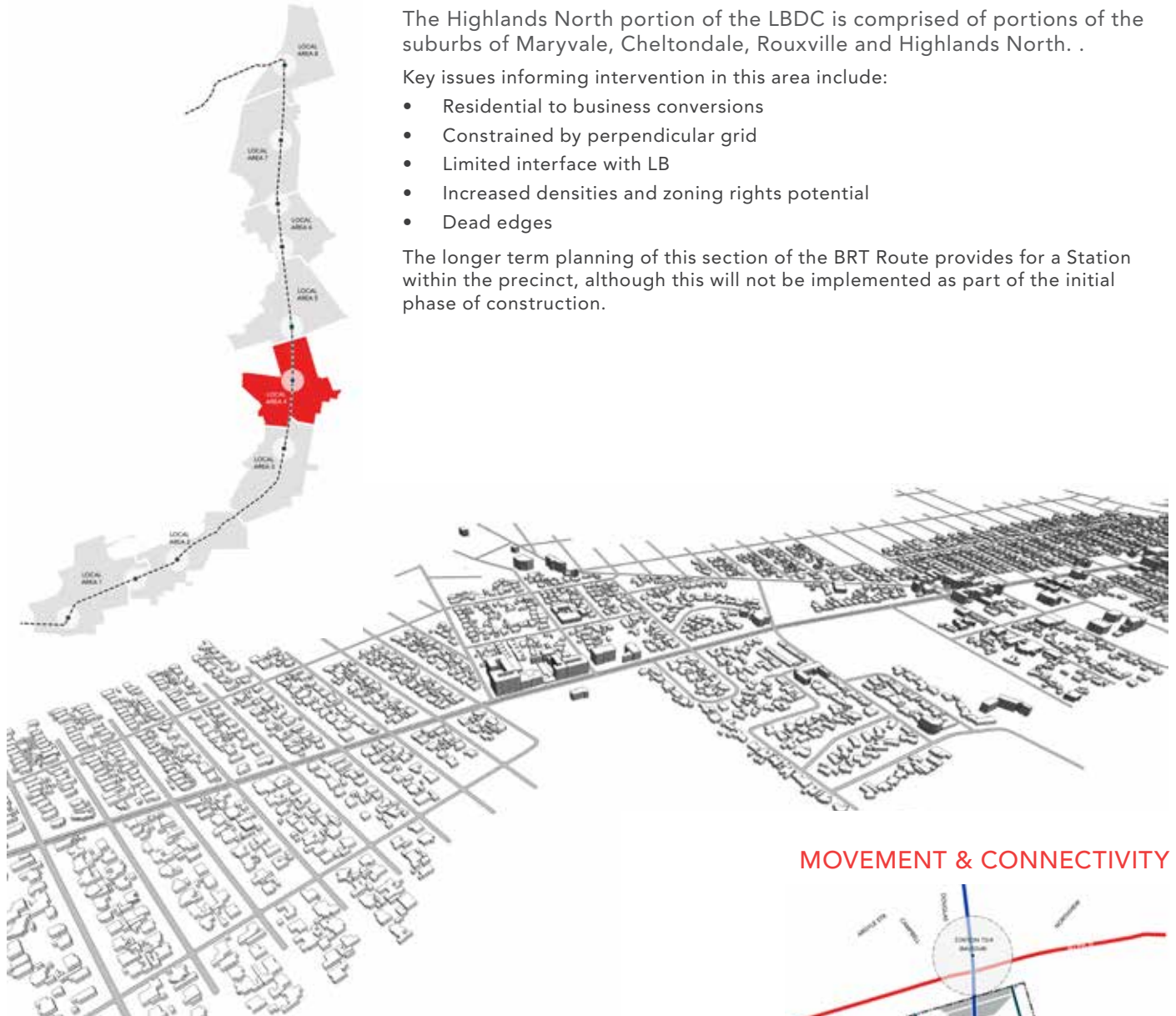
## LOCAL AREA 4

The Highlands North portion of the LBDC is comprised of portions of the suburbs of Maryvale, Cheltondale, Rouxville and Highlands North. .

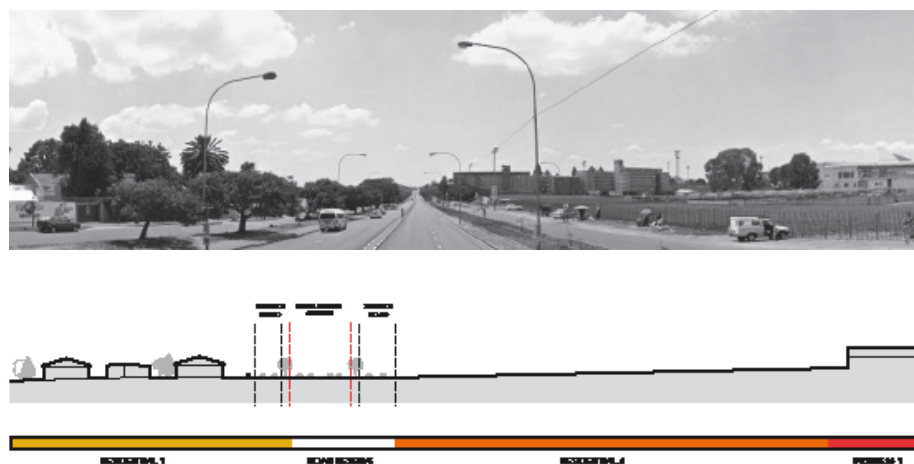
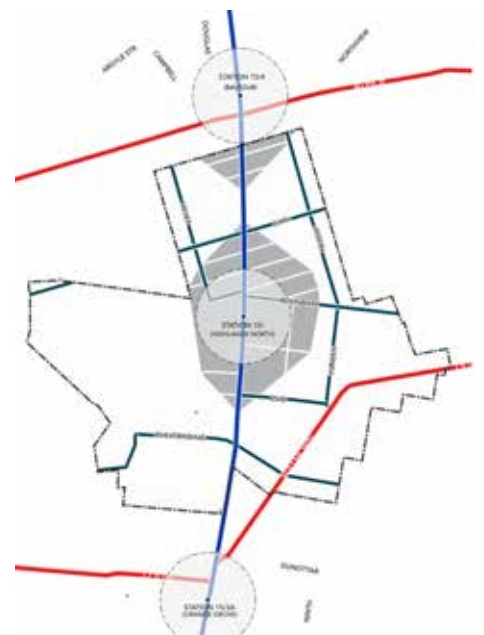
Key issues informing intervention in this area include:

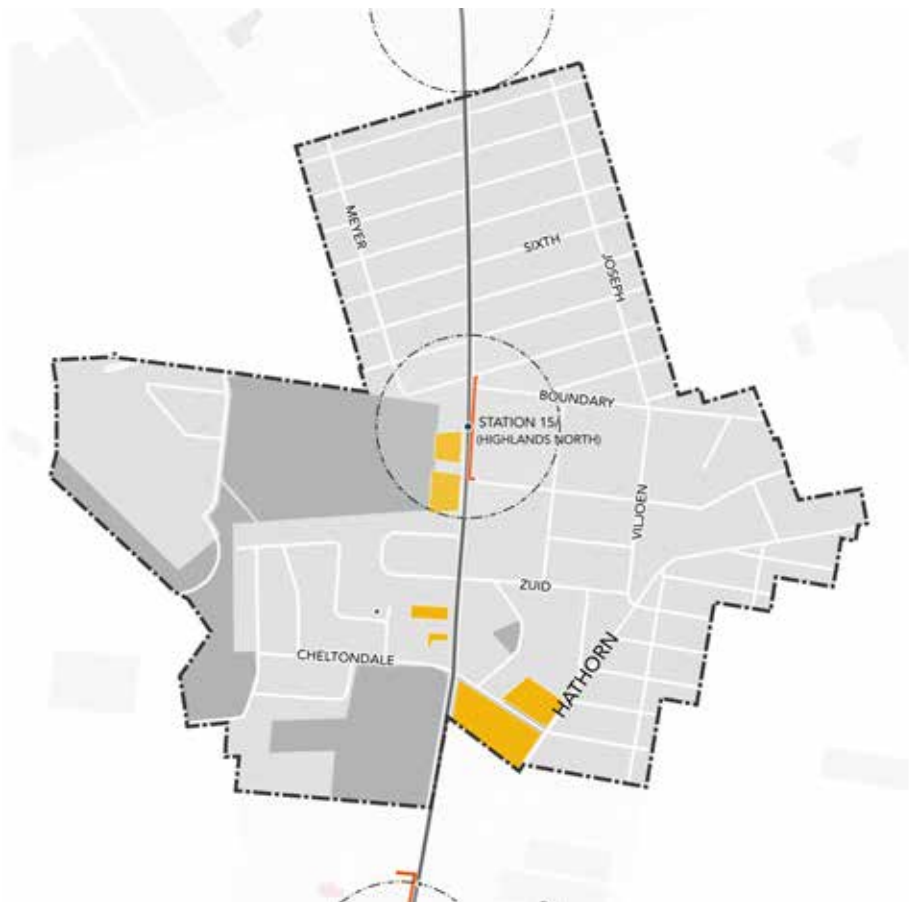
- Residential to business conversions
- Constrained by perpendicular grid
- Limited interface with LB
- Increased densities and zoning rights potential
- Dead edges

The longer term planning of this section of the BRT Route provides for a Station within the precinct, although this will not be implemented as part of the initial phase of construction.



## MOVEMENT &amp; CONNECTIVITY





HERITAGE RESOURCES

The area has limited heritage resources. The area is characterised by largely single storey houses with red tiled roofs. A characteristic section is that opposite the Doll House roadhouse which has numerous mid 20th century apartment buildings.

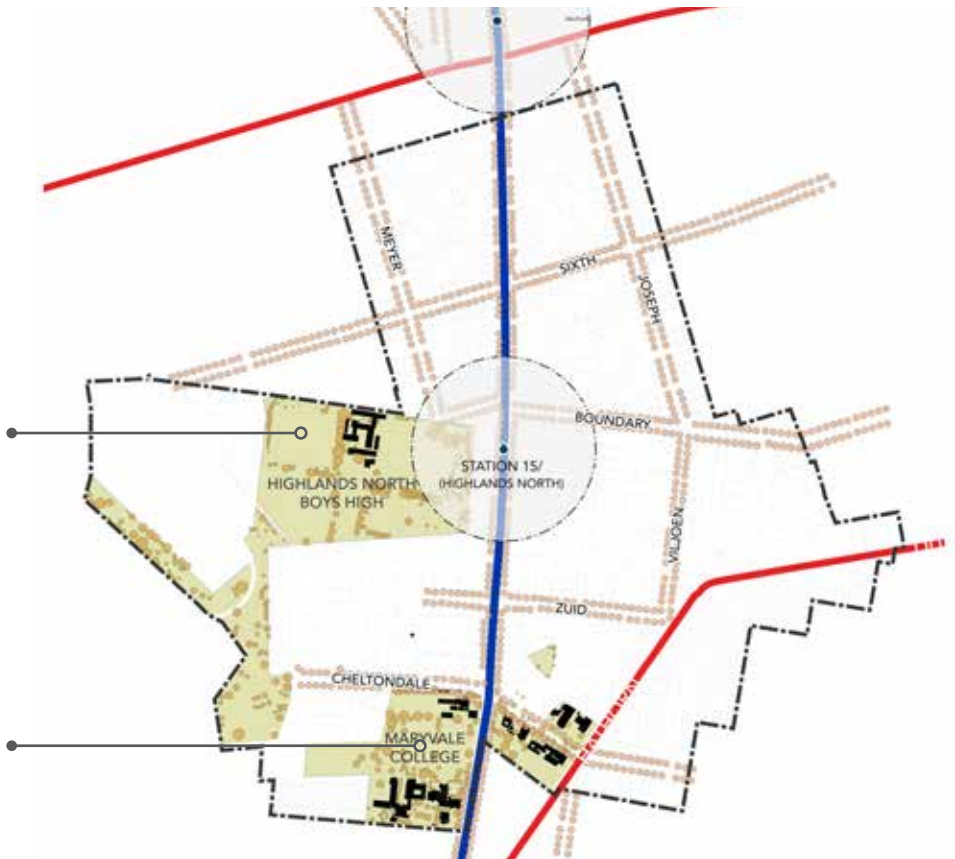
SOCIAL FACILITIES & POTENTIAL CLUSTERS

CLUSTER 1

Highlands North Boys School provides a key social facility within this local area, and has scope for longer term expansion over time to either increase existing capacity, and/ or introduce supplementary facilities with a view to optimising land and facilities.

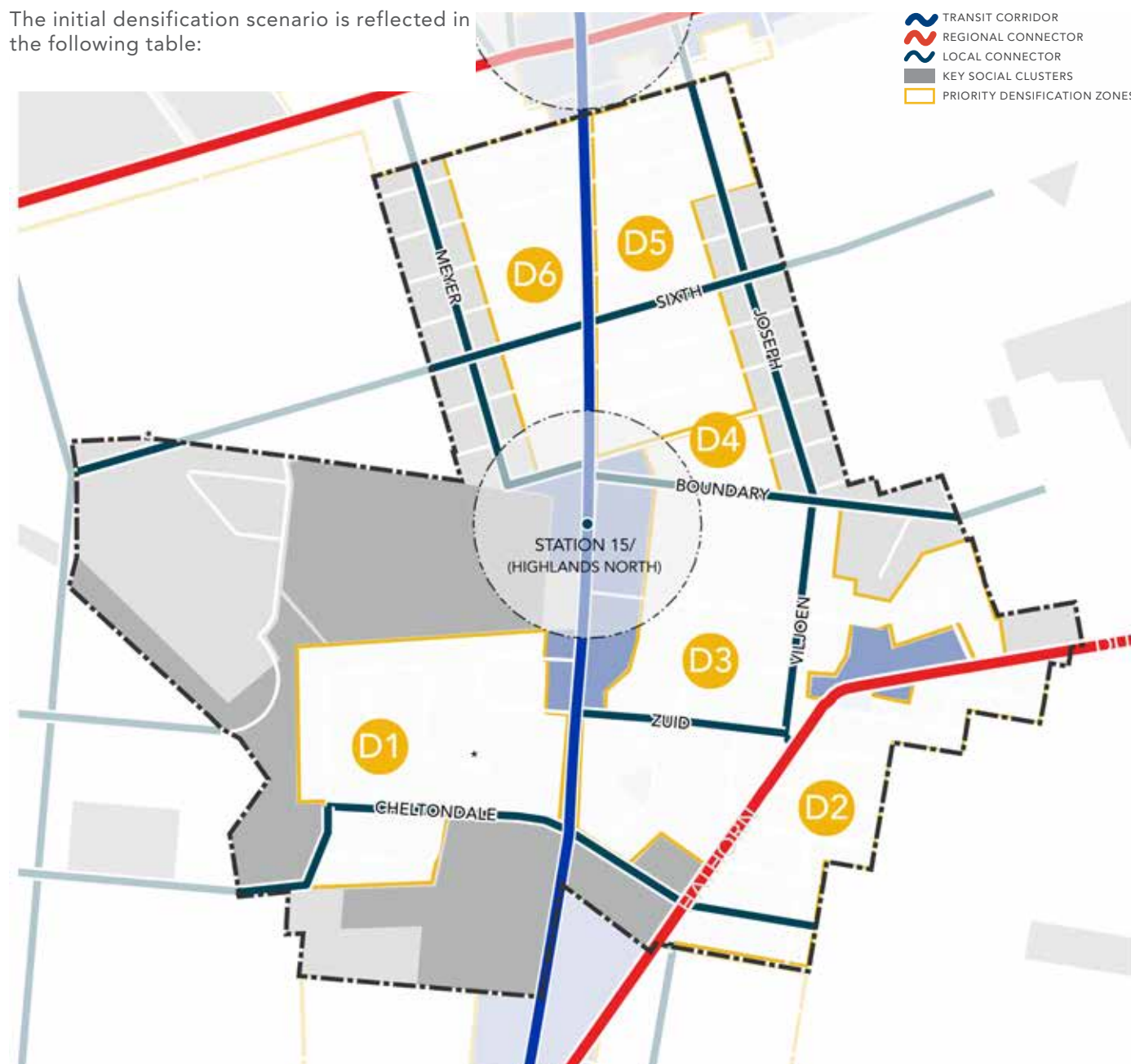
CLUSTER 2

Maryvale College, whilst a private educational facility, has the potential for longer term expansion, and, together with the proposed redevelopment of Orchards Clinic, form the basis of a potential Social Cluster



## KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected in the following table:

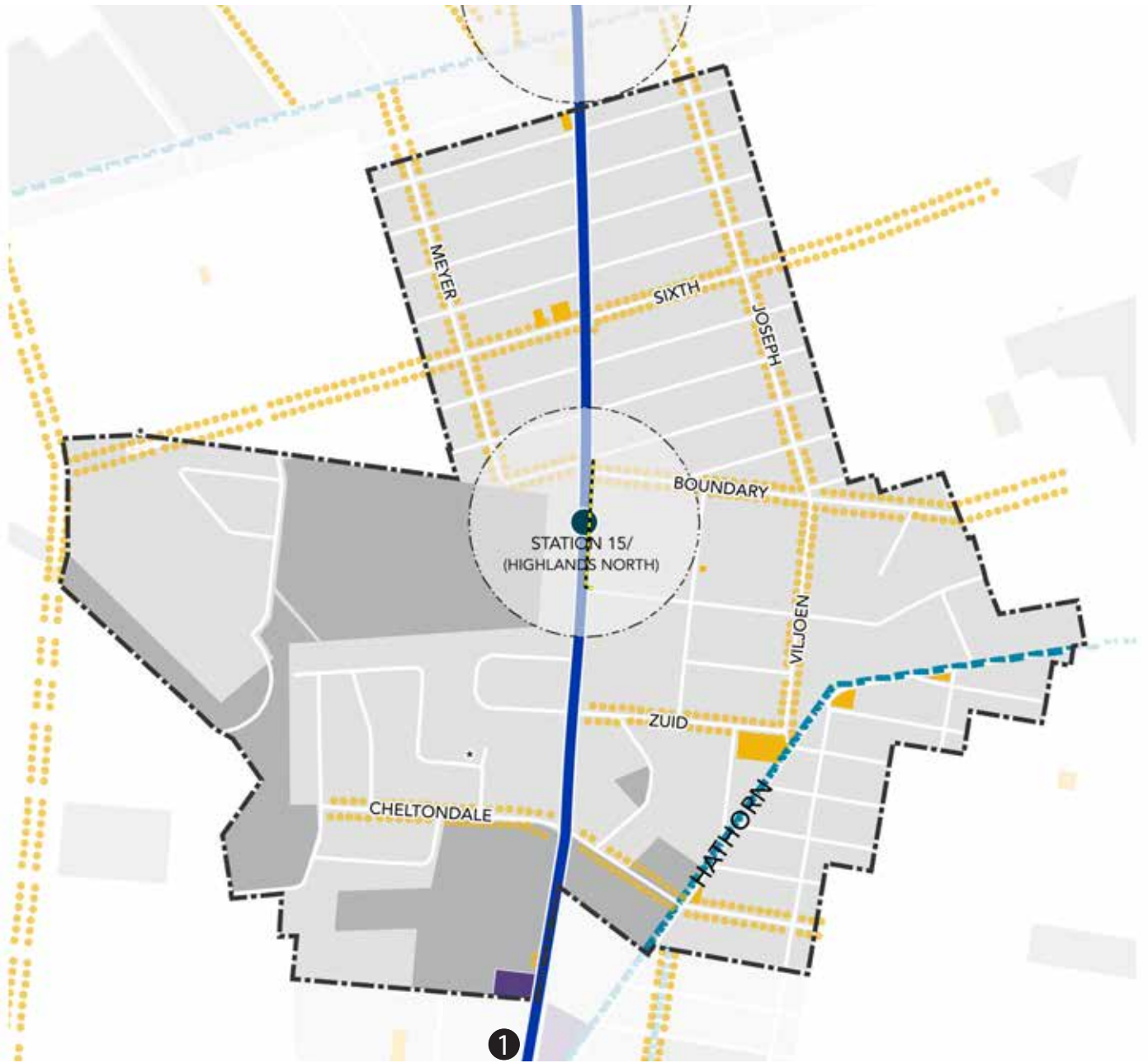


NAME	HA	TARGET DENSITY	HOUSEHOLDS
D1	16.56412	90	1491
D2	7.168559	75	538
D3	21.19503	90	1908
D4	2.182877	80	175
D5	14.28875	80	1143
D6	9.781039	90	880



KEY PROJECTS & INTERVENTIONS

In addition to the Rea Vaya System (Lanes & Stations) there is a key opportunity to augment existing levels of service provision within this local areas through the redevelopment of the existing Orchards Clinic into a higher level health facility. It is suggested that the existing property be retained for this development, given its location on the corridor and proximity to the proposed BRT Station in Orange Grove. A potential concept for the upgrade of the clinic is reflected overleaf.

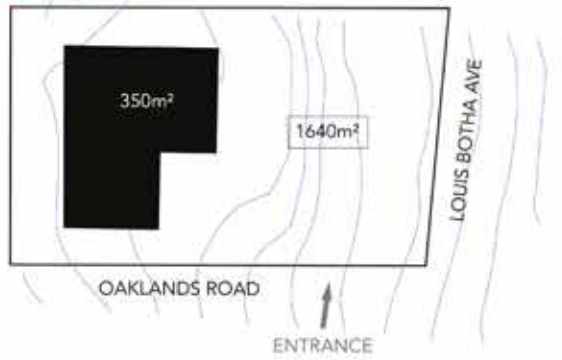


1 Redevelopment of the Orchards Clinic

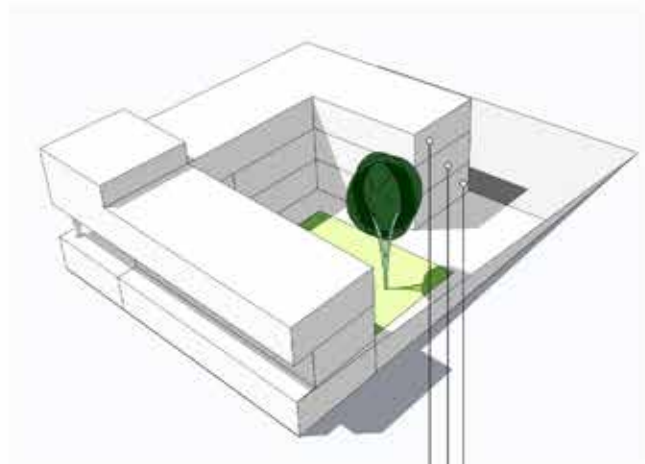
- TRANSIT ROUTE
- KEY PROJECTS
- POSSIBLE SEEDING PROJECTS (CITY LAND)



EXISTING CLINIC



NEW PROPOSED CLINIC

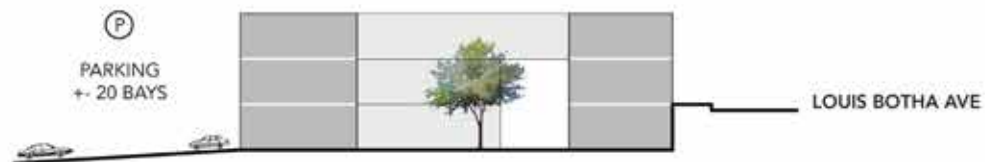
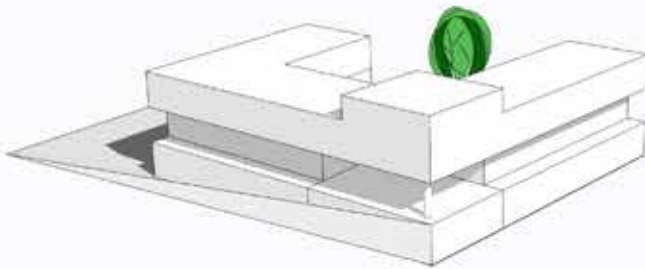


FLOOR 3 - 600m² DEPARTMENTAL OFFICES

FLOOR 2 - 500m² CLINIC

FLOOR 1 - 500m² CLINIC

1600m²



ORCHARDS CLINIC

| 57 OAKLANDS ROAD, MARYVALE



5

LOCAL AREA 5

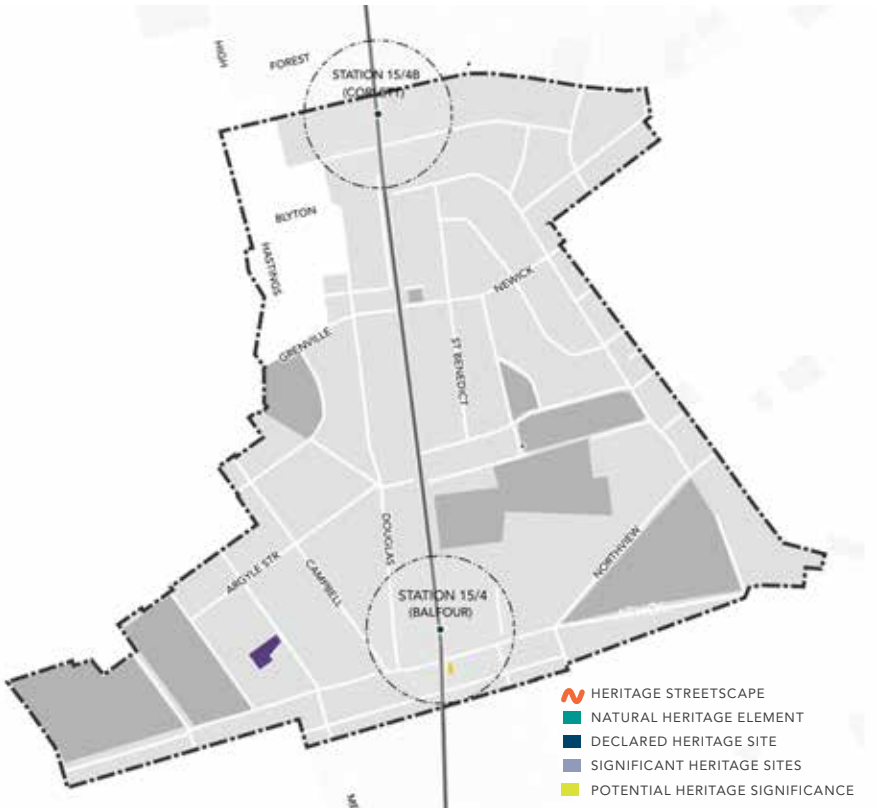
The Balfour portion of the LBDC is comprised of portions of the suburbs of Balfour Park, Waverley, Gresswold and Savoy Estate. The area is characterised by single or double storey dwellings on large stands. There is a commercial node in Balfour Park centering around the shopping centre, which has the potential to develop into a Regional Node.

Key Issues:

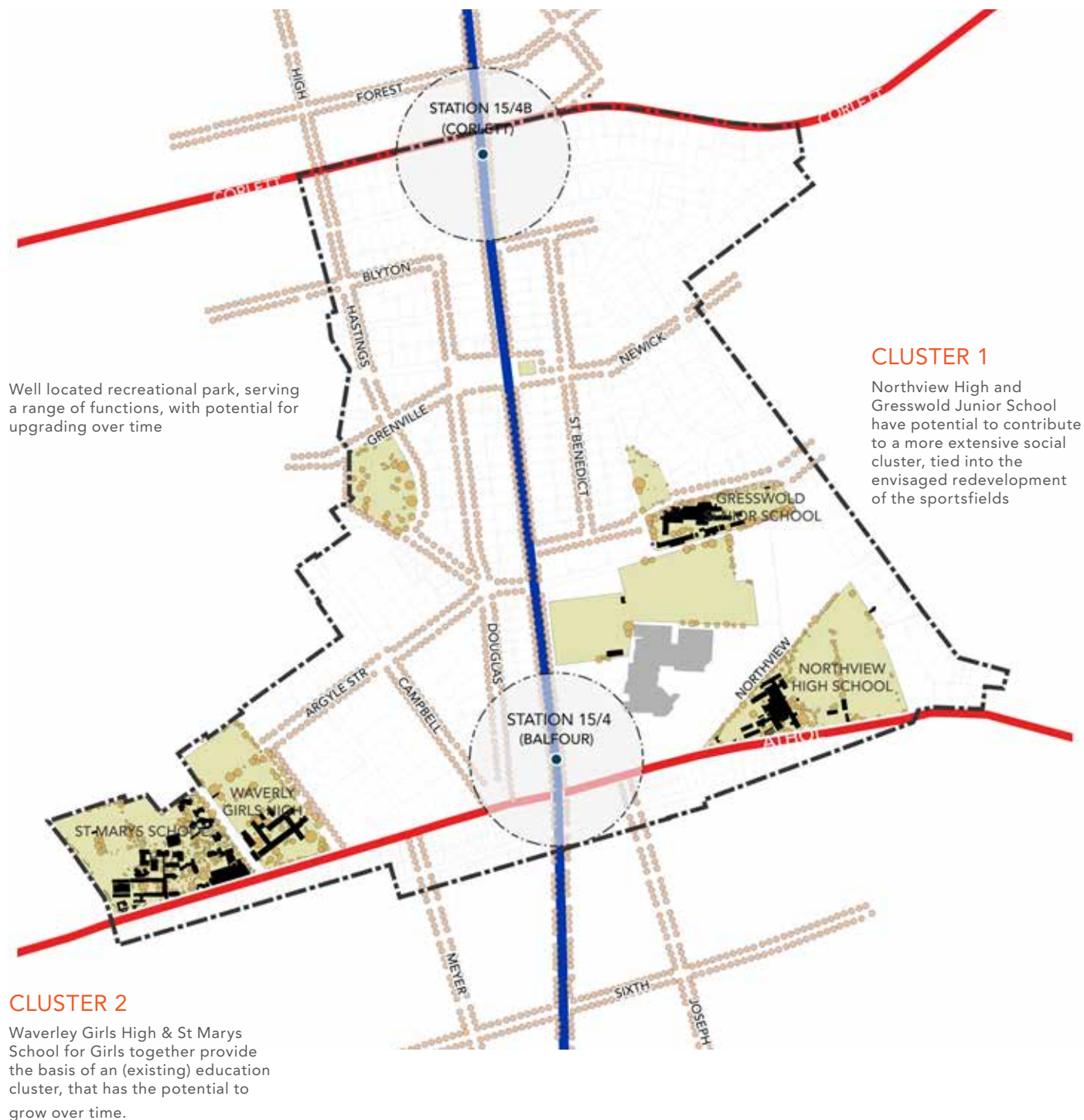
- Park & Ride Potential
- Significant scope / structural support for large scale intensification
- Residential to business conversions
- Sport and recreation
- Mall interface
- Undeveloped land opportunities
- Service roads on both sides



The area has limited heritage resources with the only declared resource being Waverley House, the original farm house for the area.



## SOCIAL FACILITIES & POTENTIAL CLUSTERS





KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected in the following table:

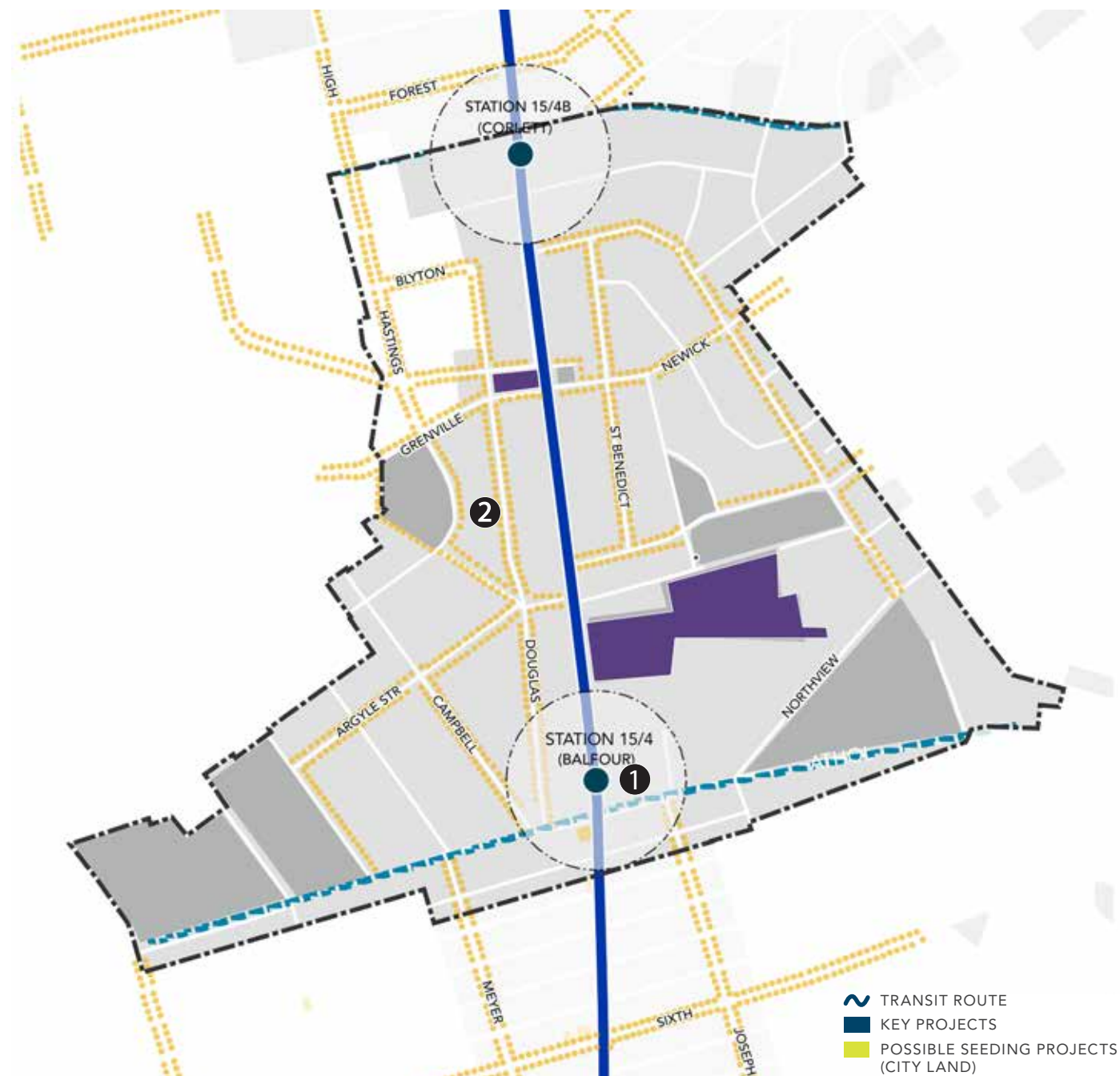
NAME	HA	TARGET DENSITY	HOUSEHOLDS
E1	6.28539	120	754
E2	1.514194	80	121
E3	11.26241	150	1689
E4	8.462643	220	1862
E5	8.730434	150	1310
E6	15.65475	140	2192
E7	16.19758	120	1944
E8	11.74062	120	1409



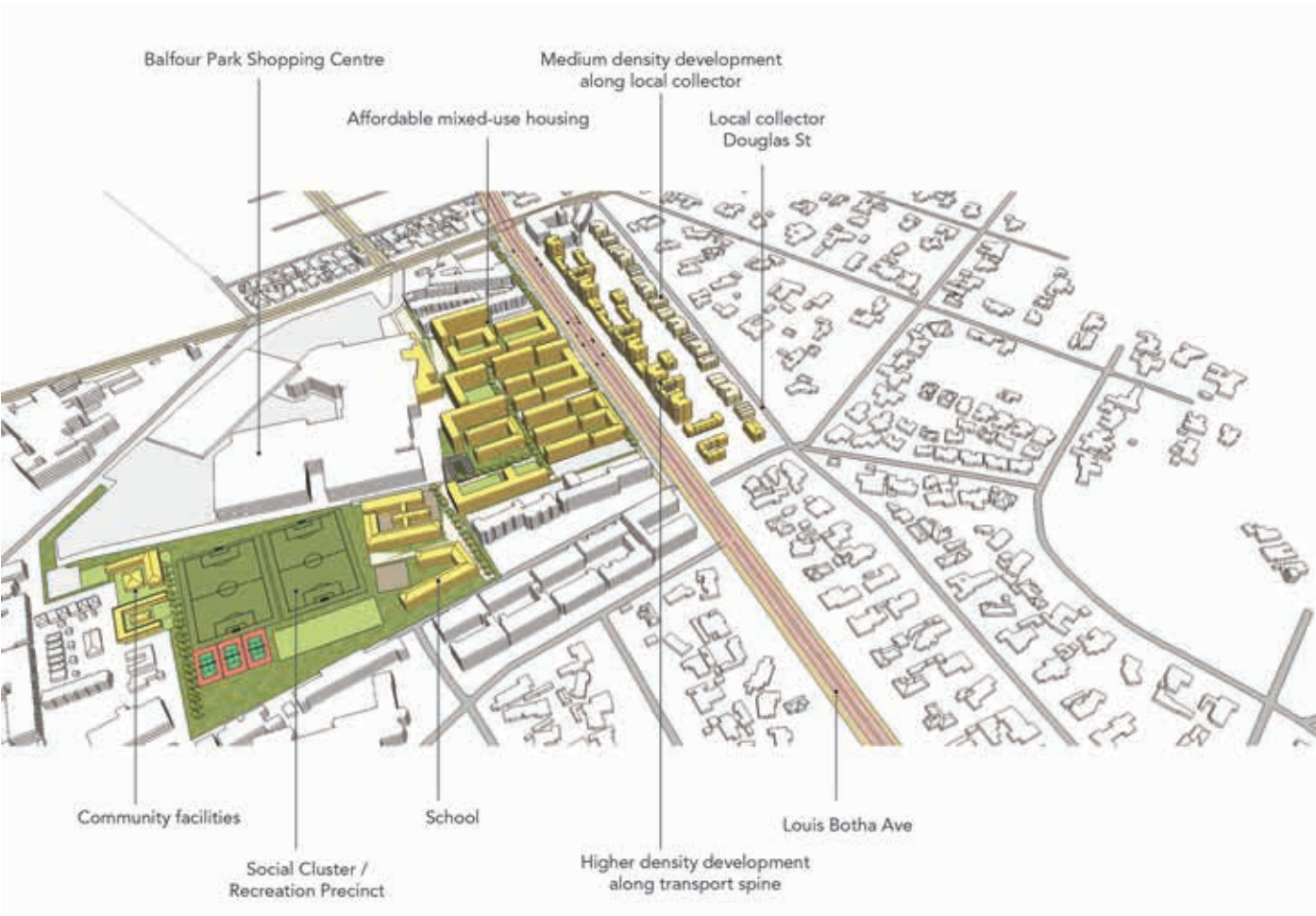
## KEY PROJECTS & INTERVENTIONS

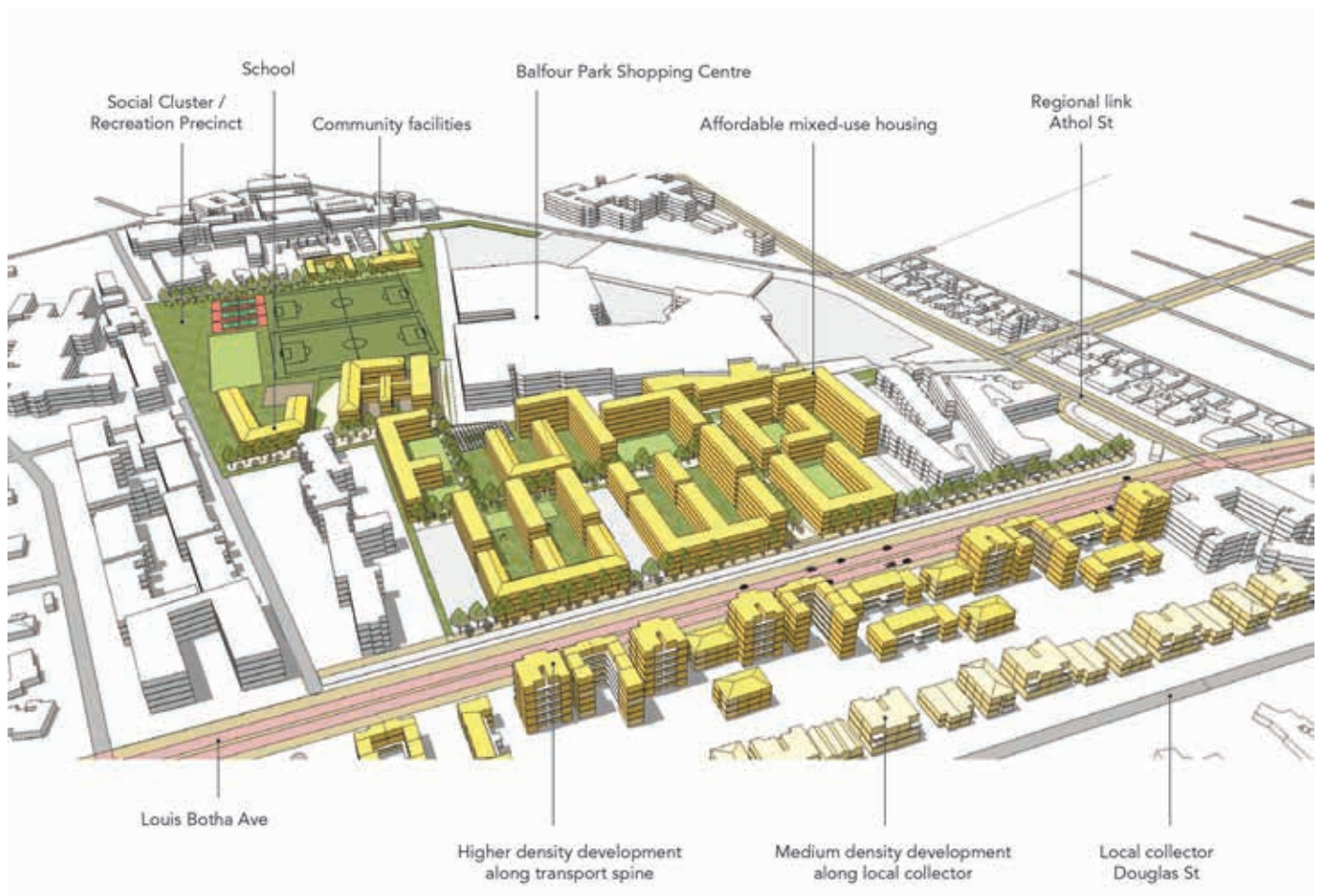
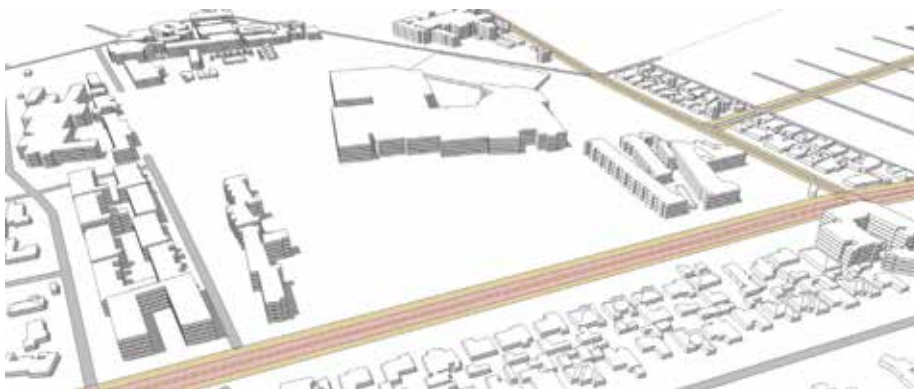
The following projects & interventions are envisaged for this local area:

- 1 Reconfiguration of existing sportsfields, optimisation of recreational facilities and development of potential mixed use/residential precinct
- 2 Future PPP development of public space/parking facility to elicit greater intensification and diversification of the Savoy Node



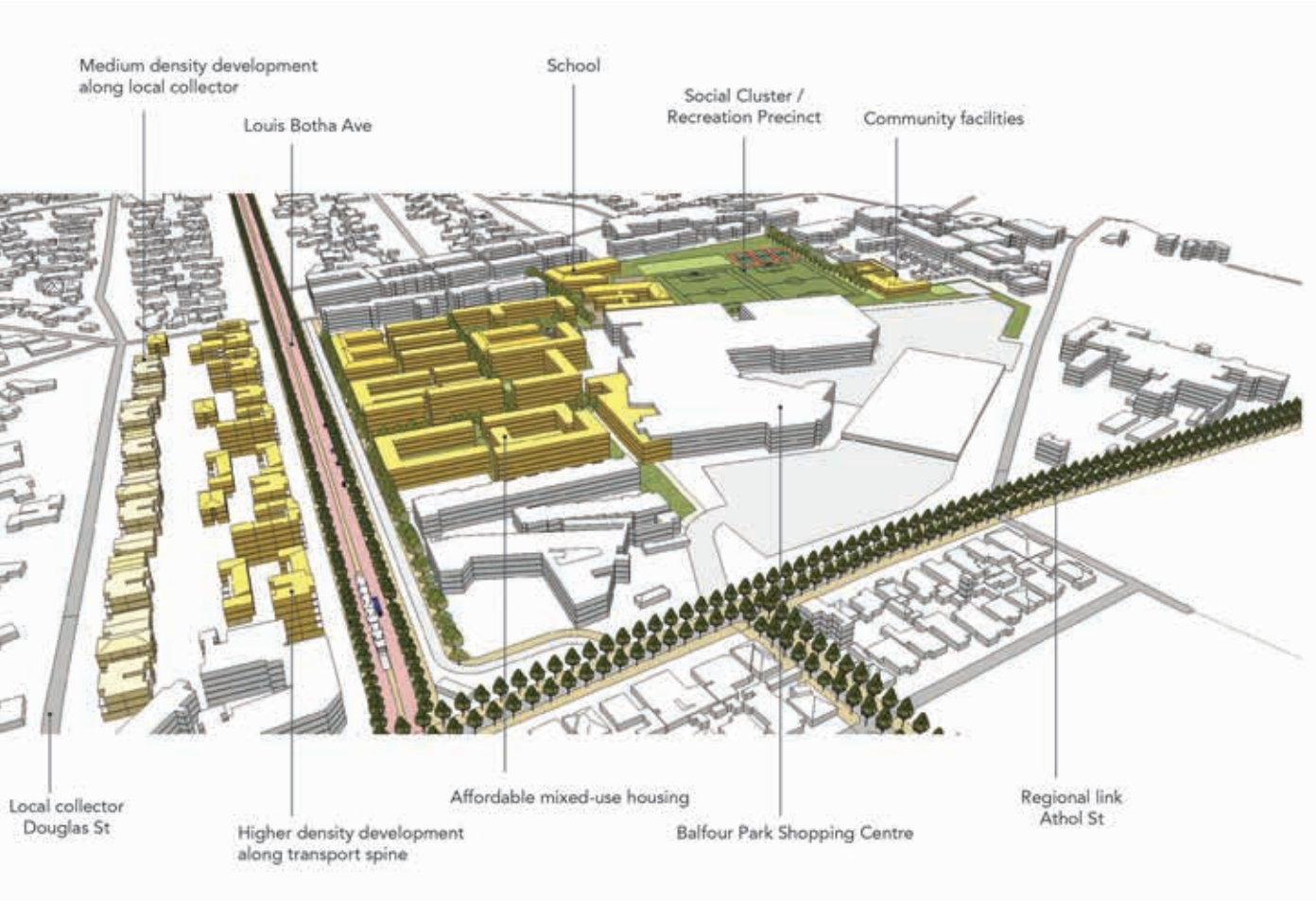
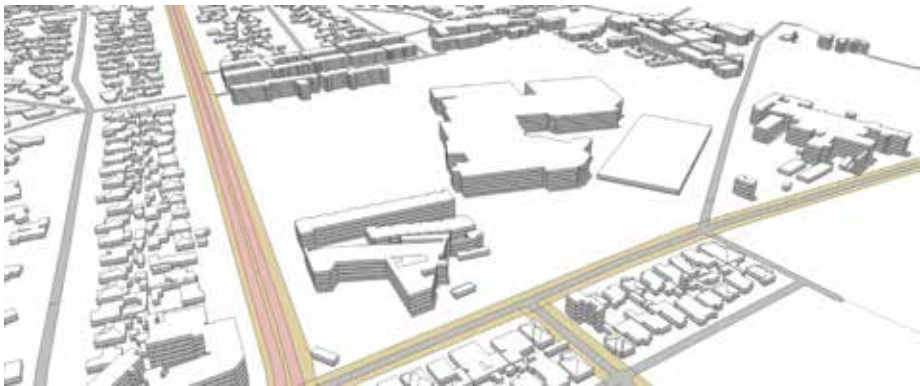








PROJECTS & INTERVENTIONS



## 6

## LOCAL AREA 6

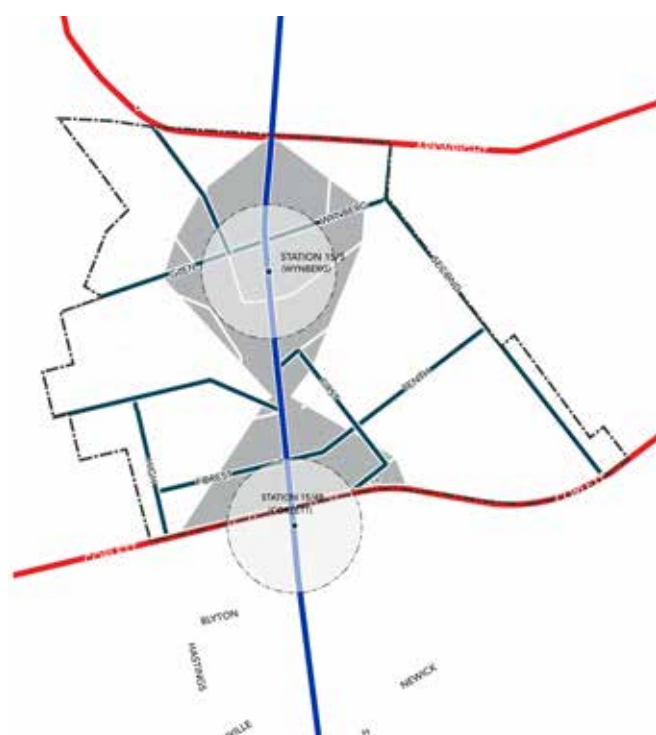
Local Area 6 includes areas of Bramley, Wynberg and Kew. It is characterised by fairly extensive development, with a strong commercial/industrial character towards the northern areas, particularly alongside Louis Botha Avenue.

Issues to be considered in terms of projects and interventions in this area include the following:

- Urban Management / Bylaw Enforcement
- Re Use / Redevelopment Opportunities
- Interface with Kew

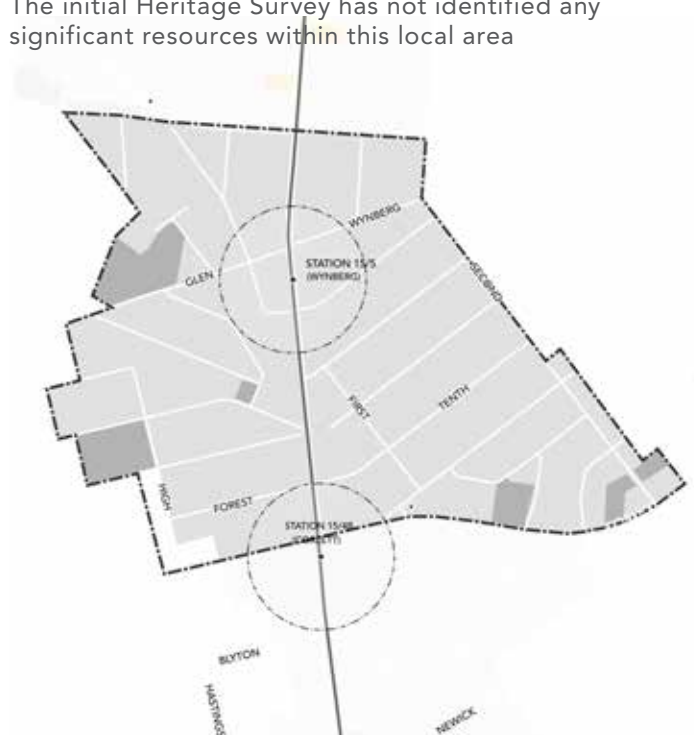


## MOVEMENT &amp; CONNECTIVITY

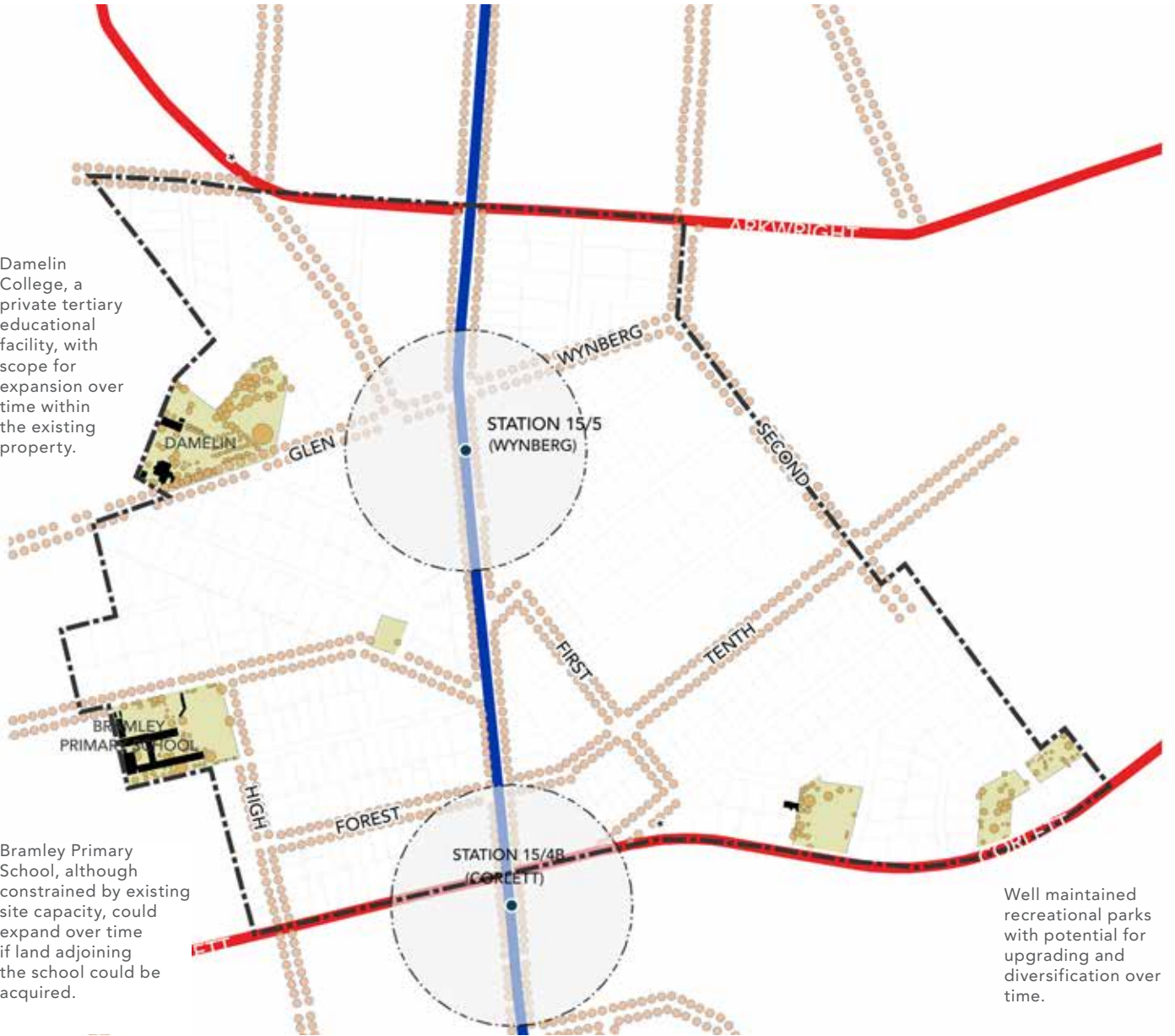


## HERITAGE RESOURCES

The initial Heritage Survey has not identified any significant resources within this local area



SOCIAL FACILITIES & POTENTIAL CLUSTERS

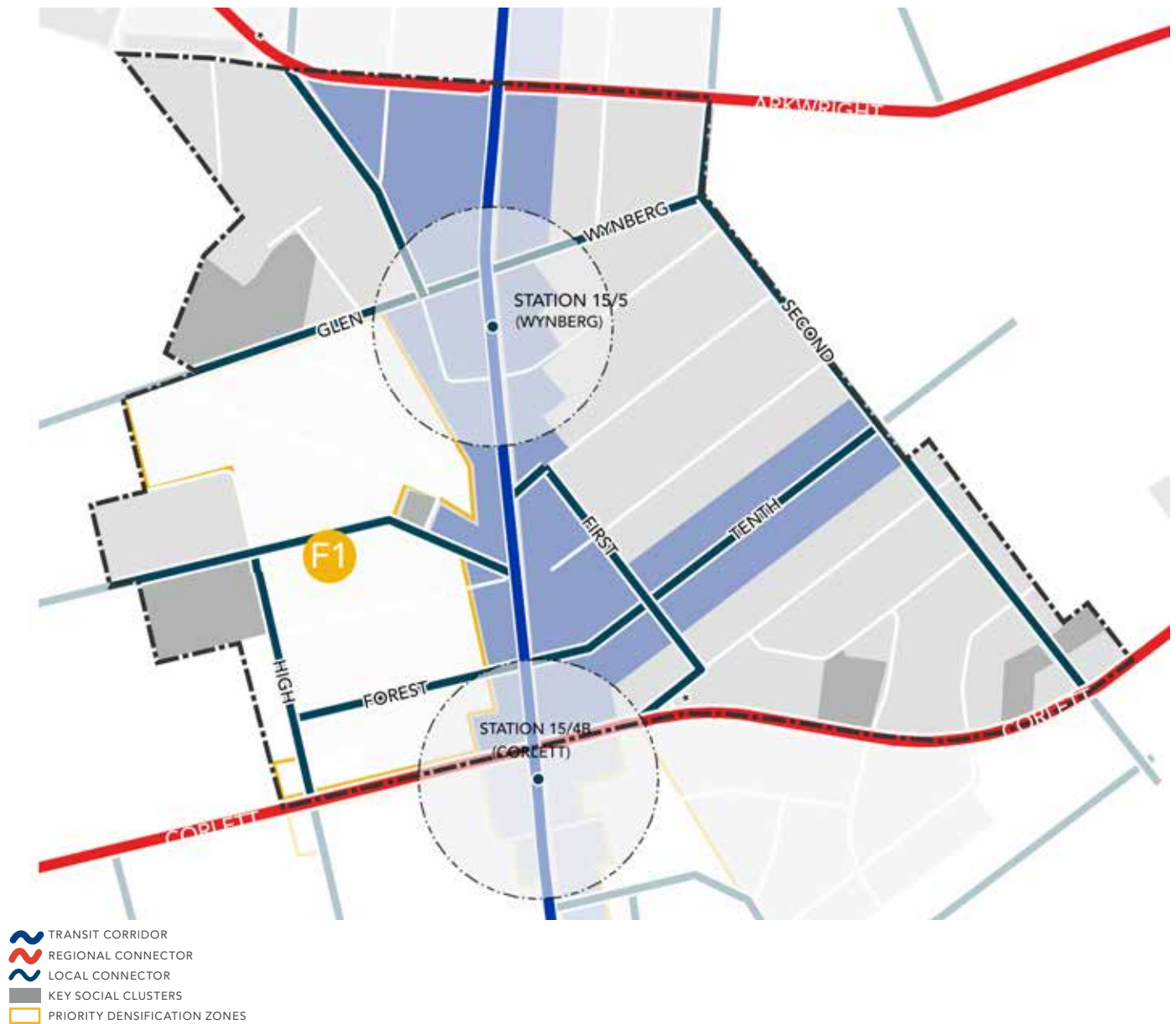




## KEY DENSIFICATION OPPORTUNITIES

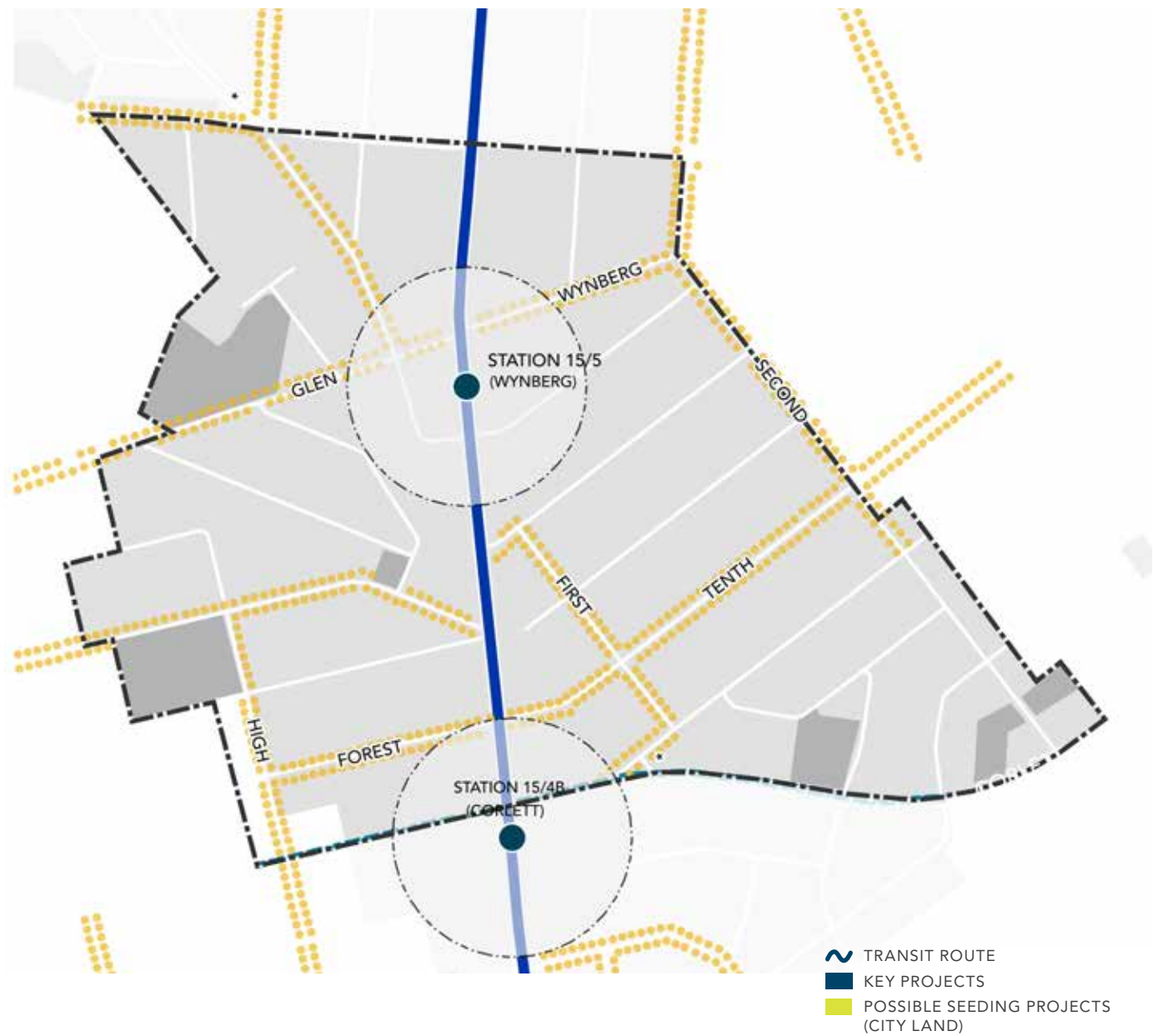
The initial densification scenario is reflected in the following table:

NAME	HA	TARGET DENSITY	HOUSEHOLDS
F1	26.76	40	1071



KEY PROJECTS & INTERVENTIONS

Projects impacting on this local area include the BRT System (Lanes & Stations) and the gradual upgrading, with specific reference to pedestrian movement, of the key local connectors.



## 7

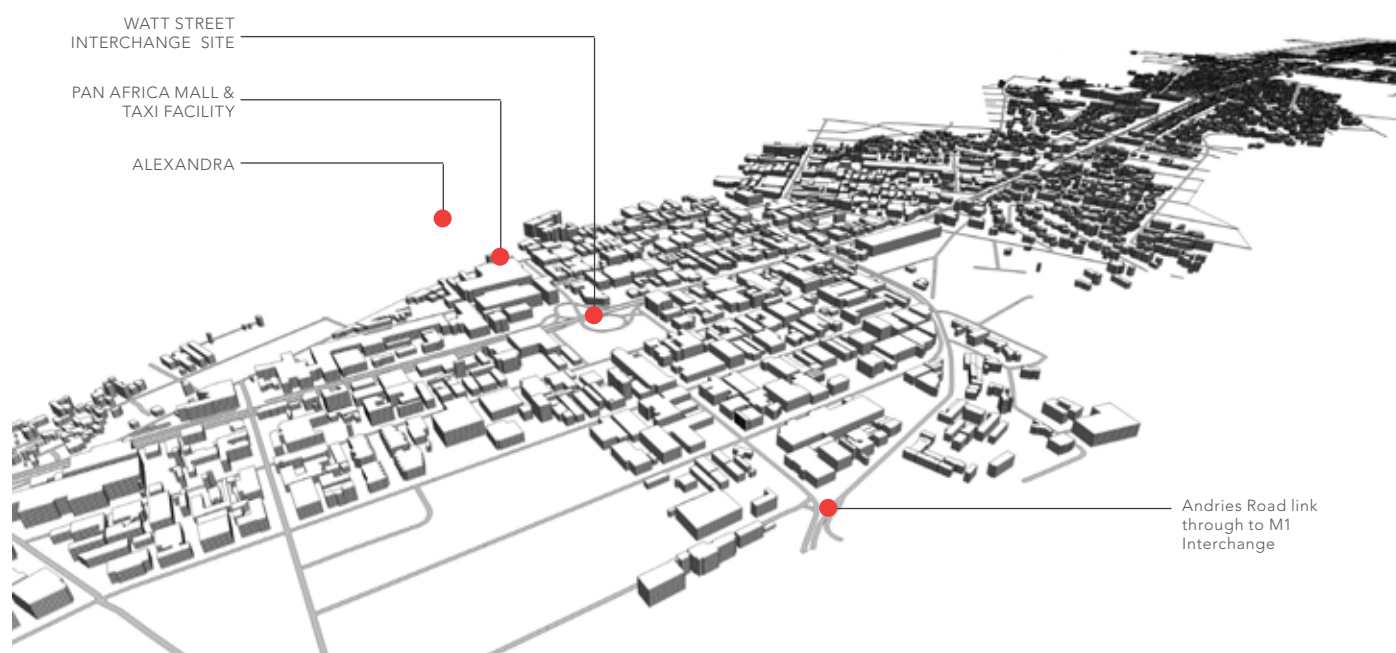
## LOCAL AREA 7

Local Area 7 comprises predominantly parts of Wynberg and Alexandra, and is anchored by the proposed Watt Street BRT Station and interchange. In terms of prevailing land use and character, the Wynberg area is predominantly industrial in nature, with some commercial activity around the Watt Street area.

The areas east of Louis Botha Avenue, towards Alexandra, have undergone fairly extensive growth over recent years, with the development of the Pan Africa Mall and taxi facility. These reinforce the strong east-west movement flow, much of which is pedestrian in nature, moving across Louis Botha Avenue towards Sandton. Peak hour pedestrian flows along this route often exceed 1000 people per hour,

Key issues that inform intervention in this local area include the following:

- The need to improve integration, both spatial and functional, with the Alexandra area;
- The potential of the recent developments around the Pan Africa Mall area, and the possibility of integrating these more closely with Louis Botha Avenue and the BRT system;
- The potential of the proposed BRT Interchange at Watt Street to generate opportunities for more extensive mixed use development in this area;
- The need to interface with specific projects and proposals emanating from the Alexandra Renewal Project,
- The need to formalise, enhance, and dignify, the extensive pedestrian movement that crosses the area;

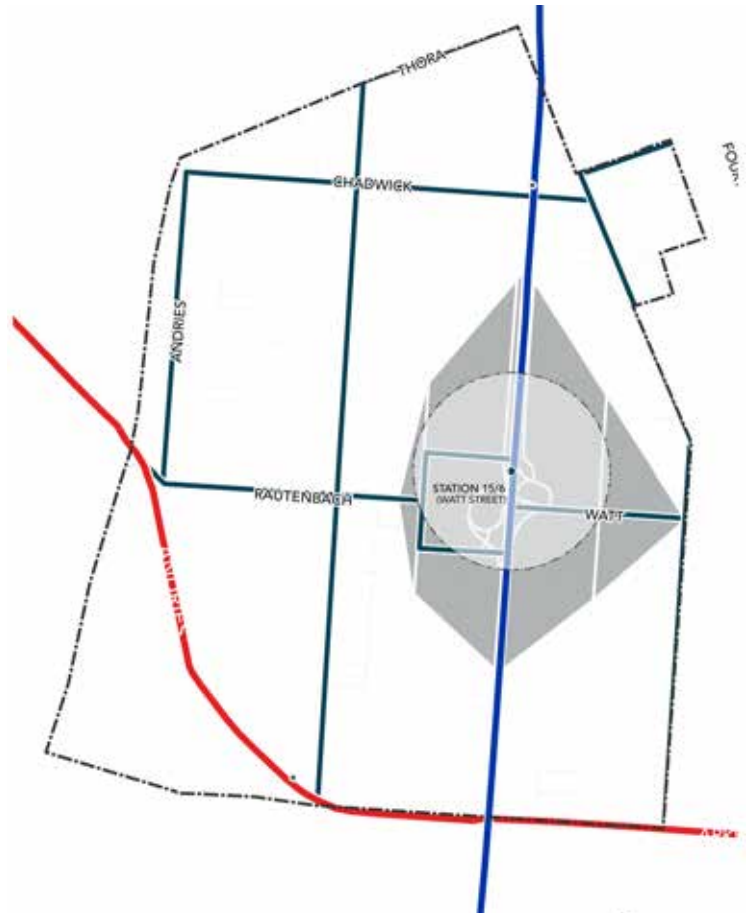


## MOVEMENT & CONNECTIVITY

Movement and connectivity in the Alexandra and Wynberg areas is strongly influenced by the current treatment of Louis Botha Avenue, with the road being more divisive than integrative where it runs through the area. This is due in part to a median barrier which runs along the middle of the route, as well as service lanes which tend to limit integration between the road and the adjoining properties.

The area has a fairly well established grid-type block structure, although the length of blocks do impact on levels of connectivity and accessibility. The proposed Watt Street Station provides good coverage, although the western parts are predominantly industrial in nature.

The area will also house an interchange facility, allowing BRT busses to turn around.

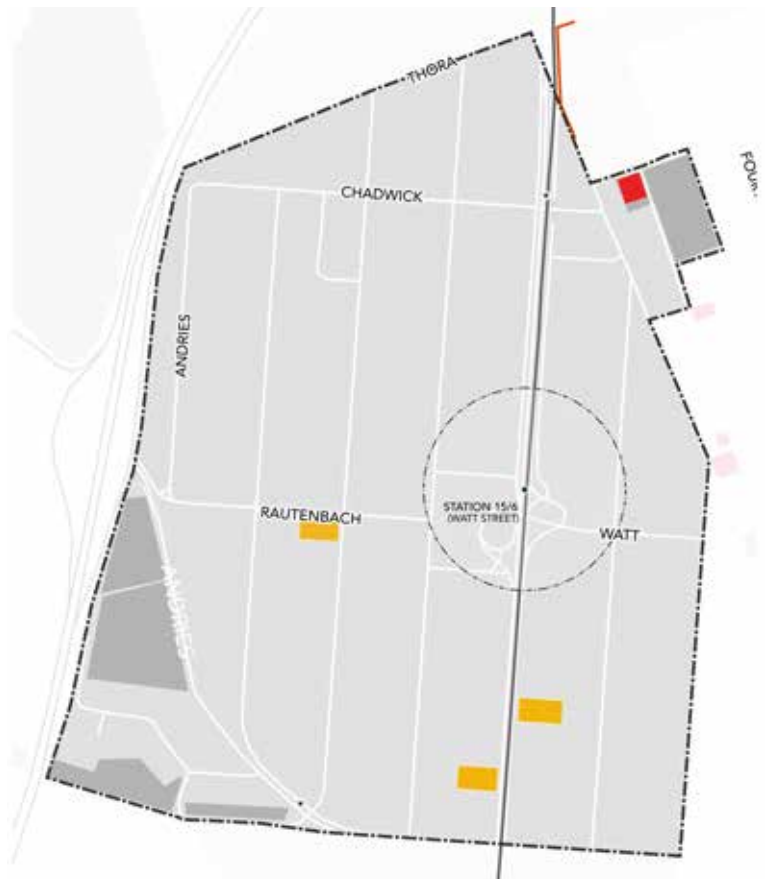


## HERITAGE RESOURCES

From a heritage perspective, the area has limited heritage significance with no resources being identified by this survey. The area is characterised by industrial buildings and warehouses dating largely from the mid to late 20th century.

The Alexandra area does, however, have a number of heritage resources of Social significance. A Heritage Trail is currently being planned. The existing scale and grain of the street edge of Alexandra and Louis Botha Avenue is of historic significance and should be maintained.

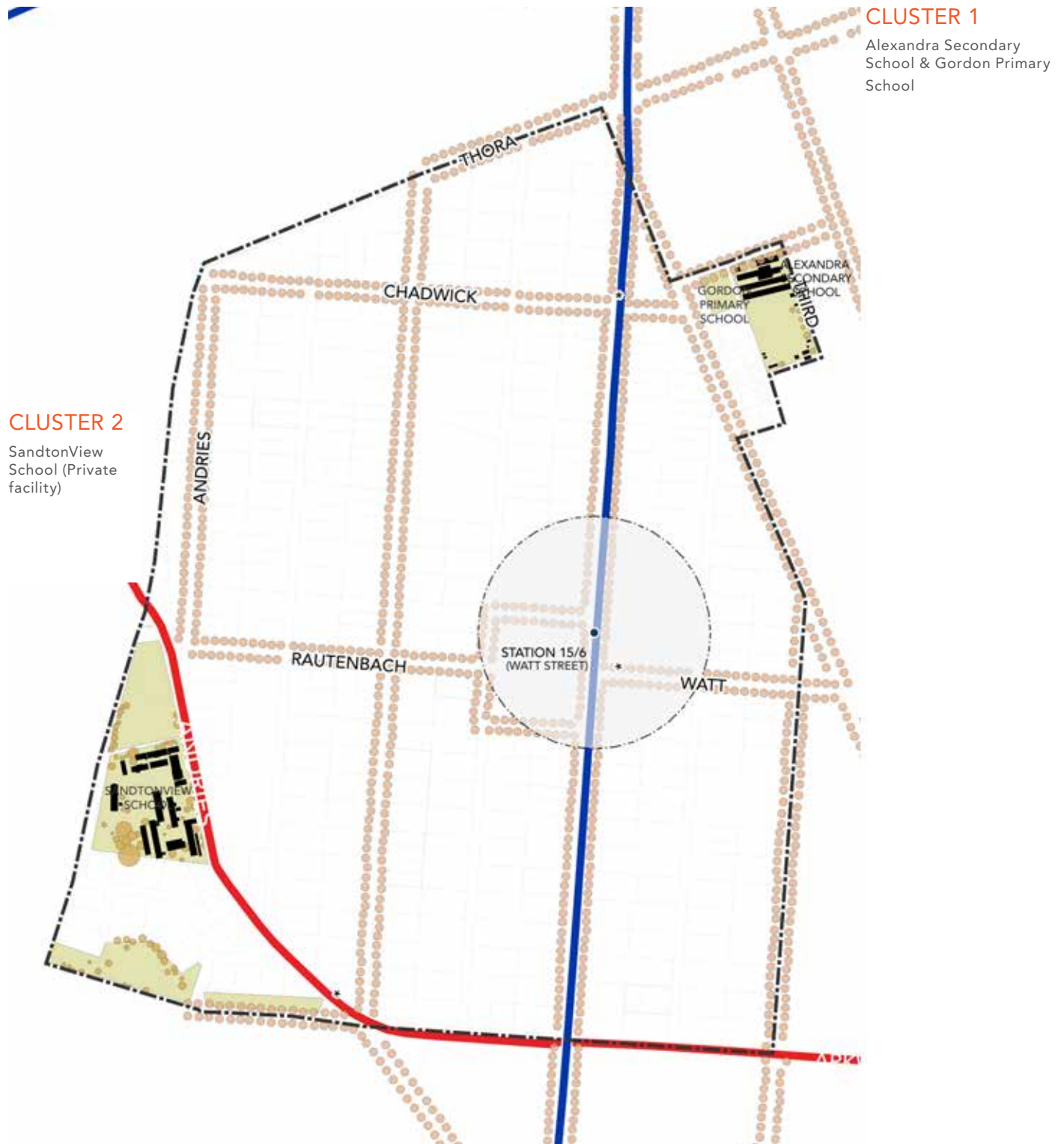
Important conservation bodies or residents associations in the area who should be consulted in the development of guidelines and as part of heritage surveys include the Johannesburg Heritage Foundation and the Alexandra Heritage Society.



- HERITAGE STREETScape
- NATURAL HERITAGE ELEMENT
- DECLARED HERITAGE SITE
- SIGNIFICANT HERITAGE SITES
- POTENTIAL HERITAGE SIGNIFICANCE



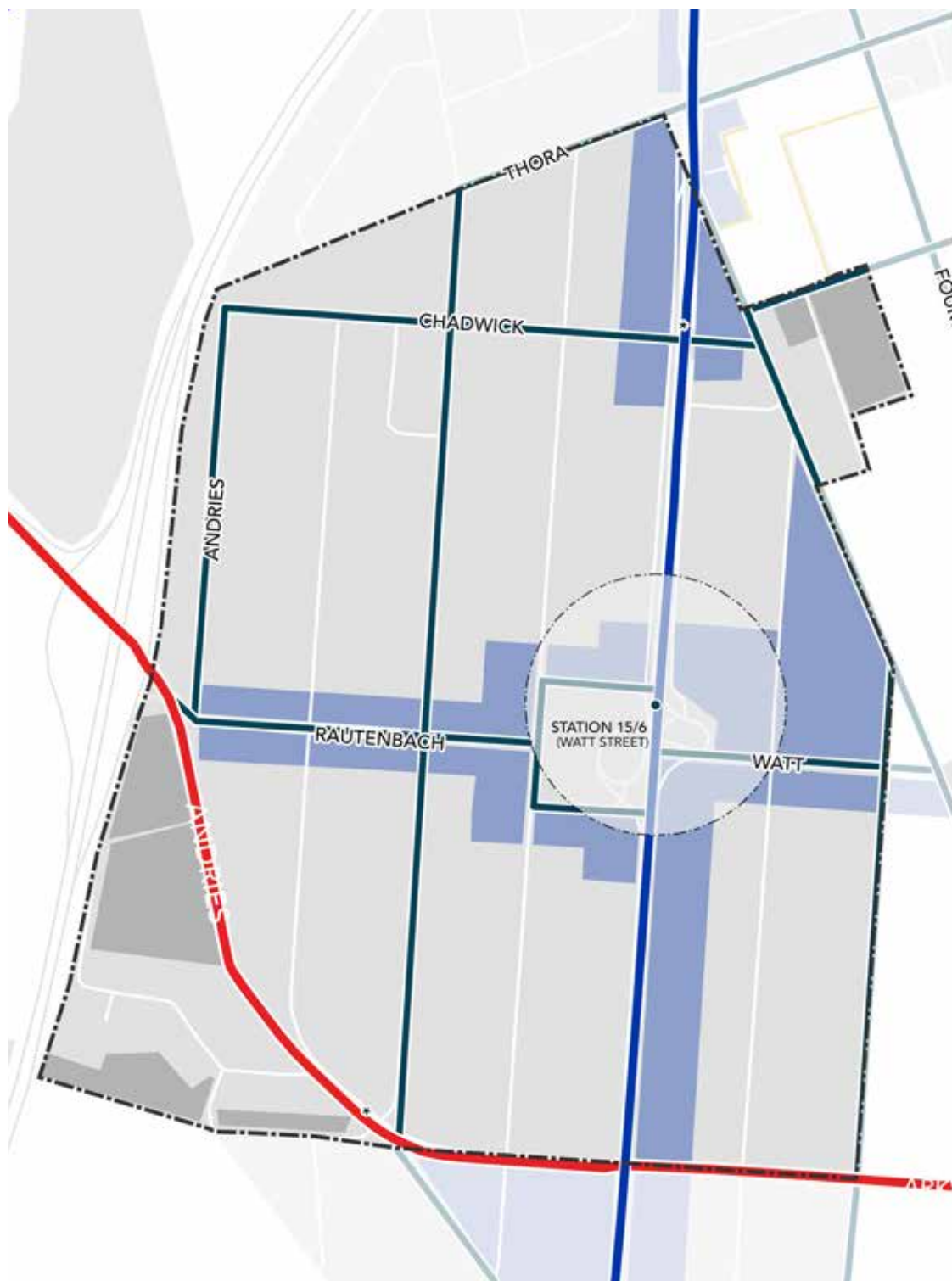
## SOCIAL FACILITIES & POTENTIAL CLUSTERS





## KEY DENSIFICATION OPPORTUNITIES

The industrial character of the Wynberg area limits the extent of residential densification that can be promoted in this area. There is, however, scope for the introduction of new residential development into the identified mixed-use intensification area, with a specific opportunity to bring housing into the envisaged Watt Street interchange project.



## PROJECTS & INTERVENTIONS

The need for an interchange, and potential future inter-modal transfer facility, provides a significant opportunity for the development of a city-scale civic space:

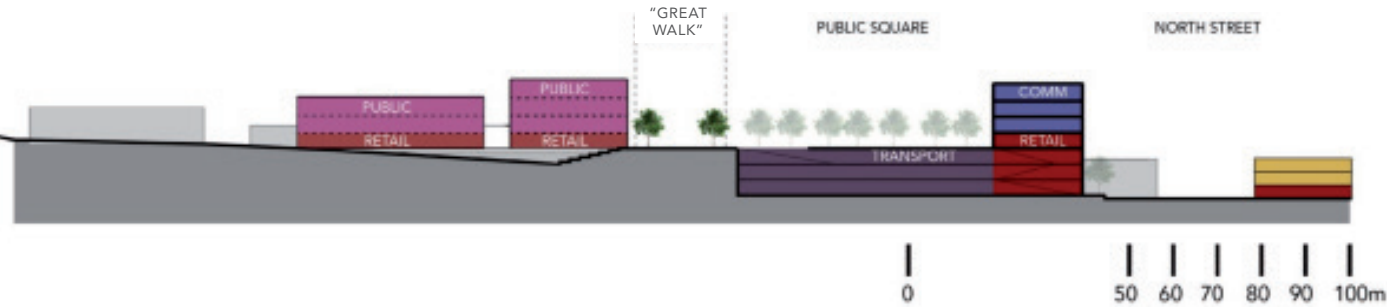
The proposed space further provides a real opportunity for connecting Alexandra into the mainstream urban system.

- ① Watt Street Interchange - potential mixed-use development anchored by a major public space and transport interchange
- ② The Great Walk - improved pedestrian accommodation on link between Alexandra and Sandton CBD
- ③ Alexandra integration - reinforce and upgrade key connections that link Alexandra to its immediate context, and to the broader structure of the city.

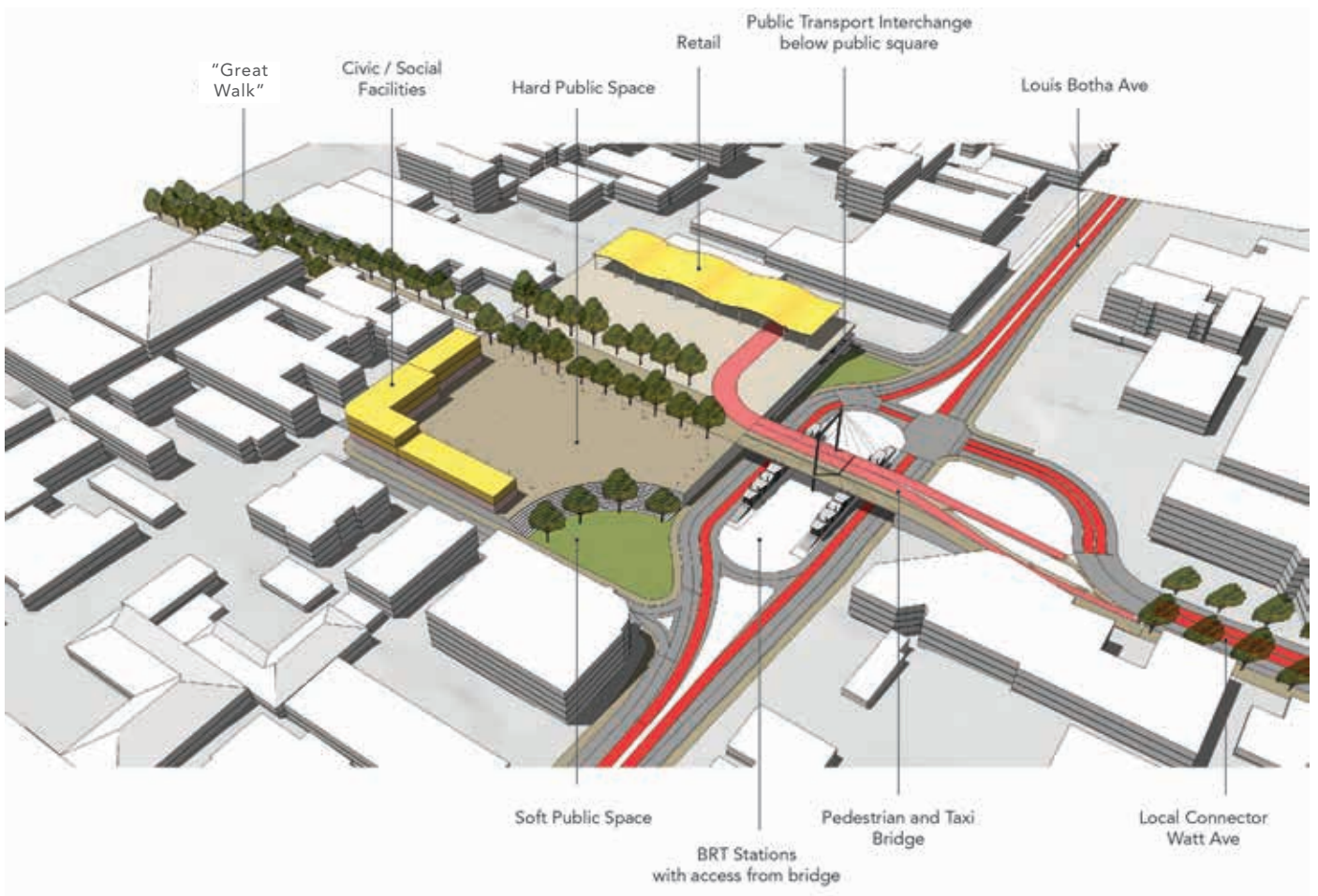
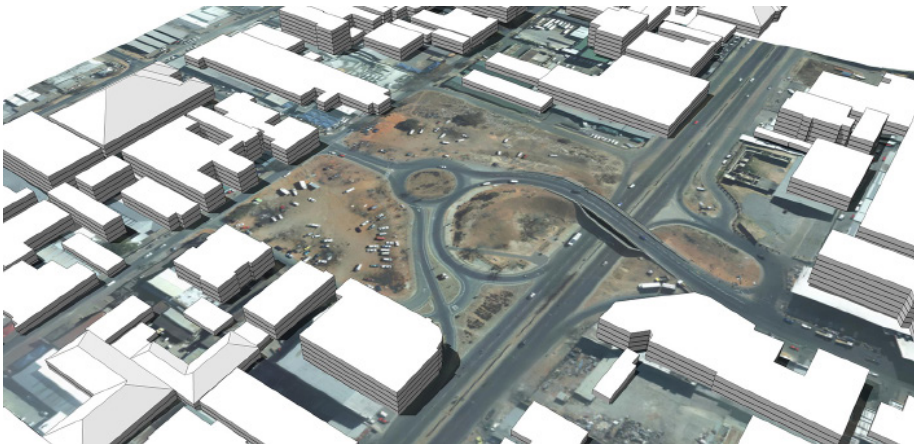


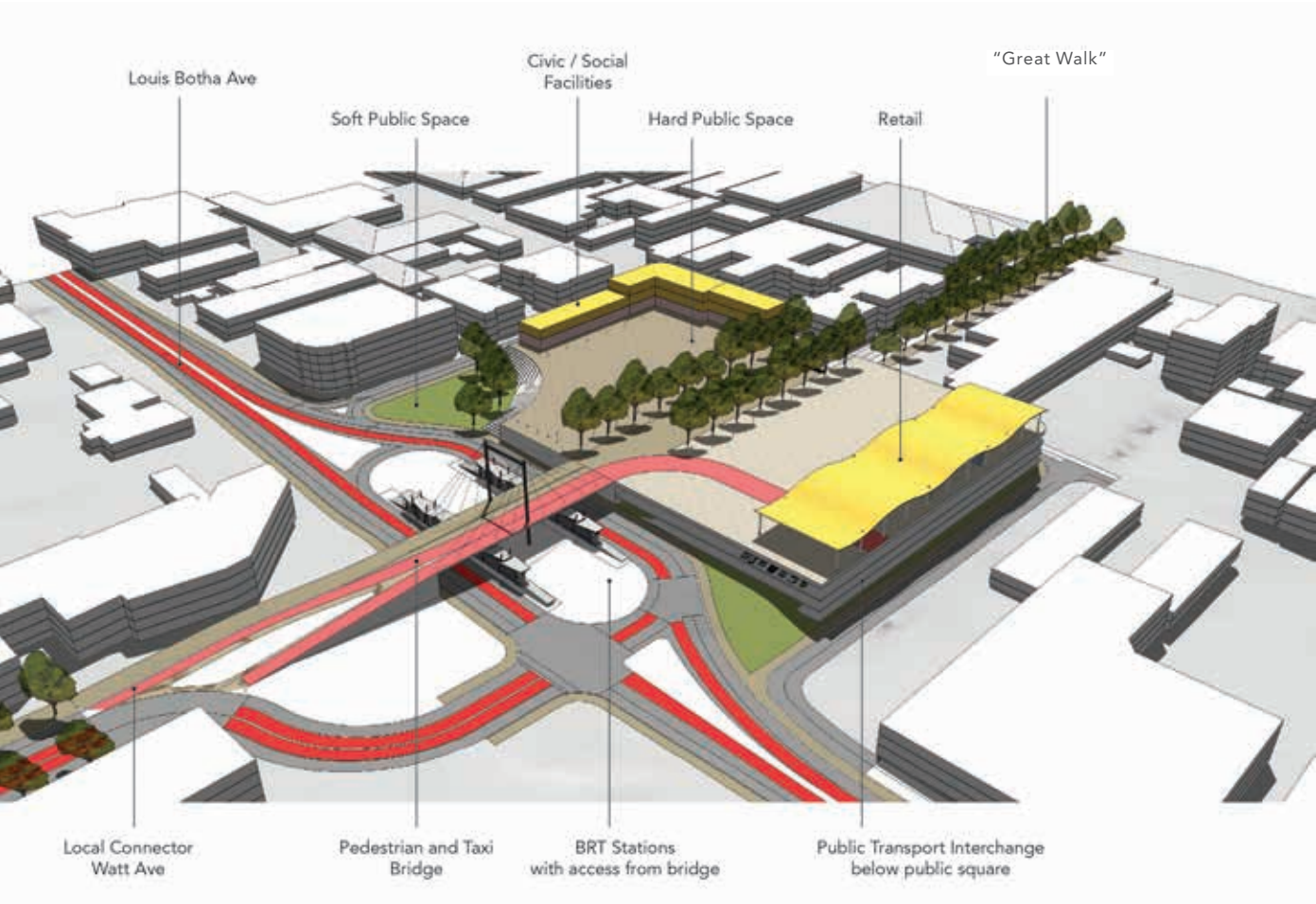
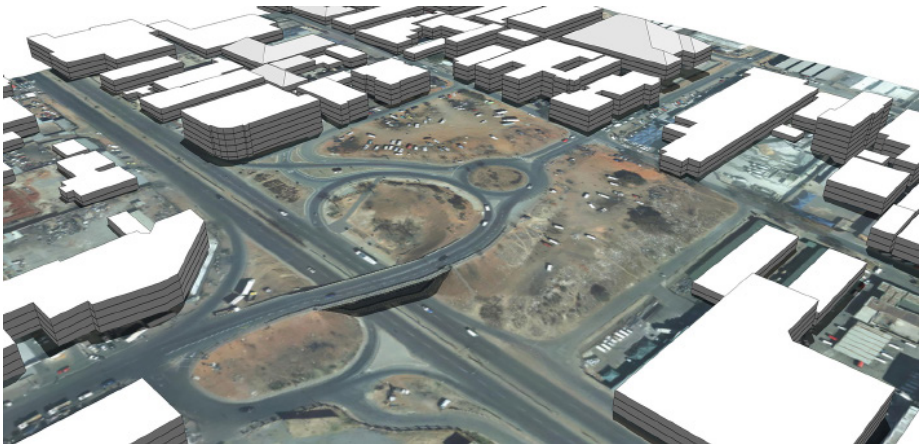
PROJECTS & INTERVENTIONS

The Watt Street interchange is a key project within this local area, providing a major opportunity to utilise the investment in Public Transport infrastructure as a catalyst for a major mixed-use development.











## 8

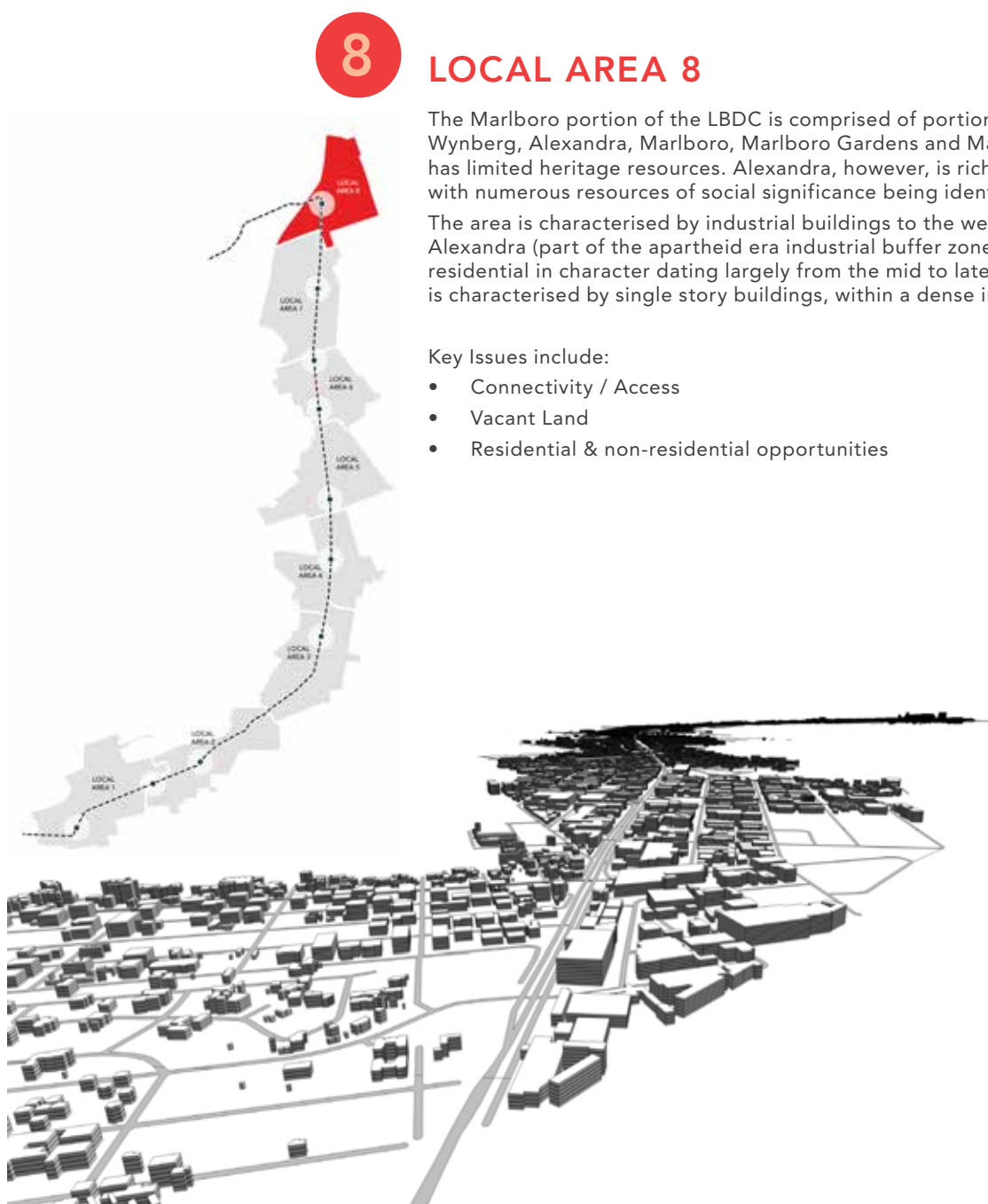
## LOCAL AREA 8

The Marlboro portion of the LBDC is comprised of portions of the suburbs of Wynberg, Alexandra, Marlboro, Marlboro Gardens and Marlboro South. The area has limited heritage resources. Alexandra, however, is rich in heritage significance with numerous resources of social significance being identified.

The area is characterised by industrial buildings to the west, north and south of Alexandra (part of the apartheid era industrial buffer zone. Marlboro Gardens is residential in character dating largely from the mid to late 20th century. Alexandra is characterised by single story buildings, within a dense informal urban landscape

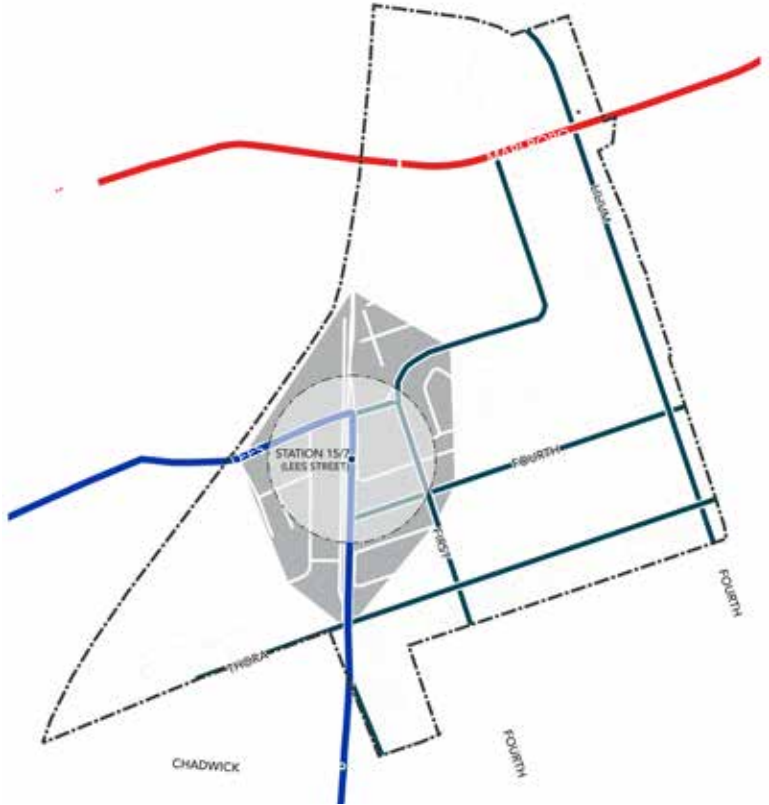
Key Issues include:

- Connectivity / Access
- Vacant Land
- Residential & non-residential opportunities



MOVEMENT & CONNECTIVITY

Area H forms the last potential TOD opportunity for this stage of the Rea Vaya system, with the route shifting westwards along Lees Avenue and across the M1 Motorway towards the Sandton CBD area. The final station offers fairly good levels of accessibility into the adjoining areas.



HERITAGE RESOURCES

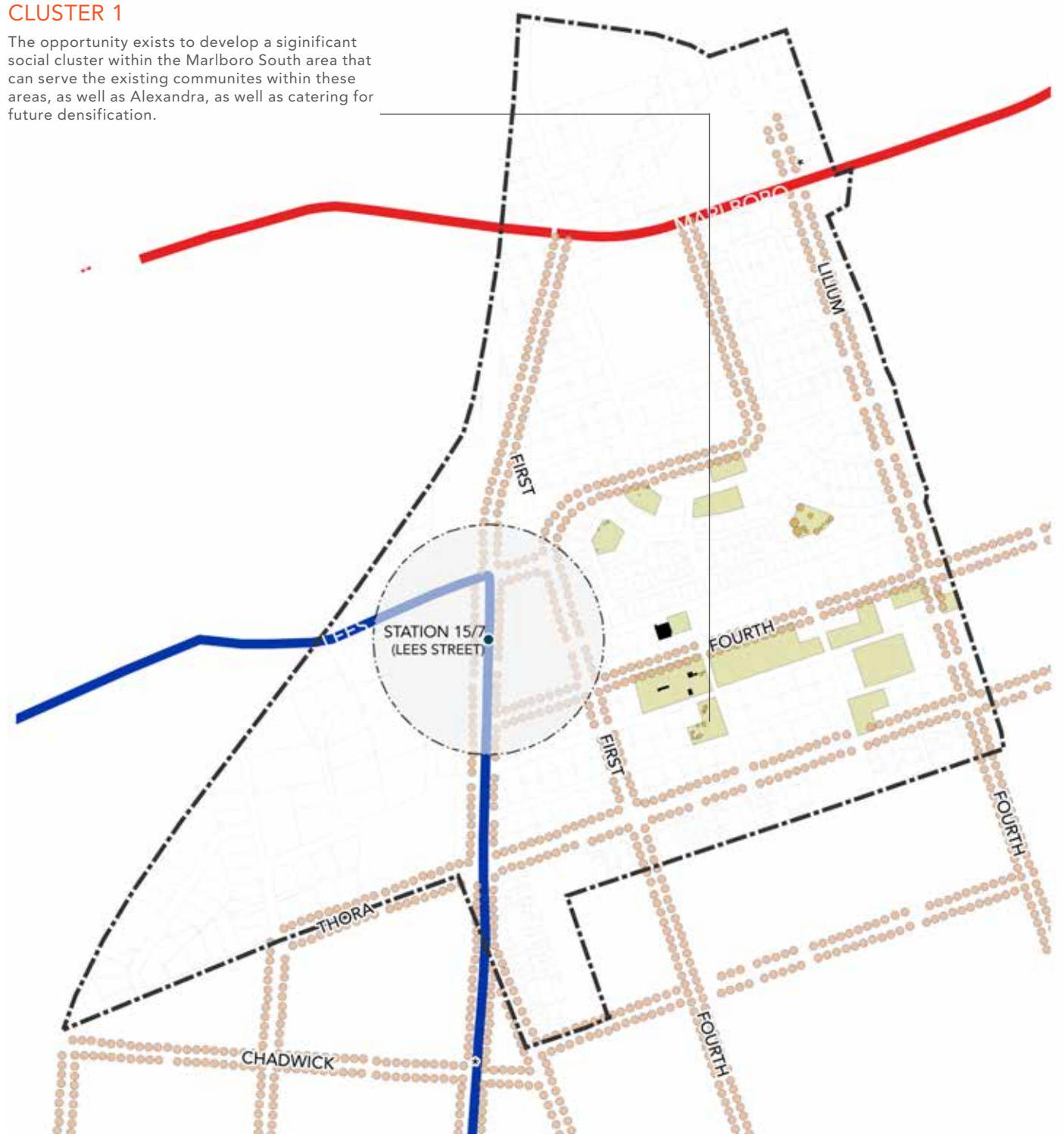
The initial Heritage Survey has identified very few significant resources within this study area, although there are elements relating to the streetscape facade in the southern portions of Louis Botha Avenue, where the original fabric of Alexandra touches onto the spine.



## SOCIAL FACILITIES & POTENTIAL CLUSTERS

### CLUSTER 1

The opportunity exists to develop a significant social cluster within the Marlboro South area that can serve the existing communities within these areas, as well as Alexandra, as well as catering for future densification.

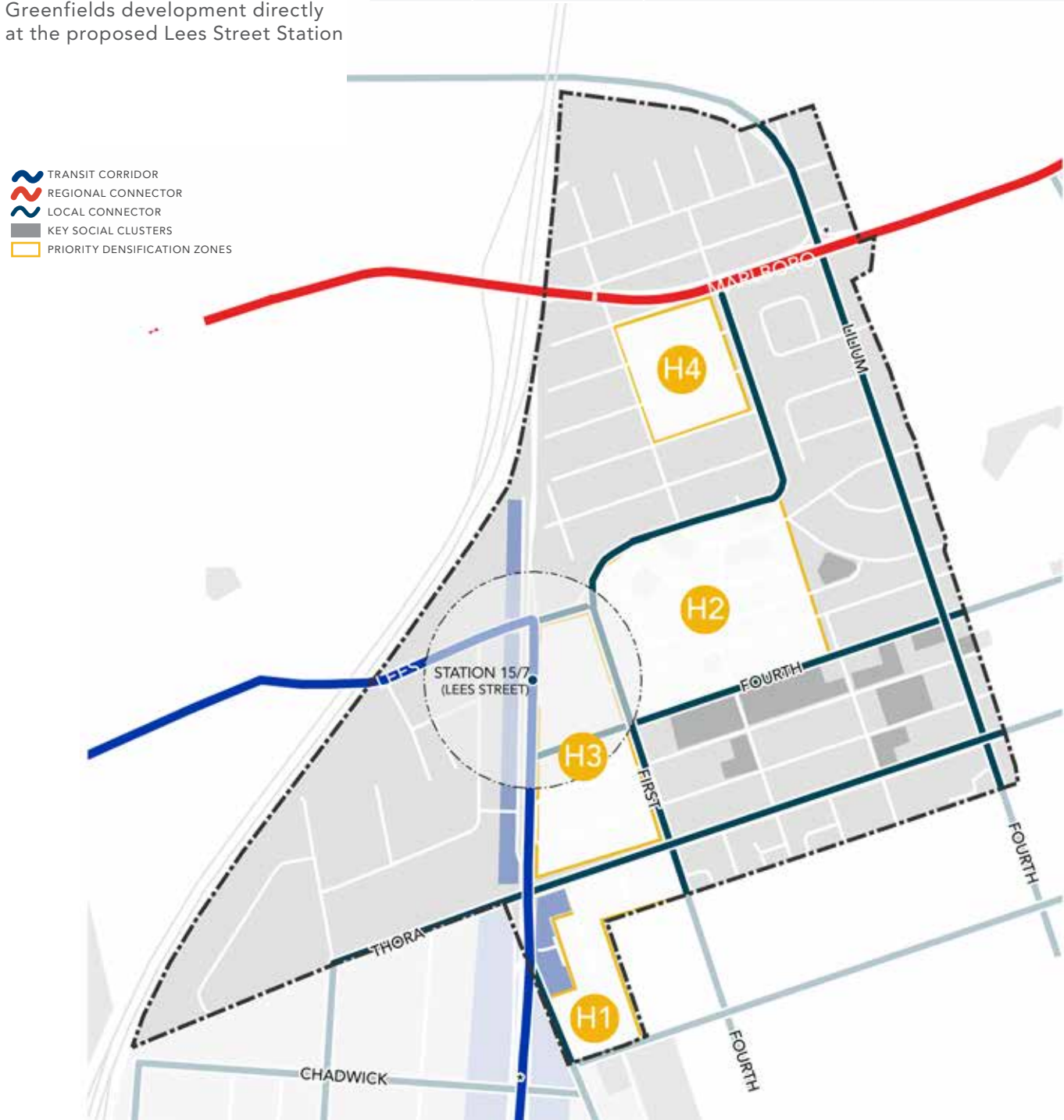


KEY DENSIFICATION OPPORTUNITIES

The initial densification scenario is reflected in the table below. Area H4 relates to the existing Municipal Licensing Department & testing grounds, which is suggested could be reconfigured and optimised to provide additional opportunities for housing development.

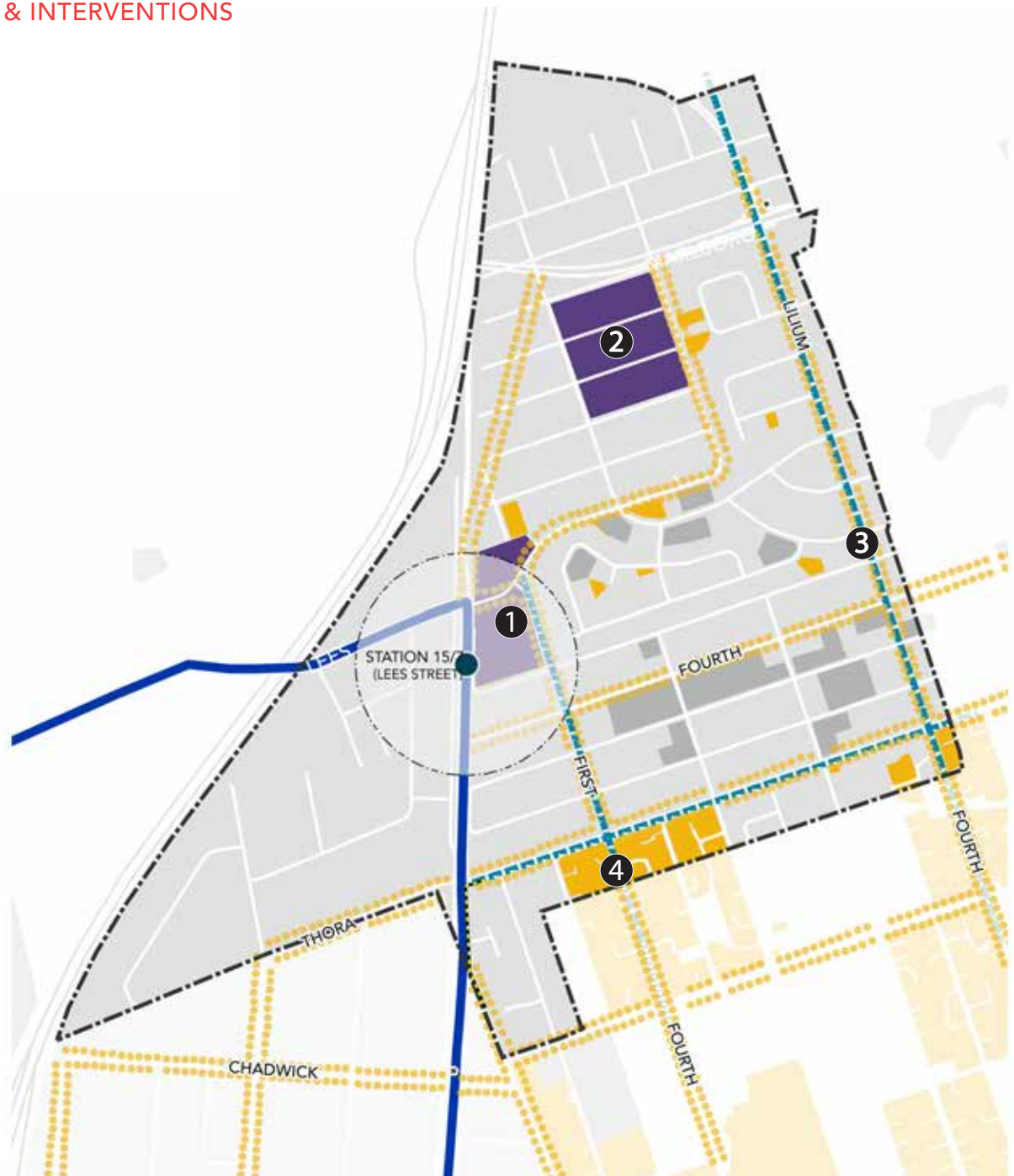
Area H3 relates to a possible Greenfields development directly at the proposed Lees Street Station

NAME	HA	TARGET DENSITY	HOUSEHOLDS
H1	4.549942	120	546
H2	11.59157	80	2086
H3		200	
H4		180	






## PROJECTS &amp; INTERVENTIONS

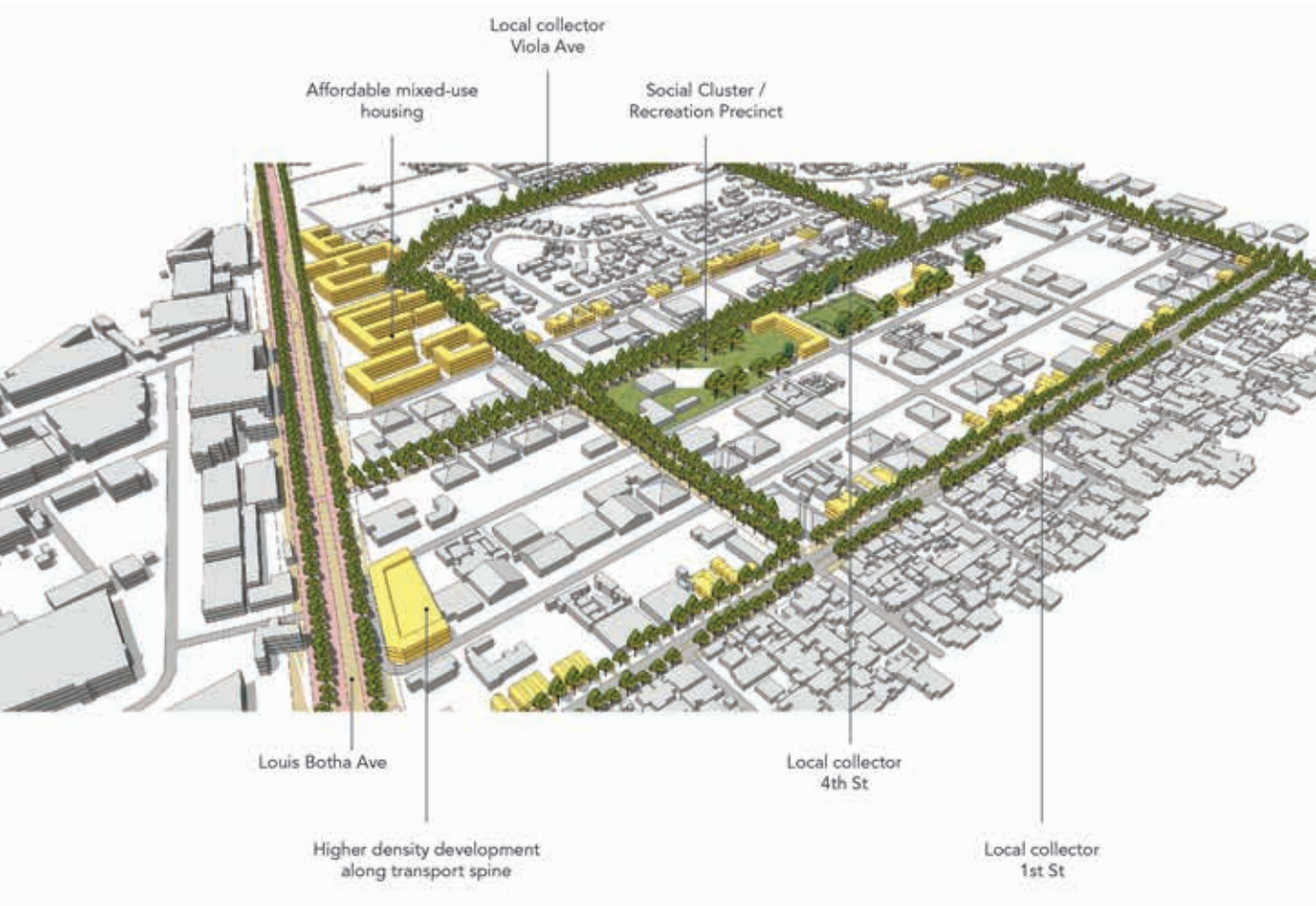


- ① Mixed-use / TOD Development on Council property adjoining proposed BRT Station
- ② Future reconfiguration of licensing department / testing grounds, as mixed-use precinct
- ③ Upgrading/development of continuous NMT link between Alexandra and Marlboro Drive
- ④ Reinforce connections between TOD precinct and Alexandra.

 TRANSIT ROUTE  
 KEY PROJECTS  
 POSSIBLE SEEDING PROJECTS (CITY LAND)



PROJECTS & INTERVENTIONS





## 04C. Priority Interventions

Establishing the Rea Vaya infrastructure within the Louis Botha corridor is the City's first priority. The focus of the City's investment in the medium term is furthermore to improve the existing bulk infrastructure to support increased development, improve public environments and social facilities, as well as linkages to the public transport facilities.

The key intervention within the Louis Botha Avenue corridor is thus the Implementation of Phase 1C BRT Projects, including construction of the dedicated lanes and stations, non-motorised transport infrastructure and inter-modal transport facilities and a depot.

### ORANGE GROVE

- Major redevelopment of Paterson Park Recreation Facility to include a new library, upgraded park and recreational facilities, safe pedestrian access and sports fields and opportunity for an integrated higher density residential development.
- Developing the Orange Grove Triangle Precinct into an attractive public space that can anchor redevelopment.
- Redevelopment of the Orchards Clinic into state of the art facility, offering comprehensive primary health care services and incorporating green building interventions in a multi-storey building.
- Upgrading of several existing local parks to activate the public amenities for residents.

### ALEXANDRA, MARLBORO AND WYNBERG

- Improving the walkability within these areas, including construction of the "Great Walk" from Alexandra to Sandton, by providing extensive non-motorised transport infrastructure including a new pedestrian bridge across the M1-motorway.
- Construction of a new multi-level inter-modal transport facility at the Watt street interchange to integrate taxi, BRT, bus and pedestrian movement, while creating an impetus for economic investment into the area.
- Construction of new higher density housing and mixed use precincts.

### BALFOUR PARK

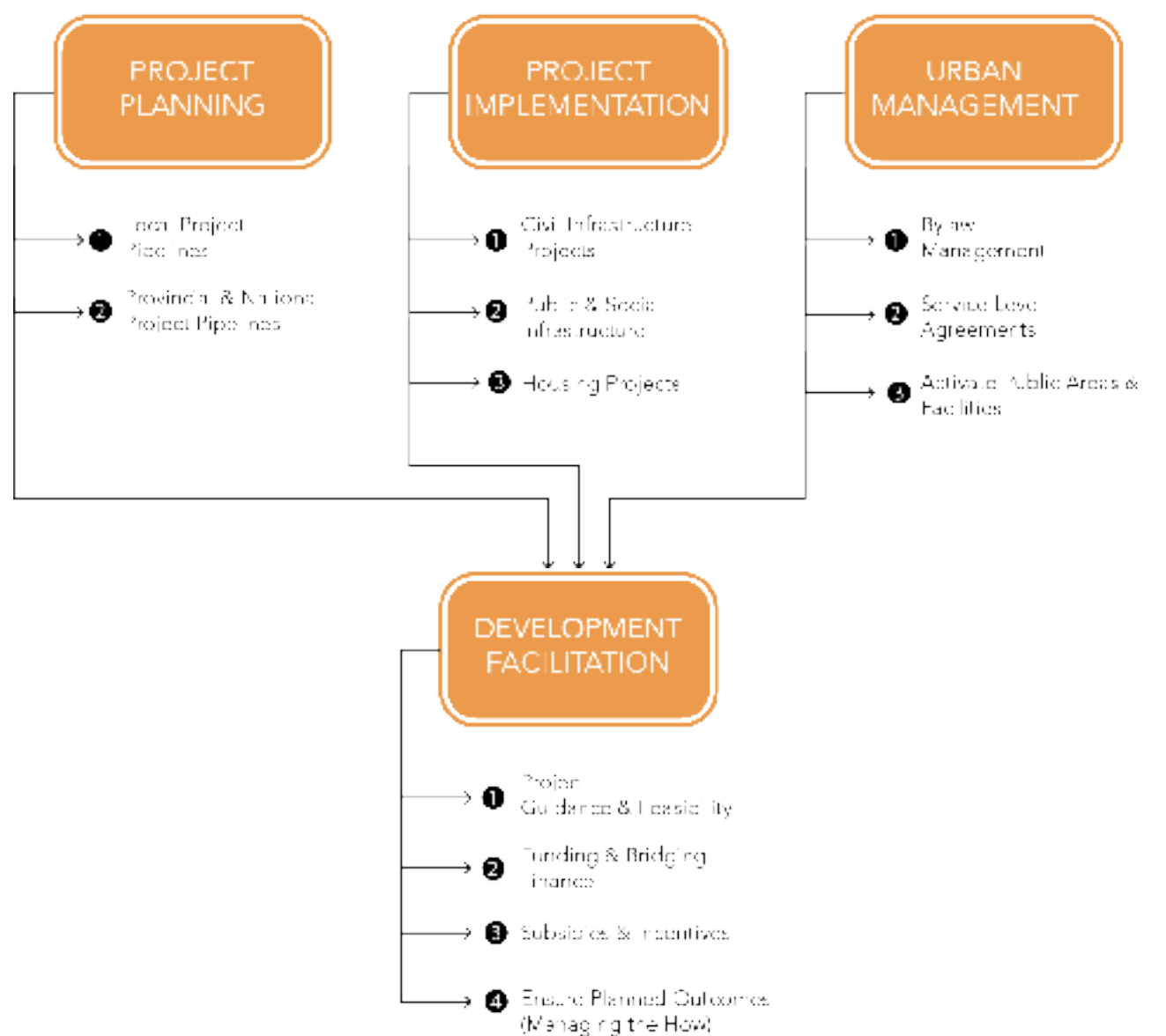
- Developing new higher density housing for a range of income groups.

### YEOVILLE AND SURROUNDS

- Upgrading of a range of existing social facilities such as the Esselen Street Clinic, Yeoville sports and recreation centre and park and Hillbrow sports and recreation centre.

# 05. IMPLEMENTATION PLAN

- A. Institutional Mechanism
- B. Developing Strategic Interventions & Key Actions
- C. Capital Program
- D. Critical Success Factors





# 05.

## IMPLEMENTATION PLAN

Realising the full development potential and envisaged outcomes of the Corridors of Freedom is an urban development process that will take decades to unfold. It is therefore critical to formulate an implementation strategy to guide the City's interventions and develop appropriate institutional responses, mechanisms and a development programme that can be refined over time to take this process forward. The Strategic Area Framework provides the spatial vision and guidance for physical interventions – but the implementation of the Corridors of Freedom requires the collaboration and efforts of the full range of urban stakeholders and implementing agencies, including residents and communities.

### 05A. Institutional Mechanisms

Whilst there is still work to be done with regards to an overall implementation mechanism to realise the vision of the Corridors of Freedom, the specific projects and proposals resulting from this exercise begin to suggest a specific range of functional requirements that must be addressed if implementation is to succeed. Broadly speaking, these can be considered in terms of the following areas:

#### PROJECT PLANNING

The Strategic Area Framework has identified a key set of projects and programs for implementation across different work streams, some of which will require more detailed planning and elaboration as growth and development in the corridor unfold.

The challenge is the need to coordinate planning of this nature across different work streams, as well as across different spheres of government, including Local, Provincial as well as National government. Beyond the sequencing of projects the coordination needs to ensure that the intended outcomes of the plan are achieved in an integrated way.

#### PROJECT IMPLEMENTATION

The implementation of projects within the corridor area requires coordination and interaction across different work streams and levels of government to deliver on the intended vision. The projects required to realise the vision include a range of civil and bulk infrastructural projects, generally implemented by one or more of the City agencies.

Sustaining the future growth and development requires investment in projects related to social and public infrastructure, such as clinics, schools, libraries, and related facilities. Whilst many of these are City responsibilities, education and many healthcare projects would traditionally be implemented by Provincial or National role players - hence the importance of coordination and integration.

## URBAN MANAGEMENT

Urban Management relates to the Municipality's responsibility for the day-to-day operations of the city, although effective Urban Management also requires the involvement of the private sector, and of neighborhood or community organisations.

The South African Cities Network SACN (2009) suggests that the functions of urban management in relation to the private sector include:

- Demarcating and regulating private spaces and ensuring that these spaces are clearly defined and demarcated;
- Service private spaces with connections to essential public services and utilities, such as water and electricity, maintain these services, and ensure that payment is made for such services.

Failure of the above has implications for property values and the ability of land and building assets to fulfill their potential value.

In terms of public spaces, the SACN suggests three primary functions of effective Urban Management:

- Regulate public spaces and maintain their public nature/utility;
- Improve, enhance and maintain public spaces and infrastructure, including public spaces, sidewalks, roads and parks;
- Govern public spaces through government, private and community inputs.

Failure to carry out these functions could result in public spaces becoming increasingly dysfunctional and alienating, with spaces becoming contested, or dormant.

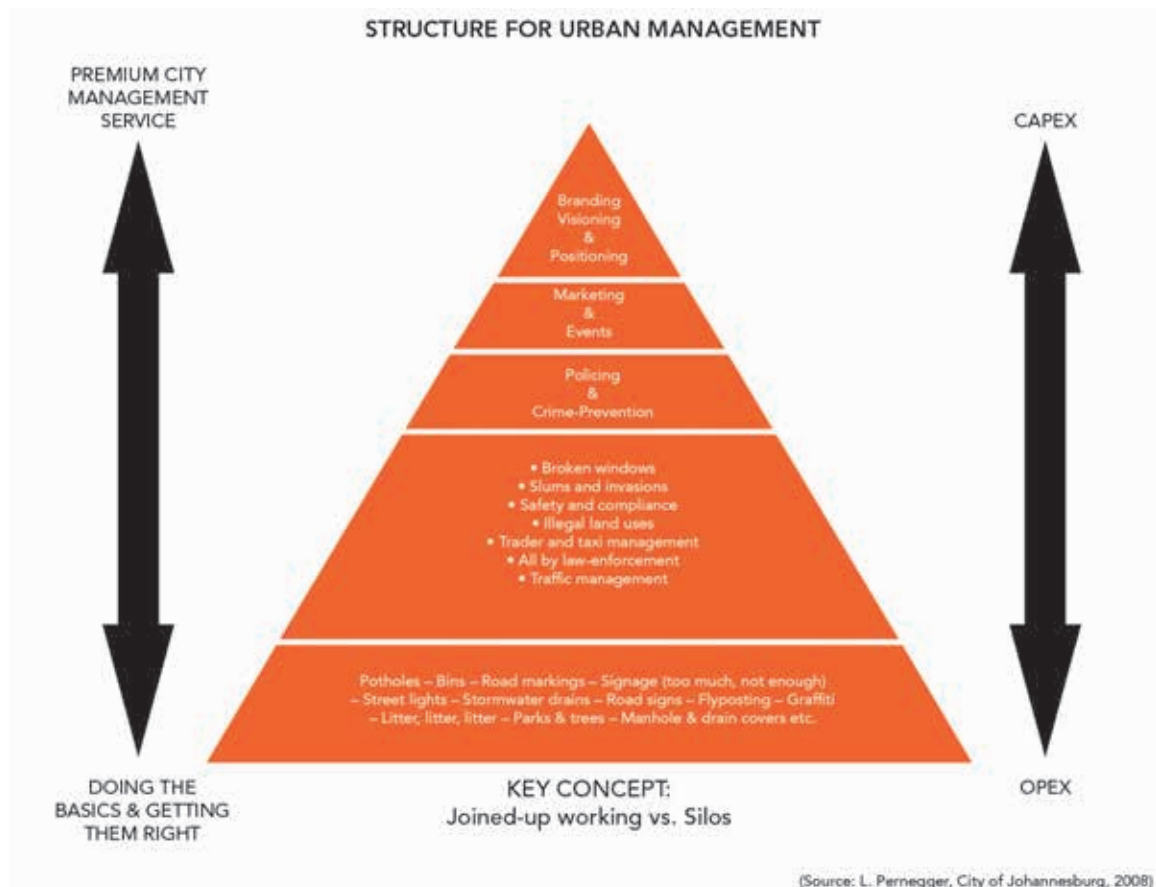
Pernegger (2008) has suggested concept of Urban Management that sees a bottom level as consisting of simple, but highly visible, management functions, such as cleaning of stormwater channels, fixing potholes and removing litter.

A Second level deals with the enforcement of bylaws such as illegal dumping and informal trading, both of which have had a significant impact in the Empire Perth study area.

The third level is about policing and crime prevention, whilst the highest levels are concerned with place marketing the managed area to outsiders.

The shift from the lower levels (Getting the Basics Right) to the higher levels (Offering a Premium Service) requires not only increased budgetary allowances, but also a more integrated and focussed approach to service delivery, which itself is a challenge given the multiplicity of operators and service providers involved.

The success of the Corridors of Freedom will be measured to a large extent by the success or failure of urban management in these areas over time. Creating the built form and infrastructure provides the canvas for urban living – where it is essential that day-to-day management ensures that these mixed-use, higher density, vibrant areas function well.



## DEVELOPMENT FACILITATION

International experience has shown that successful Transit Oriented Development initiatives do not merely happen as a result of changes to development rights or investment in a public transport system. They require continual marketing and facilitation, very often processes that do not normally fall part of the City's activities in development projects.

There must be a support structure in place through which public stakeholders can interact with the city and access information and support that may include:

- Guidance on development opportunities
- Guidance on favourable funding options and agencies
- Advice on sustainability options
- Targeted development initiatives
- Progress on implementation

The primary objective of the development facilitation function is to ensure that the integrity and intent of the plan remains intact throughout the implementation process and that the envisaged outcomes are achieved.

## 05B. Developing Strategic Interventions & Key Actions

Implementation of the Corridors of Freedom successfully requires a range of interventions and key actions by a number of role players. The City and its partners will continue to work together to develop these strategies to enable development in ways that supports the outcomes of urban efficiency and social inclusivity.

### URBAN FINANCE STRATEGIES & MODELLING

It is critical for the success of the Corridors of Freedom that the City develops a sound long-term financial plan. Context-specific urban finance strategies and tax mechanisms to finance the urban development are required. The City must ensure that investment can be leveraged from the infrastructure investment it makes. There are several international best practice examples for financing transit infrastructure and urban development through mechanisms such as land value capture – this should be investigated and packaged for the City.

The City's Finance Department should take the lead in this in collaboration with other partners such as National Treasury and financial and research institutions.

### ECONOMIC DEVELOPMENT STRATEGY

Whilst the Strategic Area Frameworks are focussed largely on the spatial dimension of the corridors, and thus the structure and role of the spatial economy within the study area, it is necessary that a more extensive Economic Study will be undertaken to explore, at a broad level, the economic structure and prospects of the corridor area, and to identify specific economic opportunities that may exist in the area. The Economic Study should result in a differentiated Economic Development Strategy for the Corridors of Freedom that addresses the outcome of inclusive economic growth.

Whilst a detailed scope of works would still need to be finalised for this study, the following issues and opportunities could inform the work to be undertaken in this regards:

- Opportunities in and around existing industrial and related economic zones within the corridor area, specifically in terms of enhancing job creation potential and introducing new economic interventions where appropriate
- Possible extensions to the Urban Development Zones (UDZ) for the city to include key industrial and employment zones
- The use of key employment drivers as a means of optimising and extending their influence
- The possibility of a specific "Incentive Package" that could drive development in specific economic sectors, or spatial clusters, where the opportunities exist (such as the establishment of a Medical Precinct or related spatial cluster as a driver for one of the corridors)
- Opportunities to implement a SMME strategy within the Corridors

The Department of Economic Development will lead this process and outline the Economic Development Strategy for the Corridors of Freedom.

## INCENTIVES AND INSTITUTIONAL MECHANISMS

Whilst the issue of incentives to promote intensification and redevelopment within the Corridors of Freedom are still to be developed further, best international practice suggests a range of incentives that have been used internationally as a means of promoting development:

- International Best Practice Inclusionary Housing Incentives
- Tax incentives for the construction of affordable housing (US)
- VAT reduction on renovation of affordable housing (UK)
- Provide affordable housing on non-residential land (London)
- Density bonuses (US)
- Decreasing administration costs, regulations and processing times (land use planning processes) (Malaysia and Canada)
- Direct subsidies
- Land grants (Malaysia)

The table below outlines some of the possible incentives that could be explored with reference to the Corridors of Freedom initiative:

COJ INCENTIVES (GROWTH AND DEVELOPMENT STRATEGY)	INCLUSIONARY HOUSING INCENTIVES	HOUSING SUBSIDIES AS INCENTIVES	ADDITIONAL HOUSINGS GRANTS / FUNDING MECHANISMS	ENVIRONMENTAL INCENTIVES / SUBSIDIES
<ul style="list-style-type: none"> <li>• Tax Increment Financing (TIF)</li> <li>• Planning Gain</li> <li>• Rights Bonuses</li> <li>• Fast Tracking of land Development Applications and Waiver of Development Application and Building Plan Fee</li> <li>• Special Rating Districts</li> <li>• Land Packaging and banking for targetted developments (Eg: Affordable Housing)</li> <li>• Extension of the UDZ Initiative</li> </ul>	<ul style="list-style-type: none"> <li>• Tax credit schemes</li> <li>• Fee-up of state land</li> <li>• Fast-track of development processes</li> <li>• Town planning compliant component incentives</li> <li>• Density bonuses / allowances</li> <li>• Use right incentives</li> <li>• Provision of bulk and link infrastructure</li> <li>• A wide range of government subsidies</li> </ul>	<ul style="list-style-type: none"> <li>• Finance Linked Individual Subsidy</li> <li>• Consolidation Subsidy</li> <li>• Institutional Subsidy</li> <li>• People's Housing Process Establishment Grants</li> <li>• Rural Subsidy</li> <li>• Project Linked Subsidy</li> <li>• New: Finance Linked Individual Subsidy Programme (FLISP)</li> </ul>	<ul style="list-style-type: none"> <li>• Social Housing Regulatory Authority (SHRA) Restructuring Capital Grant</li> <li>• Restructuring Capital Grant (RCG) Quantum</li> <li>• Community Residential Units Programme</li> <li>• The National Housing Finance Corporation (NHFC)</li> </ul>	<ul style="list-style-type: none"> <li>• The Eskom Demand Side Management (DSM) fund</li> <li>• The Tradable Renewable Energy Certificate (TREC) system</li> <li>• Mechanisms for Solar Water Heating Financial Support</li> <li>• Discretionary additional subsidy</li> <li>• Green housing bonds (home loans)</li> <li>• Tax or rates rebates</li> <li>• Renewable Energy Finance and Subsidy Office (REFSO)</li> <li>• The Clean Development Mechanism (CDM)</li> </ul>



There is also a range of incentives and grant schemes that relate specifically to developing and supporting the economic sector, which is critical for the success of the Corridors of Freedom.

The Department of Economic Development in the City will take the lead with regards to developing a package of incentives for the Corridors of Freedom.

A key element in facilitating the longer term development of the Corridors of Freedom as envisaged in the Strategic Area Frameworks is the establishment of Special Development Zones for priority development areas. This is a clearly defined area, at cadastre level, to the cadastre that the Council has delineated for focused planning and development intervention and investment. Special Development Zones (SDZs) will be promulgated by means of an amendment scheme to the Town-Planning Scheme. SDZs will result in streamlined approval processes. The Department of Development Planning will take the lead in establishing this mechanism.

## HOUSING



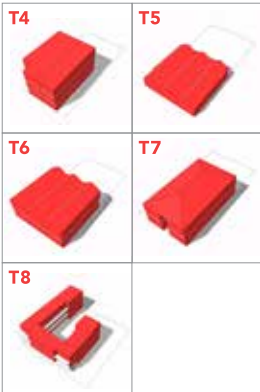

One of the critical outcomes of the Corridors of Freedom is to change the urban planning model by providing affordable and social housing along these BRT development corridors, which are adequately serviced by transport, economic and social infrastructure. To realise the objective of inclusivity, both the public and private sector must deliver on a range of housing typologies that can cater for all the City's residents. The City's role is therefore to support and facilitate private sector development and to negotiate aspects that relate to inclusionary housing, but also to extend its own delivery models to create more social and affordable housing within these well located areas.

To attain the high levels of housing densification in the key development precincts along the BRT corridor, the city should provide potential developers with guidelines and assistance to increase the levels of success in these proposed housing developments. The housing densification, should then take advantage of the various land availability opportunities, along with existing and proposed infrastructure, thus providing housing in a sustainable manner, without disrupting the delicate balance of established residential and commercial communities.

The urban planning and housing typology models have identified densification strategies that utilises realistic solutions that are mostly driven by private sector participation and investment. The city and the various social housing agencies should provide key facilitation support to developers, to assist in effecting the required transformational objectives. These will include land acquisition and release, town planning interventions, tax incentives and technical support.

Housing must be targeted at all ranges of developers and developments, i.e. smaller individual developments to larger housing development projects of over 200 housing units. One of the opportunities that exist for the City in the context of the Strategic Area Frameworks for the Corridors of Freedom, is the establishment of an Advisory Centre under the auspices of the Department of Housing which has as its mandate and objective to provide facilitation for funding and technical support to potential developers in the Corridors of Freedom and other restructuring zones (Inner City).

The table overleaf provides an overview of the potential housing delivery processes likely to unfold across the corridor over time, illustrating some of the options that exist with regards to social housing. It is evident that

FUNDING & SUBSIDY	LOCALITY OF PROJECTS & TYPOLOGIES	TYPICAL TYPOLOGIES
	Estate or Lifestyle Developments	
Private Equity & developer finance.	Mixed Use developments	
Bank Bonds and Personal Deposits.	Exclusive Townhouse or large single property	
Leverage 2nd property.	Close to Social Amenities - Schools, Malls & parks	
	Average size - 250 m <sup>2</sup> 3 bedroom units	
	<b>Densities: 40 - 60 DU/ ha (net)</b>	
First Time Home owner subsidy/ guarantee.	Housing Schemes in Urban and Sub-Urban areas	
Bank & Institutional Funding.	Often sold off-plan for green field developments.	
Institutional Funding (PIC, DBSA etc).	Private developer or bank sponsored scheme	
Bond over land used as guarantee.	Incl. townhouses, single dwelling & multi-storey	
Low interest subsidies often feature.	Walk-ups - average size 120 m <sup>2</sup> 2 bedroom	
	<b>Densities: 60 - 120 DU/ ha (net)</b>	
GPF low interest Loans and Equity	Inner City/Urban - Housing Schemes	
NHFC Debt Funding	Conversion of Office & Industrial Buildings	
Institutional Funding (PIC, DBSA etc)	Private developer or social housing institution	
Gearing of Donor Funding	Includes townhouses, row housing, multi-storey	
Limited Government subsidy for mix social housing schemes.	Walk-ups etc - average size 65 m <sup>2</sup> 1 bed.	
	<b>Densities: 120 - 200 DU/ ha (net)</b>	
Potential for donor funding etc.	Designated restructuring zones	
Government Subsidised Schemes	Within these areas, the Capital Grant will apply	
Accredited project is a project in which ,	Take the form of medium density multi-unit	
Government makes a contribution.	Complexes - institutional management apply.	
Social housing primarily covers the rental	Includes townhouses, row housing, multi-storey	
tenure option and excludes ownership.	Walk-ups etc - average size 40 m <sup>2</sup> 1 bed.	
	<b>Densities: 120-180 DU/ ha (net)</b>	

low income rental accommodation has a strong role to play across the corridor at a range of scales, although land cost is likely to be the biggest influence in the development of housing at this end of the market. It is thus vital that the City begins to invest in areas with potential. On average, the population in the three corridors will increase from 7 436 people per square kilometre to 41 632 people per square kilometre. High density residential developments within the corridors need to support a range of typologies, densities and incomes. In order to realise the envisioned social inclusivity within the corridors, the City has to invest in acquiring land for affordable housing.

A number of actions are required to support the strategic interventions around the Corridors of Freedom. :

- The City needs to undertake detailed project proposals to implement new typology housing projects within the corridors
- Compile a management strategy for the high density public housing stock
- Develop a social housing strategy with other implementing agencies in the City, including development incentives

The Department of Housing will take the lead in unpacking the City's delivery strategy within the Corridors of Freedom.

## SOCIAL CLUSTERS AND PROGRAMMES

The vision for the provision of social amenities is linked to the creation of spaces that will unite residents. The strategy is to cluster a number of varied facilities together in an integrated environment that discourages fences and pockets of isolated public facilities and encourages multi-use facilities in multi-storey buildings in character with high rise environments envisaged along the BRT and around transit stations.

The social facility clusters are spaces to implement innovative solutions on green buildings and the use of public places. In order to construct a sustainable urban community the necessary social facilities need to be provided to the Corridors to support the increase in population. The City is investing extensively in social facilities that fall under its jurisdiction within the Corridors within the next three years. This includes libraries, community halls and sports facilities, clinics and social support facilities.

Inter-governmental cooperation is required to align provincial and national budgets to this initiative in order to ensure that their services such as schools, healthcare, social welfare grants and policing, are provided to serve the increased population demands. The inter-governmental discussions should also deal with the standards and design of these facilities – innovation is required to ensure the services and buildings contribute to the objectives of efficiency and inclusivity.

A number of actions are required to realise this:

- A new integrated, strategic approach to the provision of the City's own facilities needs to be developed. This needs to include the physical design and development of the facilities, but also aspects such as the allocation and management of operational budgets and activation of Council owned facilities. This requires the joint efforts of Community and Social Development, Health Department and City Parks.
- A series of inter-governmental engagements with relevant provincial and national service providers to resolve and agree on the approach to delivering social facilities and services in the Corridors of Freedom.

The transformation agenda does not just relate to the way social and public facilities are designed – it also calls for vibrant, inclusive spaces, services and facilities where residents and communities can celebrate life and grow. This also requires innovation in terms of a new public programme that activates these spaces throughout the year to create opportunities for residents to engage socially and informally.

These programmes can include a range of learning and human potential development themes (skills development, health and environmental education) as well as recreational activities. Hosting these programmes can also link to economic development – events create opportunities for a range of economic activities to happen simultaneously.

The Communication Department will take the lead in developing such an activation programme with the contribution of other Departments (including Health, City Parks, Community Development, Urban Management).



## LAND STRATEGY

The formulation of a comprehensive Land Strategy for the Corridors of Freedom is a critical requirement for the successful implementation of the Corridors.

This strategy must deal with the acquisition of land for a range of uses, including social and affordable housing, but also a disposal strategy that outlines how and when land assets can be disposed of to support the outcomes of the SAF. The strategy should also outline the approach towards holding and managing the properties within the portfolio.

The Johannesburg Property Company will take the lead in this.

## BRANDING AND COMMUNICATION

Positioning the Corridors of Freedom as a destination and marketing it requires the establishment of it as a brand. Communicating with city stakeholders and creating engagement and excitement is critical for the implementation of the Corridors of Freedom. Over a period of time the City is going to implement a range of projects and programmes within the corridors, which should be shared and celebrated.

This requires the development of a communication strategy for the corridors, with the Communication Department in the lead role.

## INFRASTRUCTURE

The implementation of infrastructure projects – water and sanitation, power, roads, stormwater and public transportation – provides a real opportunity for innovation.

Improving urban efficiencies and at the same time reducing our impact on the environment are key outcomes for the Corridors of Freedom. The entities, Department of Transport and the Department of Environment, Infrastructure and Services have a critical role to play in developing and piloting projects that contribute to urban sustainability.

The development of a comprehensive ten-year capital programme that reflects the City's interventions with regards to service infrastructure is critical. The Department of Environment, Infrastructure and Services will take the lead in formulating this programme.



## URBAN MANAGEMENT AND PUBLIC SAFETY

The denser urban environments envisaged in the Corridors of Freedom require visible efforts on managing public spaces, the levels of service delivery and crime prevention. The focus of crime prevention should be on reducing vulnerability of residents. While the implementation of the urban design guidelines will go a long way in improving surveillance and safety within the Corridors, there is a need to supplement it with visible policing and other crime prevention measures.

The actions required include:

- Formulation of urban management plans specifically for the Corridors of Freedom (Lead: Citizen Relationships and Urban Management)
- Strategy for crime prevention and safety within the Corridors of Freedom (Lead: Public Safety)



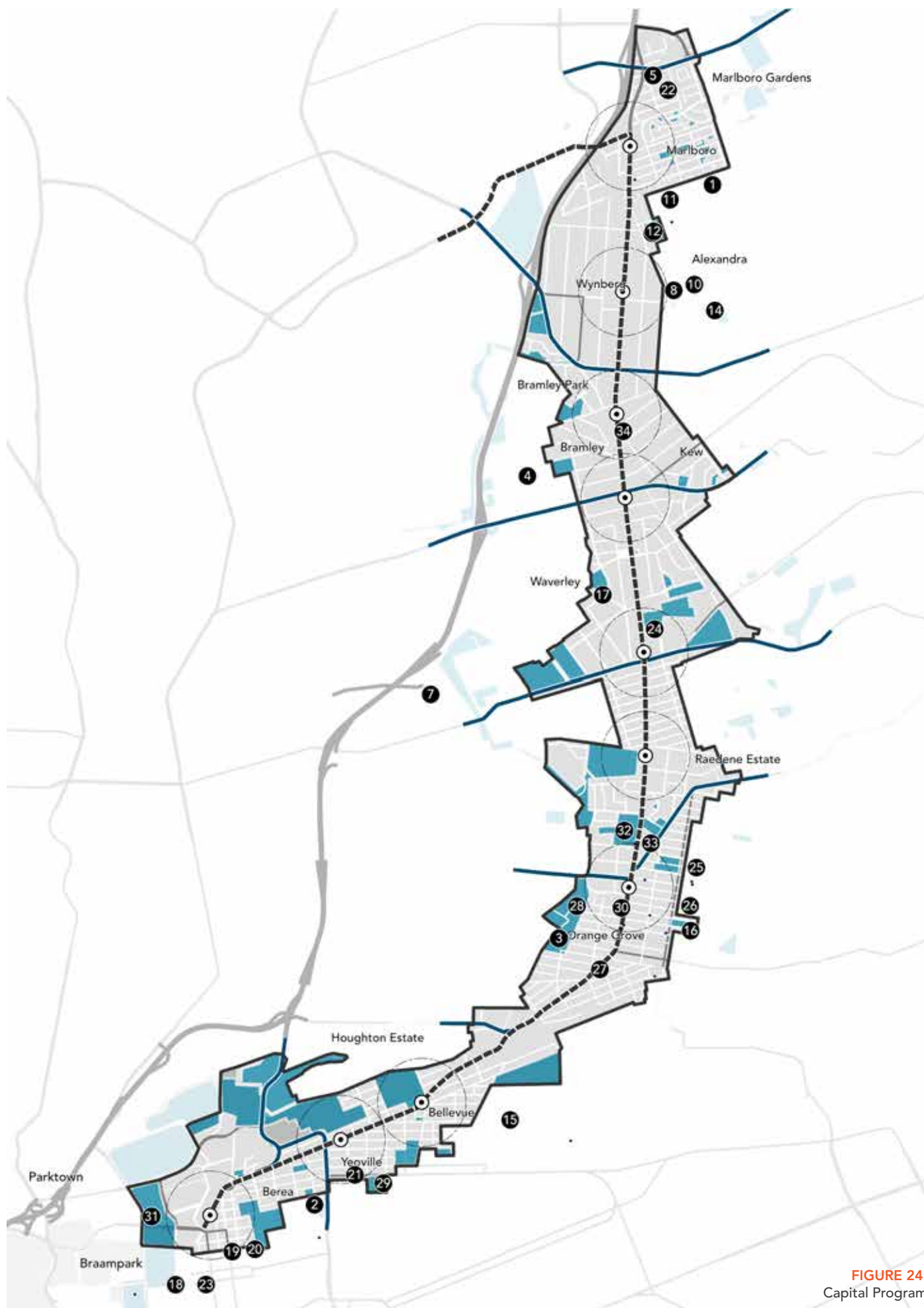
## 05C. Capital Program

The interventions identified to support the Corridors of Freedom that require capital funding will be packaged into the City's ten-year capital investment plan which is currently being developed. This includes civil infrastructure projects, public and social infrastructure and housing projects. The phasing of projects to support priority precincts and consolidated project sequencing will also be addressed in the programme. The programme will reflect the City's projects, but all efforts should be made to incorporate provincial and national projects.

The City's Centre of Excellence will play an important role to consolidate this programme with the inputs and collaboration of the City's implementing departments and entities.

The BRT Phase 1B has been finalised and operational since October 2013. The focus of the City's investment in the medium term is therefore to improve the existing bulk infrastructure to support increased development, improve public environments and social facilities, as well as linkages to the public transport facilities.

[illegible]



**FIGURE 24:**  
Capital Program

## 05D. Critical Success Factors

Developing the Corridors of Freedom is a long-term development programme that requires all stakeholders to work together towards the broader vision. The City is already demonstrating through its medium term budget its commitment to investing in the provision of infrastructure and services to support private sector initiatives.

- The success of the Corridors of Freedom is dependent on the following:
- Long-term political commitment
- Roll-out of consolidated capital programme
- Implementation of institutional arrangements to drive development
- Inter-governmental engagements and implementation
- An informed and engaged citizenry that grows with the vision of transformation.

