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<tr>
<td>Senior Consultant (Aurecon)</td>
<td>Project Director (eThekwin)</td>
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1 Introduction

The purpose of this document is to present an Implementation Framework for the Densification of the eThekwini Central Region. The Implementation Framework is Phase 3a of the initiative as conceptualised in the Project Terms of Reference. The focus of this is to guide the implementation of densification and intensification of the study area in terms of the Densification and Land Use Frameworks developed for this purpose in Phase 2.

The Terms of Reference for the project also requires this Implementation Framework to identify three Pilot Projects to be implemented with a view to testing the Frameworks developed.

1.1 Background

In 2013 the City prepared a Densification Strategy that suggests density parameters for various nodes, corridors and other areas. This initiative sets out to establish:

- Whether the suggested levels of density can be achieved in the affected study area in Central Planning Region; and
- If so, how this can be achieved.

The key objective as per the Terms of Reference is to develop a comprehensive densification framework for the corridor and adjacent suburbs identified. The densification framework will:

- Identify areas suitable for densification within proposed densification nodes, corridors and the larger area;
- Determine the densification alternatives (infill, intensification and urban renewal) appropriate to each corridor and relevant neighborhoods and nodes;
- Provide land use management tools at a detailed level to inform rezoning and development control regulations (as per the densification proposals put forward within the corridor) – at a block and suitable opportunity site level;
- Provide clear design guidelines to ensure sustainable densification at a block and opportunity site level;
- Assess the market appetite in relation to densification proposals to determine the existing and future take up of densification opportunities within the identified corridors;
- Test stakeholders responses to densification scenarios and their likely impacts; and
- Provide a robust analysis, and to propose innovative but practical responses and set of instruments (zoning, parking, design) at a detail level to advance implementation.
1.2 Structure of the Report

This report deals with the following sections:

- Introduction
- The Central Planning Region Densification Framework
- Land Use Framework
- Challenges and reasons for densification
- Implementation informants
- Identification of Pilot Sites
- A framework for phasing of the central densification plan
- Conclusion & Next Steps
2 The Central Planning Region Densification Framework

The study area is referred to as the eThekwini Central Planning Region. As part of this study the Durban Central Business District and Southern Public Transport Corridor is excluded as these areas have been studied as part of other plans. The study area therefore stretches from West of the Durban CBD to Pintown and from North of Ulazi in the South Kwadebeka and Sydenham.

2.1 The eThekwini densification vision

The vision for densification is based on various structuring elements such as natural features, nodal focus areas, transportation infrastructure and policy informats.

The natural elements in the study area are those that need protection from development. These include factors such as the eThekwini DMOSS and slope.

Nodes are an important element in focusing densification. These nodes have individual characteristics and thus different opportunities for densification. Their impact and reach also differs. This impacts on the extent of densification in the region.

Another important aspect to consider is the movement of people and goods and the system on which it takes place. Major Highways, public transport networks and the IPTN system impacts on densification.
An application and consolidation of these elements results in a spatial structuring vision for densification within the study area. These various elements combine to direct the intent and focus of the municipality in terms of future growth and densification. The figure below shows the resulting structure as discussed.

![Map of the eThekwini Densification Strategy](image)

**Figure 1: The vision of the eThekwini Densification Strategy**

For the purpose of the study this vision only give part of the picture. A finer grained analysis was required to appropriately direct densification and the extent to which it can take place. Taking into account aspects such as municipal policy policy, movement and access, urban character, land availability, and physical constrain and asseccing their actual spatial impact resulted in a densification potential index. This index forms the bases for decision making as well as underpinning the densification and land use framework.
Figure 2: Densification parameter: Consolidated Index
2.2 The densification framework

The framework gives guidance in terms of densification locations, densification parameters such as density (du/ha), building density (appropriate FAR), building heights, prefered type of densification, typical land use mix and appropriate typologies. This was derived from specific densification zones that was identified. These zones include the following areas:

- Very High Density Areas
- High Density Areas
- Medium to High Density Areas
- Medium Density Areas
- Low Density Areas

The figure below give an overview of the densification framework. The detail descriptions and guidelines of the framework was discussed in Phase 2 of the study.
3 Land Use Framework

3.1 The central region land use framework

The figure below shows the land use framework for the entire central region. This is intended to assist with decision making for the area as a whole. This includes the areas outside of the sub-regions. The framework identifies macro land use zones in 5 categories namely open space, commercial, industrial, civic/institutional and residential. The allocation of the land uses where guided by the preceding work and analysis.

Figure 3: Central Region Land Use Framework
3.2 Chatsworth Sub-Region Land Use Framework

The Chatsworth Land Use Framework allows for mostly medium to high density residential uses around the IPTN stations and medium density residential uses along IPTN feeder routes, while the rest of the area is indicated as medium to low density residential uses. The distribution of the uses was mostly influenced by the IPTN stations and its Trunk and feeder route system.

Figure 4: Chatsworth Sub-Region Land Use Framework
3.3 Kwadebeka / Clermont Sub-Region Land Use Framework

The current nature of the Kwadebeka / Clermont does allow for small stands at relatively high densities. In order to support the IPTN system and allow for increased densities a Medium to High density use is proposed for most of the area. Some High density Residential is proposed at strategic areas along the feeder route system as they play an important role in this context and are more easily accessible. The surrounding uses in these areas also guide this decision. The stations along this IPTN route are not easily accessible and land uses can therefore not follow the traditional TOD-type land use and density model.

Figure 5: Kwadebeka / Clermont Sub-Region Land Use Framework
3.4 Pinetown Sub-Region Land Use Framework

Pinetown serves as a commercial and employment hub. Its nature allows for some very high density residential uses in the Central Business District Area of Pinetwon along with mixed use typologies. Medium to High density uses are proposed along important strategic routes and also supports the surrounding employment related uses.

Figure 6: Pinetown Sub-Region Land Use Framework
### 3.5 Queensburgh Sub-Region Land Use Framework

The Queensburgh sub-region’s proposals show the impact of the Railway line and the associated station. Medium to high density residential uses are allocated in relation to the station and other commercial and civic uses, while the rest of the area lends itself to increased densities in the form of medium density residential uses. The IPTN stations and large amount of open space and other physical constrains make high density residential uses adjacent to these stations difficult.

**Figure 7: Queensburgh Sub-Region Land Use Framework**
3.6 Savannah Park Sub-Region Land Use Framework

Limited intervention potential exists. Physical factors and restricted accessibility to public transport infrastructure limited the impact of the densification proposals. Medium and medium to high density residential uses can be accommodated.

Figure 8: Savannah Park Sub-Region Land Use Framework
3.7 Westville / Bonela Sub-Region Land Use Framework

The Westville Bonela Sub-Region’s potential for densification in relation to the public transport system is limited by physical factors such as slope. This area lends itself to the consolidation of stands and redevelopment of low density single stand residential units to medium density typologies. The Bonela area can potentially accommodate higher densities in strategic, accessible locations. Medium to high density uses should be accommodated.

Figure 9: Westville / Bonela Sub-Region Land Use Framework
4 Challenges and reasons for densification

The implementation of densification takes place within the context of the local situation, but also against the backdrop of other global and local densification initiatives providing guidelines for the implementation of densification in the Southern Public Transport Corridor. This section firstly considers key challenges facing densification in the corridor and then motivates why, despite these challenges, it is important for eThekwini to continue pursuing the densification agenda.

Based on the understanding of the challenges and opportunities relating to densification some guidelines for the implementation of densification developed on the international, national and metropolitan levels are presented.

The section concludes with an extract from the 2013 City Densification Strategy of eThekwini reflecting specifically on the strategy for densification

4.1 Challenges to implementing densification

Historically there has been limited focus on the densification and intensification of land uses in existing built up areas as this presents a range of challenges. Generally greenfields on the periphery or on vacant sites within the current urban structure have been the focus for densification initiatives. Based on the earlier assessments of the potential for densification within the SPT Corridor it is evident that the process of densification still presents a number of challenges to urban development practitioners. The most obvious challenges within the corridor include:

- Absence of larger parcels of vacant land linked to corridor: There are no large parcels of land presenting redevelopment opportunities through which densification can be achieved. Any densification or intensification will therefore have to happen through a brownfields redevelopment process.

- The value of well-located properties in the corridor is relatively high: Through an assessment of recent sales data it was confirmed that prices for industrial and residential units in the study area are not low and this will impact on the feasibility of redevelopment. The acquisition of one or a number of properties for redevelopment may therefore present a challenge for project feasibility.

- The relatively low cost of public transport from for example Umlazi to CBD: Using Umlazi residents as an example, it became apparent through the research process for this initiative that the cost of public transport from Umlazi to for instance Berea Station will not be considerably more than the cost from areas located closer to the end destination. The degree to which commuters will pay a premium on residing closer to work will therefore not be substantial.

- Substantial community resistance to densification should be anticipated: Based on findings from participation programmes in the Berea area regarding minor proposed adjustments to the planning scheme it is noted that resistance to densification should be anticipated if advantages of such a process cannot be clearly illustrated to local residents (this will specifically be the case in the Umbilo section of the Corridor).

- Infrastructure constraints may limit levels of densification that can be achieved: The capacity of infrastructure in the corridor to accommodate densification will have to be investigated on a project by project basis.

- The institutional mind-set to support densification has not been established as yet: The concept of densification is relatively new within the eThekwini Municipal structure and a strong mind-set to support such processes has not been established.)
4.2 Motivation for densification

Despite the above highlighted challenges there remains adequate evidence that residential densification and employment intensification along key public transport corridors in eThekwini is essential. Importantly, urban areas should not be viewed as areas that are static, but rather as areas that continue to grow and take shape as the requirements of specifically users change with the introduction of new technologies and approaches to urban living.

Added motivation for densification is that few urban environments have an intrinsic quality that will see it retaining its value and condition over an extended period of time without focussed interventions. Investment and redevelopment are required in order for property values to be retained or grown.

4.3 International benchmarks

Curitiba: 294 people/Ha  
Malmo: 110 people/Ha

Singapore: 207 people/Ha  
Barcelona: 357 people/Ha

Most of the samples in eThekwini have very low densities showing that there is room for densification without losing spatial qualities as the international precedents. However, there are areas such as Kwadebeka, which would benefit from a different approach not suggesting light interventions that would consolidate the current living conditions.

A diversification and consolidation of densities may be required from the redefinition of the residential typologies mix (single family, townhouse, mix use – mid-rise apartment buildings with the consideration of live and workspaces so the current social and economic dynamics can be enhanced.
Figure 10: Gross densities comparison (1km2): eThekwini Samples and international benchmarks
4.4 The South African experience

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<th>City of Tshwane</th>
<th>City of Cape Town</th>
<th>City of Johannesburg</th>
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<td>Low density = 20du/ha</td>
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<td>Public Transport routes = 75- 175 du/ha</td>
<td>High density = +80 du/ha</td>
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<td>Activity routes = 100-375 du/ha</td>
<td>Gross base density =10 du/ha</td>
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<td>Mobility Routes = 30 – 70 du/ha</td>
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<td>Affordable housing areas (focused on Transit Promotion Zones) 60-300 du/ha</td>
<td>Public Transport routes = 20- 90 du/ha</td>
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<td>public investment areas) = 80-300 du/ha</td>
<td>Nodes = 15 – 100+ du/ha</td>
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<td></td>
<td></td>
<td>Subsidised Housing = 40-300 du/ha</td>
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Locations where densities are supported

| Public transport routes                                                   | Areas adjacent development routes, activity routes/streets, rail - especially close to employment and |
|                                                                          | Mixed-use areas, social facilities/institutions, public open spaces and amenity areas. |
| Concentration Zones / nodes                                             | Infill sites preferably close to economic opportunities, social amenities and BRT routes. |
| Linear Zones                                                             | Greenfields sites adjacent existing urban development. |
| Areas adjacent development routes, activity routes/streets, rail -      | Public transport routes |
| especially close to employment and mixed-use areas, social facilities/institutions, public open spaces and amenity areas. | Nodes |
| Especially close to employment and mixed-use areas, social facilities/institutions, public open spaces and amenity areas. | Marginalized Areas |
| Greefields sites adjacent existing urban development.                    | Private investment areas |
|                                                                           | Public investment areas |

2017 Revision 0  18
4.5 Overview of local densities

Most of the samples in the study area have very low densities in the targeted nodes and along the identified corridors showing that there is room for densification without losing spatial qualities as the international precedents. However, there are areas such as Bonela, Cato Manor and Kwadebeka that are much higher than the proposed densities for these types of areas, which would benefit from a different approach not suggesting light interventions that would consolidate the current living conditions.

A diversification and consolidation of densities may require from the redefinition of the residential typologies mix (single family, townhouse, mix use – mid-rise apartment buildings with the consideration of live and workspaces so the current social and economic dynamics can be enhanced.

The map below shows an analysis of the current density conditions of the study area.

![Figure 11: eThekwini Central Planning Region Density analysis](image)

From the figure, it is clear that current densities do not follow the proposed IPTN system, of proposed nodes and corridors, in the area of the Central Planning Region that is the focus of this study. The highest concentration of people are located in the CBD area and along the Southern Corridor and in the poorer and informal areas.
4.5.1 Metropolitan & Sub-Metropolitan Nodes

- **Durban CBD**
  - People/Ha: 116.94
  - 5km Level 1 Node: 31.65 People/Ha

- **Pinetown / New Germany**
  - People/Ha: 18.81
  - 2km Level 2 Node: 13.70 People/Ha

- **Umlazi**
  - People/Ha: 89.75
  - 2km Level 2 Node: 108.88 People/Ha

4.5.2 Local Area and Neighbourhood Nodes

- **Chatsworth Central**
  - Node: 43.60 People/Ha
  - 800m Level 3&4 Node: 37.00 People/Ha

- **Westville Central**
  - Node: 8.90 People/Ha
  - 800m Level 3&4 Node: 9.17 People/Ha

- **Umhlanga Ridge**
  - Node: 13.20 People/Ha
  - 800m Level 3&4 Node: 16.07 People/Ha

4.5.3 Suburban areas

- **Bonela**
  - People/Ha: 53.90

- **Kloof**
  - People/Ha: 5.76

- **Kwadebeka**
  - People/Ha: 53.22
4.6 Capacity scenarios

The following theoretical study presents 3 types of spatial qualities and densities for the buffer area within 1km from the IPTN trunk routes. The values, based on the international emblematic precedents, are orientative. The objectives and capacities of the IPTN development areas, and their influence for the rest of the city, will require consensus among the key stakeholders.

4.6.1 International precedent

Study reference – Curitiba

Density at Central Transect (300m): 350 pph
Density at Side Plots (500m): 150 pph
Density at adjacent plots (rest): 50 pph

Initial findings:
Maximum capacity within 1 km buffer: 3.2M

Study reference – Barcelona

- Continuous density: 350 pph

Initial findings:
Maximum capacity within 1 km buffer: 6.9M

Study reference – Washington

- Density at Main Centres (800m radius): 350 pph
- Density at Second centres (400m): 150 pph
- Density at adjacent plots (rest): 50 pph

Initial findings:
Maximum capacity within 1 km buffer: 1.6M
4.7 eThekweni strategy based on international density parameters

Study reference – eThekweni Central Region

- Very High: 450 pph
- High: 350 pph
- Medium to High: 220 pph
- Medium: 150 pph
- Low: 50 pph

Initial findings:

Maximum capacity: 5.5M

4.8 Capacity assessment scenario overview

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<th>Density 2011</th>
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<th>People @ 350 pph</th>
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<td>271,560</td>
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<td>3,068,841</td>
<td>2,278,513</td>
<td>1,627,251</td>
<td>574,497</td>
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<tr>
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<td>5,431</td>
<td>125,915</td>
<td>23</td>
<td>271,560</td>
<td>201,172</td>
<td>134,115</td>
<td>40,361</td>
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</tr>
</tbody>
</table>
4.9 eThekwini’s approach to densification

The eThekwini Densification Strategy proposes a three-pronged approach to densification. It is indicated that the approach “…recognises that densification interventions and tools need to occur across a range of planning and implementation scales”. This includes a:

- TARGETED APPROACH: Generic small operational interventions
- SYSTEMIC APPROACH: Large scale policy and institutional changes
- EXPERIMENTAL APPROACH: Test cases and pilot projects

It is suggested that “each approach address densification from a slightly different perspective, but all have the same target in mind”. The various approaches are expanded on as follows.

4.9.1 Targeted approach

A targeted approach to densification involves generic small operational interventions that can readily unlock densification in areas that eThekwini wishes to promote higher density (and/or intensity) development.

Policy and regulation

- Encourage dual occupancy of sites (e.g. sectional title developments)
- Encourage subdivision of sites
- Fast-track and stream-line development application processes in target areas

Governance

- Provide good urban management
- Support the establishment of Urban Improvement Precincts (UIPs)
- Ensure safety and security
- Ensure high levels of operations and maintenance of the public realm
- Enforce bylaws and development controls

Marketing

- Communicate existing opportunities to densify to property owners
- Communicate how to realise additional development rights to property owners

Systemic Approach

A systemic approach to densification involves large-scale policy and institutional changes that will affect the whole of the municipal area, or large portions of it.

Policy and Regulation

- All levels of municipal plan should contain clear and consistent policy statements and density targets
- Identify density priority zones
- Identify prerequisites for density to be released
- Prioritise density nodes
- Set minimum net density targets
- Place a moratorium on new rights where infrastructure is limited
- Enforce the urban development line
- Introduce the concept of the Transfer of Development Rights
- Relax land use controls in specific areas i.e. Coverage, FAR, minimum erf sizes, building lines
- Encourage greater mixes of land use
- Reduce standards i.e. parking, road widths
- Development of design controls

**Fiscus**
- Toll major mobility corridors
- Provide inexpensive, serviced land for high density development in priority zones
- Provide rates holidays for developers who develop high density developments in priority areas
- Discount municipal servicing costs in priority areas
- Implement a spatially variable development levy
- Secure additional subsidies to deliver high quality, high density social housing
- Tax underdevelopment properties in priority areas

**Finance**
- Developer pays for infrastructure requirements in areas where density is not prioritised
- Provide tax credits to developers of high density developments
- Municipality brokers a high density finance package for developers which includes favourable interest and lending rates and provides development loans
- Municipality negotiates red-lining policy of banks

**Direct public investment and budget alignment**
- Alignment budgets with density priority zones
- Invest in infrastructure capacity ahead of high density development
- Upgrade public environments in density nodes
- Provide additional social and recreation facilities in high density areas
- Provide an efficient, high-quality public transport service in specific focus areas

**Governance**
- Set-up partnerships to deliver density

**Marketing**
- Communicate long term density plans to residents of eThekwini
- Make use of branding and place-making to market new high density areas
- Publish success stories

*Experimental Approach*
An experimental approach to densification involves pilot studies and experimental interventions in order to test the outcomes of particular implementation tools and/or interventions. Such an approach would assist in limiting unintended consequences across the entire municipal area.

Policy and regulations

- Prepare Precinct Plans and Urban Design Frameworks for pilot areas e.g. Warwick Junction, Block AK, Cornubia
- Reduce parking standards in high priority target areas
- Experiment with housing forms, mixes of land use, heights etc. on a project by project basis

Governance

- Investigate alternative management options for high density developments e.g. share block, institutional ownership, sectional title
5 Implementation informants

Realising the full development potential and envisaged outcomes of the eThekwini Densification Strategy 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 Central Region Densification Plan provides the spatial vision and guidance for physical interventions – but the implementation of the plan requires the collaboration and efforts of the full range of urban stakeholders and implementing agencies, including residents and communities.

5.1 Roles and responsibilities of stakeholders in implementation

To implement densification strategies, it is necessary to have clarity on the roles and responsibilities of different stakeholders in such processes. Roles and responsibilities in the implementation of the densification in the Central District must be aligned with approaches adopted for eThekwini. A preliminary set of roles and responsibilities are, however, reflected in the table that follows.

Table 1: Roles and Responsibilities of Stakeholders in Densification

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>eThekwini</strong></td>
<td></td>
</tr>
<tr>
<td>Development Planning, Environment and Management</td>
<td>Placing densification high on the strategic planning agenda. Providing guidance for the implementation of densification.</td>
</tr>
<tr>
<td>Land Use Management</td>
<td>Support the development of land use management systems facilitating densification.</td>
</tr>
<tr>
<td>eThekwini Transport Authority</td>
<td>Providing an integrated transport system that supports densification (and that will also benefit from densification).</td>
</tr>
<tr>
<td>Economic Development unit</td>
<td>Facilitate strategic investments in key nodes.</td>
</tr>
<tr>
<td>Treasury/ Real Estate</td>
<td>Budgeting for land acquisition and related capital spending.</td>
</tr>
<tr>
<td>Housing</td>
<td>Supporting and actively participating in all residential densification processes, specifically in areas where housing subsidies can be accessed from government.</td>
</tr>
<tr>
<td>Line Function Departments</td>
<td>Ensuring appropriate infrastructure capacity in city networks to accommodate the proposed densification.</td>
</tr>
<tr>
<td><strong>Other Government Institutions</strong></td>
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<tr>
<td>PRASA</td>
<td>Providing adequate rail services.</td>
</tr>
<tr>
<td>Government Departments</td>
<td>Maintaining and upgrading stations as required.</td>
</tr>
<tr>
<td><strong>Community/ Private Sector</strong></td>
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<tr>
<td>Local Landowners</td>
<td>Support densification processes.</td>
</tr>
<tr>
<td>Community</td>
<td>Support densification processes.</td>
</tr>
</tbody>
</table>
Developers

Support densification processes.

5.2 Incentives and institutional mechanisms

Considering the different types of areas, the roles and responsibilities of stakeholders and specifically the implementation of the incentive scheme, it is evident that implementing densification will require that institutional capacity is identified or established to manage the process. The following table explores these incentives and institutional mechanisms.

Table 2: Incentives and institutional mechanisms

<table>
<thead>
<tr>
<th>eThekwini Incentives</th>
<th>Inclusionary Housing Incentives</th>
<th>Housing Subsidies as Incentives</th>
<th>Additional Housing Grants / Funding Mechanisms</th>
<th>Environmental Incentives / Subsidies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tax Increment Financing (TIF)</td>
<td>• Tax credit schemes</td>
<td>• Finance Linked Individual Subsidy</td>
<td>• Social Housing Regulatory Authority (SHRA) Restructuring Capital Grant</td>
<td>• The Eskom Demand Side Management (DSM) fund</td>
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<tr>
<td>• Planning Gain</td>
<td>• Fee-up of state land</td>
<td>• Consolidation Subsidy</td>
<td>• Restructuring Capital Grant</td>
<td>• The Tradable Renewable Energy Certificate (TREC) system</td>
</tr>
<tr>
<td>• Rights Bonuses</td>
<td>• Fast-track of development processes</td>
<td>• Institutional Subsidy</td>
<td>• Restructuring Capital Grant (RCG) Quantum</td>
<td>• Mechanisms for Solar Water Heating Financial Support</td>
</tr>
<tr>
<td>• Fast Tracking of land Development Applications and Waiver of Development Application and Building Plan Fee</td>
<td>• Town planning compliant component incentives</td>
<td>• People’s Housing Process Establishment Grants</td>
<td>• Community Residential Units Programme</td>
<td>• Discretionary additional subsidy</td>
</tr>
<tr>
<td>• Special Rating Districts</td>
<td>• Density bonuses / allowances</td>
<td>• Rural Subsidy</td>
<td>• The National Housing Finance Corporation (NHFC)</td>
<td>• Green housing bonds (home loans)</td>
</tr>
<tr>
<td>• Land Packaging and banking for targeted developments (E.g.: Affordable Housing)</td>
<td>• Use right incentives</td>
<td>• Project Linked Subsidy</td>
<td></td>
<td>• Tax or rates rebates</td>
</tr>
<tr>
<td>• Extension of the UDZ Initiative</td>
<td>• Provision of bulk and link infrastructure</td>
<td>• New: Finance Linked Individual Subsidy Programme (FLISP)</td>
<td></td>
<td>• Renewable Energy Finance and Subsidy Office (REFSO)</td>
</tr>
<tr>
<td></td>
<td>• A wide range of government subsidies</td>
<td></td>
<td></td>
<td>• The Clean Development Mechanism (CDM)</td>
</tr>
</tbody>
</table>
5.3 Housing delivery

This section discusses the funding and subsidies available for the different types of housing projects and typologies. The city should create a housing development agency, or fund which has as its mandate and objective to provide facilitation funding and technical support to potential developers in the sub-regions and special urban upgrade areas. Examples of agencies providing this support at national level, include the National Housing Development Agency (HDA).

<table>
<thead>
<tr>
<th>Funding &amp; Subsidy</th>
<th>Locality of Projects &amp; Typologies</th>
<th>Typical Typologies</th>
</tr>
</thead>
</table>
| • Private Equity & developer finance.  
  • Bank Bonds and Personal Deposits.  
  • Leverage 2nd property. | • Mixed use developments  
  • Exclusive townhouse or large single property  
  • Close to social amenities – schools, malls and parks  
  • Densities: 40 – 60 du/ha (net) | ![Mixed use developments](image1)  
  ![Exclusive townhouse](image2)  
  ![Close to social amenities](image3)  
  ![Densities: 40 – 60 du/ha](image4) |

<table>
<thead>
<tr>
<th>Funding &amp; Subsidy</th>
<th>Locality of Projects &amp; Typologies</th>
<th>Typical Typologies</th>
</tr>
</thead>
</table>
| • First time home owner subsidy/ guarantee  
  • Bank and institutional funding  
  • Institutional funding (DBSA, PIC, etc.)  
  • Bond over land used as guarantee  
  • Low interest subsidies often feature | • Housing schemes in urban and sub-urban area often sold off-plan for green field developments  
  • Private developer or bank sponsored scheme  
  • Includes townhouses, single dwelling and multi-storey walk-ups  
  • Densities: 60 – 120 du/ha (net) | ![Housing schemes in urban and sub-urban area](image5)  
  ![Private developer or bank sponsored scheme](image6)  
  ![Includes townhouses, single dwelling and multi-storey walk-ups](image7)  
  ![Densities: 60 – 120 du/ha](image8) |

<table>
<thead>
<tr>
<th>Funding &amp; Subsidy</th>
<th>Locality of Projects &amp; Typologies</th>
<th>Typical Typologies</th>
</tr>
</thead>
</table>
| • NHFC debt funding  
  • Institutional funding (DBSA, PIC, etc.)  
  • Gearing of donor funding  
  • Limited Government subsidy for mix social housing schemes | • Inner city / urban – housing Schemes  
  • Conversion of office & industrial Buildings  
  • Private developer or social housing institution  
  • Includes town houses, row housing, multi-storey  
  • Walk-ups etc – average 65 sqm 1 bed  
  • Densities: 120 – 200 du/ha (net) | ![Inner city / urban – housing Schemes](image9)  
  ![Conversion of office & industrial Buildings](image10)  
  ![Private developer or social housing institution](image11)  
  ![Includes town houses, row housing, multi-storey](image12)  
  ![Walk-ups etc – average 65 sqm 1 bed](image13)  
  ![Densities: 120 – 200 du/ha](image14) |
5.4 Housing development process

Housing will be targeted at all ranges of developers and developments, i.e. small individual second dwellings to larger housing development projects. Each development type will require different guidelines, while the following will provide a generic listing of factors that should be considered by the city in support of developers in achieving the desired objective. The key steps in the development process is highlighted below:

1. Land identification, acquisition and transfer;
2. Concept development;
3. Project feasibility;
4. Project funding and procurement;
5. Project development and implementation;
6. Sales – Rental or 3rd party ownership;
7. Building facilities management;
8. Project life cycle and recapitalisation.

The city should look to provide facilitation assistance to developers along the full length of the development process, thus maximising the success rate of housing densification planning and implementation, and also in providing the key guideline in meeting the city’s own development objectives.

5.4.1 Land identification, acquisition and transfer

There are numerous key development land areas that have been identified for development purposes. The city could identify, rezone, demarcate or acquire the land, to ensure the development proposed is affected. The key solution would be to encourage developers to develop projects on the desired development basis, i.e. to meet housing densifications suitable to the proposed affordable or social housing densification objectives.

5.4.2 Concept development

The development concept is a key aspect of the project plans, and should highlight the proposed development in the context of the broader development area, and the overall development framework. This is an early stage plan, that will assist the developer to gain development support for the
proposed scheme, and will assist the city and precinct planners to align the proposed plan with the overall objectives of the development framework.

5.4.3 Project feasibility

The project feasibility could be enhanced if the developer is aided in the form of grant funding, technical assistance or project guidance. The city could provide this facilitation support in the form of key technical, legal and financial advice, that would feed into a project due diligence or feasibility study. This will provide further assurance to the potential funders that projects are viable and worth funding.

5.4.4 Project funding and procurement

Social & Affordable housing developments are unattractive to developers, as the financial yields in these project, as a property development, is much lower than other asset classes, i.e. industrial, commercial property, etc. For housing projects to attract sufficient capital investments, technical support and development expertise, there is a requirement for financial support by government institutions in the form of the following:

- Low or no interest loans;
- Assistance with equity or quasi equity contributions (co-fund funders equity requirements);
- Affordable land;
- Grants and subsidies;
- Urban development tax incentives;
- Reduced bulk requirements and limited or no bulk contributions;
- Relaxation of town planning zoning, to increase development type;
- Upgraded service and public infrastructure;
- Intensive urban management or certainty through development precincts.

5.4.5 Project development and implementation

The developers should implement projects once approved for funding and town planning. Developers often require technical support at this stage, with key skills like town planning, heritage, project management, project costing and contracting assistance with construction and service providers. The city should provide project technical assistance for all projects recognised and approved into the broader development scheme. This could be provided through a panel of subcontracted professional services, or through professional fee subsidies provided to these schemes.

5.4.6 Sales – Rental or 3rd party ownership

The key step in the success of a housing development is the developers’ ability to obtain tenants or buyers into schemes. This process could be facilitated by the city, in that a credit worthy customer database could be developed for the project. The key factor however to attracting customers to an area is through the broader provision of services in the form of transport, social and public infrastructure. The city should ensure that the need of the communities are serviced by providing an adequate mix of these services.
5.4.7 Building facilities management

Most developer lack the expertise or the interest in providing long term management services to development projects. This key service is essential to the long term sustainability of the development, as it ensures that tenants maintain or pay for common services, that the buildings are maintained and that the community aspect of the housing group is protected, i.e. safety, security and communal cooperation. This aspect has lead to the failure of many housing projects.

Key to this element is ongoing and focused housing supervision. The developer should demonstrate their ability to service housing projects on an ongoing basis, or to provide assurance that the project will be sustained into the future, through owners maintenance levies or adequate allowance for maintenance in rental schemes.

5.4.8 Project life cycle and recapitalisation.

The project should have a life cycle plan, where consideration is given to the recapitalisation of the project after a period of time, i.e. 10 years, 15 years and 20 years. This will ensure that projects can be recapitalised into broader schemes, or sold onto bigger developers for recapitalisation. This will ensure the long term sustainability of the development area. The city could incentivise developers to improve buildings at regular intervals during the life of the development.

5.5 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.

The second 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 Central Region Densification Plan 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.

5.6 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.

5.7 Incentives for densification

The process of densification can be advanced through the provision of incentives. There are various
incentives to be used by the municipality. These incentive should also focus on attracting users and
residents to focus areas as the potential reduction in transport cost may not be motivation enough for
these users to pay a premium and relocate.

Three aspects are relevant. They include:

- Incentives for densification (Direct and indirect)
- Disincentives to investment, and
- Incentives for attracting users / residents

5.7.1 Incentives for densification

Direct incentives include:

- Special rating areas in terms of rating policy
- Additional development rights (zoning)
- Relaxation on requirements (e.g. parking, building lines etc.)
- Fast tracking of development applications
- Transfer of Development Rights
- Making land available
Indirect incentives may include:

- An upgraded public environment
- Improved transport systems
- Improved stations

5.7.2 Disincentives to investment

Densification can be facilitated by applying disincentives to investment in other areas. This can include:

- A moratorium on new rights
- Suspending infrastructure provision in areas on the periphery

5.7.3 Attracting users / residents

Attracting new users and residents can either be a direct result of the provision of reasonably priced housing in densification targeted areas or as a result of indirect incentives that may include an upgraded public environment, and improved transport system, and improved commuter stations and amenities.

5.8 Monitoring and review

The densification strategy needs monitoring and review parameters to assess and measure the process of densification. This relies on institutional structuring and is focused on the strategically identified areas (sub-regions). These performance indicators include:

- Population increase in the sub region as compared with that in other areas of eThekwini;
- Value of buildings plans (for redevelopment) contributing to densification approved in the sub-regions;
- Applications for subdivisions received within the sub-regions (outside of nodal focus areas);
- •PRASA and ETA statistics for station utilisation (Railway and BRT) in the Corridor – collective for all stations;
- •Overall investment by eThekwini in densification related initiatives.
- •Project specific progress measured against project parameters (time, money) established action plan for nodal densification;
- •Public sector capital investment to support densification;
- •Private sector capital investment to support densification;
- •Increase in dwelling units per hectare;
- •PRASA and ETA statistics for station utilisation (Railway and BRT) in the Corridor – for specific station.
6 Identification of Pilot Sites

This chapter establishes and evaluates the proposed IPTN stations to identify those that have the highest potential for densification based on a set of pre-determined criteria. The criteria takes into account the basic requirements of densifying around transportation facilities such as IPTN stations. The aspects to be investigated for each of the identified stations include:

- Context
- Catchment extent
- Accessibility
- Land Availability
- Housing opportunity
- Economic Activity
- Commuter comfort
- Intermodal potential
- Environment
- Development proposals
- Surrounding facilities

Each of these aspects are defined below. After the criteria for the evaluation has been established and defined the results of the evaluation are summarised in a table.

6.1 Criteria for evaluation

**CONTEXT**

The station context considers the relationship of the station with the neighboring precincts or node – is there an existing relationship with neighboring precincts or nodes, are there opportunities for relationships to be formed through specific planning mechanisms or are there no opportunities which exists to create a possible future relationship as a result of existing barriers.

**CATCHMENT**

The catchment extent refers to the regional location of the identified station along the northern corridor and the local/ immediate neighbour or passenger it draws from

**ACCESSIBILITY**

The accessibility criteria consist of several components -
1. Road infrastructure and access to the station;
2. Pedestrian access to the station;
3. The ability for alternative modes such as taxi’s and buses to access the station;
4. The visual access for passengers to locate a station from the neighbouring communities.

**LAND AVAILABILITY**

Land availability plays an important role in the identification of station precincts. The identification of vacant properties, possible urban renewal potential and informal settlement for potential upgrading are a key component.
Does the station precinct offer opportunities for increased housing prospect in the form of infill/ densification or redevelopment?

HOUSING OPPORTUNITIES

Does the station precinct present opportunities for increased Informal trading/ markets, retail service industry and or manufacturing industry?

ECONOMIC ACTIVITIES

Do the station precincts provide safe and secure environments that contain basic facilities, which are easily accessible to the daily commuters?

COMMUTER COMFORT

Is there a potential relationship that can be established between the station precinct and the proposed BRT line and precincts? Is there an opportunity to introduce taxi facilities within the station precinct?

INTERMODAL POTENTIAL

Does the open space system impact on the ability of the station to development into its full potential, and are there topographical implications within the 1 kilometer radius of the station.

ENVIRONMENT

Has the station had any previous development proposals or planning interventions within the last 5 – 10 years?

DEVELOPMENT PROPOSALS

Evaluate the station precinct according to the nodes exposure to schools, health, education or institutional facilities to supplement activity and demand within the area.

SURROUNDING FACILITIES
## 6.2 Evaluation outcomes

<table>
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<tr>
<th>Station ID</th>
<th>Evaluation criteria</th>
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<td>03T4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03T4A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malver</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the assessment have identified xx stations with the potential to densify and support the IPTN network. These stations are:
The results of the station valuation is illustrated on the following figure with the darker shadings showing the stations with a higher suitability for densification to take place.

Figure 12: Suitable areas for densification: Station valuation results
Within the station areas that were identified as suitable densification areas, certain sites were earmarked where densification should be focused. These areas are indicated on the following figure.

Figure 13: Suitable areas for densification: Potential densification sites
6.3 Overview of potential pilot sites

From the assessment of potential pilot sites, three of the sub-regions were identified as having potential to accommodate the pilot projects. These areas are also in line with the 3 areas identified by eThekwini as focus areas for potential pilot projects. These sub-regions are: Pinetown, Westville / Bonela and Chatsworth.

6.3.1 Pinetown

The Pinetown sub region has a high potential for densification. Outside of the Durban Central Business District, it is the only area in the Central Regional that holds potential for very high density development. It also has available vacant stands that can accommodate high density residential and mix use development that can support the IPTN system.

Development strategy

Various sites hold the potential to increase its density through revised zonings. 4 major areas are identified as part of the development strategy. Most of these areas are single residential low density stands. Their proximity to major roads and public transport facilities make them ideal to accommodate high density residential uses. These areas include:

- From the south, east of the M1, an area has been identified in the Mariannhill Park neighbourhood.
- A substantial area east of the N1 in the suburb of Ashley.
- Immediately North of the Pinetown Central Business District.
- Stands South of Josiah Gumede road, along Stapleton Road.

As stated before, the area also has several vacant properties. These properties can accommodate new infill development and are located in the Pinetwon CBD. These properties are situated along Glenugie Road, Kings Road and Crompton Street.

The figure below shows these areas and identifies the suitable sites for redevelopment and the vacant sites for infill development.

![Figure 14: Pinetown Redevelopment Strategy](image-url)
6.3.2 Westville/ Bonela

The Westville Bonela Sub-Region’s potential for densification in relation to the public transport system is limited by physical factors such as slope. This area lends itself to the consolidation of stands and redevelopment of low density single stand residential units to medium density typologies.

Development strategy

Limited stands were available for intervention. After consultation with various eThekwini Departments, public consultation and ground truthing, a few vacant sites were identified in Bonela, along Candella Road. A small neighbourhood South of the N3 Highway and East of the Jan Smuts Highway was identified as an area with a high potential for redevelopment.

These areas are shown in the development strategy map below.

Figure 15: Westville / Bonela Development Strategy
6.3.3 Chatsworth

Chatsworth in general is characterised by medium to high density residential with much of the land being occupied by residential uses and social uses such as education facilities. Slope, existing servitudes and other physical constraints made many vacant stands unsuitable for the selection of pilot projects. Accessibility to some sites also had an impact on their viability.

Development strategy

Sites that were indentified for new development include a small privately owned site next to the Chatsworth Retail Centre, two sites south of the Westcliff rail station currently being used as sporting field, and open space south of the Kharwastan Secondary School. These sites were reviewed and assessed during the public engagement sessions and with the eThekwini Housing Department. The site on the corner of Iris Avenue and Penguin Street adjacent to the Kharwastan Secondary School was indicated to be the most suitable.
6.4 Finalisation of pilot sites

Once all the pilot sites were identified, in the appropriate areas, another assessment was completed to finalise the pilot sites. This section describes the final pilot site assessment results and gives an overview of the selected pilot sites and their development concepts. The concepts were aligned to the densification and land use frameworks in order to determine the most suitable development for each site.

6.4.1 Pilot site prioritisation

The following table indicates the top scoring station sites for densification based on certain criteria that were applied. These station sites include Chatsworth, Pinetown and Westville/ Bonelo, as also illustrated in the figure below.

Table 3: Priority station sites / pilot sites

<table>
<thead>
<tr>
<th>Station ID</th>
<th>Sub-Region</th>
<th>Context</th>
<th>Accessibility</th>
<th>Land Availability &amp; Ownership</th>
<th>Densification Opportunities</th>
<th>Intensification Opportunities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>05T1</td>
<td>Chatsworth</td>
<td>1</td>
<td>0</td>
<td>-1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>05T2</td>
<td>Chatsworth</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>05T3</td>
<td>Chatsworth</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>04T4</td>
<td>Queensburgh</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>06T8</td>
<td>Westville</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>07T5</td>
<td>Pinetown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>07T7</td>
<td>Pinetown</td>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>06T10</td>
<td>Pinetown</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>06T11 (Pinetown Terminal)</td>
<td>Pinetown</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>06T14</td>
<td>Pinetown</td>
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<td>1</td>
<td>0</td>
<td>-1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MaVer Rail Station</td>
<td>Queensburgh</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 16: Priority station sites/ pilot sites
6.5 Overview and conceptualization of the pilot site

Three pilot sites have been identified in Pinetown, Bonela and Chatsworth. This section will investigate the specific sites that have been selected as pilot sites. An overview of each site is provided that relates to its existing zoning, land use, ownership, land value (as stated in the eThekwini Municipality’s latest Valuation Roll) and proposed zoning. The pilot site is also reviewed in the context of the proposed densification framework. An initial development concept is also proposed with potential yields for each of the sites.

6.5.1 Pinetown

The Pinetown pilot site is situated on the corner Crompton street and Sunnyside Lane on privides for intensification in the form of a mixed use development. The site measures 27,053 sqm in extent.

Ownership: eThekwini Municipality
Current Use: Vacant
Market Value: R 2,000,000.00
Current Zoning: Administration
Proposed Zoning: IPTN Mixed Use Residential (High Density)
Alignment with densification framework

According to the Densification Framework, the pilot site falls within the High Density zone, which specifies mid to high rise buildings at a location that supports the higher densities of the adjacent zone with CBD features. The pilot site has high accessibility and good connectivity.

![Densification Framework Image]

**Figure 17:** Pinetown pilot site: densification framework

Zoning implication

The Development Strategy specifies that the pilot site falls within an infill (Greenfields) site which means that new development will take place. As is described in the preceding section on site conceptual development, the proposed development will encompass a mix of land uses.

The proposed zoning for the pilot site specifies IPTN Mixed Use Residential (High Density) which will require a scheme amendment seeing as the Inner West Scheme does not provide for this zoning as yet. The proposed zoning incorporates the necessary alignment of the site’s development with the IPTN.
**Figure 18: Pinetown pilot site: proposed zoning**

**Pilot site conceptual typology development**

The conceptual development of the site illustrates the notion of densification whilst incorporating green spaces and thus creating viable places for people.

**Figure 19: Pinetown pilot site: Conceptual development**

**Pilot site layout plan**

The site layout plan consist mainly of three land use components: mixed use building; office building; and high density residential. These components are merged by means of accessibility, built form and landscaping, as shown below.
The following parameters are proposed for the Pinetown pilot site:

Figure 20: Pinetown pilot site: Contributing factors in site layout plan

Figure 21: Pinetown pilot site: Components of site layout plan
Office Site:
Site area : 4350 sqm
Coverage allowed: 40 %
Coverage provided : 24 %
Landscaping required: 25 %
Landscaping provided: 40 %
FAR allowed : 1
FAR provided: 0.7
Office area ; 2950 sqm
Building Levels : Ground + 1st +3nd + 3rd + 4th (5 storeys)

Mixed Use Site:
Site area: 6 949 sqm
Building area:
Ground floor = 1710
1st floor + 2nd floor (each) = 1321
3rd + 4th + 5th (each) = 760 sqm.
Total building area = 6 632 sqm
Building levels: Ground + 1st +2nd +3rd +4th + 5th (6 storeys)

Residential Site:
Site area: 15 714 sqm
Building areas :
Building 1 - 1296 sqm
Building 2 - 1296 sqm
Building 3 - 612 sqm
Building 4 - 576 sqm
Building 5 - 576 sqm
Building 6 - 576 sqm
Building 7 - 576 sqm
Total building area : 5508 sqm
Building levels = Ground + 1st + 2nd (3 storeys) (could be increased)
6.5.2 Bonela

Site description

The sites are situated along Candella road and measures 19,895 sqm in total.

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**SITE A**
Ownership: EASTVALE INV CC
Current Use; Vacant
Market Value: R 920,000.00
Current Zoning: Special Shopping
Proposed Zoning: General Residential 1

**SITE B**
Ownership: KZN Department of Housing
Current Use; Vacant
Market Value: R 450,000.00
Current Zoning: Creche
Proposed Zoning: General Residential 1

**SITE C**
Ownership: eThekwini Municipality
Current Use; Vacant
Market Value: R 560,000.00
Current Zoning: Petrol Service Station
Proposed Zoning: General Residential 1

**SITE D**
Ownership: MANGO BEACH INV 10 CC
Current Use; Vacant
Market Value: R 590,000.00
Current Zoning: Special Shopping
Proposed Zoning: General Residential 1
Alignment with densification framework

According to the Densification Framework, the pilot site falls within the Gateway Zone, which specifies mid to high rise buildings, as shown on the following figure. This zone comprises good accessibility and favourable locality in terms of amenities and other residential locations.

Figure 22: Westville/ Bonelo pilot site: densification framework
The proposed zoning for the pilot site specifies General Residential 1 and no scheme amendment will be required as the Central Scheme already provides for this zoning. Development parameters for this zoning include a coverage of 50% and FAR of 1.2.

Figure 23: Westville/ Bonelo pilot site: proposed zoning

Pilot site conceptual typology development

The conceptual development of the pilot site can be reflected in different ways, with different typologies being applied to obtain densification. This is illustrated by the following diagram.
Figure 24: Westville/ Bonelo pilot site: Conceptual development

**Pilot site layout plan**

The following parameters are proposed for the Westville/ Bonelo pilot site:

**ERF 221**
- Erf area: 11 874 sqm
- DU allowed (area/90) = 131 units
- DU provided = 104 (52 Ground fl + 52 First Floor)
- Area per Unit = 62 sqm.
- Total area = 104 x 62 + 10 % circulation = 7 098 sqm
- Building levels = Ground + 1st Floor (2 storeys)

**ERF 223 + 224 + 225**
- Erf area: 8 547 sqm
- DU allowed (area/90) = 94 units
- DU provided = 64 units
- Area per Unit = 62 sqm.
- Total area = 64 x 62 + 10% circulation = 4 465 sqm
- Building levels = Ground + 1st Floor (2 storeys)
6.5.3 Chatsworth

Site description

Situated on the corner of Iris Avenue and Penguin Street the site measures approximately 15,250 sqm in extent.

Ownership: RSA
Current Use: Vacant
Market Value: R 13,250,000.00
Current Zoning: Educational 1
Proposed Zoning: General Residential 1
**Alignment with densification framework**

According to the Densification Framework, the pilot site falls within the District Zone, which specifies mixed to high development density; a mix between apartment blocks typology with larger coverage and some commercial buildings. This zone lends itself to the permeable street patterns and high levels of amenities.

![Map of Chatsworth pilot site](image)

**Figure 25: Chatsworth pilot site: densification framework**

The Development Strategy specifies that the pilot site falls within an infill (Greenfields) site which means that new development will take place. As is described in the preceding section on site conceptual development, the proposal will encompass dense residential development.

The proposed zoning for the pilot site specifies General Residential 1 and no scheme amendment will be required as it is already an existing zoning in the Central Scheme. Development parameters for this zoning include a coverage of 50% and FAR of 1.2.
Pilot site conceptual development

The conceptual development of the Chatsworth pilot site provides for different options of densification, such as illustrated in the following figures:

Figure 27: Chatsworth pilot site: conceptual development
Figure 28: Chatsworth pilot site: conceptual development – building footprint development

Pilot site layout plan

The land use components on site are structured by accessibility, built form and landscaping, as illustrated by the following diagram:
The development of the site extends to and can accommodate the following:

- Erf area = 16 244 m²
- DU allowed = 75 units per hectare = 122 units
- DU provided = 122 units
- Area per unit = 62 sqm
- Total area = 122 x 62 + 10% circulation = 21 740 sqm
- Building levels = Ground + 1st floor + 2 second floor (3 storeys).
7  A framework for phasing of the central densification plan.

Successful development of pilot sites depends on coordinated action. Actions plans provide a road map for implementation and execution. The following section proposes a high level phasing approach of the pilot project to align with the planned construction and operation of the IPTN system.

7.1  Implementation phasing

The affected corridors in the study area include C3, C4, C5, C6 and C7. The prioritisation and phasing of each corridors differs. The expected operation of each line is depicted in the map below.

Figure 30: Phasing of the IPTN system and associated Pilot Sites

<table>
<thead>
<tr>
<th>LEGEND</th>
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<tbody>
<tr>
<td><strong>IPTN Phasing &amp; Affected CPR Corridors</strong></td>
</tr>
<tr>
<td>2016 - Corridor C3</td>
</tr>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2018</td>
</tr>
<tr>
<td>2022 - Corridor C5 &amp; C7</td>
</tr>
<tr>
<td>2025 - Corridor C4</td>
</tr>
<tr>
<td>2027 - Corridor C6</td>
</tr>
</tbody>
</table>
7.2 A timeline for development

Based on the operation year for each corridor, a high-level phasing approach is proposed for the pilot projects. The phasing approach takes into account the various steps in the implementation process such as Project Initiation, Project Approval / Project Inception, Land Assembly, Tender Process, Planning and concept design, Environmental Impact Assessment, Land Development Application, Detail Design, Building Plan Approval, and Construction to estimate an overall timeframe for the implementation of the project. It is estimated that the total time for the completion of the pilot project is 18 months.

An attempt was made to phase the project in such a manner that they are completed by the end of the planned operating year of the IPTN. Corridor C3 is indicated as being in operation by 2016, which has passed. The phasing approach for the corridor therefore starts as soon as this plan has been approved by council in 2018.

The Chatsworth Pilot project will also have to be initiated in 2018 if it is to be complete by the estimated operating year of the C5 corridor, while the Bonela pilot project kick-off date is estimated in mid 2021.

7.3 Critical success factors

Developing the City’s Densification Strategy 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 eThekwini’s densification strategy 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.
8 Conclusion & Next Steps

8.1 Conclusion

The pilot sites consisted of Pinetown, Chatsworth, and Westville/Bonelo. These sites were described in terms of alignment with the densification framework, as well as the conceptual development and proposed site layout that aligned with the sites.

The study concludes with the implementation of the framework which was considered in terms of the roles and responsibilities of the specific stakeholders, as well as the incentives and institutional mechanisms which are present when applying the densification framework. The different funding mechanisms for the various housing typologies were also discussed.

Densification within the Central District of the eThekwini Municipality can therefore happen responsibly according to certain guidelines and principles, adhering to the framework as set out in this document.

8.2 Next steps

The next steps of the project are as follows:

- Phase 3 B: 3 Pilot Catalytic Projects
  - Spatial Concepts
  - Revised land use scheme
  - Infrastructure scoping
  - Traffic scoping
  - Environmental scoping
- Phase 4; Finalisation of report
  - Consolidate components
  - Draft report to council
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