ILLOVO LAP

FINAL REPORT

31.05.2010
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ILLOVO LOCAL AREA PLAN: SPATIAL PLANNING FRAMEWORK
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INTRODUCTION
1.1 PURPOSE OF REPORT

Iyer Urban Design Studio, in conjunction with Goba, StratPlan, Linda Masinga and Associates and WSP Environmental Consultants, has been appointed by the Framework Planning Branch of the eThekwini Municipality to assist with the preparation of a Local Area Plan for the Illovo Township, Illovo Village and Bhekulwandle areas.

1.2 BACKGROUND TO PROJECT

PROJECT MOTIVATION
The Department of Development Planning, Environment and Management initiated a process to prepare a Local Area Plan (LAP) for Illovo Township, Illovo Village and Bhekulwandle area (hereafter referred to as the Study Area). This process has been motivated by the development of a number of stand-alone projects namely a Taxi Rank, Commercial nodes, a Park, Sports Precinct and low and middle income residential development. There is also a Local Economic Development Strategy to be developed within the framework of the LAP, by the Economic Development Unit.

A more comprehensive plan for the Study Area is therefore required. This plan will ensure a clear framework for the development and management of the area. This Plan will guide development within the Study Area and further integrate any intended or currently existing Precinct Plans (and any other studies) in the Study Area in line with eThekwini Municipality’s Package of Plans. In addition key development requirements will also be developed as part of this process. Further the LAP will consider existing and planned initiatives outside of the Study Area which may impact on the area.

PURPOSE OF THE PROJECT
The purpose of the project is to provide a clear, comprehensive Local Area Plan, a Development Plan and Land Use Management Guidelines. More detailed guidelines will also be prepared for the management of development and land use in two to be defined areas within the Study Area (i.e. Special Area Plans) will be prepared.

The plan is informed by the Municipality’s Integrated Development Plan (IDP) and South Spatial Development Plan and will therefore form part of the eThekwini Municipality’s package of plans.

The purpose of the Illovo LAP is to:

- Generate a vision for the Project Area with respect to land uses and settlement densities to integrate with transportation and infrastructure planning for the future;
1.2 BACKGROUND TO PROJECT (CONTINUED...)

- Identify and define the role of the area in relation to the development vision of the SSDP, through engagements with all the interested and affected parties including the Community, Councillors and business in the area;
- Develop intervention strategies and this will lead to the development, upgrading and integration of the project area;
- Provide a planning framework and planning guidelines for use by the public and private sector, and individual property owners so that development is integrated with the longer term needs of the city and with the infrastructure capacities of the municipality; and
- Identify and recommend methods of intervention by the Council with regards to management of the area.

OBJECTIVES OF THE PROJECT

The objectives for this project will be:

- To describe the status quo of all the development sectors in the Study Area;
- To provide guidelines for the development and management of the area;
- To provide priority infrastructure development projects;
- To identify and develop a scheme that will enhance and protect the local physical and human environment;
- To identify and coordinate how investment opportunities may be created in the area, for both the public and private sector, and how linkages to these opportunities may be created for the socio-economically disadvantaged people of the Southern area;
- To create a coherent environment, which maximizes the potential of the area;
- To re-inforce and further make provision for the community’s social, economic and environmental needs;
- Improve degraded natural and built environment; and
- Provide guidance on the implications of the existing and proposed commercial/business node from a market point of view.

1.3 THE STUDY AREA

BACKGROUND TO THE STUDY AREA

The Study Area is located approximately 30kms south west of the eThekwini CBD, and inland of the southern coastal areas of Kingsburgh and Warner Beach, in proximity to the Amanzimtoti central area.

The area of study for the current initiative is focused on the settlement of Illovo (Illovo Township). This is one of two low-cost housing projects (the other being Waterloo near Verulam) developed in the eThekwini area under less formal township establishment procedures in the early 1990’s. The settlement has been developed in phases over a number of years, and there are current proposals for further extensions.

As with other settlements of this nature, Illovo was never planned as a natural extension to the urban system, but rather as a dormitory suburb peripheral to core social and economic opportunities. As such, the settlement is predominantly residential in nature, with a limited range of social facilities, and very little opportunity for a real local economy to evolve.

The Study Area itself contains a number of characteristic sub-areas. The core of the Study Area comprises the Illovo Township, a formal, low-income dormitory settlement, whilst a significant portion of the northern area, falling within Bhekulwandle, is characterised by more traditional, dispersed patterns of settlement. In addition, the western portions of the Study Area have a far less developed character, due in part to this area previously being the focus of small Sugar Mill village.

The specific extent of the Study Area is defined Reeves Road to the north-east, the N2 and Illovo River to the south, and the Municipal boundary to the west, the Study Area is bordered by Reeves road eastbound.
Complicating the challenges faced by residents is the administrative context within which the settlement is located. The area falls partly within the established township of Illovo, and partly in the Traditional Authority area of Bhekulwandle. This distinction is compounded by the Study Area falling within two different political wards, namely Ward 97 and Ward 98. In addition, the Study Area falls within two separate planning zones, as is evident in the overview of the Regional Spatial Development Framework for the area. Whilst this does not necessarily entail spatially disparate spatial policies or proposals, it does limit the perception of the area as a functional spatial district.

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>R603</td>
<td>MR21/ P21-1/ SBU MKHIZE DRIVE</td>
</tr>
<tr>
<td>R102</td>
<td>KINGSWAY ROAD</td>
</tr>
<tr>
<td>R197</td>
<td>MR197/ M14/ P197/ OLD MAIN ROAD</td>
</tr>
</tbody>
</table>

TABLE 1.1: NAMES OF MAJOR TRANSPORT ROUTES WITHIN THE STUDY AREA
1.3 THE STUDY AREA (CONTINUED…)

HISTORY OF THE AREA

The core of the Study Area, the Illovo Township has been developed over the past two decades. Before this development the most significant development in the area included Adams Mission, the coastal resorts of Winklespruit and Illovo Village, which included the Sugar Mill and manufacturing plants for amongst other things the well-known brand Illovo Syrup.

The development landscape of the area was severely altered in the early 1990s with the establishment of the Illovo Township. Although a recent settlement, the Illovo Township is essentially an “apartheid” creation, established in the early 1990s. Rumour has it that the last Administrator of the Natal Province flew over eThekwini in a helicopter and identified three areas of undeveloped land for settlement, one to the south, one to the north and one to the west. Illovo was the site selected to the south of Durban.

Although addressing the serious backlog for low income housing, many was of the opinion that the Illovo Township development further strengthened the apartheid structure of the city by locating the poorest of the poor on the periphery. Without any job opportunities in the area people living in Illovo are still dependent on job opportunities in South Durban Basin and other areas of eThekwini. Substantial travel is involved in this and the Illovo area essentially serves as a dormitory township.

1.4 STRUCTURE OF REPORT

It should be noted that the first half of the report consists of the Status Quo analysis, each of the sections within the Status Quo is a stand-alone sector report and therefore some measure of duplication is inevitable. The second part of the report consists of the goals

Section 1 - Introduction

This section establishes the background and purpose for the project.

Section 2 – Social and Economic Development

This section presents a socio-economic sector assessment aimed at assisting with the preparation of a Local Area Plan (LAP) for the Illovo Township, Illovo Village and Bhekuldandle areas. It draws on both primary and secondary information sources and aims to understand the social and economic challenges faced by the people of the area. Based on this assessment it attempts to inform spatial planning.

Section 3 – Planning and Spatial Development

This section aims at providing an understanding of the planning legislation, currently in place to guide development within eThekwini and specifically the Illovo area. When understanding and unpacking the Illovo Study Area , the area is assessed in terms of the movement network, the environmental system, the development patterns and a performance assessment. The assessment of the Illovo Study Area is intended to examine those qualities of the settlement, and its relationship to the local and regional context, that will be used as a basis for defining an appropriate approach to intervention in the area.

Section 4 - Environmental

The environmental pre-feasibility assessment report forms the environmental input into the initial Strategic Assessment Phase. Essentially, it outlines opportunities and constraints as well as potential ‘red flags’ and makes recommendations on “no-go” areas and management priorities.
Section 5 – Traffic and Transport
The purpose of this section is to provide a concise account of the existing traffic and transportation conditions within the Study Area in terms of transport infrastructure supply and travel demand patterns. The findings contained in this report would inform successive phases of this project in the development of the Local Area Plan and Land Use Management Guidelines. The following aspects have been addressed:
- Desktop assessment of the road network and its pavement condition;
- Quantification of existing travel demand patterns using available data;
- Assessment of public transport movements and infrastructure supply; and
- Assessment of pedestrian movements based on the location of public transport facilities, road hierarchy and available accidents statistics.

Section 6 - Infrastructure
This section focuses on providing an understanding of the following bulk services within the Illovo Study Area:
- Stormwater;
- Sewer reticulation;
- Water reticulation;
- Electricity supply; and
- Solid waste.

The services sector will be assessed in terms of the following: service coverage and capacity, demand assessment and operational assessment and key issues.

Section 7 – Core Issues
This section provides an understanding of the core issues emanating from the various sector assessments and serves as a basis for the plan formulation phases.

Section 8 – Approach
Section 8 is the beginning of the conceptual framework where an approach for the LAP is developed through defining a regional role for the area.

Section 9 – Goals and Objectives
In order to develop a vision for the area the project team developed regional and local goals for the Illovo Area. Nine local goals were developed including; promote and enhance accessibility, promote diversity and choice, safe and secure environments, imageability, building a viable local economy, promote and improve public transport, sustainable services and facilities, access to an protection of natural environment and appropriate settlement form.

Section 10 – Spatial Concept
This section implements the goals and objective defined in the previous section and begins to layer and define the major structuring elements such as the movement, open space, opportunities, nodal, linear and zonal elements, resulting in the draft LAP spatial framework.

Section 11 – LAP Precincts
This section provides basic LUMS guidelines for the nine LAP Precincts, which will at a later stage inform the detailed LUMS. The guidelines include; role and function, key structuring elements, likely land use responses, environmental guidelines, intensity of development, urban design guidelines and form responses, key interventions, phasing/timing, and density targets.
1.4 STRUCTURE OF REPORT (CONTINUED...)

Section 12 – Detailed Infrastructure
Section 12 begins to detail the infrastructure upgrades and priorities for the Illovo LAP per precinct.

Section 13 – Participation Process
This section details the participation process and the identified community needs.

Section 14 – Special Area Plans
Two Special Area Plans have been developed in accordance with the immediate needs of eThekwini as per the identified precincts. The identified areas for specific development projects are Illovo Village and Illovo Central. The Special Area Plans contain the following key elements: movement and circulation framework; land use and activity patterns; urban form framework; urban Landscaping/ Public space framework; and phasing Strategy.

Section 15 – Action Plans
The final section within the report identified a number of action plans which will guide and direct further planning and development. The action plans priorities projects into immediate, short, medium and long term goals.
SOCIAL AND ECONOMIC DEVELOPMENT

BY STRATPLAN

02

STRATEGIC PLANNING RESOURCES cc
Tel 031 - 262 7914
Fax 086 - 314 1589
Post net Suite 76
Private Bag X3
WESTVILLE 3630
stratplan@saol.com
2.1 INTRODUCTION

PURPOSE OF SECTION
This section presents a socio-economic sector assessment aimed at assisting with the preparation of a Local Area Plan (LAP) for the Illovo Township, Illovo Village and Bhekuluwandle areas.

THE STUDY AREA
The Study Area, and the demarcation of it, is discussed in more detail in the spatial planning section of this report. It will suffice here to indicate that it is located on the South Coast of eThekwini and includes a number of areas each with distinct economic and socio-economic characteristics. The different areas are:

- Sections of an area referred to as Bhekuluwandle - a Traditional Council Area characterised by traditional settlement patterns (it should be noted that this area includes portions of both the Toyane and Mapumulo Traditional Councils);
- Illovo Development Area – a major peripheral dormitory township established in the last days of apartheid;
- Illovo Village – a now almost defunct sugar mill village; and
- Illovo River Valley – an undeveloped area of sugar cane land to the north of the Illovo River, located to the south of the MR21.

The above breakdown of areas will be used as the basis for this socio-economic assessment. A map of the Study Area is reflected in Figure 2.1.

Of specific significance for economic development in the area is the fact that the Study Area borders on the N2 in the east. The R603, a transport route of potentially regional significance, stretches through the area and links it directly to the N3 and onwards to Pietermaritzburg. Surfaced and unsurfaced portions of the R197 (Old Main Road), potentially an alternative north south linkage to the N2, also stretches through the area in a north-south direction. The Illovo River demarcates the southern boundary of the Study Area.

FIGURE 2.1: THE ILLOVO STUDY AREA
2.1 INTRODUCTION (CONTINUED…)

APPROACH TO COMPILING THE SECTION
This assessment is based on the following sources of information:

- Existing policy and planning documents prepared for the region and the local area over the past decade;
- Household interviews were conducted to obtain a better understanding of socio-economic conditions;
- The managers or owners of the majority of formal and informal businesses operating in the area were interviewed;
- The managers of government and non-governmental institutions in the area were interviewed;
- A number of site visits were conducted with community development workers active in the area and also one of the Councillors responsible for the Illovo area;
- Informal discussions with community leaders and property practitioners; and
- Aerial photography and mapping of the area.

CONTENTS
This section includes six sub-sections.

- Section 5 – The Economy of the Study Area: Providing a more detailed assessment of each of the key economic sectors in the four distinct development areas forming part of the Illovo Study Area.
- Section 6 – Synopsis: Assessing the information collected and highlighting implications thereof for the future development of the Illovo Study Area.

- Section 1 – Introduction: Providing overview of purpose and approach to assessment.
- Section 2 – The Economic Planning Context: Considering strategic and local planning initiatives impacting on future spatial economic development.
- Section 3 – A Socio-economic Overview: Reflecting on the socio-economic situation in Illovo and surrounding areas.
- Section 4 – The Economic Context: Considering economic development to in eThekwini and specifically to the south of eThekwini and on the basis thereof identify possible implications for the Study Area.
2.2 THE ECONOMIC PLANNING CONTEXT

NATIONAL POLICY FRAMEWORK

National Spatial Development Perspective

The National Spatial Development Perspective (2006) puts forward a number of principles which the future development in the Illovo area could support including achieving rapid economic growth that is sustained and inclusive, focussing on fixed investment focussed on localities of economic growth and/or economic potential, stimulating economic activities and creating long term employment opportunities. The NSDP also supports the channelling of development into activity corridors and nodes linked to the main growth centres – a principle that development in Illovo responds well to as it is located in an “Area of national economic significance” as identified by the NSDP (RSA 2006).

National Local Economic Development Framework

The 2006 Framework for Local Economic Development (LED) (DPLG 2006) of the Department of Provincial and Local Government supports the Strategic Agenda for Local Government and the 5-year Local Government Implementation Plan (2006-2011). Of specific relevance to the eThekwini and Illovo area is that the LED framework indicates that it “…promotes a strategic approach to the development of local economies and a shift away from narrow municipal interests focused only on government inputs into ad-hoc projects”. The framework confirms that the National Spatial Development Perspective (NSDP), the Industrial Policy, ASGISA and the Provincial Growth and Development Strategies (PGDSs) are the “driving force for local and hence national economic growth and development”.

The Strategic LED Framework promotes the following strategies which potentially also applies to the Illovo area:

- Improve market and public confidence in municipalities;
- Identify and exploit competitive advantage of 52 municipal regions;
- Intensify enterprise support in local areas; and
- Introduce community investment programming.

Provincial Spatial Economic Development Strategy

The 2005 version of the PGDS (KZN 2005) identifies economic development and job creation as one of six provincial priorities. In order to ensure the implementation thereof Provincial Priority Clusters have been identified and the Economic Development Cluster is one of five such clusters.

The following strategies, to be implemented by the Economic Development Cluster, have been identified:

- Provincial Industrial Development Strategy;
- Public and Private Investment;
- Trade Gateway;
- Promotion of Agri-Industry;
- Tourism;
- New Local Economic Development Opportunities;
- Business Support Services;
- Access to Finances;
- Agricultural Empowerment Projects; and
- Science and Technology.
2.2 THE ECONOMIC PLANNING CONTEXT (CONTINUED…)

A number of these strategies could potentially impact on future development in the Illovo area.

The Provincial Spatial Economic Development Strategy (PSEDS) (DLGTA 2006) identifies the eThekwini-Ugu Corridor, in which Illovo is located, as one of the primary development corridors in the Province. Specific sectors in the region supported by the PSEDS are agriculture and tourism. The categories of potential associated with this corridor include (from NSDP 2006 as reflected in DLGTA (2006)):

- Production of high value, differentiated goods not strongly dependent on labour costs, focused on local & global niche markets – i.e. manufacturing;
- Production of labour intensive, mass produced goods more dependent on labour costs, affordable transport linkages – i.e. agriculture and mining;
- Retail and private sector services – large employer of skilled & semi skilled workers in advanced economies;
- Tourism – dependant on tourism attractions; and
- Public service and administration.

eThekwini Economic Development Strategy

The 2007 eThekwini Economic Development Strategy is a comprehensive strategy setting the priorities of eThekwini based on achieving five strategic outcomes. The outcomes and the related strategies are reflected in Table 2.1. Future investment in Illovo will relate specifically to Strategies 5 and 13 as reflected. Where possible the Local Area Plan for Illovo should support the implementation of these strategies.

TABLE 2.1: ETHEKWINI ECONOMIC DEVELOPMENT STRATEGY
According to the SSDP the South MPR will generate additional economic development in the form of additional appropriate industrial, business, commercial and agricultural development as well as make more extensive and appropriate usage of its tourism potential and the Study Area is well located to play a major role in this.

South Spatial Development Plan

The eThekwini South Spatial Development Plan (SSDP) has been prepared with a view to guide future development in the areas to the south of Durban. A purpose of the SSDP is also to determine the economic role of the Southern Municipal Planning Region (SMPR) within the context of the existing and envisaged activity of the eThekwini Municipality.

The SSDP identifies what development is desirable for the south area, where such development should occur and how such development should be facilitated.

The South Spatial Development Plan (SSDP) highlights the fact that present levels of economic activity in the South are relatively low while unemployment levels are unacceptably high. While the improvement of the present situation needs to be addressed at a variety of development levels, the promotion of increased economic activities in the south represent one of the more significant components.

The SSDP suggests that the future development of the SMPR by nature consists of a variety of interrelated development issues and aspects which cannot be reduced to a single issue. The outstanding aspect however is its ability to provide significant additional economic development opportunities. These opportunities can be found in a wide range of economic developments extending from industrial, high- and bio-tech, commercial and business to tourism and agriculture. While it is obvious that such activities needs to be appropriately integrated into the wider development context and while they need to be sustainable from a variety of aspects, present low levels of economic activity of the South population and extremely high levels of unemployment suggest the necessity to focus significantly on further economic development in the South MPR.
INTRODUCTION

The Illovo Development Area is the core of the Study Area. It is a peripheral dormitory township that was created in the apartheid era and it is surrounded in the north, north-east and west by traditional settlement areas. To the east of the Study Area are the urban areas or coastal resort towns of Kingsburgh and Winklespruit, areas vastly different to the traditional settlement areas. This section of the report explores socio-economic conditions in the larger region and that of the Study Area.

THE PEOPLE

Illovo In The Regional Context

A key issue to be addressed in the development of a Local Area Plan for the Illovo area is the role of the area in future socio-economic and economic development in the larger region. This will guide decision-making on the strategic allocation of resources for development.

Based on an assessment of 2001 statistics and considering population growth the Illovo Study Area (as defined in the Inception Report for the Study) has a relatively small population of between 15 000 and 20 000 people. This is insignificant in the Metropolitan context where the population is placed at around 3 000 000 people. Two issues in this regard are worth noting:

- The Table 2.2 overleaf reflects the 2001 population of the Illovo area in comparison to the population of neighbouring established coastal neighbourhoods where economic development is currently focussed. It is noted that close to 50% of the population of the coastal strip now resides in the Illovo Development area, an area with no substantial economic infrastructure offering limited job opportunities.

- Behind the Study Area, to the west, is a huge rural traditional settlement area, home to hundreds of thousands of people (partly reflected in the table that follows). Some of these people reside outside of the eThekwini Municipality in the Vulamehlo and Mkhambathini Municipalities but functionally relate closely to eThekwini Municipality.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

Note: Portions of the Study Area falls within Wards 97 and 98. For the purpose of the socio-economic assessment it was, however, decided not to use the Ward demarcation as a basis as large areas of these wards do not relate to the Study Area at all. The feasibility assessment for the Taxi Rank prepared for the eThekwini Municipality, however, used ward boundaries as a basis (Sabalala, undated).

The figure and table that follows reflects the Study Area in the context of the coastal settlement. This is followed by a table and map indicating the vast areas of traditional settlement to the west and south of the Study Area.

![Figure 2.3: Illovo and Settlements in Neighbouring Coastal Strip (Brabys 2009)](image)

<table>
<thead>
<tr>
<th>AREA</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL POP.</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo</td>
<td>46%</td>
<td>54%</td>
<td>10280</td>
<td>43.2%</td>
</tr>
<tr>
<td>Warner Beach</td>
<td>48%</td>
<td>52%</td>
<td>4046</td>
<td>17.0%</td>
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<td>Doon Heights</td>
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<td>1627</td>
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<td>St Winifreds</td>
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<td>TOTAL</td>
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<td>53%</td>
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<td>100.0%</td>
</tr>
</tbody>
</table>

TABLE 2.2: GENDER AND POPULATION DISTRIBUTION IN ILLOVO AND NEIGHBOURING URBAN AREAS (SOURCE: CENSUS 2001)

The above table indicates the contribution of the various residential areas to the population numbers in the Study Area and neighbourhoods bordering on the Study Area. From the statistics it is evident that the vast majority of people (43.2%) are residing in the Illovo area. The second most populated area is that of Warner Beach with 17% of the total population of the area.

As noted above, although the population in the coastal strip is relatively low, vast numbers of people reside in neighbouring traditional council areas. This only provides a partial picture of the population as substantial traditional settlement areas, located in neighbouring municipalities, borders on these areas.
Considering the above it now becomes apparent that the Illovo Study Area potentially serves as the access point or gateway for as many as 100 000 people (eThekwini residents) to urban eThekwini and its services and economic opportunities. This number will be substantially higher should the population of neighbouring municipalities, primarily dependent on eThekwini for social and commercial services, also be taken into consideration.

People Of Bhekulwandle

The Bhekulwandle part of the Study Area is comparatively small with not a large number of people residing in the area (figures are reflected in Table 2.3 for the traditional authority areas of Maphumulo and Thoyana). A household count, using recent aerial photography, suggests 410 households residing in the area between Reeves Road and the Illovo Development Area with a population then of around 2 500 people (based on 6 persons per household).

Aerial photography shows that strong linkages between the Illovo Development and Bhekulwandle area has developed with roads from the formal area extending into and through the traditional settlement area.

People Of Illovo Development Area

It was reflected in Table 2.2 that the population of the Illovo Development Area was approximately 11 000 people in 2001. It is anticipated that the population would have grown since then and it is estimated that between 12 000 and 15 000 people currently reside in the formal development area.

People Of Illovo Village

Detailed information on the people residing in the Illovo Village area is not available. It is, however, evident that the type of housing available in the area range from low income to middle income.
Three distinct low income areas where the workers of the Illovo Sugar Mill were previously based have been identified. Middle income housing, in all probability where management resided, is located in the vicinity of the old sport club.

No detailed information regarding population numbers for the Village area is available but from recent aerial photographs it is estimated that approximately 100 households reside in the three low income areas and there are approximately 50 households in the middle income area.

**SOCIO ECONOMIC CONDITIONS**

The section below provides a brief overview of socio-economic conditions in the Study Area, with a focus on Bhekulwandle and the Illovo Development Area. Information on socio-economic conditions in the Illovo Village area of the Study Area could not be extracted.

**Conditions In Bhekulwandle**

It is assumed that the socio-economic conditions in the Bhekulwandle part of the Study Area will be similar to that of the larger traditional settlement area to the west.

Considering the above it now becomes apparent that the Illovo Study Area potentially serves as the access point or gateway for as many as 100 000 people (eThekwini residents) to urban eThekwini and its services and economic opportunities. This number will be substantially higher should the population of neighbouring municipalities, primarily dependent on eThekwini for social and commercial services, also be taken into consideration.

**People Of Bhekulwandle**

The Bhekulwandle part of the Study Area is comparatively small with not a large number of people residing in the area (figures are reflected in Table 2.3 for the traditional authority areas of Maphumulo and Thoyana). A household count, using recent aerial photography, suggests 410 households residing in the area between Reeves Road and the Illovo Development Area with a population then of around 2 500 people (based on 6 persons per household).

Aerial photography shows that strong linkages between the Illovo Development and Bhekulwandle area has developed with roads from the formal area extending into and through the traditional settlement area.

**People Of Illovo Development Area**

It was reflected in Table 2.2 that the population of the Illovo Development Area was approximately 11 000 people in 2001. It is anticipated that the population would have grown since then and it is estimated that between 12 000 and 15 000 people currently reside in the formal development area.

**People Of Illovo Village**

Detailed information on the people residing in the Illovo Village area is not available. It is, however, evident that the type of housing available in the area range from low income to middle income.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

Table 2.4 and Table 2.5 below reflects the levels of employment and household income levels for the Traditional Council areas of Maphumulo, Sabonakhona and Thoyana.

<table>
<thead>
<tr>
<th>Area</th>
<th>PERCENTAGE OF WORKFORCE PER AREA</th>
<th>TOTAL WORKFORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed</td>
<td>Unemployed</td>
</tr>
<tr>
<td>Maphumulo</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>Sobonakhona</td>
<td>14%</td>
<td>44%</td>
</tr>
<tr>
<td>Thoyana</td>
<td>22%</td>
<td>44%</td>
</tr>
<tr>
<td>Total</td>
<td>16%</td>
<td>44%</td>
</tr>
</tbody>
</table>

TABLE 2.4: LEVELS OF EMPLOYMENT IN NEIGHBOURING TRADITIONAL SETTLEMENT AREAS (SOURCE: CENSUS 2001)

It is noted from the employment levels that functional unemployment is on average 44% for the area. However, of concern and possibly providing a better picture of the situation, is the fact that only 16% of the economically active population is formally employed. Such figures in areas immediately bordering on a major metropolitan area must be considered in future planning.

Table 2.5 reflects the impact of low employment levels on household income.

<table>
<thead>
<tr>
<th>Area</th>
<th>No income</th>
<th>R1 - R1 600</th>
<th>R1 601 - R6 400</th>
<th>R6 401 - R12 800</th>
<th>R12 801 - R25 600</th>
<th>R25 601 and more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maphumulo</td>
<td>19%</td>
<td>51%</td>
<td>29%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>386</td>
</tr>
<tr>
<td>Sobonakhona</td>
<td>34%</td>
<td>43%</td>
<td>20%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
<td>11281</td>
</tr>
<tr>
<td>Thoyana</td>
<td>28%</td>
<td>42%</td>
<td>27%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>1449</td>
</tr>
<tr>
<td>Total</td>
<td>33%</td>
<td>43%</td>
<td>21%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>13118</td>
</tr>
</tbody>
</table>

TABLE 2.5: MONTHLY HOUSEHOLD INCOME LEVELS IN NEIGHBOURING TRADITIONAL SETTLEMENT AREAS (SOURCE: CENSUS 2001)

[1] The “other” category includes all people in the 15 to 64 age category not actively seeking work and includes home makers, students, pensioners and other people not seeking work.

The above table confirms that in 2001 nearly 80% of rural households earned an income of below R1 600 per month, a figure well below the basic household subsistence level.

Conditions in Illovo Development Area

Table 2.6 below reflects the level of employment of the workforce (persons between 15 and 64 years of age) in Illovo and surrounding areas. This presents a comparison of socio-economic conditions in the coastal strip as compared to inland residential areas.

<table>
<thead>
<tr>
<th>AREA</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Other</th>
<th>Total</th>
<th>% OF TOTAL WORKFORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo</td>
<td>35%</td>
<td>32%</td>
<td>34%</td>
<td>6630</td>
<td>42%</td>
</tr>
<tr>
<td>Warner Beach</td>
<td>54%</td>
<td>6%</td>
<td>40%</td>
<td>2753</td>
<td>18%</td>
</tr>
<tr>
<td>Doonside</td>
<td>55%</td>
<td>10%</td>
<td>35%</td>
<td>611</td>
<td>4%</td>
</tr>
<tr>
<td>Winklespruit</td>
<td>55%</td>
<td>11%</td>
<td>34%</td>
<td>489</td>
<td>3%</td>
</tr>
<tr>
<td>Astra Park</td>
<td>55%</td>
<td>7%</td>
<td>37%</td>
<td>1089</td>
<td>7%</td>
</tr>
<tr>
<td>St Winifreds</td>
<td>57%</td>
<td>5%</td>
<td>38%</td>
<td>1031</td>
<td>7%</td>
</tr>
<tr>
<td>Illovo Beach</td>
<td>58%</td>
<td>5%</td>
<td>37%</td>
<td>714</td>
<td>5%</td>
</tr>
<tr>
<td>Doon Heights</td>
<td>58%</td>
<td>9%</td>
<td>33%</td>
<td>1145</td>
<td>7%</td>
</tr>
<tr>
<td>Kamidene</td>
<td>58%</td>
<td>2%</td>
<td>39%</td>
<td>252</td>
<td>2%</td>
</tr>
<tr>
<td>Winklespruit Beach</td>
<td>61%</td>
<td>6%</td>
<td>34%</td>
<td>325</td>
<td>2%</td>
</tr>
<tr>
<td>Illovo Glen</td>
<td>62%</td>
<td>8%</td>
<td>30%</td>
<td>725</td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47%</td>
<td>17%</td>
<td>35%</td>
<td>15724</td>
<td>100%</td>
</tr>
</tbody>
</table>

TABLE 2.6: LEVELS OF EMPLOYMENT IN ILOVO AND NEIGHBOURING URBAN AREAS (SOURCE: CENSUS 2001)

The substantially lower employment level in the Study Area (35%) as compared to the rest of the coastal strip (ranging between 54% and 62%) is obvious. The unemployment figures also confirms this trend.

The comparatively low level of income per household in Illovo is reflected in Table 2.7 on the following page.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED...)

### Table 2.7: Household Income in Illovo and Neighbouring Urban Areas

<table>
<thead>
<tr>
<th>AREA</th>
<th>No Income</th>
<th>R1 - R1600</th>
<th>R1601 - R6400</th>
<th>R6 401 - R12 800</th>
<th>R12 800 - R25 600</th>
<th>R25 601 or more</th>
<th>Total Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illuvo</td>
<td>28%</td>
<td>33%</td>
<td>36%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>2730</td>
</tr>
<tr>
<td>Doonside</td>
<td>16%</td>
<td>25%</td>
<td>34%</td>
<td>13%</td>
<td>8%</td>
<td>5%</td>
<td>542</td>
</tr>
<tr>
<td>Warner Beach</td>
<td>7%</td>
<td>18%</td>
<td>36%</td>
<td>21%</td>
<td>15%</td>
<td>4%</td>
<td>1639</td>
</tr>
<tr>
<td>Karridene</td>
<td>8%</td>
<td>6%</td>
<td>21%</td>
<td>28%</td>
<td>26%</td>
<td>13%</td>
<td>141</td>
</tr>
<tr>
<td>Illovo Beach</td>
<td>4%</td>
<td>16%</td>
<td>44%</td>
<td>19%</td>
<td>12%</td>
<td>4%</td>
<td>410</td>
</tr>
<tr>
<td>Astra Park</td>
<td>4%</td>
<td>15%</td>
<td>32%</td>
<td>23%</td>
<td>23%</td>
<td>3%</td>
<td>481</td>
</tr>
<tr>
<td>St Wimileeds</td>
<td>4%</td>
<td>8%</td>
<td>25%</td>
<td>23%</td>
<td>28%</td>
<td>13%</td>
<td>434</td>
</tr>
<tr>
<td>Winklespruit Beach</td>
<td>4%</td>
<td>21%</td>
<td>37%</td>
<td>18%</td>
<td>17%</td>
<td>4%</td>
<td>251</td>
</tr>
<tr>
<td>Doon Heights</td>
<td>3%</td>
<td>9%</td>
<td>32%</td>
<td>27%</td>
<td>22%</td>
<td>7%</td>
<td>383</td>
</tr>
<tr>
<td>Illovo Glen</td>
<td>2%</td>
<td>10%</td>
<td>24%</td>
<td>36%</td>
<td>23%</td>
<td>6%</td>
<td>269</td>
</tr>
<tr>
<td>Winklespruit</td>
<td>1%</td>
<td>18%</td>
<td>39%</td>
<td>21%</td>
<td>13%</td>
<td>7%</td>
<td>212</td>
</tr>
<tr>
<td>Study Area</td>
<td>26%</td>
<td>31%</td>
<td>36%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td>3272</td>
</tr>
</tbody>
</table>

**OVERVIEW OF SOCIAL SERVICES**

This section provides a brief overview of social services available in the Study Area based on interviews with public sector managers (including school principals) and other stakeholders in the Study Area. The focus is on:

- Education;
- Health;
- Council Facilities; and
- Community Facilities.

The distribution of social services / government facilities in Illovo is reflected on Figure 2.5.

**Education**

There are two schools in Illovo Development Area, the Siyabonga High School and the Andrew Zondo Primary School (formerly known as the Illovo Primary School). At Siyabonga High School there are 40 members of staff and Illovo Primary have a staff compliment of 41. Both schools indicated that they mainly enroll learners from the Illovo Development Area but they also do admit learners from the surrounding areas.
In the Bhekulwandle part of the Study Area there is only one school, the Mthombeni Primary School. The staff compliment at this school could not be established but there are approximately 400 learners enrolled at this school. No representative from this school was interviewed.

In Illovo Village there is one school, the Illovo Primary School with an enrollment of 330 learners and 14 members of staff.

Facilities at the schools in the Illovo Development Area

It was noted that the primary school has more special facilities than the high school. The principal of the primary school indicated that the school has a cafeteria, a computer laboratory and some sports facilities whereas the high school indicated that they only have a cafeteria. It was established that adult literacy classes is taking place at Andrew Zondo Primary School. These classes are conducted by members of the staff at the school.

At the primary school there is also a vegetable garden. The garden was started mainly for the benefit of the many orphans that are attending the school. The vegetable garden project is not only being run by the school, women from the local community are also assisting with the maintenance of the garden.

Challenges

From the interviews with representatives of the two schools it was established that they face similar challenges. The following are the challenges that were raised:

- No school hall / indoor centre;
- No library;
- Lack of proper sports ground / facilities;
- Lack of a Swimming pool;
- No areas for younger children to play;
- No laboratory; and
- Inappropriate fencing around the school.

Both principals indicated the importance of school halls as they are concerned that the learners are being restricted to very few activities since they can only perform outdoor activities. They were also of the opinion that access to a library and proper sporting facilities are important for the development of the learners. This is a view that was also supported by members of the community as reflected on in the section highlighting community issues identified.

A concern was also raised by members of the community regarding the safety of children crossing the main road (MR21/R603 as well as internal roads) whilst on their way to school. According to the community there have been a number of fatalities on this road in the past. Information regarding this is also reflected in the section highlighting community issues.
It was noted that the school is trying to promote indigenous sport (Umlabalaba, skipping etc.). The school however does not have enough equipment to fulfil their objective and it is felt that with the assistance of the Department of Sport and Recreation their objectives can be achieved.

HEALTH
Two clinics were identified in Illovo Development Area. The Illovo Clinic caters for the whole community and the Illovo Occupational Health & Safety Clinic are for eThekwini Municipality employees only.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

No senior official from the Illovo Clinic were available to be interviewed but members of the community stated that the Illovo Clinic assists on average about 30 people per day.

A representative from the Illovo Occupational Health & Safety Clinic stated that there are four staff members in this clinic and that they occupy five offices in the clinic.

The Ambulance Services also operates from the premises at the Illovo Occupational Health & Safety Clinic.

Two NGO’s operate from a small building next to the Illovo Occupational Health & Safety Clinic. Both NGO’s are involved with assisting HIV/AIDS infected and affected people.

Challenges
The person interviewed at the municipal clinic mentioned the following as challenges at the clinic:

- Proximity of clinic to depots; and
- Access to the clinic

ETHEKWINI COUNCIL FACILITIES
People in the Study Area currently have to travel to Winklespruit, Amanzimtoti, Isipingo and Durban to pay for water, electricity and to access other government services. In the Illovo Development Area there is a building which was used as municipal offices previously. People were able to pay for water services at these offices. The provision of this service ended in 2006.

The building consists of 15 offices and currently only two offices are being used. One is used by a Councillor responsible for the Illovo Development Area and the other is used by the Ambulance Services (mentioned under Health). The other 13 offices are not currently occupied. The building has basic infrastructure such as water, electricity and sewerage.

COMMUNITY FACILITIES
From information and maps available four community halls in the Study Area have been identified. There are two halls situated in Illovo Development Area, one in Illovo B and the other in Illovo C. In the traditional settlement area there are also two halls, the Bhekulwandle and the Baphehl Halls.

The care taker of the hall in Illovo B was interviewed and he indicated that the hall is not only used by the community of Illovo Development Area but it is also used by community from surrounding areas.

It is clear that the Illovo C hall is a much better facility than the one at Illovo B.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

COMMUNITY HALLS IN ILOVO SECTION B (LEFT) AND C (RIGHT)

SAFETY AND SECURITY
At present there is no police station in the Study Area. The community views on safety and security issues are further reported on in later sections of the report.

OTHER GOVERNMENT FACILITIES
The Department of Social Welfare and Population Development is active in the area and they run The Illovo Development Centre. From what could be established it offers skills development training courses as well as training courses to co-ops.

Some of the skills development courses offered are:
- Agriculture;
- Catering;
- Blocks making; and
- Carpentry.

The Winklespruit Post Office offers a service at the Illovo Development Area, as well as in Bhekulwandle, in the form of post boxes where mail can be collected and posted. There are also post boxes in Illovo Village.

The Illovo Cemetery is located on the outskirts of the Development Area. It was established that this is a regional cemetery operated by the Municipality.

NON GOVERNMENTAL ORGANISATIONS
There are two NGOs operating in the Illovo area and they operate from a small building next to the Municipal Clinic (others may be also be operating in the area but could not be identified during fieldwork).

Nonkululeko Development Trust is involved in assisting HIV/AIDS patients and orphans. This organization has 14 staff members.
Siyabathanda Illovo Care-givers offers home base care to people in the area and are also assisting orphans and old aged people. This organization has approximately 23 staff members. The majority of staff members for both organisations are from Illovo Development Area, but there are also a few members from the Bhekulwandle area.

The Amanzimtoti YMCA is also active in the Illovo Village area.

Challenges
Representatives of two NGOs highlighted the following challenges that their organizations face:
- Small working space;
- Insufficient funding;
- Lack of facilities;
- Not enough food parcels;
- No exercise facilities for the aged.

Both organizations make use of a small room as their meeting point as well as for conducting training. However there are a number of vacant offices in the building adjacent to where they are currently operating from. These are part of the building previously used as municipal offices. Representatives interviewed stated that they also experience difficulties obtaining funding. Organizations expressed the view that they do not have enough resources or facilities to fulfil their duties.

**HOUSING AND INFRASTRUCTURE**
The Illovo Development Area was established in the early 1990s to address the housing needs in the South Coast areas of eThekwini. The full development provides for a range of low and middle income housing.

According to the property trends analysis of the South Municipal Planning Region (Graham Mulle 2008) there is a considerable demand for low cost housing in the SMPR and the housing project currently underway in the Illovo Township will alleviate this shortage to an extent. This housing project is known as the Kingsburgh West mixed development. It offers not only low income housing, but also affordable housing to people earning less than R3 500 p/m as well as gap housing. This housing project comprise of the following:
- Approximately 1 055 low income houses;
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED...)

- 120 affordable or gap market houses;
- 25 middle income houses (part of Winklespruit).

Affordable housing caters for people with an income of R3 500 – R7 500/p/m and it is partly subsidised by the government, whereas gap market housing is for people with an income of R7 500 – R15 000/p/m who receives no subsidies.

In terms of the five year Housing Plan of the eThekwini Municipality provision is made for rural housing development to the south and the west of the Illovo Development Area, however, considering the vast rural settlement areas this will have a limited impact. There is no indication of upgrading projects scheduled for the Bhekulwandle area to the north of the Study Area.

COMMUNITY ISSUES HIGHLIGHTED

Introduction and approach

In order to obtain information regarding socio-economic issues within the Study Area a limited household survey was conducted. A team of three fieldworkers conducted the survey on the 8th of April 2009 in the Illovo Development Area. Although the Study Area consists of other areas as well it was decided to focus on the Development Area part only as this is where the biggest concentration of people in the Study Area is found.

A total of 56 households were selected randomly and the fieldworkers had a set questionnaire that was used in order to conduct the survey. Households from both Ward 97 and Ward 98 were targeted.

The majority of people selected as part of the survey were willing to give their views on development in Illovo.

The majority of respondents that were interviewed were females (40 out of the total 56), probably influenced by the fieldwork being conducted on a week day. The majority of respondents fell into the age category of between 16 and 30 years of age. Sixteen people interviewed choose not to reveal their age. The table below reflects age and gender distribution of the respondents.

<table>
<thead>
<tr>
<th>AGE CATEGORY</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL NO OF PEOPLE INTERVIEWED</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 30</td>
<td>8</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>31 to 50</td>
<td>1</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>51 and above</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Did not reveal</td>
<td>7</td>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>

TABLE 2.8: AGE AND GENDER DISTRIBUTION OF RESPONDENTS

(SOURCE: STRATPLAN 2009)
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

Socio-economic conditions

Of 56 people interviewed 24 indicated that they are employed and the remaining 32 people are unemployed. The majority of people that are employed work in Durban, however, some also found employment Isipingo and Amanzimtoti. Few respondents indicated that they are employed in the immediate Illovo area.

Community views on current levels of services

When asked if conditions in the Study Area have deteriorated, improved or whether it stayed the same in recent years, the majority of respondents were the opinion that conditions have stayed the same. Some were stating this in a negative way while others saw it as a positive fact. The people who felt positive about it stated that this meant that the households had access to basic services while those who saw it negatively did so because they believe that there are still room for improvement.

It was indicated that households in the Study Area have access to basic services such as electricity, water, sanitation and tar roads.

The table below gives an indication of how the respondents rate the conditions in Illovo in recent years.

<table>
<thead>
<tr>
<th>RATING</th>
<th>NO OF RESPONDENTS</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deteriorated</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Improved</td>
<td>17</td>
<td>30%</td>
</tr>
<tr>
<td>Stayed the same</td>
<td>33</td>
<td>56%</td>
</tr>
</tbody>
</table>

TABLE 2.9: RESPONDENTS’ VIEWS OF CONDITIONS IN ILLovo
(SOURCE: STRATPLAN 2009)

Expenditure and retail patterns

In order to inform future economic development planning in the area the expenditure and retail patterns of Illovo residents were probed. Asked to provide an indication of monthly household expenditure in the retail sector the following information was obtained.

<table>
<thead>
<tr>
<th>MONTHLY EXPENDITURE</th>
<th>NO OF RESPONDENTS</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>R400 to R1000</td>
<td>33</td>
<td>59%</td>
</tr>
<tr>
<td>R1001 to R2000</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>R2001 to R3000</td>
<td>5</td>
<td>9%</td>
</tr>
<tr>
<td>R3001 to R5000</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Did not indicated</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>56</td>
<td>100%</td>
</tr>
</tbody>
</table>

TABLE 2.10: MONTHLY RETAIL EXPENDITURE OF ILOVO RESIDENTS (SOURCE: STRATPLAN 2009)

The above table reflects the monthly expenditure of households that formed part of the survey. The majority of the households spent between R400 and R1 000 per month in the retail sector. Respondents were asked to indicate where they currently do the majority of their shopping.

<table>
<thead>
<tr>
<th>AREA OF SHOPPING</th>
<th>NO OF RESPONDENTS</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isipingo</td>
<td>30</td>
<td>54%</td>
</tr>
<tr>
<td>Amanzimtoti</td>
<td>11</td>
<td>20%</td>
</tr>
<tr>
<td>Durban</td>
<td>9</td>
<td>16%</td>
</tr>
<tr>
<td>Winklespruit</td>
<td>6</td>
<td>11%</td>
</tr>
</tbody>
</table>

TABLE 2.11: SHOPPING AREA OF PREFERENCE FOR ILOVO RESIDENTS (SOURCE: STRATPLAN 2009)

From the table above it is clear that the majority of households do their shopping in Isipingo. Winklespruit is the nearest town to Illovo but only 11% of the group indicated that they do their shopping there. When these respondents were probed as to the reason why they do not shop at Winklespruit, the respondents indicated that goods are very expensive in this shopping area.
Respondents were also requested to indicate whether they would prefer conducting their shopping in Illovo, if better retail facilities were provided. The majority of the people interviewed indicated that they would prefer doing their shopping in Illovo, only 5% of the respondents indicated that they would continue to do their shopping elsewhere.

Gaps in terms of retail facilities and services in Illovo development area
People interviewed were requested to indicate their preference in terms of retail facilities and services that needs be provided in the Study Area. The following is a list of their responses.

Businesses:
- Supermarkets (Spar, Pick ’n Pay, Checkers, Cambridge and Shoprite);
- A Butchery;
- A Hardware Shop;
- A Shopping Centre; and
- Clothing Stores (Truworths, Jet, Edgars and Hub).

Services:
- Cinema (entertainment);
- Theatre (entertainment);
- Banks;
- Post Office;
- Hair Salon;
- Prepaid electricity card facility; and
- Doctor’s rooms/surgery.

Transport trends
From the survey it was established that taxis is the only mode of transport being used by people in Illovo Development area. When asked whether they are satisfied with the existing public transport, the majority (70%) of respondents indicated that they are not satisfied. The main reason for their dissatisfaction is the fact that they would prefer to have access to a bus service. The 30% of respondents that indicated that they are satisfied with the public transport also expressed the need for a bus service in the area.

Some of the challenges that were mentioned regarding the public transport in Illovo include:
- Commuters wait too long to get a taxi to their destination;
- Some of the taxi’s are not in a good condition;
- There is no transport late at night;
- There are not enough taxis; and
- Some sections of the Development Area do not get a regular service.

It was established that residents of the Development Area do not make use of the Metro Rail service at Winklespruit as a mode of transport. The main reason for this is that it is too far for to walk from Illovo to Winklespruit. Commuters would have to take a taxi to the station in Winklespruit and therefore, they suggest, would pay more for transport.

Community views on government services
Adequacy of Government Services
Seventy seven percent (77%) of respondents indicated that members of their household make use the Illovo Clinic. The majority of respondents however stated that they are not satisfied with the services offered at the clinic. The 23% of respondents who indicated that do not make use of the clinic make use of private doctors and the clinic at Winklespruit.
Some of the concerns raised by people interviewed relating to the existing health facility are:

- Inappropriate care for patients;
- A shortage of staff;
- Patients wait too long to be treated;
- General ailments are only treated on Mondays and Fridays (other days offer regular clinic activities);
- The facility closes too early; and
- There is not adequate medication available.

It was stated that because of the above perceptions some residents treat the clinic as if it does not exist. These respondents said that they rather visit a private doctor than spend the whole day at the clinic and still not get proper treatment.

**Government Services required**

Respondents interviewed indicated the following government services that are needed in the Study Area.

- Police station;
- More schools;
- Library;
- Parks;
- Sports field;
- Hospital;
- Other sports facilities (tennis court, swimming pool and a basket ball court); and
- Housing (low income housing).

The importance of the services of the Department of Social Welfare in the Study Area was specifically raised by people interviewed. The respondents were of the opinion that there is need to have social workers locally. This relates mainly to cases of child abuse as well as the number of child-headed households in the area; an issue that was also highlighted by the school principal and other members of staff at the local primary school.

**COMMUNITY VIEWS ON SAFETY AND SECURITY ISSUES**

The majority of respondents (77%) indicated that crime is a problem in the Study Area. Twenty three respondents stated that they have been personally affected by crime. Respondents indicated that house burglary and muggings are the criminal activities that they mainly experience. The fact that there is no police station in the Study Area was seen as a factor contributing to the perceived high crime rate.

The respondents were also asked if they feel safe walking in the area after dark. Almost a third (29%) of the respondents indicated that they do not feel safe due to criminal activities occurring. Twenty three percent (23%) stated that they don't have a problem with walking after dark, while 4% stated they are not too sure since they don't often walk after dark.

Many respondents indicated that crime is a major problem in the area (a view that was supported by business people as well). The SAPS were contacted in order to verify the current situation. The nearest police stations are KwaMakhutha and Amanzimtoti, both these stations service the Study Area.

The Station Commander of the SAPS in Amanzimtoti confirmed that there used to be a satellite police station in Illovo Development Area but that it is no longer in operation. The police station closed due to staff shortages. There is however plans in place to re-open the Illovo Police Station.
2.3 SOCIO ECONOMIC OVERVIEW (CONTINUED…)

In the near future. The SAPS is currently recruiting Police Reservists from the local community and it is envisaged that these volunteers will man the station in the future. The SAPS plan to have only one full time SAPS member based at the station and the rest of the personnel will be volunteers / reservists from the local community.

In order to verify the crime levels in the area crime statistics were requested from the SAPS and the following table indicates SAPS records obtained from the Amanzimtoti Police Station.

<table>
<thead>
<tr>
<th>CRIMINAL ACTIVITIES</th>
<th>NO OF CASES</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Related</td>
<td>10</td>
<td>16%</td>
</tr>
<tr>
<td>Drunken Driving</td>
<td>9</td>
<td>14%</td>
</tr>
<tr>
<td>Burglary Residential</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Assault Common</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Assault with Grievously Bodily Harm</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Attempted Murder</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Theft of M/Vehicle</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Rape</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Theft</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Car Hijacking</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Culpable Homicide</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Illegal Possession of Firearm</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Malicious Damage to Property</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Burglary Business</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>House Robbery</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Armed Robbery</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Common Robbery</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Arson</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>TOTAL NO OF CASES</td>
<td>63</td>
<td>100%</td>
</tr>
</tbody>
</table>


These statistics support the view of the community that the services of the Department of Social Welfare will make a meaningful contribution to development in the area. Drug related criminal cases and drunken driving were the highest reported category of cases.

The high incidence of drunken driving cases also relates to the fact that a number of respondents raised a concern regarding safety on the roads in the Development Area and especially with regard to speeding. They were of the opinion that the construction of speed humps in the Development Area is necessary given the fact that there have been a number of fatal accidents occurring on the roads (internal roads as well as on the main road).

Respondents views on job creation opportunities

People interviewed were requested to give a random indication of how jobs could be created for people living in Illovo Development Area. A large group of respondents was of the opinion that the construction of a shopping centre will assist in creating jobs for residents of Illovo. Some respondents also indicated that the government should provide people of the Development Area with basic skills development training and promote the creation of small businesses (SMME’s).

Other Issues Raised

- Proposed Land for Shopping Centre - One of the respondents indicated that there is a shopping complex in Illovo C Section and the owner of this property is apparently considering selling the property. The respondent suggested that the municipality should purchase the site or invite investors to buy this property and turn it into a proper shopping centre; and
- Water Termination - Some respondents raised a concern of water connections being terminated. They stated that this was due to the fact that they were not receiving their monthly bill or because they cannot afford to pay.

SYNOPSIS OF SOCIO-ECONOMIC ASSESSMENT

See Section 2.6 for Synopsis
2.4 THE ECONOMIC CONTEXT

THE ETHEKWINI ECONOMY

The 2008 Economic Development Framework of the eThekweni Municipality states that “the Municipality’s vision is to be Africa’s most caring and liveable city by 2020. This vision is contained within the Municipality’s Long Term Development Framework (LTDF, 2020) and confirms that the city strategy must be robust enough to adapt to national strategies for addressing certain priorities. These priorities are expressed in the MDGs and President’s address. With particular reference to economic development, the objective is to eradicate poverty and hunger by halving the proportion of the population that lives on less than US$1 per day between 1990 and 2015”. In order to realise this vision the Framework suggests that the following challenges must be overcome by the city:

- Low economic growth and high rate of unemployment;
- Access to basic household and community services not optimal;
- Relatively high levels of poverty;
- Low levels of literacy and skills development;
- Sick and dying population affected by HIV/AIDS;
- Exposure to unacceptably high levels of crime and risk;
- Many development practices still unsustainable; and
- Ineffectiveness and inefficiency of inward looking local government still prevalent in the municipality.

Over and above the strategies as identified in the economic development strategy of the city there is a number of obvious trends in the eThekweni economy. Most obvious of these trends is the strong focus on development and economic development specifically on the northern areas of eThekwini. Much of this revolves around the current development of the airport at La Mercy and the activities of Tongaat-Hulett focussing on property development in a range of sectors, most notably residential, commercial and industrial sectors.

From current activities aimed at ensuring readiness for 2010 substantial development activity is also centred around the Durban CBD and the Moses Mabhida Stadium. This includes the redevelopment of the Warwick Junction Precinct, the beach front promenade and various other related transport and recreation projects.

Planning for land development to the west of Durban, in the Shongweni and Cato Ridge areas, are also receiving attention and includes a focus on industrial, commercial and residential development. In residential areas there is currently a strong focus on developments in Umlazi and the INK area, implementing projects funded by the Neighbourhood Development Grant of National Treasury.

From the above short overview it is evident that major investments are being made in various areas, however, the almost complete absence of any development of note to the south of Durban is obvious.

THE SOUTH DURBAN ECONOMY

The South Durban Basin is still viewed as the engine room of the eThekweni economy with the majority of large manufacturing industries located in the area. Facilities and infrastructure in industrial areas such as Jacobs, Mobeni and Isipingo are, however, outdated and over the past decade industries have moved out of the area to take up more appropriate space in modern industrial and business parks. No substantial upgrades of industrial areas or infrastructure has been made and conditions in these areas continue to deteriorate.

As a result of this situation and the scarcity of undeveloped land there has been a high demand for land in the area, partly fuelled by Toyota’s drive to establish Toyota City and their requirement for space. The only recent development of industrial land, the South Gate development initiated in the late 1990s, is now almost fully occupied.
2.4 THE ECONOMIC CONTEXT (CONTINUED…)

This leaves limited land for future industrial development in the Basin, obviously with one exception – the Durban International Airport site. The future use of this land is still uncertain but some view this land as presenting an opportunity to initiate the redevelopment of industrial areas in the South Durban Basin. Portnet, however, also has an interest on this land in order to accommodate back of port activities.

Other than the industrial development in the Basin, economic development on the South Coast has been limited and mostly focussed on the tourism opportunities related to the coast. The Arbour Town Development, and associated retail development, is the exception and represents the single largest investment in the area over the past decade. It should also be noted that despite the substantial manufacturing capacity in the area there is no office development of note located in the Basin or to the south thereof.

THE SOUTH COAST ECONOMY

A 2005 Economic Assessment undertaken by Van Coller provides a perspective on the economic profile activity in eThekwini and specifically the South Area economy.

Van Coller (2005) divides the south into six residential /commercial zones and the Illovo Study Area stretches over three of these zones, namely ‘Amanzimtoti / Kingsburgh’ (that includes the Illovo Development Area, or as he refers to it Illovo North), ‘Adams Folweni’ (that includes the rural area Bhekuluwandle) and lastly what he refers to as Illovo (including Illovo Village and Illovo River Valley). The area referred to by Van Coller as Illovo or Illovo South is also sometimes referred to as the Illovo Flats, which includes the now defunct sugar mill at Illovo Village as well as Illovo Beach and sugar cane land to the south of the Study Area.

Table 2.13 presents a profile of economic activity in the various zones based on number of businesses in various sectors.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Isipingo/ Lotus Park</th>
<th>Amanzimtoti/Kingsburgh</th>
<th>Umlazi</th>
<th>Adams Folweni</th>
<th>Illovo</th>
<th>Umkomaas</th>
<th>TOTAL</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto &amp; Transpf</td>
<td>50</td>
<td>38</td>
<td>12</td>
<td>0</td>
<td>8</td>
<td>13</td>
<td>121</td>
<td>8.3</td>
</tr>
<tr>
<td>Build &amp; Constr</td>
<td>31</td>
<td>41</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>6</td>
<td>96</td>
<td>6.6</td>
</tr>
<tr>
<td>Cater/Accom/Leis</td>
<td>11</td>
<td>113</td>
<td>11</td>
<td>0</td>
<td>19</td>
<td>36</td>
<td>190</td>
<td>13.0</td>
</tr>
<tr>
<td>Educ &amp; Train</td>
<td>18</td>
<td>26</td>
<td>80</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>133</td>
<td>9.1</td>
</tr>
<tr>
<td>Manuf &amp; Light Ind</td>
<td>35</td>
<td>13</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>61</td>
<td>4.2</td>
</tr>
<tr>
<td>Retail</td>
<td>118</td>
<td>106</td>
<td>35</td>
<td>1</td>
<td>30</td>
<td>30</td>
<td>370</td>
<td>25.3</td>
</tr>
<tr>
<td>Services/Distrib</td>
<td>72</td>
<td>163</td>
<td>18</td>
<td>0</td>
<td>16</td>
<td>16</td>
<td>285</td>
<td>19.5</td>
</tr>
<tr>
<td>Gov/Med/Other</td>
<td>67</td>
<td>83</td>
<td>29</td>
<td>4</td>
<td>9</td>
<td>15</td>
<td>207</td>
<td>14.1</td>
</tr>
<tr>
<td>Total Res/Comm</td>
<td>402</td>
<td>633</td>
<td>200</td>
<td>8</td>
<td>97</td>
<td>123</td>
<td>1463</td>
<td>100.0</td>
</tr>
<tr>
<td>%</td>
<td>27.5</td>
<td>43.3</td>
<td>13.7</td>
<td>0.5</td>
<td>6.6</td>
<td>8.4</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>


Table 2.13 indicates that the Amanzimtoti / Kingsburgh zone dominates the South in terms of number of businesses. The majority of these businesses are, however, concentrated in the well developed and established areas of Amanzimtoti and Kingsburgh only. Much of the business activity in this area relates to Retail, Services and Catering/Accommodation/Leisure. The information also reflects the business profiles for Adams/Folweni and Illovo and indicates the undeveloped nature of the economies of these areas.
2.4 THE ECONOMIC CONTEXT (CONTINUED…)

<table>
<thead>
<tr>
<th>Sub-Place</th>
<th>Population</th>
<th>No. of Businesses</th>
<th>Ratio Pop.: Bus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isipingo / Lotus Park.</td>
<td>27 137</td>
<td>402</td>
<td>68</td>
</tr>
<tr>
<td>Amanzimtoti / Kingsburgh</td>
<td>39 587</td>
<td>633</td>
<td>66</td>
</tr>
<tr>
<td>Umlazi</td>
<td>383 562</td>
<td>200</td>
<td>1 919</td>
</tr>
<tr>
<td>Adams / Folweni</td>
<td>138 096</td>
<td>8</td>
<td>17 262</td>
</tr>
<tr>
<td>Illovo</td>
<td>2 309</td>
<td>97</td>
<td>24</td>
</tr>
<tr>
<td>Umtkomaas</td>
<td>17 901</td>
<td>123</td>
<td>146</td>
</tr>
</tbody>
</table>

TABLE 2.14: RATIO OF POPULATION TO BUSINESSES (SOURCE: VAN COLLER 2005)

The above table represents a ratio of population to number of businesses and such a ratio could be treated as a rough guide to the level of commercial development relative to a residential node. Van Coller (2005) suggests that a ratio of population per business of less than 100 generally signifies a good balance between the size of the population and local commercial and institutional development. A ratio of less than 30 generally suggests a node with more businesses than is required for the immediate needs of the population (i.e. a commercial node fulfilling a larger regional function). From the table above it then appears that the Illovo Beach and Illovo Flats area (including Illovo Village in the small southern corner of the Study Area) have sufficient businesses within the area for the essential needs. However, the majority of the Study Area relates to the Adams / Folweni sub-place where the ratio is exceptionally high, i.e. there is a low number of businesses serving a large population. (It should be noted that Van Coller is of the opinion that the number of business in this zone is clearly understated).

The figures in the table above provide a good indication of the imbalance that exists in the Study Area and immediate surrounds. The Bhekukwandle portion of the Study Area is clearly underserviced both in number and mix of businesses and recent surveys done in the Illovo Development Area indicates that the number of commercial / institutional developments is inadequate to meet the needs of the community.

STRATEGIC REGIONAL ECONOMIC IMPACTS

Other than housing development areas to the south of Durban and specifically to the south of Umbongintwini has seen limited development of note. A number of developments could, however, have a significant impact on economic development in the Study Area and each of these should be considered in detail.

Arbour Town Mall
The Mall is currently under development and will be the single largest development to the south of Prospecton in probably the past two decades (although the South Gate development also did have an impact). It is anticipated that the new Mall with its substantial shopping centre, as well as the linked value centre and housing development, could be the spark that was needed to ignite development to the south of Durban. This may facilitate attempts to ensure that the area achieve its full potential.

The impact of this development could potentially open up areas such as the Illovo Valley and Illovo Flats for development.

Transport Linkages
Road infrastructure to the south of Durban has received limited attention for a substantial period of time. Should the MR21 be acknowledged as an alternative gateway to the south coast of KwaZulu-Natal, or as an alternative route for heavy vehicles, it will have a substantial impact on the traffic through the Study Area. Providing appropriate links between the MR21 and tarred sections of the MR197 will further direct the flow of traffic and will influence on where economic and specifically commercial development are to be located.
2.4 THE ECONOMIC CONTEXT (CONTINUED...)

Lack Of Space For Development In Existing Coastal Nodes
It is generally acknowledged that nodes and CBDs in the coastal strip cannot accommodate much further development. Alternative locations for the provision of commercial and social facilities therefore need to be identified. It is suggested that under-utilised land along the MR197 presents such opportunities.

SYNOPSIS OF THE ECONOMIC CONTEXT
See Section 2.6 for Synopsis
2.5 THE ECONOMY OF THE STUDY AREA

This section considers current economic development in the four distinct areas of the Study Area. The areas identified are:

- Bhekulwandle;
- Illovo Development Area;
- Illovo Village; and
- Illovo River Valley.

The assessment for each of the areas is done on the basis of those sectors represented in the Study Area. The sectors distinguished in the various areas are:

- Retail / Commercial;
- Informal Sector;
- Government Services Sector;
- Industrial Sector;
- Property Sector; and
- Tourism Sector.

The discussion of each area is concluded with an indication of possible economic development opportunities relating to the specific area.

BHEKULWANDLE
Overview Of Economic Activity

Economic activity in the Bhekulwandle area is limited to a couple of trading stores and at least one fairly substantial block-making yard. It is assumed that the majority of people in the area are dependent on formal job opportunities in the coastal strip and pensions and remittances.

However, it is known that people in these areas follow a multiple livelihoods approach to survive and this will generally include some of the activities such as subsistence farming, cattle ownership, trading in the informal sector and other. On site visits no evidence could be found of locally produced goods being marketed locally so generally the extent of income leakage from the area is anticipated to be high. Considering that Reeves Road appears to be a well-established taxi route commercial opportunities are available.

Economic Development Opportunities

Some of the economic development opportunities to be considered in an area such a Bhekulwandle include:

- Small scale commercial agriculture;
- Subsistence farming (with a view to producing a surplus);
- Local marketing of goods;
- Provision of services; and
- Other forms of value addition.
### 2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED...)

#### ILOVO DEVELOPMENT AREA

**Commercial Sector**

Current commercial activity is limited in the Study Area and during site visits it was established that the majority of businesses trade in liquor or are taverns. Only one general dealer and one hardware shop could be identified in the township.

Table 2.15 below reflects a list of businesses, both formal and informal, identified and interviewed during field visits.

<table>
<thead>
<tr>
<th>NO</th>
<th>NAME OF THE BUSINESS</th>
<th>CONTACT PERSON</th>
<th>TYPE OF BUSINESS</th>
<th>BUSINESS CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elro’s Builder Suppliers</td>
<td>Sweety Naidoo</td>
<td>Hardware</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>2</td>
<td>Hyman Tuck shop</td>
<td>Percy Khumalo</td>
<td>Tuck shop</td>
<td>Informal (no fixed structure)</td>
</tr>
<tr>
<td>3</td>
<td>Okuthulile Tuck shop</td>
<td>Mr. Msabala</td>
<td>Tuck shop</td>
<td>Informal (fixed structure)</td>
</tr>
<tr>
<td>4</td>
<td>Phengulula General Trading</td>
<td>Mr Gwala</td>
<td>Tavern</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>5</td>
<td>Shibe Tuck Shop</td>
<td>Mr T Shibe</td>
<td>Tuck shop</td>
<td>Informal (no fixed structure)</td>
</tr>
<tr>
<td>6</td>
<td>Smack Down Tavern</td>
<td>Mr Mngadi</td>
<td>Tavern</td>
<td>Informal (fixed structure)</td>
</tr>
<tr>
<td>7</td>
<td>Tee &amp; Bee Liquors</td>
<td>Mr BM Nzuza</td>
<td>Liquor Store</td>
<td>Informal (no fixed structure)</td>
</tr>
<tr>
<td>8</td>
<td>Thokozu (Shopping Complex)</td>
<td>Mr TP Shezi</td>
<td>General dealer</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>9</td>
<td>Thokozu Buthe store</td>
<td>Mr TP Shezi</td>
<td>Liquor Store</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>10</td>
<td>Woza Nawe Store</td>
<td>Primrose Mfayela</td>
<td>General dealer</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>11</td>
<td>Woza Nawe Tavern</td>
<td>Jomo Zondi</td>
<td>Tavern</td>
<td>Formal (own premises)</td>
</tr>
<tr>
<td>12</td>
<td>Mzamo Mkhize</td>
<td>Informal trader</td>
<td>Informal (no fixed structure)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Thandazile Sithole</td>
<td>Tuck shop</td>
<td>Informal (no fixed structure)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Nokazi Ndillovo</td>
<td>Spaza shop</td>
<td>Informal (no fixed structure)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Maurren Mtshali</td>
<td>Fast food</td>
<td>Informal (no fixed structure)</td>
<td></td>
</tr>
</tbody>
</table>

A detailed survey of businesses was not conducted and it is not self-evident why, nearly 15 years after the establishment of such an extensive development area, so few businesses have established in the area; this despite the settlement including low- to middle and middle income housing. This may represent an interesting case study aimed at ensuring that alternative approaches to supporting local economic development are adopted in similar developments.

Possible reasons for the absence of economic development may include:

- The area is too close to established business areas;
- As people are dependent on job opportunities outside the area doing shopping there proves more convenient;
- A large enough concentration of business activity has never been achieved (commercial enterprises are dotted through the area); and
- Absence of a formal taxi rank providing some sort of focus for commercial development.

The above could be verified in a more detailed local economic development assessment.

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**TABLE 2.15: BUSINESSES IN THE ILOVO DEVELOPMENT AREA**

(SOURCE: STRATPLAN 2009)
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED…)

Figure 2.7 below reflects the only concentrations of business and related activity in the Illovo Development Area. Importantly, some of the concentration of business activity relate to the site for the establishment of the new taxi rank.

![Map of key commercial facilities in the study area](image)

**FIGURE 2.7: KEY COMMERCIAL FACILITIES IN THE STUDY AREA**

**Informal Sector**

Although the informal sector is not very strong in the Study Area the formal / commercial sector is supported by a number of spaza and tuck shops. The informal sector can be divided into those that have permanent or fixed structures from where they operate and those with no fixed structures, i.e. local entrepreneurs who sell their goods from makeshift or temporary structures on pavements.
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED…)

As is evident from Table 2.15 there is not a wide range of trading categories in this sector either, it is mainly related to food. The majority of traders indicated that they replace their stock on a weekly basis. Stock is generally replaced in Isipingo although a number of traders indicated that they source their stock Durban. Some also source the stock more locally. Winklespruit, Amanzimtoti and Umkomaas were mentioned as areas where goods are obtained.

The Government Sector

Overview Of Government Sector

Government services in an area are an economic sector often reported on and discussed separately from other service sectors (see also more detailed discussion in Section 2.3). In areas where commercial and industrial activity is limited (like in the case of Illovo Township) the government sector is, however, often the major contributor to gross geographic product. This relates mainly to the money spent by the government on establishing and maintaining education, health and other public sector services in these areas.

The government sector is not well represented in the Study Area and residents have to travel to Winklespruit, Amanzimtoti, Isipingo and Durban in order to access the majority of government services.

As indicated, there are two schools situated within the Illovo Development Area, one in Illovo Village and one in the Bhekulwandle area. The one high school has 40 members of staff and the one primary school have a staff compliment of 41.

Health facilities were discussed in detail in Section 2.3 and as indicated there are two clinics within the township area but only one (the Illovo Clinic) caters for the local residents.

As indicated, there are two schools situated within the Illovo Development Area, one in Illovo Village and one in the Bhekulwandle area. The one high school has 40 members of staff and the one primary school have a staff compliment of 41.

Health facilities were discussed in detail in Section 2.3 and as indicated there are two clinics within the township area but only one (the Illovo Clinic) caters for the local residents.
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED...)

Issues Relating To The Government Sector
The lack of a police station, the efficiency of the clinic and the shortage of schools were the main concerns raised by people being interviewed during the household and business surveys. A concern was also raised regarding the absence of a library in the area.

No issues related to spatial planning were highlighted by people being interviewed.

Property Development
The South Coast has not benefited substantially from property development growth trends over the past five years. This is if it is compared with the extent of development on the North Coast of eThekwini and KwaZulu-Natal.

A recent Property Trends Analysis (Graham Muller 2008) that was done for SMPR suggests several trends concerning middle to high income housing in the area. One of these is the high demand for housing in the south over the last five years. In this period opportunities for large greenfields developments could not be realised in established areas within what is termed the urban edge.

In identifying appropriate residential densification opportunities in the South MPR the SSDP suggests the densification amongst others, of the areas surrounding Illovo. The SSDP further suggests a range of additional residential development opportunities south of the R603 and between Kingsburgh and the Illovo Development Area.

A number of estate agents operating in the Amanzimtoti / Kingsburgh area were contacted but only one of these had an agent active in the Illovo Development Area. This agent stated that there is a demand for houses under R350 000 in the area. She sold three properties in the area in the last month with prices ranging from R270 000 to R320 000. According to her people that can afford houses above R350 000 prefer not to live in a township and they will rather buy property elsewhere. There is however a demand for houses in the area due to the fact that it is affordable for especially first-time buyers. The agent stated that Illovo compares well with other areas such as Umzini for instance and although retail facilities are currently limited in the area people shop at Winklespruit and other close-by areas.

Illovo: Economic Development Opportunities
Some of the economic development opportunities to be considered in the Illovo development area include:

- The establishment of a cluster of retail, commercial and service (both public and private) sector activity serving the residents of the Study Area;
- The establishment of a cluster of retail, commercial and service (both public and private) sector activity serving the residents of the Study Area as well as the substantial rural population to the south and west of the Illovo Study Area;
- Establishing facilities accommodating the informal sector in strategic locations;
- Establishing taxi shelters at strategic locations throughout the Study Area; and
- Using the Kingsburgh west housing development as a tool for job creation and entrepreneurship development.

ILLOVO VILLAGE
Although initially not viewed as important in terms of future economic development, a closer assessment of the Illovo Village area revealed that the majority of economic activity in the Study Area is located in the Illovo Village area (the old Illovo Sugar Mill settlement). This settlement area is made up of various components including low, middle and higher income housing, office developments, industrial areas, commercial development areas and sports facilities. Figure 2.9 overleaf locates the various components spatially.
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED…)

Manufacturing infrastructure, should be considered. Note should however be taken of the recommendation of the 2008 property assessment and if necessary this should be re-assessed.

“As has been alluded to earlier in this section, additional major industrial or manufacturing facilities are neither anticipated nor recommended for the areas south of Umbongintwini. However, as township schemes are extended in the future, adequate provision should be made for extremely small pockets of non-impactful activities. Space also needs to be provided for in scheme extensions for light and service industry activities and as well as warehousing where appropriate” (Graham Muller 2008).

Office
The only offices of note located in the area are that of the eThekwini Municipality. These offices previously formed part of the sugar mill and was taken over by the then south local council of the eThekwini Municipality in the late 1990s. It is still used for this purpose. Other than offices for a range of municipal functions this site is also the location of eThekwini emergency services.

Commercial
Limited commercial enterprises are located in the area.

Property and Property Development
According to Illovo sugar the only portion of land in the area still owned by the company is the land on which the syrup factory is located. Visits to the area also indicated that various estate agents are actively involved in the trading of properties in the area.

Illovo Village: Economic Development Opportunities
A number of opportunities could potentially be considered in the Illovo Village area including:

- The re-establishment of large scale agricultural activity in the area;
- The establishment of the node as small scale industrial development hub;
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED...)

- Establishing further office development in the area;
- Residential estate development relating possibly to the upmarket section of the Illovo village and the related sport facilities;
- The improvement and possible expansion of low cost housing areas; and
- Various other opportunities.

The industry related opportunities must be further considered in light of the possible tourism and recreation potential of the area.

ILLOVO RIVER VALLEY

Retail
Future planning acknowledges the commercial development potential at the R603 / N2 intersection. At present a petrol filling station and limited associated development is located in the area.

In 2004 there were plans to develop a shopping mall in the Study Area, the Blue Bay Mall. The site is near the N2 intersection along the R603. Feasibility studies were done and an environmental impact assessment was initiated, but it would appear as if these plans were shelved and this may relate to the extent of retail development currently considered in the Umbongintwini area. This is, however, to be confirmed.

Property Development
For the Illovo Flats / River Valley area the SSDP suggests providing a variety of housing opportunities, decreasing in densities from 15 to 6 units/ha. It is proposed that residential development should be on both sides of the river valley.

Office
The N2/MR21 intersection also provides a potential future location for office development.

Tourism
According to the SSDP it is generally agreed that the development opportunities of the South Coast is severely underutilized, especially if compared to the Durban Central and North Coast areas. At present the Study Area does not offer any significant tourism opportunities. The SSDP however notes that the rural areas of the SMPR has significant potential for the establishment of alternative inland eco / cultural /Africa etc tourism within the traditional settlement areas that can be linked to the existing established tourism facilities.

Illovo Beach is a quaint and attractive seaside resort that has potential for further tourism and recreational development. Although it is not part of the Study Area future development here can have a positive influence on the economy of the area and will create job opportunities for people residing in the Study Area.

It has been suggested that the Illovo River flood plain area be converted into a conservation area with leisure facilities for local population and visitors. Again this area is not part of the Study Area but development here can have a positive influence on the economy of the area. The SSDP also supports the potential development of the Illovo River valley for future tourism opportunities.

Illovo River Valley: Economic Development Opportunities
Opportunities relating to retail, commercial, residential and tourism development have been discussed in more detail in the preceding sections. These opportunities must be considered in the development of the local area plan for the area.
2.5 THE ECONOMY OF THE STUDY AREA (CONTINUED…)

STRATEGIC LOCAL ECONOMIC IMPACTS

The Illovo Taxi Rank

The establishment of a permanent taxi rank in Illovo is under consideration. According to the briefing document for the Environmental Authorisation (WSP 2008) the project will include the following components:

- The formalisation of the existing access road;
- Construction of an ablution block;
- Construction of an administration office;
- Construction of parking bays; and
- Construction of a washing area.

This taxi rank will replace the existing informal taxi rank located next to the R603. The proposed location for the taxi rank is presented in the map below.

The feasibility assessment for the project (Sabalala, undated) considered the following related activities: A Taxi rank, Petrol filling station, Art & Craft stalls, Fruit & Vegetable stalls, Retail outlet and Community Leisure Park. It is interesting to note that this feasibility assessment suggests that the establishment of a taxi rank is feasible but that the establishment of a retail facility and filling station as part of the cluster of projects are not feasible. Various recommendations are made regarding the other proposed components.

The investment of public funding in a taxi rank will most likely contribute to further investment in the area and impact on the spatial distribution of investment and economic activity. Feasibility studies suggest that 2 600 people will make use of the rank on a daily basis. The location of the rank and whether a rank is the correct option should possibly be reviewed through the local area planning process.

FIGURE 2.10: PROPOSED SITE FOR ILLOVO TAXI RANK
(SOURCE: ETHEKWINI MUNICIPALITY)

The Kingsburgh West Housing Development

The Kingsburgh West Housing development, providing for more than a 1 000 new housing opportunities or 4 000 to 5 000 additional people in the area will contribute to making commercial development in the Study Area viable. As this development will be located closer to Kingsburgh and Isipingo than the rest of the residential area in the Study Area it would, however, be a challenge to ensure that the community spend locally.

SYNOPSIS OF THE ECONOMY OF THE AREA

See Section 2.6 for Synopsis
2.6 SYNOPSIS OF FINDINGS

THE SOCIO-ECONOMIC ENVIRONMENT
The population of the Illovo Study Area falls within both the low income and middle income groups. The lower income residents are located in projects developed over the past 15 years generally to the south of the R603 and in traditional settlement areas to the north of the formal development area.

The population in the Study Area is relatively small (some 15 000 to 20 000 people), but the area is potentially the Gateway for a substantial number of people travelling to eThekwini and the various opportunities on offer in the metropolitan area.

The Illovo area has now been in existence for nearly 15 years, however, is showing limited signs of a maturing urban area. Social facilities are available, but limited, and most residents are still dependent on areas such as Isipingo for the purchase of basic household goods and luxuries.

Socio-economic conditions in the Study Area and its surrounds are of a similar nature to most urban and peri-urban areas of KwaZulu-Natal with:

- High levels of unemployment;
- Low household income levels;
- Limited household level production (agricultural or other);
- Potential drug and alcohol related challenges; and
- Limited access to social facilities.

THE ECONOMIC CONTEXT
The South Coast of eThekwini has not seen any substantial new economic development over the past two decades. There has been the redevelopment of Prospecton to accommodate Toyota City, the South Gate Industrial Area has been developed but only had a limited impact and Arbour Town Mall and related development is currently underway. The South Industrial Basin, suggested to be fully developed, is underutilised and facilities and infrastructure is outdated, requiring redevelopment. There is still uncertainty as to the future use of the International Airport site.

Current planning proposals suggest that no further industrial development be considered south of Umbongintwini. Tourism development potential is limited and constrained by topography and existing development. Limited scope exists for conventional retail and commercial development as income levels is extremely low in hinterland areas (even on the coast it is comparatively low to other areas of eThekwini).

It is concluded that an economic vision for the future development of the South Coast of eThekwini still lacks and that the status quo is accepted. This is in stark contrast with other areas of eThekwini where opportunities are seized and acted upon by both the public and private sector. It is suggested that strategic linkages must be provided as a matter of priority and that bold decisions be taken with regard to economic opportunities in the south, e.g. the ICC, the Point Waterfront, Umhlanga Ridge, Bridge City, the Airport, Zimbali etc.

The future development of the economy of the Study Area is dependent on such decisions being taken.

THE ECONOMY OF THE STUDY AREA
At present there is limited economic development of note in the Study Area. Within the residential areas economic activity appears to be limited to taverns, liquor stores, tuck shops and spaza shops. Services provided in these areas on an informal basis include a car wash, hairdressing and telecommunications. The most substantial economic activity is currently located in the vicinity of Illovo Village, where a contingent of 40 people is employed in the Illovo Syrup plant. Other small industries or service providers are also located in the Illovo Village area.
2.6 SYNOPSIS OF FINDINGS (CONTINUED...)

The various sectors of the economy provide opportunities for future economic development. Opportunities for development in each of the relevant sectors have been identified. These require further investigation in terms of an integrated development plan or local area plan for the area.

Economic development opportunities in the Study Area should be considered within the context of development in the region. The strong focus of the South Spatial Development Plan on residential development and the almost complete absence of opportunities for industrial development to the south of Umbongintwini present a concern. It is not envisaged that the tourism, residential, commercial or retail sectors will create adequate opportunities for the people in the Study Area and the vast rural population relating to the south coast of eThekwini.

BIBLIOGRAPHY:
Iyer Rothaug Collaborative, 2004. eThekwini Upper South Coast Retail and Office Assessment.

Other:
Various web-sites
03 PLANNING ANALYSIS & ASSESSMENT
3.1 PLANNING & DEVELOPMENT CONTEXT

PREVAILING POLICY CONTEXT

Integrated Development Plan
The Integrated Development Plan for the eThekwini Municipality is a documented approach to regional development within the municipal boundaries. The key challenges facing eThekwini are identified through the analysis of social, economic and environmental statuses. The IDP is a strategic approach to addressing these challenges by refining the city vision and achieving this through key actions and managing and evaluating performance.

Central to the IDP strategic approach is the 8 Core Plan of the Municipality, which is oriented towards:
- Sustaining our natural and built environment;
- Economic development and job creation;
- Quality living environments;
- Safe, healthy and secure environment;
- Empowering citizens;
- Celebrating our cultural diversity;
- Good governance; and
- Financial viability and sustainability.

FIGURE 3.2: ADMINISTRATIVE BOUNDARY: IMPLICATIONS FOR THE STUDY AREA
(SOURCE: ETHEKWINI GIS DATA)
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED...)

**Spatial Development Framework**

Durban’s Spatial Development Framework Plan, as established through the Integrated Development Plan process, firmly seeks to reinforce the development, intensification and improved functioning of the existing development structure. The Spatial Development Framework (SDF) provides a spatial context for the principles of the IDP, reflecting the investment intentions and development management approach of the Municipality.

The key principles emanating from the SDF include, inter-alia, the following:

- Strive towards a Compact city model;
- Emphasis on accessibility and convenience in a compacted urban area;
- Durban Town Centre and Umhlanga as the focus of major investment areas,
- Regeneration of existing areas;
- Supporting smaller priority nodes which provide social support;
- Supporting a Public Transport network; and
- Utilisation of available infrastructure capacity in developed areas inside the urban edge rather than extending the platform infrastructure to new areas.

In terms of the SDF, a Northwards investment direction in response to private sector development needs is identified, as is the opportunity of the South Durban Basin. The SDF imposes restrictions to development outside the identified urban edge in the next 5 to 10 years. (Illovo is located within the edge). The SDF further suggests that rural development within the area be aligned with the broader intent of the Framework.
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED…)

Southern Spatial Development Framework

The following was extracted directly from the eThekwini Southern Spatial Development Framework.

The purpose of the South Spatial Development Plan (SSDP) is to determine the economic role of the Southern Municipal Planning Region (MPR) as identified below within the context of the existing and envisaged economic activity of the eThekwini Municipality. The SSDP identifies the capacity of the existing natural and built environment to create sustainable investment and development opportunities and establishes linkages to opportunities for the socio-economically disadvantaged communities of the south. Within this context, the SSDP identifies what development is desirable, where such development should occur and how such development should be facilitated. The main objectives of the SSDP therefore includes:

- To establish an understanding of the strategic role of the southern area within the context of the eThekwini Municipality,
- To ensure alignment of the SSDP with the development plans of the west and north as well as the South Durban Basin Framework in progress,
- To inform the broader Uni-city Spatial Development Framework as well as providing guidance for subsequent local area plans and land use schemes.

While therefore the South MPR forms an integral part of the Metro and while it contains significant components of metropolitan significance, it also accommodates unique developments, and even more so, unique opportunities for future development. The initial strategic assessment suggests in broad terms inter alia major development opportunities in terms of:

- Major tourism and recreation opportunities both in coastal as well as unique inland areas,
- Significant agricultural development opportunities in the rural western parts of the South,
- Providing a progressive “ladder” of accommodation, activities and opportunities for the entire income range of the population,
- Providing opportunities for the expansion of a range of economic development necessary to support the growing population.
There are however also significant challenges for the development of the South MPR including issues such as:

- Finding ways of better integrating the rural communities of the area occupying over 50% of the South,
- Creating a better balance between the built and the natural environment,
- Protecting, rehabilitating and appropriately managing the natural resources;
- Improving significant portions of the existing built environment, in particular conditions in lower income communities,
- Improving pre-conditions for the better integration of large population groups into the economic development opportunities of the area,
- Facilitating the creation of significantly more employment opportunities for the population of the South,
- Providing better physical linkages between the South and the remainder of the Metro.

In summary it is suggested that, while the future development of the South MPR by nature consists of a great variety of interrelated development issues and aspects which can not easily be reduced to a single issue, the outstanding aspect of the South within the context of the eThekwini Municipality is its ability to provide significant additional economic development opportunities. These can be found in the fields of a wide range of economic developments extending from industrial, high-tech and biotech, commercial and business to tourism and agriculture.

While it is obvious that such activities need to be appropriately integrated into the wider development context and while they need to be sustainable from a variety of aspects, present low levels of economic activity of the South population and extremely high levels of unemployment suggest the necessity to focus significantly on further economic development in the south MPR.

The SSDF explores the above objectives in the context of a number of smaller Planning Units. The Illovo Study Area falls within two of these Planning Units: the original Illovo development falling within the Amanzimtoti/Kingsburgh Planning Unit; and the remaining parts of the Study Area falling within the Adams/Folweni Planning Unit. The intentions of the SSDF in terms of these areas can be summarised as follows:
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED…)

Amanzimtoti / Kingsburgh
The major planning principles and concepts applied include the following:
- Ensuring that development is sustainable both in terms of environmental considerations, physical and social service provision, local economic development etc,
- Facilitating integration of the various components surrounding Amanzimtoti, their inter-linkage and accessibility,
- Providing better accessibility to peripheral areas, creating additional economic development opportunities and facilitating the integration of the area into the wider Metro,
- Better utilisation of the areas of high visibility and accessibility for additional commercial, business and office development,
- Upgrading the Amanzimtoti town centre to fulfill its potential and establishing additional economic development at the N2 / R603 intersection,
- Making better usage of the recreational and tourism opportunities of the extensive coast,
- Making better usage of the inherent high levels of accessibility and visibility and proximity to the coast by increasing residential densities where appropriate without substantially changing the character of the area,
- Maintaining the unique character of the area and developing the green and recreational aspect further,
- Ensuring the maintenance of the living environment in the eastern parts of the area while upgrading the environment in the peripheral areas,
- Establishing a development structure which allows for efficient land development, accessibility, development predictability etc,
- Allowing appropriate densification around the N2 and R102 and their inland road linkages,
- Upgrading and redeveloping the Amanzimtoti town centre to fulfill the role of mixed investment node envisaged in the eThekwini SDF and establishing local activity nodes at the intersections of the N2 / MR242, the MR242 / MR197 and the N2 / R603 intersection, the latter could accommodate a significant extent of business / office etc development positively affecting development south of the R603,
- Protecting, managing and rehabilitating the valleys of the Ezimbokodweni, Amanzimtoti, Little Amanzimtoti and Illllovo Rivers as well as protecting and appropriately utilising the sensitive coastal environment,
- Allowing for appropriate residential densification in the central areas, while providing for a range of additional residential development opportunities south of the R603 and between Kingsburgh and the Illllovo township,
- Providing appropriate support services to the peripheral and under-serviced areas,
- Identifying commercial and business development opportunities,
- Protecting and appropriately rehabilitating the sensitive coastal environment, including the various lagoons and river mouths, while appropriately developing a range of beach and river related recreation activities.

The South Spatial Development Plan therefore suggests:
- Allowing increased residential densities in central areas, up to 50units/ha and providing appropriate development to the areas south of the R603,
- Appropriately upgrading and expanding both the economic and commercial development areas as well as coastal recreation,
- Upgrading and infill of Illllovo Township and better integration with surrounding activities and opportunities.

Adams / Folweni
The major planning principles and concepts applied include the following:
- Ensuring that development is sustainable both in terms of environmental considerations, physical and social service provision, local economic development etc, this in particular applicable to the areas of substantial informal densification,
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED...)

- Facilitating integration of the various formal, informal, traditional and urban components and their inter-linkage and accessibility,
- Providing better accessibility to peripheral areas, creating additional economic development opportunities and facilitating the better integration of the area into the wider Metro,
- Developing the opportunities for local economic development and facilitating such development through improved accessibility and linkage,
- Ensuring provision of appropriate services and facilities to the densifying traditional settlement areas and considering an appropriate level of formalisation,
- Maintaining the unique character of the area and developing the green and recreational aspects further,
- Improving the living conditions in the area by providing appropriate physical and social services, including facilitating appropriate local economic development,
- Establishing a development structure which allows for efficient land development, accessibility, development predictability etc,
- Locating development requiring high levels of access and visibility around the R603, MR80 and MR242 and establishing additional north-south linkages in the form of the envisaged MR579 as well as local linkages.
- Establishing Adams as the local service node for the area as envisaged in the eThekwini RDF and establishing local community nodes along the MR80 and MR242, in addition to upgrading existing community centres at KwaMakhutha and Folweni,
- Protecting, managing and rehabilitating the valleys of the Ezimbokodweni, Golokodo, Amanzimtoti and Little Amanzimtoti Rivers,
- Allowing for densification in the eastern and most accessible areas while providing for medium densities in the vicinity of the major access routes through the area, peripheral areas should remain as low density development,
- Providing appropriate support services to the peripheral and under-serviced areas,
- Identifying commercial and business development opportunities,
- Protecting and appropriately rehabilitating the numerous river valleys, while the dramatic topography provides opportunities for alternative tourism linked to the traditional coastal activities.

The South Spatial Development Plan therefore suggests:
- The establishment of the Adams local service node, local activity nodes at the MR242 and MR80, in addition to the upgrading of existing community centres,
- The provision of better north-south link roads,
- The appropriate formalisation of the densifying traditional settlement areas at various densities indicated, together with the provision of appropriate physical and social services and the facilitation and support of local economic development,
- The appropriate protection and usage of the natural environment,
- Identifying mitigating actions for all development surrounding the Umbogintwini noxious industries.
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED...)

There are a number of development projects currently being planned or considered for the Illovo area. Key amongst these is the proposed Kingsburg West housing development. This is effectively an extension, although the typologies suggested in the settlement do include a marginally wider range of income groups, with larger size units targeting the lower end of the middle-income market. In terms of actual figures, however, the vast majority of proposed units (1055 out of a total of 1200) are still aimed at a lower-income market.

A number of proposals for the Study Area relate to the development of various facilities around an economic cluster adjoining the R603. Key amongst these is a proposed Taxi Rank. The proposal in this regard is for a formal taxi rank and holding area adjoining the R603, in the area currently used by taxi operators. There is currently no formally designated taxi facility within the Study Area, and the area currently being used for ranking and holding is informal in nature, lacking appropriate facilities for passengers and drivers.

Related to the rank is a proposal for a number of market stalls to be built along the taxi rank for easy access to locals and the travelers on the Provincial road. This will also contribute, minimally, to the growth of economic activity in the area. The operation of the stalls will be guided by the bylaws of the City. A Feasibility Study conducted by Sabalala Consulting in 2005-06 on certain of the proposed developments, specifically the Taxi Rank and trading area, as well as an initial proposal for a petrol filling station, commissioned by the eThekwini Business Support Unit and, highlighted a number of potential benefits:

- The proposed developments would require extensive investment in basic infrastructure likely attracting additional businesses to the area;
- The trickle down effect associated with the developments would result in job creation within the local community, increasing income levels and spending power;
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED…)

- The attraction of external development could stimulate the economy and create job opportunities for local entrepreneurs; and
- The development of an economic hub in Ward 98 would ensure that local people inject and utilize their disposable income acquiring and purchasing locally based goods and services.
### 3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED…)

In addition to the above, there are also proposals for:

- A Multipurpose Community Centre, located in the vicinity of the existing clinic and community hall, to include government services such as a pension payout point, etc;
- The upgrading of the existing sports precinct in the same area;
- Formalising access roads to the facilities within this emerging node;
- Possible shopping centre at the entrance to Kingsburgh West; and
- Possible attraction of an FET College to the area.

**Socio-Economic Context**

The Study Area is characterised by a relatively small population, estimated at between 15,000 to 20,000 people, the majority of whom fall within the lower and middle income groups. The lower income population tends to be located within two key areas; namely the peri-urban or traditional settlement areas of Bhekuluswandle, and the formally developed areas of Illovo Township, which have been developed over phases over the last 15 years.

The socio-economic conditions within the Study Area and the surrounding settlements, particularly the peri-urban and traditional settlements to the west, reflect a prevailing pattern in the areas of KwaZulu Natal peripheral to the main urban settlements. In the context of eThekwini, this pattern is spatially reflected by significant “Pockets of Poverty” in both the northern and southern areas of the Metropolitan area, spatially separated from the core economic opportunities of the main development arms of the “T” like economic structure of the region.

These Pockets of Poverty tend to be characterised by a range of poor socio-economic conditions, including, inter-alia:

- High levels of unemployment;
- Low levels of Household Income;
- Limited access to Social Facilities; and
- Limited household level production, or means to production.
3.1 PLANNING & DEVELOPMENT CONTEXT (CONTINUED…)

FIGURE 3.9: REGIONAL PATTERNS OF POVERTY & WEALTH (Darker colours reflect higher values)
(SOURCE: DERIVED FROM ETHEKWINI GIS DATA)
SYNTHESIS: PLANNING & DEVELOPMENT CONTEXT
The Study Area is strategically located within the broader eThekweni/Msunduzi region, forming part of a triangle of linkage between the two Metropolitan cores, and the southern arm of a coastal development belt.

The regional location of the Study Area is particularly significant in the context of addressing regional inequalities, and integrating the marginalised regions of poverty that exist in the northern and southern inland regions of eThekweni.

The Study Area, together with its broader context (including specifically the Kingsburgh area) remains an important interface between the formal urban areas and their associated commercial and social opportunities, and the more traditional tribal areas.

The Study Area falls within a disparate administrative context in terms of administrative boundaries, containing areas of both formally established settlement and traditional tribal settlement, as well as planning strategies, falling across two different Planning Units.
3.2 DEVELOPMENT STRUCTURE

MOVEMENT NETWORK

At a regional level, the Study Area is indirectly linked to the broader development structure through the N2 Highway, which lies to the southeast in fairly close proximity. This element is an important structuring device in the configuration of pattern of settlement of the region, and together with the N3 further to the northwest, forms the basis of the "T" like structure of the region. These two routes form the basis for most areas of higher intensity and higher order development within the region.

The N2 route is supported by a number of primary district collector roads, specifically the R102 and R603, local distributors in the form of the R197 and Seadoone Road, as well as rail infrastructure.

The R102 route, which runs parallel to the N2, acts as an alternative and supplementary route to the N2 providing a combination of accessibility and mobility between the Study Area and areas to the north and the south.

Access between the Study Area and the N2 and R102 is facilitated by a series of east-west local distributor routes, the most significant of which is the R603 (Sbu Mkhize Drive). This route extends from the R102 in the east to link up with the N3 at Camperdown approximately 17 km east of Pietermaritzburg, a distance of approximately 65 km. The R603 represents a viable alternate route to the N2 and N3 from the southern regions of the province, a trend supported by road freight data.

The R603 is an important system in the context of the current study, as it functions as both a local distributor within the Illovo area, as well as a district level collector route which links the coastal regions to the settlement areas of the hinterland. The R603 thus provides significant potential for facilitating catalytic development projects within the broader Illovo area, although this role needs to be clearly defined and balanced with the mobility function of the route.

The P197 (M37) is a further important element at the regional level, linking the R603 with the Isipingo Rail Industrial Areas to the north. Reeves Road, which forms the eastern boundary of the Study Area, plays an important role as a local distributor route within the area.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

At a local level, the R603 forms the primary east-west corridor through the Illovo area and should therefore cater for the mobility requirements of the area. The route consists of two lanes, one in each direction, with no direct access to the route from individual land-uses, except in the case of informal access. The system of urban collector routes that serves the Illovo area is generally fragmented and incomplete, limiting effective levels of accessibility and impacting on the overall legibility of the movement network.

Public transport facilities are concentrated in the northwestern regions of the Study Area boundary, generally in close proximity to the R603 and Reeves Road, both of which are local distributor routes and provide linkage to the N2 corridor.

Public Transport systems within the Study Area are limited to mini-bus taxi services, as no formal bus services exist, although the socio-economic study undertaken as part of the current LAP process has identified significant demand for such a service. This study had also established that rail demand from the Study Area, from Winkelspruit Station for example, is limited, given the additional cost of traveling to the station.

The coastal areas south of the CBD are relatively well served by a commuter rail network, which extends further southwards as far as Port Shepstone. This system provides and relatively efficient and accessible means of connectivity to traditional employment areas in the industrial and harbor zones, and also provides linkage with a national system.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

FIGURE 3.13: RAILWAY STATIONS – 5 & 10 MINUTE WALKING BUFFERS
(SOURCE: BASED ON ETHEKWINI GIS DATA)

FIGURE 3.14: AXIAL MAPPING STUDY SHOWING RELATIVE CONNECTIVITY
(SOURCE: ANALYSIS OF ETHEKWINI GIS DATA)
3.2 DEVELOPMENT STRUCTURE (CONTINUED...)

SYNTHESIS: MOVEMENT NETWORK
The Study Area is served by strong regional linkages that connect it to metropolitan economic opportunities, with the R603 serving a particularly significant role in this regard.

A district based movement network, although one that is not entirely cohesive, although this system currently provides some connectivity to more localised employment areas and urban opportunities.

The local movement network is generally fragmented, particularly in the more traditionally settled areas, and displays poor levels of relative connectivity and legibility (refer to figure 3.14).

Public transport within the Study Area is limited, and whilst the system could be extended through the exploration of formal bus networks, it is unlikely to extend beyond road based transport modes given the cost implications of inter-modal links with the coastal commuter rail system.
ENVIRONMENTAL SYSTEMS

The natural systems underpinning the structure of the broader region can be examined in terms of river systems and their associated flood plains and wetland areas, areas of significant natural vegetation, and the general topographic character. River, wetland and vegetation areas are generally defined through the Metropolitan Open Space System (MOSS), initiated within the eThekwini Metropolitan Area in the late 1980’s.

This system connected core environmental areas through a network of buffers and corridors, operating as conduits fauna and flora. Areas identified through the MOSS system include designated open spaces, such as parks, sportsfields, reserves and servitudes core open spaces, as well as water based ecosystems. The MOSS system has recently been updated and extended.

In terms of the current Study Area, MOSS elements are generally focussed around the Illovo and Little Amanzimtoti Rivers and riparian areas. A relatively large area vegetation in the form of forest, thicket and grassland has been identified in the western edge of the site, although this area is not fully indigenous.

There are a number of perennial and non-perennial streams within the broader Study Area, and many areas have subsequently been classified through the eThekwini Environmental Management Department Land Class Layer database as having a high wetland potential.

The environmental study undertaken as part of this planning process has recommended that development be excluded from forested areas, riparian zones and steep slopes, in particular those located along the western boundary of the Study Area, for conservation reasons.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

The topography of the Study Area is generally undulating in nature and has had an influence on the structure and layout of settlement in the area. Apart from some areas around the river valleys, however, there are not significant pockets of completely undevelopable land as a result of excessive slopes (Fig 3.17). The valley of the Illovo River is one of the flatter portions of the Study Area, although it is constrained by flood lines. The elevation of the study area (Figure 3.18) ranges from approximately 180m above sea level in the north-western portions, down to less than 20m above sea level in the flood plains of the Illovo River.
The Study Area contains significant regional environmental systems, specifically the river and riparian systems of the Illovo and Little Amanzimtoti Rivers, although these systems currently have limited functional relationship with existing settlement patterns.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

LAND USE & ACTIVITY PATTERN

The regional pattern of land use and activity is related strongly to the “T”-like structure defined by national linkages, with a series of higher order nodes structured around this pattern. Within the southern region of eThekwini, the structure of development is very closely tied to the coastal development axis, running southwards from the harbour and related industrial core, towards the Kingsburgh/ Winkelspruit, after which the general pattern of intensity tends to become more sporadic in nature. The areas south of Umbogintwini are predominantly residential and agricultural in nature, with various levels of assorted commercial and retail activities.

Industrial development within the broader region is focused in the area around Prospecton and Umbogintwini, part of the South Durban Industrial Basin. An opportunity for the longer-term redevelopment of the current airport site, when this facility is relocated to the La Mercy area, has been identified, although there are a number of technical and legal issues that would need to be resolved for this to occur. This initiative is likely to provide significant employment opportunities for the region should it go ahead, and should have some benefit to the Illovo Study Area, given the relatively strong connections that exist between the areas.

In terms of retail development, the southern region of the eThekwini Metropolitan Area displays a limited range and overall bulk of retail and commercial activity when compared to the northern and central parts of the region. The historic pattern of development of the southern coastal region has led to the establishment of smaller retail and commercial centers as part of coastal settlements, there are very few larger scale developments, an exception being the recently completed Arbour Town Mall north of Amanzimtoti.

Amanzimtoti itself is the key activity centre within the region, although Kingsburgh is taking on an increasingly important role in this regard, due in part to its location on key gateways to the peri-urban settlements and their associated markets.
3.2 DEVELOPMENT STRUCTURE (CONTINUED)

Retail activity within the formal parts of the Study Area are limited to a small general dealer, a hardware store, and a number of spaza shops. Economic activity in the more traditional area is more dispersed in nature, with some trading stores and a block-making yard.

There are no significant office or business nodes that exist in the broader region, with such activities generally part of the main commercial centers of the coastal settlements, although there is a fairly large municipal administrative complex within the Illovo Village area. In terms of office facilities, no one large-scale node of office activity exists.

Agricultural land, specifically land under cultivation for sugar cane, is a significant pattern of development within the region, and also plays a role in the Study Area itself. Given that much of the land currently under cultivation for sugar cane is under firm supply agreements with sugar producers, it is likely to remain a part of the development landscape in the short to medium term, and will, in any event, be subject to planning guidelines and frameworks, in terms of prevailing policy, before it can be utilised for alternative forms of use.
The broad pattern of Land Use for the Illovo area, shown in Figure 3.23, reflects the peripheral location of the Study Area between a peri-urban and rural hinterland to the north and west, and the more formal and established urban areas to the south and east.

The local land use pattern, illustrated in Figure 3.24, is summarised in the table below:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AREA (m²)</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>14919</td>
<td>0.09%</td>
</tr>
<tr>
<td>Road Reserve</td>
<td>56483</td>
<td>0.36%</td>
</tr>
<tr>
<td>Major Recreation</td>
<td>1311</td>
<td>0.01%</td>
</tr>
<tr>
<td>Forestry</td>
<td>26914</td>
<td>0.17%</td>
</tr>
<tr>
<td>Urban Formal</td>
<td>4259032</td>
<td>26.98%</td>
</tr>
<tr>
<td>Urban Informal</td>
<td>519320</td>
<td>3.29%</td>
</tr>
<tr>
<td>Peri-Urban Settlement</td>
<td>916545</td>
<td>5.81%</td>
</tr>
<tr>
<td>Rivers &amp; Water Bodies</td>
<td>182398</td>
<td>1.16%</td>
</tr>
<tr>
<td>Commercial/Retail</td>
<td>79720</td>
<td>0.50%</td>
</tr>
<tr>
<td>State/Institution</td>
<td>242026</td>
<td>1.53%</td>
</tr>
<tr>
<td>Sugar Cane</td>
<td>2547979</td>
<td>16.14%</td>
</tr>
<tr>
<td>Undeveloped Land</td>
<td>6528015</td>
<td>41.35%</td>
</tr>
<tr>
<td>Under Construction</td>
<td>413414</td>
<td>2.62%</td>
</tr>
<tr>
<td></td>
<td>15788076</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Based on assessment of aerial photography of the Study Area, residential densities range from 25 – 30 du/ha in the denser phases of the Illovo Development Area, to approximately 2.5 – 3 du/ha in the traditionally settled areas of Bhekulwandle. These are summarised in the following table:

<table>
<thead>
<tr>
<th>AREA</th>
<th>ESTIMATED DENSITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo Development Area (Northern phases)</td>
<td>20 – 25 du/ha</td>
</tr>
<tr>
<td>Illovo Development Area (Southern phases)</td>
<td>25 – 30 du/ha</td>
</tr>
<tr>
<td>Bhekulwandle</td>
<td>2.5 – 3 du/ha</td>
</tr>
<tr>
<td>Illovo Village Settlements</td>
<td>8 – 12 du/ha</td>
</tr>
</tbody>
</table>
3.2 DEVELOPMENT STRUCTURE (CONTINUED...)

FIGURE 3.24: LOCAL LAND USE STRUCTURE
(SOURCE: ETHEKWINI GIS DATA)
In broad terms, the provision of social and community facilities within the LAP Study Area is limited relative to the actual needs and aspirations of the communities living in the area. The key facilities that do exist include:

- Four schools, two of which are located in the formal settlements areas of Illovo, namely the Siyabonga High School and the Andrew Zondo Primary School, with a third school, the Mthombeni Primary School in the Bhekulwandle part of the Study Area, and Illovo Primary School in Illovo Village;

- Two clinics, with the Illovo Clinic catering for the general community, and the Illovo Occupational Health & Safety Clinic catering for eThekwini Municipality employees only.

- Four Community Halls or structures, two of which are in the Illovo development area, namely Illovo B and Louv C, and two in the traditional settlement areas, namely Bhekulwandle Hall and Baphehli Hall.

Whilst there was a satellite Police Station in the Study Area in the past, this has since closed down as a result of resource constraints.

In assessing the catchment patterns of social and community facilities that exist within the area, there is some degree correlation between service provision and settlement patterns at a broader level, although local integration of service catchments is not fully aligned with potential support thresholds.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

An initial assessment of services provided in the area in terms of recommended guidelines, in this case the “Guidelines for Planning of Facilities in KwaZulu-Natal” prepared by the Provincial Planning and Development Commission in October 2007, reflects the basic disparities that exist in the study area. The population figures that have been used for this exercise have been calculated on the basis of actual dwelling structures/erven determined from aerial photography and cadastral information provided by eThekwini Municipality, and a set of assumptions regarding household size in different parts of the Study Area. These estimates are summarised in the table below:

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>ERVEN/MM</th>
<th>EXISTING ESTIMATED POPULATION</th>
<th>POSSIBLE FUTURE POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo Development Area</td>
<td>66038738(1)</td>
<td>23553</td>
<td>36700</td>
</tr>
<tr>
<td>Bhekuluwandle</td>
<td>410</td>
<td>2460</td>
<td>2469</td>
</tr>
<tr>
<td>Proposed Kingsburgh West</td>
<td>1232(2)</td>
<td>845</td>
<td>840</td>
</tr>
<tr>
<td>Illovo Village</td>
<td>98</td>
<td>314</td>
<td>98</td>
</tr>
<tr>
<td>Illovo River Valley</td>
<td>27182</td>
<td>45271</td>
<td></td>
</tr>
</tbody>
</table>

1) Figures reflect actual structure count and planned erven (TS Layout)  
2) Planned Development (Infrastructure development underway)

(Assumed occupancy rates used for the above calculations are 6 phh in Bhekuluwandle, 4.2 phh in the Illovo Development Area, and 3.2 phh in Illovo Village and Illovo River Valley Areas)

In almost all categories, the level of service is lower than the recommended standards for the estimated population of the area, a situation that will no doubt worsen as population increases, through new developments and densification. This under-provision is particularly significant in the Bhekuluwandle area, where there are limited facilities, sparse public transport networks, few areas of concentration of opportunities, and yet a large population in need of such facilities and opportunities.
3.2 DEVELOPMENT STRUCTURE (CONTINUED…)

Settlement Patterns

The Study Area falls within a portion of the region that is characterised by both formal urban settlement, at various scales and intensities, and areas of more traditional settlement in peri-urban areas with a stronger emphasis on rural systems and resources.

In terms of the Study Area itself, a number of distinct development patterns can be identified within the Study Area, they key districts being:

- The traditional settlement areas around Bhekulwandle and parts of Toyane and Mapumalo, to the north and northwest of the Study Area;
- The formal settlement areas of the Illovo development area, initially established as a low-income dormitory suburb, and expanded over time;
- The Illovo Village area in the southwestern quadrant of the Study Area, originally a sugar mill village; and
- The Illovo River Valley, an area currently used predominantly for sugar cane cultivation.

Of particular significance for the current initiative are the patterns associated with the two core areas of settlement, namely the formal pattern of the Illovo Development area, and the more traditional pattern of the Bhekulwandle area. The structure of development, and opportunity, within these areas has a direct bearing on the quality of the urban environment, and hence the lives of the residents.

The Illovo Village area is the focus of much of the economic activity that exists within the Study Area, and includes a mix of housing types catering for low, middle and higher income groups, commercial development areas and sports fields. Whilst the sugar mill that historically has served as a focus for this small settlement has since been relocated to Eston, much of the basic infrastructure remains in place, suggesting future potential for industrial development in some form.
Formally developed settlements of Illovo and its extensions, dominated by lower income residential development and limited facilities and service functions.

The Illovo Village area, previously a Sugar Mill Village, with a mix of residential, office, commercial, and sports facilities.

Areas of traditional settlement of within Bhekulwandle, characterised by a more dispersed pattern of settlement and lower levels of service.

Areas currently under cultivation for sugar cane.
Patterns of economic opportunity are focused primarily on regional and metropolitan systems, and the Study Area, whilst linked to these systems, is not a cohesive part of the broader system of economic opportunity.

Agricultural areas within the Study Area are likely to remain part of the short to medium term development landscape.

The Illovo Village area, whilst the most diverse part of the Study Area, remains relatively under-developed or utilised, partly for historic reasons, and partly due to its dislocation from key activity systems. There is, however, significant potential for extending the role served by this potential node in the Study Area.

The broader pattern of social and community service provision remains fairly dispersed, a situation compounded by the fragmented nature of local connectivity systems.

There is limited diversity in the pattern of development within the Study Area itself, and few established nodal areas or activity focus areas, although the existing Clinic/Taxi area, and related areas around the R603, is emerging as a potential economic node, and limited opportunity for significant growth in the local economy.

Local legibility and imageability is generally very poor, particularly in the formal settlement areas, with limited landmarks or notable landscape features, a monotony in the road network, and generally poor edge and interface conditions.
3.3 DEVELOPMENT POTENTIAL MODELING

THE BID-VALUE MODEL

An integral part of the process of analysis and assessment of the Illovo LAP Study Area has been the development of a Development Potential Model, or “Bid-Value Model” to guide the assessment process and assist in conceptualising current and future development patterns for the area. This is effectively a spatially based computer “model” that can be used to “suggest” a range of land values that may be attached to the study area, based on certain fundamental and intrinsic values, and is based on existing spatial data, derived spatial data, as well as current planning proposals.

The development of the model entails the consolidation of a range of spatial inputs or layers, a selection of which are shown alongside, and the processing of these inputs in terms of a range of process or formulae that seek to reflect spatially the inherent potential of the study area for a range of development alternatives. The outcomes of these processes are analysed spatially, and utilised to guide a more intrinsic understanding of the Study Area as it currently exists, and will also be used in later stages of the current initiative to test alternative spatial responses.

FIGURE 3.30: EXAMPLES OF INPUTS USED IN BID-VALUE MODEL (SOURCE: BASED ON ETHEKWINI AND CSG GIS DATA, AS WELL AS DERIVED GIS DATA)
3.3 DEVELOPMENT POTENTIAL MODELING (CONTINUED...)
3.3 DEVELOPMENT POTENTIAL MODELING (CONTINUED...)

The diagram on the left reflects the spatial pattern of connectivity within the study area, determined primarily by the formal road network. The diagram on the right reflects areas of relatively high development opportunity, based on the “Bid-Value” model. The implication is that accessibility does not necessarily correspond to opportunity.

FIGURE 3.33: MODELLING CONNECTIVITY AND URBAN OPPORTUNITY (SOURCE: SPATIAL MODELLING PROCESS)
3.4 ILLOVO PERFORMANCE ASSESSMENT

The Performance Assessment of the Illovo Study Area is intended to examine those qualities of the positive performing settlements, and its relationship to the local and regional context, as a basis for defining an appropriate approach to intervention in the area. In essence, the assessment must explore the overall performance of the Study Area from the point of view of urban opportunity and value. The search for high performance urban environments requires an approach that promotes particular ‘urban truths’. These are the timeless qualities that create opportunity, facilitate choice, promote safety, encourage investment and which has at its basis the development of places that work for all people.

The approach in this sub-section is to utilise key performance criteria to evaluate the ‘urban performance’ of the Illovo LAP area. Five key criteria are adopted as central to the development of high performance environments. These are:

- Integration and Connectivity;
- Consolidation and Dispersal;
- Diversity and Adaptability;
- Identity and Legibility; and
- Environmental Responsiveness.

These criteria are not focused on any specific level of assessment, but are equally important across scales, from the regional scale, to the district and local scales, and can, if taken further, be applied in the assessment and intervention at the scale of the block, site and building.

This section describes in more detail the criteria summarised above, and looks at each of these criteria in the context of the Study Area, providing a basic assessment of the relative performance of the Illovo LAC as a sustainable and qualitative piece of the city. The results of this process are intended as a basis for the development of strategies and spatial approaches to intervening in the Illovo area.

Integration And Connectivity

Environments that perform well and efficiently for people are those that provide maximum choice allowing greater accessibility to the user. Choice refers to movement at both pedestrian and vehicular levels. Movement systems need to provide clearly defined linkages and increase accessibility to desired destinations. A variety of celebrated accesses increase permeability and imageability within an area. Connected street systems give people choices. Having roads that are joined together in a network, rather than ending up in cul-de-sacs, makes it easier for all people – children, teenagers, the elderly, as well as other adults – to get around their neighbourhood. This helps integrate communities and overcome isolation.

Connected street patterns:
- Facilitate movement and exchange while spreading traffic loads;
- Make places safer and more alive by bringing activity and passive surveillance to an area;
- Make walking and cycling more enjoyable and convenient;
- Reduce dependence on motor vehicles; and
- Help ensure traffic and roads do not divide communities.

At a regional level, the Study Area is potentially well connected with a broader system of opportunity. The regional network of access, including national and regional roads and higher order regional routes, provides an important urban structuring system within the overall landscape. Crucial components here are the interceptory points within these systems. In the case of roads, the major interchanges and intersections need to be considered as points with significant generative capacity and have the ability to provide regional access. Whilst these are exploited to some extent within the Study Area, they are not fully integrated into the localized movement systems.
Choice of movement within the Study Area is relatively limited, due to the existing pattern of streets and topographic constraints limiting more direct connectivity. The axial line integration analysis shows the fundamental pattern of disconnectivity that exists in the Study Area.

In evaluating pedestrian proximity in relation to the distribution of activities it becomes evident that the network of streets and paths does not maximize potential thresholds related to social, community and economic facilities.

Consolidation and Dispersal

Consolidation is an important performance dimension for revitalizing areas of decline and bringing vitality to low-density, single-use areas and building critical mass that can support a wider range of economic and social services. Consolidation is supported by the dimension of dispersal, which relates to ensuring that the activities and opportunities area located in the right locations, and creating the right balance of activities within a specific area.

- **Consolidation**: forms an important precursor to responsive development and assists in creating conditions for complexity with increasing thresholds to induce and sustain a wider range of services.
- **Dispersal**: the basic framework and distribution of services should seek to achieve the highest levels of equity and ease of access at various scales and should be based on real need and closing down space.

Consolidation and dispersal have a valuable role to play in positively performing environments, and can:

- Make walking, cycling more likely, public transport more viable;
- Reduces the extent of land used for buildings and activities;
- Makes better use of existing infrastructure;
- Reduces development pressures on areas where intensification is not desirable, such as areas of environmental value or special character;
- Can improve efficiency in terms of energy and other resource usage.

At a broad level, the “T” structure of the region promotes a relatively strong pattern of consolidation around the two key metropolitan centers and related activity centers. A pattern of consolidation continues along the southern coastal “corridor”, with nodes gradually becoming less intensive further southwards.
Within the Study Area itself, however, there is a low degree of consolidation of activities and facilities. Whilst there is a growing focus of economic activity and social facilities around certain areas, such as the site of the proposed taxi rank of the R603, these areas cannot realistically be classified as activity nodes in the true sense of the concept.

Diversity and Adaptability
The range and style of uses and activities that exist in an area have a direct bearing on the quality of lives of the inhabitants, and influences the look and feel of a settlement. A diverse mix of uses promotes choice within an area. The ability of an area to respond to changes in the social and economic landscape over time also has an impact on the quality of settlements, and robust settlement patterns and elements are able to adapt to such changes.

Areas such Illovo, which have been designed primarily as peripheral dormitory suburbs, are by their nature not characterised by high levels of diversity. The Study Area is fundamentally a residential settlement, and the few non-residential areas that do exist are limited and mon-functional in nature.

3.4 ILLOVO PERFORMANCE ASSESSMENT (CONTINUED…)

Urban areas that reflect a diverse range of buildings and activities:

- Exhibit a greater sense of activity;
- Are able to support a range of business, big and small, new and established;
- Are more robust in nature, able to adapt to changing economic and social trends;
- Supporting a range of incomes;
- Improve support for viable public transport.

Areas such Illovo, which have been designed primarily as peripheral dormitory suburbs, are by their nature not characterised by high levels of diversity. The Study Area is fundamentally a residential settlement, and the few non-residential areas that do exist are limited and mon-functional in nature.

Legibility and Identity
Legibility refers to how easy a space is to understand and use. Legibility helps people to understand how to get around a town or city, by marking landmarks and points of activities and framing views and vistas. It also involves identifying what is public space and what is private space, and making people feel safe because they understand where they are and where they are going.

Legibility forms an important component to determine how understandable an environment is. If an environment is easy to understand, then such an environment is easy to use which in turn enhances peoples’ choices in movement. The understanding and logic created by urban form assists with the legibility of the area. Visual interest in a particular location is created through the development and celebration of specific landmarks and features. Identity helps people feel they belong to an area. Urban spaces that provide an identifiable and memorable character have a strong ‘sense of place’.
Whilst the distinct areas or districts identified within the Study Area do assist in creating unique individual identities that contribute to the legibility of the Study Area, it is suggested that a strong sense of identity is not fully evident in the area. There are few significant landmarks that operate at the scale of the Study Area as a whole, and the activity areas that do exist are not particularly strongly defined as distinct nodes. The rivers and riparian systems that exist in the area do, however, provide a basis for defining patterns of settlement and development.

Part of the Study Area consists of a structured traditional grid system that provides for clarity in the system and facilitates legibility, although the system is not without problems as confusion arises due to the similarity of streets. Building heights are generally low resulting in limited landmarks creating additional legibility problems. Edges and interfaces do not currently provide a cohesive and positive condition for the Study Area, and the fragmented nature of open spaces tends to decreases the quality of the Town Centre.

**Environmental Responsiveness**

A clear and structured relationship between the built and the unbuilt areas is an important characteristic of a positively performing environment. Environmental responsiveness is also a key way of developing character and identity. Continuity in the green structure is also required from an ecological and habitat point of view. Rivers and riparian areas, valley systems, places of dense natural vegetation, all provide elements that can be integrated to form a broader network of environmental value.
3.4 ILLOVO PERFORMANCE ASSESSMENT (CONTINUED...)

The role of such a system extends beyond the basic conservation value and benefit that could be derived, but relates as much to the quality of living of the inhabitants within and around the system, and their ability to derive additional value from contact with a natural system.

The Study Area has unique potential in this regard. At the regional level, the Study Area contains two significant elements of broader scale environmental connectivity, namely the rivers and their associated riparian zones. The extent of these systems extends beyond the boundaries of Illovo, and ties the LAP area into a regional environmental system.

At a more localized level, however, these environmental systems generally understated in their role within the settlement patterns, and tend to be viewed more as barriers or buffers, rather than the important structural elements that they can be. Development alongside these natural areas does not exhibit high levels of responsiveness to their inherent value, and in many cases, buildings tend to turn their backs to the open spaces.
3.4 ILLOVO PERFORMANCE ASSESSMENT (CONTINUED...)
3.4 ILOVO PERFORMANCE ASSESSMENT (CONTINUED…)

Facilities located close to main routes and interceptory points, yet do not create significant opportunities for public space, and do not relate to their context. Significant interceptory point is not fully exploited in the development pattern, and opportunities for higher intensity nodal are not responded to.

Relatively dense fabric, but uniform in nature, and not fully responsive to locational opportunities within the structure.

Environmental systems are physically part of development structure, and utilised in some cases for passive and active recreation, although interface with fabric is generally poor.

Facilities located close to main routes and interceptory points, yet do not create significant opportunities for public space, and do not relate to their context.

FIGURE 3.35: URBAN PERFORMANCE: FORMAL SETTLEMENT PATTERN

Relatively dispersed pattern of settlement, with settlement structured around individual homesteads, rather than blocks and streets.

Green space and open areas integral part of settlement structure, with built form sitting “in” open space, rather than abutting it, yet functionality is limited.

Road network fundamentally an access element, both vehicular and pedestrian, and developed as a means to access homesteads, rather than a structure for development.

Facilities tend to be isolated from their context, fulfilling, at a broad level, a purely functional role. Informally derived activity patterns around these facilities, however, are much richer in nature.

FIGURE 3.36: URBAN PERFORMANCE: TRADITIONAL SETTLEMENT PATTERN
3.5 PRECINCT SUMMARIES

For the purposes of more detailed analysis, the broader Illovo LAP Study Area has been broken down into a number of focus areas, based on the inherent characteristics and features of each area. The areas identified are:

- Bhekulpandle;
- Illovo Development Area;
- Illovo Village;
- Illovo River Valley;
- Kingsburgh West

<table>
<thead>
<tr>
<th>FOCUS AREA</th>
<th>AREA (M²)</th>
<th>AREA (HA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingsburgh West</td>
<td>1830459</td>
<td>183.05</td>
</tr>
<tr>
<td>Bhekulpandle</td>
<td>2826747</td>
<td>282.67</td>
</tr>
<tr>
<td>Illovo River Valley</td>
<td>1616618</td>
<td>161.66</td>
</tr>
<tr>
<td>Illovo Village</td>
<td>3064360</td>
<td>306.44</td>
</tr>
<tr>
<td>Illovo Development Area</td>
<td>6449893</td>
<td>644.99</td>
</tr>
<tr>
<td></td>
<td>15788077</td>
<td>1578.81</td>
</tr>
</tbody>
</table>

Source: Derived from eThekwini GIS Data

These areas are explored in terms of their general development characteristics, land use character, topographic character, and general longer term development potential.
3.5 PRECINCT SUMMARIES (CONTINUED…)

BHEKULWANDLE

The Bhekulwandle Area forms the north-eastern sector of the LAP Study Area, and is a traditionally settled area of approximately 282Ha. Bhekulwandle is bordered by Reeves Road to the north, and the formal Illovo Development Area to the south. The topography of the area is consistent with the broader study area, namely undulating terrain of moderate to fairly steep slopes, with higher terrain in the north west and lower towards the east.

There are an estimated 410 Homesteads within the Bhekulwandle area, based on a count from aerial imagery, with the majority of homesteads comprising two or more individual buildings or structures. The population of this area, based on an occupancy ration of 6 people per homestead, is thus in the region of 2500 people. Residential densities in the area have been calculated at between 2 and 3 dwelling units per hectare.

Given the traditional nature of settlement in this area, there is limited formal structure to the pattern of development that has emerged. Reeves Road does serve as the main collector, and distributer, for the Bhekulwandle Area, with access routes of various lengths taken of this route where necessary, and is also the focus of public transport (mini-bus taxi) for the area.

Without any formal development layout within the Bhekulwandle area, the breakdown of land uses and activities is not clearly structured. The area is predominantly residential in nature, with dispersed clusters of buildings.

There are limited non-residential activities within the Bhekulwandle area, with a few small trading stores and a block-making enterprise catering for basic retail need. In addition, there are a number of scattered social and community facilities, including a primary school and two small community halls. No health facilities exist in the area, with residents dependant on facilities in the main Illovo Development Area, or adjoining rural (Adams Mission) and urban (Kingsburgh/Amanzimtoti) areas.
The development footprint of the Bhekulwandle area (Figure 3.41) shows a relatively consistent pattern of density, with slightly higher concentrations of development along established movement routes, although no major pockets of intensity are evident.

An assessment of the Bhekulwandle area in terms of its longer term propensity to generate local economic activity through the Bid-Value model does not indicate any significant concentrations of development potential, although the eastern portions do reflect slightly higher levels of accessibility and linkage to urban opportunity. Locally based development opportunities such as agricultural and related initiatives, are likely, although these will likely
3.5 PRECINCT SUMMARIES (CONTINUED…)

ILLOVO DEVELOPMENT AREA

The Illovo Development Area forms the largest precinct within the Study Area, extending over approximately 644 Ha. The area is composed primarily of single detached dwellings/erven, although some parts of the settlement in the south-east have developed as group/attached residential areas. In total, there are approximately 8738 planned residential erven within the precinct, of which approximately 5600, or 64% have been developed (Note: as at the time of the 2007 aerial photography – this figure is likely to be higher now). The Illovo Development Area is bisected by the R603, which provides the main means of access to the settlement, and links the precinct to the southern urban areas and northwards through the peri-urban periphery to Camperdown.

Whilst the general pattern of settlement is consistent with similar township developments of the era, there are certain unique and distinguishing elements that differentiate the Township from similar developments, one of the most significant being the introduction of a “Residential Multi-Purpose” use zone along certain collector routes. There has not as yet been significant take-up of the rights attached to these properties in all areas, although some of the more strategically located properties, particularly around nodal areas, have taken on some non-residential functions, although at a low intensity.

The overall breakdown of land use zones within the precinct is reflected in the table alongside and the map on the following page, based on GIS Data obtained from the eThekwini Municipality.
3.5 PRECINCT SUMMARIES (CONTINUED…)

FIGURE 3.42: ILLOVO DEVELOPMENT AREA: LAND USE ZONING
(SOURCE: ETHEKWINI GIS DATA)

FIGURE 3.43: ILLOVO DEVELOPMENT AREA: DEVELOPMENT STRUCTURE
(SOURCE: ETHEKWINI GIS DATA)
3.5 PRECINCT SUMMARIES (CONTINUED…)

ILLOVO VILLAGE

The Illovo Village area is a focus of much of the economic activity that currently exists within the broader LAP area. The precinct is approximately 300Ha in extent, located within an arc of the Illovo River. Historically, this precinct grew as a Sugar Mill Village, although over time the gradual reduction in surrounding productive cane lands prompted the relocation of this activity.

Formal development within this precinct is concentrated in the western and central portions, and includes a mix of housing types catering for low, middle and higher income groups, commercial development areas and sports fields. A summary of the Land Use Zoning is contained in the table below.

Although initially not viewed as important in terms of future economic development, a closer assessment of the Illovo Village area revealed that the majority of economic activity in the Study Area is located in the Illovo Village area (the old Illovo Sugar Mill settlement). This settlement area is made up of various components including low, middle and higher income housing, office developments, industrial areas, commercial development areas and sports facilities. Figure 3.44 locates the various components spatially.

FIGURE 3.44: ILLOVO VILLAGE: LAND USE ZONING (SOURCE: ETHEKWINI GIS DATA)
3.5 PRECINCT SUMMARIES (CONTINUED…)

ILLOVO RIVER VALLEY

The Illovo River Valley forms the southernmost precinct in the study area, located just north of the point where the N2 Highway crosses the Illovo River. The bulk of the precinct is either undeveloped or cultivated for sugar cane, falling outside formal Town Planning Schemes, although the northern edge of the precinct does have development rights for a range of uses, including business, commercial, industrial and residential. Areas along the western eastern edge are retained for road reserves and servitudes. Whilst large portions of the precinct are undeveloped, they are, however affected by the flood plain of the Illovo River, limiting their potential for formal development. The breakdown of formal zoned land within the precinct is reflected in the adjacent table and plan.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Zone 1</td>
<td>49215</td>
</tr>
<tr>
<td>Commercial 4</td>
<td>2091</td>
</tr>
<tr>
<td>Business</td>
<td>1770</td>
</tr>
<tr>
<td>Municipal &amp; Government</td>
<td>25070</td>
</tr>
<tr>
<td>Industrial &amp; Commercial Park</td>
<td>87744</td>
</tr>
<tr>
<td>Light Industry</td>
<td>60772</td>
</tr>
<tr>
<td>Public Open Space</td>
<td>13689</td>
</tr>
<tr>
<td>Road Reservation</td>
<td>276776</td>
</tr>
<tr>
<td>Services</td>
<td>4866</td>
</tr>
<tr>
<td>Special Residential</td>
<td>6437</td>
</tr>
<tr>
<td>Undetermined</td>
<td>139326</td>
</tr>
<tr>
<td></td>
<td>667885</td>
</tr>
</tbody>
</table>

FIGURE 3.45: ILLOVO RIVER VALLEY: EXTENT OF 100 YEAR FLOOD LINE (SOURCE: ETHEKWINI GIS DATA)

FIGURE 3.46: ILLOVO RIVER VALLEY: LAND USE ZONING (KINGSBURGH TOWN PLANNING SCHEME) (SOURCE: ETHEKWINI GIS DATA)
3.5 PRECINCT SUMMARIES (CONTINUED…)

KINGSBURGH WEST

Whilst the Kingsburgh West is not assessed in significant detail in the current exercise, given the imminent development of the project, although proposals for longer term intervention within this focus area will emerge from the next phase of this exercise. A summary of the proposed development is reflected in the table below:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>ERVEN</th>
<th>AREA (HA)</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Residential 1 (Minimum erf size of 200m²)</td>
<td>1039</td>
<td>41.37</td>
<td>23.99</td>
</tr>
<tr>
<td>Special Residential 2 (Minimum erf size of 650m²)</td>
<td>132</td>
<td>10.71</td>
<td>6.21</td>
</tr>
<tr>
<td>Special Residential 3 (Minimum erf size of 100m²)</td>
<td>19</td>
<td>3.46</td>
<td>2.01</td>
</tr>
<tr>
<td>Multi-Use Residential</td>
<td>42</td>
<td>1.49</td>
<td>0.86</td>
</tr>
<tr>
<td>Commercial/Shopping</td>
<td>1</td>
<td>0.16</td>
<td>0.09</td>
</tr>
<tr>
<td>Community Facility</td>
<td>6</td>
<td>0.75</td>
<td>0.43</td>
</tr>
<tr>
<td>Primary School</td>
<td>2</td>
<td>5.99</td>
<td>3.47</td>
</tr>
<tr>
<td>Secondary School</td>
<td>1</td>
<td>4.16</td>
<td>2.41</td>
</tr>
<tr>
<td>Open Space/Playlot/Shared Sports field, etc</td>
<td>27</td>
<td>90.97</td>
<td>52.76</td>
</tr>
<tr>
<td>Roads</td>
<td>-</td>
<td>13.4</td>
<td>7.77</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1269</td>
<td><strong>172.46</strong></td>
<td></td>
</tr>
</tbody>
</table>

FIGURE 3.47: PROPOSED KINGSBURGH WEST DEVELOPMENT (SOURCE: ETHEKWINI MUNICIPALITY)
04 ENVIRONMENTAL ASSESSMENT

BY WSP ENVIRONMENTAL CONSULTANTS
4.1 INTRODUCTION

WSP Environmental (Pty) Ltd (WSP) has been appointed by the eThekwini Municipality Development Planning, Environment and Management Department as part of the Iyer Design Studio Collaborative to undertake the environmental pre-feasibility assessment for the Illovo Township, Illovo Village and Bhekulwandle Local Area Plan (LAP) (Figure 1). The Study area is located on the South Coast of eThekwini and KwaZulu Natal (Figure 1) in both Ward 97 and 98 and includes a number of areas with distinct characteristics. The areas referred to are:

- Section of Bhekulwandle, a densifying traditional settlement area;
- Illovo Township, a peripheral dormitory township;
- Illovo Villa, a new defunct sugar mill village; and
- Illovo River Valley, a substantially undeveloped area of sugarcane land experiencing development pressures.

The main objectives of the LAP are:

- To provide guidelines for the development and management of the area;
- To identify and develop a scheme that will enhance and protect the local physical and human environment;
- To create a coherent environment, which maximizes the potential of the area;
- To re-enforce and further make provision for the community’s social, economic and environmental needs; and,
- To improve degraded natural and built environments.

This environmental pre-feasibility assessment report forms the environmental input into the initial Strategic Assessment Phase. Essentially, it outlines opportunities and constraints as well as potential ‘red flags’ and makes recommendations on “no-go” areas and management priorities. The findings of the environmental assessment are presented in this report and include:

- A review of the potential environmental sensitivity of the area;
- A status quo environmental description;
- Recommended management priorities; and,
- Guidelines and regulations pertaining to proposed development activities.
4.2 METHODOLOGY

BASELINE ENVIRONMENTAL ASSESSMENT
Baseline environmental information was collated from the review of existing planning documentation, supplemented by limited ground truthing during a site visit (carried out on 6 April 2009) and through desktop studies (particularly environmental databases and policy guidelines as suggested through consultation with authorities). This information included consideration of the following factors (detailed in Section 3, 4 and 5):

- Geology: Soils and Topography (steepness of slope, stability);
- Surface / groundwater (presence of sensitive hydrological features);
- Biodiversity and DMOSS areas (presence of sensitive vegetation communities and fauna, specifically Red Data species); and
- Socio-economic impacts (heritage and land uses e.g. agriculture).

The aim of this initial baseline environmental screening has been to enable a spatial framework of the study area to be mapped and the LAP extent and layout to take into account the identified environmental parameters when drafting the Urban Development Frameworks.

PRELIMINARY CONSULTATIONS
WSP have had initial discussions (via telephone / meetings) with the following authorities:

- DAEA (regarding agricultural land);
- AMAFA (regarding heritage resources);
- eThekwini Environmental Management Department (EMD) (regarding biodiversity).

This was carried out in order to take into account any particular concerns / considerations in relation to the study area and its local environmental characteristics. Only limited feedback was received from the first two authorities listed above as the general consensus is that more detailed input could be received in response to more “concrete” plans being presented.

It was not deemed necessary to consult with Department of Water Affairs and Forestry (DWAF) and Ezemvelo KZN Wildlife (EKZNW) as robust policy guidelines and databases were referred to in detail during the desktop review. This is outlined further in Section 3.

WSP is of the opinion that the information presented in this report has adequately identified the potential development parameters to be considered and incorporated into the early stages of the planning and design process.

WAY FORWARD
A briefing document including the findings and recommendations of the environmental pre-feasibility assessment and the proposed Local Area Plan will be distributed to all above-mentioned authorities for comment. An additional meeting will be held with eThekwini EMD in order to present the findings of the environmental pre-feasibility assessment following review by the lead consultant and any necessary additions / revisions.
4.3 BIODIVERSITY AND HYDROLOGY

To determine the potential environmental sensitivity of the study area the Ezemvelo KZN Wildlife (EKZNW) Strategic Environmental Assessment (SEA), Durban Metropolitan Open Space System (D’MOSS; 2008) and the eThekwini Systematic Conservation Plan (in prep.) (ESCP) databases were interrogated. Once the potential environmental sensitivity was determined a site visit (06/04/09) was undertaken to ground truth the data collected during the database interrogation and to determine the current status of the natural environment occurring within the study area.

EZEMVELO KZN WILDLIFE SEA DATABASE
This GIS based database represents comprehensive data gathered by EKZNW during a Strategic Environmental Assessment (SEA) of KwaZulu Natal. The database is intended to define the conservation importance of key land units and species and act as a resource in a decision support system that focuses on land use planning. The SEA database was interrogated in order to determine (a) sensitive ecosystems and communities and (b) the potential for red data species occurrence within the Illovo LAP study area.

A number of scale-related discrepancies have been identified within the EKZNW C-Plan and EKZNW is in the process of revising the plan. However this database is yet to be published (pers comm. H. Snyman).

Important Ecosystems and Communities within the Study Area
In order to interrogate the SEA database in the context of the Illovo LAP, the study area was overlain with EKZNW’s SEA database of important ecosystems and communities. An area classified as containing ‘some’ important ecosystems and communities was identified within the study area’s western boundary (Figure 4.2). The current health of the natural environment within this area is described in more detail in the Environmental Description section.

Red Data Species
The SEA database was interrogated further to determine which red data species could potentially occur within the study area. In developing the SEA species database, specialists selected 255 red data species and modeled their potential distribution. The selection of species was based on their relative threat, rarity (red data-book status) and endemism. The basic assumption being that KZN has sole responsibility for caring for local endemics, and has a major responsibility to protect rare and threatened species, which are of national and international importance.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

Red data species with the potential to occur within the study area are listed in Table 3, Appendix A. It is important to remember that the SEA database lists species with the potential to occur within an area. The ecosystem health of the area is a large determinant of whether the species will actually occur (refer to in the Environmental Description section).

D’MOSS AND ETHEKWINI EMD LAND CLASS LAYER

The Metropolitan Open Space System (MOSS) was developed in the late 1980’s and initiated in 1989 in the Durban Municipal Area. Care was taken to connect core areas by a series of buffers and corridors, which acted as conduits for flora and fauna in a dynamic and relatively undisturbed manner, thus promoting ecological diversity and the sustainable use of ecosystem goods and services throughout the Durban Municipal Area (DMA). In order to maintain the structure and function of ecosystems without creating isolated islands of ecosystems, all core areas should receive priority. The MOSS system was updated and extended in 1989 to include the entire metropolitan area through the development of the D’MOSS Framework Plan.

D’MOSS may either be urban / active open spaces (buffers and corridors), including designated open spaces, such as parks, sports fields, road and rail reserves, servitudes, private gardens or natural / passive open spaces (core), including terrestrial and freshwater ecosystems (i.e. wetlands, rivers, drainage lines, watercourses.).

Areas where development is restricted, for one reason or another, are often incorporated within the D’MOSS as corridors, linking core areas with one another.

The eThekwini Systematic Conservation Plan (in prep.) (ESCP) builds on the D’MOSS database by including all land uses (e.g., agricultural / fields and residential areas) and maps homogenous units taking into account attributes such as canopy cover, wetlands and artificial areas such as golf courses. The aim of this new dataset is to assist with conservation planning by spatially representing various layers, and distribution of species, processes and threats and taking these aspects into planning processes to allow for protection and rehabilitation. Although still in preparation this dataset will include a ‘Red Data Species Layer’ and an ‘Optimal Corridor Layer’ which will aid in future Local Area Plans carried out in the DMA.

The ESCP database (available at the time of study) was interrogated to determine the existing land uses within the study area and the associated environmental opportunities and constraints.

In order to identify sensitive D’MOSS and ESCP areas, the Illovo study area was plotted onto the eThekwini Municipality GIS database (Figure 3).

- D’MOSS areas identified were largely restricted to the Ilovu and Little Manzimtoti Rivers and their associated riparian zones. A large area of forest, thicket and grassland (with high levels of alien infestation) was identified on the site’s western border (green area shown as Area 4 on Figure 3).
- The ESCP database identified two major residential areas (purple areas shown as areas 1 & 8; on Figure 3). These residential areas are classified as transformed urban settlements and do not fall within D’MOSS.
- Other areas of significance identified by interrogating the ESCP database were the Bhekulwandle Tribal Authority (Area 2), a cemetery (Area 3), fallow fields (Area 6) and commercial sugar cane plantations (Area 7).
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED...)

1. Illovo Township
2. Bhekulwandle Tribal Authority Area
3. Cemetery and Surrounds
4. D’MOSS (Transitional forest & secondary grassland)
5. Little Amanzimtoti River & Associated Riparian Areas
6. Fallow Fields
7. Commercial Sugar Cane Plantations
8. Illovo Village
9. Illovo River Valley & Estuary

FIGURE 4.3: D’MOSS (GREEN) AND EMD LAND CLASS LAYERS WITHIN THE STUDY AREA
(SOURCE: ETHEKWINI EMD)
ENVIRONMENTAL DESCRIPTION

The study area is densely populated, with formal and informal residential areas and sugarcane plantations forming the dominant land use (Figure 3). Mucina and Rutherford (2006) classify the natural environment within the study area as ‘KwaZulu Natal Coastal Belt’; however during the site visit (carried out on 6 April 2009), it was evident that the majority of indigenous vegetation has been removed or disturbed. To investigate the current condition of the remaining natural environment the study area was examined in terms of the nine ESCP and D’MOSS zones outlined in Figure 3 above.

ILLOVO VILLAGE, ILLOVO TOWNSHIP AND BHEKULWANDLE TRIBAL AUTHORITY AREA
(Figure 4.3; no 1, 2 & 8)

All three of these areas are moderately to densely populated and can be classified as residential areas (Bhekulwandle Tribal Authority Area being the least densely settled).

Ecosystem Health

The natural environment within these areas is dominated by invasive alien vegetation and secondary grasslands.

Terrestrial Vegetation

The secondary grasslands situated within the residential areas were historically primary grasslands dominated by palatable species, in particular Themeda triandra (Mucina and Rutherford 2006). However, high disturbance levels experienced within the residential area have resulted in the invasion of alien plant species (Table 2, Appendix A) and hardy, unpalatable Increaser grass species, including Aristida junciformis, Eragrostis curvula, Sporobolus africanus and S. pyramidalis (Figure 5).

FIGURE 4.4: ALIEN INFESTATION IN SECONDARY GRASSLANDS SITUATED WITHIN THE RESIDENTIAL AREA

Indigenous tree species, including Natal Fig (Ficus natalensis) and Acacia spp., were identified within the residential area, however these trees were sparsely distributed and present in very low numbers. Exotic plant species displayed a wide and dense distribution throughout Illovo Village and Township and the Bhekulwandle Tribal Authority Area (Figure 6). Abundant alien plant species recorded during the site visit are listed in Table 2, Appendix A.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

**FIGURE 4.5:** ALIEN PLANT SPECIES WITHIN A RESIDENTIAL AREA

**Fauna**

The KZN SEA database lists a number of red data species with the potential to occur within the two residential areas (Appendix A; Table 3). However, during the site visit, apart from the abundant avifaunal life present in wet areas, the only faunal species identified were domestic. The poor ecosystem health of the area is an indicator that the presence of the red data species listed in Table 3 is unlikely.

**Potential Wetlands and Drainage Lines**

There are numerous perennial and non-perennial streams flowing within the study area (Figure 6) and the ESCP database categorises the entire Illovo Village, Township and Bhekulwandle Tribal Authority areas as having a high wetland potential. The wetlands noticed during the site visit were degraded with high levels of alien plant infestations and encroachment by subsistence crops and sugarcane plantations. However, these wetland areas will still have to be excluded from development plans. There are a number of smaller drainage lines present within the Illovo Township that feed into the Little Manzimtoti River. These drainage lines must be excluded from development and rehabilitated where appropriate.

Due to the broad nature of the screening process undertaken, WSP are not in a position to exclude any areas from the study area based on the presence of wetlands. Following the drafting of the precinct plans, developers will need to commission Wetland Delineations, should development be proposed within or adjacent (within 32 m) of riparian zones.

**FIGURE 4.6:** TOPOGRAPHIC MAP OF THE STUDY AREA ILLUSTRATING THE NUMEROUS PERENNIAL (SINGLE BLUE LINE) AND NON-PERENNIAL STREAMS (DASHED BLUE LINES) PRESENT (SOURCE: 1:50 000 TOPOGRAPHIC MAP; 303088)
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

**Causant of Decreased Ecosystem Health**

There are numerous activities continuing in the area which are the likely cause of high alien infestation and poor system health. The most significant of these activities are:

- The natural environment has been highly disturbed, as a result of, but not limited to, building activities, site clearing and over grazing, leaving the ecosystem fragile and vulnerable to the invasion by alien plant species;
- Abundant subsistence cropping has lead to the prolific spread of banana (*Musa* sp.) and pawpaw (*Asimina* sp.) trees within and outside of demarcated cropping areas (Figure 8); and,
- The planting of ornamental exotic species, primarily Yellow Bells (*Tecoma stans*), Flamboyant (*Delonix regia*) and Brazilian Pepper (*Schinus terebinthifolius*), within gardens has resulted in the spread of these species into surrounding areas.

**Management Priorities and Regulations**

Management priorities and development regulations identified during the pre-feasibility study for Illovo Village, Township and Bhekulwandle Tribal Authority Area include:

- Implementation of an alien invasive plant program focused on removing species from grasslands and wetlands;
- The removal of any indigenous invasive plant species within the study area may only be carried out in consultation with the relevant authorities (this includes grasslands);
- Landscaping of future developments using indigenous plant species,
- Planning should take cognizance of the potential to create an inter-catchment link between the Manzimtoti and Little Manzimtoti rivers;
- The iLovu and Little Manzimtoti River D’MOSS areas are situated within and bordering the residential areas. These D’MOSS areas are discussed further in Section 3.3.6 & 3.3.7 and must be excluded entirely from development; and,
- Inhibiting development within and surrounding wetlands and drainage lines. DWAF and DAEA guidelines stipulate that no development, of any sort, may be undertaken within a wetland and a buffer of at least 15 m outside of the seasonal wetland zone. Where the wetland has high biodiversity value the buffer zone may be increased to 30 m.

**CEMETERY (Figure 4.3, No 3)**

**Terrestrial Vegetation**

The natural environment within the cemetery and surrounding areas is dominated by invasive alien vegetation, secondary grasslands and highly disturbed forest patches.

**Potential Wetlands**

The ESCP database categorises the cemetery and surrounding areas as having a high wetland potential and a number of wetlands were identified within the cemetery during the site visit (Figure 10). These wetlands appeared, on a preliminary investigation, to be in moderately good health providing habitat to a number of bird species.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

A Blue Crane (*Anthropoides paradiseus*), Grey Herons (*Ardea cinerea*) and Cattle Egrets (*Bubulcus ibis*) were identified within the wetland during the site visit. The SEA Database lists the Red Data species, Blue Bustard (*Eupodotis caerulescens*) and Stanley’s Bustard (*Neotis denhami*), as having the potential to occur within these areas.

![Image of wetlands within the cemetery](image)

**FIGURE 4.8: WETLANDS WITHIN THE CEMETERY**

**Management Priorities and Regulations**

Management priorities and development regulations identified during the pre-feasibility study for the cemetery and surrounding areas include:

- Excluding these areas from development due its potential as a D’MOSS buffer zone;
- Although the natural vegetation within the cemetery and surrounding areas is highly disturbed these areas are still providing important ecosystem goods and services, such as carbon sequestration (forests and grasslands) and hydrological purification (wetlands) and should be conserved and rehabilitated as far as possible. Implementation of an alien invasive plant program focused on removing species from grasslands, wetlands and forest patches will improve the level of services provided;
- The removal of any indigenous plant species within the study area may only be carried out in consultation with the relevant authorities (this includes grasslands); and,
- Inhibiting development within and surrounding wetlands. DWAF and DEA guidelines stipulate that no development, of any sort, may be undertaken within a wetland and a buffer of at least 15 m outside of the seasonal wetland zone. Where the wetland has high biodiversity value the buffer zone may be increased to 30 m.

**TRANSITIONAL FOREST AND SECONDARY GRASSLAND**

**Ecosystem Health**

Situated on the western boundary of the study area is the largest remaining portion of ‘KwaZulu Natal Coastal Vegetation’ (Figure 9). The steep topography of the area has precluded it from intensive infrastructural development and as a result it is the most undisturbed natural environment within the study area. Apart from this area there are only small patches along the Little Manzimtoti River and situated at the sites south east entrances that display remnants of this vegetation type (Figure 9; white). These smaller sections were considered in unison with the western boundary.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

Terrestrial Vegetation
The western boundary is classified by the SEA Database as containing communities and ecosystems of ‘some importance’. However, the area is also classified as being ‘moderately’ to ‘highly disturbed’ by D’MOSS. D’MOSS divides the portion of natural vegetation occurring on the western boundary, along the Little Manzimtoti River and situated at the sites south east entrances into degraded thicket with high alien infestation, degraded forest with moderate alien infestation and secondary grassland also with moderate alien infestation. The majority of areas examined during the site visit were degraded with high to moderate levels of alien infestation however; steep slopes in the area were covered by dense forest that appeared to be largely undisturbed (Figure 12).

FIGURE 4.9: AREAS OF REMAINING VEGETATION CLASSIFIED BY D’MOSS (WHITE) WITHIN THE STUDY AREA (BLACK LINE) (SOURCE: ETHEKWINI EMD)

FIGURE 4.10: STEEP SLOPES OF THE WESTERN BOUNDARY COVERED BY DENSE FOREST

[2] The D’MOSS and ESCP ‘Landscape Condition Layers’ are currently being revised and it is anticipated the a number of areas classified as ‘degraded’ will be reclassified as ‘good’ due to the ecosystem goods and services they provide.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

**Fauna**
The KZN SEA database lists a number of species with the potential to occur within the forest, thicket and grassland vegetation classified as D’MOSS areas (Table 3, Appendix A). The moderately healthy status of the forest situated on the slopes indicates that a number of these red data species have the potential to occur in this area.

**Management Priorities**
- Although the natural vegetation within the transitional forests and secondary grasslands areas is disturbed in places these areas are providing important ecosystem goods and services, such as carbon sequestration (forests and grasslands) and should be conserved and rehabilitated as far as possible. Implementation of an alien invasive plant program focused on removing species from grasslands, thickets and forests will improve the level of services provided and increase biodiversity;
- The removal of any indigenous plant species within the study area may only be carried out in consultation with the relevant authorities (this includes grasslands);
- Preclusion of slopes from development - The EMD has imposed a restriction that land steeper than 1:3 is to be considered undevelopable; and,
- Preclusion of forested areas from development - The EMD has a policy of no development in forested areas and that development is setback a minimum of 40 m from the forest edge. This restriction is in the process of being updated by DWAF who are currently preparing national guidelines to protect forests.

**Terrestrial Vegetation**
The highly disturbed character of the fields has resulted from previous cultivation activities that have subsequently been abandoned. This disturbance has resulted in the eradication of most to all of the indigenous vegetation that would have historically occurred. Indigenous vegetation may still occur within uncultivated areas (such as valleys) and should be protected.

**Surface Water Bodies**
The area is classified as having a high wetland potential by the ESCP database and acts as a cross catchment link between the iLouv River in the south and the Little Manzimtoti River in the north. An ‘Optimal Corridor Layer’ is in the process of being added to the ESCP which will include this link.

**Management Priorities and Regulations**
Management priorities and development regulations identified during the pre-feasibility study for the area of fallow fields include:
- Creating a buffer zone around the tributaries linking the iLouv and little Manzimtoti Rivers and include into the DMOSS system, thereby protecting the cross catchment link,
- Implementation of an alien invasive plant program focused on removing species from wetlands in order to increase biodiversity and improve ecosystem goods and services; and,
- Inhibiting development within and surrounding wetlands. DWAF and DAEA guidelines stipulate that no development, of any sort, may be undertaken within a wetland and a buffer of at least 15 m outside of the seasonal wetland zone. Where the wetland has high biodiversity value the buffer zone may be increased to 30 m.

**FALLOW FIELDS**

**Ecosystem Health**
The area is dominated by degraded thicket with high levels of alien plant infestation.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

COMMERCIAL CANE PLANTATIONS (Figure 4.3 & 4.14, No 7)
The area is dominated by commercial cane plantations.

Terrestrial Vegetation
The clearing of indigenous vegetation to make way for cane fields has resultant in the removal of most of the natural environment. Patches of indigenous vegetation were however, noticed within areas that have not be cultivated (such as gulley’s).

Surface Water Bodies
The area is classified as having a high wetland potential by the eThekwini ESCP database and during the site visit a number of man-made drainage channels were noticed in cane fields. Planting of cane fields right up to the iLovu’s river’s edge appeared, during the site visit, to be common practiced.

Management Priorities and Regulations
Management priorities and development regulations identified during the pre-feasibility study for the area of cane plantations include:

- Inhibit further cultivation of sugarcane along river edges and within wetland areas;
- Rehabilitation of a riparian zone along river edges (this is discussed further in Section 3.3.6) and wetlands;
- Removal of man-made drainage channels; and,
- Inhibiting development within and surrounding wetlands. DWAF and DAEA guidelines stipulate that no development, of any sort, may be undertaken within a wetland and a buffer of at least 15 m outside of the seasonal wetland zone. Where the wetland has high biodiversity value the buffer zone may be increased to 30 m.

ILLOVO RIVER, ESTUARY & RIPARIAN ZONE (Figure 4.3; No 9)
The Louv River is 135 km in length and has a catchment area between 893 and 1036 km². Approximately 6 km of this river / estuary forms the study areas southern and south western boundary.

River Health
Despite the iLovu River receiving industrial discharge from the Illovo Sugar Mill (CEROI) water samples analysed from the iLovu River found the quality of the water to be ‘fair’ (Graham, 2005).

Stress is however, placed on this river system by past and current sand winning activities. These sand winning activities occurred historically and continue to occur below the Old Illovo Sugar Estate, extensively modifying the rivers main channel (Graham, 2005).

Using the SASSS method (Dickens and Graham, 2002), Integrated Habitat Assessment System (IHAS ver. 2; MacMillan, 1998) and the Index of Habitat Integrity (IHI; Kleynhans & Hill, 1999) the health and eco- status of the iLovu River were calculated as ‘fair’ (Graham 2005).

Ilovu Estuary
Ilovu estuary is classified by Forbes and Demetriades (2008) as a temporarily open estuary and is a semi rural estuary with some residential settlement on the south bank with the floodplain and immediate catchment dominated by sugar plantations Figure 11) and draining of wetlands and creation of dumpsites have all historically combined to produce an estuary of questionable resource value. The variety of fish and estuary associated birds recorded however, reflects the fact that the iLovu estuary is generally open and tidal, and still serves a significant function on the KwaZulu Natal Coast.
The activities listed above have had an adverse impact on the estuary and pose substantial environmental and social risks as outlined below:

- Placement of hard structures such as the rail bridge and 500m causeway on floodplains has decreased the system’s capacity to absorb high water volumes due to the infilling caused by a high rate of siltation;
- Estuary inlet has disappeared through the infilling of a wetland and use of the area as a municipal refuse dump thereby resulting in the mouth opening reducing the depth to less than 1 m thereby restricting water based activities such as power boating and water skiing.
- Heavy seas of March 2007 resulted in a major deposition of marine sediments on the south shore below the rail bridge. The mouth then meandered northwards and was at one point considered a risk to poorly planned and located housing complex situated in the foredunes about 500m north of the railbridge. According to Forbes and Demetriades (2008) due to the this housing complex’s position, it will always be at risk.
- Deoxygenation of the bottom water in the backwater area between the bridges is suspected to be due to seepage from the refuse dump located within iLovo Estuary floodplain.
- Extremely high turbid conditions have been recorded in part to sand mining operations which produce unconsolidated sediments in the river channel and denude the floodplain alluvium of vegetation, exposing it to erosion.
- As per Forbes and Demetriades (2008), nutrient concentrations recorded in the estuary were amongst the lowest recorded in winter 2007 and summer 2008. E.coli counts were in within target water quality guidelines for intermediate recreational contact. The counts that were measured probably reflect seepage from septic tanks in the immediate catchment of the estuary and runoff from facilities such as sandwinning operations.

Below is a description of the floodplain, riparian, and estuarine vegetation and diversity of fauna:-

The riparian zone on both banks has been substantially invaded by alien plants especially on northern banks where Schinus terebinthifolius have been used to create shade trees in the picnic area. Extensive areas of riparian vegetation have been removed on the northern bank for the construction of a picnic area and associated car park. The banks of the river estuary west of the R102 have also been radically transformed by the removal of floodplain and riparian zone and infilling to raise level of land for protection of the road and / or allow for planting of sugar cane – the edge of the river is now comprised of a gabionised embankment. All these man-made interventions have resulted in a loss of habitat and reduction of the estuary.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

The system supports a highly diverse assemblage of macrobenthic invertebrates, including: polychaete worms, amphipod, isopod and tanaid crustaceans, bivalve and gastropod molluscs. The 26 taxa of benthic invertebrates recorded in the system (Table 4, Appendix A) ranks amongst the most diverse of assemblages in the EMA. The predominantly open mouth conditions, diversity of habitats, and constant food supply results in a relatively diverse fish community. In total, 30 fish species were recorded over the 2007/2008 sampling period, covering a range of life-history and trophic guilds (Table 5, Appendix A).

According to Forbes and Demetriades (2008), the overall health status of this system is considered to be ‘fair’.

Riparian Zone
The iLovu River riparian zone is in ‘poor’ condition as it has been modified by sugarcane farmers removing trees to make way for sugarcane plantations. Manmade drainage channels were evident in areas of the flood plain which have been converted to sugarcane plantations and in a number of areas the sugarcane plantations continue to the river’s edge.

What little vegetation remains in the flood plain (excluding sugarcane) is dominated by alien invasive species scantily interspersed with indigenous species, predominately on the steeper river bank slopes and valleys (Figure 12).

Indigenous vegetation occurring in this region is classified by Mucina and Rutherford (2006) as ‘KwaZulu Natal Coastal Belt Vegetation’. Due to the high level of disturbance within the Lovu River riparian zone, the majority of this vegetation type has been removed and replaced by alien species, predominately Chromolaena odorata, Lantana camara, Melia azedarach and Solanum mauritianum.

Management Priorities
- The river and riparian zone are classified as D’MOSS areas and must be excluded from development and rehabilitated where possible;
- Controlling, managing and rehabilitating effects of sand winning operations;
- Implementation of an alien invasive plant program focused on clearing species from the riparian zone. The removal of any indigenous plant species within the study area may only be carried out in consultation with the relevant authorities;
- Developing and maintaining a riparian buffer zone. It is recommended by DWAF that a riparian buffer zone be maintained outside of the 1:100 year flood line in order to ensure river corridor re-establishment after flood events. Smaller drainage lines are to be protected by a minimum setback of 10 m from the edge of the drainage line.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED)

A riparian buffer zone consists of a strip of indigenous vegetation separating the river system from the surrounding environment. The main functions of a riparian buffer zone are:

- Sediment removal and erosion control,
- Protection of water quality;
- Moderation of shade and water temperature;
- Maintenance of habitat structural diversity and ecological integrity; and,
- Improvement of landscape quality.

The Forestry Commission’s recommendations include maintaining open or partially wooded conditions, with about half the width of the stream exposed to direct sunlight. Where trees are providing dense shade they should be removed from the river bank and replaced with indigenous broadleaved trees and shrubs. The riparian zone should cover approximately 10 to 30 m on both sides of the river.

- Opportunity exists to rehabilitate the cleared area overlying an original wetland east of the R102 on the northern bank of the Ilovo Estuary (initially cleared to create a sports field).
- Tidal conditions and an open mouth as well as an availability of a suitable food supply as indicated by benthic data, suggests both a reasonable water quality and need for added protection.
- Inhibit further large scale agriculture and construction of infrastructure within riparian zones and floodplains.

Little Amanzimtoti RIVER & RIPARIAN ZONE (Figure 4.3; No 5)
The Little Manzimtoti River is approximately 15 km long, with 5.5 km flowing through the study area (Figure 1), and has a catchment area of approximately 10 to 15km² (CEROI, 1999).

River Health
Water samples collected from the Little Manzimtoti River contained high concentrations levels of Escherichia coli (commonly known as E. coli), phosphate and ammonia, indicating high loads of human sewage present in the system (Graham 2005). The principal source of this sewage is Kingsburgh Sewage Works which releases sewage effluent into the river after treatment (CEROI, 1999).

A primary affect of releasing treated effluent into a river system is a decrease in dissolved oxygen (DO) levels. The DO levels of the Little Manzimtoti River were calculated as being below 1 mg/l in sections flowing past Old Main Road (Graham 2005) and 2.31 mg/l in the estuarine mouth (Harrison 2004). The low DO concentrations indicate high microbiological pollutant loads resulting in decreased faunal survival and obstruction of catadromous species (fresh water species which migrate to marine environments to reproduce), such as Anguilla mossambica (Longfin eel) from reaching the sea.

Using the SASS method (Dickens and Graham 2002), Integrated Habitat Assessment System (IHAS ver. 2; MacMillan 1998) and the Index of Habitat Integrity (IHI; Kleyhans & Hill, 1999) the health and eco- status of the Little Manzimtoti River were calculated as ‘poor’ (Graham 2005). The study concluded that the vertebrate populations present in the river system are likely to be diseased and aquatic invertebrate biota limited to tolerant species.

Riparian Zone
The Little Manzimtoti riparian zone is classified by Graham (2005) as being in ‘good’ condition, but impacted on by alien plant species, predominantly Chromolaena odorata, and the illegal dumping of solid waste.

However, during the preliminary site visit the section of the Little Manzimtoti River examined was noted as being highly disturbed with riparian vegetation restricted to invasive exotic trees (predominately Eucalypts) Lantana camara and Cat’s Claw Creeper (Macfadyena unguis-cati) (Figures 13 and 14). The emerging weed Parthenium hysterophorous (Demoina Weed) was also noted to be growing along the river bank.
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

Management Priorities

Management priorities identified in Graham (2005) and concluded from the site visit and desk top review include:

- The river and riparian zone are classified as D’MOSS areas and must be excluded from development and rehabilitated where possible;
- Implementation of a river monitoring system to ensure that effluent being released into the river system is conforming to uniform effluent standards;
- Management / control of washing activities carried out within the river;
- D’MOSS identified a wetland forest within the Little Manzimtoti riparian zone in the eastern section of the study area (Figure 15). The health of this wetland requires further investigation and a rehabilitation program developed.

![Figure 4.13: Exotic vegetation occurring within the water way of the Little Amazimtoti River](image1)

![Figure 4.14: Exotic vegetation occurring on the bank of the Little Amazimtoti River](image2)

![Figure 4.15: Position of the wetland identified by D’MOSS within the study area (Source: ETHEKWINI GIS DATA)](image3)
4.3 BIODIVERSITY AND HYDROLOGY (CONTINUED…)

- Implementation of an alien invasive plant program focused on clearing species from the riparian zone; and,
- Developing and maintaining a riparian buffer zone (Box 1). It is recommended by DWAF that a riparian buffer zone be maintained outside of the 1:100 year flood line (Figure 16), in order to ensure river corridor re-establishment after flood events. Smaller drainage lines are to be protected by a minimum setback of 10 m from the edge of the drainage line.

CONCLUSION

The KZN SEA and D’MOSS databases identified a number of sensitive ecosystems and species with the potential to occur within the study area. However, the site visit concluded that the study area is highly disturbed. A number of management priorities were identified with the intention of restoring ecosystem health and protecting the remaining natural environment. For conservation purposes development should be excluded from forested areas, riparian zones and steep slopes, in particular those located along the western boundary of the study area.
4.4 GEOLOGY: SOILS & TOPOGRAPHY

TOPOGRAPHY AND SLOPES

Development on very steep slopes has the potential to result in soil erosion and consequent secondary environmental impacts such as the loss of topsoil, stormwater and surface water contamination, siltation of downstream water channels and bodies. Cut to fill operations, in order to facilitate development in steep areas, will increase the likelihood of soil erosion. It is not recommended that topography and slope steepness be used as a priority development parameter at this preliminary stage as development suitability is also dependent on the degree to which the geological formations have been weathered which influences the angle of repose. As a guiding principle however common practice dictates that slopes greater than 15 degrees will result in some soil movement while slopes between 20 and 22 degrees and steeper are considered unfavourable for development.

Figure 17 and 18 can be revisited for more detailed interpretation once the precinct plan areas have been identified. Geotechnical investigations will need to be carried out on the land parcels proposed for development in order to determine their suitability for development.

DESKTOP GEOLOGICAL DESCRIPTION

The following section outlines the various types of rock groups (geological groups and formations) found within the Study area. Section 3.2 provides an overview of associated characteristics which in turn will result in certain variability’s related to stability and erosion potential. The identification of these aspects will assist in determining areas suitable for development, those which require

FIGURE 4.17: SLOPE ANALYSIS
(SOURCE: ETHEKWINI GIS DATA)

FIGURE 4.18: TOPOGRAPHIC CHARACTER
(SOURCE: ETHEKWINI GIS DATA)

FIGURE 4.19: GEOLOGICAL GROUPS & FORMATIONS WITHIN THE STUDY AREA
(SOURCE: ETHEKWINI GIS DATA)
4.4 GEOLOGY: SOILS & TOPOGRAPHY (CONTINUED…)

The youngest geological unit within the confines of the Illovo site boundary is a linear deposit of alluvium associated with the Lovu River and its floodplain, situated towards the southwestern region of the site. Uncomfortably underlying the alluvium are the sediments of the Berea Formation. The Berea Formation comprises red and subordinate white, yellow and brown sands, and is located in the southeastern region of the site.

The Berea Formation is in turn unconformably underlain by the argillaceous Pietermaritzburg Formation (Ecca Group). The formation is situated towards the southeastern region of the site and comprises dark-grey shale, carbonaceous shale and siltstone. Exposures of shale north of the site indicate that these shales dip towards the coast at an angle of approximately 30°. The Pietermaritzburg Formation overlies the Dwyka Group Tillite with a sharp conformable contact. The Dwyka Tillite, comprising diamictite and subordinate varved shale, has a highly variable thickness, with the maximum thicknesses ranging from 100m to 800m. A large exposure is present in the northern region of the site as are small outliers within the Namaqua-Natal Metamorphic Province.

The Dwyka Group Tillite (central to north-eastern region of site) is unconformably underlain by the Natal Group Sandstone, with the underlying rocks displaying well-developed striated glacial pavements in places. The Natal Group consists of reddish-brown arenaceous rocks with interbedded mudrock and conglomerate units; these dip in an easterly direction. Within the site boundary, the Natal Group is represented by an isolated exposure situated along the border of the Dwyka Group Tillite and Namaqua-Natal Metamorphic Province.

The Natal Group (western portion of the site) is nonconformably underlain by the Namaquan-age rocks of the Namaqua-Natal Metamorphic Province. This is represented as a large exposure of garnet-biotite augen-gneiss situated towards the northwest of the site.

Towards the northern regions of the site are a number of small dolerite intrusions (Karoo dolerite) with another linear dolerite intrusion in the southern area of the site; both dolerite intrusions are associated with northeast-southwest trending faults. A further dolerite intrusion has also been observed in the central region of the site, this however is not associated with faulting.

DESKTOP GEOTECHNICAL INTERPRETATION

Slope stability problems could possibly be encountered with the sediments of the Berea Formation (shown in light blue on south-eastern region of the site) as sediments within the region have a maximum angle of repose of between 30° and 40°. Above this angle, slope failure will likely occur. These sediments are also highly erodible by wind or water. They may potentially have relatively high clay content resulting from the decomposition of feldspar and mafic minerals. It is therefore recommended that construction only takes place on the relatively flat or shallow dipping areas and not the high risk areas unless appropriate stabilization techniques are used.

Soils derived from the Natal Group (small yellow portion near the western boundary) are generally shallow and conducive to erosion. Ecca Group shales (Pietermaritzburg Formation shown as light green in central southern portion of the site) could potentially become unstable if severely undercut or if heavily loaded. On east-facing slopes, the presence of 10° to 40° out-of-slope dips may result in instability and even failure. Rocks of the Natal Group would potentially make a more suitable construction locality.

Dwyka Tillite (shown in orange in central to north-eastern region of site) is usually well jointed, the residual soil which develops from the weathering of these rocks exhibit qualities of both compressibility and expansiveness, both of which are responsible for a host of potential engineering problems. Foliation, coupled with advanced mechanical disintegration, could result in slope instability associated with the Namaqua-Natal Metamorphic Province. The residual soils that develop from these mafic rocks (large purple area in north western corner of study area) will also exhibit expansive characteristics.
4.4 GEOLOGY: SOILS & TOPOGRAPHY (CONTINUED…)

Residual soils associated with dolerite decomposition (Karoo Dolerite shown in pink) could possibly be regarded as regions of instability due to the presence, in KwaZulu-Natal, of rapid-weathering dolerites. This disintegration is due to the presence of chlorite and other hydrophilic clay minerals which swell due to the adsorption of water. Faults in the area could act as conduits for water and speed up the weathering process of the rocks into which they have intruded. Soil migration associated with this rock group is known to occur beyond the identified area thereby creating larger area of possible weathering and instability.

RECOMMENDATIONS

A number of potential soil stability and foundation problems have been identified for most of the geological formations present. Unstable slopes, and expansive soils require the implementation of appropriate stabilization techniques prior to construction. It is recommended that a geotechnical site investigation be undertaken in order to adequately characterize the specific site in terms of its proposed use and foundation requirements.

4.5 SOCIO-ECONOMIC: HERITAGE & AGRICULTURE & CONFLICTING LAND USES

CULTURAL & HERITAGE RESOURCES

WSP consulted with Amafa on the 4 May 2009. The discussion highlighted the fact that they are not in a position to provide an indication as to whether heritage resources potentially occur within the Study area. Amafa are still in the process of developing a database which will allow for the identification of low, medium and high risk / likelihood areas.

Following a brief description of the study area by WSP however, Amafa highlighted the following issues:-

- Due to the large extent of the study area and the fact that a large portion is currently “undeveloped” and “urban informal” (see Figure 20), over and above a significant portion of the site comprising...
natural features and land cover, it is highly likely that a Heritage Impact Assessment (HIA) will be required. It is recommended that this take place only once the Special Area Plans have been finalised and the two proposed precinct plans drafted.

- A significant portion of the southern region of the study area, is covered by sugarcane (see Figure 20 and Area 6 and 7 on Figure 3), as well as a small area near the Bhekuluwandle area (Area 2 on Figure 3). Amafa have stated that the presence of sugar cane farming does not preclude a need for a HIA for that particular ground cover. This is due to the fact that sugarcane is planted in a shallow manner- only 10-15 cm deep. There is potential for heritage resources to occur below this depth.

- Cemeteries are considered “no-go zones” for development in terms of the protection of cultural and heritage resources.

Further, Amafa suggested that a brief review if the applicable legislation be considered as a general guideline for this study which is outlined below. According to the KwaZulu-Natal Heritage Act (No.10 of 1997), the following activities trigger the need for a HIA. In accordance with the Act, any person wishing to undertake an activity described below must provide the Heritage Agency with an application prior to commencing with the desired activity:

- 27. (1 a) “construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length … “

- 27. (1c) “any development, or other activity which will change the character of an area of land or water –
  i. exceeding 10 000 m2 in extent;
  ii. involving three or more existing erven or subdivisions thereof;
  iii. involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years;
  iv. the costs of which will exceed a sum set in terms of regulations; and
  v. any other category of development provided for in the regulations.”

The following items listed under subsection 26 of the “general protections” section of the Act are protected:

a. Structures: Any structures which are older than 60 years;

b. Graves of the Royal Family;

c. Graves of Victims of Conflict;

d. Traditional Burial Places;

e. Battlefields and public monuments and memorials;

f. Archaeology, rock art, palaeontology, battlefields and meteorite sites; and

g. Objects (pottery, stone tools, spear heads etc.).

In the event of triggering an activity listed above, a Heritage Impact Assessment and Report are to be prepared in accordance with Subsection 27 (2) (a). These documents are to include:

a. the identification and mapping of all heritage resources in the affected area;

b. an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;

c. an assessment of the project’s impact on such heritage resources;

d. an evaluation project’s impact on heritage resources relative to the sustainable social and economic benefits to be derived from the upgrade project;

e. the results of consultation processes held with affected communities and other interested parties regarding the impact of the project on heritage resources;

f. whether heritage resources will be adversely affected by the proposed project, the consideration of alternatives; and

g. plans for mitigation of any adverse impacts during and after completion of the proposed project.

Following the investigations and the submission of the Heritage Impact Assessment Report, the Council shall, after consultation with the project proponent, decide:

a. Whether or not the project may proceed;
4.5 SOCIO-ECONOMIC: HERITAGE & AGRICULTURE & CONFLICTING LAND USES (CONTINUED...)

b. whether any limitations or conditions are to be applied to the project;
c. what general protections in terms of this Act apply, and what formal protections may be applied to such heritage resources;
d. whether compensatory action shall be required in respect of any heritage resources damaged or destroyed as a result of the project; and
e. whether the appointment of specialists are required as a condition of the approval of the proposal.

The Council shall not make and decision under subsection 27(4) mentioned above with respect to any project that impacts on a heritage resource protected on a national level unless it has been consulted by the national heritage conservation agency. Any decisions made by the council may be appealed in accordance with the procedures described by the Act. Subject to the findings of the Heritage Impact Assessment Report, certain activities may require a permit.

RECOMMENDATIONS

FIGURE 4.21: SOCIAL FACILITIES MAP SHOWING POTENTIAL HERITAGE SITES/RESOURCES
(SOURCE: ETHEKWINI GIS DATA)

Although no “culture/historic sites” are identified within the study area in Figure 21, there exists a cemetery on the western boundary of the study area (Area 3 in Figure 3). This Area 3 should be considered a “no go zone” due to the presence of the cemetery as well as steep slopes. The areas (Areas 1 and 8) containing four “worship sites” marked by a black cross on Figure 20 are considered “urban formal” according to the eThekwini ESCP (in prep, 2008). Should infrastructural upgrades be proposed as packaged projects within the identified Precinct Plans, these will need to be taken into account when carrying out the more detailed environmental planning and authorisation processes.
4.5 SOCIO-ECONOMIC: HERITAGE & AGRICULTURE & CONFLICTING LAND USES (CONTINUED...)

AGRICULTURE

Agricultural activities such as limited forestry and extensive sugar cane cultivation occur in the southern region of the study area (see Figure 4 and 21).

Area 6: Fallow Fields

Area 6 (in Figure 3) is identified as “high agricultural land potential” in Figure 22, however this land parcel is currently described as “fallow fields” according to the eThekwini ESCP (in prep, 2008). It is assumed that this land parcel is zoned “agriculture”. However there exists within the study area a number of conflicting existing and proposes landuses. The broad intentions for this area as outlined in the eThekwini South Spatial Development Plan (SSDP) include the “encouragement of densification in selected areas in selected areas in Amanzimtoti ... infill at Illovo, new residential development on the northern bank of Illovo River and environmental rehabilitation” (eThekwini Municipality, 2007). Figure 24 shows a portion of Area 6 (in Figure 3) as earmarked for greenfields housing development.

WSP therefore consulted with a Department of Environmental Affairs and Agriculture (DAEA) representative based in Cedara on the 8 May 2009 in order to gain an understanding of development limitations or regulations on or surrounding agricultural land. It was recommended that WSP refer to the Sub-Division of Agricultural Land Act 70 of 1970. The general guiding principle applied by DAEA is that the transformation of agricultural land to another use shall not be supported. This however is assessed on a case by case basis as a number of considerations need to be granted. For example whether the identified agricultural land parcel has high agricultural potential or not (which is the case for Area 6) and whether the surrounding landuses are similar in nature or not.

There is an opportunity as per Section 3 of the Sub-Division of Agricultural Land Act 70 of 1970 for the Local Authority to apply for the extension of an adjacent scheme: “no area of jurisdiction, local area, development area, peri-urban area or other area referred to in paragraph (a) or (b) of the definition of ‘agricultural land’ in section 1, shall be established on, or enlarged so as to include, any land which is agricultural land”. Agricultural land" is
defined in section 1 of the Act and includes any land with the exception of "land situated in the area of jurisdiction ... of certain local authorities". It is evident from this definition that only land falling outside the area of jurisdiction of the local authorities referred to in section 1 of the Act is regarded as agricultural land and the consent of the Minister will be necessary for the transactions previously alluded to in respect of such land.

**Area 2: Bhekulwandle Tribal Authority**

Area 2 is tribal land under the Mapumulo and Toyane Tribal Authority (Figure 25). The eThekewini SSDP (2007) states that agricultural development within the eThekewini southern region should promote “more efficient community based agricultural development in suitable parts of traditional settlement area” and “encourage the diversification and appropriate beneficiation of agricultural activities” (eThekewini Municipality, 2007). Figure 22 indicates that this area has a high potential to support agricultural activities. In addition the current settlement pattern reflects low to medium density yet no formal housing proposals have been made in this area (see Figure 23 and 24). WSP is therefore of the opinion that this area could potentially be earmarked for the expansion of market gardening opportunities and garden agricultural projects in order to support the objective of promoting more efficient community based agricultural development within traditional settlement areas. This will increase food security potential within the Study area.

Recommendations

- Planning team to investigate the reason why fields within Area 6 are lying fallow.
- Confirm zoning within study area (particularly areas earmarked for alternative landuses) and the interpretation and applicability of Agricultural Act to eThekewini Municipality housing projects.
- Proposed Housing for Kingsburgh West development is to exclude area identified in this report as a valuable catchment link and for incorporation into DMOSS (including a suitable buffer). See section 3.3.4.
- eThekewini (possibly Rural ABM) to work together with Ingonyama Trust Board (ITB) in identifying potential garden agric projects / market gardening within the Bhekulwandle community (Area 2).
- Explore potential for sustainable muthi harvesting within identified wetland buffers in Area 2 – potential community project.
4.6 CONCLUSION

The prefeasibility assessment has divided the study area in 9 units based on various local characteristics in order to clearly describe and assess possible implications per aspect (Vegetation and Hydrology, Geology, Heritage, Agriculture and other conflicting landuses). This breakdown will allow for the inclusion of environmental considerations and recommendations into the proposed Local Area Plan. Table 1 below summarises the local characteristics of various aspects per unit in order to gain a clear understanding of the opportunities and constraints in different areas within the study area.
### 4.7 KEY ISSUES

#### ENVIRONMENTAL

<table>
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<tr>
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<th>CORE ISSUE</th>
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<td>1: Illovo Township</td>
<td>Vegetation and Hydrology</td>
<td>• Highly disturbed grassland.</td>
<td>• Implementation of Alien Invasive Plant Program in grasslands and wetlands.</td>
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<td></td>
<td></td>
<td>• Potential for red data species yet unlikely to occur due to current poor ecosystem health.</td>
<td>• Creation of buffers in areas adjacent DMOSS areas (either no development or passive recreation).</td>
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<td></td>
<td></td>
<td>• High wetland potential in area (degraded state).</td>
<td>• Future developments to be landscaped using indigenous species.</td>
</tr>
<tr>
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<td></td>
<td>• Extensive subsistence cropping.</td>
<td>• Development to be inhibited within and surrounding wetlands. Appropriate buffers (15-30m) will need to be applied following a Wetland Delineation and Functional Assessment.</td>
</tr>
<tr>
<td></td>
<td>Geology</td>
<td>• The Natal Group (small yellow area) is nonconformably underlain by the Namaqua-age rocks of the Namaqua-Natal Metamorphic Province (Mafic Granite shown in purple). Foliation, coupled with advanced mechanical disintegration, could result in slope instability associated with the Namaqua-Natal Metamorphic Province. The residual soils that develop from these mafic rocks will also exhibit expansive characteristics.</td>
<td>• Rocks of the Natal Group would potentially make a more suitable construction locality.</td>
</tr>
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<td></td>
<td></td>
<td>• Majority of the area is relatively flat (0-10 degree slope).</td>
<td>• Flatter slopes (not exceeding 15 degrees) are more suitable for development.</td>
</tr>
<tr>
<td></td>
<td>Agriculture and Housing</td>
<td>• Moderate agricultural land potential (lowest).</td>
<td>• Proposed housing development does not conflict with existing use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Area earmarked for greenfields housing developments.</td>
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<tr>
<td></td>
<td>Heritage</td>
<td>• Area contains “worship sites”.</td>
<td>• Should infrastructural upgrades be proposed as packaged projects within the identified Precinct Plans, these “areas of worship” will need to be taken into account when carrying out the more detailed environmental planning and authorisation processes.</td>
</tr>
<tr>
<td>2: Bhekuluwandle Tribal Authority Area</td>
<td>Vegetation and Hydrology</td>
<td>• Highly disturbed grassland.</td>
<td>• Implementation of Alien Invasive Plant Program in grasslands and wetlands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Potential for red data species yet unlikely to occur due to poor ecosystem health.</td>
<td>• Creation of buffers in areas adjacent DMOSS areas (either no development or passive recreation).</td>
</tr>
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<td>• High wetland potential in area (degraded state).</td>
<td>• Future developments to be landscaped using indigenous species.</td>
</tr>
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<td></td>
<td>• Extensive Subsistence cropping.</td>
<td>• Development to be inhibited within and surrounding wetlands. Appropriate buffers (10-30m) will need to be applied following a Wetland Delineation and Functional Assessment.</td>
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## ENVIRONMENTAL

<table>
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<th>RECOMMENDATIONS</th>
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<tbody>
<tr>
<td>Geology</td>
<td>Dwyka Tillite is usually well jointed, the residual soil which develops from the weathering of these rocks exhibit qualities of both compressibility and expansiveness, both of which are responsible for a host of potential engineering problems.</td>
<td>Majority of the area is relatively flat (slope less than 10 degrees).</td>
<td>Expansive soils require the implementation of appropriate stabilization techniques prior to construction. It is recommended that a geotechnical site investigation be undertaken in order to adequately characterize the specific site in terms of its proposed use and foundation requirements. Flatter slopes (not exceeding 15 degrees) are more suitable for development.</td>
</tr>
<tr>
<td>Agriculture and Housing</td>
<td>Tribal land.</td>
<td>High agricultural and wetland potential.</td>
<td>eThekwini (possibly Rural ABM) to work together with Ingonyama Trust Board (ITB) in identifying potential garden agricultural projects / market gardening within the Bhekulwandle community area. Explore potential for sustainable muthi harvesting within identified wetland buffers in Area 2 – potential community pilot project.</td>
</tr>
<tr>
<td>Heritage</td>
<td>Rural nature.</td>
<td></td>
<td>Potential base for cultural tourism opportunities within the Study Area (particularly if housing development is not implemented)</td>
</tr>
<tr>
<td>3. Cemetery and Surrounds</td>
<td>Invasive alien vegetation, secondary grasslands and highly disturbed forest patches.</td>
<td>High wetland potential (moderately good health providing habitat to a number of bird species).</td>
<td>Exclusion of this area from potential development due to potential role as DMOSS buffer zone. Alien invasive plant program focused on removing species from grasslands, wetlands and forest patches. Development to be inhibited within and surrounding wetlands. Appropriate buffers (10-30m) will need to be applied following a Wetland Delineation and Functional Assessment should development surrounding the wetland be proposed.</td>
</tr>
<tr>
<td>Geology</td>
<td>Soils derived from the Natal Group (small yellow portion near the western boundary) are generally shallow and conducive to erosion.</td>
<td>Majority of the area comprised of steep slopes (angle of slope exceeding 20-40 degrees).</td>
<td>Rocks of the Natal Group would potentially make a more suitable construction locality. Should be considered no-go zone for development.</td>
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### 4.7 KEY ISSUES (CONTINUED…)

#### ENVIRONMENTAL

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</table>
|      | Agriculture and Housing | ‧ High agricultural land potential.  
 ‧ Area not earmarked for housing development. | ‧ Land should not be used for agricultural purposes due to presence of heritage resource (cemetery). |
|      | Heritage  | ‧ Presence of large cemetery. | ‧ No-go zone for development. |
| 4: D’MOSS Transitional Forest and Secondary Grasslands | Vegetation and Hydrology | ‧ Largest remaining portion of KwaZulu Natal Coastal Vegetation - the most undisturbed natural environment within the Study Area.  
 ‧ Majority of areas (including small patches along the Little Amanzimtoti River and situated at the sites south east entrances) are degraded with high to moderate levels of alien infestation however; steep slopes in the area were covered by dense forest that appeared to be largely undisturbed.  
 ‧ The moderately healthy status of the forest situated on the slopes indicates that a number of these red data species have the potential to occur in this area. | ‧ Preclusion of forested slopes from development. |
|      | Geology    | ‧ Dwyka Tillite is usually well jointed, the residual soil which develops from the weathering of these rocks exhibit qualities of both compressibility and expansiveness, both of which are responsible for a host of potential engineering problems.  
 ‧ Majority of the area comprised of steep slopes (angle of slope exceeding 20-40 degrees). | ‧ Expansive soils require the implementation of appropriate stabilization techniques prior to construction. It is recommended that a geotechnical site investigation be undertaken in order to adequately characterize the specific site in terms of its proposed use and foundation requirements.  
 ‧ Should be considered no-go zone for development. |
|      | Agriculture and Housing | ‧ Good agricultural land potential.  
 ‧ Area not earmarked for housing development. | ‧ Continued protection of D’MOSS area.  
 ‧ No-go zone for development. |
|      | Heritage    | ‧ Natural resource to be protected. | ‧ Potential cultural tourism attraction. |
### 5: Little Amanzimtoti River & Associated Riparian Areas

**Vegetation and Hydrology**

- **River Health**
  - Water samples collected from the Little Amanzimtoti River contained high concentrations levels of *E. coli*.
  - Health and eco-status of the Little Amanzimtoti River were calculated as ‘poor’.
  - Red data species are unlikely to be present within the system.

- **Riparian Zone**
  - Good condition but impacted on by alien plant species and the illegal dumping of solid waste.
  - Noted during site visit that area is highly disturbed with riparian vegetation restricted to invasive exotic trees and emerging weeds.

**Recommendations**

- Implementation of a river monitoring system to ensure that effluent being released into the river system is conforming to uniform effluent standards.
- Management / control of washing activities carried out within the river.
- D’MOSS identified a significant wetland forest within the Little Amanzimtoti riparian zone in the eastern section of the Study Area. The health of this wetland requires further investigation and a rehabilitation program developed.
- Implementation of an alien invasive plant program focused on clearing species from the riparian zone (with special emphasis placed on the wetland forest identified by D’MOSS).
- Developing and maintaining a riparian buffer zone.

**Geology**

- Dwyka Tillite is usually well jointed, the residual soil which develops from the weathering of these rocks exhibit qualities of both compressibility and expansiveness, both of which are responsible for a host of potential engineering problems.

**Recommendations**

- Expansive soils require the implementation of appropriate stabilization techniques prior to construction. It is recommended that a geotechnical site investigation be undertaken in order to adequately characterize the specific site in terms of its proposed use and foundation requirements.

**Agriculture and Housing**

- High agricultural land potential.
- Portion of area has been earmarked for greenfields housing development as per the 5 Year Housing Plan.

**Recommendations**

- Farming within river flood plain and D’MOSS area is discouraged.
- Investigate whether this area is still earmarked for development as this area is comprised of majority D’MOSS and is considered a no-go zone for development.

**Heritage**

- Natural resources to be protected.

**Recommendations**

- Potential cultural tourism attraction.
### 4.7 KEY ISSUES (CONTINUED…)

#### ENVIRONMENTAL

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| 6: Fallow Fields       | Vegetation and Hydrology    | • Degraded thicket with high levels of alien plant infestation.  
• Highly disturbed character of the fields has resulted from previous cultivation activities that have subsequently been abandoned.  
• High wetland potential and acts as a cross catchment link between the Illovo River in the south and the Little Amanzimtoti River in the north. | • Indigenous vegetation may still occur within uncultivated areas (such as valleys) and should be protected.  
• Creating a buffer zone around the tributaries linking the Illovo and Little Amanzimtoti Rivers and include into the DM OSS system, thereby protecting the cross catchment link and watershed.  
• Implementation of an alien invasive plant program focused on removing species from wetlands.  
• Development to be inhibited within and surrounding wetlands. Appropriate buffers (1-30m) will need to be applied following a Wetland Delineation and Functional Assessment should development surrounding the wetland be proposed. |
|                        | Geology                     | • Ecca Group shales could potentially become unstable if severely undercut or if heavily loaded. On east-facing slopes, the presence of 10° to 40° out-of-slope dips may result in instability and even failure.  
• Residual soils associated with dolerite decomposition (small area Karoo Dolerite shown in pink) could possibly be regarded as regions of instability due to the presence, in KwaZulu-Natal, of rapid-weathering dolerites. Faults in the area could act as conduits for water and speed up the weathering process of the rocks into which they have intruded. | • Unstable slopes and expansive soils require the implementation of appropriate stabilization techniques prior to construction. It is recommended that a geotechnical site investigation be undertaken in order to adequately characterize the specific site in terms of its proposed use and foundation requirements. |
|                        | Agriculture and Housing     | • High Agricultural Potential  
• Land use shown as sugar cane however land is lying fallow  
• Proposal for greenfields housing development (Kingsburgh West).  
• Tributary within the area acts as a cross catchment link between the Illovo River in the south and the Little Amanzimtoti River in the north | • Planning team to investigate the reason why fields within Area 6 are lying fallow.  
• Confirm zoning within Study Area (particularly areas earmarked for alternative landuses) and the interpretation and applicability of Agricultural Act to eThekwini Municipality housing projects.  
• Proposed housing for Kingsburgh West development is to exclude area identified in this report as a valuable catchment link and for incorporation into DM OSS (including a suitable buffer). |
|                        | Heritage                    | • Potential for creation of a small museum showcasing history of sugarcane farming in KwaZulu Natal. | • Potential cultural tourism attraction. |
### 7: Commercial Sugar Cane Plantations

#### Vegetation and Hydrology
- Indigenous vegetation removed for sugarcane cultivation.
- High wetland potential (man-made drainage channels were noticed in cane fields).
- Sugarcane farming practiced within river floodplains.

#### Geology
- Slope stability problems could possibly be encountered with the sediments of the Berea Formation as sediments within the region have a maximum angle of repose of between 30° and 40°. Above this angle, slope failure will likely occur. These sediments are also highly erodible by wind or water.
- Ecca Group shales could potentially become unstable if severely undercut or if heavily loaded. On east-facing slopes, the presence of 10° to 40° out-of-slope dips may result in instability and even failure.
- Residual soils associated with dolerite decomposition (small area Karoo Dolerite shown in pink) could possibly be regarded as regions of instability due to the presence, in KwaZulu-Natal, of rapid weathering dolerites. Faults in the area could act as conduits for water and speed up the weathering process of the rocks into which they have intruded.

#### Recommendations
- Inhibit further cultivation of sugarcane along river edges and within wetland areas.
- Rehabilitation of a riparian zone along river edges and wetlands.
- Removal of man-made drainage channels.

#### Agriculture and Housing
- Current land use is sugarcane cultivation.
- High agricultural land potential due to proximity to Illovo River.
- Not earmarked for housing development.

#### Recommendations
- Likely that large scale sugar cane farming will continue to be practiced. More environmental responsible practices need to be investigated and opportunities for rehabilitation explored.

### 8: Illovo Village

#### Vegetation and Hydrology
- Highly disturbed grassland
- Potential for red data species yet unlikely due to poor ecosystem health
- High wetland potential in area (degraded state)
- Extensive Subsistence cropping

#### Recommendations
- Implementation of Alien Invasive Plant Program in grasslands and wetlands.
- Creation of buffers in areas adjacent DMoss areas (either no development of passive recreation).
- Future developments to be landscaped using indigenous species
- Development to be inhibited within and surrounding wetlands. Appropriate buffers (1-30m) will need to be applied following a Wetland Delineation and Functional Assessment.
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| Geology | | • The youngest geological unit within the confines of the Illovo site boundary is a linear deposit of alluvium associated with the Illovo River and its floodplain.  
• Majority of the area is relatively flat (0-10 degree slope). | • Construction should not take place on this depositional rock group. In addition, alluvium indicates the presence of a floodplain. No development is to occur within the floodplain.  
• Although this more gentle terrain is more suitable for development than areas with slope angles exceeding 15 degrees, development is not to occur within the floodplain. |
| Agriculture and Housing | | • Considered an urban formal area with moderate agricultural land potential.  
• Area earmarked for greenfields housing development. | • No environmental objection to proposed housing. However investigations need to be made following packaging of projects in order to identify and protect potential sensitive environmental features. |
| Heritage | | • Area contains “worship sites”. | • Should infrastructural upgrades be proposed as packaged projects within the identified Precinct Plans, these will need to be taken into account when carrying out the more detailed environmental planning and authorisation processes. |
| 9: Illovo River Valley and Estuary | Vegetation and Hydrology | River Health  
• River system under stress due to past and current sand winning activities.  
• Health and eco-status of the Illovo River calculated as ‘fair’  
• Red data species have a low potential of occurring within the system.  
Illovo Estuary  
• Estuary banks radically transformed by the removal of floodplain and riparian zone and infilling to raise level of land for protection of infrastructure and / or allow for planting of sugar cane – the edge of the river is now comprised of a gabionised embankment. All these man-made interventions have resulted in a loss of habitat and reduction of the estuary.  
• High diversity of fish species and summer influx migratory waders.  
Riparian Zone  
• Illovo River riparian zone is in ‘poor’ condition as it has been modified by sugarcane farmers removing trees to make way for sugarcane plantations.  
• Vegetation remaining in floodplain is dominated by alien invasive species scantly interspersed with indigenous species (predominately on the steeper river bank slopes and valleys). | • Improved management and control of sand winning activities within Illovo River in order to improve the river and estuarine system’s carrying capacity (i.e.: flood protection).  
• Developing and maintaining a riparian buffer zone (including an Alien invasive plant program).  
• Rehabilitate the cleared area overlying an original wetland east of the R102 on the northern bank of the Illovo Estuary.  
• Inhibit further large scale agriculture and construction of infrastructure within riparian zones and floodplains in order to allow for the protection of the estuaries system which provides habitat to a diversity of fish species and migratory bird species.  
• Future planning to take into consideration the risks and avoid the locating of housing developments within the 1:10 year flood line. |
## 4.7 KEY ISSUES (CONTINUED...)

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<tr>
<td>Agriculture and Housing</td>
<td>• Current landuse is sugarcane cultivation although the area is also part of the DMOSS area. • High agricultural land potential due to proximity to Illovo River. • Not earmarked for housing development.</td>
<td>• It is likely that large scale sugar cane farming will continue to be practiced however, more environmentally responsible practices need to be investigated and opportunities for rehabilitation explored (e.g., sports field overlying a historical wetland and areas of sugarcane within the floodplain and D’MOSS area).</td>
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</tr>
<tr>
<td>Heritage</td>
<td>• Natural resource to be protected</td>
<td>• Rehabilitation programmes in order to create potential cultural tourism attraction.</td>
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5.1 INTRODUCTION

INSTITUTIONAL STRUCTURES
Within the South African Transportation framework, there are four statutory governmental organizations, as indicated in the organogram (Figure 5.2 below), that are responsible for or influence the planning and or implementation of transport related infrastructure:

- N DOT;
- KZN DOT;
- PRASA;
- ETA

### FIGURE 5.2: TRANSPORT AUTHORITY STRUCTURE

TERMS OF REFERENCE
Iyer Urban Design Studio, in association with Goba (Pty) Ltd, were appointed by the Frameworks Planning Branch of the eThekwini Municipality to prepare the Local Area Plan for the Illovo Township, Illovo Village and Bhekulwandle areas.

SECTION PURPOSE
The purpose of this section is to provide a concise account of the existing traffic and transportation conditions within the Study Area in terms of transport infrastructure supply and travel demand patterns. The findings contained in this report would inform successive phases of this project in the development of the Local Area Plan and Land Use Management Guidelines. The following aspects have been addressed:

- Desktop assessment of the road network and its pavement condition;
- Quantification of existing travel demand patterns using available data;
- Assessment of public transport movements and infrastructure supply;
- Assessment of pedestrian movements based on the location of public transport facilities, road hierarchy and available accidents statistics.

SECTION STRUCTURE

- Section 1: Introduction – Provides the background and context of the study, outlining the purpose of the document and contains a description of the site locality.
- Section 2: Background – Provides a summary of roles of various Institutional structures and a précis of previous studies relating to the Study Area.
- Section 3: Existing Transport Infrastructure – Description of the existing transport system.
- Section 4: Travel Demand Assessment – Estimation of the current travel demand volumes and movement patterns relevant to the Study Area.
- Section 5: Summary of Key Issues – Concludes the report by presenting a summary of the core findings.
5.2 BACKGROUND

INSTITUTIONAL ROLES & RESPONSIBILITIES RELATING TO TRANSPORT

THE NATIONAL DEPARTMENT OF TRANSPORT (NDOT): The role of the NDOT is to lead the development of integrated efficient transport system by creating a framework of sustainable policies, regulations and implementable models to support government strategies for economic, social and international development. The objectives NDOT aims to achieve in providing a policy framework, regulation and implementation models are:

- Competitive transport costs;
- Safety and security improvements;
- Reduce infrastructure backlogs;
- Improve access; and
- Reduce time in transit.

THE KWAZULU NATAL DEPARTMENT OF TRANSPORT (KZN DOT): The role of KZN DOT is to provide the public with a safe, integrated, regulated, affordable and accessible transportation system and to ensure that the developmental needs of the province are met. The core functions are to construct and maintain a balanced road network that complies with the Provincial Growth and Development Strategy, the planning and provision of urban and rural public transport facilities, conducting transport studies, the control of road transportation, provision of the provincial transport planning frameworks, management of public transport services and public road network, the resignation and licensing of vehicles and drivers, regulation of traffic on public roads, the maintenance and provision of visible road traffic signs and the implementation of road safety campaigns and awareness programmes.

ETHEKWINI TRANSPORT AUTHORITY (ETA): The ETA’s vision is to provide safe, effective, efficient and fully integrated transport operations and infrastructure which would best meet the needs of freight and passenger customers at improved levels of service and cost in a fashion which supports government strategies for economic and social development, whilst being environmentally and economically sustainable. The functions of the ETA is to prepare transport plans, develop land transport policies, perform financial planning, manage the movement of persons and goods and call for tenders for public transport services to be operated and then evaluate tenders received. ETA has implemented a road safety programme to increase road safety awareness and reduce the occurrence of pedestrian accidents areas within eThekwini.

PRASA - Metrorail: The role of Metrorail is to ensure efficient and seamless movement of people through provision of safe, reliable, affordable and sustainable commuter rail services; and to develop rail assets using best practices in the interest of all stakeholders. PRASA-Metrorail’s mandate is to also ensure that rail commuter services are provided in the public interest and to promote rail as the primary mode of mass commuter transportation. Metrorail provides services to meet the countries needs of affordable public transport.

LOCAL & REGIONAL STUDIES

South Spatial Development Plan (SSDP) – September 2008
The SSDP identifies the capacity of the existing natural and built environment to create sustainable investment and development opportunities and establishes linkages to opportunities for the socio-economically disadvantaged communities of the south. The main objectives of the SSDP are to establish an understanding of the strategic role of the southern areas within the context of the eThekwini Municipality, to ensure the alignment of the SSDP with the development plans of the west and north as well as the South Durban Basin Framework in progress and to inform the broader Unicity Spatial Development Framework as well as providing guidance for subsequent local area plans and land use schemes.
The Illovo Flats Development Framework identifies development concepts for the area around the lower reaches of the Illovo River extending from the R603 to the Umzimbazi River and from the N2 to the western boundary of the municipality.

The status quo assessment indicated that the majority of internal and external linkage occurs in an east-westerly direction. This provides poor linkage within areas in the south and to opportunities in the north. A few interceptor points are created in the western areas. The provision of the envisaged additional north-south link road should substantially improve those conditions.

The rail alignment is located in close proximity of the beach and requires urgent upgrading and better utilisation. Consideration should also be given to extending public transportation beyond the present dependence on taxi services.

With the exception of the coastal belt, linkages between the south MPR and the remainder of the Metro are virtually non-existent, this is likely to have contributed to:

- the developing traffic problems on parts of the N2/M4,
- the western parts of the south being inaccessible from the remainder of the Metro; and
- difficulties for the South population to access employment activities in the west and north.

Existing rail services are severely underutilised; opportunities should be identified to improve the service, while investigating the potential for extending an appropriate rail network.

Existing public transport is substantially confined to taxi services; the potential for expanding public transport services should also be investigated.

The key implications for sectors in the south are:

- to improve linkages to the rest of Metro and East-West within the SMPR [South Municipal Planning Region]; and
- to improve or establish linkages across Umkomazi, Illovo, Umlazi Rivers.

Making better usage of the existing rail linkages and investigating expansion potentials. Developing improved road access to and in peripheral areas and to adjacent municipalities.

The SSDP suggest the following in order to establish an improved regional and local north-south road linkage:

- Developing the planned MR579 linking Pinetown to Inwabi west of Umlazi, Folweni and the N2 at Kingsburgh – this will provide new development opportunities for the western periphery and alleviate transport problems on the north-south linkages in the east; and
- Upgrading the MR197 providing an alternative north-south linkage to the N2 and creating new nodal opportunities west of the N2.
5.2 BACKGROUND (CONTINUED…)

The major planning principles and concepts in terms of traffic and transportation applied include the following:

- **Restructuring THE CITY**: i.e. providing better accessibility to peripheral areas, creating additional economic development opportunities and facilitating the integration of the area into the wider Metro; **Hierarchy of Access Corridors**: i.e. providing improved direct access from the N2 with linkage to both R102 and upgraded MR197.

The SSDP therefore suggests:

- Establishing appropriate linkage to coast and beach; and
- Establishing the appropriate commercial, business and office development in the proximity of the N2 and the envisaged new access.

The infrastructure development in terms of roads:

- **MR197 Upgrading**: i.e. starting an upgrading process for the MR197 contributing to alleviating present and future traffic problems on parts of the N2; and
- **Illovo Access**: i.e. investigating the potential for providing improved access to Illovo from the N2.

**Integrated Development Plan (IDP) – 2007/2008**

One of the objectives of the 2020 vision of the IDP is to provide a good public transport system. The key to this is to promote the ease of movement for commuters to and from work, shopping, leisure and school. The specific vision is that people will not have to take more than two buses, taxis or trains before they reach their destination in eThekwini. Improving the public transport facilities will reduce the need to increase road networks, provide a platform of connectivity between people and reduce pollution by minimising vehicle usage.

A policy decision has been made to prioritise public transport over private transport and to develop a public transport system with services which are customer focused and needs driven in both urban and rural areas. The big challenge is to move people from private to public transport in so far as daily commuting is concerned. This can only be achieved incrementally over a period of years as public transport services improve. The programme of building public transport modal interchanges which is the cornerstone of public transport is in progress. Major investment into the rail system has commenced and the new train coaches will improve the quality of commuter train services. The eThekwini Municipality Metropolitan Area Spatial Development Framework is shown in Figure 5.4.
5.2 BACKGROUND (CONTINUED...)

Rail
The existing commuter rail service runs parallel to the N2 and fall outside the defined Study Area. In addition, the Illovo area is currently outside the “Major Public Transport Corridor” as defined by the eThekwini Transport Authority, and illustrated in Figure 5.5. Metrorail 2008 Census data was utilised in order to identify serviced routes as well as the passenger demand. The following rail services are easily accessible from the Illovo area:

- Doonside Station;
- Winkelspruit Station;
- Warner Beach Station.

The station locality and five minute walk (400m) isochrones are illustrated in Figure 5.6. Preliminary Durban Metrorail Census 2008 data indicates that these stations service 5593 patrons every weekend. It is possible that commuters from Illovo travel to these stations via road based public or private transportation in order to utilise the rail services.

5.3 EXISTING TRANSPORT INFRASTRUCTURE

FIGURE 5.5: ETHEKWINI PROPOSED PUBLIC TRANSPORT SYSTEM STRATEGY

[Source: Public Transport Plan, August 2005, ETHEKWINI TRANSPORT AUTHORITY]

FIGURE 5.6: KINGSBURGH RAIL STATION
Regional Road Network

The two major transport structuring elements within the municipality are the N2 and N3 Development Corridors, around which the greatest intensity of public and private infrastructure has been invested. Infrastructure intensity decreases as one move away from the CBD core and the N2 and N3 corridors.

This being noted, the Study Area is located at the southern extremity of the eThekwini Municipality. There are four major transport routes that structure the movement system between Illovo and the greater municipality and province. These include:

- National Route 3 (N3);
- R102 (Winklespruit Road);
- Sbu Mkhize Drive (R603/P21-1); and
- M14 (P197 – 2/3), Refer to Figure 5.7.

The N2 route forms the primary north-south mobility link between Illovo and the major economic nodes within the municipality to the north. These nodes include the South Durban Basin, the Port of Durban, Durban CBD, Phoenix Industrial Pak, Umhlanga and nodes further north including the King Shaka Airport/ Dube Trade Port. The National Route (N2) is supported by a series of primary district collector roads (R102 & R603), local distributor routes (M14 & Seadoone Road) and rail infrastructure.

The R102 which runs parallel to the N2, acts as an alternative and supplementary route to the N2 providing a combination of accessibility and mobility to/from Illovo from/to the north and south.

Access between the Study Area and the N2 and R102 may be gained via a series of east-west local distributor routes. The most important of these east-west routes is the R603 (Sbu Mkhize Drive).

The route extends from R102 in the east at Winklespruit to the N3 at Camperdown approximately 17 km east of Pietermaritzburg (route length approximately 65km). The route therefore acts not only as the primary local distributor route traversing the Illovo area but also as a district level collector route which links the coastal regions to the south of the municipality to the western hinterland.

In addition, the P197 route extends between the Isipingo Rail Industrial areas in the north to the R603. The route traverses rural, urban residential and industrial/commercial areas. The P197-3 then extends south from the R603 beyond municipal boundaries. The existing road network is illustrated in Figure 5.7.
5.3 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED...)

Local Road Network
At a local level, the Illovo area may be accessed from the N2 and R102 via the R603 and the M14 (via Seadoon Road) local distributor routes (refer to Figure 5.9).

The R603 forms the primary east-west corridor through the Illovo area and should therefore cater for the mobility requirements of the area. The route consists of two lanes, one in each direction, with no direct access to the route from individual land-uses, except in the case of informal access. This limited access is in keeping with the R603’s function as a mobility route with limited access.

The R197 route traverses a north-south direction. To the north of the R603 the route lies along the Study Area boundary. This leg of the R197 Local Distributor route has limited connection to the Illovo road network, with access only via the R603 and Road 10584/ 10147(Urban Collector). This can be seen as a benefit and appropriate to the R197’s role as a mobility route.

A fragmented and incomplete system of urban collector routes services areas of Illovo. Completion of the urban collector system may be necessary in order to ensure a comprehensive road hierarchy. This would facilitate high levels of mobility along local distributor routes which are supplemented by a complete and extensive urban collector system which facilitates required levels of accessibility.
5.3 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED...)

Road Pavement Conditions
The eThekwini Transport Authority’s Pavement Management System (PMS) was used in order to assess the quality of the road pavement within the Study Area. Figure 5.9 shows the condition of the road network. The Visual Condition Index (VCI) rating indicates the condition of the road surface and ranges from very poor to very good.

Local/District Collector Routes: The PMS indicates that the pavement condition of the R603 and R197 has not been assessed. Both routes act as Local Distributor routes and are under the jurisdiction of the KZN Department of Transport.

Internal Roads: Of the roads that have been assessed by the eThekwini Transport Authority, the internal roads in the Study Area are for the most part in fair to very good condition. However, numerous roads, especially in the northern extremities of the Study Area have not been assessed, and may indicate a dire need for road improvement. In addition, some areas of Illovo have unpaved roads, which should receive attention.

Poor pavement conditions not only decreases user comfort, making journeys along them less attractive, but they also increases travel times and may raise issues concerning safety. Pavement conditions therefore have an impact on overall transport costs, safety and the attractiveness of a destination, i.e. the Study Area.

Road pavement structures have a limited life span due to various factors which include ageing, utilisation and lack of preventative maintenance. It is therefore necessary to continuously monitor, maintain, rehabilitate and upgrade roads part of its life cycle.
Public Transport Facilities

The eThekwini Municipality’s Current Public Transport Record (CPTR) was used to identify all public transport facilities within the Study Area. Table 5.1 contains a summary of relevant information for the various public transport facilities. The public transport facility locations and public transport service routes are illustrated in Figure 5.11 with catchment areas identified as 1 km radii (10 min walk) from each facility. A full summary of the CPTR public transport facilities data is located in Annexure B1.

<table>
<thead>
<tr>
<th>GPS No.</th>
<th>Name</th>
<th>Modes</th>
<th>Status</th>
<th>No. Of Bays</th>
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<td>Mini-Bus Taxi</td>
<td></td>
<td>81</td>
</tr>
<tr>
<td>C061</td>
<td>Kwa A (Illovo)</td>
<td>Mini-Bus Taxi</td>
<td></td>
<td>81</td>
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<td>B &amp; C (Illovo)</td>
<td>Mini-Bus Taxi</td>
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<td>81</td>
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<td>C077</td>
<td>Sitini</td>
<td>Mini-Bus Taxi</td>
<td></td>
<td>81</td>
</tr>
</tbody>
</table>

TABLE 5.1: PUBLIC TRANSPORT FACILITIES

Public transport facilities are located predominantly in the north western regions of the Illovo Study Area boundary. In addition, they are situated in close proximity to the R603 and Reeves Road, both of which are local distributor routes and both of which access the N2 corridor (Reeves road via Seadoone Road).
5.3 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED...)

Public Transport Routes

Public Transport routes were identified from the eThekwini Municipality’s Current Public Transport Records (CPTR). Figures 5.11 indicate the public transport routes utilised by mini-bus taxi and bus respectively, within the Study Area.

Data from the CPTR indicate that no bus routes traverse the Study Area and only mini-bus taxi routes service the Illovo Study Area. The routes serviced by mini-bus taxi are isolated to the north-western corner of the Study Area. The local distributor routes utilised to enter/leave Illovo are the R603 and Reeves Road. This indicates that the M14 is not utilised as a major public transport route.
5.4 TRAVEL DEMAND ASSESSMENT

Modal Split
The eThekwini Transport Authority’s Current Public Transport Record 2005, (CPTR) was utilised to estimate public transport demand patterns. As indicated in section 5.10 and 5.11 of this report, the Study Area is only served by mini-bus taxi facilities and route services. The mini bus taxi industry therefore enjoys a 100% share of the public transport market.

The eThekwini Transport Authority’s EMME/2 model was consulted in order to estimate the Public Transport: Private vehicle person trip modal split to/from the Illovo area. A summary of the data follows in Table 5.2. A full summary of the EMME2 data is included in Annexure B3.

Public Transport Routes
Public Transport routes were identified from the eThekwini Municipality’s Current Public Transport Records (CPTR). Figures 5.11 indicate the public transport routes utilised by mini-bus taxi and bus respectively, within the Study Area.

Data from the CPTR indicate that no bus routes traverse the Study Area and only mini-bus taxi routes service the Illovo Study Area. The routes serviced by mini-bus taxi are isolated to the northwestern corner of the Study Area. The local distributor routes utilised to enter/leave Illovo are the Reeves and Reeves Road.

Table 5.2 indicates a biased usage for public transport in both trips originating from Illovo as well as trips destined for Illovo. This is characteristic for the lower income population residing within Illovo and their corresponding dependency on public transport. The modal split for Illovo is closely comparable to the municipal modal split average of 60:40, PT:PVT.

Total Person Trip Distribution
The eThekwini Transport Authority’s EMME/2 model was used to estimate travel demand characteristics, for both public transport and private vehicle usage. A summary of person trips between Illovo and the major economic nodes in the eThekwini Municipality follows in Table 5.3. Figures 5.12 – 5.15 illustrates the person trip distribution between Illovo and these nodes.

<table>
<thead>
<tr>
<th>ORIGIN/DESTINATION</th>
<th>Origin Illovo</th>
<th>Destination Illovo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%PT</td>
<td>%PVT</td>
</tr>
<tr>
<td>Illovo</td>
<td>6.7</td>
<td>10.3</td>
</tr>
<tr>
<td>Adams Mission</td>
<td>4.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Amanzimtoti/Kingsburgh</td>
<td>11.0</td>
<td>23.1</td>
</tr>
<tr>
<td>DIA/Prospecton/Jaocbs/Merebank/Bluff</td>
<td>18.2</td>
<td>35.2</td>
</tr>
<tr>
<td>Durban CBD/ Harbour/Point/Berea/Springfield</td>
<td>30.9</td>
<td>11.3</td>
</tr>
<tr>
<td>Pinetown/New Germany/Westville</td>
<td>4.5</td>
<td>1.7</td>
</tr>
<tr>
<td>INK/Phoenix South Industrial</td>
<td>1.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Umlhlanga/Mt Edgecombe</td>
<td>3.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Chatsworth/Marianhill/Queensburgh</td>
<td>6.1</td>
<td>6.6</td>
</tr>
<tr>
<td>Umlazi</td>
<td>3.1</td>
<td>0.6</td>
</tr>
</tbody>
</table>

TABLE 5.3: EMME2 PERSON TRIP DISTRIBUTION

TABLE 5.2: EMME2 PT & PVT PERSON TRIP SUMMARY
5.4 TRAVEL DEMAND ASSESSMENT (CONTINUED...)

FIGURE 5.12: PUBLIC TRANSPORT PERSON TRIPS – ORIGIN ILLOVO

FIGURE 5.13: PUBLIC TRANSPORT PERSON TRIPS – DESTINATION
5.4 TRAVEL DEMAND ASSESSMENT (CONTINUED...)

FIGURE 5.14: PRIVATE TRANSPORT PERSON TRIPS – ORIGIN ILLOVO

FIGURE 5.15: PRIVATE TRANSPORT PERSON TRIPS – DESTINATION
5.4 TRAVEL DEMAND ASSESSMENT (CONTINUED...)

Public Transport Demand
Due to the absence of rail infrastructure within the Study Area as well as the absence of bus services in the Illovo area, public transport is limited to mini-bus taxi services. This being noted, it is possible that patrons utilise road based public and private transport to access rail services at one of the three stations in Kingsburgh to the east of Illovo.

The eThekwini Transport Authority’s (CPTR) was utilised in order to assess the mini-bus taxi demand in the Study Area. A detailed summary of the data is included in Annexure B2. The CPTR indicates an AM peak hour demand of 279 passengers during a weekday. This figure would seem intuitively low and is far less that that estimated by the municipality’s EMME2 model (Refer to Table 5.2). It can therefore be assumed that the CPTR survey of public transport trips in the area is inconclusive and does not provide an accurate indication of the demand.

Pedestrian Movement
Accident statistics obtained from the eThekwini Transport Authority indicates the number of accidents that have occurred in the Illovo area in 2008. Figure 5.16 indicates the distribution of these incidents throughout the Study Area.

Both vehicle and pedestrian accident sites within the Study Area are concentrated along the R603 and Reeves Road. This can be attributed to the higher volumes of traffic attracted to these routes due to their functions as local distributor routes as well as the fact that these routes are serviced by public transport operators. The resultant higher concentrations of vehicles and pedestrian movements thereby cause greater movement conflicts and higher probabilities of accidents.
5.4 TRAVEL DEMAND ASSESSMENT (CONTINUED...)

Freight Movement along R603

The R603 is strategically positioned between the N2 at Illovo and the N3 at Camperdown, approximately 17km east of Pietermaritzburg. The route length is approximately 65 km and bypasses not only the highly trafficked N2 and N3 in the heart of the eThekwini Municipality but also the Marianhill Toll Plaza along the N3.

The R603 therefore presents an attractive alternate route to the N2/N3 from the southern regions of the province. Information attained from the KZN Department of Transport’s Freight Database Website suggests that approximately 200 heavy goods vehicles utilise the route daily between Camperdown and Illovo in an easterly direction, and approximately 180 in the contraflow direction.

Future development aspirations of the Illovo area should take note of the potential which the R603 offers to catalyse economic activities that could take advantage of a logistics route. During the subsequent phases, this role of the R603 needs to be clearly defined based on the balance of facts.

5.5 SUMMARY OF CORE ISSUES

Regional accessibility
- The Illovo area is highly dependant on the N2 and R102 to the east for its integration with the rest of the municipality to the north; and
- The M14 local distributor offers the potential to strengthen links to the north, and in particular with Umlazi, Isipingo and the South Durban Basin.

Local Accessibility
- The R603 plays an important role as both a central mobility corridor through Illovo as well as a regional link to the N3 at Camperdown;
- Reeves/School/Seadoone Road plays an important role as a local distributor route and should be designated and managed accordingly;
- The function and integrity of the M14 (R197) and R603 as local distributors should be maintained by minimizing/controlling access along the route; and
- The incomplete network of urban collector roads should be improved upon in order to allow easy movement throughout Illovo via these urban collector routes.

Road Pavement Conditions
- Numerous roads within Illovo have not been assessed as part of the municipality’s Pavement Management system; and
- Some roads within the study have been identified as being in “poor condition”. In addition some roads are unsurfaced.

Public Transport
- The lack of rail facilities and bus services in Illovo limits patron choice of public transport mode. However, the optimum mode based on transport demand thresholds should always be promoted; and
- Routes serviced by public transport are limited to the R603, Reeves/School/Seadoone Road and the north western region of the Study Area.

Figure 5.17: KZN DOT ROAD FREIGHT TRAFFIC SURVEY

[SOURCE: HTTP://WWW.KZNTRANSPORT.GOV.ZA/PUBLIC_TRANS/FREIGHT_DATABANK/KZN/STATISTICS/ROAD_FREIGHT/INDEX.HTML]
5.5 SUMMARY OF CORE ISSUES (CONTINUED…)

Pedestrian Movement
- Appropriate pedestrian amenities should be provided along routes serviced by public transport.

Freight Movement
- The R603 has the potential to function as an alternative to the N2/N3 route between southern KZN and Camperdown. Development policies should be developed for the R603 and the route should be accordingly encourage/ discouraged as an alternative route.
6.1 INTRODUCTION

In order to ensure the above is achievable the current bulk service infrastructure needs to be investigated so as to ensure the services can cope with the current and future demands placed on the system. This report will focus on the following bulk services within the Study Area.

- Bulk Stormwater;
- Bulk Water;
- Bulk Sewer;
- Electricity; and
- Solid Waste Disposal.

The current capacities and infrastructure conditions of the above services will be discussed and the future possible upgrades necessary to cater for future developments.

6.2 STUDY AREA

The Study Area is located in both Ward 97 and Ward 98. The Study Area is located at the northern tip of Ward 98 and is bordered to the South West by the municipal boundary and the Ward boundary to the West.

To the north, the Study Area is bordered by Reeves road eastbound. The eastern boundary starts at the intersection of Reeves Road and Old Main, and follows the cadastral boundary south bound up to the Road R603, which is the main Road to Umbumbulu.

The boundary then follows the R603 eastbound to the N2, then southwards along the N2 up to the Illovo River. The South of the Study Area is bounded by the Illovo River west bound to the Municipal boundary in the West. The Study Area is approximately 16 km² in area as depicted in Figure 6.1

The land use was examined within the Study Area. The land use has a vital role in bulk services due to the fact that the type of land use determines the typical water demand and sewer outflow quantities. Figure 6.2 shows a plan plot of the land use within the Illovo region. The land use percentage is indicated in Figure 6.3 which illustrates that the Study Area comprises predominantly of undeveloped areas, followed by urban formal and per-urban areas.
6.2 STUDY AREA (CONTINUED...)

FIGURE 6.1: ILLOVO REGION

FIGURE 6.2: CURRENT LANDUSE WITHIN THE DEFINED STUDY AREA IN THE ILLOVO REGION
6.2 STUDY AREA (CONTINUED…)

6.3 ANALYSIS OF CURRENT & FUTURE SERVICE CAPACITY

Bulk Water

In order to determine a status quo assessment of the current water demand in the Illovo area, a discussion was held with Ms S. Ramkison (1 April 2009) from the eThekwini Water & Sanitation Department (EWS).

It was ascertained from the discussion that the Study Area currently receives its water supply predominantly from Amanzimtoti Water Treatment Works and the Durban Heights Reservoir (Reservoir Hills). It was determined that the current system is functioning effectively. Information relating to the network capacity is unknown. No known problems exist within the Illovo area.

The bulk water mains and water reticulation within the Study Area are depicted in Figure 6.4, and range in diameter from 28mm to 500mm. From Figure 6.4 it can be deduced that the total water pipeline coverage within the Study Area is extensive. Ms Ramkison indicated that plans are underway to utilise and rehabilitate a few reservoirs that are currently abandoned. This could be a possible supply for future developments. The pipe infrastructure is currently adequate but would need to be re-assessed on an individual basis for each proposed future development.

To undertake an analysis on an individual basis would typically involve the following:

- Determination of the maximum flow demand for the particular development in a given day by applying a peak factor, as prescribed in the “Guidelines for Human Settlement Planning and Design”.
- The water network should be sub-divided into segments based on pipeline diameter and locality, and
- The current capacities are then compared against the full capacity to determine if the system is operating at its maximum flow or not.
6.3 ANALYSIS OF CURRENT & FUTURE SERVICE CAPACITY (CONTINUED…)

In order to ascertain the current status of the sewer infrastructure located within the Study Area an interview was held with Mr D. Kruger (14 April 2009) of the eThekwini Water and Sanitation Department (EWS).

A graphical representation of the bulk sewer infrastructure including sewer reticulation located within the defined Study Area is depicted in Figure 6.5. The sewer pipeline diameters range from 110mm to 450mm. According to Mr. Kruger, the pump stations are currently functioning at capacity and are in need of upgrades. The capacity of the sewer network is unknown. The sewer is drained to the Kingsburgh Waste Water Treatment works, which has a hydraulic capacity of 5.85Ml/day and eThekwini have indicated that the Average Daily Flow is currently 4.27Ml/day.

The bulk sewer network coverage is extensive throughout the Illovo Township and scattered in other areas of the study region.

In order to determine the current capacity of the system the following methodology is proposed:

- The scale and type of development needs to be accurately determined;
- A survey needs to be undertaken to determine relevant connection points and relevant pipeline dimensions;
- The estimated Annual Average Daily Flow (AADF) with a prescribed peak factor needs to be estimated for each development node; and
- Drawdown tests for each individual pump station to assess the hydraulic capacity need to be undertaken.

A comprehensive analysis will need to be undertaken of the existing pump stations and sewer network within the study region. It is highly probable the sewer pipelines will need to upgraded and replaced to accommodate the additional flow resulting from new developments.
6.3 ANALYSIS OF CURRENT & FUTURE SERVICE CAPACITY (CONTINUED…)

**Storm Water**

In order to determine the current capacity of the stormwater system a meeting was held with Mr G. Shabane (25 March 2009) from the Coastal, Stormwater and Catchment Management Department of the eThekwini Engineering Unit.

According to eThekwini, stormwater infrastructure does exist in the urban areas but a large percentage of the stormwater pipeline data is missing as indicated in Figure 6.6. There are no known problems. Most reported problems are related to random blockages which are then cleared by the municipality.

As seen in Figure 6.6, the river network is extensive throughout the Study Area. This is a possible stormwater discharge point for future developments.

Although the existing stormwater as-built information has not yet been obtained, the following aspects can be considered to be of importance:

- The Illovo region currently consists of 43% of undeveloped areas, which means that there is a significant amount of groundwater infiltration. Any additional or new developments will result in an increase in capacity and have a major effect on the flow regime; and
- Once the data set of as-built plans for the stormwater system has been obtained, the capacity of the system should be tested for lower order rain events (1 in 1 and 1 in 2 year recurrence intervals) and also for higher order rain events (1 in 10 and 1 in 50 year recurrence intervals). This will identify key areas where stormwater overflows could occur.

eThekwini have stipulated that all new developments will need to ensure that the post development flows emanating from the site are attenuated down to the 1 in 10 year and 1 in 50 year pre-development flows as stipulated in the "eThekwini Design Manual for Guidelines and Policy for the Design of Stormwater Drainage and Stormwater Management Systems".
To ensure that new developments are not adversely affected by stormwater flow the following measures need to be undertaken:

- On-site attenuation as per municipality guidelines; and
- Resurveying and if necessary upgrading of municipal stormwater lines to cater for the stormwater runoff emanating from the site.

**FIGURE 6.6: BULK STORMWATER LINES**
6.3 ANALYSIS OF CURRENT & FUTURE SERVICE CAPACITY (CONTINUED…)

Electricity
To determine the current status of the electricity supply for the combined Study Area in the Illovo region a meeting was held with Mr R. Pillay (25 March 2009) of the eThekwini Electricity Department.

At the meeting it was determined that the electricity system in the Study Area is currently running at full capacity. The geographic layout of minor sub-stations, transformers and overhead electric cables are indicated on Figure 7.7 There are 3 Major sub-stations supplying the Study Area providing the majority of the electricity supply in the region at 11kV.

Plans are currently underway to construct a new major sub-station in this region in order to introduce additional capacity into the system. The new major sub-station is 4 x 30MV.

In order for the eThekwini Electricity Department to cater for future developments within the Study Area the following process needs to be followed. Once the scope and category of the development has been determined an application needs to be submitted to the eThekwini Electricity Department providing an estimate of the electrical load required by the proposed development.

eThekwini has indicated that in rural areas, free connections are made to developments at a radius of 120m from a mini-substation or transformer. The connection is extended if it is feasible i.e. more than one family living in the area.

Currently the electricity system can be considered to be running at capacity. Future upgrades to the existing systems will result in additional capacity in the Illovo region.

FIGURE 6.7: OVERHEAD ELECTRIC CABLES, TRANSFORMERS AND SUBSTATIONS LOCATED WITHIN THE STUDY AREA
Solid Waste Disposal

In order to determine the current situation with solid waste disposal in the Illovo region a meeting was held with Mr L Moodley of Durban Solid Waste (31 March 2009).

Currently the waste is being transported to the Bisasar Landfill Site and the Bulwar Drive Landfill Site. Mr Moodley has indicated that Bisaser Landfill Site is due to close in the next 5 to 10 years. He also indicated that Bulwar Drive Landfill Site in Chatsworth is close to capacity.

Future plans for the area include a new landfill in Illovo but there is currently a lands claim dispute with the community. The proposed landfill is estimated to have a capacity of approximately 100 ha and a design life of 75 years. The new landfill is planned to serve a large portion of the Southern region.

If the proposed landfill in Illovo is approved, then this landfill will be able to sufficiently cater for any new developments in the Study Area.

References

Kruger, Douw. 2009. Interview by Miss N.R.Naidoo. eThekwini Water & Sanitation Department, Durban, 14 April.
Austin, L.M., 2000, Guidelines for Human Settlement Planning and Design, CSIR.
Ramkison, Shalimar. 2009. Interview by Miss N.R. Naidoo. eThekwini Water & Sanitation Department, Durban, 1 April.
Pillay, Ronnie. 2009. Interview by Miss N.R.Naidoo. eThekwini Electricity Department, Durban, 25 March.
### STRATEGIC ISSUES

#### 7.1. ECONOMIC DEVELOPMENT CORE ISSUES

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>CORE ISSUE</th>
<th>IMPLICATIONS FOR PLANNING &amp; DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONOMIC DEVELOPMENT</td>
<td>Lack of strategic economic development vision for the South Coast of eThekwini</td>
<td>A clear economic development vision should be established for the Study Area.; The vision should feed into the debate on the economic development for the south coast</td>
</tr>
<tr>
<td></td>
<td>The future role of the Study Area in the regional economy</td>
<td>The future role of the Study Area will be a determining factor in decision-making around the location of public transport, commercial and social service activities, this will guide future investment.</td>
</tr>
<tr>
<td></td>
<td>Commercial nodes in the coastal strip does not serve the retail / commercial requirements of the Illovo population and beyond.</td>
<td>Additional retail and services development could be encouraged within the Study Area; The upgrading of the R197 access to Isipingo and the Durban CBD will be improved.</td>
</tr>
<tr>
<td></td>
<td>Limited job opportunities within a 10 kilometer radius of the Study Area.</td>
<td>Economic development opportunities in both the formal and the informal sector should be considered.</td>
</tr>
<tr>
<td></td>
<td>Absence of economic development in the Study Area</td>
<td>(As above)</td>
</tr>
<tr>
<td></td>
<td>Economic development opportunities around Illovo Village must be considered</td>
<td>Opportunities relating to the redevelopment of Illovo Village must be investigated and accommodated in the Local Area Plan.</td>
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### 7.1. ECONOMIC DEVELOPMENT CORE ISSUES (CONTINUED…)

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<thead>
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<tr>
<td>HOUSING</td>
<td>Focus needed on improving quality of housing in traditional settlement areas in and surrounding Study Area</td>
<td>Identify priority areas for upgrading of rural housing and infrastructure.</td>
</tr>
<tr>
<td>SOCIO-ECONOMIC</td>
<td>Limited social and government services available in the Study Area</td>
<td>Provide for the improvement of social and government services in the Study Area.</td>
</tr>
<tr>
<td></td>
<td>A large rural population outside the Study Area will benefit from improved social and government service delivery in the Study Area</td>
<td>When considering economic vision for the Study Area also consider the approaches to the improvement of service delivery</td>
</tr>
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### 7.2. SPATIAL PLANNING CORE ISSUES

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<th>SPATIAL PLANNING:</th>
<th>The need for, and implications of, spatial restructuring in the Regional Context must be considered as a prelude to spatial intervention at the local level.</th>
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<tbody>
<tr>
<td>Regional Restructuring Significance</td>
<td>Planning interventions within the Study Area must address the different roles served by the area, and Must look beyond local boundaries and development trends.</td>
</tr>
<tr>
<td>Interface between formal urban and traditional peri-urban areas</td>
<td>Planning within the Study Area must respond to differing systems of administration, yet seek to derive synergy for both systems through common spatial interventions.</td>
</tr>
<tr>
<td>Disparate Administrative and Planning Context</td>
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**ILLOVO LOCAL AREA PLAN: SPATIAL PLANNING FRAMEWORK**
### 7.2. SPATIAL PLANNING CORE ISSUES (CONTINUED…)

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<th>IMPLICATIONS FOR PLANNING &amp; DESIGN</th>
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<td>SPATIAL PLANNING:</td>
<td>Disparate Administrative and Planning Context</td>
<td>Planning within the Study Area must respond to differing systems of administration, yet seek to derive synergy for both systems through common spatial interventions.</td>
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<tr>
<td></td>
<td>Strong Regional Connectivity</td>
<td>Need for balance between mobility needs of regional systems, and deriving developmental energies and opportunities from such systems.</td>
</tr>
<tr>
<td></td>
<td>Underdeveloped District Connectivity</td>
<td>Need to strengthen district connector routes (Old Main Road, Reeves, etc) and reinforce their role in structuring development within the Study Area.</td>
</tr>
<tr>
<td></td>
<td>Fragmented Local Movement and Accessibility</td>
<td>Local patterns of connectivity within the Study Area need to be strengthened, and a logical system of accessibility developed, particularly in the interface between formal and traditional settlement areas.</td>
</tr>
<tr>
<td></td>
<td>Relatively Poor Public Transport Accessibility</td>
<td>Patterns of accessibility must be strengthened, with real accessibility to transport nodal points reinforced, and a logical distribution of such nodal points explored.</td>
</tr>
</tbody>
</table>
### 7.2. SPATIAL PLANNING CORE ISSUES (CONTINUED…)

<table>
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<tr>
<th>SECTOR</th>
<th>CORE ISSUE</th>
<th>IMPLICATIONS FOR PLANNING &amp; DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPATIAL PLANNING:</td>
<td>Significant Regional</td>
<td>Environmental systems must be reinforced as part of the spatial structuring systems guiding</td>
</tr>
<tr>
<td></td>
<td>Environmental Systems</td>
<td>development, and reinforcing a positive relationship between built and unbuilt systems must become</td>
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<tr>
<td></td>
<td></td>
<td>integral to intervening in the area.</td>
</tr>
<tr>
<td></td>
<td>Economic Opportunity a</td>
<td>The potential for higher-order economic development within the Study Area is limited, and the focus</td>
</tr>
<tr>
<td></td>
<td>Regional Patterns</td>
<td>must be on protecting and growing local economic opportunities, and integrating more effectively with</td>
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<tr>
<td></td>
<td></td>
<td>the regional system. The approach thus becomes one of “Getting the Basics Right”.</td>
</tr>
<tr>
<td></td>
<td>The Role of Agriculture</td>
<td>Current planning must explore a positive interface with productive agricultural land, and seek to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assimilate these areas as part of a logical development pattern.</td>
</tr>
<tr>
<td></td>
<td>The Potential of Illovo</td>
<td>The potential for extending the role served by this potential node in the Study Area must be explored</td>
</tr>
<tr>
<td></td>
<td>Village</td>
<td>with reference to longer term regional connectivity and development trends.</td>
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</tbody>
</table>
### 7.2. SPATIAL PLANNING CORE ISSUES (CONTINUED…)

<table>
<thead>
<tr>
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<tr>
<td>SPATIAL PLANNING:</td>
<td>Inequitable patterns of service provision.</td>
<td>The location of facilities and services must be informed by local patterns of accessibility, and the localised development of such facilities must respond to the immediate context, and a broader public space framework.</td>
</tr>
<tr>
<td></td>
<td>Inequitable patterns of service provision.</td>
<td>The location of facilities and services must be informed by local patterns of accessibility, and the localised development of such facilities must respond to the immediate context, and a broader public space framework.</td>
</tr>
<tr>
<td></td>
<td>Limited local economic potential.</td>
<td>Existing local economic opportunities must be protected and enhanced, and integrated into a broader “Capital Web” of longer term capital investment.</td>
</tr>
<tr>
<td></td>
<td>Poor legibility and imageability</td>
<td>Local intervention should seek to reinforce the overall legibility of the Study Area, providing clarity and logic in movement, structured and identifiable public space networks, and a generally improved quality in the urban environment, an approach contributing to “Getting the Basics Right”.</td>
</tr>
</tbody>
</table>
### 7.3. ENVIRONMENTAL CORE ISSUES

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>ENVIRONMENT</td>
<td>Dense alien infestation</td>
<td>A program will need to be designed and budgeted for.</td>
</tr>
<tr>
<td></td>
<td>High wetland potential within the area</td>
<td>Wetland Delineation and Functional Assessment will be required if an area containing a potential wetland is proposed for development. Exclusion of wetlands and buffer zones from development.</td>
</tr>
<tr>
<td></td>
<td>Poor condition of rivers / estuaries, associated riparian zones and cross catchment links</td>
<td>Rehabilitation program to be designed and budgeted for. Consideration need to be given to include valuable areas e.g., cross catchment link identified into DMOSS for protection (currently earmarked for housing development).</td>
</tr>
<tr>
<td></td>
<td>Regions containing natural vegetation in good / moderate health</td>
<td>No-go development zones (particularly on the Study Areas western border).</td>
</tr>
<tr>
<td></td>
<td>Known and potential heritage sites within the Study Area</td>
<td>HIAs may be required prior to implementation of precinct plans. Exclusion of heritage sites from development planning.</td>
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</tbody>
</table>
### 7.3. ENVIRONMENTAL CORE ISSUES (CONTINUED…)

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<tr>
<td></td>
<td></td>
<td>Exclusion of heritage sites from development planning.</td>
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<tr>
<td></td>
<td>Geotechnical no-go zones</td>
<td>Geology needs to be considered during planning</td>
</tr>
<tr>
<td></td>
<td>D’MOSS and land use zoning</td>
<td>All D’MOSS areas must be demarcated during planning and excluded from development.</td>
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<tr>
<td></td>
<td></td>
<td>Smaller pockets of indigenous vegetation adjacent existing DMOSS areas</td>
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<tr>
<td></td>
<td>Agricultural Potential and conflicting land use</td>
<td>Plans are to obey land use zoning</td>
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<tr>
<td></td>
<td></td>
<td>Conflicting existing and planned land uses need to be resolved (i.e.: agriculture vs. other development, as well as need to conserve and rehabilitate valuable riparian zones).</td>
</tr>
</tbody>
</table>
### 7.4. TRAFFIC AND TRANSPORT CORE ISSUES

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>TRAFFIC AND TRANSPORTATION</td>
<td>Regional accessibility</td>
<td>Strengthen access to these routes</td>
</tr>
<tr>
<td></td>
<td>Local accessibility</td>
<td>Ensure that routes maintain their functions as local accessibility links; Complete the network of urban collector routes</td>
</tr>
<tr>
<td></td>
<td>Road Pavement Condition</td>
<td>Assessment of roads should be completed</td>
</tr>
<tr>
<td></td>
<td>Public Transport</td>
<td>Improved public transport services access and improved service routes</td>
</tr>
<tr>
<td></td>
<td>Pedestrian Movement</td>
<td>Appropriate pedestrian amenities at high conflict zones</td>
</tr>
<tr>
<td></td>
<td>Freight Movement</td>
<td>Identify role of R603</td>
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</tbody>
</table>
## 7.5. INFRASTRUCTURE CORE ISSUES

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>INFRASTRUCTURE</td>
<td>Bulk Water</td>
<td>The pipe infrastructure is currently adequate but would need to be re-assessed on an individual basis for each proposed future development.</td>
</tr>
<tr>
<td></td>
<td>Waste Water</td>
<td>A comprehensive analysis will need to be undertaken of the existing pump stations and sewer network within the study region.</td>
</tr>
<tr>
<td></td>
<td>Stormwater</td>
<td>eThekwini have stipulated that all new developments will need to ensure that the post development flows emanating from the site are attenuated down to the 1 in 10 year and 1 in 50 year pre-development flows</td>
</tr>
<tr>
<td></td>
<td>Electricity</td>
<td>Once the scope and category of the development has been determined an application needs to be submitted to the eThekwini Electricity Department providing an estimate of the electrical load required by the proposed development.</td>
</tr>
<tr>
<td></td>
<td>Solid Waste Disposal</td>
<td>Future plans for the neighbouring area include a new landfill in Illovo but there is currently a land claim dispute with the community.</td>
</tr>
</tbody>
</table>
# APPROACH

## 8.1. DEFINING A REGIONAL ROLE

<table>
<thead>
<tr>
<th>THE STATUS QUO</th>
<th>FUTURE ROLE</th>
<th>APPROACH</th>
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<tbody>
<tr>
<td>The Illovo LAP area, and its component parts, serves as a dormitory township in the eThekwini Municipality. Because of the location of the area in relation to existing settlement and regional access routes the opportunity does, however, exist for the area to fulfil a larger regional role. The LAP area thus performs a role similar to that fulfilled by Verulam and Tongaat to the north of Durban, making retail, commercial and social services more accessible to the vast rural population to the west and south of the Illovo area.</td>
<td>The Illovo LAP area has the potential to fulfil a southern gateway role in the eThekwini context. Retail, manufacturing and tourism / leisure opportunities combined with higher density housing could create a unique mix of uses that areas such as Winklespruit, Amanzimtoti and Isipingo can not. The location of Illovo in relation to the R603 and the R197 and the extensive rural population to the west and south makes this possible.</td>
<td>The basis of the approach will be to: • Obtain institutional support for the approach; • Improve accessibility; • Guide land development processes; and • Create economic opportunities.</td>
</tr>
</tbody>
</table>
8.1. DEFINING A REGIONAL ROLE (CONTINUED…)

Institutional support:
In order for the Illovo LAP area to fulfil a broader regional role institutional support for this concept is essential. Adequate resources will have to be allocated to a number of strategic projects. Strategic projects in this context will include the establishment of the R197 as an alternative north-south corridor to the N2, the recognition of the potential future role of the R603 in terms of the regional transport network, the development of a larger business area (possibly linked directly to the R197), the establishment of economic opportunities at scale in areas to the south of the Illovo River.

Improve accessibility:
Accessibility to the Illovo LAP area will have to be dramatically improved for the area to assume regional role. Specifically the upgrading of the R97 is crucial.

Guide land development:
Substantial areas of vacant or under-utilised land presenting opportunities for greenfields development are available. These areas should be identified and land use management guidelines for such areas must be developed.

Create economic opportunities:
For development in the Illovo area to be sustainable local business and job opportunities will have to be created at scale.

CHALLENGES / TRIGGERS
The following challenges have been identified as possible triggers which could potentially produce adverse effects for the intended role of the Illovo area.

- Establishment of the R197 as an alternative movement corridor to the N2 corridor and the construction of appropriate linkages;
- Resolving the future role of the R603 on a regional level, specifically in relation to carrying freight;
- The roles of nodes currently located at Adams Mission and Umbumbulu Village;
- Establishing economic and job opportunities in the Illovo Village and surrounding areas.
8.1. DEFINING A REGIONAL ROLE (CONTINUED…)

EThekwini Municipality’s (EM) Quality of Life Survey is intended to enable decision makers to respond to the voices of the people.

This survey has been conducted yearly since 1998 to measure EM’s 2020 vision. EM’s vision is to grow its economy by meeting people’s needs so that people can enjoy a high quality of life with equal opportunities.

The survey focuses on the CBD as well as the Durban surrounds (e.g. suburbs and townships) with very little attention to rural areas within the boundary of eThekwini Municipality. Illovo is located south of Durban and is on the fringes of the municipality.

The survey reveals that “for people to be satisfied with life, they must be in good health, have a reasonable standard of living, and have access to basic services as well as community amenities.

Therefore, decision makers in an effort to improve the quality of life of its citizens must ensure that development programmes deliver ways that will have the most impact on the satisfaction with life” (Quality of Life survey 2005; page 50).

To help achieve a better quality of life for Illovo its Local Area Plan must be informed by an approach which focuses on an improved standard of living, better health care services and municipal services (e.g. clean water, sanitation, electricity and regular refuse removal). In a nutshell the LAP must seek to provide a general improvement of the social well being.

Health
The main determinant of a good quality of life is good health. Those living below the bread line (e.g. R 1 500 per month) struggle to make ends meet. There are approximately 41, 5% of these families within eThekwini Municipality and when they get sick; they have to rely on public health facilities because they cannot afford private health care. In rural areas Multi Purpose Community Centres are built to help address the dire need for health services in these areas.

Improved health extends to provision of basic services such as clean water, electricity, sanitation and regular refuse removal. If these services are not available or not easily accessible, then one cannot have a good quality of life.

Standard of Living
Currently approximately 42% of people within the municipality are unemployed and it is higher than the provincial average. Having a job to support one’s family makes a big difference in how people feel about the quality of life. When one is employed they are not dependent on other people for their well being and for the well being of their family. As more people get jobs their satisfaction increases.

Education is another key component to having an improved standard of living. Limited or inadequate access to education increases the propensity of entrapment for people to stay within poverty cycle.

Social Well Being
Home ownership gives the provider and the family alike a sense of security. People with homes take this for granted, but for the poor it gives them a sense of belonging, as a family provider, as family members and as members of a broader community. An improved standard of living can be seen through access to a decent home.

Access to Services
When decision makers make plans to improve the standard of living in disadvantaged areas adequate care must be taken to provide access
to good health care facilities, access to education and adequate police protection.

Access to public services such as community halls, sports facilities, clinics, police services, libraries, parks, crèches, and postal services all improve the quality of life.

Easy access to public transport is vital for the poor. This helps them to get to work and school on time, both of which contribute to an improved quality of life.

**INSTITUTIONAL ARRANGEMENTS**

Human settlement patterns in Illovo can be characterised as peri-urban and rural. The management of the peri-urban areas fall under the municipality while the management of the rural areas fall under Amakhosi or the Traditional Authority. Each has a distinct and different way of management.

EM’s 2020 vision which is to provide an improved quality of life with equal opportunities to all its citizens must take cognisance of these different institutional arrangements. The management methodology of each has to be analysed and adapted to ensure that conflict is eliminated or minimized during the implementation of services which will help improve the quality of life of eThekwini Municipalities’ citizens.
GOALS & OBJECTIVES

9.1. OVERVIEW

REGIONAL GOALS
- Regional positioning as the southern gateway within eThekwini

LOCAL GOALS
- Goal 1 - Promote & Enhance Accessibility
- Goal 2 - Promote Diversity & Choice
- Goal 3 - Safe & Secure Environments
- Goal 4 - Imageability
- Goal 5 - Building a Viable Local Economy
- Goal 6 - Promote & Improve Public Transport
- Goal 7 - Sustainable Services & Facilities
- Goal 8 - Access to and Protection of Natural Environment
- Goal 9 - Appropriate Settlement Form
9.2. GOAL 1 - PROMOTE AND ENHANCE ACCESSIBILITY

**DESCRIPTION**
Intervention within the Illovo LAP area should enhance accessibility to local and regional opportunities and facilities/activities. Such accessibility is based fundamentally on the movement network that exists in the area, the interceptory points within this network, and the public transport systems that operate within this system. The framework should seek to establish a basic level of service that operates at the lowest level of accessibility (Pedestrian).

**OBJECTIVES**
- Access to urban social opportunities
  Spatial intervention in Illovo should ensure acceptable levels of service provision are facilitated in a logical and spatially equitable manner.
  - **Walkability**
    Residents should have access a basic level of urban service within a 5-minute walking radius.
  - **Access local opportunities**
    Intervention should improve accessibility to opportunities that exist in the study area as a whole, as well as in adjoining parts of the urban system.
  - **Integration of Services**
    Intervention should explore options for the integration of services through the application of lateral integration of facilities across sectors and ‘marrying’ similar scaled facilities within the same locale.
  - **Hierarchal Structure/Location**
    The ability to access certain types of facilities should be based on the level or hierarchy of facility.

**PERFORMANCE CRITERIA**
- Appropriate level of service provision based on current and future population;
- Measurable increase in basic levels of service provision;
- Measurable increase in range of facilities and activities within defined threshold areas;
- Measurable increase in public transport capacity and utilisation; and
- Higher levels of connectivity in the physical movement network (Measured through axial mapping)

**SPATIAL RELEVANCE**
- Making connections in the movement network at different levels (neighborhood, local, regional);
- Build on the generative capacity of movement systems at different levels within the structure; and
- Identifying a hierarchy of nodal points based on levels of accessibility and connectivity to the regional network.
9.3. GOAL 2 - PROMOTE DIVERSITY & CHOICE

DESCRIPTION
Environments which perform well for people are those which afford maximum choice. The idea is to create multi use environments with increasing levels of choice, opportunity and diversity. The emphasis should be based on the sharing of facilities and break the norm of one site, one use approach.

OBJECTIVES
Offer easy access to diversity of commercial, retail, education, health, employment, recreation, entertainment, cultural & public facilities and activities.
Allow for an integration (sharing of facilities) as well as an overlap of activities.
Allow for diversity of activities to establish variety of experiences, choices & opportunities. This can be achieved by the creation of multi use nodes.

PERFORMANCE CRITERIA
• Walk ability: Most services and facilities should be within a 5-10 minute walk from both the workplace and home;
• Connectivity: An inter-connected network that disperses traffic easily and makes walking easy. Mix of Uses: A range of diverse mix of uses based on the local needs of the community can be accommodated and is accessible; and
• Increasing density: It is very important to promote ease of walking, as well as a more efficient use of resources and services.

SPATIAL RELEVANCE
• Creation of a hierarchy of nodes that overlap sufficiently to reinforce continuity;
• The nodes should contain a diverse mix of uses with the primary nodes located along main activity spines;
• The nodes should be accessible for cars and people. There should be sufficient pedestrian paths that connects to the nodes from all parts; and
• Any new development should promote clustering and sharing of uses.

It is important that the main economic centres within Illovo are accessible for all residents. These areas need to contain a range of activities to serve the local population. The need for specific uses at each node needs to be established and may vary in regard to the provision of facilities and services. The over arching aim for Illovo is to ensure that each is node is self sustaining and will not depend on another form of basic services.
9.4. GOAL 3 – SAFE & SECURE ENVIRONMENTS

DESCRIPTION
The creation of safe and secure environments is essential in order to safeguard communities from both social and environmental vulnerabilities.

OBJECTIVES
- Reduce degree to which natural or social systems are at risk to damages or losses due to natural phenomenon;
- Rehabilitation to enhance eco-system services;
- Defensible design;
- Creation of safety havens for threatened people;
- Encourage safety in order to assist in crime prevention;
- Provide for safer pedestrian crossings;
- Location of services e.g. satellite police station within close proximity to civic centre; and
- Ensure public places and education facilities are correctly fenced.

PERFORMANCE CRITERIA
- Safety homes for vulnerable groups;
- Alien Vegetation Removal Programmes;
- Rehabilitation of degraded wetlands / riparian areas;
- Floodline analysis within Illovo floodplain prior to any development in that area; and
- Creation of DMOSS corridors / inter-catchment links.

SPATIAL RELEVANCE
Smaller drainage lines within Illovo Township need to be protected and excluded from development.

Potential for inter-catchment link between Manzimtoti and Little Manzimtoti Rivers within Bhekulwandle.

Protection of inter-catchment link within Kingsburgh West is required.

No further development within Illovo Estuary and River floodplain.

Places of safety to be included in easily accessible, well lit civic areas (need for privacy needs to be considered).
9.5. GOAL 4 – IMAGEABILITY

DESCRIPTION

Intervention within the Illovo LAP area should seek to enhance the overall character and identity of the study area (and its component areas), celebrate spatial connections with the past, and establish a logic to the spatial configuration and functioning of the existing and future settlement structure.

OBJECTIVES

**Sense of identity**
Celebrating uniqueness and overcoming the mediocrity of low-income settlement by celebrating unique visual and functional elements within a identifiable and relevant structure.

**Sense of community**
Establish the basis for a meaningful public environment within the Illovo LAP area, one that is logically structured, relevant, and can be imbued with meaning by those who use it.

**Heritage**
Enable heritage elements to be protected and incorporated into the spatial structure of spaces and places within Illovo.

PERFORMANCE CRITERIA

- Incorporation of identified visual elements into the spatial structure;
- Incorporation of identified heritage elements into the spatial structure; and
- Logical hierarchy and related procession of public spaces and activity areas

SPATIAL RELEVANCE

- Identifiable districts or areas of spatial cohesiveness;
- Visual connections;
- Significant visual gateways to define points of arrival or uniqueness;
- Logical and hierarchal open space structure;
- Incorporation of temporal layers (layering of history/heritage, etc); and
- Protection of significant visual elements.

The lack of true identity and imageability in the Illovo LAP area can be attributed to the (planned) marginalized nature of the settlement, as well as the transitional location of the area between established formal areas and traditional settlement areas, with the area having taken on a relatively monotonous character.
9.6. GOAL 5 – BUILDING A VIABLE LOCAL ECONOMY

DESCRIPTION

A vibrant local economy is to be established in the Illovo LAP area. Such an economy will provide both job and business opportunities, as well as improved access to goods and services for local people.

Each of the precincts within the LAP area offers unique opportunities. These range from tourism related to manufacturing and production related opportunities.

OBJECTIVES

- To provide easy access for local residents to as wide a range of retail, commercial and other services as possible;
- To establish local markets both serving local people, but also providing for an opportunity to market items produced locally;
- To facilitate entrepreneurship development, skills development and job creation locally improving livelihoods on a local and regional level; and
- To provide opportunities for commercial development that will create the opportunity for the Illovo area to fulfil the role of a commercial gateway for the rural population residing to the south of Amanzimtoti.

PERFORMANCE CRITERIA

- Land availability: Land available for commercial and economic development in key locations.
- Jobs created: Temporary and permanent job opportunities created in the study area.
- Business opportunities: Business opportunities created for local entrepreneurs.
- Range of services on offer: CBDs usually offer a full range of commercial and social services. The ultimate would be for Illovo to offer such a full range of services.
- Number of visitors: Visitors from local areas and wider region making use of facilities related to Illovo.

SPATIAL RELEVANCE

Each precinct in the Illovo LAP area will make a unique contribution in terms of economic development:

- Lower Illovo River Valley: Residential and tourism related opportunities;
- Illovo Village: Small scale manufacturing and service industries;
- Illovo Settlement Area (central): New commercial and facility development focussed on local needs;
- Illovo Settlement Area (east): New commercial and facility development focussed on regional needs in regional catchment; and
- General: Construction and related opportunities.
9.7. GOAL 6 – PROMOTE & IMPROVE PUBLIC TRANSPORT

DESCRIPTION

Low income groups are often unable to access private transport. They are therefore a captive market of the public transport industry which forms their only link to economic and employment markets. The prioritisation of public transport over private transport is a policy decision outlined by the eThekwini IIDP (2007-2008). Public transport systems and services must meet the needs of the end user and are safe, reliable, effective, efficient, affordable and integrated[eThekwini ITP, 2005-2010].

OBJECTIVES

The objectives of public transport provision should be in line with the overall municipal objectives while still addressing the unique needs of the Illovo residents.

Integration: Public transport provision within Illovo should work in conjunction with the greater municipal system in order to gain maximum benefits from investments in the municipal transport infrastructure.

Accessibility: The ease of access to public transport dictates modes used as well as overall travel times. Public transport should be accessible by all residents within a 10min walk.

Safe: Safety of service modes, public transport facilities and in accessing facilities and services are critical factors used by commuters in deciding whether to use private or public transport and which mode of public transport to use.

Reliable: Public transport should be reliable ensuring that the service is available at scheduled times or specified frequencies.

Effective: Public transport routes and services should address the demand patterns of commuters, by providing the required service routes at an acceptable frequency.

Efficient: Public transport should function efficiently through the operation of appropriate modes for the prevailing demand volumes while still providing appropriate service frequency.

Affordable: Public transport operations must consider the financial implications on both the commuters as well as the operators. A balance must thus be achieved in order to provide an appropriately priced service which is still profitable for operators.

PERFORMANCE CRITERIA

Accessibility: Public transport facilities or routes should be accessible by commuters within 10min.

Safety: Pedestrian facilities (sidewalks, crossings and lighting) should be provided along the major public transport routes. Reliability and Effectiveness: Public transport operators should service routes at appropriate and predictable frequencies (5-10 minutes).

Affordability and Integration: The appropriate mode of public transport should operate within the area considering the demand volumes. Multiple modes operating singular routes should be avoided. Modal transfer should be promoted where trip lengths, volumes and frequencies dictate.

SPATIAL RELEVANCE

Operation of an affordable and effective public transport system facilitating the movement of commuters between Illovo and the greater eThekwini Municipality. Retention of public transport patrons and promotion of public transport, thus reducing private vehicle dependence and ensuring more efficient use of transportation infrastructure.
DESCRIPTION

In order to ensure sustainability of services within the project area, any development within the project footprint needs to address the current and future needs of the community while still effectively and efficiently using bulk infrastructure through appropriate development form and densification.

OBJECTIVES

The objectives of service provision should be in line with municipal objectives whilst addressing the needs of the community.

Promotion of high-density developments to maximise benefit of service infrastructure systems. Consolidation of demand in this fashion will eliminate the use of extensive distribution networks, pump stations and reservoirs for the project area in terms of sewer and water.

Storm water control becomes critical in this scenario of high-density developments as the increased run-off needs to be attenuated as to not impact on the natural water courses.

Electricity bulk infrastructure to be upgraded to cater for future developments.

Densification will also allow for smaller extent to potentially impact on environment and sensitive ecosystems.

Research and implement where possible renewable energy technologies / water and energy efficient principles for bulk infrastructural delivery.

PERFORMANCE CRITERIA

Service delivery: Existing backlogs should be identified and phased service delivery should be planned and progress monitored.

Maximising Infrastructure: New infrastructure to be connected with existing infrastructure to allow for ease of construction, operation and maintenance.

SPATIAL RELEVANCE

Development formats must be consolidated and densified in order to reduce urban sprawl, infrastructure spend and accelerate service delivery.

These development should be strategically located to maximise the use of existing infrastructure thereby reducing infrastructure spend.
9.9. GOAL 8: ACCESS TO AND PROTECTION OF THE NATURAL ENVIRONMENT

DESCRIPTION
Natural resources of the City have large economic and ecological benefits. Opportunities for protection and sustainable use of resources to benefit the Illovo community need to be enhanced. The balancing of social, economic and environmental needs of the area must result in the efficient use of all resources to ensure all development occurs within the carrying capacity of the natural surroundings.

OBJECTIVES
- Protection of conservation worthy areas;
- Creation and use of buffers as potential recreation areas;
- Creation and maintenance of productive / sustainable landscapes through the encouragement of sustainable resource use; and
- Opportunities to support the City’s 2010 Greening Programme eg. Carbon sequestration / rainfall harvesting.

PERFORMANCE CRITERIA
- Controlled grazing of livestock;
- Inclusion of additional land parcels into formal D’MOSS system for protection;
- Creation of open spaces for recreational use within built areas (protects against dumping of waste/ informal settlement etc); and
- Number of opportunities to support 2010 Greening e.g. planting trees to offset increased carbon emissions.

SPATIAL RELEVANCE
- Creation of “green lungs” in built up areas e.g. Illovo Township/ Illovo Village;
- Potential DMOSS buffer around Cemetery site on Western boundary;
- Extensive rehabilitation and protection of Illovo Estuary as an important ecosystem and habitat; and
- Seek opportunities for sustainable resource use e.g. Muthi harvesting in open spaces of traditional areas e.g. Bhekulwandle.

The study area is densely populated, with formal and informal residential areas and sugarcane plantations forming the dominant land use, there exists a large portion of natural areas containing valuable ecosystems – some of which is included in DMOSS.
9.10. GOAL 9: APPROPRIATE SETTLEMENT FORM

**DESCRIPTION**

Intervention within the Illovo LAP area should seek to promote a form of settlement that is generative in nature, responsive to the needs and potentials of the people and place, flexible to accommodate a range of development responses, and robust in its ability to maintain a spatial logic through successive elaborations of growth and change over time.

The existing pattern of settlement in the formal Illovo areas is generally mono-functional in nature, and whilst there is scope for diversification in some areas, this has not taken place as initially envisaged. The Bhekulwandle area has its own challenges in this regard, being more sparsely populated, and less structurally integrated, limiting existing potential for the establishment of areas of greater intensity and diversity.

**OBJECTIVES**

**Structural Logic**
Establish a logical and hierarchal system of nodes and corridors as basis for locating higher orders of facilities and activities.

**Compaction & Densification**
Promote higher density development through a logical structure.

**Permeability**
To enhance a system of movement which offers a variety of choice for people.

**Vertical mixed-use**
Creating opportunities for mixed-use structures within appropriate locations in the structure.

**Multi-functional Facilities**
Promote the multifunctional planning and use of key social facilities.

**Efficiency**
Space standards should maximize space utilization and achieve higher levels of overlap and integration.

**PERFORMANCE CRITERIA**

- Identifiable system of nodes and corridors of different intensities and diversities;
- Measurable increase in densities within appropriate areas of the LAP Area;
- Measurable increase in overlap of activities in identified nodal areas; and
- Measurable decrease in space utilisation of key facilities and activities.

**SPATIAL RELEVANCE**

- Hierarchy of Nodes of varying intensity and functional diversity;
- Hierarchy of linear development elements (Corridors/spines);
- Adaptable block and subdivision structure; and
- Progressive network/structure of public space relative to activity intensities and location.
Given the above issues, it is imperative that intervention within the Illovo LAP Area must fundamentally be directed towards ensuring responsive and sustainable development through appropriate capital infrastructure investment, and the spatial ideas that emanate from the current process must be aligned with this goal.

Whilst the current process is not necessarily intended as a spatial planning exercise, it is important that certain spatial concepts underpinning a way forward are explored.

A key underlying approach is understanding urban design as a strategic response and the findings of this phase of work as laying the skeleton and structure around which local action occurs with the guidance of the broader framework.
10.2. DEVELOPING A STRUCTURAL LOGIC

It is imperative that the concepts in this document are viewed as such, and not as a fixed master plan that predicts absolute truths. Each action emerging from such needs detail review and refinement and consequently its shape being made more beautiful over time.

The most memorable cities and places are those that are not derived from a product based design, but are those which are crafted by the vision of many. These actions of course need to be guided so as to maximise on positive impacts, avoid diseconomies and conflict and which allows development to be phased over time depending on budget, local conditions and the will of actors.

It is this level of intervention that is required in Illovo LAP Area, namely the determination of a broad level system of movement lines and connections, predicated on a system of public transport that is not only sustainable, but a driving force of energy and opportunity, that becomes the point of departure for a spatial concept for the area.

In this regard, the precepts of the development framework, and the focus of the current study must be on defining this broad structure of movement, and public transport, in a manner that establishes the logic to growth and development over time, and not so much on attempting to define, in infinite detail, the scale and nature of uses and activities that occupy the areas defined by this lattice.

The proposals are based fundamentally on investment in a system of movement elements that underpin the Illovo LAP Area and provide a basic lattice that will enable development to unfold over time in a way that is more aligned with the broader Goals and Objectives of the current exercise. The diagrams on the following page illustrate a proposal for such a system.
The starting point of such a concept is to define a movement system with Public Transport as its most basic level of rationale.

With this as a basis, we define an open space lattice that overlays and complements the movement system;

Lastly, we define a process, matched by a non-specific site allocation system, that ensures that investment in social facilities and amenities can always keep up with urban growth.
10.3. DEFINING THE MOVEMENT SYSTEM

DEFINING THE MOVEMENT SYSTEM

Building on what Exists.
The basis of a framework to facilitate the longer term development of the broader Illovo LAP Area must build on the elements of structure and form that exist in the area. These elements include:

- The N2 Freeway to the south-east of the Study Area;
- The R603, running through the study area from the N2 in a generally northerly direction, ultimately linking to Camperdown;
- Reeves Road, forming the northern boundary of the site; and
- The R197 (Old Main Road), providing an alternative to the main N2 based coastal corridor.

Investment in transport infrastructure within Illovo LAP Area must seek to integrate with these existing systems, but at the same time address the shortcomings of the existing network.
10.3. DEFINING THE MOVEMENT SYSTEM (CONTINUED…)

The Importance of Connectivity

The basis of a framework to facilitate the longer term development of Illovo LAP Area must build on the elements of structure and form.

The adjoining axial line integration analysis shows the fundamental pattern of connectivity that exists in the study area.

Integrated spaces (routes) play a key role in the performance of the urban environment. The areas defined by such links are more frequently visited and used, and tend to be more legible.

Defining a movement network for the Illovo area must seek to maximise existing connectivity, and reinforce future patterns. Appropriate points of connection, which build on existing strengths, emerge from the analysis.
10.3. DEFINING THE MOVEMENT SYSTEM (CONTINUED…)
10.3. DEFINING THE MOVEMENT SYSTEM (CONTINUED...)

The Public Transport Prerogative

The ability of the Illovo LAP Area to provide sustainable development opportunities, and assimilate growth in a way that provides qualitative urban opportunities, is dependant on a need to view public transport not as a "nice-to-have" addition to a pattern of development, but as a basic prerequisite for a positive structure for growth in the region.

Rail Network adjoining the study area, with Winklespruit Station the closest access point.

Walking catchments around existing Minibus Taxi service points.
10.4. DEFINING AN OPEN SPACE LATTICE

The broad framework proposals have at their core a commitment to assimilating future growth and development around a movement system, predicated on public transport, and an open space lattice that overlays and compliments the movement system.

The current study has focused on the precepts of the movement system, and what is required in the future phases of the initiative is the identification and elaboration of a broad based open space lattice for the Illovo LAP Area.

The primary starting point within regional space should be the natural base as a structuring system. The basis of such a lattice already exists in the region, in the form of existing natural and related structural elements, such as:

- The river systems;
- Open space and wetland areas associated with the rivers and dams;
- Significant topographic features in the form of prominent ridges and high points; and
- The Coastal forest in the west of the site.

These elements should form the basis of a regional scale open space lattice that becomes a dominant structuring element, working in synergy with the movement framework and associated public transport system, that give direction and form to growth and development as it accretes around this lattice over time. To this end, it is as important to define the edge, establish hierarchies and nurture meaning within this space.

Continuity in the green structure is also required from an ecological and habitat point of view. Freeway reserve zones, valley systems, places of dense natural vegetation, all offer clues in establishing and stitching together a network of open space corridors.

The regional scale lattice of movement overlaid on the natural system provides the basic structure and logic for guiding growth.

Continuity in the green structure is also required from an ecological and habitat point of view. Freeway reserve zones, valley systems, places of dense natural vegetation, all offer clues in establishing and stitching together a network of open space corridors.
10.4. DEFINING AN OPEN SPACE LATTICE (CONTINUED...)

The growing significance of ecological systems within the eThekwini region in general, and the Illovo LAP area in particular, is reflected through the increasing extent of ecological and other sensitive areas being incorporated into the MOSS.
10.4. DEFINING AN OPEN SPACE LATTICE (CONTINUED...)

Core MOSS areas – key rivers and wetland systems, and associated ecological systems

Interface areas between core ecological areas and development areas – functional use of open space

Continuity in the natural structure through urban connections, viewpoints, and cross-catchment links.
The overall Open Space lattice represents a significant structuring element within the proposed Illovo LAP Spatial Framework, providing an integrated natural system that complements and reinforces built systems, both existing and future.
A significant opportunity exists with regards to establishing a regional scale recreation area focused around the existing, and ecologically sensitive, Coastal Forest area to the west of the Illovo development area. Part of the formal eThekwini MOSS System, this ecological system is considered as “Endangered” by the DWAF.
Lastly, we define a process, matched by a non-specific site allocation system, that ensures that investment in social facilities and amenities can always keep up with urban growth.

Responding to the regional logic of movement and the confluence of systems, road and rail, the initial investment in capital infrastructure and facilities should target the points of highest accessibility and confluence.

These higher order interceptory points should contain the highest order facilities. Here, principles of marrying hierarchies and clustering of activities would apply. The concentration of investment should also respond to places that are tied to the regional grid of access first hence linkages to the main interchanges are important.

Investment over time should be structured to support incipient centers following a clear logic that reinforces and closes out space and which is based on pedestrian proximity. Here a system of service centers or nodes structured on a 5 min walking range should apply.

As development impetus grows and response to the initial investment occurs, new growth and service should follow the similar logic, with the start of the process of investment again relating to movement systems and their interceptory points. The challenge is always to ensure that a more sustainable form of settlement is achieved through the clustering of investment over time.

Over time consolidated growth will occur, held by a clearly defined edge, and reinforced through patterns of public investment.
10.6 IDENTIFYING OPPORTUNITY & POTENTIAL (CONTINUED…)
The Bid-Value model, developed to determine relative developmental value within the LAP Area, provides a basis for spatially locating specific planning mechanisms that can structure existing activity patterns, and future growth areas, in a manner that responds to actual potential.
Activity nodes form part of the overall activity system and represent key intersections along activity spines. They are considered the centers from which development should extend and the primary points for investment. Activity nodes should be located to ensure the highest level of accessibility. Key objectives include:

- Promote concentration and integration of activities;
- Ensure accessibility through positioning and concentration;
- Serve as physical focus and reference points.

The following range of Nodal Areas are proposed for the Illovo LAP Study Area:

- Primary Activity Node;
- Secondary Activity Node;
- Local Activity Node;
- Basic Activity Node; and
- Special Node.

**LINEAR ELEMENTS**

- Urban Arterial Activity Spine
- Main Arterial Activity Spine
- Main Road Activity Spine
- Local Activity Spine
- Proposed Cross-Catchment Linkages
- Mobility Spine
## 10.7. PLANNING MECHANISMS: NODAL ELEMENTS (CONTINUED…)

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
</table>
| **SUB-REGIONAL NODE**        | Major activity node with a strong commercial bias. The identified node has previously been acknowledged as one of three potential sub-regional “centre” nodes in the Southern region | Higher intensity activities, likely to include retail, office commercial and other business functions, as well as urban residential (Apartments, etc) | - Height: Up to 5 Storey’s (Subject to visual impact considerations relative to scenic environmental elements)  
- Visual response to main roads  
- Positive relationship to streets;  
- Massing and coverage to define public space systems; |

| PRIMARY ACTIVITY NODE (Local Node) | This node is intended to serve as the main center of higher order activity & mixed-use development. The node represents a position of high accessibility and potential to draw from external development, and functions as a key reference point. | Focus of higher intensity activities, including formal commercial, small business, higher order social and community facilities, as well as more intensive forms of residential development. | - Height: up to 4 storey’s;  
- Positive relationship to streets;  
- Massing and coverage to define public space systems; |

| SECONDARY ACTIVITY NODE (Local Node) | Developed to serve as gateways into the study area, and to contain facilities and services that service the settlement as a whole. These nodes are intended to accommodate activities and facilities that respond to the level of the settlement as a whole. | Provide for a mix of development, including higher-order facilities, formal commercial etc. | - Height: up to 3 storey’s  
- Positive relationship to streets;  
- Massing and coverage to define public space systems; |
### 10.7. PLANNING MECHANISMS: NODAL ELEMENTS (CONTINUED…)

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERTIARY ACTIVITY NODE</td>
<td>Local activity nodes are intended to serve as local centers for formal commercial development and facilities serving various neighborhoods.</td>
<td>Provide for local needs and for smaller scale commercial development, mixed use development.</td>
<td>- Height: Up to 2 storeys&lt;br&gt;- Positive relationship to streets&lt;br&gt;- Intensity patterns to respond to identified nodes and spine elements&lt;br&gt;- Massing and coverage to define public space systems;</td>
</tr>
<tr>
<td>(Local Node)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BASIC ACTIVITY NODE</td>
<td>Providing a very basic level of infrastructural support to operate as a “gateway” to a broader urban system. There is potential for these systems to grow over time, depending on thresholds of support.</td>
<td>Formal Public Transport Shelter (Taxi), water point, community notice board, provision for informal trade</td>
<td>Facilities to respond to main movement route, node to allow for future expansion, focus on public space.</td>
</tr>
<tr>
<td>(Local Node)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECIAL NODE</td>
<td>The Study identifies the core Illovo Village area as a Special Node, envisaged as a mixed-use node with an emphasis on local economic development opportunities and activities.</td>
<td>Mixed use, with a focus on job creation and institutional support/LED activities, and residential development at a range of densities.</td>
<td>- Height: dependant on local activity structure&lt;br&gt;- Positive relationship to streets&lt;br&gt;- Intensity patterns to respond to identified nodes and spine elements&lt;br&gt;- Massing and coverage to define public space systems;</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
Activity spines are intended to serve as primary structuring elements within the overall system. Spines can generally be defined as higher order routes facilitating the development of a variety of activities including commercial, higher density residential, social and community facilities, etc. The role of spines includes:

- Maximising the locational advantages of higher-order routes for a range of development responses;
- Promoting structure and legibility by developing clear patterns of development and intensity; and
- Promoting integrated development environments.

The following range of Spines are proposed for the Illovo LAP Study Area:

- Urban Arterial Activity Spines;
- Main Arterial Activity Spines;
- Main Road Activity Spines; and
- Local Activity Spines.

In addition to the above Activity Spines, the LAP proposes additional linear structuring elements in the form of:

- Mobility Spines; and
- Cross Catchment Environmental Links.

10.8. PLANNING MECHANISMS: LINEAR ELEMENTS

NODAL ELEMENTS

Sub-Regional Mixed-Use Node
Primary Local Node
Secondary Local Node
Tertiary Local Node
Special Node
Basic Activity Node
10.8. **PLANNING MECHANISMS: LINEAR ELEMENTS (Activity Based)**

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
</table>
| **URBAN ARTERIAL ACTIVITY SPINE** | The Urban Arterial Activity Spine represents a key focus for higher order development, facilitating more intensive economic development opportunities at the level beyond the local district, and providing a logical structural zone for higher order community and social facilities. | Higher intensity activities, likely to include retail, office commercial and other business functions, as well as urban residential (Apartments, etc)                                                                 | • Height: Up to 4 Storey’s  
  • Visual response to main roads  
  • Positive relationship to streets;  
  • Massing and coverage to define public space systems;                                                                                                     |
| **MAIN ARTERIAL ACTIVITY SPINE**  | The Main Arterial Activity Spine represents a secondary level of linear development intensity, facilitating development opportunities that support the intensification and sustainable growth of specific districts. Intensity of development along these spines will depend on local conditions, particularly constraints imposed by topographic character. | Focus of higher intensity activities, including formal commercial, small business, higher order social and community facilities, as well as more intensive forms of residential development.                                                                 | • Height: Up to 2 Storey’s  
  • Visual response to main roads  
  • Positive relationship to streets;  
  • Massing and coverage to define public space systems;                                                                                                     |
| **MAIN ROAD ACTIVITY SPINE**      | Located along the main internal collector routes linking the higher order activity spines, the main road activity spines are intended to accommodate a range of development responses as a means of consolidating | Provide for a mix of development, including higher-order facilities, formal commercial etc.                                                                                                                                                                                   | • Height: Up to 2 Storey’s  
  • Visual response to main roads  
  • Positive relationship to streets through active frontage and colonnades where appropriate;  
  • Massing and coverage to define public space systems;                                                                                                         |
## 10.8. PLANNING MECHANISMS: LINEAR ELEMENTS (Linkage based)

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
</table>
| LOCAL ACTIVITY SPINE                        | In most instances, the land use rights envisaged within these spines are already in place through the Lovu Town Planning Scheme. | Provide for local needs and for smaller scale commercial development, mixed use development. | - Height: Up to 2 Storey's  
- Visual response to main roads  
- Positive relationship to streets through active frontage and colonnades where appropriate;  
- Massing and coverage to define public space systems;  
- Development to consider appropriate interface with residential context where applicable |
| MOBILITY SPINE                               | Lower friction route providing higher order vehicular activity functions, oriented toward public transport. Mobility spines can form part of higher level activity spines where local conditions (parallel access routes, topography, etc) exist. | Limited activity response to mobility spine, focus on ensuring balanced and quality interface between movement need and adjoining development context. | Needs of pedestrian, particularly at Public Transport Points and along activity strips, are important considerations in the design and configuration of these routes. Accommodation of pedestrian movement along these links becomes particularly important in areas where concurrent activity spines are to be promoted. |
| CROSS-CATCHMENT ENVIRONMENTAL LINKS         | Provide inferred spatial corridor to facilitate the integration of MOSS habitats between adjoining river catchment areas. | Public and private open space, ecological and river corridors, playing fields, cultivated land, agricultural allotments. | Limited built form. Height and configuration of any built form to consider visual impact in the context of the natural environment. |
10.9. PLANNING MECHANISMS: ZONAL ELEMENTS

Zonal Areas represent distinct areas or districts that have similar existing characteristics, or a similar form of spatial intervention.

The following range of Zonal Areas are proposed for the Illovo LAP Study Area:

- Consolidation Zone;
- Intensification Zone;
- Environmental Zone (DMOSS);
- Interface Zone; and
- Opportunity Zone.

ZONAL ELEMENTS

- Consolidation Zone
- Environmental Interface Zone
- Environmental Zone (DMOSS)
- Intensification Zone
- Opportunity Zone
## 10.9. PLANNING MECHANISMS: ZONAL ELEMENTS (CONTINUED…)

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSOLIDATION ZONE</td>
<td>Defined areas where existing land use and activity patterns are to remain predominantly stable and in line with existing patterns</td>
<td>Consolidation of existing activities, with changes to use patterns only in response to specific structural elements within or adjoining the zone.</td>
<td>Limited deviation from existing form response. New development (Infill or redevelopment) to consider relationship to street and defined activity elements (Nodes and spines).</td>
</tr>
<tr>
<td>INTENSIFICATION ZONE</td>
<td>Defined areas where intensification and diversification of existing land use and activity patterns should occur, generally in support of linear and nodal activity elements such as nodes and spines. Intensification also provides greater thresholds of support for public transport systems, and a greater range of activities.</td>
<td>Intensification of prevailing activity patterns, with integration of required support uses and activities in response to identified hierarchy of nodes and spines.</td>
<td>Visible intensification of existing built form in ordered manner, based on: • Positive relationship to streets; • Intensity patterns to respond to identified nodes and spine elements; • Massing and coverage to define public space systems;</td>
</tr>
<tr>
<td>ENVIRONMENTAL ZONE</td>
<td>Protect and manage the core Metropolitan Open Space System (MOSS) elements, and accommodate remediation of specific environmental habitats and systems where needed.</td>
<td>Public and private open space, ecological and river habitats, controlled recreation activities.</td>
<td>Limited built form, restricted to conservation and support functions, and ecologically planned passive recreational infrastructure. Height and configuration of any built form to consider visual impact in the context of the natural environment.</td>
</tr>
</tbody>
</table>
10.9. PLANNING MECHANISMS: ZONAL ELEMENTS (CONTINUED…)

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ROLE</th>
<th>KEY ACTIVITIES</th>
<th>FORM RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERFACE ZONE</td>
<td>The interface zone is intended to ensure the integration of ecological and environmental systems, and creating a positive relationship between the built and natural environments.</td>
<td>Public and private open space, ecological and river corridors, playing fields, cultivated land, agricultural allotments.</td>
<td>Limited built form. Height and configuration of any built form to consider visual impact in the context of the natural environment. Development in directly adjoining areas to respond to Interface Zone through visual or active frontage, including movement elements where appropriate.</td>
</tr>
</tbody>
</table>
| OPPORTUNITY ZONE | Areas currently undeveloped or underdeveloped that are likely to contribute significantly to meeting the broader aims of the LAP process. | Dependant on location in regional and local urban system (Both the natural and built structuring elements), to be informed by contextual parameters and prevailing development need. | Dependant on location in regional and local urban system, with basic principles to be applied:  
  ▪ Positive relationship to streets;  
  ▪ Intensity patterns to respond to identified nodes and spine elements;  
  ▪ Massing and coverage to define public space systems; |
10.10. PUTTING THE PIECES TOGETHER

Key Nodes – focus of higher order and more intensive activity.

Linear Elements – consolidating opportunity around movement and visibility.

Development Zones – underlying focus of development approach.
10.11. DRAFT LAP SPATIAL FRAMEWORK

Initial Spatial Framework concept underpinning the Local Area Plan.

LINEAR ELEMENTS
- Urban Arterial Activity Spine
- Main Arterial Activity Spine
- Main Road Activity Spine
- Local Activity Spine
- Proposed Cross-Catchment Linkages
- Mobility Spine

NODAL ELEMENTS
- Sub-Regional Mixed-Use Node
- Primary Local Node
- Secondary Local Node
- Tertiary Local Node
- Special Node
- Basic Activity Node

ZONAL ELEMENTS
- Consolidation Zone
- Environmental Interface Zone
- Environmental Zone (DMOSS)
- Intensification Zone
- Opportunity Zone
### 10.12. AREA SCHEDULES

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AREAS (M²)</th>
<th>AREAS (Ha)</th>
<th>PERCENTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery</td>
<td>142455.787</td>
<td>14.25</td>
<td>0.9</td>
</tr>
<tr>
<td>Core Ecological Zone</td>
<td>2960894.05</td>
<td>296.10</td>
<td>18.75</td>
</tr>
<tr>
<td>Environmental Interface Zone</td>
<td>1419860.117</td>
<td>142.00</td>
<td>8.99</td>
</tr>
<tr>
<td>Environmental Performance Zone</td>
<td>322608.545</td>
<td>32.30</td>
<td>2.05</td>
</tr>
<tr>
<td>Formal Settlement Zone</td>
<td>4399210.214</td>
<td>439.90</td>
<td>27.86</td>
</tr>
<tr>
<td>Future Formal Settlement</td>
<td>1901234.952</td>
<td>190.10</td>
<td>12.04</td>
</tr>
<tr>
<td>Mixed Use Opportunity Area</td>
<td>2358114.309</td>
<td>235.80</td>
<td>14.93</td>
</tr>
<tr>
<td>Traditional Settlement Zone</td>
<td>2283699.177</td>
<td>228.40</td>
<td>14.46</td>
</tr>
</tbody>
</table>
11.1. OVERVIEW

As a basis for more detailed elaboration of the LAP Spatial Framework, and as a structure for the preparation of Precinct Plans, the overall Illovo LAP Study Area has been structured into a number of distinct functional Precincts:

- Bhekulwandle;
- Illovo North;
- Illovo Central (Main Node);
- Illovo South;
- Illovo Regional Forest Reserve;
- Kingsburgh West;
- Illovo Village;
- Illovo River Valley; and
- Kingsburgh Node.

The implications of the Spatial Framework in terms of each of these precincts is elaborated in the section that follows.
11.2. BHEHULWANDLE PRECINCT ELABORATION

BHEHULWANDLE: PRECINCT SUMMARY

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Location Map" /></td>
<td><img src="image2.png" alt="Context Map" /></td>
<td>The Bhekulwandle Area forms the north-eastern sector of the LAP Study Area, and is a traditionally settled area of approximately 282Ha. Bhekulwandle is bordered by Reeves Road to the north, and the formal Illovo Development Area to the south. The topography of the area is consistent with the broader study area, namely undulating terrain of moderate to fairly steep slopes, with higher terrain in the north west and lower towards the east. There are an estimated 410 Homesteads within the Bhekulwandle area, based on a count from aerial imagery, with the majority of homesteads comprising two or more individual buildings or structures. The population of this area, based on an occupancy ration of 6 people per homestead, is thus in the region of 2500 people. Residential densities in the area have been calculated at between 2 and 3 dwelling units per hectare.</td>
</tr>
</tbody>
</table>

![Image](image3.png)
### BHEKULWANDLE: LUM GUIDELINES

#### Role & Function
Traditional Settlement Area; interventions aimed at improving thresholds of support to allow viable increase in facilities, services, and economic opportunities.

#### Key Structuring Elements
Intensification zones; along Reeves Road; Reeves Road to function as activity spine; Link road from MR197 to support lower order intensification; Protection of potential environmental inter-catchment link.

#### Likely Land Use Responses
Focused residential consolidation within defined zone along Reeves Road. Community & social services, local commercial opportunities are o be contained within the spine. Small scale agriculture and muthi harvesting are also to be encouraged.

#### Environmental Guidelines
Protect and manage the core MOSS elements - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.

#### Intensity of Development
Low Intensity, increasing density towards Reeves Road as the envisaged spine consolidates. Higher intensity at the identified nodes.

#### Urban Design Guidelines & Form Response
Largely detached, less intensive form. Possible medium density housing responses within the proposed Intensification Zone along Reeves Road. (Guidelines as per relevant Structural Elements)
Establish a variety of hard and soft open space which are interconnected and mutually supportive. Spaces should be designed to accommodate a range of uses and relate to adjacent activities and buildings along and within the intensification zone.

#### Key Interventions
Upgrading of Reeves Road and Link routes from R603; Initiation of secondary and tertiary local nodes; and introduce mechanisms for land use management.

#### Phasing/ Timing

#### Density Targets
Existing densities peak at approximately 5dph. Limited further densification proposed in Consolidation Zone. Higher densities (15 to 20 du/ha (gross)) to be targeted in the Intensification Zone. Bhekulwandle growth based on consolidation around the main spine (106 Ha @ 10 du/ha).
11.3. ILLOVO NORTH PRECINCT ELABORATION

<table>
<thead>
<tr>
<th>ILLOVO NORTH: PRECINCT SUMMARY</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION</td>
<td>CONTEXT</td>
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<td>[Image]</td>
<td>[Image]</td>
<td>Illovo North represents the uppermost section of the Illovo Development Area. The area is composed primarily of single detached dwellings/erven, although some parts of the settlement in the south-east have developed as group/attached residential areas. There are approximately 8738 planned residential erven within the Illovo Development Area as a whole (Encompassing the northern, central, and southern precincts), of which approximately 5600, or 64% have been developed (Note: as at the time of the 2007 aerial photography – this figure is likely to be higher now). The Precinct is bisected by the R603, which provides the main means of access to the settlement, and links the precinct to the southern urban areas and northwards through the peri-urban periphery to Camperdown.</td>
</tr>
</tbody>
</table>

[Image]
### ILLOVO NORTH: LUM GUIDELINES

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Predominantly residential area, with some support facilities and local commercial opportunities. Role likely to remain stable into the future, with consolidation of existing patterns of development, and some intensification around the R603 and local activity spines.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>Intensification zones along R603 and link road to Bhekulwandle; Link road from MR197 to support lower order intensification, River system and drainage lines.</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Consolidation of existing residential patterns through infill (build-out) and possible redevelopment in some areas. Local scale commercial responses along identified activity spines and around nodes, particularly in areas closer to Illovo Central. Public and private open space, ecological and river habitats, controlled recreation activities within the interface zone.</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>Protect and manage the core MOSS elements adjacent to the intensification zone along the R603 - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Generally low intensity as per prevailing settlement patterns, increasing towards the activity spines and nodes.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>Largely detached, less intensive form, with more intensive form responses towards spines and nodes (Guidelines as per relevant Structural Elements). Establish a variety of hard and soft open space which are interconnected and mutually supportive. Spaces should be designed to accommodate a range of uses and relate to adjacent activities and buildings possible increase intensity and form within the intensification zone.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>Upgrading of link route to Bhekulwandle; Formalisation of spatial activities within the interface zone; Address backlog in social and community facilities</td>
</tr>
<tr>
<td>Density Targets</td>
<td>Existing densities of 25 – 30 du/ha to be maintained in consolidation zone. Likely increase of up to 40 du/ha (gross) to be promoted where appropriate in intensification zones.</td>
</tr>
</tbody>
</table>
11.4. ILLOVO NORTH SOUTH ELABORATION

<table>
<thead>
<tr>
<th>ILLOVO SOUTH: PRECINCT SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION</td>
</tr>
</tbody>
</table>
| [Image] | [Image] | Illovo South represents the section of the Illovo Development Area below the main activity core (Central precinct) straddling both sides of the R603. The area is composed primarily of single detached dwellings/erven, although some parts of the settlement in the south-east have developed as group/attached residential areas.

There are approximately 8738 planned residential erven within the Illovo Development Area as a whole (Encompassing the northern, central, and southern precincts), of which approximately 5600, or 64% have been developed (Note: as at the time of the 2007 aerial photography – this figure is likely to be higher now).

The Precinct is bisected by the R603, which provides the main means of access to the settlement, and links the precinct to the southern urban areas and northwards through the peri-urban periphery to Camperdown. |
## ILLOVO SOUTH: LUM GUIDELINES

### Role & Function
Predominantly residential area, with some support facilities and local commercial opportunities. Role likely to remain stable into the future, with consolidation of existing patterns of development, and some intensification around the R603 and local activity spines. Specific opportunity around the MR197/R603 link.

### Key Structuring Elements
Intensification zones along R603 and link road to Bhekulwandle; Opportunity around the MR197/R603 link depending on timing; Link road from MR197 to Reeves Road to support lower order intensification; Higher order activity spine along R603; River system and drainage lines.

### Likely Land Use Responses
Consolidation of existing residential patterns through infill, local scale commercial responses along identified activity spines and around nodes, public and private open space, ecological and river habitats, controlled recreation activities within the interface zone, higher order commercial activities and social and community facilities along proposed R603 spine and identified nodal areas.

### Environmental Guidelines
Protect and manage the core MOSS elements within the valley lines - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environments, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.

### Intensity of Development
Generally low intensity as per prevailing settlement patterns, increasing towards the activity spines and nodes. Higher intensity along R603 and nodes.

### Urban Design Guidelines & Form Response
Largely detached, less intensive form, with more intensive form responses towards spines and nodes (Guidelines as per relevant Structural Elements). Establish a variety of hard and soft open space which are interconnected and mutually supportive. Spaces should be designed within the tertiary local nodes and should aim to accommodate a range of uses and relate to adjacent activities and buildings. Possibility to create a high street on the parallel route supporting the R 613 should be investigated.

### Key Interventions
Upgrading of link route to Bhekulwandle; Formalisation of spatial activities within the interface zone; Address backlog in social and community facilities; Facilitation of R603 corridor (Possible road upgrading, etc)

### Phasing/ Timing

### Density Targets
Existing densities of 25 – 30 du/ha to be maintained in consolidation zone. Likely increase of up to 40 du/ha (gross) to be promoted where appropriate in intensification zones.

(See legend on page 210)
11.5. ILLOVO CENTRAL ELABORATION

ILLOVO CENTRAL: OVERVIEW

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CONTEXT</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Location Map" /></td>
<td><img src="image2.png" alt="Context Map" /></td>
</tr>
</tbody>
</table>

OVERVIEW

The Illovo Central Precinct forms the activity focus of the Illovo Development Area, and is currently the focus of a number of infrastructural and related development projects, including a Taxi Rank.

The node currently accommodates a clinic, a community hall, and a number of commercial developments.

The location of the node relative to the broader regional structure suggests significant opportunity for further expansion and diversification.
ILLOVO CENTRAL: LUM GUIDELINES

Role & Function
This node is intended to serve as the main center of higher order activity & mixed-use development. The node represents a position of high accessibility and potential to draw from external development, and functions as a key reference point.

Key Structuring Elements
The R603 Activity Spine, providing opportunity for a range of economic and related opportunities (Subject to parallel access and topographic issues);
The link route to Bhekuluwandle; and River system and drainage lines.

Likely Land Use Responses
Focus of higher intensity activities, including formal commercial, small business, higher order social and community facilities, as well as more intensive forms of residential development.

Environmental Guidelines
Protect and manage the core MOSS elements within the valley lines - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.

Intensity of Development
Medium Intensity development focused on defining a high quality and integrated public environment.

Urban Design Guidelines & Form Response
Facilities to respond to main movement route, node to allow for future expansion, focus on public space.
Establish a variety of hard and soft open spaces within the central core surrounding the schools which are interconnected and mutually supportive. Open spaces should be designed to accommodate a range of uses and relate to adjacent activates and buildings. Market space within hard space to be encouraged.

Key Interventions
Special Area Plan with suggested activity structure, movement and circulation, land uses, urban forma and landscaping heights, F.A.R, phasing.
Facilities audit to guide future growth need.

Phasing/Timing

Density Targets
Densities of 25 – 30 du/ha to be maintained in consolidation zone. Likely increase of up to 40 du/ha (gross) to be promoted where appropriate in intensification zones.
Whilst the Kingsburgh West is not assessed in significant detail in the current exercise, given the imminent development of the project, although proposals for longer term intervention within this focus area will emerge from the next phase of this exercise.

There are, however, two specific issues that have emerged through the current process:

- The implications of the proposed development on recognised environmental and ecological systems within the study area, including proposed cross-catchment links;
- The need to re-evaluate the Kingsburgh West proposal as it relates to the area on the western side of the R603 so as to accommodate the proposed link through the study area from Bhekulwandle to Illovo Village.
### Kingsburgh West: LUM Guidelines

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Predominantly residential area, with some support facilities and local commercial opportunities. Role likely to remain stable into the future, with consolidation of existing patterns of development, and some intensification around the R603 and local activity spines.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>Intensification zones; along R603 and link road to Bhekulwandle; Link road from MR197 to support lower order intensification; D’MOSS and protection of potential inter-catchment link; and significant wetland forest within Little Manzimtoti riparian zone.</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Consolidation of existing residential patterns through infill (build-out) and possible redevelopment in some areas. Local scale commercial responses along identified activity spines and around nodes, particularly in areas closer to Illovo Central. Public and private open space, ecological and river habitats, controlled recreation activities within the interface zone.</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>Protect and manage the core MOSS inter-catchment links as well as the wetland forest within the Little Manzimtoti riparian zone - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Generally low intensity as per prevailing settlement patterns, increasing towards the activity spines and nodes.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>Largely detached, less intensive form, with more intensive form responses towards spines and nodes. (Guidelines as per relevant Structural Elements) Establish hard and soft open spaces within the primary and tertiary local nodes as well as along appropriate sections of the MR 197.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>Review of Phase 6 (South of R603) to explore proposed link road alignment; Review of interface between MOSS elements and proposed development to ensure environmental issues have been adequately addressed; Rehabilitation of cross-catchment link; and introduce an Alien Invasive Removal Programme.</td>
</tr>
<tr>
<td>Density Targets</td>
<td>Proposed densities of 25 – 30 d/h to be maintained in consolidation zone. Likely increase of up to 40 d/h (gross) to be promoted where appropriate in intensification zones. Kingsburgh Node Growth assumes medium/high density residential in a mixed-use context, using an overall 30 – 60 d/h for 40 Ha.</td>
</tr>
</tbody>
</table>
11.7. ILLOVO REGIONAL FOREST ELABORATION

<table>
<thead>
<tr>
<th>ILLOVO REGIONAL FOREST: OVERVIEW</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION</td>
<td>CONTEXT</td>
<td>OVERVIEW</td>
</tr>
<tr>
<td><img src="image1.png" alt="Location Map" /></td>
<td><img src="image2.png" alt="Context Map" /></td>
<td>Protect and manage the core Metropolitan Open Space System (MOSS) elements and red data species (at least 20 recorded), and accommodate remediation of specific environmental habitats and systems where needed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opportunities for community based initiatives in management and activities related to the reserve</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Westward extension across the Lovu River to be explored. Potential link to patches of “swamp forests” to NW of forest (endangered distinctive vegetation type).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limited built form, restricted to conservation and support functions, and ecologically planned passive recreational infrastructure. Height and configuration of any built form to consider visual impact in the context of the natural environment. Support function / passive recreation to be restricted to within 40m proposed buffer area (not within D’MOSS area) i.e.: interface zone</td>
</tr>
</tbody>
</table>
## ILLOVO REGIONAL FOREST: LUM GUIDELINES

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Regional conservation and recreation area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>Existing coastal forest and related ecological systems; and interface with adjoining formal development areas of Illovo.</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Biking/ walking trail development and maintenance; Alien eradication; Facilities development, i.e. conference, hotel, tourism centre, educational facilities; Restaurant; Rest rooms and ablation facilities</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>Protect and manage the core MOSS regional conservation and recreation area - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Very limited – small scale unobtrusive development with special consent could occur within the interface zones.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>Limited, as per structural element guidelines. Establish a variety of soft open spaces within the interface zone. Open spaces should be designed to accommodate a range of uses and relate to adjacent activities and buildings which are interconnected and mutually supportive of the Illovo Regional Forest.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>A detailed Management Plan</td>
</tr>
<tr>
<td>Density Targets</td>
<td>n/a</td>
</tr>
</tbody>
</table>
11.7. ILLOVO REGIONAL FOREST ELABORATION (CONTINUED...)

CONSERVATION FEATURES OF PROPOSED ILLOVO MUNICIPAL FOREST RESERVE

KwaZulu Natal Coastal Belt / Forest:
This vegetation type occupies highly dissected undulating coastal plains that were probably occupied to a large extent by various types of subtropical coastal forests in the past. They have been transformed by various land uses especially sugar cane cultivation.

KZN Coastal Belt vegetation occupied approximately 65% of EMA of which 76% has been transformed by formal urban settlements and to a lesser extent by sugar cane farming. The remaining undeveloped portions are mostly limited to land adjacent to river systems (ATTRACTIVE FEATURES TO ENHANCE VALUE AS RECREATIONAL POTENTIAL) and comprise patchy secondary grassland, wooded grassland and thicket vegetation (patch evident within Illovo River Precinct).

CONSERVATION FEATURES OF PROPOSED ILLOVO MUNICIPAL FOREST RESERVE

20 + red data species (both flora and fauna) found within forest precinct
See excel spreadsheet

SOME GUIDELINES/PRINCIPLES FOR MOVING FORWARD ON THE FOREST RESERVE CONCEPT

1. Department of Water Affairs and Forestry (DWAF), Ezemvelo KZN Wildlife (EKZNW), DAEA and eThekwini are jointly preparing guidelines to protect forests within KZN. In the interim, the Environmental Management Department (EMD) applies a policy of no development in forests and requires that development is setback by 40m from forest edge.

2. Parks, Leisure and Cemeteries Department (in particular, the Natural Resources Division-NRD) is responsible for eThekwini conservation management activities in order to sustain environmental goods and services.

3. 46 “Nature Reserves” within EMA. Only 7 of these are proclaimed in terms of Natal Nature Conservation Ordinance 15 of 1974 or KZN Nature Conservation Management Act 1997. Of these 7, only the Palmiet Nature Reserve is owned and managed by eThekwini. Other managers include Msinisi Holdings, EKZNW (as well as other private landowners eg Tongaat Hulett & Hawaan Investments etc). I.e.: areas may be owned by one organisation and managed by another.
4. Best nature reserves are zoned as public or private open space. NRD initiating rezoning process (2007-2009). Proclamation application will be submitted for certain areas as per NEM: Protected Areas Act 2003.

5. NRD and EMD need to formalise legal arrangements where municipal land is being managed by other agencies for conservation purposes.

6. EMD and NRD to formulate a plan to ensure that all municipal “nature reserves” have management plans, objectives and budgets (NRD and Msinsi Holdings recently prepared management plan template for municipal protected areas).

7. It is envisaged that the forest precinct is fully owned by eThekwini. However should this not be the case. The municipality has established a land acquisition programme for environmental purposes (secures land on basis of least cost through use of environmental servitudes). Tool of last resort due to high capital and on-going management costs. In selecting land for acquisition, various criteria are applied:

- Does the site fall within EESMP / DMOSS spatial layer? Is the site adjacent or near existing protected area? Does the site support an important biodiversity feature? Is there no other way to secure the land? Is there a good prospect that the site will be managed in the future? Is the owner a willing seller?

OPPORTUNITIES FOR LED INITIATIVES/COMMUNITY PROJECTS THAT COULD COME FROM THE FOREST RESERVE PROPOSAL

Environmental Management and Poverty Alleviation

1. “Working for Ecosystems”: DEAT funded, part of government’s Expanded Public Works Programme. Wildlife Environmental Society SA (WESSA) = implementer. Aim is to train and employ poor people to do env management work within peri-urban (pilot project – Giba Gorge) and rural context.

2. “Working for Water Programme”: Run by DWAF; best known national environmental poverty relief programme; very active within EMA.

Sustainable Utilisation of Natural Resources

Use and harvesting of indigenous species for muthi purposes within buffer / interface areas. Municipality has introduced a free education programme to help combat overharvesting in the wild. Management and enforcement options need to be consisted within Forest Management Plan.

Access = potential issue

Other

Unskilled, semi and skilled employment opportunities within support services / facilities.
The Illovo Village area is a focus of much of the economic activity that currently exists within the broader LAP area. The precinct is approximately 300Ha in extent, located within an arc of the Illovo River. Historically, this precinct grew as a Sugar Mill Village, although over time the gradual reduction in surrounding productive cane lands prompted the relocation of this activity.

Formal development within this precinct is concentrated in the western and central portions, and includes a mix of housing types catering for low, middle and higher income groups, commercial development areas and sports fields.

Although initially not viewed as important in terms of future economic development, a closer assessment of the Illovo Village area revealed that the majority of economic activity in the Study Area is located in the Illovo Village area (the old Illovo Sugar Mill settlement).
### ILLOVO VILLAGE: LUM GUIDELINES

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Significant opportunity area for the initiation of LED focused development projects, consolidation of existing functions and activities into a cohesive and unique activity node.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>MR197, proposed link route through to Bhekulwandle, MOSS systems, existing built form and infrastructure</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Consolidation of existing activities; SMME Industrial Incubator and SMME hive development; Space for small manufacturing businesses; Municipal training centre (for functions such as Disaster Management, Waste Management etc.); Regional livestock market (feeding the various markets in southern eThekwini townships); and future housing development.</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>Protect and manage the core MOSS regional conservation and recreation area - limited built form, restricted to conservation and support functions. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Moderate to low.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>As per guidelines under Nodal Elements table. Establish a variety of hard and soft open spaces within the opportunity zone. Open spaces should be designed to accommodate a range of uses and relate to adjacent activities and buildings which are interconnected and mutually supportive. The Illovo Village opportunity zone requires the development of a high performance urban environments which promotes timeless qualities that create opportunity, facilitate choice, promote safety, encourage investment and which has at its basis the development of places that work for all people.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>Special Area Plan with suggested activity structure, movement and circulation, land uses, urban forma and landscaping heights, F.A.R, phasing. Preliminary assessment of proposed link route.</td>
</tr>
<tr>
<td>Density Targets</td>
<td>Proposed future population based on a gross density of 30 du/ha to 60 du/ha applied to the opportunity area of 193 Ha</td>
</tr>
</tbody>
</table>

(See legend on page 210)
### ILLOVO RIVER VALLEY: OVERVIEW

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
</tr>
</thead>
</table>

#### LOCATION

The Illovo River Valley forms the southernmost precinct in the study area, located just north of the point where the N2 Highway crosses the Illovo River.

The bulk of the precinct is either undeveloped or cultivated for sugar cane, falling outside formal Town Planning Schemes, although the northern edge of the precinct does have development rights for a range of uses, including business, commercial, industrial and residential. Areas along the western eastern edge are retained for road reserves and servitudes.

Whilst large portions of the precinct are undeveloped, they are, however, affected by the flood plain of the Illovo River, limiting their potential for formal development.

There is significant scope for considering the precinct as a focus for LED and related activities.
**ILLOVO RIVER VALLEY: LUM GUIDELINES**

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Unique development area with specific environmental performance requirements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>River Valley, related floodplain area and ecological systems; Topographic features (Prominent Ridges); Proposed cross-catchment linkage; Interface between environmental systems and R603.</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Lower intensity, high value residential development; Recreation; and tourism and related low impact activities.</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>Protect and manage the unique core MOSS system - limited built form, restricted to conservation and support functions. A specific environmental performance management plan would need to be generate for this area as it abuts onto the Illovo River. The interface zone is intended to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Low intensity.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>Low impact form response; important interface with environmental systems and linkages. Urban design guidelines for this area would need to be designed around the outcome of an environmental performance plan. Open spaces should be designed to accommodate a range of uses and relate to the opportunity zone. Proposed development should respect and support the integrity of the core open space system which surrounds it.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>Environmental performance dimensions to guide future development.</td>
</tr>
<tr>
<td>Density Targets</td>
<td>Will depend on nature of future development and location/structuring of any residential clusters. This precinct assumes lower density settlement (Up to 10 du/ha) in the 32.3 Ha Environmental Performance Zone.</td>
</tr>
</tbody>
</table>
### KINGSBURGH NODE: OVERVIEW

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Location Map" /></td>
<td><img src="image2.png" alt="Context Map" /></td>
<td>The Kingsburgh Node is envisaged as a major activity node with a strong commercial bias. The identified node has previously been acknowledged as one of three potential sub-regional “centre” nodes in the Southern region.</td>
</tr>
</tbody>
</table>
### KINGSBURG NODE: LUM GUIDELINES

<table>
<thead>
<tr>
<th>Role &amp; Function</th>
<th>Sub-regional activity node, providing a gateway to the Illovo LAP area, as well as to the southern coastal corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Structuring Elements</td>
<td>R603/ N2 Intersection, providing extremely high levels of accessibility and visibility. The R603 linking the coastal corridor to the hinterland; and environmental systems (ridges) to the south-west.</td>
</tr>
<tr>
<td>Likely Land Use Responses</td>
<td>Higher intensity activities, likely to include retail, office commercial and other business functions, as well as urban residential (Apartments, etc)</td>
</tr>
<tr>
<td>Environmental Guidelines</td>
<td>The fringe of the interface zone within this precinct needs to be integrated with the primary system to ensure the integration of ecological and environmental systems, creating a positive relationship between the built and natural environment, consisting of public and private open space, playing fields, cultivated lands and agriculture allotments.</td>
</tr>
<tr>
<td>Intensity of Development</td>
<td>Medium to high intensity.</td>
</tr>
<tr>
<td>Urban Design Guidelines &amp; Form Response</td>
<td>As per guidelines under Nodal Elements table. Establish a variety of hard and soft open spaces within the intensification zone. Detailed urban design guidelines for this area should be developed through a detailed precinct plan and urban design framework. Open spaces should be designed to accommodate a range of uses and relate to adjacent activities and buildings within the intensification zone and the sub regional mixed use node.</td>
</tr>
<tr>
<td>Key Interventions</td>
<td>Commitment to broader vision; and Precinct Plan/Detailed Urban Design Framework</td>
</tr>
<tr>
<td>Phasing/ Timing</td>
<td>Medium to longer term (2019 -2029). Critical issue is to ensure that longer term opportunity of this Node is not negatively influenced through piecemeal development projects – the Node should be envisaged and designed as a single cohesive precinct, and possibly phased within this broader vision. Interim holding activities may become appropriate in the shorter term (2013 - 2018).</td>
</tr>
</tbody>
</table>
| Density Targets | Will depend on final development response and detailed precinct plan. Residential densities within the node likely to be medium at 30 du/ha (Urban bias (apartments, etc) but larger units)
11.11. POPULATION GROWTH AND IMPLICATIONS FOR FACILITIES

An initial assessment of services provided in the area in terms of recommended guidelines, in this case the “Guidelines for Planning of Facilities in KwaZulu-Natal” prepared by the Provincial Planning and Development Commission in October 2007, reflects the basic disparities that exist in the study area. The population figures that have been used for this exercise have been calculated on the basis of actual dwelling structures/erven determined from aerial photography and cadastral information provided by eThekwini Municipality, and a set of assumptions regarding household size in different parts of the Study Area.

(Assumed occupancy rates used for the above calculations are 6 phh in Bhekulwandle, 4.2 phh in the Illovo Development Area, and 3.2 phh in Illovo Village and Illovo River Valley Areas)

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>ERVEN/HH</th>
<th>EXISTING POPULATION</th>
<th>POSSIBLE FUTURE POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo Development Area (Including the North, South &amp; Central Precincts, as well as the areas proposed for the Regional Forest)</td>
<td>5603/8738(1)</td>
<td>23533</td>
<td>36700</td>
</tr>
<tr>
<td>Bhekulwandle</td>
<td>410</td>
<td>2460</td>
<td>2460</td>
</tr>
<tr>
<td>Proposed Kingsburgh West</td>
<td>1232 (2)</td>
<td>5174</td>
<td></td>
</tr>
<tr>
<td>Illovo Village</td>
<td>264</td>
<td>845</td>
<td>845</td>
</tr>
<tr>
<td>Illovo River Valley</td>
<td>98</td>
<td>314</td>
<td>98</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27152</strong></td>
<td></td>
<td><strong>45277</strong></td>
</tr>
</tbody>
</table>

Based on assessment of aerial photography of the Study Area, residential densities range from 25 – 30 du/ha in the denser phases of the Illovo Development Area, to approximately 2.5 – 3 du/ha in the traditionally settled areas of Bhekulwandle. These are summarised in the following table:

<table>
<thead>
<tr>
<th>AREA</th>
<th>ESTIMATED DENSITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhekulwandle</td>
<td>15 – 20 du/ha</td>
</tr>
<tr>
<td>Illovo North</td>
<td>40 du/ha</td>
</tr>
<tr>
<td>Illovo South</td>
<td>25 – 40 du/ha</td>
</tr>
<tr>
<td>Illovo Central</td>
<td>25 – 40 du/ha</td>
</tr>
<tr>
<td>Kingsburgh West</td>
<td>25 – 40 du/ha</td>
</tr>
<tr>
<td>Illovo Regional Forest</td>
<td>n/a</td>
</tr>
<tr>
<td>Illovo Village</td>
<td>15 du/ha</td>
</tr>
<tr>
<td>Illovo River Valley</td>
<td>10 dph</td>
</tr>
<tr>
<td>Kingsburgh Node</td>
<td>15 dph</td>
</tr>
</tbody>
</table>
### 11.11. POPULATION GROWTH AND IMPLICATIONS FOR FACILITIES (CONTINUED…)

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>THRESHOLD CONSIDERATIONS</th>
<th>PROVISION</th>
<th>IDEAL SERVICE LEVEL</th>
<th>ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary School</strong></td>
<td>Estimated Population is 3 to 4000 people,</td>
<td>3 (Illovo Primary School; Mthombeni Primary School; Andrew Zondo Primary School). An additional two Primary Schools are planned for the Kingsburgh West Development.</td>
<td>7/8 (Current Population) 14/15 (Future Population)</td>
<td>Provision significantly lower than service required for estimated existing population, and future planning still below standards.</td>
</tr>
<tr>
<td><strong>Secondary School</strong></td>
<td>Estimated Population is 6 to 10000 people, 6000 for lower income communities, 49m² per classroom.</td>
<td>1 (Siyabonga High School). An additional Secondary School is planned for the Kingsburgh West Development.</td>
<td>4 (Current Population) 6 (Future Population)</td>
<td>Provision lower than service required for estimated existing population, and future planning still below standards.</td>
</tr>
<tr>
<td><strong>Clinics</strong></td>
<td>Dispersed- 5000 : Mobile Point Clustered- 5000 : Health Station 5000- 10000: Small Clinic 10000- 20000; Medium Clinic</td>
<td>1 Fixed (Small) Clinic &amp; 1 OHS Clinic</td>
<td>Dependant on settlement pattern, but spread of facilities should serve entire LAP study area.</td>
<td>Provision is significantly lower than required, particularly for Bhekulwandle area where no facility currently exists.</td>
</tr>
<tr>
<td><strong>Hospitals</strong></td>
<td></td>
<td></td>
<td></td>
<td>Accessibility to closest Government Hospital to be assessed.</td>
</tr>
<tr>
<td><strong>Community Facility Site</strong></td>
<td>Varies</td>
<td></td>
<td>Dependant on densities and settlement pattern</td>
<td>Whist formal provision has been made for community facilities in Illovo Development Area and Kingsburgh West, Bhekulwandle area remains problematic</td>
</tr>
<tr>
<td><strong>Community Halls</strong></td>
<td>4 (Small Halls)</td>
<td></td>
<td>Whilst actual provision is above standard, the scale of provision, i.e.: facilities are limited in their scope.</td>
<td>Location of facilities should be at most accessible areas/nodal points</td>
</tr>
<tr>
<td><strong>Library</strong></td>
<td>None</td>
<td>At least one</td>
<td></td>
<td>Location of facilities should be at most accessible areas/nodal points</td>
</tr>
</tbody>
</table>
11.11. POPULATION GROWTH AND IMPLICATIONS FOR FACILITIES (CONTINUED…)

The following tables illustrate a basic facilities audit completed for the Illovo area.

The population estimates below include the existing and future population estimates, based on Illovo LAP proposals - the assumptions for this are listed in the table below. These estimates are linked to the facilities tables on the forthcoming page.

The facility shortfall have not been spread across the different precincts, as this can be misleading. For example; Illovo Central - does not have a high level of facility provision, however it is one of the most accessible precincts with the study area, therefore it would make sense to locate facilities within the precinct even though the population of the precinct would not justify it if one just went by figures alone. The shortfall of facilities should therefore be viewed in the context of the LAP area as a whole.

The assumption made are as follows;
- Illovo Development Area (North, Central & South) future estimates include full build-out of current development, as well as intensification around corridors and nodes;
- Illovo Village - future population based on a gross density of 15 du/ha applied to the opportunity area of 193 Ha;
- Bhekulwandle growth based on consolidation around the main spine (106 Ha @ 10 du/ha);
- Illovo River Valley - Assumes lower density settlement (Up to 10 du/ha) in the 32.3 Ha Environmental Performance Zone;
- Kingsburgh Node Growth assuming medium/high density residential in a mixed-se context, using an overall 30 du/ha for 41 Ha;

PLEASE NOTE:
- Facilities have been listed below to the best of the teams knowledge;
- Not all existing facilities can be quantified, especially in terms of informal churches, sportsfields, crèche facilities, etc;
- The table below and the tables on the following page need to be read together. The table adjacent and the table to the far right on the following table are read in conjunction with one another.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Illovo North</td>
<td>2411.00</td>
<td>4.20</td>
<td>59.00</td>
<td>2405.00</td>
<td>316.00</td>
<td>195.90</td>
<td>195.28%</td>
</tr>
<tr>
<td>Illovo Central</td>
<td>176.00</td>
<td>4.20</td>
<td>98.00</td>
<td>121.00</td>
<td>324.00</td>
<td>429.50</td>
<td>218.75%</td>
</tr>
<tr>
<td>Illovo South</td>
<td>264.00</td>
<td>3.20</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Illovo Village</td>
<td>264.00</td>
<td>6.00</td>
<td>132.00</td>
<td>123.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Bhekulwandle</td>
<td>280.80</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Kingsburgh West</td>
<td>172.46</td>
<td>2.20</td>
<td>4.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Illovo River Valley</td>
<td>178.40</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Kingsburgh Node</td>
<td>59.30</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
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<tr>
<td>Forest Reserve</td>
<td>98.45</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Estimated Existing Population:** 25877.80

**Possible Future Population:** 70985.80
### 11.11. POPULATION GROWTH AND IMPLICATIONS FOR FACILITIES (CONTINUED…)

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>THRESHOLD</th>
<th>AREA (HA)</th>
<th>EXISTING</th>
<th>PLANNED</th>
<th>TOTAL</th>
<th>REQUIRED (Existing Pop)</th>
<th>REQUIRED (Future Pop)</th>
<th>CURRENT SHORTFALL</th>
<th>FUTURE SHORTFALL</th>
<th>FUTURE LAND REQUIREMENTS (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Centre - informal</td>
<td>700</td>
<td>0.035</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>36.9</td>
<td>101.4</td>
<td>36.9</td>
<td>101.4</td>
<td>3.55</td>
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<td>Sports field</td>
<td>1000</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>25.8</td>
<td>71.0</td>
<td>25.8</td>
<td>71.0</td>
<td>42.59</td>
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<tr>
<td>Religious Centre - formal</td>
<td>2100</td>
<td>0.2</td>
<td>15</td>
<td>15</td>
<td>30</td>
<td>12.3</td>
<td>33.8</td>
<td>-2.7</td>
<td>18.8</td>
<td>3.76</td>
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<tr>
<td>Creche - low</td>
<td>2400</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10.8</td>
<td>29.6</td>
<td>10.8</td>
<td>29.6</td>
<td>0.00</td>
</tr>
<tr>
<td>Creche - middle to high</td>
<td>3000</td>
<td>0.045</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>8.6</td>
<td>23.7</td>
<td>2.6</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>4.3</td>
<td>11.8</td>
<td>4.3</td>
<td>11.8</td>
<td>0.00</td>
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<td>2</td>
<td>2</td>
<td>4</td>
<td>4.3</td>
<td>11.8</td>
<td>2.3</td>
<td>7.6</td>
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<td>Secondary school</td>
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<td>1</td>
<td>2</td>
<td>2.6</td>
<td>7.1</td>
<td>1.4</td>
<td>5.7</td>
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<td>Post Office</td>
<td>10000</td>
<td>0.02</td>
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<td>0</td>
<td>2.6</td>
<td>7.1</td>
<td>2.4</td>
<td>7.5</td>
<td>0.14</td>
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<tr>
<td>Library</td>
<td>20000</td>
<td>0.09</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.3</td>
<td>3.5</td>
<td>1.3</td>
<td>3.5</td>
<td>0.18</td>
</tr>
<tr>
<td>Community Info Centre</td>
<td>22000</td>
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<td>0</td>
<td>0</td>
<td>1.2</td>
<td>3.2</td>
<td>1.2</td>
<td>3.2</td>
<td>0.06</td>
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<tr>
<td>Community centre/hall</td>
<td>30000</td>
<td>0.1</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>0.9</td>
<td>2.4</td>
<td>-3.1</td>
<td>-7.4</td>
<td>-3.82</td>
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<tr>
<td>Clinic</td>
<td>30000</td>
<td>1.5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>0.9</td>
<td>2.4</td>
<td>-1.1</td>
<td>0.4</td>
<td>0.55</td>
</tr>
<tr>
<td>Cemetery</td>
<td>30000</td>
<td>0.9</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.9</td>
<td>2.4</td>
<td>-0.5</td>
<td>1.4</td>
<td>12.30</td>
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<tr>
<td>Municipal Offices</td>
<td>50000</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>0.7</td>
<td>1.4</td>
<td>-0.9</td>
<td>0.5</td>
<td>0.13</td>
</tr>
<tr>
<td>Old Age Home</td>
<td>50000</td>
<td>1.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.5</td>
<td>1.4</td>
<td>0.5</td>
<td>1.4</td>
<td>2.12</td>
</tr>
<tr>
<td>Police station</td>
<td>60000</td>
<td>0.15</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.4</td>
<td>1.2</td>
<td>-0.6</td>
<td>0.6</td>
<td>0.09</td>
</tr>
<tr>
<td>Community Health Centre+ARV</td>
<td>60000</td>
<td>1.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.4</td>
<td>1.2</td>
<td>0.4</td>
<td>1.2</td>
<td>2.01</td>
</tr>
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<td>Civic Centre inc. Hall</td>
<td>60000</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0.4</td>
<td>1.2</td>
<td>0.4</td>
<td>1.2</td>
<td>1.18</td>
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<td>Home Affairs</td>
<td>60000</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.4</td>
<td>1.2</td>
<td>0.4</td>
<td>1.2</td>
<td>0.12</td>
</tr>
<tr>
<td>Children's Home</td>
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<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.4</td>
<td>1.2</td>
<td>0.4</td>
<td>1.2</td>
<td>2.37</td>
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<tr>
<td>Tertiary Institution</td>
<td>150000</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>1.89</td>
</tr>
<tr>
<td>Hospital L1</td>
<td>450000</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.63</td>
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<tr>
<td>Initiation</td>
<td>500000</td>
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<tr>
<td>Major public venue</td>
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<td>0.0</td>
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<td>0.28</td>
</tr>
</tbody>
</table>

#### DISTRIBUTION OF EXISTING & PLANNED FACILITIES ACROSS LAP PRECINCTS

- (1) Planned
- (2) Planned
- (3) Planned

**Total:** 101.90
The following image illustrated the study areas proximity to Hospitals in area. A 10 kilometer travel buffers from each of the three closest facilities - public & private.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION

Based on the proposals outlined in the LAP and proposed Spatial Framework, a preliminary assessment of the envisaged Infrastructure upgrades and their prioritisation has been prepared.

The plan alongside shows the initial upgrading proposals emanating from the LAP. The implications in terms of costing and prioritisation is summarised in the table on the following page.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION (CONTINUED...)

<table>
<thead>
<tr>
<th>PROJECT ID</th>
<th>PROJECT DESCRIPTION</th>
<th>PROJECT PRIORITY</th>
<th>DESCRIPTION OR COST</th>
<th>CALCULATION (M²)</th>
<th>RATE (£/M²)</th>
<th>COST</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Extension of urban collector route to Reeves Road</td>
<td>MEDIUM</td>
<td>CONSTRUCTION COSTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Works</td>
<td>1944</td>
<td>1200</td>
<td>2,316,000.00</td>
<td>2,316,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add 2% R&amp;D costs</td>
<td>25%</td>
<td>2,945,000.00</td>
<td>3,645,000.00</td>
<td>3,645,000.00</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Add 10% Contingencies</td>
<td>10%</td>
<td>3,645,000.00</td>
<td>3,645,000.00</td>
<td>3,645,000.00</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Professional fees</td>
<td>15%</td>
<td>4,690,025.00</td>
<td>4,690,025.00</td>
<td>4,690,025.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add 15% VAT</td>
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<td>4,690,025.00</td>
<td>6,526,583.50</td>
<td>6,526,583.50</td>
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<tr>
<td></td>
<td>Total Project Cost</td>
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<td>5,226,032.00</td>
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</tr>
<tr>
<td>B</td>
<td>Extension of urban collector route to Reeves Road</td>
<td>MEDIUM</td>
<td>CONSTRUCTION COSTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Works</td>
<td>6992</td>
<td>1200</td>
<td>9,608,000.00</td>
<td>9,608,000.00</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Add 2% R&amp;D costs</td>
<td>25%</td>
<td>9,608,000.00</td>
<td>12,010,000.00</td>
<td>12,010,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add 10% Contingencies</td>
<td>10%</td>
<td>12,010,000.00</td>
<td>12,010,000.00</td>
<td>12,010,000.00</td>
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</tr>
<tr>
<td></td>
<td>Professional fees</td>
<td>15%</td>
<td>10,114,025.00</td>
<td>10,114,025.00</td>
<td>10,114,025.00</td>
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</tr>
<tr>
<td></td>
<td>Add 15% VAT</td>
<td>14%</td>
<td>10,114,025.00</td>
<td>13,692,543.50</td>
<td>13,692,543.50</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Total Project Cost</td>
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<td></td>
<td>17,726,568.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Surfacing of section of R137 (Old Main Road) between Reeves Rd and R603</td>
<td>HIGH</td>
<td>CONSTRUCTION COSTS</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Works</td>
<td>23450</td>
<td>1200</td>
<td>28,240,000.00</td>
<td>28,240,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add 2% R&amp;D costs</td>
<td>25%</td>
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Please note: the above infrastructure costing are preliminary estimates only, and should be used as a guideline.
NODAL REVIEW
BHEHULWANDLE
Water
- A bulk water main is running through the node.
- Extensive reticulation present within the node.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- No sewer reticulation is evident in this node.
- A sewer trunk leading to the Waste Water Treatment Works is present along the southern border of the node. The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- Extensive network of overhead cables and numerous transformers are present in this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available.

ILLOVO NORTH
Water
- A bulk water main is running through the node.
- Extensive reticulation present within the node.
- The conditions and storage capacities of the existing reservoirs within the area has to be examined.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- Sewer reticulation is extensive only in the areas north of the R603.
- A sewer trunk leading to the Waste Water Treatment Works is runs through the node. The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- Extensive network of overhead cables and numerous transformers are present in this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available.

ILLOVO SOUTH
Water
- A bulk water main is running through the node.
- Extensive reticulation present within the node.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- Sewer reticulation is extensive only in the areas north of the R603.
- A sewer trunk leading to the Waste Water Treatment Works is runs along the north of the node.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION (CONTINUED...)

The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- Extensive network of overhead cables and numerous transformers are present in this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available.

ILLOVO CENTRAL

Water
- A bulk water main is running through the node.
- Reticulation network is present within the node.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- Sewer reticulation is extensive only in the areas north of the R603.
- A sewer trunk leading to the Waste Water Treatment Works is runs through the node. The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

ILLOVO CENTRAL

Water
- A bulk water main is running through the node.
- Reticulation network is present within the node.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- Sewer reticulation is extensive only in the areas north of the R603.
- A sewer trunk leading to the Waste Water Treatment Works is runs through the node. The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION (CONTINUED...)

**KINGSBURGH WEST**

**Water**
- A bulk water main is running through the node.
- Water reticulation is present in the southern areas of the node only.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

**Sewer**
- Sewer reticulation is limited in this node. A sewer network would have to be designed to connect to the existing trunk main.
- A sewer trunk leading to the Waste Water Treatment Works is runs through the node. The capacities within the trunk main have to be investigated to determine if it can cater for additional flow from the node.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

**Stormwater**
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

**Electricity**
- The electrical network is limited at this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available to cater for additional developments at this node.

**ILLOVO REGIONAL FOREST**

**Water**
- There is no water network present at this node.
- Investigations have to be undertaken on how to include water supply to this node. A water supply system would have to be designed to accommodate this area.

**Sewer**
- No sewer reticulation is evident at this node. It would have to be confirmed if a sewer network exists, if not then a network would have to be designed to connect to the existing sewer pump stations.
- The conditions and capacities of the existing pump station within the area have to be examined and upgraded if necessary.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

**Stormwater**
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

**Electricity**
- There is no evident electrical network at this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available to cater for additional developments at this node.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION (CONTINUED…)

ILLOVO VILLAGE
Water
- Extensive reticulation present within the node.
- The conditions and storage capacities of the existing reservoirs within the area has to be examined.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- No sewer reticulation is evident at this node. It would have to be confirmed if a sewer network exists, if not then a network would have to designed to connect to the existing sewer pump stations.
- The conditions and capacities of the existing pump station within the area have to be examined and upgraded if necessary.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- A network of overhead cables and numerous transformers are present in this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available to cater for additional developments at this node.

ILLOVO RIVER VALLEY
Water
- There is no water network present at this node.
- Investigations have to be undertaken on how to include water supply to this node.

Sewer
- No sewer reticulation is evident at this node.
- A potential pipe route to link the sewer from this node to the Waste Water Treatment Works has to be investigated.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- There is no evident electrical network at this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available to cater for additional developments at this node.

KINGSBURGH NODE
Water
- The reticulation network is sparse at this node.
- The conditions and storage capacities of the existing reservoir within the area has to be examined.
- Capacities within the reticulation network have to be analysed in order to determine if water supply to this node is satisfactory.

Sewer
- No sewer reticulation is evident at this node.
- A potential pipe route to link the sewer from this node to the Waste Water Treatment Works has to be investigated.
- It needs to be determined if spare capacity at the Waste Water Treatment Works is available to accommodate new developments at this node.
12.1. INFRASTRUCTURE UPGRADES AND PRIORITISATION (CONTINUED...)

Stormwater
- No stormwater reticulation present in this node.
- There are a number of rivers present in this area which could serve as discharge points for stormwater.

Electricity
- There is no evident electrical network at this node.
- An application has to be submitted to eThekwini to determine if spare capacity is available to cater for additional developments at this node.
PARTICIPATION PROCESS

13.1 IDENTIFIED COMMUNITY NEEDS

THE PHYSICAL ENVIRONMENT

The community require the following facilities:
- Library
- Swimming Pool
- Soccer Field
- Rugby Field
- Tennis Court
- Police Station
- Shops and banking facilities
- Factories and other places of employment
- Multipurpose Halls

In terms of Sport and Recreation, the community advised that their children start consuming alcohol and taking drugs at the very early ages. They believe that through the provision of sport and recreation facilities these misdemeanours will be reduced. They also advised that they have a local rugby team which has a rugby kit but do not have a rugby field.

Pre-schools and Crèches, the community views the pre-schools and crèches as the foundation of a good education. Without these facilities the child’s progress is retarded. The prevalent problem faced by pre-school and crèche owners is lack of funding and non-payment of fees. Only 50% of parents can afford to pay fees. They advised that they applied to the Welfare Department for children’s grant but their forms are lost in the Department’s system before the approval stage. On their last attempt they were told that it will take approximately two years to obtain approval.

The community expressed a grave need for a Police Station even if it is a mobile one, because the crime rate is high. They proposed that it be located near the Multi Purpose Community Centre (MPCC). It was said that crime is rife near the fruit and vegetable stands. There is also a lot of pick-pocketing. The community believes that the level of crime will be reduced if there is police presence and improved lighting especially on the main roads. They also believe that crime contributes to the status quo of the area in terms of economic opportunities as investors are reluctant to invest in areas with high crime rates.

Schools, classrooms are full and crowded. There are approximately 1600 learners in 11 classrooms. Some of the classrooms are mobile units. Therefore there is a need for more classrooms and/or schools.

The community is so poor to an extent that they cannot even pay school fees of R300 per annum. In comparison, school fees for Model C schools nearby range between R3000 or R8000 per annum.

The community would like to have their children provided with meals at schools.

The school managers advised that water and electricity is expensive at schools and it is difficult to pay for these services because the parents are unable to pay school fees. They also advised that they do not have proper ablution facilities.

Public Transport, everyone at the community meetings mentioned this as one of their key challenge. They are not happy about public transportation and rely only on taxis which are expensive. They requested that the eThekwini Municipality Bus Service be extended to Illovo as well. Below is a summary issues raised by the community relating to public transport:

- Due to lack of adequate schools in the area, busses are required because some of the children travel as far as Adam’s Mission to attend schools.
- Coupons for the elderly people and school children are required.
- A rank is required for passengers (especially for the 4am passengers).
- Roads are needed. They have 2 major link roads within the community. The roads are in a bad state and require upgrading.
- Humps on the main road (R 603) are needed to reduce speed.
13.1. IDENTIFIED COMMUNITY NEEDS (CONTINUED…)

INGONYAMA TRUST

The relationship between the Ingonyama Trust and Amakhosi was highlighted as one of the key areas that need attention because of the embedded conflict of the Institutional arrangement between Traditional Authorities (e.g. Amakhosi) and Local Councillors.

Applications for developmental projects are sometimes stuck between these institutions. The Local Council may have funds to provide development, however, the Local Inkosi has to provide land and be consulted as some of the land which can be use for development belongs to the Ingonyama Trust Board.

It was highlighted that izinduna or Amakhosi have very little knowledge about Town Planning. They therefore need to know about the planned development so that whatever is approved is line with Town Planning Regulations and Controls. Only one Local Inkosi (Inkosi Maphumulo) was available for a presentation. The Inkosi was happy with the project progress thus far and will forward her letter of support for the project and proposed intervention to Council. Several attempt have been made to secure a meeting with Inkosi Hlengwa and they have all been unsuccessful. The team will continue with their attempt to ensure that there is support for the project.

YOUTH

The local youth leadership wanted to know about the services & plans that the City has for youth. They requested that the local leadership be encourage to open the facilities for community use. The youth advised that, they have dance groups who require financial assistance. They pay R36-00 per hour for the use of the hall and this is not affordable. No one can afford rental for the community hall.

EMPLOYMENT OPPORTUNITIES

The community listed a few challenges they would like to see addressed in an effort to improve job security.

- They claim that for the few job opportunities available in this community job allocation is very selective.
- Small companies are registered but it is difficult to find work. Some people who work for Zibambele (the DOT job creation programme) salaries are very low.
- Workshops for industrial or economic development are required for retrenched factory workers, (e.g. aluminium window fitters and for sewers of curtains and uniforms).
- There are goats on sale in the middle of a residential area. This is a problem because these goats smell.

ACCESS TO SERVICES

The community advised that there is a high number of people affected & infected by HIV/AIDS. The community runs an HIV/AIDS support centre but they do not have sufficient funds.

Lessons from the surrounding community: AIDS HEALTH CARE FOUNDATION

This facility is based in Umlazi-W (Emaweleni) and was started in 2002 as part of Thembalabantu clinic. Services provided at the facility cover numerous areas within eThekweni Municipality. The Aids Health Care Foundation is an NGO which has a Memorandum of Understanding with the Provincial Department of Health to provide comprehensive care and treatment to people with HIV and AIDS.

The facility started when ARVs were not widely available and its outreach stretches as far as Umbumbulu in the South, Kwadabeka in the West and beyond the CBD of Durban in the north.

The facility has expansion plans which must be attached to a smaller Primary Health care Facility. However due to the potential outreach and the size of Umlazi, the NGO is looking for other premises inside Umlazi to extend its outreach.
13.1. IDENTIFIED COMMUNITY NEEDS (CONTINUED…)

This provides an opportunity for a similar Health Outreach facility for an area such as Illovo, which in turn will have a larger outreach beyond Illovo, (e.g. Umbumbulu etc).

ACCESS TO SERVICES

- The community would like to see the social development offices being brought close because they have to travel long distances for ID documents, Birth Certificates and Death Certificates. This facility will also help with grants available for the community at large.
- Welfare pay points are not available in the area. Currently most people receive their welfare grants through shop owners who charge for this service. As a result people are robbed as soon as they leave the shop.
- Application forms for grants are available but people don’t know where to go for these services.

Further to the above, the following proposals were made by the community:

- Young parents are also vulnerable to abuse.
- **Food parcels** must be provided for child-headed families. There are a few of these around the community.
- The child-headed households must be assisted with school uniforms.
- Land for crèches is required, however there is no assistance from Amakhosi or Councilors.
13.2. STAKEHOLDER ENGAGEMENT

Illovo is located approximately 28km south of Durban and it includes some rural communities which were incorporated under eThekwini Municipality (EM) in 2003, when the boundaries of Durban Metro were extended to include rural communities. This is why Illovo is largely under developed. Major strides are thus required to improve the local conditions to be aligned with eThekwini Municipality’s Quality of Life Survey conducted yearly since 1998.

To ensure that the Local Area Plan (LAP) for Illovo is aligned with the vision of eThekwini Municipality, site visits by the professional team as well as stakeholder consultation meetings were conducted over the past 6 months with the community of Illovo. The intention of the stakeholder consultation meetings is to enable the decision makers (the client) to respond to the voices of the people by providing equal opportunities to all its citizens.

The Quality of Life Survey reveals that “for people to be satisfied with life, they must be in good health, have a reasonable standard of living, and have access to basic services as well as community amenities. Therefore, decision makers in an effort to improve the quality of life of its citizens must ensure that development programmes deliver ways that will have the most impact on the satisfaction with life” (Quality of Life survey 2005; page 50).

To help improve the quality of life for Illovo its Local Area Plan must be informed by an approach which focuses on an improved standard of living, better health care services and the provision of municipal services. In a nutshell the LAP must seek to provide general improvement of the social well being. EM: eThekwini Municipality

HEALTH

According to EM’s Quality of Life survey, the main determinant of a good quality of life is good health, which is provided through basic services such as clean water, electricity, sanitation and regular refuse removal. Rural areas within Illovo are thus affected by the lack of these services, as well as a poor road network making it difficult for community members to travel easily within the community and to areas outside of their community.

Primary Health Care

During the broader stakeholder participation meetings, community members of Illovo complained bitterly about the level of service they receive from their local clinic. While there are two clinics within walking distance of each other; one is available for municipal employees only. The other one is available to all community members but it is completely inadequate. Below are quotations from the community members that explain the level of service received at the latter clinic.

One respondent requested that the community be provided with a 24 hour clinic or health centre. The reasons she gave for this request are as follows;
“Our clinic is a challenge because we are given numbered cards to limit the number of people getting medical attention per day.

- When the last numbered card is issued, that means people without a card cannot be attended to. They are requested to come back the following day even when they need urgent medical attention.
- “As a result, people wake up at 04h00 to stand in a queue to ensure that they get allocated a numbered card.
- The gate to the clinic only opens at 06h00 when the security guards arrive.
- This means people wait outside the gate for at least 2 hours before they are allowed onto the premises, even when it is raining.
- Even though people receive these numbers cards, they still wait for more hours before getting medical attention. Sometimes people wait for the whole day (e.g. up to 4 pm) to get medical attention.
- This is a problem because sick people cannot afford to wait this long for medical attention let alone coming back the following day”.

Another community member highlighted the inadequacy of the mobile clinic as follows;

“The mobile clinic which operates in the area is supposed to come bi-monthly (on Fridays). The problem is that it is irregular and sometimes it does not come for two to three months at a time. It would be a tremendous help if it could come at regular intervals. People need the service regularly, especially the elderly.”

Proposed Intervention: These statements demonstrate clearly the inadequacy of the health services provided within this community. Current staff cannot cope with the number of patients visiting the clinic hence the need for a 24 hour clinic.
13.2. STAKEHOLDER ENGAGEMENT (CONTINUED…)

HIV/AIDS CARE
There is an HIV/AIDS care facility provided by the Nonkululeko Development Trust within the community but it does not have adequate facilities or sufficient funds. This service needs to be improved.

An AIDS HEALTH CARE FOUNDATION based in Section W in Umlazi eMaweleni has a Memorandum of Understanding with the Provincial Department of Health to provide comprehensive care and treatment to people living with HIV and AIDS. Services provided at the facility cover all of eThekwini Municipality including the south as far as Illovo. The uMlazi facility started when ARV’s were not widely available and its outreach stretches as far as Umbumbulu in the South, KwaDabeka in the West, and beyond the Durban CBD to the north.

The facility has expansion plans which must be attached to a smaller Primary Health Care Facility, however due to the potential outreach and the size of Umlazi, the foundation is looking for other premises within Umlazi to extend health care facilities.

Proposed Intervention: While Illovo is not the Foundation’s preferred location, there exists an opportunity for the expansion of the HIV/AIDS care facility within Illovo to cater for communities further south (e.g. Umbumbulu, Folweni etc.).

EDUCATION
According to EM’s Quality of Life survey, education is another key component to having an improved standard of living. Limited or inadequate access to education increases the propensity of entrapment for people to stay within the poverty cycle.

Crèches and Pre-schools
Community members believe that pre-schools and crèches are the foundation of a good education and without this kind of a foundation; the child’s progress is retarded. While there are a few small crèches and pre-schools within the community, they don’t have sufficient funds to ensure that they are run efficiently.

- Most of the parents are unemployed and parents cannot afford to pay fees. Only 50% of the parents can pay for fees and some of the crèches were nearly closed due to lack of funds.
- Their current efforts of an application to the Welfare Department for children’s grant are thwarted because the forms keep getting lost. When they make follow ups with the department, they are advised that the bottleneck could take up to two years to be cleared.

Proposed Intervention: A successful application for the children’s welfare grants to the Department of Welfare will go a long way in alleviating the problems outlined above.

- The community efforts are further thwarted by the fact that they do not have an adequate building or land. Land for crèches is required, but the community claimed that they do not get assistance from Amakhosi or the local councillor to secure land.
- The community would like to use some of the unused office municipal buildings in the interim while waiting for the processing of the application by the Welfare Department. The community believes that these offices are used for private meetings and therefore not accessible.
- Crèches are too expensive and some parents (especially night shift parents) leave their children with friends or relatives because they cannot afford the fees. As a result some of the children get abused.
13.2. STAKEHOLDER ENGAGEMENT (CONTINUED…)

Primary Schools and High Schools
All schools within the community are full and crowded. In one community meeting it was reported that in one school they were approximately 1600 learners in 11 classrooms. This paints a very disturbing picture of approximately 145 learners per classroom. Some of the classrooms are in mobile units. The overcrowding of school drives other learners to attend schools in neighbouring communities (e.g. Adam’s Mission).

Proposed Intervention: There is therefore a dire need for more schools within the Illovo area. What is encouraging is that the local councillors advised that there are three vacant sites which were allocated to schools. These sites can be used for a Pre-school and for the additional Primary & High Schools needed by the community.

FET College
The local councillors also advised that there was a Trade School in the area which was discontinued. The building was sold to the Department of Social Welfare which currently provides training services for agriculture; catering; block making and carpentry.

Proposed Intervention: If the building can be upgraded it will provide an opportunity for the establishment of an FET College, where people can be provided with additional trade skills such as electrical certificates, welding, driving lessons, etc. This would go a long way in addressing the job skills shortages experienced by the community, which will improve access to job opportunities.

HOUSING
The social well being of an individual is enhanced by home ownership. This gives the provider and the family a sense of security. People with homes take this for granted, but for the poor it gives them a sense of belonging, at an individual level as well as a member of a broader community. An improved standard of living can be seen through access to a decent home.

There is a high demand for low cost housing within the area and the community is eager to find out about plans for low cost housing.

Challenges Around Low Cost Housing
This is what the community members had to say to highlight their housing provision concerns;

- When will we get assistance with this?
  Kingsbury West has a mixed development which will address affordable housing (R3 500 to R7 500) and gap housing (R7 501 to R15 000). What about us? Are there any plans for low-cost housing?
Some sites are vacant, but people don’t live in the houses or sites, yet there are people from the community who are in dire need of houses. We therefore request for the municipality to have an audit of the vacant sites, so that local people can benefit. The municipality must have data of all the housing sites. This will help to isolate vacant sites, the owners must be found and if they don’t need the houses, houses or sites must be re-allocated to needy people and their families from the community. The municipality may just discover that some of these vacant site owners are deceased in which case something will have to be done about that.

The Community Development Worker present at the meeting addressed the last concern by advising that a survey to determine ownership of houses has already been done. The survey revealed that many people who are inside the houses are from Lovu. This is work in progress.

Proposed Intervention: The communication between the community members and government officials has to be improved. Community members must also be encouraged to attend community meetings. It is also important to highlight that one community member expressed tiredness in seeing consultant after consultant asking them about their needs while little or no development takes place within the community thereafter. The community is now anxious to see development in their neighbourhood, not talk about development. This may explain why some community members don’t come to community meetings anymore.

Nevertheless, Illovo has different human settlement patterns which offer an opportunity for the provision of innovative housing options. These housing options are as follows:

Housing Settlements within Illovo

Kingsburg West: Offers an opportunity for the provision of transitional housing from the existing and established houses on the east. There is an opportunity to sub-divide the sites on the west into bigger plots, therefore providing an opportunity for “up-market housing” within the 8738 planned residential units for the area of Illovo. The proposed housing type for this area: can be social housing which target income groups which are above R 15 000 p.m.

Illovo North and Illovo South: These are areas within Illovo which also form part of the approximately 8738 planned residential units within the Illovo Development Area. R603 runs in the middle of the planned residential area and the road provides the main access into these housing areas. Within this area there can be a mixture of low-cost housing, gap housing and social housing. The proposed housing type for this area can be a mixture of affordable housing and gap housing targeting a range of income groups. Affordable housing will attract income groups ranging from R 3 501-00 to R 7 500 p.m. while gap housing will attract income groups ranging from R 7 501-00 p.m. to R 15 000 p.m. Certain pockets of Illovo North and South can be considered for low cost housing. These are income categories ranging from R 2 500-00 to R 3 500-00.
13.2. STAKEHOLDER ENGAGEMENT (CONTINUED…)

**Bhekulwandle**: is a unique area and it will require a unique housing solution. It is largely rural and the entire area does not have any formal roads except on the north border of the study area (i.e. Reeves Road). There are no services within the area (e.g. water, sewer, or electricity), therefore it is proposed that the settlement pattern for the future should be in keeping with the current rural settlement pattern. Rural housing is thus proposed for this area. This will be in keeping with the existing land tenure system where the Traditional Authority (i.e. Local Inkosi) allocates land to a household.

An interview held with an official of the Department of Human Settlement reveals the following;

**Lessons From Neighbouring Communities**

**Sobonakhona**: This area is largely rural and covers sections of Ward 96 and Ward 97. This neighbouring community has approximately 2850 planned residential sites. Tranch 1 funding has been approved by the provincial housing department and the Project Manager is currently finalizing the appointment of the housing construction company.

**Umnini**: in Wards 98 and 99 has a plan for approximately 3 000 rural housing units. The area is divided into three zones, each with a 1000 planned rural houses. The applications for Tranch 1 and 2 funding from the Provincial Department of Human Settlement have been approved for zones 1 and 2. The application for Zone 3 funding is still outstanding.

**Esidweni**: Esidweni is located south of Umlazi. This project does not fall under Illovo and it is also not a rural housing project. The sizes of the plots are thus not uniform though the size of the house will be the same as other rural housing projects nearby for the areas such as Umnini and Sobonakhona.

The common theme with the rural housing projects mentioned above is that the size of the house is 40m², however the size of the plot is bigger than the normal sub-division prevalent from the surrounding townships. The rationale around this is this system maintains the indigenous living patterns of “umuzi” (or a homestead). The remainder of the land is utilized for farming; whether grazing of cattle or crop farming. Therefore the Illovo LAP will provide varied housing options ranging from;

- **Low Cost Housing**: which target income groups of R 2 500-00 to R 3 500 p.m.;
- **Affordable Housing**: targeting income groups of R 3 501-00 to R 7 500 p.m.;
- **Gap Housing**: targeting income groups of R 7 501-00 to R 15 000 p.m. and Rural Housing.

Rural housing is thus proposed for Bhekulwandle and Baphehli.

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**MUNICIPAL SERVICES**

When the municipality makes plans to improve the standard of living in disadvantaged areas adequate care must be taken to provide access to public services such as community halls, sports facilities, clinics, police services, libraries, sports facilities, parks, crèches, adequate police protection and postal services. All of these services improve the quality of life.

**Payment of Water and Electricity**

The community of Illovo has access to clean water, sewer connection, electricity, as well as refuse removals. However, they complained that they do not have anywhere to pay for these services because payment of these municipal services at a nearby office was stopped in 2006. These offices don’t seem to be used optimally. People now have to travel to Winkelspruit, Isipingo, Amanzimtoti and Durban to pay for these services.

As a poor community they would prefer to have these services close by, even if it’s a satellite, instead of travelling far to pay for their water, electricity and refuse removal. The community wanted to know if anything can be done to address this. One community member complained that sometimes the cost of a taxi fare to one of the municipal offices can even be higher than the cost of the electricity card they are buying.

**Proposed Intervention:** A satellite Municipal office closely is requested by the community.

**Cemetery**

The community has a Regional Cemetery which is managed by the municipality, but it is not adequate.

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**PUBLIC TRANSPORT**

Easy access to public transport is vital for the poor. This helps them to get to work and school on time, both of which contribute to an improved quality of life.

**Busses**

The community needs improvement of public transport. They are currently dependant on taxis which are too expensive.

The lack of adequate schools from the neighbourhood, adds to the burden of additional costs the community has to incur. Children travel as far as Adam’s Mission in quest for a better education.

**Proposed Intervention:** The community prefers busses because they are cheaper. Busses have weekly and monthly coupons which are cheaper for school children, ordinary community members as well as the elderly people (pensioners).

**Taxi Ranks**

A rank is needed for passengers, especially for passengers that leave around 04h00. It is believed that work on a site approved by ETA located opposite the current clinic and near the Community Hall in Section B will commence before the end of 2009.
Road Upgrades
The upgrade of roads is needed. There are 2 major link roads within the community (10080 Road and Old Main Road). The roads are in a bad condition and need to be improved. During our first site visit, this was emphasized by the local councillor, especially for the area near Bhekulwandle, which is one of the rural areas within the area.

Traffic Calming Measures
Humps on the main road (R 603) are needed to bring down speed because of cars that travel at high speed on this road, in the midst of foot traffic especially around the clinic and the community hall.

EMPLOYMENT OPPORTUNITIES
Currently approximately 42% of people within the municipality (EM) are unemployed and this is higher than the provincial average. While unemployment is high at Illovo, the exact percentage is unknown. Having a job to support one’s family makes a big difference in how people feel about the quality of life. When one is employed they are not depended on other people for their well being and for the well being of their family. As more people get jobs their satisfaction about life in general increases.

The community was eager to see many local people employed when the proposed development(s) starts. They however raised concerns which they would like to see being addressed, which are summarised as follows;

Most of those employed travel to Durban, some work in Isipingo and Amanzimtoti, very few work here in Illovo. When the development starts, they wanted to know if employment opportunities will be created for local people. For the few job opportunities available in this community job allocation is very selective. They would like to see this improved.

Small companies are registered but it is difficult to find work. Some people who work for Zibambele (the DOT job creation programme) earn little money. This must be improved.

Workshops for industrial or economic development are required for retrenched factory workers, (e.g. aluminium window fitters and for sewers of curtains and uniforms). This can be incorporated as part of the courses provided by the FET college.

Youth and Women Employment Opportunities
The community claimed that usually, when new developments start outsiders benefit more than the local people. They wanted to know if there were any plans to ensure that the local people also benefit not just from job opportunities, but also from small contractor opportunities, especially youth and women.

Proposed Intervention: Employment and contractor opportunities for locals must be created during the implementation phase.
**DEPARTMENT OF SOCIAL WELFARE**

The Siyabathanda Illovo Care Centre for the Aged and orphans

The Siyabathanda Illovo Care Centre for the Aged and orphans are not adequate. The care workers do not have sufficient space at the current offices for the elderly to do exercises.

Community members believe they should be allowed to use the Community Hall for the elderly at no cost. Currently they are required to pay for the use of the hall. Once again the state of poverty within the community was stated as the reason why they cannot afford to pay for the use of this hall.

Some community members did not know how to access welfare grants for the elderly. They therefore believed that if these facilities can be provided close by it would be a great help.

Lastly, the managers of the Care Centre managed to raise funds for their own building which can be used by the elderly, but they are unable to secure the land. They have tried to get land from the Traditional Authority and the councillor, and the community claimed that it has been impossible to get this matter finalised. The funder has been patient and funds have been available for the past two years. They are afraid that if the land issue is not resolved as soon as possible they will lose these funds.

**SOCIAL FACILITIES**

The community has some social facilities within the community, e.g. four community halls, some sports fields, and a Police Station which was decommissioned. However, these do not seem adequate.

**Community Halls**

There are four community halls within this community, each with a capacity for approximately 150 people. Two are within the Illovo “township” in Sections B & C, while the additional two are in the rural areas of Bhekuluwandle and Bapheli.

The Illovo B Community Hall was a housing support centre. It was not planned to be a community hall. There is land and space available for extension of the housing support centre into a proper community hall, should funds be available.

There are land ownership issues attached to Bhekuluwandle and Bapheli Halls. Ingonyama Trust owns the land and they do not maintain the halls. The halls are in a state of disrepair.

**Proposed Intervention:** Councillors for the area believe that if these halls are to be upgraded, EM’s Real Estate Department should apply for the handover of these halls from Ingonyama Trust to the municipality.

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**13.2. STAKEHOLDER ENGAGEMENT (CONTINUED...)**

**Safety Home For Abused Women and Children**

Children get abused (sometimes sexually), because the community does not have adequate child care facilities such as crèches and pre-schools. The community feel there is a need for a safety home for abused children and women. They also believe that young parents are also vulnerable to abuse and will thus benefit from the safety home.

**Food Parcels Required For Child Headed Households**

Food parcels must be provided for child-headed families. There are a few of these children around this community due to the death of their parents through AIDS related illnesses. The community believes that these children must also get help with uniforms.

**Proposed Intervention:** Land parcels owned by the municipality must be identified and made available for the projects which will best address community needs.
This will unlock capital expenditure for the repairs which are sorely needed as well as an annual maintenance budget from the municipality.

Police Stations

The Police Station is needed urgently, because crime is bad in the area. Due to the high rate of crime, the community believes that they cannot wait for a year or more time for a Police Station. The “local” one was decommissioned and the one in KwaMakhutha where they currently report crime is far. This does not work for them. If funds are a problem then a mobile one will suffice as an interim measure. Community members advised that:

- Crime was rife near the fruit and vegetable stands, because there are a lot of pick-pockets.
- Lighting must be improved. When people go to work every day and church on Thursday nights they are robbed.
- The community also believes that due to crime the economy for this area won’t grow and therefore no investors will come.

Proposed Intervention: For reasons mentioned above, the community is in dire need of a Police Station and as an interim measure they are even prepared to settle for a satellite, should there not be sufficient funds available for its provision.

Home Affairs Services

Due to the welfare grants needed for children and the elderly, ID documents, Birth Certificates and Death Certificates it may be necessary to have a satellite Home Affairs Department within the community. This will reduce the financial drain currently experienced by the community of having to travel long distances to get assistance.

This facility will also help provide pay points for the child welfare grants and pension funds. Currently most people receive their welfare grants through shop owners in the community who in turn charge for this service. As a result some people get robbed as soon as they leave the shop. If this facility is located near a Police Station the incidents of crime will be reduced drastically and ultimately eliminated.

Many community members who do not know how and where to get application forms for grants will also get assistance close by.
Sports and Recreation
Children start drinking and do drugs very early because of the lack of these facilities. The community believes that through the provision of sport and recreation facilities these misdemeanours will be reduced. They also claimed to have rugby jerseys sponsored for some schools but there are no sports fields.

Youth Development
The youth wanted to find out about services which promote their development. They claimed to have a dancing group but need assistance. They also claimed to have been looking and asking around but no help has been forthcoming. They pay R 36-00 per hour for the use of the hall and this is not affordable. No one can afford rental for the community hall.

Library
Some children use the Adams Mission library which is too far from Illovo. There is thus a grave need for a library in the area of Illovo.

Swimming Pool
While the community have made a request for a swimming pool, the councillors for area, believe that at this moment this is not top priority. They believe the social services listed above should be the top priority.

Further the maintenance issues attached to the upkeep of this facility can be exorbitant; hence councillors believe it is not desirable at this stage.

Multi Purpose Community Centre (MPCC)
One is mindful of the limitation of government funding for all or most of the social services listed above. It would thus makes sense for the municipality (through the MIG / NDGP) to provide funding for an MPCC, which will be a big building located in a central area.

Proposed Intervention: An MPCC would be the best way to provide the bulk of the community facilities mentioned above. The central location is vital to ensure easy access for the wider community. This will create a destination for the entire community as well as the desired foot traffic needed to attract retailers and other investors into Illovo.

MIG: Municipal Infrastructure Grant
NDGP Neighbourhood Development Grant Programme

CLARITY BETWEEN RESIDENTIAL, RETAIL AND COMMERCIAL ACTIVITIES
One of the community members requested for live stock along R 603 to be relocated to another area where they would not damage communal gardens. Some community members did not like where these goats were located which is very close to a residential area. They cited the smell of manure as another problem.

Another community member requested for the liquor stores and taverns to be moved away from schools. She further requested for the liquor stores and taverns to be properly regulated and monitored because they operate all night. She also added that “currently taverns or bottle stores are located within the residential areas. This is undesirable because most drunk people use foul language and swear in front of children all hours (day and night).” It is thus undesirable to have their children exposed to such foul language everyday.

Proposed Intervention: There is therefore a clear need for a delineation of residential, retail and commercial areas as proposed in the local area plan.

13.2. STAKEHOLDER ENGAGEMENT (CONTINUED...)
SHOPPING FACILITIES
The community wanted to know about the provision of shops or a shopping centre? Most of them travel to Isipingo, Amanzimtoti, recently About Town or Galleria and Durban to do their shopping. Some go to Winkelspruit, which is closer, but very expensive. They believe further employment opportunities will be created for them, should this come to fruition. They mentioned shops like Spar, Pick 'n Pay, Checkers, Shoprite & Cambridge, butchery; Hardware Store, clothing stores such as Truworths, Jet, Edgars and Hub as desirable.

Once again the main consideration for this was the saving on transport costs because they travel to the neighbouring areas to buy most of these things.

INSTITUTIONAL ARRANGEMENTS
Human settlement patterns in Illovo can be characterised as peri-urban and rural. The management of the peri-urban areas fall under the municipality while the management of the rural areas fall under Amakhosi or the Traditional Authority. Each has a distinct and different way of management.

EM’s 2020 vision which is to provide an improved quality of life with equal opportunities to all its citizens must take cognisance of these different institutional arrangements. The management methodology of each has to be analysed and adapted to ensure that conflict is eliminated or minimized during the implementation or provision of services which will help improve the quality of life of eThekwini Municipalities’ citizens. To ensure effective implementation these two management systems must be aligned.

Proposed Intervention: One example has already been given by local councillors where the community halls which are in a state of repair and owned by Ingonyama Trust must be transferred from Ingonyama Trust to EM’s Real Estate to unlock capital expenditure to fix the halls and an annual budget for maintenance.

A proposal of unlocking land parcels is addressed at the end of the next section.

LAND LEGAL CHALLENGES
Many community members seemed to have major problems with the acquisition of land, whether it was for a business or for a community facility. All accounts of their woes by community members were similar. This must be addressed to open the bottle necks caused by this lack of direction or uncertainty. Examples of what community members said are as follows;

- Land for crèches is required, but we do not get assistance from Amakhosi or our councillor.
- We have managed to raise funds for our own building which can be used by the elderly, but we are unable to secure the land. We have tried to get land from the Traditional Authority and the councillor, but it has been impossible to get this matter finalised. The funder has been patient and funds have been available to us for the past two years. We are afraid that if the land issue is not resolved as soon as possible we will lose these funds.
- I also have a project and it already has approved funds. My frustration is that I am unable to secure land. The land I wanted is zoned agricultural and I wanted to promote an Agricultural Centre. I am unable to plan ahead because I don’t own this piece of land. I have to renew the lease every month with the Social Development Department.

13.2. STAKEHOLDER ENGAGEMENT (CONTINUED...)
This is frustrating because I would like to expand, but because of the uncertainty, I don’t want all our hard work to go to waste, if and when we get relocated.

- I also want to comment about these RSA sites. It is a problem that affects a lot of people. Also, there are many sites which are called show houses. People who need houses cannot acquire them. The quality of some of these subsidised houses is bad. I live in one of these houses. When it rains my house gets wet. I cannot do anything to fix the house because I’m not sure if it is one of the houses that need to be demolished later on. We are frustrated about this uncertainty and want a decision on these matters to be made soon.

- We have a temporary work area for a crèche. We have found sponsors for land but have been unable to secure property. We have waited for a long time for land and we have not received any help from our councillor or Amakhosi and/or Izinduna.

Proposed Intervention: Land parcels which are needed for development must be identified early and negotiations with land owners (e.g. Ingonyama Trust Board, private land and government land), must be started early to unlock bottlenecks and facilitate development.

CONCLUSION
The community of Illovo has provided consultants with a long list of projects that are needed by the community. Some of these include a need for a 24 hour Health Centre, a Police Station, a library, halls, a satellite municipal office for payment of services and many more.

If the Illovo community is to be at a similar level as the rest of the services provided within the eThekwini Municipality, most of these facilities are needed. While most of these facilities are needed urgently (e.g. Police Station) some are not as urgent.

Budget constraints may prohibit the provision of most of these services however, should an option of a Multi-Purpose Centre be chosen by the community, delivery could happen much faster. Further, to maximise benefit for the community while being prudent with capital expenditure, the existing hall can be upgraded and may even incorporate a library. The provision of these services will go a long way to improving the quality of life of the residents of Illovo.

The location of the facility should be central to ensure that the majority of the community members have easy access. The MPCC will begin to attract the volume of foot traffic which usually attracts most investors into the community. The proximity of the Taxi rank to the MPCC will be the main attraction of the community members and the investors alike.

Lastly, the community is crying out for job and contractor opportunities, it is hoped that during the implementation process local job and contractor opportunities will be considered. While the local area plan begins to highlight the preferred location of various activity zones, some of the projects mentioned in this section can serve as a catalyst in ensuring that planning of retail, commercial and residential areas is implemented in a way that is self-sustaining.
The following two Special Area Plans have been developed in accordance with the immediate needs of eThekwini as per the identified areas / nodes. The identified areas for specific development projects are Illovo Village and Illovo Central.

The Special Area Plans will identify projects that would be packaged for detail design and implementation at a later stage.

The Special Area Plans will contain the following key elements:
- Movement and circulation framework;
- Land use and activity patterns;
- Urban form framework;
- Urban Landscaping/ Public space framework; and
- Phasing Strategy.

Specific issues to be addressed and indicated in graphic format are amongst others:
- Road network Pedestrian circulation Block Subdivisions/Land Assembly proposals;
- Details of Site Areas;
- Site information relating to topographic feature, elevation etc;
- Build Form Placement;
- Areas identified for public transport Landscaping of streetscape;
- Inclusion of building control lines, where applicable;
- Min and Max Heights per site; and
- Min and Max Floor Area Ratios per site Coverage details per site.
14.1. ILLOVO CENTRAL CONCEPT
14.1. ILLOVO CENTRAL CONCEPT (CONTINUED...)

**DESIGN PRINCIPLES AND GUIDELINES**
Create a clear vision for the study area which develops a supportive movement network and land use structure.

**MOVEMENT AND CIRCULATION**
- Create a clear movement system based on a hierarchy of routes;
- Design and establish a permeable environment allowing improved movement and choice for users;
- Promote pedestrian priority zones and scale in terms of distribution of activities;
- Create and design an environment which provides clarity, identity and structure at a local and overall level;
- Traffic calming should be complimentary to various pedestrian priority zones;

**LAND USE**
- Promote qualities of complexity and overlap creating a rich and diverse environment building on a medium to fine grain mixed use nature;
- Establish the opportunity to create a unique sense of place and legibility for the users;
- Allow development to be mutually beneficial for users and land use activities alike;
- Reinforce facilities and activities which will generate positive upliftment in infrastructure and the community;
- Create user friendly and safe public space and facilities;

**URBAN FORM**
- Establish a range of built form controls which contribute to achieving the overall design objectives. Of primary importance is guiding development in a way, which creates, built form qualities found within structured environments and creating an urban fabric;
- Ensure the relationship between building edges and facades are supportive of the overall environment and individual use;
- Promote development which is compatible;
- Encourage the development of continuous built fabric;
- Create a safe and comfortable pedestrian environment through surveillance and appropriate building edge conditions;
- Encourage colonnade edges within the central core to promote pedestrian movement and activity;

**PUBLIC SPACE**
- Establish a variety of hard and soft open spaces which are interconnected and mutually supportive;
- Create a network of unique public space and facilities as reference points allowing for legibility and the building of a sense of place and community;
- The public space should relate to the adjacent activities and buildings, and the design of such spaces should be in accordance with the nature of the surrounding activities;
- Spaces should be designed to accommodate a range of uses.

*Sustainable Working Environment*
14.1. ILLVO CENTRAL CONCEPT (CONTINUED...)

**APPLICATION**

**MOVEMENT AND CIRCULATION**

- A clear and logical road hierarchy is been proposed. The new and improved system could include -
  - A primary mobility route – R603 which links the coastal region to the Pietermaritzburg hinterland;
  - A secondary access road which links the Illovo central node to Bhekulwandle;
  - Two accessibility spines on either side of the primary mobility route (R603) which provides access to activities spanning the primary mobility route – R603;
  - A collector road that services the northern Illovo area; and
  - A number of local access roads aiding the permeability of the area.
- Four new connections have been proposed as well as a number of road upgrades;
- Pedestrian priority zones have been established within the primary economic and activity node as well as within the community and civic node.

**LAND USE**

- A rich mix of land use activities have been introduced which support the existing residential development. The land uses include;
  - A community and civic node;
  - A tourism and recreational node;
  - A economic and activity nodes; and
  - Mixed use development activities.
- The multi-purpose centre located alongside the secondary access road, within the primary community and civic node creates a unique opportunity to provide a distinct urban square creating an strong sense of place;
- Proposed land uses within the node are complimentary and will develop a robust and active public environment;
- Quality of the environment -
  - The primary community and civic node as well as the primary economic activity node provides for higher density development with a finer grain built form response;
  - The mixed use development within the area along the R603 provides a more medium intensity development strip;
  - The remainder of the area requires a very low level of development;
  - The generous open space system within the Illovo Central area allows for positive upliftment of the area as well as improved and positive land uses response;

**URBAN FORM**

- Design and orientation of the built form should support a safe and secure streetscape;
- Heights for the area should range between 1 to 4 stories. The 3 to 4 story building should be concentrated within the two primary nodes, i.e. the community and civic node and the economic and activity node;
- F.A.R’s within the precinct should range from 0.3 – 0.5 in the lower intensity spaces, 0.6 – 0.8 in the medium intensity areas and 1.0 – 1.5 in the high intensity areas around the primary nodes;
- Define the street edge along the R603 and on the secondary access road leading through the civic and community node towards Bhekulwandle through built edge conditions, colonnades and tree planting;
- The development of two landmark buildings or features within the civic and community node as well as the economic and activity node defining unique and special the spaces.
14.1. ILLOVO CENTRAL CONCEPT (CONTINUED…)

PUBLIC SPACE

- Public realm upgrades should occur throughout the node, however primarily around the pedestrian priority zones. Upgrades should include –
  - Upgrading paving and sidewalks;
  - Planting trees;
  - Landscaping;
  - Signage;
  - Lighting; as well as
  - Street furniture such as bins and benches.
- Introduce a planting strategy for the area to formalise approaches and gateways as well as the R603. The introduction of the planting strategy will also help link the open space system through the vegetated road networks;
- Hard landscaping such as public urban squares and gathering areas will occur within the civic and community node as well as the economic and activity node. These spaces should be designed to accommodate a range of uses;
- Traffic calming measures need to be implemented within the node, particularly around the civic and community node and the economic and activity node, as both are situated along side high friction routes.

The following series of plans provide guidelines for development within the Illovo Central area.
The plans consist of a proposed;
- Activity Structure,
- Movement and Circulation;
- Land Use;
- Urban Form
- Urban Form and Landscaping;
- Indicative Maximum F.A.R;
- Indicative Maximum Height; and
- Development Phases.
14.1.1. ILLOVO CENTRAL - ACTIVITY STRUCTURE

MOVEMENT NETWORK
- Primary Mobility Road (R603)
- Secondary Access Road
- Activity Spine
- Collector Road

ACTIVITY NODES
- Primary Civic/Community Node
- Primary Economic/Activity Node
- Primary Regional Open Space Gateway

200m/3 Minute Walk
The upgrading of existing roads as well as the introduction of new roads within the Illovo Central precinct increase the areas permeability. The improved movement structure will allow growth and development to occur along the R603, creating a well structured and active Activity Spine.

**MOVEMENT NETWORK**
- Primary Mobility Road (R603)
- Secondary Access Road
- Accessibility Spine
- Collector Road
- Local Access Road
- New Link Road
To facilitate future growth and development within the Illovo Central Node, a number of land uses need to be introduced.

Growth and development along the R603 should be promoted by mixed-use activity such as retail, office, and SMME incubator hub.

**Broad Land Uses**

- Educational Facilities
- Civic and Community Node
- Mixed Use Development
- Commercial and Transport Node
- SMME Incubator Hub
- Tourist and Recreational Facilities
- Existing Residential
- Illovo Regional Forest
14.1.4. ILLOVO CENTRAL - URBAN FORM

1. Existing School;
2. Proposed Future School;
3. Ancillary Sports Fields;
4. Taxi Rank;
5. Market;
6. Motor Service Centre;
7. Commercial Retail & Offices;
8. SMME Incubator Hub;
9. Tourist & Recreational Facilities;
10. Open Space System;
11. Illovo Regional Forest;
12. Existing Residential;
13. Mixed Use Development;
14. Multi Purpose Centre
14.1.5. ILLOVO CENTRAL - URBAN FORM AND LANDSCAPING

- Indicative Building Placement;
- Higher intensity, Finer Grain Built Form
- Medium Intensity, Medium Grain Built Form
- Focal Points/ Spaces/ Landmarks
- Open Space Corridor Rehabilitation Zone
- Structured Tree Planting
- Urban Space/ Pedestrian Priority Zone
- Gateways
14.1.6. ILLOVO CENTRAL - INDICATIVE MAXIMUM FAR
14.1.7. ILLOVO CENTRAL - INDICATIVE MAXIMUM HEIGHT

[Map showing different zoning categories: 1 Story, 2–3 Stories, 3–4 Stories]
14.1.8. ILLOVO CENTRAL - DEVELOPMENT PHASES

PHASING
- First Phase
- Second Phase
- Third Phase
As a result of the interaction with local councils within the Illovo Area, it was suggested that long term guidance be given to the area north of the Illovo Central Precinct. The Illovo Central Extension is seen as a long term plan to give direction to some of the last vacant land parcels within the area. The development of the Illovo Central Extension should only be triggered after the development of the original Illovo Central Precinct. The proposals for this area suggest primarily infill residential development to support existing residential communities; upgrading of the existing sports precinct; and the continuation of mixed use development along the R603 spine.

1. Sports Precinct;
2. Mixed Use Development;
3. Workshops/Mini Factories;
4. Future Residential;
5. Satellite Taxi Rank;
6. Trading Area;
7. Park;
8. Open Space.
14.1.10. ILLOVO CENTRAL EXTENSION – OVERALL PLAN
14.2. ILLOVO VILLAGE CONCEPT
14.2. ILOVO VILLAGE CONCEPT (CONTINUED…)

DESIGN PRINCIPLES AND GUIDELINES
Create a clear vision for the study area which develops a supportive movement network and land use structure.

MOVEMENT AND CIRCULATION
- Create a clear movement system based on a hierarchy of routes;
- Design and establish a permeable environment allowing improved movement and choice for users;
- Promote pedestrian priority zones and scale in terms of distribution of activities;
- Create and design an environment which provides clarity, identity and structure at a local and overall level;
- Traffic calming should be complimentary to various pedestrian priority zones;

LAND USE
- Promote qualities of complexity and overlap creating a rich and diverse environment building on a medium to fine grain mixed use nature;
- Establish the opportunity to create a unique sense of place and legibility for the users;
- Allow development to be mutually beneficial for users and land use activities alike;
- Reinforce facilities and activities which will generate positive upliftment in infrastructure and the community;

- Create user friendly and safe public space and facilities;

URBAN FORM
- Establish a range of built form controls which contribute to achieving the overall design objectives. Of primary importance is guiding development in a way, which creates, built form qualities found within structured environments and creating an urban fabric;
- Ensure the relationship between building edges and facades are supportive of the overall environment and individual use;
- Promote development which is compatible;
- Encourage the development of continuous built fabric;
- Create a safe and comfortable pedestrian environment through surveillance and appropriate building edge conditions;
- Encourage colonnade edges within the central core to promote pedestrian movement and activity;

PUBLIC SPACE
- Establish a variety of hard and soft open spaces which are interconnected and mutually supportive;
- Create a network of unique public space and facilities as reference points allowing for legibility and the building of a sense of place and community;
- The public space should relate to the adjacent activities and buildings, and the design of such spaces should be in accordance with the nature of the surrounding activities;
- Spaces should be designed to accommodate a range of uses.
14.2. ILLOVO VILLAGE CONCEPT (CONTINUED…)

APPLICATION

MOVEMENT AND CIRCULATION

- A new collector road is proposed though the study area, which will act as a complimentary route to the existing road creating a loop system. This link will make the Illovo Village area more permeable;
- Pedestrian priority zones have been established within two areas of the village:
  - Primary mixed use development node, situated along side the R603, at the entrance to the precinct, as well as
  - Within the primary economic and activity node to the south of the precinct.
- Traffic calming measures will need to be implemented at both gateways to the precinct due to the pedestrian priorities zones;

LAND USE

- A rich mix of land uses are proposed to support this node. These include –
  - Two economic and activity nodes – one situated along the R603 and the proposed new collector road, and the other to the south of the study area;
  - A primary mixed used development node situated along the R603 at the entrance to the study area;
  - An SMME incubator hub to the south of the site, located at the south gateway to the node;

- A primary regional open space gateway which should provide a number of positive tourism and recreational opportunities is located adjacent to the Luvi River and at the base of the Illovo Regional Forest.
- The land use within the village node will be supported by a proposed residential component;
- Residential development should provide an active, vibrant and secure environment;
- The development and intensity of the built environment within this area should be that of a village scale;
- Development around the mixed use and economic node should be more intense with a finer grain built form response;
- The area denoted as a historical conservation zone as well as the country club should be maintained and upgraded;

URBAN FORM

- Design and orientation of the built form should support a safe and secure streetscape;
- Heights for the area should range between 1 to 4 stories. The 3 to 4 story building should be concentrated within the two primary nodes, i.e. the community and civic node and the economic and activity node;
- F.A.R’s within the precinct should range from 0.3 – 0.5 in the lower intensity spaces, 0.6 – 0.8 in the medium intensity areas and 1.0 – 1.5 in the high intensity areas around the primary nodes;
- Define the street edge along Old Main Road and on the proposed new collector road leading to the regional open space gateway through built edge conditions, colonnades and tree planting;
- The scale of built form needs to be sensitive and respond appropriately to the open space system and the proposed residential communities;
- The historical conservation zone should be maintained and upgraded to preserve its unique character;
- Resort development at the base of the Illovo Regional Forest should be sensitive to the surrounding natural open and be discreet in nature.

PUBLIC SPACE

- Public realm upgrades should occur throughout the node. Upgrades should include –
  - Upgrading paving and sidewalks;
  - Planting trees;
  - Landscaping;
  - Signage;
  - Lighting; as well as
  - Street furniture such as bins and benches.
14.2. ILLOVO VILLAGE CONCEPT (CONTINUED…)

- The concept introduces a planting strategy for the area to formalise approaches and gateways as well as to reinforce the open space system and scenic corridor within the precinct. The introduction of the planting strategy will help link the open space system through the vegetated road networks;
- Hard landscaping such as public urban squares and gathering areas should be located throughout the residential area, however these spaces should be designed to accommodate a range of uses. Provision for two primary gathering spaces should be made within the mixed use node as well as the economic and activity node;
- Traffic calming measures need to be implemented within the node, due to the potential residential areas within this precinct;
- The regional open space gateway provides a unique and positive recreational and environmental opportunity for the surrounding communities.

The following series of plans provide guidelines for development within the Illovo Village area. The plans consist of a proposed:
- Activity Structure;
- Movement and Circulation;
- Land Use;
- Urban Form
- Urban Form and Landscaping;
- Indicative Maximum F.A.R;
- Indicative Maximum Height; and
- Development Phases.
14.2.1. ILLOVO VILLAGE - ACTIVITY STRUCTURE

MOVEMENT NETWORK
- Primary Mobility Road (R603)
- Mobility/Accessibility Route
- New Collector Road

ACTIVITY NODES
- Primary SMME Incubator Hubs
- Primary Economic/Activity Node
- Primary Regional Open Space Gateway
- Primary Mixed Use Node
- 500m/5 Minute Walk
- Cross Catchment Link
14.2.3. ILLOVO VILLAGE - MOVEMENT AND CIRCULATION FRAMEWORK

MOVEMENT NETWORK
- Primary Mobility Road (R603)
- Mobility/Accessibility Route
- Collector Road
- Local Access Road
- New Link Road
14.2.4. ILLOVO VILLAGE - BROAD LAND USE FRAMEWORK

BROAD LAND USES
- Open Space System
- Residential Development
- High Density Residential Development
- Mixed Use
- SMME Incubator Hub
- Tourist and Recreational Facilities
- Business Centre
- Historical and Conservation Zone
14.2.5. ILLOVO VILLAGE - URBAN FORM

1. Consolidate Residential Development
2. SMME Incubator
3. Business Centre
4. Sports Fields
5. Mixed Use Development
6. Medium Density Housing
7. High Density Mixed Use Development
8. Open Space System
9. Satellite Taxi Facility
10. Historical Conservation Zone
11. Tourism and Recreational Zone
12. Resort Development
14.2.6 ILLOVO VILLAGE - URBAN FORM AND LANDSCAPING

- Indicative Building Placement;
- Higher intensity, Finer Grain Built Form
- Medium Intensity, Medium Grain Built Form
- Focal Points/ Spaces/ Landmarks
- Open Space Corridor Rehabilitation Zone
- Structured Tree Planting
- Urban Space/ Pedestrian Priority Zone
- Gateway
14.2.7. ILLOVO VILLAGE - INDICATIVE MAXIMUM FAR
14.2.8. ILLOVO VILLAGE - INDICATIVE MAXIMUM HEIGHT
14.2.9. ILLOVO VILLAGE - DEVELOPMENT PHASES

**PHASING**
- First Phase
- Second Phase
- Third Phase
ACTION PLAN

15.1. INSTITUTIONAL ARRANGEMENTS IN THE STUDY AREA

The historic fragmented management of urban and rural areas of South Africa is well documented, but in very few places is this as clearly illustrated as in the Illovo area. This then also contributed to the development of the area that has to date been of a fragmented nature. In short the following institutional arrangements applied in the Study Area up until the 1990s:

- **Traditional Councils**: Parts of Bhekulwandle and areas neighbouring on the Illovo Development falls with three different Traditional Council Areas (this is still the case);
- **KwaZulu Government**: The KwaZulu Government was responsible for development in the Traditional Council areas;
- **Kingsburgh and Amanzimtoti**: These areas were managed by separate local authorities and had no responsibility of rural / farming areas;
- **Regional Services Councils**: Agricultural land on which Illovo was developed would have been the responsibility of the Regional Services Councils or Joint Services Boards;
- **Corporate land owners**: Illovo Sugar as a major land owner in the area obviously had a major impact on development management in the area.

**THE CURRENT SITUATION**

The democratisation process in South Africa changed the above and the demarcation process in 2000, in terms of the Municipal Structures Act, ensured that the area as whole forms part of the eThekwini Municipality (with the Vulamehlo and Mkhabezini Municipalities bordering to the west of the Study Area).

However, a number of institutional arrangements still impact negatively on achieving integrated development in the area, viz.

- The study area is split in two wards, i.e. Wards 97 and 98. This split is purely of a political / administrative nature and bears no relevance to development dynamics. The Illovo Development Area for instance is split into two by the Wards.
- The neighbouring areas still forms part of three different Traditional Councils making consultation processes, and specifically integrated development planning, nearly impossible.
15.1. INSTITUTIONAL ARRANGEMENTS IN THE STUDY AREA (CONTINUED…)

RECOMMENDED WAY FORWARD
It is proposed that a Development Forum be established for the Study Area and Bhekulwandle areas not previously included in the Study Area. All stakeholders from different ward and traditional council structure, as well as other relevant stakeholders, should be involved in such a development forum.

The composition and the roles and responsibilities of such a Development Forum will be discussed in later sections of this report.
15.2. THE DEVELOPMENT PROCESS

The Local Area Plan for Illovo presents a framework for the future development of the Illovo area. The area has historically been neglected in terms of integrated development with most interventions in the area being of an ad hoc nature. It is, however, acknowledged by stakeholders that the plan cannot be implemented in the short term for a number of reasons, including:

- Implementation of the plan is dependent on the availability of resources, both human and financial;
- Implementation will require the cooperation and buy-in of all stakeholders in the vision and strategy;
- Implementation of certain projects / components of the plan will require others to be concluded and operational; and
- Initiating the implementation of activities / projects will be dependent on specific triggers (objectives being achieved), as well as additional studies and detailed planning.

With the above in mind the proposed project programme categorises projects in the following timeframes:

- Immediate: Actions that should immediately be initiated (2010 – 2012)
- Short Term (2013 – 2018)
- Medium Term (2019 to 2023)
- Long Term (2024 to 2029)

Each of the terms is discussed below and the areas of focus within these terms are considered.

APPROACH TO IMPLEMENTATION

The eThekwini Municipality has adopted an approach to development that involves local communities / stakeholders. It is envisaged that this Plan, developed in consultation with stakeholders, will also be implemented with the support of the stakeholders (the approach to ensuring this is discussed in later sections).

The broad approach to implementation, which guides the preparation of the implementation process, is to firstly confirm the recommendations of the Local Area Plan through more detailed planning and design exercises on the Precinct Level (as per the Illovo Central and Illovo Village examples presented as part of this initiative). Secondly, those projects viewed as requiring limited financial resources, linked primarily to the management functions of the municipality, should be implemented in the short term together with high priority projects that have existed as priorities for a substantial period of time.

It is noted that a number of the projects identified is of such a nature that detailed motivations and extensive financial resources will be required to implement. These projects will generally be implemented in the medium to long term.

ACTION PLAN PROCESS

IMMEDIATE ACTIONS

The purpose of identifying immediate actions is to ensure that the momentum already achieved through previous interventions in the area, and the Local Area and Precinct Planning processes, is maintained and not lost due to implementation delays. For this purpose a number of projects, requiring limited funding and not requiring substantial inputs for implementation, have been identified. These projects are generally of a planning nature or capital development projects already initiated.

A number of the immediate actions identified will, once implemented, clear the way for larger capital type projects to be motivated for and implemented.

SHORT TERM

In the short term, i.e. up till the end of 2018, the focus will be on developing and obtaining buy-in on specific strategies and initiating the implementation thereof. The implementation of these priorities in the short term will be dependent on budget availability.

MEDIUM TERM

Activities scheduled for the medium term are generally of a capital nature requiring substantial resources to be allocated. These projects are viewed as critical to making the Illovo area functioning in terms of its allocated role.
15.2. THE DEVELOPMENT PROCESS (CONTINUED…)

MEDIUM TERM
Activities scheduled for the medium term are generally of a capital nature requiring substantial resources to be allocated. These projects are viewed as critical to making the Illovo area functioning in terms of its allocated role.

LONG TERM
Projects / activities scheduled for the longer term are those not of critical importance at present. These projects / activities will be required to accommodate the future growth and development in the area and ensure that the area continue to fulfil its designated role within the eThekwini Municipality.
15.3. RESOURCES FOR IMPLEMENTATION OF THE ACTION PLAN

The availability of resources or the potential to access resources for implementation is critical in ensuring successful implementation of the action plan. In this regard, reference is not only made to financial resources, but also to organisation and human resources. The resources available for implementation are discussed in more detail below.

ORGANISATIONAL RESOURCES
A number of organisations active in the Illovo area have been identified during the planning process. The key organisations with a potential future role to fulfil in the implementation of the plan are:

- The eThekwini Municipality;
- Various Government Departments (specifically the Department of Transport);
- Civic Associations; and
- Non-Governmental Organisations.

ETHEKWINI

The ongoing involvement and commitment of the Municipality in the implementation of the Local Area Plan is essential. The Municipality has substantial resources at its disposal to support this process; however, it will have to be ensured that the proposed development for Illovo is integrated into line department planning and budgets. Important organisational resources to be aligned for the implementation of the plan include:

- Political leadership: Both Wards 97 and 98 have strong political leadership supported by Community Development Officers.
- Line departments: At present line department involvement in the area is limited. Facilities previously established for eThekwini line departments are currently vacant.
- Management of existing eThekwini facilities in Illovo: A number of eThekwini facilities exist in the Illovo area including Community Halls, a Clinic, Offices (both in Illovo Development Area and Illovo Village) and others. The most appropriate use of these facilities to the benefit of the community must be considered.

GOVERNMENT DEPARTMENTS

A number of government departments, and the availability of resources in these departments, will have a bearing on future development in the Study Area. Government departments with a key role to fulfil in the area include:

- The Department of Transport responsible for the R603 and MR197, both routes of regional and local significance for Illovo;
- The Department of Education responsible for the provision of school facilities in a fast densifying urban and peri-urban environment;
- The Department of Health responsible for the provision of health facilities.

CIVIC ASSOCIATION

There is at present no strong presence of civic associations in the area.

HUMAN RESOURCES

Human resources to be allocated relates primarily to Council resources. For implementation to be successful each relevant line department should have a person assigned the responsibility to deal with the Illovo area.

FINANCIAL RESOURCE

Various potential sources of funding for projects in the Illovo area exist. However, with regard to financial resources, challenges in terms of accessing funding include:

- Competing priorities and the priority assigned to Illovo (it is hoped that in budget allocations the regional gateway role is acknowledged);
- Accessing funding in the short term due to multi-year budgets already in place; and
- Ensuring the commitment of private sector funding as an incentive for public sector funding (and vice versa).

Some of the funding sources to be further considered for purpose of implementation include:

- Council capital budget;
- KZN Corridor Fund of the KZN Department of Local Government and Traditional Affairs;
- Others.
15.3. RESOURCES FOR IMPLEMENTATION OF THE ACTION PLAN (CONTINUED...)

In terms of each of the projects identified in this implementation plan recommendations is made as to the appropriate funding source for the project. More detailed discussion will have to be engaged in with potential funders to secure funding for projects.
15.4. MANAGING IMPLEMENTATION OF THE ACTION PLAN

IMPLEMENTATION COORDINATION
At present the only eThekwini staff with a direct responsibility for the Illovo area is the ward Community Development Officers. Other eThekwini line departments generally have staff serving the southern areas (i.e. the staff do not focus on Illovo specifically). The Development Planning staff currently responsible for the southern areas is then also responsible for Illovo, as one area forming part of the south.

The above highlights some concern for the future implementation of the Illovo Local Area Plan and it is hoped that the establishment of a Development Forum will address this concern, at least partially.

THE STAKEHOLDER FORUM
ESTABLISHMENT OF A STAKEHOLDER FORUM
Previous sections of this report have highlighted the importance of establishing a stakeholder forum in order to ensure the future integrated development of the Study Area. The current fragmented institutional arrangements are the primary motivation for this. It is requested that the core of the Stakeholder Forum should be formed by:

- Representatives of the two wards (the Councillors and if available ward committee members);
- Representatives of the directly affected and neighbouring Traditional Councils;
- Line Department representatives; and
- NGOs / CBOs operating in the area.

PURPOSE OF STAKEHOLDER FORUM
The purpose of the stakeholder forum will be:
- To enable the meaningful contribution of local stakeholders in planning and development;
- To encourage a high level of communication between eThekwini and local stakeholders in the preparation and implementation of the Precinct Plan;
- To coordinate development efforts in the Illovo area; and
- To ensure private and non-governmental sector buy-in in implementation of projects.

APPROACH
It is proposed that the Stakeholder Forum meet on a quarterly basis with the focus of the meetings being on components of the Local Area and Precinct Plan serving as the Agenda for the meeting. The approach for managing the stakeholder forum, however, needs to be discussed and agreed to by members.
15.5. ACTION PLAN PROJECTS

OVERVIEW OF PROJECT DATABASE
For the purposes of the Special Area Plans as well as the Local Area Plan a projects database has been developed. The project database will give guidance to future projects and actions for the implementation and development within the Illovo LAP. This projects database includes the following information relating to each project:

- Project Name;
- Location in terms of Precinct;
- Short Description;
- Responsibilities;
- Linkages;
- Priority;
- Budget.

PROJECT LISTING
A summary project list is provided below per pillar and per strategy. More detailed project sheets are included in Annexure B attached.
## 15.5. ACTION PLAN PROJECTS (CONTINUED…)

**GENERAL ACTION PLAN**

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>PRECINCT</th>
<th>PROJECT TYPE</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>CAPITAL / OPERATIONAL BUDGET</th>
<th>CAPITAL BUDGET</th>
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<tbody>
<tr>
<td>1.1</td>
<td>Extension and upgrading of the open space system through out Illovo</td>
<td>General</td>
<td>Operational</td>
<td>eThekwini Environmental</td>
<td>Short</td>
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<td>1.2</td>
<td>Establish and Implement and Urban Management Plan</td>
<td>General</td>
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<td>eThekwini Municipality &amp; Stakeholder Forum</td>
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<td>2.1</td>
<td>Land Use Management Mechanism</td>
<td>Bhekuziwandle</td>
<td>Planning</td>
<td>LUMS</td>
<td>Short</td>
<td>Capital</td>
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<td>2.2</td>
<td>Bhekuziwandle Node Precinct Plan</td>
<td>Bhekuziwandle</td>
<td>Planning and Design</td>
<td>Framework Planning</td>
<td>Short – Medium</td>
<td>Capital</td>
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<td>3.1</td>
<td>Establishment of Trading Centre</td>
<td>Illovo Central</td>
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<td>3.2</td>
<td>Establishment of Market Place</td>
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<td>Business Support</td>
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<td>Organisation of Informal Sector Activities</td>
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<td>Business Support</td>
<td>Short</td>
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<td>3.4</td>
<td>Establishment of Commercial / Office Development</td>
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<td>3.5</td>
<td>Establishment of Public Sector Service Centre (Tusung Centre)</td>
<td>Illovo Central</td>
<td>Implementation</td>
<td>Government Communication and Information System (GCIS)</td>
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<td>3.6</td>
<td>Urban Environment Improvements</td>
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<td>Design</td>
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<td>3.7</td>
<td>Reconfiguration of Layout</td>
<td>Illovo Central</td>
<td>Planning and Design</td>
<td>Framework Planning</td>
<td>Short – Medium</td>
<td>Capital</td>
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<td>3.8</td>
<td>Alien Invasive Removal Plan for Little Manzimtoti River</td>
<td>Illovo Central and Kingsburgh West</td>
<td>Planning</td>
<td>EThekwini Environmental Management Department; Biodiversity Planning; The Project Executive: Coastal and Catchment Policy, Management and Coordination</td>
<td>Short</td>
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<td>Illovo Forest Reserve Economic Development</td>
<td>Illovo Forest Reserve</td>
<td>Planning</td>
<td>Parks, Leisure and Cemeteries Department: Natural Resources Division; EThekwini Environmental Management Department: Biodiversity Planning</td>
<td>Medium</td>
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<td>Parks, Leisure and Cemeteries Department: Natural Resources Division</td>
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<td>4.3</td>
<td>Sustainable Urban Design Framework Strategy to create a River Edge Promenade (linking the Illovo Forest Reserve and Estuary)</td>
<td>Illovo Forest Reserve and Illovo River Valley</td>
<td>Design</td>
<td>Economic Development Unit; City Architects; and Parks, Leisure and Cemeteries Department: Natural Resources Division</td>
<td>Medium</td>
<td>Capital</td>
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<td>4.4</td>
<td>Sustainable Muthi Harvesting Strategy</td>
<td>Illovo Forest Reserve, Illovo North and South (i.e.: within interface zones)</td>
<td>Planning</td>
<td>Leisure and Cemeteries Department: Natural Resources Division; EThekwini Environmental Management Department: Biodiversity Planning, Rural ABM; Business Support / Economic Development Unit</td>
<td>Short</td>
<td>Capital</td>
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**Note:** Project costs and budgets are provided for indicative purposes only. Actual project costs may vary. The project team is encouraged to conduct detailed planning to ensure accurate costing and budgeting.
## 15.5. ACTION PLAN PROJECTS (CONTINUED…)

### GENERAL ACTION PLAN

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
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<th>CAPITAL / OPERATIONAL BUDGET</th>
<th>CAPITAL BUDGET</th>
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<tr>
<td>5.1</td>
<td>Address Backlog in Social / Community Facilities</td>
<td>Illovo North</td>
<td>Facilitation</td>
<td>Councillor to facilitate</td>
<td>Short to Long</td>
<td>Capital / Operational</td>
<td>Determine</td>
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<td>5.2</td>
<td>Formalise Spatial Activities within Interface Zone</td>
<td>Illovo North</td>
<td>Design and Implementation</td>
<td>Framework Planning and Parks and Recreation</td>
<td>Short</td>
<td>Capital</td>
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<td>5.3</td>
<td>Bhekulwandle Rural Housing Project</td>
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<td>Planning and Design</td>
<td>Public Sector Housing, Metro Housing, Rural ABM</td>
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<td>6.1</td>
<td>Illovo Estuary Management Plan (EMP)</td>
<td>Illovo North River</td>
<td>Planning and Design</td>
<td>eThekwini Environmental Management Department</td>
<td>Short</td>
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<td>6.2</td>
<td>Wetland Rehabilitation Plan (cleared area on northern bank of estuary adjacent R 102)</td>
<td>Illovo River Valley</td>
<td>Planning</td>
<td>eThekwini Environmental Management Department</td>
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<td>Address Backlog in Social / Community Facilities</td>
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<td>Councillor to facilitate</td>
<td>Short to Long</td>
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<td>7.2</td>
<td>Formalise Spatial Activities within Interface Zone</td>
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<td>Design and Implementation</td>
<td>Framework Planning and Parks and Recreation</td>
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<td>8.1</td>
<td>SMME Industrial Incubator</td>
<td>Illovo Village</td>
<td>Implementation</td>
<td>Economic Development Unit / Business Support</td>
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<td>Capital / Operational</td>
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<td>8.2</td>
<td>SMME Hive Development</td>
<td>Illovo Village</td>
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<td>Business Support</td>
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<td>Capital / Operational</td>
<td>R 6,000,000</td>
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<td>8.3</td>
<td>Municipal Training Centre</td>
<td>Illovo Village</td>
<td>Implementation</td>
<td>Corporate Services / Human Resources</td>
<td>Long</td>
<td>Capital / Operational</td>
<td>Determine</td>
</tr>
<tr>
<td>8.4</td>
<td>Regional Livestock Market</td>
<td>Illovo Village</td>
<td>Facilitation</td>
<td>Economic Development Unit / Business Support / Private Sector</td>
<td>Short</td>
<td>Capital / Operational</td>
<td>R 2,500,000</td>
</tr>
<tr>
<td>8.5</td>
<td>Farmers Market / Fresh Produce Market</td>
<td>Illovo Village</td>
<td>Facilitation</td>
<td>Economic Development Unit / Business Support / Private Sector</td>
<td>Medium</td>
<td>Capital / Operational</td>
<td>Determine</td>
</tr>
<tr>
<td>8.6</td>
<td>Urban Environment Improvements</td>
<td>Illovo Village</td>
<td>Design and Implementation</td>
<td>Framework Planning</td>
<td>Short</td>
<td>Capital</td>
<td>R 400,000</td>
</tr>
<tr>
<td>8.7</td>
<td>Reconfiguration of Layout</td>
<td>Illovo Village</td>
<td>Design and Implementation</td>
<td>Framework Planning</td>
<td>Short - Medium</td>
<td>Capital</td>
<td>R 300,000</td>
</tr>
<tr>
<td>8.8</td>
<td>Housing Development</td>
<td>Illovo Village</td>
<td>Planning and Design</td>
<td>Framework Planning and Housing</td>
<td>Medium - Long</td>
<td>Capital</td>
<td>R 250,000</td>
</tr>
<tr>
<td>9.1</td>
<td>Kingsburgh Node Precinct Plan</td>
<td>Kingsburgh West</td>
<td>Planning and Design</td>
<td>Framework Planning</td>
<td>Short - Medium</td>
<td>Capital</td>
<td>R 9,734,175</td>
</tr>
<tr>
<td>9.2</td>
<td>Link road to from R603 to Illovo Village</td>
<td>Kingsburgh West</td>
<td>Planning, design and</td>
<td>eThekwini Transport Authority</td>
<td>Long term</td>
<td>Operational/ Capital</td>
<td>Determine</td>
</tr>
<tr>
<td>9.3</td>
<td>Address Backlog in Social / Community Facilities</td>
<td>Kingsburgh West</td>
<td>Facilitation</td>
<td>Councillor to facilitate</td>
<td>Short to Long</td>
<td>Capital / Operational</td>
<td>Determine</td>
</tr>
</tbody>
</table>
15.5. ACTION PLAN PROJECTS (CONTINUED…)

TRAFFIC AND TRANSPORT ACTION PLAN

The following table lists key interventions in terms of the traffic and transport related actions for the Illovo LAP. All actions listed below require additional planning and design before implementation. The actions provide guidance to future infrastructural upgrades, demands and budget alignments. Budgets allocated to the project or action are broad estimates, detailed planning would establish more accurate costing.

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>PRECINCT</th>
<th>PROJECT TYPE</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>CAPITAL / OPERATIONAL BUDGET</th>
<th>CAPITAL BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1.1</td>
<td>Upgrade of MR197 to asphalt surface</td>
<td>General</td>
<td>Design and Implementation</td>
<td>KZN Dot and eThekwini Municipality</td>
<td>Medium to long</td>
<td>Capital</td>
<td>R 50,725,868</td>
</tr>
<tr>
<td>T 1.2</td>
<td>R603 Corridor</td>
<td>General</td>
<td>Planning</td>
<td>KZN Dot and eThekwini Municipality</td>
<td>Medium</td>
<td>Capital</td>
<td>R 5,725,868</td>
</tr>
<tr>
<td>T 2.1</td>
<td>Upgrade of Road 10080 to Reeves Road</td>
<td>Bhekulwandle</td>
<td>Design and Implementation</td>
<td>KZN Dot and eThekwini Municipality</td>
<td>Short</td>
<td>Capital</td>
<td>R 11,897,325</td>
</tr>
<tr>
<td>T 2.2</td>
<td>Upgrade of Road 83727 to Reeves Road</td>
<td>Bhekulwandle</td>
<td>Design and Implementation</td>
<td>KZN Dot and eThekwini Municipality</td>
<td>Short</td>
<td>Capital</td>
<td>R 25,957,800</td>
</tr>
<tr>
<td>T 3.1</td>
<td>Taxi Facility</td>
<td>Illovo Central</td>
<td>Design and Implementation</td>
<td>eThekwini Transport Authority</td>
<td>Short</td>
<td>Operational/ Capital</td>
<td>R 430,000</td>
</tr>
<tr>
<td>T 3.2</td>
<td>Upgrade Of Road 10080</td>
<td>Illovo Central</td>
<td>Design and Implementation</td>
<td>eThekwini Transport Authority</td>
<td>Short to medium</td>
<td>Capital</td>
<td>R 491,044</td>
</tr>
<tr>
<td>T 3.3</td>
<td>Upgrade Of Road 510148</td>
<td>Illovo Central</td>
<td>Design and Implementation</td>
<td>eThekwini Transport Authority</td>
<td>Short to medium</td>
<td>Capital</td>
<td>R 556,542</td>
</tr>
<tr>
<td>T 3.4</td>
<td>Upgrade Of Road 10155</td>
<td>Illovo Central</td>
<td>Design and Implementation</td>
<td>eThekwini Transport Authority</td>
<td>Medium to long</td>
<td>Capital</td>
<td>R 589,098</td>
</tr>
<tr>
<td>T 3.5</td>
<td>Upgrade Of Road 10450</td>
<td>Illovo Central</td>
<td>Design and Implementation</td>
<td>eThekwini Transport Authority</td>
<td>Medium to long</td>
<td>Capital</td>
<td>R 11,552,122</td>
</tr>
<tr>
<td>T 4.1</td>
<td>Link road from R603 to Illovo Village</td>
<td>Illovo Village</td>
<td>Planning, design and implementation</td>
<td>eThekwini Transport Authority</td>
<td>Long term</td>
<td>Operational/ Capital</td>
<td>R 18,386,775</td>
</tr>
<tr>
<td>T 4.2</td>
<td>Public Transport facility provision</td>
<td>Illovo Village</td>
<td>Planning, design and implementation</td>
<td>eThekwini Transport Authority</td>
<td>Short to medium</td>
<td>Operational/ Capital</td>
<td>R 0</td>
</tr>
<tr>
<td>T 5.2</td>
<td>Link road to from R603 to Illovo Village</td>
<td>Kingsburgh West</td>
<td>Planning, design and implementation</td>
<td>eThekwini Transport Authority</td>
<td>Long term</td>
<td>Operational/ Capital</td>
<td>R 9,734,175</td>
</tr>
</tbody>
</table>
PROJECT GOAL
To undertake a traffic and transportation feasibility assessment of proposed transport infrastructure in the Illovo Local Area Plan (LAP).

SCOPE OF PROJECT
The project should estimate the effects and impacts of LAP landuse proposals on existing and proposed transport infrastructure within the study area.

This assessment should inform the extents and size of proposed infrastructure in terms of capacity provision as well as the preparation of concept designs (Concept TRL’s). Such designs would then inform a more detailed cost estimate.

PROJECT PHASES AND TASKS
It is envisaged that the following broad tasks are required as part of this project:

- Classified traffic counts at critical intersections
- Classified traffic cordon counts with occupancy surveys along major routes
- Pedestrian surveys
- Development of a Saturn Model for the Illovo area to test development proposals and network changes
- Concept Traffic Road Layouts (TRLs) which must include pedestrian accommodation at development nodes
- Concept Designs of public transport facilities including initial facility sizing.

The following additional input would be required for the study through work streams from the town planning sectors

- Proposed GLA delineated for each land use type and development site
- Demographic growth forecasts for the study area by Traffic Analysis Zone
## ANNEXURE A

### A.1. ENVIRONMENTAL

**TABLE 1: Alien and invasive exotic species abundant within the Study area**

<table>
<thead>
<tr>
<th>Growth Form</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>CARA Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree</td>
<td><em>Asimina sp.</em></td>
<td>Pawpaw</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Agave sisalana</em></td>
<td>Sisal</td>
<td>Invader: 2</td>
</tr>
<tr>
<td></td>
<td><em>Casuarina cunninghamiana</em></td>
<td>Beefwood</td>
<td>Invader: 2</td>
</tr>
<tr>
<td></td>
<td><em>Cinnamomum camphora</em></td>
<td>Camphor</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Delonix regia</em></td>
<td>Flamboyant</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Eucalyptus grandis</em></td>
<td>Saligna gum</td>
<td>Invader: 2</td>
</tr>
<tr>
<td></td>
<td><em>Melia azedarach</em></td>
<td>Syringa</td>
<td>Invader: 3</td>
</tr>
<tr>
<td></td>
<td><em>Musa sp.</em></td>
<td>Banana</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Pandium graviata</em></td>
<td>Guava</td>
<td>Invader: 2</td>
</tr>
<tr>
<td></td>
<td><em>Schinus terebinthifolius</em></td>
<td>Brazilian pepper</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Solanum mauritianum</em></td>
<td>Bugweed</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Tecoma stans</em></td>
<td>Yellow bells</td>
<td>Weed: 1</td>
</tr>
<tr>
<td>Bush/Shrub</td>
<td><em>Canna indica</em></td>
<td>Indian shot</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Chromolaena odorata</em></td>
<td>Triffid Weed</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Lantana camara</em></td>
<td>Lnatan</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Parthenium hysterophorus.</em></td>
<td>Demoina Weed</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Ricinus communis</em></td>
<td>Castor-oil Plant</td>
<td>Invader: 2</td>
</tr>
<tr>
<td></td>
<td><em>Senna didymobotrya</em></td>
<td>Peanut Butter Cassia</td>
<td>Invader: 3</td>
</tr>
<tr>
<td>Creepers/Climbers</td>
<td><em>Cardiospermum grandiflorum</em></td>
<td>Balloon vine</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Commelina benghalensis</em></td>
<td>Wandering Jew</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Ipomoea indica</em></td>
<td>Morning glories</td>
<td>Weed: 1</td>
</tr>
<tr>
<td></td>
<td><em>Macfadyena unguis-cati</em></td>
<td>Cats Claw</td>
<td>Weed: 1</td>
</tr>
</tbody>
</table>
## ANNEXURE A

### A.1. ENVIRONMENTAL

**TABLE 2:** Red data species listed within the SEA database with the potential to occur within the Study area

<table>
<thead>
<tr>
<th>Area</th>
<th>Class</th>
<th>Species Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Area</td>
<td>Amphibian</td>
<td>Hyperplius pickersgilli</td>
<td>Natal spiny reed frog</td>
</tr>
<tr>
<td></td>
<td>Bird</td>
<td>Eupodotis caerulescens</td>
<td>Blue bustard</td>
</tr>
<tr>
<td></td>
<td>Crustacean</td>
<td>Atyoida serrata</td>
<td>Shrimp</td>
</tr>
<tr>
<td>Western Boundary</td>
<td>Amphibian</td>
<td>Hyperplius pickersgilli</td>
<td>Natal spiny reed frog</td>
</tr>
<tr>
<td></td>
<td>Bird</td>
<td>Eupodotis caerulescens</td>
<td>Blue bustard</td>
</tr>
<tr>
<td></td>
<td>Crustacean</td>
<td>Atyoida serrata</td>
<td>Shrimp</td>
</tr>
<tr>
<td>Water Bodies &amp; Riparian Zones</td>
<td>Fish</td>
<td>Butis butis</td>
<td>Duckbill sleeper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Favonigobus rechei</td>
<td>Tropical sand goby</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hypseleotris dayi</td>
<td>Golden sleeper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Microphis brachyurus</td>
<td>Short-tail pipefish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Microphis fluviatilis</td>
<td>Freshwater pipefish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taenioides jacksoni</td>
<td>Bearded eelgoby</td>
</tr>
<tr>
<td></td>
<td>Amphibian</td>
<td>Hyperplius pickersgilli</td>
<td>Intermediate spiny reed frog</td>
</tr>
<tr>
<td></td>
<td>Bird</td>
<td>Eupodotis caerulescens</td>
<td>Blue bustard</td>
</tr>
<tr>
<td></td>
<td>Crustacean</td>
<td>Atyoida serrata</td>
<td>Shrimp</td>
</tr>
</tbody>
</table>
ANNEXURE B

B.1. TRAFFIC AND TRANSPORTATION – CPTR FACILITIES DATA
ANNEXURE B

B.2. TRAFFIC AND TRANSPORTATION – CPTR PERSON TRIP DATA
ANNEXURE B

B.3. TRAFFIC AND TRANSPORTATION – EMME2
ANNEXURE B

B.4. TRAFFIC AND TRANSPORTATION – KZN DoT FREIGHT DATABANK
ANNEXURE C

C.1. PARTICIPATION PROCESS

INTERVIEW: KZN PROVINCIAL DEPARTMENT OF HUMAN SETTLEMENT

Contact Person: Velaphi Gumede

Within the study area of Illovo there are different human settlement patterns which offer a unique opportunity for the provision of innovative housing categories.

HOUSING SETTLEMENTS WITHIN ILLOVO

Kingsburg West: Offers an opportunity for the provision of transitional housing from the existing and established houses on the east. There is an opportunity to sub-divide the sites on the west into bigger plots, therefore providing an opportunity for “up-market housing” within the 8738 planned residential units for the area of Illovo. The proposed housing type for this area: can be social housing which target income groups which are above R 15 000 p.m.

Illovo North and Illovo South: These are areas within Illovo which also form part of the approximately 8738 planned residential units within the Illovo Development Area. R603 runs in the middle of the planned residential area and the road provides the main access into these housing areas. Within this area there can be a mixture of low-cost housing, gap housing and social housing. The proposed housing type for this area can be a mixture of affordable housing and gap housing targeting a range of income groups. Affordable housing will attract income groups ranging from R 3 501-00 to R 7 500 p.m. while gap housing will attract income groups ranging from R 7 501-00p.m. to R 15 000 p.m.

Certain pockets of Illovo North and South can be considered for low cost housing. These are income categories ranging from R 2 500-00 to R 3 500-00

Bhekuluwandle: is a unique area and it will require a unique housing solution. It is largely rural and the entire area does not have any formal roads except on the north border of the study area (i.e. Reeves Road). There are no services within the area (e.g. water, sewer, or electricity), therefore it is proposed that the settlement pattern for the future should be in keeping with the current rural settlement pattern.

Rural housing is thus proposed for this area. This will be in keeping with the existing land tenure system where the Traditional Authority (i.e. Local Inkosi) allocates land to a household.

LESSONS FROM NEIGHBORING COMMUNITIES

Sobonakhona: This area is largely rural and covers sections of Ward 96 and Ward 97. This neighbouring community has approximately planned residential 2850 sites. Tranch 1 funding has been approved by the provincial housing department and the Project Manager is currently finalizing the appointment of the housing construction company.

Ummini: in Wards 98 and 99 has a plan for approximately 3 000 rural housing units. The area is divided into three zones, each with a 1000 planned rural houses. The applications for Tranch 1 and 2 funding from the Provincial Department of Human Settlement have been approved for zones 1 and 2. The application for Zone 3 funding is still outstanding.

Esidweni: Esidweni is located south of Umlazi. This project does not fall under Illovo and it is also not a rural housing project. The sizes of the plots are thus not uniform through the size of the house will be the same as other rural housing projects nearby for the areas such as Ummini and Sobonakhona.

The common theme with the rural housing projects mentioned above is that the size of the house is 40m², however the size of the plot is bigger than the normal sub-division prevalent
from the surrounding townships. The rationale around this is this system maintains the indigenous living patterns of “umuzi” (or a homestead). The remainder of the land is utilized for farming; with grazing of cattle or crop farming.

Therefore the Illovo LAP will provide varied housing options ranging from:

- Low Cost Housing which target income groups of R 2 500-00 to R 3 500 p.m.;
- Affordable Housing targeting income groups of R 3 501-00 to R 7 500 p.m.;
- Gap Housing targeting income groups of R 7 501-00 to R 15 000 p.m. and
- Rural Housing.
## PROJECT NO 1.1: EXTENSION AND UPGRADING OF THE OPEN SPACE SYSTEM THROUGHOUT ILLOVO

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 8: Access to and Protection of the Natural Environment (Objective - Protection of conservation worthy areas)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The open space system provides a critical structuring component in any area. Creating and maintaining the unique structuring element is of utmost importance in the Illovo area. Extending and upgrading the open space network also contributes positively to the quality of life for the surrounding communities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>eThekwini Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Operational</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>Ops BUDGET</td>
</tr>
</tbody>
</table>

| LINKAGES | Illovo Forest Reserve Management Plan and Estuary Rehabilitation Plan. |

## PROJECT NO 1.2: ESTABLISH AND IMPLEMENT AN URBAN MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 3: Safe and Secure Environment; Goal 7: Sustainable Services and Facilities; Goal 8: Access to and Protection of the Natural Environment</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The urban environment in the Illovo is not appropriately managed and maintained. This is both a public and private sector responsibility. An urban management plan focusing on addressing crime and grime issues, as well as promoting the general upgrading of the area, is to be developed. Such a Plan may include a series of incentives for the private sector to participate in the implementation of the Plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>eThekwini Municipality &amp; Stakeholder Forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Operational</td>
</tr>
</tbody>
</table>

| LINKAGES | |
|----------|
## D.1. DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO 2.1: LAND USE MANAGEMENT MECHANISM

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Bhekulwandle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 9: Appropriate Settlement Form</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Generate an appropriate Land Use Management System that takes into account the Tribal Authority Land management.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Framework Planning</th>
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</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
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</tr>
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<td>CAP BUDGET</td>
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</tr>
<tr>
<td>OPS BUDGET</td>
<td></td>
</tr>
</tbody>
</table>

### PROJECT NO 2.2 BHEKULWANDLE NODE PRECINCT PLAN

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Bhekulwandle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility; Goal 2: Promote Diversity and Choice; Goal 3: Safe and Secure Environments; Goal 4: Imageability; Goal 5: Building a Viable Local Economy; Goal 6: Promote and Improve Public Transport; Goal 7: Sustainable Services and Facilities; Goal 8: Access to and Protection of the natural Environment; Goal 9: Appropriate Settlement Form</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning and Design</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short - Medium</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Precinct Plans will identify projects that would be packaged for detail design and implementation. The precinct plans should include the following elements: Movement and Circulation Framework, Land Use and Activity Patterns, Urban Form Framework, Urban Landscaping/public space framework and a phasing strategy.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Framework Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
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</tr>
<tr>
<td>OPS BUDGET</td>
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</tr>
</tbody>
</table>
### D.1. Detailed Action Plan Project Sheets

#### Project No. 3.1: Establishment of Trading Centre

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td>Type</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Priority</td>
<td>Short</td>
</tr>
<tr>
<td>Description</td>
<td>It is envisaged that the Illovo Central node will in future fulfil a more substantial role in terms the provision of commercial services to the people of Illovo and the rural area surrounding Illovo. The establishment of Trading Centre that will include a major retailer, space for a number of smaller commercial enterprises and services, as well as space for the informal sector is essential should the node be required to fulfil this role. This is viewed as a private sector development with the eThekwini Municipality fulfilling a facilitation role in terms of the development. The first phase of the trading centre will be between 3 500m$^2$ and 5 000m$^2$ in size.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>CAP Budget</td>
<td>R12,000,000</td>
</tr>
<tr>
<td>OPS Budget</td>
<td>0</td>
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</tbody>
</table>

#### Project No. 3.2: Establishment of Market Place

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td>Type</td>
<td>Implementation</td>
</tr>
<tr>
<td>Priority</td>
<td>Short</td>
</tr>
<tr>
<td>Description</td>
<td>A site on the R603, in close vicinity to the Taxi Rank has been identified as a market place. The market place will provide basic space and facilities to the informal sector, both those traders currently active in the area, as well as the traders that will be attracted to the node as a result of increased transport and pedestrian activity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Business Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>CAP Budget</td>
<td>R1,200,000</td>
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<td>OPS Budget</td>
<td>R50,000</td>
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</tbody>
</table>
## D.1. Detailed Action Plan Project Sheets

### Project No. 3.3: Organisation of Informal Sector Activities

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Facilitation</td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>Short</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>In planning for the formalisation of the informal sector it will be beneficial if traders are represented by an informal traders organisation. This will provide the designers of facilities with the opportunity to directly interact with the people who the facility is intended to benefit. As far as could be established there is no traders organisation in the node.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Business Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type (CAP/OPS)</strong></td>
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<tr>
<td>CAP Budget</td>
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</tr>
<tr>
<td>OPS Budget</td>
<td>R30,000</td>
</tr>
</tbody>
</table>

### Project No. 3.4: Establishment of Commercial / Office Development

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Goal 7: Sustainable Services and Facilities</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Facilitation</td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>A site has been identified for the establishment of a commercial / office development in the node. Such a development will cater for a range of financial, medical and other commercial services for which a need has been expressed by the local community. At present residents and people from surrounding areas travel to Amanzimtoti, Isipingo and the CBD to access these services. Specific government services can also be accommodated in this development. It envisaged that this will be a private sector development, facilitated by the eThekwini Municipality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type (CAP/OPS)</strong></td>
<td>Capital</td>
</tr>
<tr>
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<tr>
<td>OPS Budget</td>
<td>0</td>
</tr>
</tbody>
</table>
**D.1. DETAILED ACTION PLAN PROJECT SHEETS**

### PROJECT NO 3.5: ESTABLISHMENT OF PUBLIC SECTOR SERVICE CENTRE (TSUSONG CENTRE)

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 7: Sustainable Services and Facilities</td>
</tr>
<tr>
<td>TYPE</td>
<td>Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>A Thusong Centre in Illovo will not only focus on the needs of local people but will provide surrounding rural communities to the west and south of Illovo with access to such services. Thusong Service Centres are one-stop, integrated community development centres, with community participation and services relevant to people’s needs. They aim to empower the poor and disadvantaged through access to information, services and resources from government, non-governmental organisations (NGOs), parastatals, business, etc. enabling them to engage in government programmes for the improvement of their lives. Ultimately a Thusong Centre in Illovo can be linked to a Sizakala Customer Care Centre of the eThekwini Municipality.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Government Communication and Information System (GCIS)</td>
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<tr>
<td>LINKAGES</td>
<td>TYPE (CAP/OPS) Capital</td>
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<td></td>
<td>CAP BUDGET R6,000,000</td>
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<td>OPS BUDGET R600,000</td>
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### PROJECT NO 3.6: URBAN ENVIRONMENT IMPROVEMENTS

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 3: Safe and Secure Environments;</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Public realm upgrade - Upgrading paving and sidewalks, street planting and landscaping, signage, street furniture and providing lighting.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Framework Planning</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>TYPE (CAP/OPS) Capital</td>
</tr>
<tr>
<td></td>
<td>CAP BUDGET R400,000</td>
</tr>
<tr>
<td></td>
<td>OPS BUDGET</td>
</tr>
</tbody>
</table>
D.1. DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO 3.7: RECONFIGURATION OF LAYOUT

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility; Goal 2: Promote Diversity and Choice; Goal 3: Safe and Secure Environments; Goal 4: Imageability; Goal 5: Building a Viable Local Economy; Goal 6: Promote and Improve Public Transport; Goal 7: Sustainable Services and Facilities; Goal 8: Access to and Protection of the natural Environment; Goal 9: Appropriate Settlement Form</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Planning and Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIORITY</td>
<td>Short - Medium</td>
</tr>
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</table>

**DESCRIPTION**

The concepts provided for the Illovo Central Node serves only as a guide to further studies and investigation. A Site Development Plan as well as an Implementation Plan would need to be generated and approved by council before any developments commence.

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Framework Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
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</tr>
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<td>OPS BUDGET</td>
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</tbody>
</table>

**LINKAGES**
**D.1. DETAILED ACTION PLAN PROJECT SHEETS**

### PROJECT NO 3.8: ALIEN INVASIVE REMOVAL PLAN FOR LITTLE MANZIMTOTI RIVER

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Central and Kingsburgh West</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 3: Safe and Secure Environments (Objective - Rehabilitation to enhance ecosystem services)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>After habitat destruction, invasive aliens pose the greatest threat to the City's biodiversity. Invasive alien species often reduce the ability of natural ecosystems to supply high quality environmental goods and services. Degradation of natural environments by invasive alien plants wastes water resources, reduces ability to farm, intensifies flooding and fires, promotes erosion and causes siltation of dams and estuaries leading to poor water quality. Despite the Little Manzimtoti’s River’s reported “degraded state”, it plays an important role in the water catchment of the study area. This plan should include the surveying and mapping of disturbed vegetation as well as harmful activities (e.g., washing) along the little Manzimtoti River within the 2 precincts and recommend methods for the control of activities and eradication of alien species to allow for the reinstatement of indigenous species, as well as a monitoring programme for the medium- long term.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY | ETHekwini Environmental Management Department: Biodiversity Planning; The Project Executive: Coastal and Catchment Policy, Management and Coordination |
| type (CAP/OPS) | Capital |
| CAP BUDGET | R40,000 |
| OPS BUDGET | 0 |

### PROJECT NO 4.1: ILLOVO FOREST RESERVE ECONOMIC DEVELOPMENT

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Forest Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Illovo Forest precinct has been identified as a node with potential for the establishment of a regional recreation function similar to that currently operating in the Giba Gorge, but with a strong environmental focus. A range of economic development opportunities could be explored in relation to such a facility. As a first step, following the preparation of the Forest Management Plan with an environmental focus, a Business Plan for the development of the &quot;facility&quot; should be developed.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY |                          |
| type (CAP/OPS) | Capital |
| CAP BUDGET     | R250,000 |
| OPS BUDGET     |          |
GOAL 8: Access to and Protection of the Natural Environment (Objective - Protection of conservation worthy areas)

DESCRIPTION

Largest remaining portion of KwaZulu Natal Coastal Vegetation. The steep topography of the area has precluded it from intensive infrastructural development and as a result it is the most undisturbed natural environment within the study area. Apart from this area there are only small patches along the Little Manzimtoti River that display remnants. In addition it supports in excess of 20 red data species / species of conservation concern. A Management Plan is therefore required to further protect and manage this DMOSS area and formalise it into an eThekwini Reserve thereby allowing recreational use and associated economic benefits while assigning ongoing management options. The plan is to include but not limited to: investigation of access opportunities both physical and community access for sustainable resource use; grassland patch and trail management; alien invasive removal programme; support functions within interface zone / buffer etc.

RESPONSIBILITY

Parks, Leisure and Cemeteries Department: Natural Resources Division; Ethekwini Environmental Management Department: Biodiversity Planning

TYPE (CAP/OPS) | Capital
---|---
CAP BUDGET | R65,000

LINKAGES

Working for Ecosystems (DEAT);
Working for Water Programme (DWAF)

OPS BUDGET | 0
### D.1. DETAILED ACTION PLAN PROJECT SHEETS

**PROJECT NO 4.3: SUSTAINABLE URBAN DESIGN FRAMEWORK STRATEGY TO CREATE A RIVER EDGE PROMENADE (LINKING THE ILLJOVO FOREST RESERVE AND ESTUARY)**

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Forest Reserve and Illovo River Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 8: Access to and Protection of the Natural Environment (Objective - Creation and Use of Buffers / Interface Zones as potential recreational areas)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Strategy to create a river edge promenade in order to encourage interest along this edge of the study area and act as a catalyst for recreational and tourism use (i.e.: vibrant unique public space and infrastructure amenities) linking the Forest Reserve and Estuary. Strategy should include appropriate design guidelines for a financially and socially sustainable urban design precinct plan, including the following considerations: to promote diversity of use within interface zones; prepare a detailed analysis; ensure a balance of activities; provide for accessibility; create functional linkages; develop &quot;greenway infrastructure&quot; (i.e.: conserve open space and protect forest and riverine ecosystems); river restoration; and build a positive and distinctive identity for precinct.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Economic Development Unit; City Architects; and Parks, Leisure and Cemeteries Department: Natural Resources Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>R200,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LINKAGES</th>
<th>Illovo Forest Reserve Management Plan and Estuary Rehabilitation Plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPS BUDGET</td>
<td>0</td>
</tr>
</tbody>
</table>
### Project No 4.4: Sustainable Muthi Harvesting Strategy

**Precinct:** Illovo Forest, Illovo North and South (i.e.: within interface zones)

**Goal:** Goal 8: Access to and Protection of the Natural Environment (Objective - Creation and Maintenance of productive / sustainable landscapes through the encouragement of sustainable resource use).

**Type:** Planning

**Priority:** Short

**Description:** The trade role players are predominantly rural women. Their involvement in the trade constitutes an important livelihood option for these women, as medicinal plants are one of the few low-volume high value natural resources that can be harvested and traded to generate rural incomes. There is a need within peri-urban and rural areas such as the study area to improve the current harvesting, production, processing, storage and treatment technology of these resources and products. It is envisaged that this plan will involve the following scope of works: Phase 1 - Concept Development in order to determine the City and Communities needs, interests and perceptions of what is feasible or not; Phase 2 - Development of Sustainable Muthi Harvesting Plan including the identification of appropriate site/s (participatory approach) and presentation of options such as forest interface zone use for plant propagation material (soft option), establishment of a nursery, planting out system, and carbon offset packaging; and Phase 3 - Recommendation of Implementation Schedule.

**Responsibility**
- Leisure and Cemeteries Department: Natural Resources Division; eThekwini Environmental Management Department: Biodiversity Planning, Rural ABM; Business Support / Economic Development Unit

**Linkages**
- LED Opportunities within Illovo South and North Interface Zones; Municipal service support system for the Durban medicinal plant industry

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (CAP/OPS)</th>
<th>Capital</th>
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<tbody>
<tr>
<td>Leisure and Cemeteries Department: Natural Resources Division</td>
<td><strong>CAP BUDGET</strong></td>
<td>R33,000</td>
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<tr>
<td>eThekwini Environmental Management Department: Biodiversity Planning, Rural ABM; Business Support / Economic Development Unit</td>
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</table>

<table>
<thead>
<tr>
<th>Linkages</th>
<th>OPERATIONAL BUDGET</th>
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</thead>
<tbody>
<tr>
<td>LED Opportunities within Illovo South and North Interface Zones; Municipal service support system for the Durban medicinal plant industry</td>
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</tr>
</tbody>
</table>
### D.1. Detailed Action Plan Project Sheets

#### Project No. 5.1: Address Backlog in Social / Community Facilities

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 7: Sustainable Services and Facilities</td>
</tr>
<tr>
<td>Type</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Priority</td>
<td>Short to Long Term</td>
</tr>
<tr>
<td>Description</td>
<td>Although a relatively recent development indications are that there is already a backlog of educational and health facilities in Illovo and surrounding communities. This will be exacerbated with the development of the Kingsburgh West housing development adding pressure on existing facilities. Although the provision of such services is not a local authority responsibility it is essential that the needs of local communities are communicated to the relevant government departments and service providers. The need for new facilities much be identified and this must be placed on budgets of relevant provincial and national government departments.</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Councillor to facilitate</td>
</tr>
<tr>
<td>Type (CAP/OPS)</td>
<td>Capital / Operational</td>
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<tr>
<td>CAP Budget</td>
<td>0</td>
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<tr>
<td>OPS Budget</td>
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#### Project No. 5.2: Formalise Spatial Activities within Interface Zone

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo North</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 8: Access to and Protection of the Natural Environment</td>
</tr>
<tr>
<td>Type</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>Priority</td>
<td>Short</td>
</tr>
<tr>
<td>Description</td>
<td>Provide guidelines for activities permitted within the open space interface zone</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Framework Planning and Parks and Recreation</td>
</tr>
<tr>
<td>Type (CAP/OPS)</td>
<td>Capital</td>
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<tr>
<td>CAP Budget</td>
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<td>OPS Budget</td>
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<tr>
<td>D.1. DETAILED ACTION PLAN PROJECT SHEETS</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>PROJECT NO 5.3: BHEKULWANDLE RURAL HOUSING PROJECT</td>
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<tr>
<td><strong>PRECINCT</strong></td>
<td>Illovo North</td>
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<tr>
<td><strong>GOAL</strong></td>
<td>Goal 9: Appropriate Settlement Form</td>
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<tr>
<td><strong>TYPE</strong></td>
<td>Planning and Design</td>
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<tr>
<td><strong>PRIORITY</strong></td>
<td>Medium</td>
</tr>
<tr>
<td><strong>DESCRIPTION</strong></td>
<td>Once an appropriate Land Use Management System is generated that takes into consideration the Tradition Authority Land Management issues, a rural housing project could be investigated.</td>
</tr>
<tr>
<td><strong>RESPONSIBILITY</strong></td>
<td>Framework Planning and Housing</td>
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<tr>
<td>TYPE (CAP/OPS)</td>
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<td>CAP BUDGET</td>
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<td><strong>LINKAGES</strong></td>
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<td><strong>PROJECT NO 6.1: ILLOVO ESTUARY MANAGEMENT PLAN (EMP)</strong></td>
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<tr>
<td><strong>PRECINCT</strong></td>
<td>Illovo River Valley</td>
</tr>
<tr>
<td><strong>GOAL</strong></td>
<td>Goal 3: Safe and Secure Environments (Objective - Rehabilitation to enhance ecosystem services)</td>
</tr>
<tr>
<td><strong>TYPE</strong></td>
<td>Planning and Design</td>
</tr>
<tr>
<td><strong>PRIORITY</strong></td>
<td>Short</td>
</tr>
<tr>
<td><strong>DESCRIPTION</strong></td>
<td>This temporarily open / closed estuary is 225ha in extent and supports a total of 26 invertebrates. The system also supports a diverse fish community (second most diverse assemblage of fish species within eThekwini) and has a strong presence of wading birds (third most in eThekwini). Major impacts contributing to its transformed state creating an ecosystem “under stress” include the canalisation of the floodplain leading to substantial habitat loss as well as sandmining upstream. The aim of the EMP s to both protect the existing goods and services provided by the estuary as well as mitigate against further impacts. The scope of works is envisaged to be split into 2 objectives: Situation Assessment (Legislation and policy review, determination of goods and services, identification of issues relating to exploitation of resources, assessment of water quality and quantity requirements, determination of protection potential and priority restoration actions, public awareness and participation); and EMP (Vision and Strategic Objectives, Management Strategies, Estuarine Zonation Plan &amp; Operational Objectives, Management Action Plans, Implementation plan, Monitoring and evaluation programme). In addition, the possible impacts of Sea Level Rise should also be assessed and planned for.</td>
</tr>
<tr>
<td><strong>RESPONSIBILITY</strong></td>
<td>eThekwini Environmental Management Department: Biodiversity Planning; The Project Executive: Coastal and Catchment Policy, Management and Coordination</td>
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<td>CAP BUDGET</td>
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<tr>
<td><strong>LINKAGES</strong></td>
<td>River Promenade Design Strategy; National Biodiversity Strategy and Action Plan (NBSAP) (DEAT)</td>
</tr>
</tbody>
</table>
### PROJECT NO 6.2: WETLAND REHABILITATION PLAN (CLEARED AREA ON NORTHERN BANK OF ESTUARY ADJACENT R)

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo River Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 3: Safe and Secure Environments (Objective - Rehabilitation to enhance ecosystem services)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
</tbody>
</table>

**DESCRIPTION**

The boundary of the wetland habitat (delineation) and the importance of the wetland in terms of its functionality must be determined in order to minimize the impacts associated with the existing environment and its surrounds. This should include the results of the delineation will be presented in a brief report which will include: maps displaying the spatial extent of the wetland area as well as appropriate buffer areas; identification and Wetland Functional Ratings for Hydrogeomorphic Units and associated maps; a basic summary of the composition of the vegetation associated with the wetland areas; overall functional wetland assessment including any necessary rehabilitation and management guidelines; provision of all spatial data in ESRI shapefile format. Following the assessment of threats, the Wetland Rehabilitation Plan, should aim to achieve the following broad goals: replace the ecosystem services lost; enhance services upstream and downstream from the site; and maintain the health of the ecosystems occurring downstream of the rehabilitation area. These will be achieved through the implementation of one or combination of the various alternatives presented in the plan.

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>EThekwini Environmental Management Department: Biodiversity Planning; The Project Executive: Coastal and Catchment Policy, Management and Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
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<td>CAP BUDGET</td>
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</table>

**LINKAGES**

Estuary Rehabilitation Plan

### PROJECT NO 7.1: ADDRESS BACKLOG IN SOCIAL / COMMUNITY FACILITIES

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo South</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 7: Sustainable Services and Facilities</td>
</tr>
<tr>
<td>TYPE</td>
<td>Facilitation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short to Long Term</td>
</tr>
</tbody>
</table>

**DESCRIPTION**

Although a relatively recent development indications are that there is already a backlog of educational and health facilities in Illovo and surrounding communities. This will be exacerbated with the development of the Kingsburgh West housing development adding pressure on existing facilities. Although the provision of such services is not a local authority responsibility it is essential that the needs of local communities are communicated to the relevant government departments and service providers. The need for new facilities much be identified and this must be placed on budgets of relevant provincial and national government departments.

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Councillor to facilitate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Capital / Operational</td>
</tr>
<tr>
<td>CAP BUDGET</td>
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<tr>
<td>OPS BUDGET</td>
<td>0</td>
</tr>
</tbody>
</table>

**LINKAGES**

OPS BUDGET 0
### D.1. Detailed Action Plan Project Sheets

#### Project No 7.2: Formalise Spatial Activities Within Interface Zone

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 8: Access to and Protection of the Natural Environment</td>
</tr>
<tr>
<td>Type</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>Priority</td>
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</tr>
<tr>
<td>Description</td>
<td>Provide guidelines for activities permitted within the open space interface zone.</td>
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<table>
<thead>
<tr>
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<th>Framework Planning and Park and Recreation</th>
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<tbody>
<tr>
<td>Type (CAP/OPS)</td>
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<td>CAP Budget</td>
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<td>OPS Budget</td>
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</table>

#### Project No 8.1: SMME Industrial Incubator

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td>Type</td>
<td>Implementation</td>
</tr>
<tr>
<td>Priority</td>
<td>Medium</td>
</tr>
<tr>
<td>Description</td>
<td>The Illovo Village node is viewed as having potential to become a future economic development node in the southern regions of eThekwini. Small service industries are already located in the node and as the previous location of a sugar mill basic industrial infrastructure is in place. It is suggested that an SMME Industrial Incubator be established in this node which will provide opportunities for entrepreneurship development to the people of the south. Incubators provide low-cost space and support services that are designed to increase the survival chances of start-up companies. The sectors to be focussed on by the incubator must be determined through more detailed investigations but may include furniture, metal work, clothing and textiles. The incubator development should be facilitated by the eThekwini Municipality with hopefully donor funding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Economic Development Unit / Business Support</th>
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<tr>
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<td>Capital / Operational</td>
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</table>
## D.1. DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO 8.2: SMME HIVE DEVELOPMENT

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<thead>
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<th>Illovo Village</th>
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</thead>
<tbody>
<tr>
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<td>Goal 5: Building a Viable Local Economy</td>
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<tr>
<td>TYPE</td>
<td>Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Illovo Village node is viewed as having potential to become a future economic development node in the southern regions of eThekwini. Small manufacturing businesses generally have difficulty in accessing reasonably priced manufacturing space. With the establishment of an industrial incubator in the area it is then also proposed that a SMME Hive Development providing appropriate accommodation to small businesses in the industrial sector be provided. Such a facility will provide flexible space options as well as an opportunity to share machinery and equipment to between 20 and 30 small businesses.</td>
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</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>Business Support</th>
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</thead>
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### PROJECT NO 8.3: MUNICIPAL TRAINING CENTRE

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<tr>
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<tbody>
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<td>Goal 5: Building a Viable Local Economy</td>
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<tr>
<td>TYPE</td>
<td>Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Long</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>With the municipality already having a presence in the node and current facilities being underutilised the potential exists for the establishment of a training facility serving the municipality as a whole in this node.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Corporate Services / Human Resources</th>
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<tr>
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<td>OPS BUDGET</td>
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</table>
## D.1. Detailed Action Plan Project Sheets

### Project No 8.4: Regional Livestock Market

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<th>Precinct</th>
<th>Illovo Village</th>
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<tbody>
<tr>
<td>Goal</td>
<td>Goal 5: Building a Viable Local Economy</td>
</tr>
<tr>
<td>Type</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Priority</td>
<td>Short</td>
</tr>
<tr>
<td>Description</td>
<td>Goat and livestock sales yards are currently established in various locations throughout the city often in close proximity to residential and formal commercial activities. This is not sustainable in the long term. As the Illovo Village Node develop into a regional centre the potential exists for the establishment of a larger regional livestock market. Such a facility can be developed on the same basis as the current facility in Umzazi.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Economic Development Unit / Business Support / Private Sector</th>
</tr>
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<td>Type (CAP/OPS)</td>
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### Project No 8.5: Farmers Market / Fresh Produce Market

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Village</th>
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<tbody>
<tr>
<td>Goal</td>
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<tr>
<td>Type</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Priority</td>
<td>Medium</td>
</tr>
<tr>
<td>Description</td>
<td>A regional fresh produce market can potentially be established in the Illovo Node. This could initially be in the form of a Farmers Market to provide local small scale farmers an opportunity to market their produce on a periodic basis (e.g. once a week). The feasibility of establishing such a market must be further investigated.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Economic Development Unit / Business Support / Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type (CAP/OPS)</td>
<td>Capital / Operational</td>
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### D.1. DETAILED ACTION PLAN PROJECT SHEETS

#### PROJECT NO 8.6: URBAN ENVIRONMENT IMPROVEMENTS

<table>
<thead>
<tr>
<th>PRECINCT</th>
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<th>Capital</th>
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<tbody>
<tr>
<td>GOAL</td>
<td>Goal 3: Safe and Secure Environments;</td>
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<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
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<td></td>
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<tr>
<td>PRIORITY</td>
<td>Short</td>
<td></td>
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</tr>
<tr>
<td>DESCRIPTION</td>
<td>Public realm upgrade - Upgrading paving and sidewalks, street planting and landscaping, signage, street furniture and providing lighting.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Framework Planning</td>
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<td></td>
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<tr>
<td>LINKAGES</td>
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#### PROJECT NO 8.7: RECONFIGURATION OF LAYOUT

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Village</th>
<th>TYPE (CAP/OPS)</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility; Goal 2: Promote Diversity and Choice; Goal 3: Safe and Secure Environments; Goal 4: Imageability; Goal 5: Building a Viable Local Economy; Goal 6: Promote and Improve Public Transport; Goal 7: Sustainable Services and Facilities; Goal 8: Access to and Protection of the natural Environment; Goal 9: Appropriate Settlement Form</td>
<td></td>
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<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
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</tr>
<tr>
<td>PRIORITY</td>
<td>Short - Medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The concepts provided for the Illovo Village Node serves only as a guide to further studies and investigation. A Site Development Plan as well as an Implementation Plan would need to be generated and approved by council before any developments commence.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Framework Planning</td>
<td></td>
<td></td>
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<tr>
<td>LINKAGES</td>
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</tbody>
</table>
## D.1. Detailed Action Plan Project Sheets

### Project No. 8.8: Housing Development

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Illovo Village</th>
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</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Goal 9: Appropriate Settlement Form</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Planning and Design</td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>Medium - Long</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>The Precinct Plans will identify projects that would be packaged for detail design and implementation at a later stage. The precinct plans should include the following elements: Movement and Circulation Framework, Land Use and Activity Patterns, Urban Form Framework, Urban Landscaping/ public space framework and a phasing strategy.</td>
</tr>
</tbody>
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**Responsibility:** Framework Planning and housing  
**Type (CAP/OPS):** Capital  
**CAP Budget:** R100,000  
**OPS Budget:**  

### Project No. 9.1: Kingsburgh Node Precinct Plan

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Kingsburgh West</th>
</tr>
</thead>
</table>
| **Goal**      | Goal 1: Promote and Enhance Accessibility:  
Goal 2: Promote Diversity and Choice;  
Goal 3: Safe and Secure Environments;  
Goal 4: Imageability;  
Goal 5: Building a Viable Local Economy;  
Goal 6: Promote and Improve Public Transport;  
Goal 7: Sustainable Services and Facilities;  
Goal 8: Access to and Protection of the natural Environment;  
Goal 9: Appropriate Settlement Form |
| **Type**      | Planning and Design |
| **Priority**  | Short - Medium |
| **Description** | The Precinct Plans will identify projects that would be packaged for detail design and implementation at a later stage. The precinct plans should include the following elements: Movement and Circulation Framework, Land Use and Activity Patterns, Urban Form Framework, Urban Landscaping/ public space framework and a phasing strategy. |

**Responsibility:** Framework Planning  
**Type (CAP/OPS):** Capital  
**CAP Budget:** R100,000  
**OPS Budget:**  

---

**IYER:**  
ILLOVO LOCAL AREA PLAN: SPATIAL PLANNING FRAMEWORK
Goal 7: Sustainable Services and Facilities

Type: Facilitation

Priority: Short to Long Term

Although a relatively recent development, indications are that there is already a backlog of educational and health facilities in Illovo and surrounding communities. This will be exacerbated with the development of the Kingsburgh West housing development adding pressure on existing facilities. Although the provision of such services is not a local authority responsibility it is essential that the needs of local communities are communicated to the relevant government departments and service providers. The need for new facilities must be identified and this must be placed on budgets of relevant provincial and national government departments.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (Cap/Ops)</th>
</tr>
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<tbody>
<tr>
<td>Councillor to facilitate</td>
<td>Capital / Operational</td>
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<tr>
<td></td>
<td>CAP BUDGET: 0</td>
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<td></td>
<td>OPS BUDGET: 0</td>
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</table>
## ANNEXURE D

### D.2. TRAFFIC AND TRANSPORT DETAILED ACTION PLAN PROJECT SHEETS

#### PROJECT NO T 1.1: UPGRADE OF MR197 TO ASPHALT SURFACE

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>General</th>
</tr>
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<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design and implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium to long term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The MR197 has the potential to function as an alternative north-south district collector route to the north of the municipality. This potential has been confirmed in consultation with the KZN Department of Transport. Section 2 of the route, between the R603 and MR37 is currently a gravel road and upgrade of this section to asphalt surfacing is essential if the route is to function as a higher order route in the future.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY | KZN Dot and eThekwini Municipality |
| LINKAGES | |

<table>
<thead>
<tr>
<th>TYPE (CAP/OPS)</th>
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#### PROJECT NO T 1.2: R603 CORRIDOR

<table>
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<tr>
<th>PRECINCT</th>
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<td>Goal 1: Promote and Enhance Accessibility</td>
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<td>Planning</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The R603 route functions as a regional collector route, providing access from the western hinterland to the southern regions of the municipality. The route also acts as the central mobility route through the Illovo area. In addition the R603 acts as an alternative to the N3 toll route, luring freight movement to this corridor. The future role of the R603 corridor must therefore be agreed upon and development strategies and controls for the route should be formulated.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY | KZN Dot and eThekwini Municipality |
| LINKAGES | |

<table>
<thead>
<tr>
<th>TYPE (CAP/OPS)</th>
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<td>OPS BUDGET</td>
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## D.2. TRAFFIC AND TRANSPORTATION DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO T 2.1: UPGRADE OF ROAD 10080 TO REEVES ROAD

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Bhekulwandle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
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<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Bhekulwandle area suffers from a lack of investment in road infrastructure and is characterised by gravel roads. Accordingly, most routes linking Bhekulwandle to the MR37 (the nearest local distributor) are also gravel routes. Investment in a system of asphalt surfaced urban distributor routes in Bhekulwandle would be a strategic investment in addressing infrastructure provision in the area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>KZN Dot and eThekwini Municipality</th>
<th>TYPE (CAP/OPS)</th>
<th>Capital</th>
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### LINKAGES

### PROJECT NO T 2.2: UPGRADE OF ROAD 83727 TO REEVES ROAD

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<tr>
<th>PRECINCT</th>
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<td>Goal 1: Promote and Enhance Accessibility</td>
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<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
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<tr>
<td>PRIORITY</td>
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</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Bhekulwandle area suffers from a lack of investment in road infrastructure and is characterised by gravel roads. Accordingly, most routes linking Bhekulwandle to the MR37 (the nearest local distributor) are also gravel routes. Investment in a system of asphalt surfaced urban distributor routes in Bhekulwandle would be a strategic investment in addressing infrastructure provision in the area.</td>
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<table>
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<th>RESPONSIBILITY</th>
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### LINKAGES
## D.2. TRAFFIC AND TRANSPORTATION DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO T 3.1: TAXI FACILITY

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<tr>
<th>PRECINCT</th>
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<tr>
<td>GOAL</td>
<td>Goal 6: Promote and Improve Public Transport</td>
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<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The provision of public transport facilities in the Illovo Central area is essential for the success of the proposed precinct development. In addition the promotion of public transport over private vehicle usage is a goal of the eThekwini Municipality. The predominantly low income residents in and around the Illovo area would be captive public transport users, and the adequate provision of public transport facilities and appropriate service frequencies must be achieved.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
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<tr>
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<td>Operational/ Capital</td>
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### PROJECT NO T 3.2: UPGRADE OF ROAD 10080

<table>
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<th>Illovo Central</th>
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<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short to medium term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Road 10080 is proposed as an activity street in the Illovo Central precinct. The location of public transport facilities and social facilities such as schools, clinics etc. along the road will generate a large number of pedestrian trips in along this road. This will necessitate the provision of adequate pedestrian facilities such as sidewalks, lighting and traffic calming. In addition capacity upgrades in future may be required as dictated by traffic demand and acceptable operating levels of service.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Capital</td>
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<td>OPS BUDGET</td>
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<tr>
<td>Project No: T 3.3: Upgrade of Road 510148</td>
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<tr>
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<tr>
<td><strong>Precinct:</strong> Illovo Central</td>
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</tr>
<tr>
<td><strong>Goal:</strong> Goal 1: Promote and Enhance Accessibility</td>
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</tr>
<tr>
<td><strong>Type:</strong> Design and Implementation</td>
<td></td>
</tr>
<tr>
<td><strong>Priority:</strong> Short to medium term</td>
<td></td>
</tr>
<tr>
<td><strong>Description:</strong> The proposed development in the Illovo central precinct along the R603 route necessitates the provision of a parallel access road in order to maintain the R603’s mobility function. Road 510148 will therefore perform this function as a parallel access road to proposed developments and should be design accordingly. The provision of pedestrian sidewalks and lighting is essential.</td>
<td></td>
</tr>
<tr>
<td><strong>Responsibility:</strong> eThekwini Transport Authority</td>
<td></td>
</tr>
<tr>
<td><strong>Type (Cap/Ops):</strong> Capital</td>
<td></td>
</tr>
<tr>
<td><strong>Cap Budget:</strong> R556,542.4425</td>
<td></td>
</tr>
<tr>
<td><strong>Ops Budget:</strong></td>
<td></td>
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<tr>
<td><strong>Linkages:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project No: T 3.4: Upgrade of Road 10155</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precinct:</strong> Illovo Central</td>
</tr>
<tr>
<td><strong>Goal:</strong> Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td><strong>Type:</strong> Design and Implementation</td>
</tr>
<tr>
<td><strong>Priority:</strong> Medium to long term</td>
</tr>
<tr>
<td><strong>Description:</strong> The proposed development in the Illovo central precinct along the R603 route necessitates the provision of a parallel access road in order to maintain the R603’s mobility function. Road 10155 will therefore perform this function as a parallel access road to proposed developments and should be design accordingly. The provision of pedestrian sidewalks and lighting is essential.</td>
</tr>
<tr>
<td><strong>Responsibility:</strong> eThekwini Transport Authority</td>
</tr>
<tr>
<td><strong>Type (Cap/Ops):</strong> Capital</td>
</tr>
<tr>
<td><strong>Cap Budget:</strong> R589,097.85</td>
</tr>
<tr>
<td><strong>Ops Budget:</strong></td>
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</tbody>
</table>
## D.2. TRAFFIC AND TRANSPORTATION DETAILED ACTION PLAN PROJECT SHEETS

### PROJECT NO T 3.5: UPGRADE OF ROAD 10450

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design and Implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium to long term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The proposed development in the Illovo central precinct along the R603 route necessitates the provision of a parallel access road in order to maintain the R603’s mobility function. Road 10450 will therefore perform this function as a parallel access road to proposed developments and should be design accordingly. The provision of pedestrian sidewalks and lighting is essential.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>eThekwini Transport Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>R11,552,122.3125</td>
</tr>
</tbody>
</table>

### PROJECT NO T 4.1: LINK ROAD FROM R603 TO ILLOVO VILLAGE

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning, design and implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Long term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The MR197 is currently staggered at its intersection with the R603. Future development of the MR197 as an alternative north-south route would benefit from a correction of this staggered alignment and promote a higher level of mobility along the route.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>eThekwini Transport Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Operational/ Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>R18,386,775</td>
</tr>
</tbody>
</table>

| LINKAGES | |
|----------|
### D.2. TRAFFIC AND TRANSPORTATION DETAILED ACTION PLAN PROJECT SHEETS

#### PROJECT NO: T 4.2: PUBLIC TRANSPORT FACILITY PROVISION

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Illovo Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 6: Promote and Improve Public Transport</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning, design and implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short to medium term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Illovo Village currently does not have formal public transport facilities (as per eThekwini Municipality PTMIS). The provision of public transport facilities within this node is essential for the success of proposed development within Illovo Village. In addition the promotion of public transport over private vehicle usage is a goal of the eThekwini Municipality. The predominantly low income residents in and around the Illovo area would be captive public transport users, and the adequate provision of public transport facilities and appropriate service frequencies must be achieved.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Operational/ Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>0</td>
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<tr>
<td>OPS BUDGET</td>
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</tr>
</tbody>
</table>

#### PROJECT NO: T 5.1: LINK ROAD TO FROM R603 TO ILOVO VILLAGE

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>Kingsburgh West</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Goal 1: Promote and Enhance Accessibility</td>
</tr>
<tr>
<td>TYPE</td>
<td>Planning, design and implementation</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Long term</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The MR197 is currently staggered at its intersection with the R603. Future development of the MR197 as an alternative north-south route would benefit from a correction of this staggered alignment and promote a higher level of mobility along the route.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>TYPE (CAP/OPS)</td>
<td>Operational/ Capital</td>
</tr>
<tr>
<td>CAP BUDGET</td>
<td>R9,734,175</td>
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<tr>
<td>OPS BUDGET</td>
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</table>