eThekwini City Density Strategy
Final Report

06 May 2013
This document represents the Final Deliverable for the City Density Strategy and represents the combined effort and contribution of the Project Steering Committee, Project Consultant Team and Various Stakeholders to the process. Their participation in the process, insight and guidance to the project are appreciated.

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1 INTRODUCTION

1.1 BACKGROUND TO THE STRATEGY

The eThekwini Municipality (EM) is seeking to shift the growth trajectory of the city in a more efficient, equitable and/or sustainable direction. It plans to do this through the development of a specific strategy for the direction and management of one of the most important characteristics that influences the quality and performance of, and the efficiency and sustainability of human settlements i.e. urban and rural settlement density.

More specifically it has sought to develop a strategy that will:

- Identify and consolidate ideas, concepts and definitions relating to density in the EM into a widely accepted policy statement and also a management framework for density within the EM;
- Begin to align key planning and development stakeholders in the public and private sector around these ideas, concepts and definitions and the manner in which it can be effectively implemented;
- Understand the contextual and management dynamics that underpin density targets, patterns and trends in the EM context;
- Identify an approach to practical and realistic implementation interventions and tools that can be inserted into the existing (and proposed new) policy, operational and urban management environment of the Municipality so as to unlock impediments to achieving density targets and / or the creation of quality living environments;
- Identify typical areas within the city that are suitable for densification and the appropriate mix of interventions and tools for achieving targets in these areas.

1.2 METHODOLOGY

In order to achieve the above mentioned goals, it has been necessary to conduct a variety of strategic explorations related to density, its context and its determinants which will underpin the density strategy.

These may be summarised as follows:

- **Definitions of density** - understanding and establishing definitions for “gross” and “net” densities as well as definitions for other variations e.g. residential, neighbourhood, town, city densities, employment densities;
- **Dimensions of density** - understanding the meaning and implications for the density strategy of “population density”, “building density”, “unit density”, “floor space ratios”, “employment density” etc.;
- Clarification of the meaning of terms such as “densification”, “dedensify”, “compaction”, “infill”, “redensification” etc;
- Establish consensus around the nature of, and the role of, the “urban development line” and “development phasing line” (i.e. old “urban edge”) in achieving target settlement densities (i.e. the interplay between urban and rural areas);
- Understanding the influence on density management of factors such as geophysical conditions, environmental capacities, transportation systems, infrastructure capacities, social and cultural dynamics, economic imperatives, financial constraints and institutional systems and capacities;
- Understanding how density is currently managed and how it is managed in other parts of the country / world, and identify the applications for the EM; and
- Understanding and clarifying the positive and negative impacts of density on the efficiency and sustainability of urban and rural

"What are the proper densities for city dwellings? The answer to this is something like the answer Lincoln gave to the question, ‘How long should a man’s leg be?’ Long enough to reach the ground, Lincoln said. Just so, proper city dwelling densities are a matter of performance. They cannot be based on abstractions about the quantities of land that ideally should be allotted for so-and-so many people (living in some docile, imaginary society). Densities are too low, or too high, when they frustrate city diversity instead of abetting it. We ought to look at densities in much the same way as we look at calories and vitamins. Right amounts are right amounts because of how they perform. And what is right differs in specific instances.”

Jane Jacobs

The Death and Life of Great American Cities

(1961:221)
settlements (e.g., link density to sustainable livelihoods strategies).

The methodologies adopted to answer these strategic explorations included a strategic desktop review, strategic spatial analysis, research and best practice literature review and utilisation of a special stakeholder engagement vehicle - "Social Learning Process".

In summary the strategy has sought to answer the following five questions:

- **WHAT** we understand density to mean in the context of EM?
- **WHY** we are concerned with density in EM?
- **WHERE** particular density strategies would be applied spatially within EM?
- **HOW** would one go about achieving these strategies? and
- **WHOM** would be responsible for driving these processes?

### 1.3 APPLICATION OF THE STRATEGY

The City Density Strategy is intended to **guide and inform the structuring of the metropolitan area** from a metropolitan (strategic) as well as regional point of view. It is therefore closely linked to the eThekwini Municipality’s Spatial Development Framework and Package of Plans system; however, its application and interpretation should be dealt with similarly to that of the SDF.

The strategy provides guidelines and norms for locating various **forms of human settlement density** from a strategic point of view, as well as suggests an approach to practical and realistic implementation interventions and tools, which inform and guide more specific density proposals within relevant Spatial Development Plans (SDP), Local and Functional Area Plans (LAP/FAP) and Precinct Development Plans (PDP).

The City Density Strategy intentionally does not make specific density proposals at local levels as such an exercise requires detailed analysis and understanding of an area. The translation of the strategy into detailed planning and project proposals should take place in lower-order spatial development, and other plans as per the Package of Plans.

The document is intended for use by municipal development and sectoral planners and for municipal decision makers. As noted by the Project Steering Committee (29/10/13), the development of the City Density Strategy is a longer term process within eThekwini Municipality to facilitate, promote and/or develop more sustainable density levels.

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1 After EM SDF (2013)
2 WHAT IS DENSITY?

2.1 CONCEPT OF DENSITY

Density is a key concept in planning, architecture and urban design that is used to describe, predict and control the use of land. It is a measure of thresholds, urban efficiencies and the intensity of residential development and is part of a suite tools for city building.

Density as a control mechanism was first introduced during the industrial revolution when a correlation between overcrowding and disease was established that resulted in the birth of modern town planning. The resultant introduction of the Garden City and City Beautification movements provided the rationale for the dominance of suburbia in the 20th century as planners sought to balance the convenience of town living with living in the countryside (Dodson and Gleeson, 2007).

As a concept, density is shaped by a city’s age, history, context, culture geography, policies, attitudes and economy (Boyko & Cooper, 2011) and it is relevant to “environmental quality, transportation systems, physical infrastructure and urban form, social factors and economic factors” (Hess et al, 2007) and its role is to assist with determining land use requirements. It is a function of the supply and the demand for land, space and buildings.

Yet despite over a century of fascination with density, urban planners still display a surprising lack of clarity about what counts when considering density, and about how to measure it. Many people, including trained planners and designers, have difficulty estimating density from visual cues or distinguishing between quantitative (measured) and qualitative (perceived) density.

Density is a controversial term: it is feared by those who imagine ugly buildings, overshadowed open space, parking problems and irresponsible residents and promoted by those who value urbane streetscapes, efficient infrastructure supply, walkable neighbourhoods, and increased housing options (Forsyth, 2003).

2.2 MEASURES OF DENSITY

Density is simply a number of UNITS in a GIVEN area. What “UNITS” and what ”AREA” are the two variables in any density calculation that will vary dependent on the information being analysed and the answer sought. It is important to note that any measure of density, by virtue of its statistical calculation, is a measure that provides averages (Boyko & Copper, 2011).

Density measures are important as they can be used to:

- estimate the intensity of built form on a particular site or a place
- model the impacts of development standards
- keep track of how well a development is performing against the original vision
- calculate population densities.

The density definitions most commonly used by city policy makers, urban planners, designers, engineers and architects in eThekwini include site, net residential density, gross residential density and metropolitan residential density. These definitions relate to residential unit density i.e. the density of urban form and all are calculated using the same basic formula: the number of dwellings divided by the area of land they occupy. Traditionally the area used is measured in hectares.

What is common is that there is an increasing demand for efficiency of the urban environment with respect to the better use of land and natural resources, infrastructure, and human and financial resources. In this, the density of urban areas plays an important role.

\[
\text{residential density} = \frac{\text{number of dwellings}}{\text{land area (ha)}}
\]

Which land uses are counted in the land area determines the type of residential density being described.

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2 1 hectare is a portion of land that is 10,000m$^2$ (100m X 100m)
<table>
<thead>
<tr>
<th>DEFINITION</th>
<th>DESCRIPTION</th>
<th>ILLUSTRATION</th>
<th>DENSITY CALCULATION</th>
<th>COMMENTS/USES</th>
</tr>
</thead>
</table>
| **METROPOLITAN RESIDENTIAL DENSITY** | The overall residential density of a metropolitan area including all land uses (including land extensive areas) within the metropolitan boundary.                                                               | ![Image](image1) | Units: 945,860  
Population: 3,757,280  
Municipal area is: 230,245ha  
Building Density: 4 units/ha  
Population Density: 16 persons/ha | • Used by policy makers in order to allocate finances, social facilities.  
• Used for comparative purposes between cities.                                                                                                                                 |
| **GROSS RESIDENTIAL DENSITY**    | The residential density of a designated area. Includes all land used for uses such as industry, commerce, education, transportation and parks but excludes land extensive areas such as agricultural land and nature reserves/parks areas. | ![Image](image2) | Units: 6,371  
Population: 14,283  
Gross calculation area is: 260ha  
Building Density: 25 units/ha  
Population Density: 55 persons/ha | • Important tool for structuring areas in a more efficient manner, for establishing and managing sustainable settlement forms and for establishing different settlement and life style options.  
• Used to assist in meeting targets at the local level.                                                                                                                                 |
| **NET RESIDENTIAL DENSITY**      | The residential density on a specific site, excluding public roads and public open space (i.e. including only the area allocated for residential uses and internal roads).                                             | ![Image](image3) | Units: 161  
Population: 347  
Gross calculation area is: 4ha  
Building Density: 40 units/ha  
Population Density: 87 persons/ha | • Easiest density to determine.  
• Always higher than gross density.  
• Can be influenced by decreasing the size of units on a site, increasing the height or coverage of buildings.  
• Important for transportation, infrastructure and social facilities planning and for evaluation other impacts on the natural environment. |
| **SITE DENSITY**                 | The residential density on a specific site which includes only the residential component of the land area.                                                                                                   | ![Image](image4) | Units: 23  
Population: 31  
Site area is: 0,295ha  
Building Density: 78 units/ha  
Population Density: 105 persons/ha | • The most concentrated measure of density.  
• Used to estimate residential yields and in turn to calculate non-residential land use requirements e.g. social facility requirements, |
It is the land uses that are included in the land area which determine the measure of density being described. As a result there is an inverse relationship between density and the land area used to calculate density. The larger the portion of land, the lower the density result is.

Net residential density is always higher than gross residential density and can be increased, almost ad infinitum, by decreasing the size of units and erven and increasing the height and coverage of buildings.

An increase in gross residential density is limited by facility and space standards. By increasing the number of people in an area, more facilities such as schools, streets and open space are needed, thus taking up more space and lowering the gross density.

In South Africa gross density is typically 40% to 50% lower than net density because of high layout standards, such as the width of roads and the size of schools. Gross density can be increased by lowering space standards and by sharing facilities such as sports fields (CoT, 2005).

2.3 Dimensions of Density

The measurement of density can be applied to three dimensions: building density, occupancy density and population density.

They are interrelated, mutually dependent and determined by external factors. The relationship and interdependence between them and between the factors that determine them can be identified and calculated.

Each has its own set of advantages and disadvantages. Building density is used as a parameter during the design of a project and can be easily controlled whereas both occupancy density and population density are subject to external factors such as housing shortages, housing affordability, location, accessibility to public transport and services etc.

<table>
<thead>
<tr>
<th>DENSITY MEASURE</th>
<th>DESCRIPTION</th>
<th>UNIT OF MEASURE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING DENSITY</td>
<td>Building density refers to the number of dwelling units per area and is determined by the space between buildings, building width, building configuration and building height.</td>
<td>• Dwelling units per hectare</td>
<td>Most visible element of density</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Floor area ratio (FAR)</td>
<td>Easiest to control and use in land use planning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Coverage</td>
<td>Can be measured in Gross or Net terms</td>
</tr>
<tr>
<td>OCCUPANCY DENSITY</td>
<td>Occupancy density is directly related to income, the cost of floor space, and the need for space in terms of family size, which refers to the number of people per dwelling unit.</td>
<td>• Floor space ratio (m²/person)</td>
<td>Net density is useful for comparing densities between different housing typologies.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• People per dwelling unit</td>
<td>Irrespective of building densities, high occupancy rates are an indicator of overcrowding</td>
</tr>
<tr>
<td>POPULATION DENSITY</td>
<td>Population density is a product of building density and occupation density.</td>
<td>• Persons per hectare</td>
<td>Affected by household size dependent on the life-stage of a household, income etc</td>
</tr>
</tbody>
</table>

2.4 Density Measures in eThekwin

As noted the type of density measure, or dimension of density that will be used will vary and is dependent on the information being analysed and the answer sought i.e. the purpose for which a density calculation is being used.

In eThekwin Municipality population density and net density have the most widespread applicability across sectors (Workshop, 29/08/13).

These two measures provide information with respect to thresholds for social and public transport facilities, enable the generation of water and waste flows, and can be used to target housing delivery and structure human settlement.

Net residential density and net population density should therefore form the basis for setting density targets in eThekwin.
2.5 MANAGEMENT OF DENSITY

Residential density is essentially a function of supply and demand and is created through constraint and incentive. These functions can be controlled formally through the statutory regulations i.e. municipal town planning schemes, and/or informally through informal land and housing markets.

The supply of density is managed through development standards, zoning regulations, land and development costs, cultural choice, and subsidy provisions, whilst demand will be determined by individual choice, location, availability of land and housing affordability, social and transport facilities provision and the availability of infrastructure.

Constraint and incentive can be used to direct and manage the supply of and demand for density. Examples of these include:

- **Socio-Political Control**: Under group-areas and Apartheid governance the availability of land in well-located areas for African, Indian and Coloured settlement was severely limited. High demand and limited supply resulted in high density development that maximised location to job opportunities. Examples of these neighbourhoods in eThekwini include Clermont, Sparks Estate, Grey Street and Inanda.

- **Availability of Land**: Beyond the old ‘town’ boundaries of Durban pre-1990s - growth to the north (Mt Edgecombe/Umhlanga) and west (Hillcrest) was constrained by sugar-cane farming. These sugar estates essentially ‘held’ the outer boundaries of Durban’s urban footprint. It was only in the early to mid-1990s that these areas were opened up for development. Incentives to locate to these areas included factors such as prestige addresses, strict design controls, available service land, a safety and security focus etc.

- **Technology**: Prior to the advent of mass private vehicle ownership there was a heavy reliance on public transport for mobility, and higher density development occurred along major transport routes which controlled and incentivised where higher density development would occur i.e. Florida Road, Musgrave, and the Old Line Suburbs. With increasing private car ownership came suburban sprawl where the costs of developing outside of the central city were deemed to be ‘cheaper’ from a municipal taxes point of view and fuel for commuting relatively inexpensive. Suburbia also was perceived to offer a less expensive lifestyle. House prices were lower etc.

- **Availability of Infrastructure**: Density has historically only occurred in areas where infrastructure has been provided. As the infrastructure platform has been extended, settlement has followed. This is particularly true for areas where infrastructure investment associated with the servicing of backlogs has occurred i.e. the blacktopping of roads in rural areas, and the release of land in areas such as Mt Edgecombe and Umhlanga for development.

The following diagram illustrates how various contextual attributes influence both design and standards and how these in turn influence density. Using different design and standards appropriate to different contexts enables planners to effectively control the supply of density.
2.6  **The Relationship between Density and Housing Typology**

The following pages demonstrate what different net density ‘numbers’ look like and the relationship between density and housing typology. As a general rule the relationship between housing typologies and density is impacted on by development controls such as parking standards, set-back lines, coverage and FAR controls etc.

<table>
<thead>
<tr>
<th>Detached</th>
<th>0-20du/ha</th>
<th>20-40du/ha</th>
<th>40-60du/ha</th>
<th>60-80du/ha</th>
<th>&gt;100du/ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attached</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Low-rise Walk-ups</td>
<td></td>
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<td></td>
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<tr>
<td>Medium/High Rise Flats</td>
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</tbody>
</table>

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2.7 DENSIFICATION

Densification is the process of increasing density in a given area through the introduction of additional dwelling units and/or people.

This can occur either through infill and compaction either planned (formal) or unplanned (informal).

- **Infill** refers to the development of greenfield areas within designated urban areas or within brownfield (existing urban areas) sites within designated urban areas.
- **Compaction** refers to the redevelopment of existing properties to higher densities (densification) and may include subdivision and development of large properties within urban areas.

Examples of these methods of densification are as illustrated on the image to the right.

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5 MCA Urban and Environmental Planners in United Nations (2012)
2.8 Advantages & Disadvantages Associated with Density

Density plays an important role in the decision making processes found within architecture, planning and urban design yet opinions vary on the positive and negative impacts of density. There is also little evidence to support the notion that the impacts of density affect all people equally or that people would prefer higher densities (Boyko & Cooper, 2011).

In summary, the advantages and disadvantages associated with both high and low density residential development are illustrated in the adjacent diagram.

The benefits of managing density are essentially related to two key dimensions; the creation of sustainable human settlements and sustainable resource use (City Workshop, 29/08/13). These two dimensions are essentially driving the demand for density imperatives in SA cities, and especially within eThekwini.

(After Acioly, and Davidson, 1996)
2.9 IMPACT OF DENSITY ON RESIDENTIAL SETTLEMENT

The following table illustrates the linkage between a range of densities (measured in dwelling units per hectare) and different features of residential environments.

An optimum net density range of between 35 and 112 dwelling units per hectare (approximately 150 to 450 persons per hectare).

At these densities, the benefits include:
- the provision of public transportation would be more viable;
- capital outlay on roads would be low;
- capital outlay in utilities would be low;
- modes of mobility support both private vehicles and public transportation;
- the choice of housing would be high for densities up to 50 units per hectare, but would decrease for higher densities;

The costs include:
- the lack of privacy and noise become problematic at densities as low as 25 units per hectare; at higher densities, serious consideration should be given to design of units and defensible space to optimise privacy and ensure ownership;
- the cost of internal access such as passages and stairs would be high, especially for densities higher than 80 units per hectare;
- there would be a significant need for open space and amenities in this environment;

A number of other design attributes occur:
- entrances to dwelling units would probably front onto common ‘undefensible’ passages;
- access to ground level is ‘indirect’
- housing would be provided in a highly urban or inner-city environment;
- parking would be detached from units.

(After Wood, C.K 1980 in Senior B 1984)

2.10 SUMMARY

- Density is a tool used to describe, predict and control the use of land.
- It is the number of UNITS in a GIVEN area.
- There is no ideal density nor is there a “one-size-fits-all” approach to density.
- There are different measures of density for different planning and design purposes.
- Density is not equivalent to intensity, nor does it imply high rise buildings.
- Density measures cannot replace good human settlement design practice.
- Higher net density does not necessarily mean more people.
- Net density is the most appropriate density to target for creating sustainable human settlements.
- High density is not necessarily good density in the same that low density is also not necessarily bad density.
- There are both advantages and disadvantages associated with both high and low density.
- Density is a function of supply and demand and is created through constraint and incentives.
WHY WE ARE CONCERNED WITH DENSITY?

3.1 URBANISATION

The world is urbanising, cities that once housed 200 million people or ten percent of the world’s population in 1900 now accommodate 3.5 billion people or fifty percent of the world’s population and by 2050 will accommodate 6.4 billion people or over 70% (City of Melbourne, 2010).

As urbanisation increases, so does urban sprawl. There is evidence of a global pattern of declining urban densities, despite rapid urbanization, suggesting that urban growth is becoming less compact. In other words, people moving into cities are not necessarily accommodated within existing urban footprints. Cities are spreading horizontally to accommodate this influx, either through formal expansions or through informal urban sprawl with little guidance given to the form of development permitted.

To counter the impacts of sprawl there has been a worldwide call to compact the city. The Compact City movement strives for high density, mixed-use developments, promoting and enhancing efficient public transport systems, enhancing the quality of life of residents in cities across the world and the protection of key environmental assets that provide for environmental resilience.

The process of achieving compaction involves the intensification; consolidation and redevelopment of activities within the existing urban footprint of cities i.e. the idea of reduce, reuse & recycle.

“We have reached an interesting time when the drivers of sustainable cities are the same as the drivers of liveable cities, namely, mixed use, connectivity, high quality public realm, local character and adaptability. When these characteristics come together...they provide alchemy of sustainability, social benefit and economic vitality. These cities reduce their need for car travel, reduce energy consumption and emissions, use local materials, support local businesses and create identifiable communities”

Rob Adams, The Age, 2009

The current enthusiasm for strategies of higher density development is rooted within a broader debate on sustainable urban form. A key feature of this debate is the directive to create compact city forms, thereby arresting development at the urban fringe and concentrating it at higher densities within the existing urban fabric. The compact city and its policy have been offered up as a panacea “solve-all” solution to the range of contemporary urban ills, however not without challenge (Gillen, 2007 & Boyko & Cooper, 2011).

3.2 GLOBAL DENSITY TRENDS

In most traditional cities with market-orientated economies, the level of population density tends to decline from the City Centre. This pattern is evident in the following diagram for the cities of New York, London, Sao Paulo and Shanghai.

3.3 SOUTH AFRICAN DENSITY TRENDS

However, in the context of South Africa this pattern is inverted and population density rises with distance from the centre. Densities within South African cities are also comparably lower than other countries with similar incomes (Turok, 2011 & SACN, 2011).

As the following 3D illustrations of population density in Gauteng (top) and the City of Cape Town (bottom) illustrate, high population density tends to occur on the periphery of SA cities, and generally in former township areas.

South African Cities are a product of their history and there is no doubt that colonial and Apartheid restrictions...
disrupted the spatial patterns of our cities. The forced removals of vast numbers of non-white people from central locations in District Six, Cato Manor and Soweto are dramatic examples of where state ideologies have influenced settlement patterns and more recently, state rules against the invasion of vacant land have prevented increases in the density of inner city areas (albeit illegal activity).

3.4 Key Legislative and Policy Directives

South African legislation, policy and practice in spatial planning has been heavily influenced by the concept of densification and the compact city. The main impetus for such an approach has been linked to restructuring the Apartheid City through addressing issues of social equity, efficiency and to a limited extent the argument for sustainability.

The Constitution of South Africa, the Development Facilitation Act, the White Paper on Spatial Planning and Land Use Management, KZN Planning and other relevant spatial planning policy in eThekwini Municipality all promote the idea of a compact city and densification and yet there appears to have been “little political appetite to go beyond these expressions of intent to pursue densification more actively” (Turok, 2011:471). Key directives include:

- Minimise unmanaged or unfocussed urban growth
- Create opportunities for the densification of existing low density areas
- Promote higher density and integrated environments with typical urban character to balance suburban developments
- Ensure that residents have access to a range of choices with regard to housing typologies as well as locations
- Integrate residential development, movement systems, social facilities, employment opportunities and activity areas
- Focus residential densification around areas of opportunity (employment opportunity, activity areas, transport opportunities etc.)

3.5 Why Managing Density is Important in eThekwini

Development scenarios prepared for the eThekwini Municipality indicate that the population of the metropolitan area will grow from 3.5 million people in 2007 to 4.4 million by 2030. The eThekwini Metropolitan region would therefore have to accommodate an additional 775,000 people. This represents an average growth rate of 1.1% p.a. (SSI, 2010).

The scenarios further indicate that the distribution of this new growth would be 40% to the north and 20% each to the central, outer west and south functional regions of eThekwini (see adjacent images).

This information is particularly valuable in informing where development needs to be accommodated within the metropolitan area and begins to allude to how the application of appropriate density controls could impact on the spatial form of the city and assist in accommodating population growth.

The development scenarios are intended to provide an indication of the order of magnitude of, and spatial distribution, of population growth that the eThekwini Municipality would have to accommodate by 2030.

Based on an average household size of 4 persons per dwelling unit, an additional 193,000 housing units would need to be provided.

Assuming all these units were accommodated in new growth areas (greenfields) and dependent on the density of each new settlement, between 1,287 and 12,867 hectares of land would be required.

3.6 Current Density Distribution/Settlement Patterns & Trends

<table>
<thead>
<tr>
<th>GROWTH</th>
<th>RESIDENTIAL LAND REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2030</td>
</tr>
<tr>
<td></td>
<td>New Units</td>
</tr>
<tr>
<td>EM AREA</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>38 600</td>
</tr>
<tr>
<td>South</td>
<td>38 600</td>
</tr>
<tr>
<td>North</td>
<td>77 200</td>
</tr>
<tr>
<td>Outer West</td>
<td>38 600</td>
</tr>
<tr>
<td>eThekwini</td>
<td>193,000</td>
</tr>
</tbody>
</table>
The current distribution of density in eThekwini reflects the Apartheid spatial planning legacy and the distribution pattern is similar to other South African cities:

- a fragmented city;
- limited variations in density levels across the metropolitan area;
- large areas of low density in central, well-serviced locations;
- large areas of high density on the urban periphery;

The overall metropolitan density of the eThekwini is 4du/ha. Gross residential densities in excess of 40du/ha are located in scattered pockets across the city and these are limited to the Durban CBD/Beachfront; Cato Manor, Umlazi and KwaMashu/Inanda.

Density is concentrated within the former townships of KwaMashu, Ntuzuma, Inanda and Phoenix in the north, Umlazi, Lamontville and Chatsworth to the South, Clermont/KwaDabeka and Marianridge in the West and the Durban CBD/Beach, Glenwood, Berea, Cato Manor in the Central areas.

The remainder of the metropolitan area is settled at gross residential densities of less than 15du/ha. This includes areas such as Durban North, Westville, Pinetown, Mpumalanga, Tongaat and Verulam.

A band of rural/traditional residential settlement is located on the periphery of eThekwini where gross residential densities are below 5du/ha.
It is evident in comparing the EM density pattern of 2001 to that of 2011 that there has been a change in the distribution of density.

As the following map which shows the percentage change in gross residential density for metropolitan area illustrates:

- density within the traditional suburbs of Berea, Montclair, Pinetown, Phoenix, Westville (urban core) etc have remained stable.
- density in the rural periphery has doubled
- density has increased threefold in greenfield development areas such as Hillcrest, Mt Edgecombe, Umhlanga and Welbedacht.
- density along the backbone of the IRPTN has either decreased, or is stable.

The reasons for this pattern provide invaluable insight for the preparation of a strategy to manage density:

- The rural areas in particular offer a ‘soft’ landing for migrants into to the municipal system. Here the barriers to acquiring land to settle on, and the regulations regarding the development of land, are far less onerous than within the formal urban system. There is also anecdotal evidence of residents choosing to invest in rural areas where property taxation and servicing costs are minimal compared to land under formal land legal administration.
- Developing in rural/tribal areas is a cultural/lifestyle choice.
- Municipal investment in servicing backlogs has been directed into areas on the urban periphery and rural/tribal areas over the past decade.
- Corporate decisions by major land owners e.g. Tongaat Hulet Developments etc. to transform former sugar cane land to urban development have resulted in a plethora of new housing opportunities, with a particular emphasis on high quality managed and secure neighbourhoods that are under threat in existing neighbourhoods. This has resulted in a push of residents to the edge.
- The municipality’s housing programme has been unable to secure well-located land at reasonable prices within the urban core and has been forced to deliver large-scale greenfield housing projects on the periphery of existing settlements.

Whilst the overall gross residential density of the eThekwini Municipality has increased, the predominant nature of residential development has been low to medium density despite a policy environment that promotes higher density development. In this regard, a number of development patterns are evident in eThekwini, each of which is a product of an attraction (driver) for the pattern, or a constraint. The following table summarises these patterns.

(Prepared by RHDHV using source data from eThekwini Municipality’s Planning Unit Demographics and Population Model)
<table>
<thead>
<tr>
<th>DEVELOPMENT PATTERN</th>
<th>DESCRIPTION</th>
<th>ATTRACTION (DRIVERS) FOR DEVELOPMENT PATTERN</th>
<th>CONSTRAINT TO DEVELOPMENT PATTERN</th>
</tr>
</thead>
</table>
| EXISTING HIGH RISE DEVELOPMENTS | Existing high rise and urban high density built form in areas such as Albert Park, North and South Beach | • Well located sites  
• Regulatory control permits conversion  
• Available infrastructure and capacity  
• High quality amenity  
• Access to social facilities  
• Access to good transport systems  
• Access to employment centres | • Limited land available for expansion  
• Resistance from neighbouring communities  
• Affordability of new housing stock |
| NEW MEDIUM/ HIGH RISE DEVELOPMENTS | Umhlanga New Town, Umhlanga Rocks, Bridge City | • Planned unit development driven by major landowners e.g. THD  
• Clear vision for development in these areas  
• Well located near employment centres  
• Intentional pursuit of higher density living environments  
• Serviced sites available to property developers  
• Active marketing, branding and place-making with a Promise of security | • Infrastructure provision and capacity not able to cope with higher density  
• Resistance from neighbouring communities  
• Lifestyle choice not favoured by young families  
• Social facilities not being provided by the public sector in these areas e.g. schools, clinics  
• Affordability  
• Poor public transport and reliance on private vehicles |
| PROPERTY REDEVELOPMENT | Redevelopment of existing residential housing stock to new forms of housing e.g. conversion of single detached units on the Berea to multiple unit developments | • Well located sites  
• Regulatory control permits conversion  
• Available infrastructure and capacity  
• High quality amenity  
• Access to social facilities  
• Access to good transport systems  
• Access to employment centres | • Limited opportunities to redeveloped i.e. willing seller, willing buyer  
• Resistance from neighbouring communities  
• Congestion  
• Brownfields redevelopment is more expensive |
| NEW UNITS THROUGH SUBDIVISION OR GREENFIELD DEVELOPMENT | New public sector township establishment on the periphery of the exiting urban footprint e.g. Redcliffe, Etafuleni. | • Availability of land cheaper land  
• "Free" government house  
• Provision of bulk infrastructure by the municipality  
• Provision of ‘one house one plot’ | • Poor access  
• Limited access to social facilities  
• Located far from employment centres  
• Invariably located in areas that have high environmental sensitivities or in land that has good agricultural potential |
| | New private township establishment on the periphery of the exiting urban footprint which tend to be in the form of “gated estates” e.g. Mt Edgecombe and Cotswold Downs etc | • Availability of packaged development opportunities i.e. land and housing development  
• High levels of security and urban management  
• Active marketing, branding and place-making  
• Close to new employment centres e.g. Umhlanga New Town Centre and Hillcrest CBD | • Expansion of infrastructure networks and capacity needed  
• Extension of town planning scheme required to convert agricultural land  
• Poor public transport  
• Congestion on major mobility and arterial routes |
<table>
<thead>
<tr>
<th>DEVELOPMENT PATTERN</th>
<th>DESCRIPTION</th>
<th>ATTRACTION (DRIVERS) FOR DEVELOPMENT PATTERN</th>
<th>CONSTRAINT TO DEVELOPMENT PATTERN</th>
</tr>
</thead>
</table>
| MULTIPLE HOUSEHOLDS IN A SINGLE DWELLING | Flat sharing, multiple households sharing one unit e.g. Umgeni Road, Umbilo and Gale Street, Albert Park, South Beach | • Relatively affordable rent  
• Access to good public transport  
• Access to social services  
• Access to employment | • Complicated tenure arrangements  
• Occupational regulations prohibit multiple households in one unit  
• Poor urban management – bad buildings predominate  
• Limited public housing stock  
• Informal rental market open to abuse |
| INFORMAL SETTLEMENT EXPANSION | KwaDabeka, Ntuzuma | • Limited regulation and control  
• Relatively well located to employment opportunities | • No services  
• No social amenity  
• Security of tenure  
• Public health risks |
| BACKYARD UNIT | Formal units in the for of granny flats and second dwellings e.g. Glenmore, Glenwood, Chatsworth  
Informal backyard units e.g. Umlazi, Cato Manor, KwaMashu | • Access to good transport systems  
• Infrastructure and capacity  
• Good location  
• Income generation  
• Limited enforcement of regulation and control  
• Income generation for primary household  
• Site can accommodate second dwelling | • Regulatory control and standards  
• Submission fees  
• Small site size  
• Regulatory control and standards  
• Infrastructure poor |
| RURAL DEVELOPMENT | Formal house on un-serviced land e.g. KwaXimba, Umbumbulu | • Minimal development controls  
• Available land  
• Cultural lifestyle choice  
• Low costs i.e. no rates, limited service costs etc | • Low levels of service  
• Periphery of urban settlement  
• Limited access to finance (bonds) |
3.7 Preconditions For Density

The drivers and constraints of particular development and associated density patterns in eThekwini, begin to indicate what preconditions for different residential density would be.

In summary these relate to the constraint on land to develop i.e. development controls, the lack of infrastructure or infrastructure capacity to ‘receive’ development and the lack of transport. The provision of transport is also an incentive, as is the creation of amenity, good location and urban management.

The Municipality has the most control to influence density in the area of development control and building regulations.

<table>
<thead>
<tr>
<th>PRECONDITIONS</th>
<th>MUNICIPALITY’S ROLE IN CREATING THE PRECONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DEVELOP/.CONTROL</td>
</tr>
<tr>
<td>Suitable development controls and building regulations such as FAR, coverage, set backs, minimum lot sizes, zoning, parking regulations, height, restrictive title conditions exist.</td>
<td>✓</td>
</tr>
<tr>
<td>Market demand for a particular residential density environment</td>
<td>-</td>
</tr>
<tr>
<td>Availability to finance to develop</td>
<td>-</td>
</tr>
<tr>
<td>Supply of high quality and reliable public transport network</td>
<td>✓</td>
</tr>
<tr>
<td>Provision of infrastructure and infrastructure capacity</td>
<td>✓</td>
</tr>
<tr>
<td>Clear vision and direction in local and metropolitan plans.</td>
<td>✓</td>
</tr>
<tr>
<td>The availability of land.</td>
<td>-</td>
</tr>
<tr>
<td>Urban Management and the creation and/or protection of amenity</td>
<td>✓</td>
</tr>
<tr>
<td>Cultural acceptance</td>
<td>-</td>
</tr>
</tbody>
</table>

3.8 Summary

- Globally, city regions are urbanising and eThekwini is no exception.
- There is a legislative imperative to apply more appropriate residential densities to cities.
- EM will need to accommodate an additional 775,000 people over the next twenty years.
- Density is a tool in a toolbox that can be used to reshape eThekwini into a more sustainable and resilient metropolitan area.
- Net residential density in eThekwini is low.
- Density is changing in the metropolitan area.
  - Increased density is occurring on the periphery and in informal areas.
  - Increased density is occurring in areas with limited control and regulation.
  - Density in existing areas is being stifled by existing land use management systems, development controls and standards.
- Density is a product of constraint and incentive.
- There are a number of preconditions required to realise density in an area.
4 WHERE TO DISTRIBUTE RESIDENTIAL DENSITY IN ETHEKWINI MUNICIPALITY?

4.1 THE CHALLENGE

eThekwini is faced with having to manage the challenges associated with a scarcity of natural resources, high population growth and rural to urban migration whilst at the same time, enhancing the sustainability and liveability of the area under its jurisdiction.

One of the important measures of attaining these broader goals is to develop and implement strategies that seek to achieve a more consolidated urban form for all types of land uses.

Increased density per se is therefore not the goal but rather a means towards accomplishing the bigger goals of a more sustainable and resilient city.

As such, the density strategy seeks to encourage the delivery of appropriate residential densities in appropriate locations in order to promote an appropriate model compact city.

The outcome of such a strategy will be an increase in the overall residential density of the urban core, as well as the metropolitan area, as well as the protection of important natural assets and natural systems required for sustainable and resilient metropolitan areas.

Coupled with strategies to create vibrant activity centres (nodes) and a sustainable public transport system (corridors), the residential density strategy will assist eThekwini with its overall goal of creating a “socially equitable, environmentally sustainable and functionally efficient Municipality that bolsters its status as a gateway to Africa and the world” (EM, 2012).

4.2 THE GOAL

The broad goal of the City Density Strategy is to direct appropriate residential density to appropriate locations in order to ensure sustainable resource use and the creation of sustainable human settlements.

4.3 OBJECTIVES

The main objectives of density policy are:

- to minimise/reduce the footprint of the city
- to promote an acceptable standard of environment and amenity for the occupants of residential areas;
- to ensure an appropriate balance between the residential population of an area and the capacity of the existing or planned facilities and infrastructure required to service it;
- to maintain an efficient intensity of land use in the context of competing demands on a limited supply of developable land;
- to provide for a variety of urban form for urban design reasons and to satisfy the demands of different market sectors;
- to project agricultural land and food security for the metropolitan area;
- to provide population thresholds to sustain a viable public transport system; and
- to help facilitate the restructuring of the city into a more sustainable urban form.

4.4 GENERAL RESIDENTIAL DENSITY PRINCIPLES

In applying residential development densities, there are a number of general principles which need to be considered coherently with a view to achieving integration of land use, transport, environmental and infrastructural planning. Through such integrated planning, residential developments of different densities can be planned to achieve the most efficient and functional urban form and economies of scale in terms of social, transport and infrastructural provisions while meeting environmental objectives.

The relevant principles guiding the residential densities with the above integrated approach are:

- There should be a hierarchy of residential densities to meet market needs for a diversity of housing types;
- Residential densities should be commensurate with what the existing and planned infrastructural and environmental capacities can cope with;
- Developments should be placed in such a way to encourage public transport and reduce the travel demand; and as such, higher density residential developments should be located near rail stations and major public transport interchanges wherever possible to capitalize development opportunities and to reduce reliance on road-based vehicular travel;
• There could be a decreasing **gradation of residential development densities** from the distances to the rail stations and public transport interchanges;

• Higher density residential developments outside major transport corridors or the catchment areas of a rail station could be considered where there will be **adequate feeder services** from the rail stations and public transport interchanges;

• It would be more compatible to adopt a low density for residential developments which may be located close to environmentally sensitive areas e.g. wetland, conservation areas etc.

### 4.5 Density Target Areas

The following **density targets areas** are provided as a guideline to direct and manage density in and across the municipal area. The density targets have been derived from international and national best practice with respect to transit-orientated development, development that supports transportation and social facilities thresholds and that also respond to the natural environment.

Conceptually, the density target areas indicate:

• where higher residential density development should be **actively promoted** i.e. town centres; in proximity to major transport facilities.

• where residential density should be **managed** i.e. residential suburbs.

• where residential density should be **actively discouraged** i.e. rural areas.
Within and in proximity to metropolitan and sub-metropolitan nodes

**Target Conditions**

Generally within and abutting the defined node or central business district area. Particularly in the vicinity of public transport routes, interchanges and stations, near social facilities and public open space precincts and where there is a diverse concentrated mix of land uses, activities and services.

- **Level 1** Node: Within 5km
- **Level 2** Node: Within 2km

**Density Guideline (Min)**

Net Density of 80-250du/ha

(160-1,000P/ha)

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*Level of Nodes determined by eThekwini Accessibility Mapping (2011)*
WITHIN AND IN PROXIMITY TO LOCAL AREA AND NEIGHBOURHOOD NODES

**TARGET CONDITIONS**
Generally within and abutting the defined node, especially the multifunctional part of the node.

**DENSITY GUIDELINE (MIN)**
Net Density of 40-80du/ha
(160-320p/ha)

Clustering of activities in a local area/neighbourhood, or as part of an activity street, with good access (including public transport).

Comprises of a range of land uses and services such as shops, restaurants, offices, banks, post office, community centre, municipal offices, hospitals, clinics, institutions, station, bus/taxi stops, garages, parking areas and/or public spaces/facilities.

Includes higher-density zones.

Largely focussed on a range of linked buildings, land uses and spaces.

Examples: Tongaat, Hillcrest, Verulam, Umhlanga Ridge Musgrave, Westville, Broadway, Clermont, Chatsworth, Mpumalanga, Bridge City, Kwa-Mashu

* Level of Nodes determined by eThekwini Accessibility Mapping (2011)

WITHIN AND IN PROXIMITY TO RAIL OR MASS TRANSIT STATIONS

**TARGET CONDITIONS**
In the residential areas that are within 2km proximity to major public transport facilities and within 400-800m, of all existing and proposed rail stations and sub-metropolitan bus or taxi ranks

**DENSITY GUIDELINE (MIN)**
Net Density of 80-150du/ha
(320-600p/ha)

At the intersection/convergence of city-scale development, connector and activity routes including public transport interchanges – good access on the broader scale. May form an expanded part of an activity route but requires the inclusion of a public transport interchange.

Examples: Berea Station, Bridge City, Umlazi
### Within and in Proximity to Development Spines

<table>
<thead>
<tr>
<th>Target Conditions</th>
<th>Density Guideline (Min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 800m of points of direct access, transport intersections and interchanges, places of intense mixed-use and nodal activity (activity route character) and next to or part of commercial complexes.</td>
<td>Net Density of 80-150du/ha</td>
</tr>
</tbody>
</table>

**Major city-wide or district movement routes (class 2 or 3 roads) including line-haul public transport or IRPTN along which there may be interrupted flows at traffic lights and intersections. Express ways (at grade) with fast-moving traffic sections may form part of the development route.**

Generally, very limited direct access but with development and commercial/business complexes linked to parallel and connecting side roads (feeder systems).

Could include short stretches of activity route type development, mixed land uses and higher-density areas.

Examples: MR577, Umhlanga Rocks Drive, R102 (North Coast Road), M13

### Within and in Proximity to Activity Spines

<table>
<thead>
<tr>
<th>Target Conditions</th>
<th>Density Guideline (Min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally near the activity route but particularly near public transport interchanges and stations, mixed-use areas and concentrated activity – business/commercial nodes and at public institutions and facilities including open space. In the residential areas that are within 2km proximity to major public transport facilities and within 400-800m, of all existing and proposed rail stations and sub-metropolitan bus or taxi ranks</td>
<td>Net Density of 80-150du/ha (320-600p/ha)</td>
</tr>
</tbody>
</table>

**Significant and/or metro-wide to district activity route directly linked to development including centres/nodes, mixed land uses, commercial/business developments and light industry, institutions, social facilities (including recreation) transport interchanges and higher-density development (including higher density areas).**

Intermittent movement patterns incorporating public transport (including commuter rail). Direct access en route with interrupted movement flows, especially at bus/taxi stops and at traffic lights and intersections. Pedestrian-orientated in sections.

Examples: Brickfield Road, Sparks Road
### Metropolitan

Broad guidelines applicable to the metropolitan area. These must be interpreted in terms of appropriate levels of planning and should not be considered a blanket density control.

- **Target Conditions**: All locations where permitted in terms of existing rights or an application for rezoning/consent/departure/sub-division.
- **Second dwellings and other forms of development acceptable if no negative impact on the character of the area and existing rights.**

| Urban | Net Density of 40-80 du/ha |
| Suburban | Net Density of 15-40 du/ha |
| Rural | Net Density of 1-15 du/ha |

### Interface with UDL and Environmentally Sensitive Areas

Within 400m proximity to the Urban Development Line – must take cognisance of local context.

- **Density Guideline (MIN)**: Net Density of 5-15 du/ha
4.6 Principles for Locating Higher Density Residential Settlement

- **Principles**: important location attributes higher density residential development sites should possess. Some principles are noted as “critically important” and, accordingly, may severely restrict development potential if not addressed; and

- **Other relevant considerations**: if present on a prospective development site, these issues will likely require management/remediation strategies and/or design/construction responses. These issues may also affect development potential.

All principles and relevant considerations should be considered collectively.

Not complying with certain principals could be offset by alternate solutions and/or effectively achieving more important principles.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>PRINCIPLES (* denotes critically important principle)</th>
</tr>
</thead>
</table>
| **ACCESS AND LIVABILITY**        | 1 Land is within the specified distance of ONE of the following:  
   - 2km of CBD/Metropolitan Node (Level 1 and 2 Social Facility Node)  
   - 800m of existing/emerging sub-regional node (Level 3 and 4 Social Facility Node)  
   - 800m of high quality open space  
   - 800m of tertiary institution  
   - 800m of regional hospital  
   2 Land is within close proximity to ALL of the following elements:  
   - 400m of existing or future IRPTN route  
   - 400m of existing or proposed useable open space  
   - 400m of existing or proposed employment zone  
| **PHYSICAL ENVIRONMENT**         | 3 Land has no risk of significant inundation from any of the following*:  
   - Riverine flooding (1:100 floodline)  
   - Storm surge flooding  
   - Localised flooding / stormwater drainable issues  
   - Geotechnically unstable  
   4 Land not identified as high value ecological land*:  
   - D’Moss – Upper Catchment Areas should be avoided  
   - Other Critically ecological land e.g. wetland, grasslands  
   5 Land not identified as good agricultural land  
   6 Land not contaminated  
   7 Land not steeper than 1:3  
   8 Land not identified for power generation  
| **INFRASTRUCTURE AND HIGH IMPACT ACTIVITIES** | 9 Land can be serviced by ALL of the following infrastructure networks (existing or proposed)*:  
   - Water supply  
   - Sewerage (including acceptable alternate systems)  
   - Roads  
   - Stormwater  
   10 Land is within 400m of existing or planned social and community facilities, including education (Levels 1-4 Social Facility Node)  
   11 Land is not affected by major infrastructure corridors or high impact activities  
   - High voltage transmission lines*  
   - Airport safety/noise zones  
   - Major Hazardous Installations (MHI)  

* Integrated Rapid Public Transport Network
5 HOW TO DIRECT DENSITY IN ETHEKWINI MUNICIPALITY?

5.1 THE ROLE OF ETHEKWINI

The production of a strategy implies intent to intervene in the current manner in which the City is developing. In order for the strategy for eThekwini to be successful there needs to be an acknowledgement that not all factors that influence density and/or are influenced by density are within the direct control of the eThekwini Municipality, nor are they spatial in nature.

The strategy therefore needs to acknowledge that eThekwini Municipality is but one of a number of roleplayers who can influence where density goes. Others include National and Provincial Government, the Private Sector, the Not-for-Profit Sector and Communities.

eThekwini Municipality must however take the lead and not merely react to proposals for the delivery of density. Proactive planning for the delivery of density through budgeting, the implementation of pilot projects and the marketing of density opportunities will help to facilitate and create a platform on which the other partners can contribute towards the delivering density in eThekwini.

Essentially it is about eThekwini Municipality providing, supporting and facilitating the preconditions for density to occur.

5.2 THREE-PRONGED APPROACH

The ability of the eThekwini Municipality to harness and to direct existing and potential development energy in such a way that the ultimate goal of a sustainable and efficient metropolitan area is achieved can be found in the application of a number intervention measures and tools that can be implemented.

These tools and measures are primarily the responsibility of the municipality to activate and support and they help to control the preconditions under which density can be delivered.

A three-pronged approach to directing density for eThekwini Municipality is recommended. Such an approach recognises that density interventions and tools need to occur across a range of planning and implementation scales.

- **CITY-WIDE (SYSTEMIC) APPROACH**
  Large scale policy and institutional changes

- **TARGETED APPROACH**
  Specific interventions for particular density target areas

- **EXPERIMENTAL APPROACH**
  Test cases and pilot projects

5.3 INTERVENTION TOOLS AND MEASURE

The following tables provide an overview of the range of tools and intervention measures as well as which department with the municipality would be responsible for driving the implementation of the tool.

DENSITY LESSONS FROM DEVELOPERS & BUILT ENVIRONMENT STAKEHOLDERS

- Appetite and demand for density linked to location
- High density nodes in the North near new employment centres are “taking off”
- Density a factor of financial returns on properties i.e. maximise units that can be developed
- Affordability a driver for what density is demanded
- Financing of development a limiting factor
- Noticeable trend at Planning Info centre for enquires re additional units on existing SR sites
- Architectural queries for second and third dwellings on site
- Demand for ‘rack’ rentals from vulnerable groups and students
- Development controls are an issue, especially parking requirements
- NIMBY (Not in my backyard) attitude in existing neighbourhoods
<table>
<thead>
<tr>
<th>INTERVENTION AREA</th>
<th>APPROACH</th>
<th>INTERVENTION</th>
<th>TOOLS/MEASURES</th>
<th>LEAD DEPARTMENT/S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POLICY AND REGULATION</strong></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>All levels of municipal planning should contain clear and consistent density policy statements and density targets</td>
<td>Package of Plans</td>
<td>Framework Planning Land Use Management</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Identify prerequisites for density to be released in an area i.e. availability of infrastructure, appropriate zoning, provision of social facilities</td>
<td>Package of Plans</td>
<td>Development Planning Land Use Management</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Enforce the urban development line</td>
<td>Rating Policy Infrastructure Provision</td>
<td>Framework Planning Real Estate</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Set minimum net density targets</td>
<td>Package of Plans</td>
<td>Framework Planning Housing</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Identify high and low density priority zones</td>
<td>Package of Plans Budget Alignment Infrastructure Provision</td>
<td>Framework Planning Environment Treasury</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Prepare Precinct Plan, Urban Design Frameworks and Density land for high priority density target areas</td>
<td>Package of Plans</td>
<td>Framework Planning</td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Encourage greater mixes of land use through more flexible land use controls</td>
<td>Package of Plans</td>
<td>Land Use Management Framework Planning</td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Place a moratorium on new rights where infrastructure is limited</td>
<td>LUMS</td>
<td>Land Use Management Framework Planning</td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Relax land use controls in specific areas i.e. Coverage, FAR, minimum erf sizes, building lines, development standards</td>
<td>Zoning Development Control Development Standards Parking Controls</td>
<td>Land Use Management Framework Planning eThekwini Transport Authority</td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Fast-track and stream-line development application processes in target areas</td>
<td>LUMS</td>
<td>Land Use Management</td>
</tr>
<tr>
<td></td>
<td>TARGETED</td>
<td>Encourage subdivision of sites in appropriate target areas</td>
<td>LUMS</td>
<td>Land Use Management</td>
</tr>
<tr>
<td>INTERVENTION AREA</td>
<td>APPROACH</td>
<td>INTERVENTION</td>
<td>TOOLS/MEASURES</td>
<td>LEAD DEPARTMENT/S</td>
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</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Encourage dual occupancy of sites (e.g. sectional title developments) in higher density target areas</td>
<td>LUMS</td>
<td>Land Use Management</td>
</tr>
<tr>
<td>EXPERIMENTAL</td>
<td></td>
<td>Experiment with housing forms, mixes of land use, heights etc on a project by project basis</td>
<td>Housing Programme</td>
<td>Housing Framework Planning</td>
</tr>
<tr>
<td>DIRECT PUBLIC INVESTMENT AND BUDGET ALIGNMENT</td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Align budgets with density priority zones</td>
<td>Integrated Development Plan Municipal Budget</td>
<td>Treasury Framework Planning</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Provide an efficient, high-quality public transport service in specific focus areas</td>
<td>Public Transport System</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Invest in infrastructure capacity ahead of high density development</td>
<td>Package of Plans Integrated Development Plan</td>
<td>eThekwini Transport Authority Water and Sanitation</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Upgrade public environments in density nodes</td>
<td>Urban Renewal</td>
<td>Treasury Economic Development</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Provide additional social and recreation facilities in high density areas</td>
<td>Urban Renewal</td>
<td>Health Parks and Recreation</td>
</tr>
<tr>
<td>FISCUS(^7) (REVENUE)</td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Implement a spatially variable development levy</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Toll metropolitan mobility corridors</td>
<td>Incentive/Disincentive Package</td>
<td>ETA Treasury</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Provide rates holidays for developers who develop high density developments in priority areas</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Discount municipal servicing costs in high priority density target areas</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury</td>
</tr>
<tr>
<td>TARGETED</td>
<td></td>
<td>Provide inexpensive, serviced land for high density development in priority zones</td>
<td>Incentive/Disincentive Package</td>
<td>Real Estate</td>
</tr>
</tbody>
</table>

\(^7\) Literally translated means ‘purse’ or ‘basket’ and refers to forms of revenue
<table>
<thead>
<tr>
<th>INTERVENTION AREA</th>
<th>APPROACH</th>
<th>INTERVENTION</th>
<th>TOOLS/MEASURES</th>
<th>LEAD DEPARTMENT/S</th>
</tr>
</thead>
<tbody>
<tr>
<td>TARGETED</td>
<td>Secure additional subsidies to deliver high quality, high density social housing</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury Housing</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Tax underdeveloped properties in priority high density areas</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury</td>
<td></td>
</tr>
<tr>
<td>FINANCE</td>
<td>Developer pays for infrastructure requirements in areas where density is not prioritised</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Provide tax credits to developers of high density developments</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury in conjunction with SARS</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Municipality brokers a high density finance package for developers which includes favourable interest and lending rates and provides development loans</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury in conjunction with Banking/Finance Institutions</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Municipality negotiates red-lining policy of banks in the inner city</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury in conjunction with Banking/Finance Institutions</td>
<td></td>
</tr>
<tr>
<td>GOVERNANCE</td>
<td>Provide good urban management, but especially in high impact areas</td>
<td>Bylaws</td>
<td>Service Departments Framework Planning</td>
<td></td>
</tr>
<tr>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Ensure safety and security</td>
<td>Bylaws</td>
<td>Metro Police in conjunction with SAPS</td>
<td></td>
</tr>
<tr>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Ensure high levels of operations and maintenance of the public realm</td>
<td>Bylaws Operations and Maintenance</td>
<td>Service Departments</td>
<td></td>
</tr>
<tr>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Enforce bylaws and development controls</td>
<td>Bylaws Enforcement Unit</td>
<td>Building Inspectorate</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Support the establishment of Urban Improvement Precincts (UIPs)</td>
<td>Incentive/Disincentive Package</td>
<td>Treasury ABMs</td>
<td></td>
</tr>
<tr>
<td>TARGETED</td>
<td>Set-up partnerships to deliver density</td>
<td>Partnerships</td>
<td>ABMs Housing</td>
<td></td>
</tr>
<tr>
<td>INTERVENTION AREA</td>
<td>APPROACH</td>
<td>INTERVENTION</td>
<td>TOOLS/MEASURES</td>
<td>LEAD DEPARTMENT/S</td>
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<tr>
<td>EXPERIMENTAL</td>
<td>Investigate alternative management options for public sector high density developments e.g. shareblock, institutional ownership, sectional title</td>
<td>Regulatory</td>
<td>Housing</td>
<td></td>
</tr>
<tr>
<td>MARKETING</td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Communicate long term density plans to residents of eThekwini</td>
<td>Media</td>
<td>Framework Planning LUMS Communications</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Communicate how to realise existing additional development rights to property owners to densify to property owners</td>
<td>Media</td>
<td>Framework Planning LUMS Communications</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Make use of branding and place-making to market new high density areas</td>
<td>Media</td>
<td>Framework Planning LUMS Communications</td>
</tr>
<tr>
<td></td>
<td>CITY-WIDE (SYSTEMIC)</td>
<td>Publish success stories</td>
<td>Media</td>
<td>Framework Planning LUMS Communications</td>
</tr>
</tbody>
</table>
6 RECOMMENDATIONS

The preparation of this City Density Strategy signals a serious intent of eThekwini Municipality to direct appropriate residential density to appropriate locations in order to ensure sustainable resource use and the creation of sustainable human settlements.

Intervention in complex systems - to know what to do where and when - is a process fraught with unintended consequences and the dangers of dead ends however; no city can afford the “luxury of postponing decisions until the evidence is complete. Action to bring about development is too urgent to be held up by research. Planning is always imperfect, but it is likely to be enhanced if informed by a parallel stream of analysis and reflection” Turok, (2011).

Based on the work undertaken as part of this project, the following recommendations are made with respect to implementing the guiding principles and norms as they relate to managing residential density in eThekwini Municipality.

6.1 Adopt the City Density Strategy and incorporate the principles and guidelines into the Spatial Development Framework, Spatial Development Plans and local area/precinct plans.

6.2 Prepare three priority density target area Precinct Development Plans/Urban Design Frameworks that will:

(a) identify and delineate density priority areas
(b) to develop a land release strategy for density target areas
(c) to provide details of where targeted regulatory changes would be required
(d) to assist with directing the municipal budget
(e) coordinate, integrate and align the activities and energies of all key stakeholders

6.3 Align public investment for infrastructure, transportation, housing, community facilities in line with density objectives.

6.4 Enforce the Urban Development Line and Development Phasing Line.

6.5 Start small, harness hidden density in existing neighbourhoods and experiment with pilot projects in priority density target areas.

6.6 Pilot project three density priority projects for public sector interventions that demonstrate the high quality living environments in higher density housing typologies.

6.7 Ensure regulatory support that provides the preconditions for density are incorporated into the LUMS and other relevant City policies. Some further research into these areas may be required:

(a) Provide the appropriate zoning in the appropriate areas (current initiative underway)
(b) Review of standards and guidelines for the provision of public facilities and amenities (current initiative underway)
(c) Parking policies and standards (current initiative underway)
(d) Introduction of rates rebates and/or penalties to encourage higher density development (current initiative linked to UDL underway)
(e) Review the developer contribution levies to support density goals
(f) Simply and streamline the development application process (particularly in priority density target areas)

6.8 Set up a monitoring and evaluation system to focus on:

(a) ensuring the adoption of the City Density Strategy by the Municipality
(b) implementing the strategies, principles and policies contained in the City Density Strategy by both the public and private sector.
(c) the impact of the strategy on achieving density in desired areas.
7.1 Published Articles, Documents or Brochures


Boyko, C & Cooper, R (2011) Clarifying and Re-Conceptualizing Density, Progress in Planning 76 (1)

City of Melbourne (2010) Transforming Australian Cities for A More Viable and Sustainable Future

City of Tswane (2005) Compaction and Densification Strategy

Dave, S (2011) Neighbourhood Density and Social Sustainability in Cities of Developing Countries, Sustainable Development, 19


Landcom (2011) *Residential Density Guide*


Rodman-Smith (2009) Planning Densification from the Start, Urban Land, June


Smith, M (2009) Planning Densification from the Start, Urban Land, June

SSI (2010) Generating Development Scenarios, Northern Urban Development Corridor, March


Turok, I (2011) Deconstructing Density: Strategic Dilemmas Confronting the Post-Apartheid City, Cities, 28

UN Habitat (2012) Urban Patterns for a Green Economy: Leveraging Density, United Nations Human Settlement Programme,

7.2 Stakeholder Interviews

eThekwini Municipality Development Info Centre (Don Colborne - 20 November 2013 (telephonic))

Ken Davies and Associates (Ken Davies) - 20 November 2013 (telephonic)

Lees Short and Associates (Joanne Lees) - 20 November 2013 (telephonic)

North Public Transport Corridor Project Team - 2 November 2012

PRASA (Sonitha Pooran) - Adhoc communication over project duration

Tongaat Hulett Developments (Rory Wilkinson) - 13 November 2012

7.3 Project Steering Committee Meetings

Project Steering Committee 1 (13 July 2012)

Project Steering Committee 2 (21 September 2012)

Project Steering Committee 3 (29 October 2012)

Project Steering Committee 4 (15 February 2013 (future date))

7.4 Stakeholder Workshops

Workshop 1 (29 August 2013)

Workshop 2 (19 October 2013)

Workshop 3 (21 November 2013)
**GLOSSARY**

**100 Year Floodline** - Line to which flooding is likely to occur on a 100 year interval.

**Brownfield Development** - Development in existing developed urban areas.

**Compaction** - The redevelopment of existing properties to higher densities. May include the sub-division and development of large properties within urban areas, the construction of multi-unit developments on properties previously occupied by a single unit, or more incremental development in the form of additional or second units on existing single unit properties.

**Densification** - The increased use of space, both horizontally and vertically, within existing areas/properties and new developments, accompanied by an increased number of residential units and/or population thresholds. Densification has the following benefits: reduces urban sprawl, makes better use of the city’s limited resources, cuts infrastructure costs, supports public transport by increasing thresholds to make public transport viable, improves access to social and commercial facilities, employment and services, protects the environment by concentrating people in the urban environment, and makes neighbourhoods more safe by increasing surveillance. Densification can be achieved through infill and/or compaction.

**Density** - The population or number of residential units divided by the land area where the population/residential units are situated. Gross Density is determined by dividing the total population/residential units of an identifiable town/urban/rural area/development site by the total land area of the town/urban/rural area/development site. Net Density is determined by dividing the population/residential units by the total residential land only within the town/urban/rural area/development site. This only includes access roads in the calculations.

**Development Corridors** - Linear systems of urban or rural land use, oriented and integrally linked to single (or multiple) forms of transportation routes/spines and are serviced by a hierarchy of nodes e.g. business, industrial, social, recreation etc. The corridors vary in type and include Rural Corridors, Urban Development Corridors (UDC) and Coastal Corridors.

**Development Nodes** - Clusters of mixed land use including residential which provide opportunity for mixed investment and which service surrounding urban or rural areas with respect to commercial and social services and transportation. Whilst the nodes, irrespective of hierarchy will invariably be mixed in use each of the nodes will have a primary character or role i.e. business, tourism and recreation, shopping, entertainment.

**Development Spines** - Road and/or rail transportation routes that link various nodes, industrial opportunity areas and high density residential areas into linear urban or rural systems and form the spine to the corridor.

**Ecosystem Goods and Services** - Natural ecosystems contain resources and perform functions that provide directly or indirectly specific goods (e.g. water, wood, muthi plants, food) and services (e.g. flood attenuation, water regulation, climate regulation, recreation space, erosion control) to society.

**Efficiency** - Development that maximises development goals such as sustainability, integration, accessibility, affordability, and quality of living, relative to financial, environmental, and social costs, including ongoing and future costs.

**Greenfield Development** - Development on previously undeveloped land, which is often rural or agricultural in nature.

**High Density Housing** - Residential development with an average net density of 40 units per ha and over, up to 100 units per ha where possible. High density development is to be encouraged in areas with good access to infrastructure, social services and public transportation, especially around mixed use nodes and at railway stations.

**Infill** - The development of greenfield areas within designated urban areas or within brownfield (existing urban areas) sites within designated urban areas.

**Lifestyle Options** - Clearly identifiable types of residential settlement that display varying characteristics with respect to density, building form, public space and landscape and include Urban, Suburban, Rural Agricultural and Rural Traditional.

**Local Areas** - Identifiable geographic areas within the sub metro area which are physically and functionally connected and which display predominant and homogeneous characteristics i.e. urban, suburban or rural. Each plays an important role with respect to the achievement of the broader based growth and development objectives of the Municipality as well as ensuring that local needs are met.

**Low Density Housing** - Residential development with an average net density of 10 units per ha or less.

**Medium Density Housing** - Residential development with an average net density of 15 to 30 units per ha.

**Multi-modal** - A public transport facility or site which acts as a hub for a range of modes of public transport, including rail, bus, minibus taxi, pedestrian and cycling, and which provides for the transfer from one mode of transport to another.

**Nodes** - Nodes are areas where a higher intensity of land uses and activities are supported and promoted. Typically any given municipal area would accommodate a hierarchy of nodes that indicates the relative intensity of development anticipated for the various nodes, their varying sizes, and their dominant nature.

**Open Space System (D’MOSS)** - An interconnected and functional spatial system of open space which includes ecological assets that need to be protected and or conserved such as wetlands, grasslands, estuaries, rivers, forests, woodlands, coastal zones etc, as well as areas for recreation and sports. The system includes areas of active and passive open space.

**Passive Open Space** - Open space that is set aside for conservation purposes, and which would consist of at the
very least a non-negotiable core to maintain biodiversity and ecosystem services such as stormwater management, soil maintenance and microclimatic amelioration.

**Stakeholders** - Agencies, organisations, groups or individuals who have a direct or indirect interest in a development intervention or its evaluation (African Development Bank, et al, undated).

**Sub-Area** - A smaller area identified within a Local Area as unique in character and identity and defined by major natural features such as river valleys and escarpments, major transport corridors (i.e. freeways or rail lines), and/or primary land use characteristics (i.e. identifiable residential, commercial or industrial area focused around economic activity and social facilities or areas of high ecological value).

**Sustainability** - In the context of land development, sustainability implies that the life cycle costs of land development and its likely side effects on the environment, community, and the economy need to be understood and taken into account to sustain its benefits, while minimising or mitigating any likely negative impacts.

**Upgrade** - In the context of public housing development refers to the redevelopment of an informal settlement area to provide new residential units and associated services to the same standard as greenfields public housing development.

**Urban Development Line** - A line demarcating the extent to which urban development will be permitted to establish in the urban development corridor in the long term. It also demarcates those areas that are to be protected and developed as rural and agricultural areas. The line has been drawn to include expansion areas for future growth and which are adjacent to existing urban areas.

**Urban Sprawl** - The uncontrolled expansion of urban areas.
ANNEXURE 1: STAKEHOLDER ENGAGEMENT

INTRODUCTION

The focus of the Stakeholder Engagement Process for the City Density Strategy has been the active involvement of municipal officials throughout the project beyond merely commenting on product produced by an external consultant project team.

As such the methodology adopted utilised a special stakeholder engagement vehicle (“Social Learning Process”) in order to further joint learning and build a common understanding of the concept and implications of densification and how and what a strategy for application in eThekwini could look like, as well as traditional engagement vehicles such as Project Steering Committee Meetings and Targeted Stakeholder Interviews.

The following table summarises the type and nature of engagements undertaken throughout the project process.

**TABLE 1: SUMMARY OF STAKEHOLDER ENGAGEMENTS**

<table>
<thead>
<tr>
<th>PHASE</th>
<th>TYPE OF ENGAGEMENT</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Inception Report</td>
<td>Presentation</td>
<td>13 Jul 12</td>
</tr>
<tr>
<td>2 Densification Concepts and Best Practice</td>
<td>Interviews</td>
<td>THD/KZNIA/NPTC team etc</td>
</tr>
<tr>
<td></td>
<td>Workshop 1</td>
<td>Project Steering Committee</td>
</tr>
<tr>
<td></td>
<td>Presentation</td>
<td>Project Steering Committee</td>
</tr>
<tr>
<td>3 Identification of Areas in Metro</td>
<td>Workshop 2</td>
<td>Project Steering Committee</td>
</tr>
<tr>
<td>4 Strategies for Implementation</td>
<td>Workshop 3</td>
<td>Project Steering Committee</td>
</tr>
<tr>
<td>5 Consolidation, Review and Finalisation</td>
<td>Presentation</td>
<td>Project Steering Committee</td>
</tr>
</tbody>
</table>

This report provides a concise summary of outcomes of the stakeholder engagement process.

**SOCIAL LEARNING PROCESS**

A “Social Learning Process” was used to generate and test the project process outputs in order to leave a platform of ‘enhanced competency’ and empowerment amongst all municipal stakeholders so that the responsibility for ongoing implementation of the project deliverables does not only fall with the Project Team but is embedded within the various municipal departments.

The process is summarised in the following diagram:

Three Stakeholder Engagement Workshops were hosted at Royal HaskoningDHV’s Offices. These workshops were well attended and participation from the stakeholders was good and provided invaluable insight to the development of the city density strategy.
WORKSHOP ONE: DENSIFICATION CONCEPTS AND BEST PRACTICE

The first of three stakeholder engagement workshops held on 29 August 2012 was to explore "what do we understand density to mean?".

The purpose of the workshop was to begin to consolidate ideas, concepts and definitions relating to density in eThekwini Municipality.

Participants engaged in a group discussion on why they believed density to be important. Each group was required to provide their top five reasons. Through the discussion and feedback, two clear reasons for density emerged: sustainable resource use and/or human settlement concerns.

Participating departments were requested to present a consolidated departmental perspective on the following:

- the most appropriate density definitions for eThekwini?
- the most appropriate ways of measuring density in eThekwini?
- what constitutes high, medium or low density?

The day proved to be very interesting and some meaningful insights into how each of the municipal departments engages with density were uncovered. Participants were introduced to the different dimensions and measurements of density and the implications of targets explored.

The overarching finding of the day was that there were many working definitions of density within eThekwini and that a common understanding of "what is meant by density" is needed for eThekwini Municipality.

DEBATE

REPORT BACK

The focus of the second stakeholder engagement workshop held on 19 October 2012 was to unpack "where density is currently occurring in eThekwini and where it should be occurring".

The consultant team presented the participants with a spatial picture of where density is currently occurring, what different typologies of density look like and where over time densification has occurred.

Participants then brainstormed why they believed density was occurring in certain areas and not others.

Some key insights included:

- Densification is occurring, however the pattern of densification is of concern to City Planners
- Density is both a phenomenon and tool
- There are both attractors and constraints for density in differing parts of the Municipality
- There is a history behind our density patterns linked to both technology and politics
- Can the Municipality truly control where density occurs

After a short discussion on where density should be occurring, participants engaged in a group discussion on where they believed density should be encouraged to locate. Each group was required to identify only three areas where they felt the goals of a densification strategy would be most fruitful. A rational for each choice had to be provided by the team.

The feedback from each of the teams provided some key principles for locating density in eThekwini. These include:

- Locate density in existing town centres
- Locate density in close proximity to high density employment nodes i.e. South Durban Basin
- Unlock 'hidden' density potential in existing suburbia

COLLECTIVE LEARNING

WORKSHOP TWO: LOCATING DENSITY
Workshop Three: Implementing Density

The focus of the third stakeholder engagement workshop held on 21 November 2012 was to understand "what type of interventions would be required and where".

The consultant team presented the participants with a range of density patterns that are evident in eThekwini for discussion.

Each pattern was then unpacked in terms of the reasons for why a certain pattern was occurring i.e. what were the attractors and constraints to density in each density pattern.

Through the discussion around each pattern, a number of themes for intervention emerged.

These included:
- Policy and Regulatory
- Marketing
- Finance
- Institutional Arrangements
- Capital Investment
- Urban Management
- Fiscus

Each of these themes was then further unpacked in terms of the types of tools that could be used to influence density.

It was noted in the concluding remarks of the workshop that a three pronged strategy to density was required.

- Targeted Approach: Generic small operational interventions
- Systemic Approach: Large scale policy and institutional changes
- Experimental Approach: Test cases and pilot projects

Project Steering Committee Meetings

Project Steering Committee Meetings were held to present the Draft Deliverables of each phase of the project:
- 13 July 2012
- 21 September 2012
- 29 October 2012
- 15 February 2013 (future date)

Attendance at these meetings was fair.

Comments received from the meetings, together with written comments from Municipal Officials have been used to make amendments to the final consolidated report.

Municipal Infrastructure Investment Forum

It is the intention to present the Draft City Density Strategy to the Municipal Infrastructure Investment Forum (MIIF), however to date an opportunity to present has not yet been secured.
TARGETED STAKEHOLDER INTERVIEWS

A number targeted stakeholder interviews were conducted with members of the built environment profession in order to ascertain whether there is demand for higher density development, what barriers to creating density exist and what guidance the market would be looking for from a City Density Strategy.

Interviews were conducted with:

- North Public Transport Corridor Project Team
- Tongaat Hulett Developments
- Ken Davies and Associates
- Lees, Short and Associates
- eThekwini Municipality Development Information Centre
- PRASA

NORTH PUBLIC TRANSPORT CORRIDOR PROJECT TEAM

Mike Kahn, Suzanne Logan, Tindall Kruger, Elizabeth Dubbeld, Tony Markewicz and Toni Redman

2 November 2012

The purpose of this meeting was for the two teams to share their knowledge regarding emerging principles for densification and how to implement densification in order to feed into both processes.

Some of the key principles/conclusions emanating from the meeting:-

- there is no one size fits all approach and a differential approach is needed
- formality is a major barrier i.e. need to look for ways to unlock ‘hidden’ potential in existing neighbourhoods, especially with respect to 2nd dwellings
- without a number of preconditions, higher density developments will not happen i.e. the right location
- there may be a need to introduce a special vehicle to deliver higher density development within the city, specifically in relation to subsidised government housing
- cost of living is starting to drive a desire to densify in middle to upper income neighbourhoods, not low income neighbourhoods
- there will be generic principles for density, however implications at site level may be different and should be interpreted in relation to the sites’ context
- the City should aim to create a system of preconditions that could accommodate density where they desire it to occur.

TONGAAT HULETT DEVELOPMENTS

Rory Wilkinson and Toni Redman

13 November 2012

As one of the major developers of higher density development within eThekwini Municipality, the insights of THD have proved to be very instructive to the City Density Strategy process.

THD recognise that the suburban model that has been developed to date is no longer sustainable in the long-term, although, until recently this is what the market has demanded.

Well-located land for density is key to ensuring that the take-up of development opportunities occurs. Location however needs to be supported by a fully functional public transport system, as well as social services system.

There is a call to the City to be bold in determining what they want with respect to density, including height. Attempts to increase densities in developments such as Ilala Ridge and Executive Village have met with resistance from existing communities (NIMBY).

High density development within the Umhlanga New Town was achieved due innovation in a sliding scale parking standard. Using the current standards, the development as it is, would not have been achieved.

Other standards are considered too high e.g. road widths, access to each unit, building lines. Requirements for infrastructure capacity are overdesigned. Green building principles, recycling, etc can reduce the demand placed on municipal infrastructure.

With increasing development costs, unit sizes across the board, are getting smaller. This includes a decrease in the size of SR sites.

Overall there is a sense in the market that there is an increasing appetite for higher density living, however at present the market is small due to a number of constraints linked to:

- regulatory control
- the availability of finance from Banking sector
- development standards
- cultural acceptance

Developers are looking for certainty from the Municipality. A clear articulation of what types of development they want to see and where.

KEN DAVIES AND ASSOCIATES

Ken Davies and Toni Redman

20 November 2013 (telephonic)

Evidence of property sales related to new high density developments in the Umhlanga New Town tend to speak towards an appetite for density, if the density being offered is well located in terms of access to employment zones.

There is also a recent commitment to the development of higher density housing in the Bridge City node again linked to employment associated with the new regional hospital and magistrate’s court.

8 City is imposing conditions on developments but cannot help facilitate implementing the conditions e.g. how to unlock finance for inclusionary housing

9 Banks are risk adverse. Developers have to raise approximately 80% of funds before a Bank will consider providing finance for a development. No finance is granted for inclusionary housing
Increasing transport costs and inefficient public transport systems are driving the demand for density near employment.

The lack of ancillary residential services e.g. schools, social services, clinics libraries etc are problematic in newer high density areas, especially where these areas are driven by the private sector. The current process of addressing social services backlogs is not focussing on these areas. **Total living environments are needed with high density development.**

**Facilitating density goes beyond merely providing the right zoning.** There needs to be an economic return to investing in high density development and if it is not in the right location, it will not work.

The proposed IRPTN network will assist in addressing some of the poor location issues, but not all.

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**Lees Short And Associates**

Joanne Lees and Toni Redman

20 November 2013 (telephonic)

Joanne Lees is on the Executive Committee of the KZN Institute for Architecture as well as a practising architect.

One of the driving factors for maximising development on-site, and indirectly density, is the value of land. Well-located land simply demands a higher value and therefore in order to maximise returns, density is generally delivered and/or demanded of a site. The appetite and demand for density is strongly linked to good location but the balance between affordability and location is difficult to achieve.

The practice has noted an increasing demand for 'granny-flat' developments in additional to ancillary units for household staff in areas located near tertiary education institutions. However the **current standards contained within the Scheme have a direct impact on the number of additional units that can be delivered on a site e.g. the maximum number of kitchens permitted in Special Residential zones.**

Delivering density at a project level can be hampered by development standards and development controls. In the case of SOHCO housing projects in the Hillary and Cato Manor, **set-back lines, parking standards and building lines impacted on the project’s ability to maximise density and keep the affordability of the developments in check for the developer.**

Anecdotal evidence suggests that a limiting factor for acquiring density is **limitations in infrastructure capacity.**

Recent Inner City work undertaken by Oxfam points to an issue of vulnerable groups in the current housing scenario who are falling through the cracks: Students and Non-residents. This has lead to a **demand for rack rentals in the informal market** where occupants are not subjected to the same stringent landlord requirements as the formal market e.g. provision of payslips, credit checks etc.

In order to achieve density some key principles were suggested:

- promote a mix of typologies
- do not predetermine target income groups areas in projects allow the developers to determine this as they know their business
- all greenfield developments should include some form of higher density development e.g. along access routes
- determine priority zones for density
- investigate alternate parking solutions e.g. residents parking permits for on-site parking, street patrols etc

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**eThekwini Municipality Development Info Centre**

Don Colborne and Toni Redman

20 November 2013 (telephonic)

There a no statistics but again **a sense that there is a desire for increasing density** in eThekwini based on the nature of queries being addressed by the Info Centre.

Generally queries are related to **how an owner can acquire additional rights to develop on their site.** The types of enquiries tend to suggest owners are looking to accommodate extended families, and/or looking to secure additional income from a rental unit. As a result there is a trend of **ad-hoc rezoning occurring in neighbourhoods zoned for Special Residential.**

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**PRASA**

Sonitha Pooran and Toni Redman

Ad hoc informal discussions as part of PRASA Rail Study

PRASA is fully supportive of the Municipality’s desire to see residential densities increased around key public transport infrastructure. **PRASA’s desire emanates from need to increase ridership on their rail services** and is currently in a process of modernising their service and improving the quality of the existing commuter rail service.

Commitment to high quality neighbourhoods in the vicinity of rail stations is required.
# Project Steering Committee Members As Per Inception Report

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soobs Moonsammy (Principal)</td>
<td>Buddy Govender</td>
<td>GIS Office/Planning Information</td>
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* Bold denotes participation in at least one workshop or PSC meeting,