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DESKTOP STUDY ON RURAL DENSIFICATION

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Abbreviations

ASPIRE Amathole Economic Development Agency

CBD Central Business District

COGTA Department of Cooperative Governance & Traditional Affairs

CSIR Council for Scientific & Industrial Research

DOHS Department of Human Settlements

DRDLA Department of Rural Development & Land Affairs

ITB Ingonyama Trust Board

LED Local Economic Development

NDP Neighborhood Development Programme

NDPG Neighborhood Development Programme Grant

IDP Integrated Development Plan

PGDS Provincial Growth & Development Strategy

PSEDS Provincial Spatial Economic Development Strategy

RDP Reconstruction & Development Programme

SANRAL South African National Roads Agency Limited

SDF Spatial Development framework

UDF Urban Development Framework

UDS Urban Development Strategy

Executive summary

The study aims to investigate the concept of rural densification by looking into what has been done globally, nationally and by other provinces. This would provide a point of reference in development of densification policies and programmes within the province in the context of creation of sustainable human settlements as stipulated by outcome 8 which refers to the creation of sustainable human settlements and improved quality of household life.

Densification can be defined as increased usage of space both horizontally and vertically within existing areas /properties and new developments accompanied by an increased number of units and/or population thresholds (Cape Town, draft densification strategy). Densification plans ensures that the number of dwellings per hectare increase in a planned and sustained manner without adversely affecting the quality of life of established communities within a defined area.

The report includes the literature review chapter (chapter 2), which summarizes and analyzes existing literature with respect to densification with emphasizes on the rural context. Work reviewed in this chapter includes policy and/or strategies and research projects undertaken internationally, nationally, by different provincial departments as well as at local government level.

The chapter touches on the international perspective in terms of rural densification by looking at rural development strategies which are being implemented in India and Mexico. Furthermore, the chapter focuses on the South African perspective and looks at the guidelines for sustainable human settlements developed by the Council for Scientific & Industrial Research (CSIR). The guidelines aim to guide the creation of sustainable human settlements by applying principles that are of structural and spatial nature.

The literature review also looked into the Western Cape provincial strategy which identifies different types of settings suitable for densification and also provides a number of densification options. Another document has been developed specifically for City of Cape Town, which encompasses densification policy statements to intensify densification in priority zones within the city. The chapter also covers a strategy by the City of Tshwane which is similar to strategies highlighted above in the sense that it emphasizes on applying densification principles to identified priority zones.

Chapter 3 entails best practices in terms of projects that have been undertaken in different regions in South Africa. An example of a project in Zimbabwe is also recorded. It was fascinating to discover the similarity of human settlements patterns in Africa and perhaps KZN could draw up some useful lessons. The focus of the project was to use slums upgrade project of Dzivarasekwa Extension as an opportunity to develop new affordable housing models that could sustainably increase density. The section also covers examples of small town regeneration projects in Eastern Cape and North West.

Chapter 4 looks at the status of densification in KwaZulu-Natal. The province is characterized by having scattered settlements in the periphery. The report outlines a number of strategies and recommendations that could be employed to intensify the planning and implementation of the concept of densification in KwaZulu-Natal. Amongst others, the following has been recommended:

- The CSIR Redbook be used for guiding human settlements developments however, technical and social dynamics must be considered in each project. Implementing Agents will, thus, have to ensure that they are advised by their town planners in relation to their developments.
- Provincial Growth & Development Strategy should also be considered in planning for development in the province.

- The current urbanized areas and larger municipalities be prioritized in terms of pilot projects, as well as areas identified for new town development or urban regeneration, and in alignment with the Provincial Growth and Development Strategy.
- The concept of densification be promoted as a tool to be applied on a case-bycase basis, starting with areas that are already dense in nature and/or where new settlements are planned.
- The principles of sustainability and planning for future growth and development be applied in settlement planning.
- The figure below illustrates the KZN densification outline proposed by the Department of Human Settlements:

4. Community acceptance and understanding

To be tested, and negotiated in terms of findings of 1--3, may result in development of packages so as not to perpetuate poor settlement patters, yet to ensure very basic needs are addressed appropriately

Include: ITB, COGTA, House of Traditional Leaders

Joint communication strategy required from ITB, COGTA,

Rural Development, DoHS

Project specific interventions also need follow up communication (i.t.o pilots)

1. PGDS and PSEDS v Existing dense settlements

Evaluate existing settlement patterns against PGDS and PSEDS to identify possible areas suitable to densification

Planning units for COGTA, DoHS, ITB - GIS mapping to be used as base

Where do we densify and why?

3. Technical conditions

A one-size fits all appraoch is not possible. Densification and development plan yields are informed by soils, environment constraints, topography, servitudes, existing development and structures

Based on project/area specific interventions, perhaps to consider pilots in each area, e.g Vulindlela in PMB, Umzumbe i Hibiscus, Jozini, Nkandla, etc - advise needed from COGTA - consider exisiting and planned projects informed by 1. and 2

2. Municpal planning criteria

Consider municipal planning bylaws in relation to densities (note PDA will soon apply to all areas, also ITB requirements i.t.o. land use pattters/zoning and leases)

Planning units of COGTA and DoHS to confirm with municipalities (starting with aspiring metros and confirmed metro)

^{*}Densification model and approach for KZN (rural development) to be read clockwise

Chapter 1: introduction and context

The aim of this chapter is to provide an overview of the research topic through providing background of the concept of densification and also provides motivation for undertaking the research and how the whole exercise was undertaken. Information in this chapter has been extracted from the research proposal that was prepared in January 2012, circulated to both internal and external stakeholders of the KwaZulu-Natal Department of Human Settlements.

1.1. Title

Investigating the concept of rural densification.

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1.2. Acknowledgements

For the success of the desktop study engagements with other organs of the state has been most crucial. Product Development Component therefore acknowledges inputs given into the study by the following organizations:

- KZN Department of Human Settlements: Integrated Planning Unit
- Department of Cooperative Governance & Rural Development
- KZN Planning Commission
- Department of Rural Development & Land Reform
- Ingonyama Trust Board

1.3. Introduction

It is marked that the global population is at a turning point in terms of the initial setting where most people lived in rural than in urban areas. Currently the society has entered an era where more people are living in urban than in rural areas (Geyer, 2007). This is because more people are migrating to cities for a number of reasons hence cities are growing faster, as a result tradeoffs are continuously being made between space and place. This has necessitated the need for planners and policy makers to seek alternatives to address the rapid growth in cities hence the concept of densification was debated.

Densification can be defined as increased usage of space both horizontally and vertically within existing areas /properties and new developments accompanied by an increased number of units and/or population thresholds (Cape Town, draft densification strategy). Densification plans ensures that the number of dwellings per hectare increase in a planned and sustained manner without adversely affecting the quality of life of established communities within a defined area. Densification does not necessarily refer to high rise buildings as it has been commonly assumed but rather entails different types depending on the area being considered for densification. It may therefore include demolition and redevelopment; infill and Brownfield development; subdivision, additional/second dwelling, sectional title development or green fields development. It might include reorganization of space to allow for concentrated settlement or clustering of land uses to facilitate more cost effective infrastructure developments.

South Africa is no exception to such as this phenomenon has been prevalent in this region. In the country the concept of urban migration was inherited from the apartheid regime where people had to move to urban areas for employment. In 1994 the Reconstruction & Development Programme (RDP) was enacted as means of addressing such imbalances of the past, it meant to encourage densification and unification of urban fabrics through promoting more compact cities, decent public

transport, housing close to work to facilitate easy access to employment opportunities and urban resources (Todes, 2006).

The RDP influenced a number of pieces of legislation which were to facilitate the concept of restructuring, some of these include Development Facilitation Act (DFA) and Urban Development strategy (UDS) just to name a few. This is evident in that a lot of work has been done in terms of urban restructuring and densification. However, this still does not minimize or address rural-urban migration and/or the underlying challenges, but it encourages this phenomenon as it focuses on urban areas. In the light of the above, government has recently initiated discussions with respect to the idea of rural densification, moving away from the narrow view of associating densification with urban areas only.

It must be noted that migration and/or population movement has been identified as a major contributor to rural poverty in South Africa. Cross et al (1998), states that in KwaZulu-Natal (KZN) job search is no longer the single dominating reason given for migration instead infrastructure is with it for first place, with land issues close behind. It is noted that as many as two thirds of the province's disadvantaged families have broken away from their communities of origin and moved at least once in their lifetimes (Cross et al, 1998).

Rural to rural migration is another trend that has been highlighted in recent studies. This is due to people moving to advantaged rural areas around small towns & secondary cities. One would say that this manifest the need for densification to be explored in rural areas as an attempt to minimize dependence on urban areas for better opportunities and better services.

Densification has a number of advantages which include the following:

- a) Reduces excessive consumption of non-renewable resources
- b) Supports the development of a viable public transport
- c) Facilitates economic opportunities and supports service provision

- d) Improve housing patterns and choice of housing type
- e) Impact positively on security and safety

The development of higher densities is impacted by integrated form and design of buildings and spaces. There are three building forms that are mostly considered for densification, these are as follows:

- a) Single detached tower building, surrounded by open space
- b) A traditional street layout with attached row/terrace housing
- c) A perimeter or a courtyard building design enclosing an open space

1.4. Motivation for the research

The study aims to investigate the concept of rural densification by looking into what has been done globally, nationally and by other provinces. This would provide a point of reference in development of densification policies and programmes within the province in the context of creation of sustainable human settlements as stipulated by outcome 8 which refers to the creation of sustainable human settlements and improved quality of household life.

Previously densification strategies have been developed in the context of urban areas but recently rural densification has started receiving attention and commitment from government. The study will attempt to record examples of densification in rural areas/communities and its implications. However, literature indicates that this area of research presents a gap as stated that densification has always been an urban phenomenon.

The need for rural densification manifests itself in a number of circumstances which include the rising percentage of households living in informal settlements. According to Statistics SA General Household Survey in 2005, 65% of people in the country live in urban while 35% is in rural areas.

Just by driving outside the cities one could observe that densities were created outside of the city centers and that they are dispersed all over. Economic hubs are also scattered, this means that people still have to travel long distances to their places of work and they have to spend significant portions of their income on fares. This then explains the influx of people to cities in terms of migration.

In South Africa many people spend up to 50% of their income on transportation costs (Statistics SA General Household Survey, 2005). These results from that historical housing development were located on the peripheries of cities, because that is where land was available and cheaper, but it was far from the city centers. Rural densification aims to bring people closer to job opportunities by bringing development to them and eliminating a scenario where they have to migrate to cities and flock into urban areas. However, densification in itself is merely a tool that needs to supplement forward planning for sustainable development. Proper settlement planning is the key to ensure that services and sites would be available to house communities and provide space for sustainable living and economic activity.

1.5. Research questions

- a) What does rural densification entail, (is it an attempt to urbanize rural areas)?
- b) What forms of densification are available?
- c) Which models can be adopted for implementation in KZN?

1.6. Objectives

a) To investigate the context rural densification for future reference of stakeholders in the human settlements spectrum (what does it entail).

- b) To examine and record forms of densifications by recording examples of what have been employed globally, nationally and at provincial level by different provinces.
- c) To draw recommendations in terms of how KZN-Human Settlements can contribute best into rural densification.

1.7. Research design

The study has been undertaken as a desktop research (work plan attached). Desktop research refers to seeking facts, general information on a topic, historical background, study results, etc., that have been published or exist in public documents (http://www.etu.org.za/toolbox/docs/development/research.html, assessed 12 April 2012). Information that informed the research was obtained from libraries, newspaper archives, government, university, websites, Non-Governmental Organizations and Community Based Organizations.

1.8. Data collection

Data collection for this study was conducted over a period 2 months (May & June) and the report has been continuously updated. A preliminary meeting was held with key stakeholders in the rural planning spectrum; these included the KZN-Department of Human Settlements (Integrated Planning, Product Development & Capacity Building) with external stakeholders i.e. Department of Cooperative Governance & Traditional Affairs (COGTA); the Planning Commission; Ingonyama Trust Board (ITB) and the Department of Rural Development & Land Reform (DRDLR).

Books, websites of different organizations (i.e. other countries, Provincial departments and municipalities) and engagements with relevant professionals (i.e. planners) have been used as primary sources of information. Contacts have also been established with relevant bodies to continuously add value into the study i.e. consultants and Tertiary Institutions.

Chapter 2: Literature review

The literature review chapter aims to summarize and analyze existing literature with respect to densification with emphasizes on the rural context. Work reviewed in this chapter includes policies and/or strategies and research projects undertaken internationally as well as by various bodies of government within the Republic of South Africa.

2.1. International perspective

In South Africa the accelerated migration of rural people into urban areas has caused informal settlements to grow beyond the coping capacity of city infrastructure, this case is similar to what is happening in other international countries, such as India and Mexico. In theory, living in urban areas potentially offers improved access to health care, education, better housing and improved economic opportunities. In reality however, the growth of urban slum areas in developing countries brought about an increase in poverty as many poor, often illiterate and unskilled people leave rural areas to try and find employment in cities.

As an attempt to resolve this phenomenon, India has developed a mini master plan as part of the overall master plan for Delhi. This plan categorizes the rural areas of India into three levels and provides a customized rural development packages for each of these categories. The rural development strategy for India goes beyond agricultural activities as one would anticipate. On the other side Mexico's integrated rural development plan is based on using agriculture to motivate indigenous people to remain in their areas of origin and allow agriculture to develop their areas in terms of economic and social improvements.

2.1.1. Rural Development in India: Delhi

Of all the emerging economies, India is the only one that continues to be predominantly rural in nature (Nathan et al, 2004). Rural India is still mostly dependant on agriculture and the share of non-farm based livelihoods is very low at about 15 per cent. A study conducted on rural transformation in India reveals that there have been wide regional variations in the process of rural transformation, with some regions showing the characteristics of middle level developed countries in South East Asia and some at a stage much behind sub-Saharan Africa (Nathan et al, 2004).

A Mini Master Plan was developed and has been implemented for developing rural villages in India (Delhi). According to the plan, out of the total area of 1483 square kilometers of Delhi; 798 square kilometers are rural and 685 square kilometers are urban. The Mini Master Plan seeks to allow for planed and integrated development of rural areas of Delhi which talks to construction of physical, social and ecological infrastructure.

The plan divided an overall of 195 rural villages into three ranks; these are **growth centers**, **growth points** and **basic villages**. The categorization into different ranks was informed by an investigation into the following factors:

- i. Population
- ii. Growth of population
- iii. Physical infrastructure
- iv. Available social infrastructure
- v. Potentiality for development and communications

a) Growth centers

Growth centers are defined as dynamic and efficient centers for development that have a core of commercial and community services, residential development, and natural and built landmarks and boundaries that provide a sense of place (State of Rhode Island, 2002). Encouraging development within identified growth centers is intended to reduce the pressure for sprawl development outside of the growth centers. According to the state of Rhode Island report (2002), growth centers concept will help cities and towns' plans for the future by identifying where they want growth and development to occur and what they want that growth to look like.

These centers may have different specifications from one area into another in terms of size, regional importance, and services provided but they share common characteristics such as public and private investments in services; facilities; buildings; transportation; water and wastewater systems. The center also contains contain a combination of schools, commercial and industrial buildings, and housing.

Fifth teen (15) areas were categorized as growth centers in India (Delhi), each growth center was planned to serve an area between 40 to 50 square kilometers, covering a population of 40-50 000 people. These centers perform higher order functions and activities, mainly of non-agricultural nature. The centers entail the development of large areas for different types/purposes. The following facilities are planned for this category:

- i. Big shopping complex
- ii. Building of public and social facilities (educational, vocational, recreational, medical, banks, parks, sports center, gymnasium, skating hall, public conveniences, auditorium, restaurants, cafes, mini forest, places for religious gatherings, police station, collection and distribution centers)
- iii. Small industrial estates

b) Growth points

Third three (33) areas have been characterized as growth points, which will serve an area of 20 to 25 square kilometers, covering a population of 15- 25 thousand. No industry other than household is allowed in these villages. The growth point will have the following facilities:

- i. Shopping centre of medium scale
- ii. Primary, middle and senior secondary schools
- iii. Library /cub /adult education centre
- iv. Post, telegraph and telephone office
- v. Cooperative societies
- vi. Primary health centre
- vii. Sports complex
- viii. Multi-purpose centre
- ix. Public park
- x. Gathering and religious places

c) Basic Villages

A total of 147 areas have been identified as basic villages. Each basic village aim to serve existing *abadi* areas (built up areas of the village). No industry other than household is allowed in these villages. These basic villages will have the following facilities:

- i. Multi-Purpose Community Center (MPCC), with adjoining eight to ten shops kiosks
- ii. public parks
- iii. primary school
- iv. sports stadium for rural sports
- v. public conveniences
- vi. space for meals
- vii. religious and cultural gatherings facility
- viii. community hydrants
- ix. latrines and electricity
- x. sub-post office

2.1.2. Integrated rural development Mexico

Mexico facilitates rural development under the Integrated Program for Rural. The program was initiated in the 1970's, it focus is on the activities of government agencies on selected rural areas (micro-regions) which have substantial productive potential, but whose populations lack the resources necessary to tap this potential.

a) The program includes investment in the following activities:

i. Directly Productive Components

- a) Small-scale irrigation
- b) soil and water conservation
- c) crop & livestock
- d) Bookkeeping development programs
- e) Reforestation
- f) Fisheries
- g) Rural industries
- h) Medium-term development credit

ii. Productive Support Components

- a) extension services
- b) applied research in support of the extension program
- c) Rural marketing facilities
- d) organization of farmer groups and support of land titling programs
- e) Construction, rehabilitation, and maintenance of rural roads
- f) rural electrification
- g) A program to generate productive employment opportunities for rural women
- h) Feasibility studies for productive investments.

iii. Social Infrastructure

- a) Primary schools and boarding facilities
- b) Rural health clinics
- c) A pilot nutrition program
- d) Village water supply systems
- e) village self-help programs for community improvement

iv. Management

a) Monitoring and evaluation; and staff

b) The program has the following objectives

- i. Substantially increase food crop and livestock production
- ii. generate employment and income opportunities through agri-cultural diversification
- iii. increase fish production and consumption, and increase poor fishermen's income
- iv. improve living and working conditions of the target population through improvements in health, infrastructure, service provision
- v. Protect the natural resource base through soil conservation.

c) Program beneficiaries

The projects within this program aim to benefit small farmer families or the poorest of the poor, mostly indigenous people falling within specified average annual income. In view of the diversity of the proposed activities a given group of a rural population may be expected to benefit from more than one project activity. Some 1.2 million families or approximately 80 percent of the target population would be expected to benefit from project activities over a three year period, either through increased income and employment opportunities generated or from the use of the infrastructure built.

Beneficiary participation begins at the planning stage in each locality meeting, communities are called together to discuss their investment needs with representatives of line agencies, state representatives and local governments. Beneficiaries are also responsible for contributing part of the cost of investment under some components. Such contributions may be in the form of labor, draft power, machinery, or materials. The proportion of sub-project cost to be borne by beneficiaries is agreed upon by beneficiary groups and implementing agencies.

2.2. South African perspective

2.2.1. Perspective of the National Planning Commission with regards to rural development.

The most common mistake that governments have made in the past years since 1994, is the assumption that rural areas are all the same hence uniform interventions have been implemented in rural areas. The National Development Plan (NDP) recognizes that rural areas should not be dealt with through a blanket approach. The overall idea is to develop economic viable rural settlements, achieving this should be built on attributes of a particular area. Before determining a suitable rural development intervention, a comprehensive investigation of the area must be undertaken to ensure that crucial features are identified and the intervention will be design to complement and maximized their uses in a sustainable manner. Many rural areas usually hold potential for economic growth with a strong emphasis on agriculture; mining or tourism. Specified criteria should be used to establish a sector/s appropriate for a given area.

A major issue facing rural areas is that planning that was done at the time did not create a conducive environment for human habitation. Rural areas, homelands and townships were just seen as areas for housing black labor and no attention was given into adequate planning. Location of these areas had and still continues to limit basic

social and recreational amenities and subjects communities to long walking distances to transport networks.

In recognition of the above hereditary challenges the National Planning Commission (NPC) within the National Development Plan (NDP) document has established principles to guide spatial planning in rural areas. These principles are as follows:

- a) Sensitivity to the differentiate nature of rural areas, recognizing that there is a rationale for varying types and levels of investment.
- b) Innovative forms of service and infrastructure provision where conventional, fixed infrastructure maybe unaffordable. This includes mobile services, renewable energy and ICT.
- c) Stronger spatial coordination and greater clustering of services in all rural areas, including health, education, transport, welfare and security.
- d) Strengthened systems of governance and management such as reformed tenure and land management systems and targeted infrastructure provision in areas of densification along mobility corridors and within previous homelands.
- e) Land reform programmes that are spatially targeted in areas that are most viable in terms of agricultural land and access to markets.
- f) Prioritised attention to agriculture and rural enterprise development in areas of high market access, especial within peri-urban zones and along major mobility corridors.
- g) Prioritised attention to connective infrastructure that strengthens the links between the urban and the rural.
- h) Attention to "soft infrastructure" for rural development, including support for good governance, enterprise and youth development.
- i) Attention to expanding ICT access in rural areas.
- j) Attention to the infrastructure for supporting non-farming activities such as tourism and mining in areas with proven potential.

- k) A renewed emphasis on the developmental role of small towns in rural areas as job creation centres.
- 1) Targeted investment to support the regional and local food production systems that build rural economies and reduce national food security risks.
- m) Attention to developing green economies in rural areas, especially in relation to producing renewable energy, and sustainable tourism, farming and water-usage.

2.2.2. Guidelines for human settlements planning & design – CSIR

The South African government has made a call for physical, social and economic integration of towns and cities; this also stresses the need for higher densities and compaction. This thinking has influenced the development of the guidelines for the Human Settlement Planning and Design document (also known as the Redbook) by Council for Scientific & Industrial Research (CSIR); however the document does not deal with settlements in rural areas, although many of the principles and standards are applicable and can be adopted for settlement making in rural areas.

The CSIR Redbook provides guidelines for settlement making; this entails examination of planning & design in South Africa and also looks at principles that are important to achieve a well performing settlement. The principles which are important in achieving a well performing settlement are of a **structural and spatial nature**. For such principles to have logic in settlement making they must be integrated, thereby establishing a set of locational responses. They can be applied to Greenfield sites, urban restructuring and upgrading of informal settlements.

2.2.3. Structural principles

Structural principles talk to consideration of all structural elements within a settlement, it encompasses a number of ideologies which talks to reinforcement, continuity, discontinuity, externalization, concentration along routes and sameness and diversity. These are looked at briefly below:

a) Reinforcement

This idea focuses on the importance of reinforcing each structural element with others. This talks to how interconnected modes of movement (pedestrian, bicycle, train, tax, bus & car) can be brought together into a single corridor, thereby creating a range of structural opportunities. The thinking here is that where stopping points for all modes come together, potential exists for creation of a major place with high-order urban activities.

b) Continuity

The notion of continuity talks to green space, movement, built form and continuity of public space. **Continuity of green space** refers to that access to natural as well as urban and rural landscape is a basic need for people hence establishing of continuity for green space is an important element in settlement design.

- i. Continuity of movement looks at the movement or flow of people, goods and services as the energy network of the settlement, which entails activities that require the greatest degree of exposure which will tend to gravitate towards the most accessible points and links in the energy network.
- **ii. Continuity of built form** is an idea centered on integrating development of new parcels with existing development to obtain agglomeration of economies.
- iii. **Continuity of public spaces** looks at ensuring that every building, either through the building itself, its walls or planting should contribute to defining the public space it abuts.

c) Discontinuity

In the settlement making process the principle of discontinuity refers to the promotion of breaks in particular movement of the urban system to achieve particular effects. This can apply to movements and built form. This principle can also be used to integrate natural and rural areas into the urban landscapes.

- d) The principle of externalization refers to location of social facilities and higher order urban activities along more continuous movement routes. This is to ensure that the future of facilities is not entirely dependent on the local community but rather is open to a wider range of people. This will maximize the potential return on the investment in facilities as it will be accessible.
- e) The principle of sameness and diversity, this principle relates to accommodating both homogeneity (sameness) & heterogeneity (diversity) in a settlement. This refers to considering cultural and economic diversity and expression within a settlement. It recognizes the democratic, multicultural society.

2.2.4. Spatial principles

According to the Red book there are **four spatial principles** which are central to creating positive settlements. These are definition, scale, flexibility and intensity of space use. These are looked at briefly below:

- a) **Definition** refers to that in a positive environment the public space is defined by buildings and other space defining elements, such as walls and planting. This creates a sense of enclosure.
- b) Scale refers to judgment about relationships such as size, distance and height. In human settlements terms, scale reference is usually made to

"human scale", which is the scale that human beings feel comfortable with.

- c) Flexibility refers to the creation of spatial structures which can accommodate the unexpected demands made overtime. Positive environments reflect flexibility in their spatial structures.
- d) Intensify of space use encompass intensive use of land as this yields maximum benefits, these includes creation of support for economic development, establishing an economic climate, efficient use of infrastructure and of better utilization of land (this includes promotion of different housing types).

2.2.5. Application of the principles

According to the CSIR Redbook, at present in South Africa there are in essence three generic urban conditions prevailing. These are greenfields, urban restructuring and upgrading of informal settlements. In each of these cases the form is different but the application of principles should be the same. These are recorded below:

a) Greenfield sites

A challenge with Greenfield developments is to provide spatial ordering system to guide growth on the site, while integrating it with surrounding urban systems to the greatest degree possible.

The plan for a Greenfield development site should seek to create an area of settlement which is highly livable and which has inherent qualities that will promote ongoing process of consolidation and upgrading overtime.

It should be informed by the needs of the main affected parties these include existing residents, entrepreneurs, industrialists and new residents as well. It must be recognized that each of these parties have different requirements that must be incorporated.

b) Urban restructuring

Urban restructuring requires channeling of new developments into existing areas in order to improve them. This can be achieved by using new development particularly housing, to increase densities in order to improve levels of service (for example, along existing or new transport corridors), or to make better use of existing investments (for example, inner city areas, around exiting commercial & industrial nodes). Restructuring involves the following generic options:

- i. Establishment of a spatial logic or order by creating spaces and achieving the greatest possible continuities of movement at different scales, which aim to break down the historic fragmented urban pattern in the region.
- ii. Improving the quality of the public spatial environment
- iii. Creating new public spaces where they are required
- iv. Intensification through housing infill programmes, in order to increase thresholds of support and thus levels of service.

c) Upgrading of informal settlements

In case of informal settlement upgrade the problem is the provision of a public spatial structure that will address overcrowding, creation of public gathering places, to guide public and private investments and to improve movements systems. When upgrading informal settlements, relocation of residents and economic activities may be necessary to create a spatial structure consistent with settlement making principles.

2.3. Western Cape

The Western Cape Province uses the Provincial Spatial Development Framework (PSDF): Settlement restructuring as a guide towards densification. It is agreed that densification should not be applied uniformly across the Province or within settlements and that not all environments will be suitable for densification. The following settings are identified as suitable environments for different types of densification:

a) Areas of economic potential

The initial focus of achieving higher densities and increased developments are areas of higher economic potential as per the National Spatial Development Perspective and the Growth Potential of Towns Study that was undertaken in Western Cape (2004).

- b) Within towns / settlements, higher densities should be concentrated :
 - i. Along mobility routes in order to support public transport routes,
 - ii. In and around nodes,
 - iii. On the periphery of open spaces to increase surveillance,
 - iv. Within areas of focused public sector investments, and
 - v. Selected areas of high private investments.

2.3.1. Densification options

The PSDF provides a number of forms of densification that must be considered for implementation, these include the following:

a) Demolition and redevelopment

This form of development includes town houses, flats and security villages. It is most appropriate for fronting onto existing or future public routes.

A project in this regard has been implemented in the Western Cape (Claremont). The project entailed the demolition of five (5) double storey commercial buildings on the Main Road that was replaced by a development which introduced more that 300 apartments to a business node, with retail outlets wrapped around the edges at the ground level so as to ensure vibrancy and surveillance along the Main Road and some of the side streets.

b) Infill and Brownfield development

Infill and Brownfield development is promoted on strategic sites identified as part of the audit of vacant and underutilized land and areas promoted for densification in the Spatial Development Framework (SDF).

The adoption of this densification option was motivated by a Brownfield development undertaken in Newtown, Johannesburg. The Brickfield site in Newtown was used as a shanty town, mostly accommodating immigrants coming to work on the mines. The site has been recently developed through a joint venture between the private sector and government and provides 650 apartments catering for a range of income groups.

c) Subdivision, additional/second dwelling, sectional title development

This form of densification is suitable in areas where ervens are large and densification can be achieved by subdividing into two or smaller plots, permitting a second dwelling on undivided erf or creating a sectional title for a large residential building.

d) Greenfields development

It is stated that Greenfields sites must be identified through land audits and be given careful consideration. They may not be appropriate where they are on edges of settlements of high densities because of potential impacts on the character of the surrounding area.

2.4. Cape Town densification strategy (draft)

A 'middle path' spatial strategy has been selected as an appropriate densification option for Cape Town. The strategy aims to achieve a targeted average gross base density for the city by encouraging higher levels of densities at selected and specified spatial locations (including parts of certain residential areas) together with lower levels of incremental densification across the city where contextually appropriate and feasible. A multi-faceted implementation approach based on strategic, partial control is recommended.

Densification will be facilitated through a range of planning, regulatory and fiscal measures and communication strategies; this will be used to promote densification in priority zones.

2.4.1. Densification strategy policy statements

Cape Town densification strategy encompasses the following densification policy statements:

a) Policy 1 – adopt a middle path development strategy that sets a gross base density (average density) of 25 dwellings units/ hectare.

In the medium to long term the target is a gross base density (average density) of 25 dwelling units/hectare across the built area of the city. To achieve this density, higher levels of densification will be encouraged at specified spatial locations and lower levels of incremental densification (e.g. second dwellings and property subdivisions) will be permitted across the city where appropriate feasible and permitted in terms of approved zoning scheme, building regulations and other relevant legislation and regulations.

According to the strategy a gross base of 25 dwellings per hectare is internationally accepted minimum density to operate an efficient, sustainable public transport system. It is therefore viewed as the minimum parameter as the city should aim for a greater average density over the long term (+50 years).

b) Policy 2- densification decisions should be guided by the density decision making framework and balanced by resource limitations and infrastructure availability.

The strategy emphasizes that decisions regarding the location, form, scale, height and orientation of densification should be guided by the following aspects:

i. Location assessment criteria

- ii. The locations targeted for densification in terms of spatial structure of the city and its associated density guidelines.
- iii. Contextual conditions
- iv. Density design guidelines and,
- v. The city wide Spatial Development Framework (SDF), District Spatial Development Plans (DSDP) and Local/ Density Plans.

Important generic considerations which must be properly examined in the identification and evaluation of areas for densification are highlighted. These are as follows:

a) Access to safe, secure and efficient public transport system (existing or planned).

Medium to high densities should be aligned with viable public transport system.

b) Land use integration

Proximity to places of employment, services and facilities is required if the higher –density areas are to generate the benefits of concentration.

c) Access and proximity to public open spaces

High density development should be located near urban open spaces such as parks, squares, sports fields, nature reserves, river corridors, wetlands and coastlines to provide physical and psychological relief from the higher density environments.

d) Infrastructural capacity

Density should never be supported where water, waste water and storm water capacity is reaching point of absolute constraint and cost implications associated with rectification are too high and not catered for in the budget.

Step 1	Step 2	Step 3
Check whether the location is suited to	Consult density guidelines	Density decisions
densification.		
Considerations	Areas targetered for densification and	Determine the
✓ Access to public transport.	their associated density parameters	density (height
✓ Proximity to places of		,form and
employment, services and		orientation)
facilities.		appropriate to the
✓ Proximity to open spaces,		location and
✓ Infrastructure capacity		prepare conditions
		of approval (if
		appropriate)
	City-wide SDF & District plans	
	Local density plans	
	Urban design plans	
	Contextual informants	
	✓ Nature of the environment	
	✓ Land use	
	✓ Built and heritage character	
	✓ Infrastructure	
	✓ Transport impact assessment	
	✓ Socio economic	

However, the key emphasis should not be on densification per se, but raterh to ensure proper forward planning for sustainable livelihood to be improved over time (e.g upgrading services, economic activity, mixed land use, etc).

c) Policy 3 – facilitate densification through a range of planning, regulatory and fiscal measures and communication strategies.

Different mechanisms need to be investigated, prioritized and then employed to encourage densification. In Cape Town the selection of mechanisms was informed by the factors limiting and facilitating densification and existing patterns and trends. These mechanisms can be divided into two broad categories, namely:

- i. The overall measures for achieving higher densities across the city.
- ii. The measures that could support densification.

Types of mechanisms that can be applied in this regard include the following:

a) City-wide mechanisms

- i. City-wide & overall Regulatory and zoning measures (increased height restrictions, 2nd dwellings, subdivision to smaller sites and increased bulk especially in mixed use areas).
- ii. Space standards (space standards for community facilities, open space adjusted to accommodate sharing and/or clustering and parking standards).
- iii. Development containment (urban edge and delaying the provision of bulk infrastructure).
- iv. Incentives/ disincentives (municipal tax rebates in areas targeted for higher density development, penalties in green field/low density areas and increased developer contribution/levies).
- v. Legislation (lobbying national/provincial government to draw up, amend or withdraw legislation).
- vi. Communication (communication strategy)

b) Mechanisms in targeted density areas

- i. density plans (local & district density plans)
- ii. Regulatory and zoning measures(overlay zones)
- iii. Design framework and guidelines (urban and building design guidelines)
- iv. Research & development (financial and institutional mechanisms that support multi-storey developments in affordable housing areas).

- v. Public investment (investment in infrastructure, social amenities and the public environment).
- d) Policy 4 proactively promote densification in densification priority zones.

In the short term Cape Town aims to prioritize in the following areas:

- i. Areas where existing zoning rights support higher density development,
- ii. Infill sites and,
- iii. Green field developments on the edge of existing urban development.

The appropriate mechanisms identified in policy 3 and a communication strategy will be put in place to support the densification of the prioritized areas.

2.4.2. Implementation of the strategy

The document prepared by Cape Town as summarized above provides a framework for promoting densification and guiding decisions with regards to appropriate location, form, scale and height of densification. To ensure that ideas and proposals presented are implemented it was recommended that more in-depth work be done in five broad areas. These areas are as follows:

- a) Incorporate proposals into the SDF and local density plans
- b) Prepare a communication strategy
- c) Ensure good results
- d) Ensure regulatory support
- e) Set up a monitoring & evaluation system

2.5. City of Tshwane compaction & densification strategy

2.5.1. General approach for the City of Tshwane

The City of Tshwane has developed a densification and compaction strategy which aims to guide and inform structuring of the metropolitan area from a metropolitan as well as regional point of view. The strategy provides guidelines and norms for densification from a strategic point of view to inform and guide more specific densification proposals.

Different mechanisms are used around the world to facilitate physical growth of cities; these mechanisms include the smart growth approach that the City of Tshwane has decided to adopt. It is noted that this approach is not a single approach but rather a collection of urban development strategies aimed at reducing sprawl and promote growth that is balanced and fiscally, environmental and socially responsible. Smart growth tries to promote growth and development in areas with optimal opportunity and offers an antidote to sprawl that has resulted from unlimited low-density development away from the city centre.

Smart growth is not a densification approach or strategy per se but rather a holistic way of looking at growth & development. It encompasses the following:

- a) It leverages new growth and development to improve existing areas of opportunity,
- b) It promotes redevelopment of existing areas rather that abandoning existing infrastructure and facilities only to rebuild it further out,
- c) Smart growth is a "town-centre", transit and pedestrian oriented,
- d) It promotes the mixing of retail, commercial and housing uses
- e) It favors Brownfield as opposed to Greenfield developments.

- 2.5.2. Principles and sub-principles which guide densification and compaction within Tshwane are as follows:
- a) Densification must contribute to the overall structures and functionality of the metropolitan area in that it takes place in a balanced, focused and structured way.
 - i. Densification should concentrate around specific strategic areas,
 - ii. Density levels should be linked to the functional characteristics of various parts of the city,
 - iii. Densification and compaction must be applied in such a way that diversity and unique spatial characteristics are maintained within the city,
 - iv. Density should relate to surrounding land uses.
- b) Appropriate higher density housing opportunities at the appropriate locations must be provided for all income groups.
 - i. Create a range of housing opportunities and choices,
 - ii. Social integration must be promoted throughout the metropolitan area.
- c) Specific areas of opportunity or need for restructuring should be identified (areas that should not be densified for specific reasons should also be identified).
 - Areas of opportunity should possess real current or future potential growth and development and such potential should also be desirable from a restructuring point of view.
 - ii. (Re-) development should be promoted within existing built-up areas as an antidote to Greenfields developments.
- d) Areas targeted for densification should be treated as whole environments.
 - i. Investment in infrastructure, streetscape, open spaces and social facilities should ideally precede higher density developments,

- ii. Ensure that development and retention of quality living environments, which means that indiscriminate application of density should be avoided,
- iii. Promote mixed land uses in areas earmarked for densification,
- iv. Developments should promote safety and security in an area through the creation of defensible spaces,
- v. Provide alternatives to driving, such as walking or cycling, within densification areas.
- e) Areas targeted for densification should be well served by public transport, or have the possibility to be well served by public transport in future.
- f) Preserve and enhance open space, farmlands, natural beauty and critical environmental areas.
- g) Encourage community stakeholder collaboration
- h) Retain, enhance and encourage cultural assets.

2.5.3. Four density zones defined in the City of Tshwane

The strategy identified four typical zones within the city of Tshwane; this entailed looking at the general characteristics of each zone, density, typologies and further provides certain **pre-requisites** for restructuring of each zone; pre-requisite in this regard refers to minimum requirements that must be put in place before densification attempts can be successful. The four identified zones are as follows:

- a) Concentration Zones makes reference to locales directly influenced by transportation or concentration of economic activity; this covers the following settings:
 - i. High Density Zone are primary focus areas for high density, medium to high-rise residential developments and are centered around nodes of metropolitan importance.

Characteristics of this zone are found in major urban centres. These locations have developed into places accommodating a whole range of urban activities including economic activities, services, entertainment and a choice of housing opportunities on an intense scale. This is the zone where medium to high rise flats are in abundance and most transport routes converge hence it becomes an area of mixed land use.

The high density zones need to be further developed into an intense and active gathering of activities that create a sense of concentrated urbanity. They need to be upgraded in order to attract people and investors to them by integrating the public and private transport network and proactively managing the development in their zone to create an eligible and stimulating lattice of activities.

ii. Transit Promotion Zones refers to the nodes that are centred on transportation nodes or facilities such as station, highway interchanges and other modal inter-changes. These zones could be part of high density zones or corridors where such zones also incorporate a major transport facility.

In cases of public transport facilities, these zones make for a hub of activity thus inducing high volumes of frequent pedestrian traffic within a walkable distance from the transport facility.

It is stated that under this category there exists a range of nodes differing in needs and scales, e.g. those playing a significant role in a provincial /regional scale and those which are limited to metropolitan significance.

Pre-requisites for the concentration zones:

a) Urban design qualities that support the integrated urban character of these areas.

- b) Upgrading of engineering services
- c) Pedestrian and cycling facilities
- d) Inter-modal transfer facilities at train stations should be upgraded
- e) Mixed land uses
- f) Social and recreational facilities to support the increased residential population.

b) Linear Zones

City of Tshwane densification and compaction strategy refers to linear zones as specifically to high activity areas that are located along major mobility routes. The mobility routes typically carry capacities of traffic to areas such as the zones of concentration and transit oriented zones hence encouraging the feasibility of public transport. These zones are categorized as follows:

- i. Activity spine attempts to describe major axis/transport route that runs through the city. A mix of public and private transport will be prevalent on such routes and a mix of land uses will be the dominant trend. This aims to provide linkages between nodes and in so doing attracting development. In such areas there is a need to density as there is usually a high demand for residential, office and retail space.
- ii. **Development Corridor** signals the development occurring along a major transport route, for example a freeway, and a rail system.

Prerequisites for linear zones:

- a) high quality efficient public transport system and facilities;
- b) Appropriate level of engineering services.
- c) Suburban Densification Zones are those existing low density areas where there is potential for moderate densification through sub-divisions, second dwelling

houses and cluster housing developments. High densities such as second dwellings, duplex developments, walk-ups and low-rise appointment must be promoted around local nodes, social facilities and open spaces/recreation facilities. Densities should be increased by incentivizing or allowing higher density redevelopment and infill (especially government-subsidized housing).

Areas of subsidies housing should be required to accommodate a mixed range of densities within their development so as to detract from their current monotonous environments. Public transport connections should be set up between suburbs and should provide strong linkages with to the activity spines & development corridors.

Prerequisite for suburban zones:

- a) Existing engineering service infrastructure should be able to carry the higher densities
- b) Public transport connections should be set up between suburbs
- c) Pedestrian and cycling access to local nodes and social facilities
- d) Sufficient capacity of collector roads in the area for more traffic
- d) **Low Density Zones:** this zone is characterized by mono-functional suburbs which play a host to most high income earners and comprises mostly large stands with single dwelling houses. Access to public transport is limited since private motor vehicles constitute the major traffic flow in the area. Retail centres are often not in close proximity to such zones and there is little and sometimes no mix land uses in existence.

A typical location would be in peripheral areas but could also include areas more centrally located but with special circumstances or characteristics. It is stated that although these zones have a definite place within the overall density structures in Tshwane, they should be considered to be the exception rather that the rule.

Pre-requisites for low density zones:

a) Provision should be made to ensure that new large-scale developments in the periphery do not lead to low quality, monotonous environments.

2.5.4. Tools and measures to stimulate development in specified areas

a) Fast-tracking land development applications in areas close to urban centres

Special provisions can be made by the authority concerned for the fast-tracking or streamlining of land use applications in areas demarcated for densification. Town planning schemes in the metropolitan area should be amended to allow for a simple advertising process.

b) Transfer of Development Rights (TDR)

This could be used with a set of incentives; local governments would use DRT to ensure the transfer of existing rights from areas where further development is not desirable, to areas where it is desired. It could for instance be used to stimulate developments in nodes in former townships and along transport corridors.

c) Providing inexpensive, serviced land in specified areas

A local authority could offer lease or sell land (owned by the council or acquired by expropriation) in an area in which development is envisaged at reasonable rates to stimulate mixed land use development or development at higher residential densities.

d) Relaxing land-use controls in specified areas

Town planning schemes and building regulations could be amended to allow for higher densities and mixed land-use zones in for instance nodes in the inner city areas.

e) Providing incentives

Developers could also be enticed into developing housing at higher densities through tax credits. Tax exemptions could be issued to finance higher density housing additions to non-residential developments. Incentives zoning whereby developers are given special rates on property taxes or engineering services could also be used to stimulate the development of desired land uses in dedicated areas. Incentives should be focused on:

- i. New high density mixed land-use residential developments,
- ii. Mixed land use Brownfield developments at high densities,
- iii. Mixed-land use developments throughout the city,
- iv. Corridor-focused development.

2.5.5. Implementation

To facilitate implementation of the City of Tshwane compaction and densification strategy the principles discussed; density zones; tools and measures must be integrated with the following aspects:

- a) Regional Spatial Development Frameworks must incorporate the proposals made in this strategy.
- b) Direct Public Investment and Budget Alignment
- c) Councils must device incentives and disincentives to promote densification and compaction.
- d) Monitoring and evaluation
- e) Targets and timeframe

2.6. Formalization of rural settlements patterns in KZN

Many debates centres around the historic context in rural settlement planning resulting from apartheid planning. This in itself has resulted in rural areas being perceived as requiring inferior planning approaches and contributing towards settlements with poor access to basic social and recreational amenities; long walking distances to transport networks and basic facilities and resulting in a poor sense of connectedness.

Transformation in these areas has occurred slowly in several rural settlements and rural towns throughout the Province. Examples are sited in reports and studies compiled by the former KZN Planning Commission where areas such as Ndwedwe, Amaoti, Hibberdene, Brunt Ville and High flats and Tugela Ferry to mention a few (2004: 6 and 7).

The report on "Urban Design for Emerging Towns" prepared for the Planning Commission in 2004 refers to these case studies and how proper settlement planning in the context of these local case studies have resulted in good planning

principles. These include issues such as providing forward planning and structured growth, proper use of public space, and flexibility to allow an incremental approach (2004:6-7). The principles outlined in the document, albeit that it refers to as an urban framework, provide useful tools in planning settlements in these rural nodes. The case studies are also used to outline how conventional planning issues contribute towards solving development challenges such as:

- a. **Framework Planning Approach**, i.e. identifying the context within which the specific planning initiative takes place, identifying structuring elements, locating the essential ingredients of the envisaged development, and establishing potential development generators and a development process.
- b. **Appropriate location within wider context**, i.e. the establishment of the wider context of particular nodal developments, the external influences on the node, the functions of the node derived from its context and local design aspects developed from the node's internal and external functions.
- c. Movement structure, i.e. providing illustrations of planning initiatives identifying movement structures linking the development with the wider surrounding context and external opportunities, creating an internal access hierarchy, contributing to appropriate legibility, permeability and accessibility, providing inter alia also location for a hierarchy of public institutions and relevant public spaces.
- d. Location of public institutions, i.e. providing some examples of planning and development initiatives which are intended to create appropriate location for a hierarchy of public institutions, related inter alia to a hierarchy of accessibility and visibility. The examples also provide an argument for the clustering of facilities, for the facilities functioning as generators of other developments and the establishment of public space associated to the institutions and accommodating relevant pedestrian and associated activities.

- e. **Public urban space network**, i.e. illustrating a variety of types of spaces and functions, their linkage to movement / accessibility and public institution hierarchy, their reflection of topography and natural environment issues, their potential linkage to the surrounding areas etc.
- f. **Usage of unique topographic conditions**, i.e. providing examples of utilising prevailing topographic conditions for the creation of unique settlements, working with the wider landscape context and creating environments which are environmentally sustainable and provide a functional urban development.
- g. **Integration of green open space**, i.e. integrating and linking the urban settlement into the surrounding landscape, utilising existing topographic conditions for the creation of unique settlements, providing a natural structuring element, providing soft relief from the built environment and creating a more varied and richer living".

Spatial development planning and the need to be proactive in the design and layouts of rural developments have been demonstrated in projects such as Vulamehlo; Dududu (PPT, et al, 2008) and more recently in areas such as the greater Dukuduku projects.

In addition to this, rural projects and formal planning have been implemented in projects developed in Lions river and Lidgetton and Deeside farm. Examples are also found in some of the agrivillage type developments (a separate report on the agri-village challenges was developed by the Department of Human Settlements in March 2011. The report highlight the need for integration and support.

The application of more formal settlement patterns is also not new in the context of land vested in the Ingonyama Trust Board, and in particular those areas

abutting towns (large and small). Various examples of this are found in the Ethekwini region and in projects at Umgababa. Also areas such as Lochsloy (Estcourt), St Chads (Ladysmith).

Literature cautions against a "One-size-fits all approach". Examples of integrated plans and the need to assess these against the unique nature of each community are outlined in examples such as the KwaShangase Integrated Spatial Development framework (PPT et al, 2004).

Chapter 3: Best practices

This chapter aims to record best practices in terms of projects that have been undertaken in different regions in South Africa. An example of a project in Zimbabwe is also recorded. It was fascinating to discover the similarity of human settlements patterns in Africa and perhaps South Africa, specifically KZN could draw up some useful lessons.

The Eastern Cape, KZN, Limpopo and Mpumalanga are known for having a majority of its population living in rural areas and carry a legacy of poverty and very little infrastructure development.

3.1. Eastern Cape

Research shows that Eastern Cape has been largely active in the densification sphere under the Small Town Regeneration Programme through Amathole Economic Development Agency (ASPIRE). ASPIRE was established in September 2005 and is wholly owned by the Amathole District Municipality. ASPIRE's vision is to be a pioneer in the stimulation of spatial economic development. Aspire's programmes can be classified into four pillars, these includes Town-centre development; Growth point or node development; Corridor investments and Developing markets.

The small town regeneration model has the following objectives:

- a) To identify the key economic conditions and trends in the town in partnership with local stakeholders such as communities, municipality, businesses, government departments and other developmental stakeholders, such as agencies and NGO"s
- b) To determine which sectors and commodities in the area are significant to its economic activity and could be developed in order to positively impact on economic development
- c) Assess socio-economic activities that will give a competitive advantage to the area, such as skills, natural resources, active community, etc
- d) Increase capital investment in the town and surrounds such as investing in high impact sector based projects that can have economic spin offs for the town and unlock opportunities
- e) Assess existing spatial data such as cadastral, land use, land ownership, demographic and physical analysis of the area
- f) Investigate the availability of bulk infrastructure and other related engineering services that are critical for the functioning of the town and to unlock economic opportunities.

Among many areas of the Eastern cape ASPIRE is currently making an impact in Alice; Butterworth; Dutywa; Peddie and Stutterheim. In 2011 National Treasury and South African Cities Network in partnership with Rachel Adatia Clacherty undertook a review of one of these projects and Sutterheim was chosen for the study and findings are recorded below.

3.1.1. Stutterheim/Mlungisi

Stutterheim is a small town in the Eastern Cape which serves a town for people living in the surrounding rural area, with low income of about R1600 per month.

In the boundaries of Stutterheim lies in a densely populated township known as Mlungisi which is characterized by a lack of community and commercial infrastructure, poor quality neighborhood environment, and other development challenges are most visible.

a) Challenges and opportunities

Key challenges for the town's development include:

- A spatially fragmented structure with commercial, administrative and industrial infrastructure concentrated around the central business district (CBD) and with lower income areas generally less accessible.
- ii. Unreliable infrastructure, with interruptions in water and electricity supplies and poor roads, constrains manufacturing operations in the industrial area.

b) Features of the town that offer opportunities for development include:

- i. Main road and rail linkages that make the town accessible from surrounding areas, as well as East London and Gauteng (N6 Corridor)
- ii. Available raw materials for processing and manufacturing enterprises, such as timber and locally grown products
- iii. Tourist attractions related to the environmental assets in the surrounding area, such as the Amatole Mountains, indigenous forests, Thomas River Conservancy, and cultural heritage sites

c) Stutterheim's development approach

Planning for spatial integration involves thinking about how the town operates not only within its urban boundaries, but also over the wider rural area that the town serves.

d) Plans for regeneration

The spatial plans for the regeneration of Stutterheim will re-define the town's urban edge by linking the town's development with that of Mlungisi and consolidating development along the urban zone of the N6 into Stutterheim.

e) Key initiatives are:

- i. Building a new road and a bridge to link Mlungisi and Stutterheim
- ii. Developing a community-commercial park in Mlungisi which will include community services, space for formal and informal business activities, a supermarket, restaurants, a sports field, gym and an amphitheatre
- iii. Developing the Amahlathi Gateway Petro Park on the N6, which will include a service station, visitor's information centre and children's entertainment area
- iv. Upgrading Stutterheim's CBD, including restructuring the taxi rank and creating a new public open space with trees and benches
- v. Upgrading infrastructure in the industrial area
- vi. Establishing Abenzi Woodhouse company to train local youth in wood-work and business skills, and to manufacture furniture and other products using local timber.

f) Planning process

- Amahlathi Municipality is working in partnership with ASPIRE, the economic development agency of the Amathole District Municipality. ASPIRE is facilitating and project managing the regeneration initiative.
- The planning phase resulted in a document comprising of: a Situational Assessment, a Regeneration Strategy and a local Spatial Development Framework (SDF). After a period of public comment, a

municipal council resolution ensured that the municipal Integrated Development Plan (IDP) and SDF will be amended in line with the town's regeneration initiative.

g) Planning for integrated towns

Two key concepts informed the Stutterheim/Mlungisi regeneration initiative:

- i. Economic development to grow the key opportunity sectors of forestry, agriculture, local manufacturing and tourism; as well as to increase opportunities for residents to enter the formal economy as employees, entrepreneurs, investors, service providers or manufacturers.
- ii. Quality of urban environment which depends on people being able to access social, business and services facilities in a clean and safe environment.

Both concepts are influenced by the layout and structure of the town and its transport linkages. A key focus of the Stutterheim initiative is to improve the 'spatial functioning' of the town, i.e. where particular business areas, residential areas or facilities are located in relation to each other and how efficiently people and goods can move between them.

However, this needs to be done in a way that protects the natural environmental assets in the area, given the importance of these for the sustainability of economic development. For example, land near the new Stutterheim-Mlungisi road was set aside as a recreational park, which also serves to protect the catchment area of the stream.

h) Redefining the town's boundaries

The town's function as a primary service node, as described in the municipal SDF, formed the starting point for the town's regeneration planning documents. However the study area was defined by the functional boundaries of the town which relate to the town's road and rail linkages and its roles within the wider catchment area, rather than merely the ward boundaries.

The SDF review made proposals to reduce urban sprawl, and aim for a more compact urban settlement. It excluded smallholdings and farms that were previously included in the urban edge. However, certain residential areas that were previously excluded have been included so that better services and infrastructure can be provided to residents and they can be better integrated with the other facilities in town.

i) The Mlungisi-Stutterheim bridge

Construction of the Mlungisi–Stutterheim bridge and access road began in January 2010, with funding from the Neighbourhood Development Partnership Grant (NDGP). For generations, residents of the Mlungisi township had to travel 4km on dangerous roads or walk 2km through a steep valley to reach Stutterheim.

Residents had initially envisioned a pedestrian bridge linking them to town. However, the project was upgraded to accommodate motor vehicles by ASPIRE who were thinking ahead to the needs of public transport users, small businesses and higher income groups in an economically vibrant Mlungisi.

A challenge for ASPIRE was the unrealistic expectations among community members of the number of jobs that the project would provide. The bridge is being built using a labour-intensive method, based on an arched design using bricks. Although the construction project provided only short-term jobs, it was an opportunity for 45 people to gain work experience and learn new skills which will assist them in the job market.

j) An infrastructure investment to stimulate local business

The bridge and new road will not only make life easier for residents of Mlungisi in general, it will also encourage the development of small businesses by making it easier to move goods and attract custom. Together with other plans to provide facilities and support for small businesses, it is an example of how ASPIRE is making markets work better for Mlungisi.

In particular, the bridge acted as a catalyst for the Mlungisi community-commercial park, construction of which began in February 2011 with another NDPG grant.

k) Inspiring future development

Upgrading Stutterheim's CBD is being done in line with a community campaign to develop an image, or 'brand' for Stutterheim. Local people are asked to express, through any medium they wish, their response to the question: "What is Stutterheim to you?"

The idea is to generate pride in the town and encourage people from all sectors to participate in the town's future development. For example, local businesses may use the Stutterheim 'brand image' on their goods to encourage people to buy local products or to advertise the area. It is also a way to stimulate private sector investment so the town's economic development will continue after ASPIRE withdraws from the area.

1) Lessons learned in Stutterheim

It is noted that the planning phase for this project was completed by mid-2009, and the initiative is moving into the implementation phase. Some key lessons drawn from the experience are outlined below.

i. Plan for functional integration

Planning for more compact, integrated towns involves looking at the functional boundaries of a town – how it is linked to the areas it serves – rather than the usual boundaries set by ward-based planning.

ii. Review the existing municipal SDF and compile a local SDF

If the urban edge is going to be redefined to make the town function more efficiently and address the challenges of marginalised areas posed by apartheid planning, it is likely that a local SDF will be needed. The local SDF needs to be aligned with the municipal SDF, compiled as part of the IDP process. However, the local SDF can also inform the IDP and help refine the municipal SDF to reflect the township's longer-term regeneration plans. Remember that the local SDF must include a focus on the protection of the area's natural systems, which are vital for long-term development.

iii. Manage expectations

Recognise that construction projects that employ local people, such as building the Mlungisi–Stutterheim bridge, are not long-term job creation projects. Rather they are opportunities for skills training and development. Job creation through the regeneration initiative takes time and involves developing the conditions for successful business initiatives. The municipality can facilitate this through infrastructure improvements, effective governance, provision of training and other support for small business development. However, it also depends on the partnerships and relationships developed between public and private sector investors, local community organisations and entrepreneurs.

iv. Consider partnering with an economic and development agency

In the Amahlathi Municipality/ASPIRE partnership, the municipality plays a supportive role in terms of land re-zoning, approval of building plans and other regulatory processes. It also assists with communication among ward committees and communities. ASPIRE manages the regeneration initiative from social facilitation through to project implementation. However, the municipality has to ensure that it has the capacity for the long-term operation and maintenance of the new developments and additional municipal infrastructure after ASPIRE's development role comes to an end.

3.2. North West: Zeerust

The small town regeneration model has also been piloted in North West: Zeerust. This is a good model of a development approach that took advantage of a town's location on an existing national freight transport route, while also including plans to stimulate development in outlying settlements. The project discussed below forms part of the review project undertaken by National Treasury; South African Cities Network and Rachel Adatia Clachery & Associates.

3.2.1. Background

Zeerust is an agricultural town in the North West Province under Ramotshere Moila Local municipality. It is situated 240km north-west of Johannesburg and 40km from the Botswana border. The town serves a large rural area with over 40 villages within a radius of 120km of the town and has a population of about 150.000, with shocking numbers of unemployment. The main road from Gauteng to Botswana (N4) runs through the town centre.

Ikageleng is the township closest to Zeerust's CBD, within a 30-minute walking distance. Near the road leading into Ikageleng are some low-level

economic activities and an area of low-income housing. There is a small municipal service centre with a clinic, an under-utilised sports precinct and community hall. More affluent housing has developed around the edges of the township.

3.2.2. Challenges and opportunities

a) Key challenges for the development of the Zeerust CBD and Ikageleng are:

- i. Traffic congestion, air and noise pollution in the CBD due to the high volume of traffic on the N4. About 4 600 motor vehicles drive through the town every day, of which 600 are trucks.
- ii. A limited potential for projects within Ikageleng to lever investment, due to Ikageleng's proximity to the CBD and the limited disposable income available to residents.

b) Opportunities for the town's development include:

- Its location at the junction of the main road running through Vryburg and Mafikeng (Western Frontier Corridor), and the N4 (Platinum Corridor)
- ii. Prime agricultural land and mineral resources in the surrounding rural areas.

3.2.3. Approach to transforming Zeerust

The municipality's approach to the regeneration of Zeerust is described below. A key feature was re-routing the freight road which opened up opportunities for development in the CBD and peripheral areas.

a) Plans for regeneration

Key development initiatives identified for Zeerust are:

- i. An N4 by-pass road and acquisition of land for a business node. Rerouting the heavy traffic from the town centre will relieve the problems related to traffic congestion in the CBD. A better functioning CBD will help Zeerust to operate more efficiently and effectively as an economic and social service centre for Ikageleng and rural villages.
- ii. Upgrade the road and bridge linking Ikageleng to Zeerust CBD
- iii. Build a new multi-purpose community centre in Ikageleng and upgrade the existing sports facilities
- iv. Formalise Dinokana to facilitate the development of a future economic and social node. It is expected that this development will also benefit surrounding communities through improved linkages and integration.

b) Planning process

The municipality initially applied for an NDPG to develop a multi-purpose community centre in Ikageleng. However, the NDPG award was made when the SDF was being drafted. This provided an opportunity to investigate whether any other economic opportunities identified at a regional level through the SDF process could add value to the NDP initiative in Ikageleng.

The SDF identified Zeerust as an urban priority intervention area and Dinokana as a rural priority intervention area. Various development initiatives were identified through the SDF and IDP processes, including the N4 by-pass road and improving the access road to Ikageleng. These were verified through additional studies and prioritised according to NDP selection criteria.

Ongoing and dedicated community and stakeholder input identified additional projects and sub-projects.

c) Resolving the trucking problem

A key challenge facing Zeerust's CBD is the road congestion related to the trucks using the N4 freight route. Addressing this issue required the participation of two major role-players – South African National Roads Agency Limited (SANRAL) and Bakwena (responsible for the operation and maintenance of the Platinum Corridor) – without whom the N4 by-pass could not go ahead.

The council had prohibited the parking of trucks in the CBD, but most trucks still park along the N4 in town. There are two reasons for this:

- i. The lack of facilities at the truck stop on the outskirts of town
- ii. The fact that trans-border truck drivers have to go to the South African Revenue Service (SARS) office in the CBD to process SARS clearance documentation.

These needs have now been addressed, as negotiations with relevant stakeholders led to:

- A commitment from SANRAL to fund a new weigh bridge, with job creation opportunities, as well as future link roads to improve access to the border
- A commitment from the existing truck stop owner to invest in improving existing facilities and establishing a SARS office at the truck stop.

There is now potential for the development of a transport node that was not anticipated in earlier plans.

3.3. Zimbabwe: Densification of Dzivarasekwa Extension (author of original: Greg Bachmayer (SDI) – February 2012).

3.3.1. Background

The focus of this project was to use the slum upgrade project, of Dzivarasekwa

Extension, as an opportunity to develop new affordable housing models that could

sustainably increase the density than the status-quo. This initiative is a

collaborative project between Slums Dwellers International (SDI) and Shelter on

Dialogue (DOS).

Dzivarasekwa Extension (DZ Ext.), is located 18km west of Harare and was

established by the government in 1993. Over 2000 families originally resided here

until 2004 when some of these families were allocated plots in the Hatcliffe

Extension. The 2005 some people were evicted from Hatcliffe Extension as a

result about 150 families returning to DZ Ext. Today, DZ Ext. is home to 450

families. This settlement was established in the 1950 as a residential area for

domestic workers who worked in Malborough & Mabelreign, which are suburbs

nearby.

DZ Ext. sits on the periphery which is a state owned land and lacks basic services

such as proper roads, drainage, electricity and sewerage. The area is also on the

fringe of a neighbouring wetland, which further complicates the impacts of the

heavy rains during the wet season. The residents had built semi permanent

structures built from materials including brick and mortar, wooden cabins,

polythene material and sheet metal. Communal toilets (eco-san and pit latrines)

service their sanitation needs and water is provided from 3 boreholes in the

settlement.

3.3.2. Intervention: insitu upgrade

Housing & proper sanitation are evidently the two main problems facing the

residents of DZ Ext. This scenario is not unique to DZ Ext, as most cities in

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Zimbabwe have sprawled out, pushing the poor further from the centre where services are non-existent and costly to install.

The City of Harare decided to use DZ Ext. as a pilot project. This would demonstrate that increased densities are viable and can deliver affordable, adequate and aesthetically pleasing physical spaces for communities. This would demonstrate 3 proto-type designs, building 15 housing units that the DZ Ext. community could adopt for their own designs. The initial intent for these designs was for models similar to walkup flats and semi-detached housing.

Slums Dwellers International provided technical assistance, sending up an architect to workshop different plans over a 3 week period. At the time of this, initial designs had been prepared by Dialogue of Shelter and the City's technical team.

At the first consultation with the community only two designs were presented, a row house and a semi-detached house. There were mixed comments as people found issues understanding the plans properly. Furthermore, it was also difficult for them to imagine and understand the spaces drawn properly, as most of them have had little or no experience in this.

Common patterns in the feedback were that they wanted a sense of ownership and individuality. Design features such as the continuous row houses, giving the effect of an on-going wall or the communal entrances for the semi-detatched houses were contrary to this and were rejected. Demarcation was central to achieving this sense of individuality.

After this consultation the designs were re-worked to try and maximize spatial efficiency and explore new ideas that could plug into these proto-types. The design changes weren't a radical departure from the original plans but by building them as 3D models, this allowed a more holistic view of the designs. This would

also prove to be a valuable tool for communicating the designs to a community of people who had little or no experience in reading architectural drawings.

The follow up consultations were done after the adjustments and three designs were shown instead of the initial two: row-house, semi-detached terrace, and low-rise apartment block, these were adjusted and also the walk up apartment block was added.

3.3.3. The community's readiness for densification

The concept of densification was not accepted by the generality of the community at DZ Ext. The design that caused the most controversy was the apartment blocks. Some felt that they were 'tricked' or 'pushed' into apartments instead of houses. The reality was that the government had already zoned and commissioned this job to take on these densification requirements.

This was not fully accepted by the community as the community believed apartments were more expensive to build and it would mean that half the families wouldn't have access to their own private garden, an important issue to them. There was also the belief that these would not be maintained properly. This was the case with the examples they were familiar with in other places which had gone into neglect and decay.

The semi-detached terraces were considered as favorable even thou little doubts were persistent about this building type. Once the re-worked row-houses were presented, they were met with applause, as that is what they all wanted themselves. However the proposed interior (open-plan living room, kitchen and dining room) were rejected.

The time reworked on the plans again considering things that were regarded as crucial, these were:

- a) Demarcation to allow individual's a sense of ownership and individuality
- b) Provide a private garden or outdoor space everyone wants this for planting or gardening and it also reduces need for maintenance of communal spaces.
- c) People will take very good care of their own spaces but won't make an effort if it is communal (evident in Mbare)
- d) Design for incremental additions increase affordability, and it will also allow for a variety of housing, even if they all stem from the same model.
- e) On top of this, the stakeholders wanted to use this as an opportunity to try do something new or different and to challenge the standards where possible.

3.3.4. Conclusions

The case of DZ Ext. is an interesting one as it demonstrates the community perceptions on the concept of densification. This project is still at its early phases hence the focus on design, it would be interesting to see the end product and how other community initiatives will be fed in this project.

Currently the designs are being tweaked in response to the community feedback given. The City of Harare's consultant team will also review the designs and see what will be required for this building to work structurally and construction wise too. Finally, once this process is approved for, the proto-types will be constructed and from there, the feedback cycle will continue. In the end, the new housing built at DZ Ext. will have been through so many consultation processes, that it would be hard to deny that the community members have been co-producers in this process. The idea that stakeholders are working towards is that, by this stage, the designs will be so well polished, that the:

- a) Members will be enthusiastic about investing their time, efforts and finances further
- b) The proto-types will be willfully picked up by other communities in their upgrade projects, and incorporated into their plans.
- c) The buildings will be an improvement on the status quo. This will be in regards to affordability, aesthetics, planning and environmentally. In short, these should be building blocks of a better community than what the previous housing models allowed for.

Chapter 4: KwaZulu-Natal (KZN) current status

The purpose of this chapter is to present findings on the status of densification in the Province of KwaZulu-Natal. The chapter seeks to answer the question of "where Province is at in terms of Human Settlements or rural development projects that are density oriented". This is achieved by looking at the background of the province with regards to existing settlements patterns; and also examining if any provisions are made for compaction in Provincial policies and programmes and also recording work that is in the pipeline and/or has been undertaken.

4.1. Introduction

In terms of settlements patterns, KwaZulu-Natal is characterized by sprawl settlements which has left people far from economic opportunities and has also had a severe impact with regards to provision of services. Cost implications limit the municipalities' capacity to providing services and infrastructure to relatively isolated communities. As a result to date people still move from their rural homes to "towns" for better opportunities and services.

A number of studies and documents have been developed by different organs of the state which proposes interventions that will ensure that rural areas are not left isolated; hence the idea of rural densification is receiving the center stage.

The Provincial Growth & Development Strategy (PDGS) for KZN provides a broad overview of this concept through clearly defining priority areas, nodes and corridors (see figure 3 & 4 as extracted from the KZN-PGDS). The PGDS makes it achievable to co-ordinate programmes and projects of different departments and aligns them with the areas identified by the PDGS.

The KZN government through the Economic Cluster developed the Provincial Spatial Economic Development Strategy (PSEDS), as a sector plan of the PDGS.

The PSEDS supports a number of economic development strategies; among others is the corridor development which includes small town rehabilitation programme and Local Economic Development initiative. The table below shows small towns that have been prioritized in the PSEDS.

Figure 2: shows small towns that have been prioritized in the PSEDS.

1. St. Faiths	14. Hlabisa
2. Harding	15. Mbazwana
3. Impendle	16. Jozini
4. Richmond	17. Manguzi
5. Weenen	18. Nkandla
6. Winterton	19. Melmoth
7. Msinga	20. Maphumulo
(Tugela Ferry)	
8. Nquthu	21. Ndwedwe
9. Dannhauser	22. Mandisa
10. Utrecht	23. Umzimkulu
11. Nongoma	24. Ixopo
12. Ulundi	25. Kokstad
13. Mtubatuba	

The PDGS emphasizes that in order to improve the current pace of service delivery and economic development within the province the principle of densification of human settlements and systematically linking nodal development to economic strategy must prevail and further stresses on collaborative planning and policy implementation as key in achieving this.

The Department of Human Settlements is at a forefront in terms of ensuring the creation of human settlements that conforms to the PDGS; hence there is an

urgent need to develop strong interventions in terms of contradictory practices or policies in relation to densification which results to scattered rural patterns.

However it must be noted that all is dependent strongly on land which has always been a controversial subject in the Province. Most land in the province is administered by the Ingonyama Trust Board (ITB), whilst ITB is playing a vital role in managing the land, strides still need to be made in aligning development planning with other sector departments so that sectors of government pull in one direction

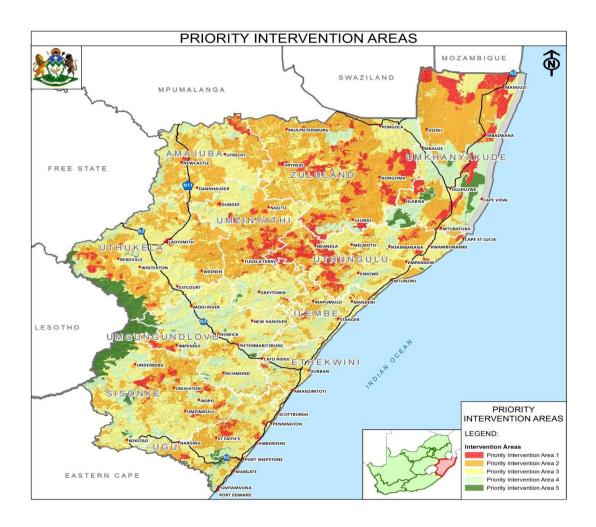


Figure 3: composite map illustrating Priority Intervention Areas

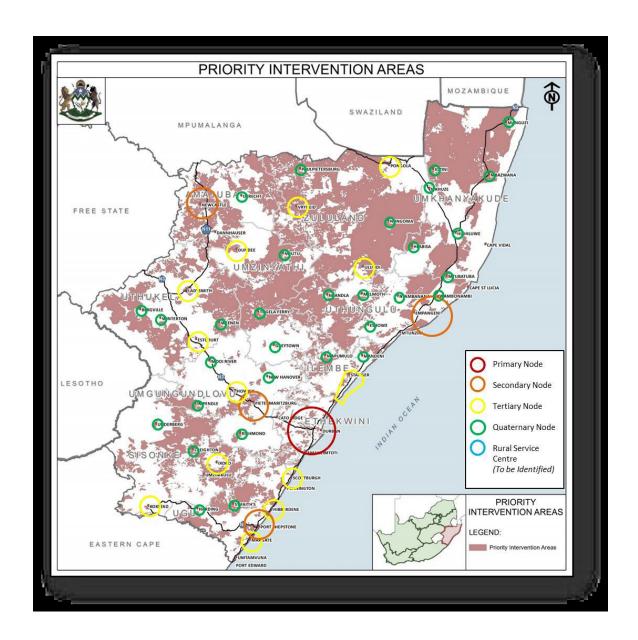


Figure 4: illustration of nodes in relation to level 1 and 2 priority interventions

4.2. A closer look at densification from the municipality's perspective (KZN-Metropolitan and/or aspiring).

Most municipalities in KwaZulu-Natal are characterized by scattered rural settlement patterns which pose strain on municipalities' pursuit to provide basic services. As a result the concept of densification has been received well by various municipalities in the Province. Bearing in mind that if densification could be planned and achieved within the intended context this may lessen the negative impacts on operational budgets, which results from municipalities' attempts to extend services over scattered areas.

Municipalities have thus started planning towards achieving densification and compaction, below EThekwini & Mhlathuze municipalities are looked at in terms of where they are in this regard. However other municipalities such as Ilembe and Emnambithi have started making attempts to move towards densification.

4.2.1. EThekwini Municipality

According EThekwini municipality's Spatial Development Framework (SDF) the rural areas of eThekwini have limited access to physical and social services and contain limited economic development and such are highly dependent on the urban centers or areas for resources and income as they have limited survival strategies and opportunities for them.

The need to develop appropriate programmes and projects for rural areas is therefore evident. A municipal densification strategy is currently in progress for which will identify strategies and actions needed to achieve sustainable densification and consolidation in EThekwini.

Challenges facing Planning for restructuring in the rural areas of EThekwini has been identified as follows:

- a) The major portions of the rural areas have only recently been incorporated into the metropolitan area hence there is a limited understanding of the needs and current livelihood of rural people.
- b) Dominance of a strong traditional authority structure
- c) Lack of clear and generally accepted national policies on the role of traditional leaders creates institutional uncertainties which will at least in the short term impact on economic development.

The fact that development of a strategy is still work in progress has not stopped the municipality's planning division to think and plan towards the concept of densification. Methods of achieving densification in the city have already been identified in the SDF and also the emerging economic nodes have been identified and documented.

a) Methods identified for achieving densification in EThekwini

- Infill development on vacant or underutilized parcels of land at higher densities. A range of infill processes may include but not limited to transfer of development rights, land swops, land consolidation, public housing projects.
- ii. New development on vacant or underutilized land at higher densities.
- iii. Cluster development on large parcels of land through a consolidation process.
- iv. Conversion of existing buildings (sometimes vacant or derelict) to other uses.
- v. Subdivision of large pieces of land to encourage higher densities.
- vi. Allowing additional units to be developed on a single piece of land.

vii. Redevelopment of poorly functional areas to encourage and facilitate infill.

b) A number of projects are already taking place in EThekwini, these include:

- i. Bridge city which is strategically located between KwaMashu, Phoenix & Ntuzuma. It brings innovative transportation, urbanism and mixed use development to a previously marginalized part of the city and actively promotes higher densities.
- ii. The new town of Cornubia also promotes mixed land use, densification and integration. The planning of Cornubia is based upon the principles of sustainable development with higher densities, a wide range and integration of income levels, employment and economic opportunities, substantial provision for schools, clinics and other social facilities, predicated on viable non-motorized and public transportation and extensive open spaces.

The development is strategically located (some 15km south of the new King Shaka International Airport) between the historically created and disadvantaged areas of Phoenix, Ottawa and Waterloo and newer areas of Mt Edgecombe and Umhlanga and has been planned to integrate these very different and disparate communities in a manner which adds value and enhances linkages and opportunities to all.

iii. In addition rural nodes are to be established, consolidated and enhanced as village centers to provide support to the development of the rural and agricultural hinterland. The following emerging economic nodes have been identified in the municipality's SDF, these are as follows:

Region	Priority investment area	Rational for
		Prioritisation
Rural Investment Nodes	 Umgababa Umbumbulu Inchanga Umzinyathi KwaXimba 	Rural investment node that have potential for support services: business, agriculture tourism, environmental issues and opportunities for local economic development
Rural Service Nodes	 Zwelibomvu Kwangcolosi Ntshongweni KwaSondela Buffelsdraai Cottonlands Adams/Folweni Matabetule Senzokuhle 	Local level of services for surrounding communities in terms of social and economic activities, traditional structures and facilities.

Figure 5 emerging economic nodes have been identified in the EThekwini municipality's SDF.

4.2.2. Mhlathuze municipality

A need to bring basic services to people in the City of Mhlathuze has been identified as most social facilities are located in regional nodes. As a result people from former marginalized communities have to travel long distances. Rural Service Centers have been proposed as an intervention in these communities, these centers aim to provide a one stop shop for social facilities and infrastructure. Rural Service Centers are proposed in the following areas:

- a) Madlebe Tribal Area
- b) Dube Tribal Area
- c) Mkhwanazi North Tribal Area
- d) Mkhwanazi South Tribal Area
- e) Khoza Tribal Area

It is envisaged that the concentration of social facilities will spur on the development of economic activities, therefore planning of Rural Service Centers will provide for the development of economic activities from the outset, to promote economic activities.

Ultimately one can already anticipate that there will be a lot of rural to rural migration towards the identified nodes hence planning provisions should be made for the growing demand of different housing initiatives. This should be provided for in the housing sector plans.

4.2.3. Small town regeneration initiative in KZN

The Department of Co-operative Governance & Traditional Affairs (COGTA) under its Special Initiatives Unit has been working towards implementation of the small town rehabilitation programme in KZN. The proposed plan entails rehabilitation of the twenty five priority small town nodes as identified in the PSEDS (see figure 2). The programme aims to ensure that the competitiveness of these small towns is enhanced in order to attract investment and to retain the current investors. Clearly this will ultimately generate job opportunities and create demand for mixed housing which must be properly planned in accordance with guidelines provided in the CSIR Redbook.

A joint research initiative between National Treasury; South African Cities Network and Rachel Adatia Clacherty & associates highlights a project undertaken in Mpumalanga as project of note in terms of small town regeneration initiative in KZN. This initiative illustrates how, in an area where there were complicated land ownership issues, the municipality mobilized multi-stakeholder partnerships to invest in developments that would unlock the potential of the area to become a regional service centre.

4.2.4. Small town regeneration in Hammersdale: Mpumalanga

Mpumalanga is a rural settlement about 60km west of Durban between Hammarsdale and Cato Ridge, KwaZulu-Natal with a population of about 130 00. Mpumalanga lies on the periphery of eThekwini Metropolitan Municipality, beyond the urban edge. Initial the town was established as a dormitory residential settlement to provide labour for the Hammarsdale clothing and textile industry in the 1960's.

Unemployment rate is very high, it estimated that about 48 000 people are living in poverty. Currently it has three informal settlements and two low-cost housing areas and lacks public transport, commercial and social facilities.

a) Challenges and opportunities

Key challenges for development of the area include:

- i. The lack of bulk infrastructure, the provision for which was not included in the Metro's next three-year budget
- ii. The communal tenure of the land, which often complicates the provision of municipal services and the sale or lease of land for development.

b) The area's opportunities for development include:

- i. The settlement's good location in terms of transport linkages. It is near a provincial main road (MR385) that links to the N3 highway (identified as a development corridor), and the Durban to Johannesburg railway runs parallel to the MR385.
- **ii.** The identification of the settlement in all the municipal plans as a rural development node with a regional function.

c) Approaches for development

This section outlines some key elements of the Metro's approach to transforming a marginalised settlement into a viable small town. It highlights some key factors that helped to strengthen partnerships between different role-players.

d) Plans for regeneration

- The regeneration initiative has become known as Mpumalanga New Town Centre. The plans include:
- ii. Housing projects for low-income and middle-income groups, including rental units as well as units for private ownership
- iii. Various types of public facilities such as a community health centre, facilities for informal traders and agricultural co-operatives, a business support centre, a library, two new parks, and a new railway station
- iv. A retail centre
- v. Water and sanitation services, street lighting, stormwater drainage, roads and other infrastructural projects to support the new developments.

e) Overview of the planning process

The Metro received funds for the planning process from the Neighborhood Development Partnership Grant (NDPG) and the provincial Department of Economic Development. It commissioned the development of a Precinct Plan and a Local Economic Development Strategy. The municipal Economic Development Unit, which drove the development initiative, compiled a Township Regeneration Strategy (TRS) and a Business Plan, as requested by the Neighborhood Development Programme (NDP).

All the municipal plans were thoroughly researched and supported the concept of Mpumalanga nodal development outlined in the IDP. In addition, time and resources were invested in developing relationships with community members and other stakeholders and potential investors.

Key partners in the development were the traditional authorities and the Ingonyama Trust Board (ITB) who administer the communal land in the area. Any development in the area was subject to their agreement to make the land available to the Metro or private developers.

The institutional arrangements, which included a project steering committee and community stakeholder forum, ensure the close involvement of the ITB, ward councilors and other community representatives in the development plans.

f) Lessons learned

Through many years of careful preparation and partnership building, eThekwini Metro has established a sound platform for investment in the Mpumalanga New Town development with financial commitments from a property developer, a national bank, and various government departments and agencies. Three key lessons drawn from their experience are given below.

i. Communal tenure is not necessarily an impediment to development

The Metro's experience shows that it is possible to integrate dual systems of land tenure and retain advantages from both systems. For Mpumalanga, this was achieved through the Metro respecting traditional forms of land management and working with traditional leaders rather than challenging them. The willingness of the ITB to be open to innovation and change was also an important factor.

ii. Preparation is important for successful development

Throughout the process, the Metro took care to gain an in-depth understanding of the area, the needs of the people and the issues of concern relating to the potential development. This involved providing training in planning and development processes when required, backing up development plans with thorough research and requesting provincial departments to provide relevant information at an early stage in the process.

Through such preparatory work the Metro developed strong relationships with potential partners, based on trust and confidence that the municipality would be able to deliver the infrastructure services required.

Thorough preparation takes time, and the Metro was able to resist pressure for quick visible development that often comes from funders, politicians or government officials.

iii. Development plans need to be economically viable

To attract private sector partners, development plans need to make economic sense. EThekwini Metro developed the Precinct Plan and Town Centre Urban Design jointly with ERIS. Without this early consideration of the needs of the private sector, the plan may have needed to be amended at a later stage. Private sector partners are important as investors and for their leverage potential in attracting other partners.

4.2.5. Projects underway

COGTA is driving a number of projects in this regard, such as the proposal to rehabilitate twenty five small towns (*see 4.2.3.*). Among other rural small towns where work has commenced in terms of small town regeneration initiatives is Msinga (Mzinyathi municipality); Jozini & Ndumo (UMkhanyakude municipality) and under Umzimkhulu municipality. These are both poverty stricken regions and most of the land is under Amakhosi. The following has been identified by COGTA as a challenge that needs to be addressed:

- a) land tenure
- b) unplanned urban environment
- c) General congestion in towns
- d) Absence of effective law enforcement
- e) Absence of effective urban management
- f) Lack of appropriate facilities
- g) Forward spatial and land use planning

Currently Urban Development Frameworks (UDF) for some of these towns has been developed to address the physical structure of the towns to promote its functionality within the broader municipal economy. The UDF also aims to promote an urban structure of the town that will respond to the needs of the town including, clarity of infrastructure requirements and promotion of Local Economic Development for the area whilst respecting ecological and environmental aspects of an area. The Department of Rural development & Land Reform is also driving some initiatives such as Nkandla and also restitution and redistribution projects for instance in Mpendle with the community of Ingwe village.

4.2.6. The concept of Community Service Centres (CSC)

Studies have revealed that there is a surplus of community halls, traditional administrative centres and other community structure that are dysfunctional, underutilised or spatially misplaced, as a result these does not play an effective role in terms of integration and economic activity. Community service centres intends on maximising the use of such establishments and promoting integration within rural communities.

The concept of Community Service Centres has been on the agenda for discussion at Cabinet level. As a result Cabinet Lekgokla tasked COGTA in partnership with the KZN-Provincial Planning Commission to formalizing a document that would guide the implementation of this idea.

Community Service Centres includes Multipurpose Community Centres; Thusong Centres and One Stop Development Centres. Community Service Centres aims to resuscitate and build economic activity in rural areas through ensuring connectivity and provision of basic needs. This approach is similar to the rural development strategy that was implemented in India: Delhi, where rural areas are categories into different levels to enable for suitable interventions not just a uniform approach (refer to 2.1.1).

Specified criteria are used to determine the relevant category for an area. This is also comes out strongly in the Chapter 8 of the NDP discussed ealier in the document (refer to 2.2.1). In KZN the process and criteria to be used towards the establishment of Community Service Centres is still work in progress, however what comes out strong in the draft document is that implementation of this idea must at all times submit to the extensive detail and guidance established by the Provincial Growth & Development Strategy of 2011 (PDGS). For instance in deciding on location of community services centres should be guided by key intervention areas identified within the PDGS.

i. Categories of Community Service Centres:

a) Grade 1 : CSC Hub – bias towards supporting district economic potential

A CSC Hub is the highest level of CSC, incorporating a wide spectrum of government, commercial, enhanced economic development, educational and private sector services. Hubs will be implemented within an underdeveloped predominately rural environment as catalytic projects towards development of interventions and encouraging the growth of emerging small rural towns.

b) Grade 2 : CSC Satellite – socio- economic service

CSC Satellites are the second level of CSC and are established within marginalised under-serviced communities and have bias towards localised government services. CSC Satellites are operational headquarters for ward councillors, ward committees, Operation Sukuma Sakhe (OSS), flagship programmes, sector departments and Small businesses.

The SCS Satellite will serve communities with a 10 kilometre radius to the CSC. Wards in the outer lying areas (15 km radius) will be serviced to mobile services coordinated between the CSC satellite and Ward CSC.

c) Grade 3: Ward CSC (operation sukuma sakhe war rooms)

This level includes and integrates mobile service delivery to address issues of spatial locations and challenges thereof faced by rural communities in accessing government services. It also provides habitable operational bases for ward councilors, ward committees and Community Development Workers, towards the alignment of wards and OSS War Rooms.

Chapter 5 : Discussions

5.1 Introduction

It is noted that the largest part of literature review undertaken thus far only reveals densification options or proposals that have been developed for an urban scenario, very little has been recorded in terms of interventions designed specifically for the rural context. The importance of rural densification is emphasized by almost all government departments (Provincial and National) and municipalities but very little, if any proposals are documented in this regard. However a number of the urban densification proposals and/or options and principles tabled by different organizations can also be adopted and adjusted to cover the rural context.

5.2 Need for integration and alignment of departmental efforts

An interesting consideration is that a lot of work has been done in terms of rural development by various spheres of government, the issue lies with very little consideration for integration. KZN-DOHS undertook a research exercise to look into different rural development projects in 2010 (research report on land affairs projects: 2010). The report states that a number of rural development projects have failed due to lack of integration and alignment of programmes and plans by various departments. The various sector departments met to discuss issues pertaining to rural development projects and consensus in terms of establishing a working relation, alignment and integration was reached (refer Appendix 2: minutes of the meeting with stakeholders on rural development issues).

The PDGS allows for strategic densification as it clearly stipulates the priority areas; nodes and corridors, making it easy for different sector departments to align their programmes with the specified areas. Densification of strategic areas will in essence support balanced and shared growth; facilitated social mobility and settlement restructuring as envisioned by the PDGS.

The main argument underpinning a number of strategic documents such as those discussed above is that corridors and nodes must be optimized to build up thresholds and thus create locational opportunities for business. Densification of residential development around these corridors and nodes will serve to increase thresholds, as will a concentration of public investment in these areas. Characteristically, development corridors connect major nodes, creating purposeful interaction, requiring high-density development - both residential and commercial - along the route. It is therefore believed that a multimodal transport system would determine the success of a corridor.

Recently the different sector departments had a meeting which initiated the process of engaging in rural development issues and "planning" together. At the meeting it was also noted that the Department of Cooperative Governance and Department of Human Settlements are both undertaking a project in the context of rural densification. The departments have reached consensus that they will be working together to pool resources.

It was also agreed at the meeting that densification models used in other areas might not necessary be replicable in KwaZulu-Natal because of the unique setting of the Province however they might be useful in establishing basis. On that view, a pilot project is strongly recommended as it would also be beneficial in terms of testing what could work within the province. This would allow for identification of challenges and lessons learnt exclusively in the Province's context. The results of the pilot project would also form a starting point for development of a Provincial densification framework.

Discussions between sector departments also emphasized focusing development on the nodes, corridors and priority areas as stipulated in the PDGS. This is in line with the strategies and proposals developed by other provinces. A one size fits all approach and planning by numbers; for instance 80 units per hectare; would not be feasible as a number of issues impact on the nature and extent of densification.

It must also be noted that due to the complexity of the densification concept it requires to be placed within the right department in terms of framework development and coordination that must be facilitated in the process, hence the KZN-Planning Commission is undertaking this function.

5.3 KZN Planning Commission

The KZN Planning Commission developed guidelines to manage urban growth; the guidelines highlight a crucial component in terms of unsustainable densification in rural areas. As much as the focus is on densification but the principle of sustainability should form basis for decisions and interventions (see figure 6 below).

According to the guidelines, unsustainable rural densification is associated with rapid urbanization, for instance there has been significant migration into many towns and smaller centers. Settlements with significant densities have emerged. These densities are sufficiently high to make many 'rural' activities such as subsistence agriculture and small scale farming difficult. Furthermore, densities of this nature compromise the preservation of high value agricultural land. An example of such cases is UMzimkhulu Municipality since it was incorporated into KwaZulu-Natal from the Eastern Cape; the Municipality has experienced an influx of people, particularly into the traditional authority areas.

The KwaZulu-Natal Planning Commission identified the following causes of unsustainable densification:

a) Rural densification has taken place, owing initially to the forced movements of people under apartheid, and subsequently to the voluntary

- or semi-voluntary movements of people seeking economic and access advantages
- b) Apartheid spatial policies restricted the movement of blacks into urban areas designated for whites, largely confining them within their selfgoverning territories or homelands. Under apartheid, urbanization was diverted from the white cities, leading to the creation of massive rural slums in the countryside. Some of these slums were caused by forced removals
- c) Voluntary/semi-voluntary rural densification often arises from poverty or from environmental collapse – disadvantaged people from rural areas try to obtain locational advantage, or at least reduce their locational disadvantage and improve their access to resources and services
- d) The land allocation practices of traditional authorities have led to unsustainable rural densification.

Municipal Planning & Management Tools	Nature of Intervention	Tool #
Development Planning	Apply planning principles and standards that support densification and compact cities	3
	Implement pro-active and detailed planning through SDPs and LAPs (existing plans are often too vague to give decisive direction)	1
	Define urban edge or urban development/growth boundary	20
	Establish protocols and capacity building programme to implement detail planning (SDPs and LAPs) on land under communal tenure Apply consolidated nodal development in rural areas	2
	Prepare municipality-wide housing plan	7
	Prepare city-wide open space and conservation plan and implement measures to effectively manage and develop conservation areas and open spaces	12
	Prepare agricultural plan for municipal area	13
	Promote reliable and affordable public transport and walkable local areas to reduce reliance on cars	18
e D D d te	Establish implementation protocols to coordinate land use	23

	development decisions between neighbouring municipalities and between municipalities, housing and other relevant authorities Establish procedures to negotiate development agreements with property owners/land rights holders/developers that will encourage infill development (on private and communal land)	22
	Establish or review model for 'development contributions' by private developers to recover full costs of infrastructure provision and maintenance of outlying private developments	24
	Make integrated cities and towns with an economic base "development conditions" when approving housing and township establishment projects	25
nt Control	Apply stricter control over subdivision of agricultural land	29
	Remove "dual" legislation that can be misused by developers to override municipal decision making and agricultural legislation such as the Subdivision of Agricultural Land Act of 1970 (LEFTEA and DFA)	30
Land Use/ Development Control	Locate and design subsidised housing projects to promote densification and compact cities	36
	Apply infrastructure investment (engineering, transport and social services) to shape city development patterns	34
_Φ	Apply differential levels of service	35
ıstructure	Locate and design subsidised housing projects to promote densification and compact cities	36
Public Infrastructure Investment	Apply housing subsidies to encourage consolidated nodal development	39
Property Rates and Taxes	Stimulate infill development, urban densification and release of vacant land by taxing property based on development suitability and potential	45
Property Transactions	Provide for land exchange agreements or appropriation to prevent leapfrog development	50
Integrated Area- Specific Measures	None	
Information tools & modeling techniques	Ensure that the municipality has up to date, user friendly data on social, economic, agricultural, environmental and spatial trends in its area of jurisdiction	60

Apply 'cost surface modelling to define urban edge where feasible and establish development contributions required from	61
developers, where feasible	

Figure 6: Potential solutions and tools (*see Appendix 1 for tools referred to*) to address unsustainable densification in rural areas/displaced urbanization (extract from the sustainable urbanization guidelines to manage urban growth: KZN-Planning Commission).

5.4 Examples of integrated rural development approaches in KZN

Changes in rural settlement patters have occurred slowly in several rural settlements and rural towns throughout the Province. Examples are sited in reports and studies compiled by the former KZN Planning Commission where areas such as Ndwedwe, Amaoti, Hibberdene, Bruntville and Highflats and Tugela Ferry to mention a few (2004: 6 and 7).

The report on "Urban Design for Emerging Towns" prepared for the Planning Commission in 2004 refers to these case studies and how proper settlement planning in the context of these local case studies have resulted in good planning principles. These include issues such as providing forward planning and structured growth, proper use of public space, and flexibility to allow an incremental approach (2004:6-7). (Also refer to paragraph 2.6 above).

The move towards a more integrated development approach, noting community and area specific needs, challenges and development potential and in the context of planning for future improvements is alos illustrated in the report presented by PPT, in partnership with the Department of Human Settlements, funded by USAI (2004). From these reports it is evident that "densification" is but only a tool a greater emphasis needs to be placed on proper forward planning for rural communities, noting community and cultural dynamics and balanced against technical development requirements and funding. An example of how such forward planning can be accommodated within existing settlements is illustrated in section 5.4.1, below. Readers are again cautioned that this is merely an example and that a one-size-fits all approached is not encouraged due to the unique nature of these communities and the variety of factors that impact on these areas.

5.4.1 Examples of formalization and planning for future densification of densely settled areas on ITB land, incorporating the status quo.

In rural areas, settlements are characterized by the traditional way of living known as "Umuzi". An "Umuzi" may be described as a homestead comprising cluster of dwellings ("huts") with a common use area allocated to the head of the household by the traditional authority. It is mostly occupied by a family (extended in most cases) but under the control of the head of the household. The common use areas are generally used to house their animals when not in the fields grazing (refer to figure 7, below).

It is impractical and inappropriate to disrupt this type of living, simply in order to achieve the objective of one beneficiary per site, as is required by the subsidy scheme, especially in view of the informal land rights held by the occupants.

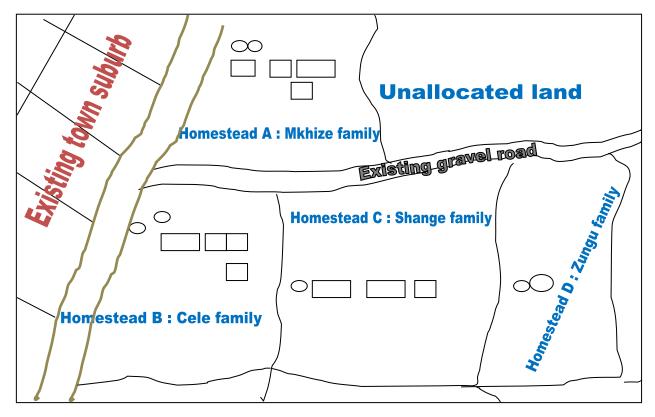


Figure 7: Rural Settlement adjoining town - ITB land

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It is **possible** to achieve the formalization of these settlements **without formal subdivision** of the land through the framing of a settlement plan that accommodates forward planning.

In Figure 7, the settlement plan can, for example, use the existing infrastructure to formalise the allotments to the original head of household, as depicted by the lines.

The "Imizis" are denoted on the layout plan as primary erven, separated by the existing or modified road network, and communal land. Members of the traditional "Umuzi" are mostly direct or indirect family members and controlled by the family head. Movement within the "Umuzi" and allotments/assignments, regulated by the family head in terms of customary law. The institutional arrangement for the management of an "Umuzi" is catered for in terms of these customary laws.

These primary allotments are further "laid out" on the settlement plan along the lines of Figure 7. Members of the traditional "Umuzi" are mostly direct or indirect family members and controlled by the family head. Movement within the "Umuzi" and future settlement thereof.

Within each "Umuzi" provision can be made for the assignment of a portion of the land by the head of the household to any person in terms of the customary law (noting that in most instances such persons will enjoy an informal right). The assigned portion will be defined in terms of its own boundaries (thus a secondary type of allotment), and enjoy the benefits of the common property on a basis similar to an undivided share principle. An example is depicted in Figure 8, below.

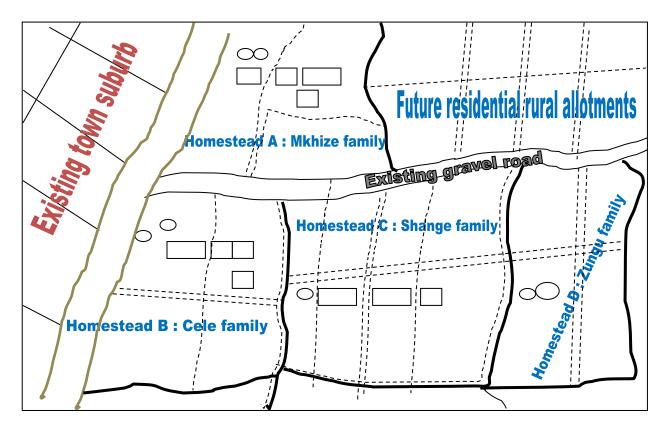


Figure 8: Rural Settlement adjoining town - ITB land - Example of formalization and future allotments

5.4.2 Settlement planning incorporating future needs and the status quo

Figure 8 above illustrates the framing of portion of a settlement plan guided by the conditions on the ground. In this case, the settlement is adjacent to a town with a higher level of service. It is reasonable to expect that the adjoining rural community would aspire to these services over time, hence, a need to accommodate the future infrastructure needs and to identify areas where services might be constructed in the future. The following suggestions are also incorporated:

a) Internal access within each "Umuzi" would be defined in terms of the landmarks and current practice. The solid black lines depict the boundaries of the existing homesteads.

- b) From a planning point of view, the settlement plan must clearly reflect the above requirements, and accommodate the needs of all stakeholders and organs of state.
- c) In order to provide for the inclusion of future family members within the "Umuzi", the development conditions must make provision to recognise the future planning and progressive approach to be followed. It also needs to guide minimum allotment sizes, noting the technical conditions and Generally, however, the "Umuzi" primary serviceability of such sites. allotment is large and therefore is able to cater for future family members, as is shown in Figure 7 where the thick black lines denote the original homestead, and the dotted line represents areas assigned to areas assigned by the head of the household for family members. Once insufficient land is available on the original homestead, customary practice usually provides for new negotiations for additional land. Future residential allotments should be negotiated with the traditional council and be identified in terms of the municipal spatial development framework to ensure optimal land usage and preventing settlement on land that is less desirable for occupation, e.g. flood The latter should also inform the housing sector plan and be plains. developed in consultation with all stakeholders. Proper settlement planning is thus to be centred around accommodating the existing settlement pattern whilst also providing for future development needs (e.g. infrastructure such as roads) and safe sites for occupation.
- d) It is recommended that statutory consent for this is achieved in terms of either:
 - i. The Planning and Development Act.
 - ii. Provision of Certain Land for Settlement Act, Act 126 of 1991.
 - h) The extent of survey beaconing must be agreed between the relevant state departments as these would vary from project-to-project. It is suggested

that provision should be made to ensure proper identification of areas identified for roads and infrastructure.

- i) It is emphasized that each settlement considered for the use of this concept will exhibit its own peculiar "flavour".
- j) It is therefore imperative that the layout plan and conditions of establishment clearly reflect the actual circumstances of each "Umuzi" such that the legal and registration requirements are met.
- k) To achieve the above, the planner, land surveyor and conveyancer must liaise with COGTA, the municipality, and the ITB.
- Furthermore, and equally important, this concept should be discussed with the District Council; and/or Local Council in order to clearly define the future obligation of such District Council and/or Local Council.

5.4.3 Densification: a flexible approach

The concept of densification should be promoted as a tool to be applied on a case-by-case basis, starting with areas that are already dense in nature and/or where new settlements are planned. The questions to be considered are: "Where do we densify and why". Responses would be guided by issues such as alignment with the Provincial Growth and Development Strategy and in relation to existing dense settlements. Municipal planning criteria and technical conditions (including the need and costs of infrastructure services) and measured against comminity dynamics and needs all need to be taken into account. These are discussed briefly below:

a) PGDS and PSEDS versus existing dense settlements

- (i) Evaluate existing settlement patterns against PGDS and PSEDS to identify possible areas suitable to densification
- (ii) Planning units for COGTA, DoHS, ITB GIS mapping to be used as baseline.
- (iii)Areas identified as rural nodes and service centres should be prioritized. These areas are likely to expand and hence proper forward planning for land use, services and other infrastructure matters need to be planned upfront and delivered on a progressive basis.
- (iv) Areas with more sparse settlement patterns would require a different progressive delivery approach. These might include rudimentary services only and/or a basic housing unit. Care should be taken not to perpetuate poor unsustainable settlement patterns.

b) Municipal planning criteria\

- (i) Consider the municipal planning and bylaws in relation to densities (note PDA will soon apply to all areas, also ITB requirements i.t.o. land use patterns/zoning and leases). Planning is a local government function and in more than 40% of the province, the ITB is the custodian and needs to be consulted in terms of settlement pattern.
- (ii) Planning units of COGTA and DoHS to confirm with municipalities (starting with aspiring metros and confirmed metro). COGTA to provide plannin support in ensuring spatial plans are available for all municipalities.

c) Technical conditions

- (i) A one-size fits all approach is not possible. Densification and development plan yields are informed by soils, environmental constraints, topography, servitudes, existing development and structures. A strict compliance to units/ha thus, is not feasible in the rural context.
- (ii) Based on project/area specific interventions, perhaps to consider case study projects in each area, e.g Vulindlela in PMB, Umnini, Umzumbe in Hibiscus, Jozini, Nkandla, etc advise needed from COGTA consider existing and planned projects informed by 1 and 2 above.
- (iii)In addition to this, the informal rights of occupants need to be recognized together with the *traditional allocation system; and requirements and suggestions from the Ingonyama Trust Board relating to leases.
- (*) Note: Generally the allocation of sites is undertaken by the traditional authority who assigns an informal right to the head of the household to establish his umuzi. The head of household may allocate a portion of this site to his/her children or any person he/she chooses in terms of the custom of that community. In the context of densification, this would be viewed as a separate allotment and could be approached in a similar manner as an undivided share and/or mini-sub concept, with the exception that the land is not formally subdivided.

d) Community acceptance and understanding

(i) Community acceptance and understanding must be tested, and negotiated in terms of the findings of steps 1-3 above. It might result

in development of packages so as not to perpetuate poor settlement patterns, yet to ensure very basic needs are addressed appropriately.

(ii) Examples could be:

Product 1: Sparse settlement developments: Package A: Provision of basic services (VIP sanitation, rainwater harvesting and standpipes or boreholes, depending on local needs and technical circumstances); One – house per umuzi principle, but for most needy and vulnerable.

Product 2: Sparse settlement developments: Package B: Provision of top structure and or basic services (VIP sanitation, rainwater harvesting and standpipes or boreholes, depending on local needs and technical circumstances; One house umuzi principle to most needy and vulnerable.

Product 3: Already densely settled communities not adjacent to a town: Provision of top structure and or basic services (VIP sanitation, rainwater harvesting and standpipes or boreholes, depending on local needs and technical circumstances; One per allotment to most needy and vulnerable; gravel roads. Settlement plan to be formalized through the Planning and Development Act and to incorporate planning for upgraded level of service in future, but guided by current network; and consider mixed land-use sites to encourage sustainable development, and identification of sites suitable for future allotments by the Traditional Authority. Need and desirability of formalizing the status quo to be determined upfront in consultation with municipality ITB, COGTA and community and leadership. Leases are recommended, subject to traditional authority and ITB consultation The latter have several advantages in terms of and acceptance. assisting with leveraging finances from institutions.

Product 4: Densification and/or formalization of dense rural settlements adjoining a town: Provision of top structure and/or basic services (VIP sanitation, rainwater harvesting and standpipes or boreholes), depending on local needs and technical circumstances: *One house per allotment to most needy and vulnerable; gravel roads. Settlement plan to Settlement plan to be formalized through the Planning and Development Act and incorporate planning for upgraded level of service in future, but guided by current network; and consider mixed land-use sites to encourage sustainable development, and identification of sites suitable for future allotments by the Traditional Authority. In this regard densification could take various forms, e.g. use of flats, and/or reorganization of settlements to concentrate residential units (per umuzi), and/or reallocation of agricultural land. Whereas the configurations of such patterns are endless, consultation with the community and partnering departments such as Rural Development, Agriculture, will be critical. *Leases are suggested for each beneficiary identified to receive a house.

(*)Note: Generally the allocation of sites is undertaken by the traditional authority who assigns an informal right to the head of the household to establish his umuzi. The head of household may allocate a portion of this site to his/her children or any person he/she chooses in terms of the custom of that community. In the context of densification, this would be viewed as a separate allotment and could be approached in a similar manner as an undivided share and/or minisub concept, with the exception that the land is not formally subdivided. An example of how this could be achieved is appended hereto).

5.4.4 Critical support factors

- a) The involvement of the: ITB, COGTA, House of Traditional Leaders in the roll out of the strategy is critical. However, it is submitted that densification can be dealt with on a project-by-project basis and this should be undertaken with the involvement of all stakeholders, including the servicing authorities.
- b) The development of Joint communication strategy required from ITB, COGTA, Rural Development, DoHS.
- c) Project specific interventions also need follow up communication (in terms of case studies/examples).
- d) The principles of sustainability and planning for future growth and development need to be considered and be applied in settlement planning.

Chapter 6 : Conclusion

The desktop research reveals that work speaking directly to rural densification is still overlooked and this needs an intervention. Literature confirms that a problem exists but very little is said about possible rural interventions, for instance most municipalities highlight the need and intentions to densify but very little has been put into place in terms of the "how part" and/or targets and priorities. However it is noted that most of the strategies focusing on urban would also be applicable in rural areas. For instance the CSIR Redbook outlines spatial and structural principles which must be employed for settlement making these would also produce a well performing rural settlement. The literature review also reveals that strategies that have been developed in other provinces i.e. Western Cape and Tshwane carry the principles prescribed in the Redbook.

Previously, despite the existence of small towns in all provinces, small towns were rarely seen as key players or contributors to local economic development of rural areas. Such towns were only limited to serving as administrative centers. It is however evident that there is a paradigm shift in that area, as an emphasis is being put on town planning for small towns and rural settlements. The future holds a promise of planned and well serviced rural towns and settlements.

The comprehensive plan for development of sustainable human settlements states that housing development must be demand oriented this means that housing projects should respond to pre- identified needs. The document also recognizes that for this to happen the planning function must lie with the municipalities as they are the closest to the communities and have the power to undertake informed planning. A provision is then made for development of housing sector plans as part of all municipalities' Integrated Development Plans; this is done so that housing planning is undertaken carefully at municipal level.

There is therefore a strong need for various provincial departments to support municipalities as key role players. It is evident that municipalities are key in achieving densification and overall rural development programmes. A range of National and Provincial policies provide clear and compelling mandates for the Provincial departments to support small and rural municipalities with rehabilitation of small towns as local centers of economic activity and nodes of concentrated and focused delivery of services.

It is however important for provincial departments to work in a coordinated manner as well, this talks to alignment of their programmes and projects to ensure maximized impacts on the ground. It is noted that government departments have also began engagements at various levels, for instance a meeting was held on the 26 April 2012 between DRDLA; COGTA; DOHS and ITB as part of this study. The meeting highlighted that provincial departments are willing to share plans, align them and pool resources. The meeting had suggested that one area of impact be chosen as a pilot, consensus was reached that Jozini would be ideal as work is already underway.

Another important aspect to consider whilst planning towards densification is the readiness of communities to accept the concept. Most rural people enjoy the large plots of land and all the peace that comes with it in terms of minimal traffic and intervention of modern technologies. The example from Zimbabwe shows some form of resistance from the communities hence communities should be involved as early as possible in the planning process.

Chapter 7: Recommendations

The following recommendations are made:

- 1. Densification be defined as increased usage of space both horizontally and vertically within existing areas /properties and new developments accompanied by an increased number of units and/or population thresholds.
- 2. It is to be noted that densification does not necessarily refer to high rise buildings as it has been commonly assumed but rather entails different types depending on the area being considered for densification. It may therefore include demolition and redevelopment; infill and Brownfield development; subdivision, additional/second dwelling, sectional title development or green fields development.
- 3. Rural development need to be addressed in the context of the PDGS, PSEDS and Integrated Rural Development Framework.
- 4. The CSIR Redbook be used for guiding human settlements developments however, technical and social dynamics must be considered in each project. Implementing Agents will, thus, have to ensure that they are advised by their town planners in relation to their developments.
- 5. The principles of sustainability and planning for future growth and development need to be considered and be applied in settlement planning.
- 6. The current urbanized areas and larger municipalities be prioritized in terms of pilot projects, as well as areas identified for new town development or urban regeneration, and in alignment with the Provincial Growth and Development Strategy.
- 7. The concept of densification be promoted as a tool to be applied on a case-by-case basis, starting with areas that are already dense in nature and/or where new settlements are planned.

8. Whereas a "one size fit all" approach is not possible, however the following broad approach is suggested to guide implementation in considering where to densify and why:

4. Community acceptance and understanding

To be tested, and negotiated in terms of findings of 1-3, may result in develpment of packages so as not to perpetuate poor settlement patters, yet to ensure very basic needs are addressed appropriately

Include: ITB, COGTA, House of Traditional Leaders

Joint communication strategy required from ITB, COGTA,

Rural Development, DoHS

Project specific interventions also need follow up communication (i.t.o pilots)

1. PGDS and PSEDS v Existing dense settlements

Evaluate existing settlement patterns against PGDS and PSEDS to identify possible areas suitable to densification

Planning units for COGTA, DoHS, ITB - GIS mapping to be used as base

Where do we densify and why?

3. Technical conditions

A one-size fits all approach is not possible. Densification and development plan yields are informed by soils, environmenta constraints, topography, servitudes, existing development and structures; serviceability and infrastructure requirements

Based on project/area specific interventions, perhaps to consider case study projects in each area, e.g Vulindlela in PMB, Umnini in Ethekwini, Umzumbe in Hibiscus, Jozini, Nkandla, etc - advise needed from COGTA - consider existing and planned projects informed by 1. and 2

2. Municpal planning criteria

Consider municipal planning bylaws in relation to densities (note PDA will soon apply to all areas, also ITB requirements i.t.o. land use pattters/zoning and leases)

Planning units of COGTA and DoHS to confirm with municpalities (starting with aspiring metros and confirmed metro)

Figure 9: Densification model and approach for KZN (rural development) to be read clockwise

- 9. The capacitating of municipalities in terms of development of housing sector plans and overall human settlements planning is emphasized as the correct implementation of the rural densification context lies mostly at municipal planning level.
- 10. Capacitation of Amakhosi with regards to densification and how it links with Traditional Authority i.e. land allocations.

- 11. It is recommended that the Department of Human Settlements supports the small town rehabilitation initiative through aligninment of plans & programmes with key departments. This will allow for provision of state aided housing entailing mixed housing, these include rental, individual subsidies and rural subsidies in priority areas chosen for rehabilitation.
- 12. As per the meeting held it was recommended that departments must have regular meetings. These could be incorporated into the planning forum meetings. The document reinforces the need for such engagements, as this will allow for alignment and information sharing amongst professionals and experts.
- 13. The research report also recommends that the Planning Commission should assist in driving the rural development coordination and integration with the Office of the Premier.

8. References:

Aspire Annual Report for 2009/2010. www.aspire.org.za

Todes, A. 2006. Urban Spatial Policy.

Cape Town. Draft densification strategy.

City of Tshwane. Compaction & densification strategy, 2005.

Cross C.; Mngadi T., & Mbhele T .2008. Constructing migration: infrastructure, poverty and development.

Council for Scientific & Industrial Research (CSIR). Guidelines for the Human Settlement Planning and Design document.

Department of Cooperative Governance and Traditional Affairs. Draft CSC establishment criteria framework (Draft version 1, 2012).

Greg Bachmayer (2012). Densification of Dzivarasekwa. A collaboration between Slum Dwellers International and Dialogue for Shelter.

EThekwini Municipality. Spatial Development Framework (Draft, March 2012).

KwaZulu-Natal Provincial Planning Commission. Provincial growth and development strategy, 2011.

KwaZulu-Natal Provincial Planning Commission. Sustainable urbanization: guideline to manage urban growth, Volume 2.

KwaZulu-Natal Provincial Planning and Development Commission. Assessment of Rural Human Settlement in KwaZulu-Natal

KwaZulu-Natal Planning and Development Commission, 2004. Urban Design for Emerging Towns – consolidated report. Prepared for the Planning and Development Commission by Iyer Rothaug Project Team.

Mhlathuze Municipality. Intergrated Development Plan, 2011.

National Planning Commission. National Development Plan.

Project Preparation Trust. Housing and Infrastructure. <u>www.pptrust.org.za</u>, accessed 5 October 2012.

Project Preparation Trust and DBSA. 2005. Draft Integrated Rural Development Manual.

Project Preparation Trust and KZN Department of Housing. 2008. Rural Housing Manual. Funded by USAID

State of Rhode Island. 2002. Growth centers: recommendation for encouraging growth and investment in economically and environmentally sound locations in Rhode Island.

Statistics South Africa. General Household Survey, 2005.

Geyer, H. S. 2007. 'Place' qualities of urban space: interpretations of theory and ideology in Geyer, H. S. (ed.) International Handbook of Urban Policy, Volume I: Contentious Issues, Edward Elgar: Aldershot, Hants, UK, 190-210.

Western Cape Provincial Spatial Development Framework: Settlement Restructuring, 2009.

Township regeneration in small towns: case study .2011. South African Network of Cities; National Treasury & Rachel Adatia Clacherty & Associates.

Qayi S, 2010. Understanding Economic Role of small towns. Nelson Mandela Metropolitan University.