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00 TABLE OF CONTENTS
# 0.1 TABLE OF CONTENTS

1. **INTRODUCTION**
   - 1.1 Background  
   - 1.2 History of Verulam  
   - 1.3 Purpose and methodology  
   - 1.4 Structure of report  

2. **SOCIAL AND ECONOMIC DEVELOPMENT**
   - 2.1 Introduction  
   - 2.2 The economic planning context  
   - 2.3 Overview of the Verulam economy  
   - 2.4 Strategic economic impact  
   - 2.5 A socio-economic overview  
   - 2.6 The economic sectors  
   - 2.7 The 2000 Verulam central area framework plan  
   - 2.8 SWOT analysis of the Verulam economy  

3. **PLANNING AND SPATIAL DEVELOPMENT**
   - 3.1 Introduction  
   - 3.2 Planning context  
   - 3.3 Study area analysis  
   - 3.4 Summary of key issues  

4. **URBAN MORPHOLOGY**
   - 4.1 Introduction  
   - 4.2 The structure of the Town Centre  

5. **TRAFFIC AND TRANSPORTATION**
   - 5.1 Introduction  
   - 5.2 Section structure  
   - 5.3 Study area and regional context  
   - 5.4 Background  
   - 5.5 Existing transport infrastructure  
   - 5.6 Travel demand assessment  
   - 5.7 Operational assessment  
   - 5.8 Summary of key issues  

6. **INFRASTRUCTURE**
   - 6.1 Introduction  
   - 6.2 Analysis of current and future service capacity  
   - 6.3 Recommendations  

7. **VERULAM DEVELOPMENT PERSPECTIVE**
   - 7.1 Key issues  

8. **KEY INFORMANTS**
   - 8.1 Core Issues from the Situational Analysis  
   - 8.2 Community Issues Identified  

---

**4.3 Urban grain and visual character**  
**4.4 Urban Design Assessment**  
**4.5 Sub-Precinct Analysis**  
**4.6 Core issues**  
**5.1 Introduction**  
**5.2 Section structure**  
**5.3 Study area and regional context**  
**5.4 Background**  
**5.5 Existing transport infrastructure**  
**5.6 Travel demand assessment**  
**5.7 Operational assessment**  
**5.8 Summary of key issues**  
**6.1 Introduction**  
**6.2 Analysis of current and future service capacity**  
**6.3 Recommendations**  
**7.1 Key issues**  
**8.1 Core Issues from the Situational Analysis**  
**8.2 Community Issues Identified**  

---

**103**
## 0.1 TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>PRINCIPLES AND STRATEGY</td>
<td>151</td>
</tr>
<tr>
<td>9.1</td>
<td>A Performance Based Approach to Design</td>
<td>152</td>
</tr>
<tr>
<td>9.2</td>
<td>Development Strategy</td>
<td>153</td>
</tr>
<tr>
<td>10.</td>
<td>TOWN CENTRE CONCEPT AND VISION</td>
<td>155</td>
</tr>
<tr>
<td>10.1</td>
<td>Integrated movement systems</td>
<td>156</td>
</tr>
<tr>
<td>10.2</td>
<td>Supportive Public Open Space</td>
<td>166</td>
</tr>
<tr>
<td>10.3</td>
<td>Ensure a Diverse Land Use Mix</td>
<td>180</td>
</tr>
<tr>
<td>10.4</td>
<td>Ensure a Responsive Built Environment</td>
<td>193</td>
</tr>
<tr>
<td>10.5</td>
<td>Facilitate Local Economic Development</td>
<td>205</td>
</tr>
<tr>
<td>10.6</td>
<td>Ensure Appropriate Urban Management</td>
<td>207</td>
</tr>
<tr>
<td>11.</td>
<td>TOWN CENTRE PRECINCT PLAN</td>
<td>209</td>
</tr>
<tr>
<td>11.1</td>
<td>Traffic and Transportation</td>
<td>211</td>
</tr>
<tr>
<td>11.2</td>
<td>Land Use</td>
<td>216</td>
</tr>
<tr>
<td>11.3</td>
<td>Sub-Precinct Guidelines</td>
<td>220</td>
</tr>
<tr>
<td>12.</td>
<td>IMPLEMENTATION PLAN</td>
<td>239</td>
</tr>
<tr>
<td>12.1</td>
<td>Linkage and Overview to Strategy Plan</td>
<td>240</td>
</tr>
<tr>
<td>12.2</td>
<td>The Development Process</td>
<td>242</td>
</tr>
<tr>
<td>12.3</td>
<td>Resources for Implementation</td>
<td>243</td>
</tr>
<tr>
<td>12.4</td>
<td>Managing Implementation</td>
<td>245</td>
</tr>
<tr>
<td>12.5</td>
<td>Projects</td>
<td>246</td>
</tr>
<tr>
<td>12.6</td>
<td>Concept Business Plan</td>
<td>249</td>
</tr>
<tr>
<td></td>
<td>ANNEXURE A: LAND USE CATEGORIES</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>ANNEXURE B: DETAILED PROJECT SHEETS</td>
<td>257</td>
</tr>
<tr>
<td></td>
<td>ANNEXURE C: MINUTES FROM PUBLIC STAKEHOLDER MEETINGS</td>
<td>267</td>
</tr>
</tbody>
</table>
1.1 BACKGROUND

Verulam is a historical centre located within the north of the eThekwini Municipality, an area that has over the past decade attracted substantial high value developments. The northern area is arguably one of the prime investment destinations in South Africa.

Verulam is on the doorstep of development areas such as Umhlanga Ridge (a primary metropolitan node), the King Shaka Airport and Dube Tradeport (an international logistics hub), the Cornubia development area (proposed development area accommodating up to 50 000 to 60 000 residential units), the Sibaya Casino complex and various other world class developments. The Verulam Town Centre is surrounded by a range of land uses including a range of residential areas, industrial areas and rural development.

The Town Centre is located just off the R102. It has good linkages to the N2 and M4 freeways to the east and access to the “hinterland populations” of Inanda and Ndwedwe.

The 2000 Framework Plan already suggests that “Verulam is therefore well positioned to take advantage of future developments around tourism in the northern and coastal regions, as well as being the destination and/or interchange point for substantial hinterland populations”. This assessment will explore these roles of the Town Centre further and will inform a vision for the development of the area.
1.2 HISTORY OF VERULAM

Verulam is situated along the eThekwini Municipalities northern corridor, along the slopes of the Umdloti River, and is the third oldest settlement in KwaZulu-Natal.

The small sugar town was settled by a party of about 400 Methodists under the patronage of Earl Verulam. Verulamium was an ancient Roman town built on the Celtic town of Vermian – ‘built above the marsh’ which informed the name of the town.

The town itself is a densely populated area with many different cultures catered for with mosques, temples and churches. The most spectacular of these is the Shri Gopalali Hindu Temple which was opened by Mahatma Gandhi in 1913.

In the 1850’s a group of British immigrants led by Thomas Champean, and sponsored by the Earl of Verulam, settled in the area. Activity grew and the village developed considerably and soon became an important centre of social, religious, political and economic activity. With this growth, the village was established and later became the magisterial seat for the country of Victoria – the area between the Umgeni and Tugela Rivers on the North Coast of Natal and became a separate magistracy in May of 1852. The town also became the seat of the district surgeon, law courts, hospital and post office. Much of this earlier Regional centre function is currently retained in the town.

In the late 1870’s, Verulam emerged as the focal point in the railroad communications system. In 1879 it became the terminus to the north and Zululand. Which was the first railway line, which stretched from the Umgeni to Avoca until the extension to Verulam.

In 1860 when the first Indians came as indentured labourers to Natal, 52 were assigned to Tongaat where they worked on the sugar cane fields. At the time there were no sugar mills in Verulam – the first opened in 1874. It would appear that sugar milling never became firmly entrenched as part of life in Verulam. As a result, in 1946 the sugar mill in Verulam central was absorbed by the Tongaat Sugar Company, now known as Tongaat Hulett, which was largely responsible for the rapid growth and development of Tongaat.

1.3 PURPOSE AND METHODOLOGY

The purpose of the Project is:

- To prepare a Conceptual Precinct Framework Plan for the extended study area, and a more detailed conceptual plan for the commercial component;
- To understand the traffic requirement and implications in the broader context, as well as at the local level, in terms of public transport and the potential of the rail station to act as an additional node;
- To understand the economic role of the area in terms of the changing nature of the surrounding context as well as to identify development opportunities including informal trading opportunities within the study area;
- To inform the preparation of Budget and Implementation Plans for particular projects as identified.

The objectives of the project, as outlined in the brief, are:

- To identify the economic role of the area in a local, metropolitan and regional context as well as the challenges and opportunities for investment and employment;
- To identify catalytic projects and interventions (both public & private, including urban design and public realm upgrades) that respond to the growing economic needs in the region and that will lead to the economic regeneration of the node;
- To identify and respond to the social / subsidized / ‘GAP’ housing demand within the region taking into consideration the need to:
  - Density and discourage urban sprawl;
  - Consider redevelopment interventions;
  - Improve the quality of housing and public infrastructure;
  - Develop and strengthen public transport-oriented activity corridors;
  - To facilitate an improved and responsive urban design, public realm and built form that is in keeping with the spatial character of the precinct.
1.3 PURPOSE AND METHODOLOGY (CONTINUED…)

- To identify key interventions in order to enhance the manner in which the study area operates. The role and potential linkages with the R102, M27 and other key routes within the study area will be interrogated with references to other planning initiatives in the area in order to facilitate regional integration;
- To identify key interventions at a local level that will facilitate access, movement, circulation and parking (pedestrian and vehicular, private and public – taxi); and
- To ensure that informal trade considerations are integrated into transport plans.

The methodology adopted for the project is depicted in the diagram below.

The Sector Studies, and Situational Analysis of the project is aimed at developing a thorough understanding of the development conditions and dynamics within the Verulam Node. It is intended that this understanding will inform the Urban Design Framework planning in the forthcoming phases.

1.4 STRUCTURE OF REPORT

Section 1 - Introduction
This section establishes the background to the project.

Section 2 – Social and Economic Development
This section presents an economic sector assessment aimed at informing the spatial planning for the Verulam Town Centre. The intention of the precinct planning exercise is to (1) review planning proposals as reflected in the Verulam Central Area Urban Design Framework (prepared in September 2000) and (2) identify priority interventions to ensure Verulam continues to fulfill its role in the metropolitan space economy.

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 Verulam. In addition, a previous study done by Markewicz English – Urban designers – Architects, entitled Verulam Central Area Urban Design Framework -2000 is also considered.

The second part of this section deals a physical planning with analysis of the study area as a whole in terms of natural systems, movement, existing zoning, existing land use, heights as well as exiting F.A.R

Section 4 – Urban Morphology
This section aims at providing an understanding of the urban structure of the Town Centre and its associated urban performance. This examination of the Town Centre occurs at both an overall study area scale and a more detailed precinct scale. The section is structure in the following manner:

Sub section 4.1 – The Structure of the Town Centre: provides an evaluation of the structure of the existing Town Centre based in terms of a conceptual Town Centre framework of ‘Core’ and ‘Frame’
1.4 STRUCTURE OF REPORT (CONTINUED…)

Sub section 4.2 – Urban Grain and Visual Character: provides an analysis of the built form, its patterns and perceptual attributes through a study of the 'figure ground' of the study area, and through an exploration of the ‘form of city’ or ‘Lynchian’ analysis.

Sub section 4.3 – Urban Design Assessment: provides an evaluation of the present performance of the Town Centre measured against key urban design criteria; and lastly

Sub-section 4.4 Sub-Precinct Analysis: offers a closer evaluation, at a precinct scale, providing a description of localised urban form and public realm conditions.

Section 5 – Traffic and Transport
The purpose of this section is to provide an overview of the existing traffic and transportation conditions within the study area in terms of infrastructure supply and travel demand. The following aspects will be addressed;
- Quantification of public transport;
- Desktop assessment of road networks and pavement conditions;
- Assessment of the operational performance of critical intersections;
- Assessment of pedestrian movement within the Town Centre.

Section 6 - Infrastructure
This section focuses on providing an understanding of the following bulk services within the Verulam Town Centre;
- Stormwater;
- Sewer reticulation;
- Water reticulation;
- Electricity supply;
- 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 – Verulam Development Perspective
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 – Key Informants
This section identifies the core issues outlined in the situational analysis as well as recognises the needs and confirms put forward by the Verulam community.

Section 9 – Principles and Strategy
Section 9 provides an understanding of the principles and development strategies which are used to inform the vision and concept for the Verulam Town Centre.

Section 10 – Town Centre Concept and Vision
This section illustrates and explains each concept within the Verulam Town Centre vision. The section is structured in the following manner;
- An integrated movement system;
- A supportive public space;
- Ensure a diverse land use mix;
- Ensure a responsive built environment;
- Local economic development;
- Ensure approach urban management.

Section 11 – Town Centre Precinct Plan
Section 11 provides greater detail designs and recommendation for the following;
- Traffic and Transportation;
- Land use;
- Sub-Precinct Guidelines.
1.4 STRUCTURE OF REPORT (CONTINUED...)

Section 12 – Implementation Plans

Section 12 concludes the report with the following sub-sections:

- Linkage and overview to strategy plan;
- The development process;
- Resources for implementation;
- Managing implementation;
- Projects; and
- Concept business plan.
2.1 INTRODUCTION

PURPOSE OF SECTION
This section of the report presents an economic sector assessment aimed at informing the spatial planning for the Verulam Town Centre. It is prepared as part of the Status Quo Assessment Phase of the Verulam CBD Precinct Plan project commissioned by the Framework Planning Branch of the eThekwini Municipality.

The intention of the precinct planning exercise is to (1) review planning proposals as reflected in the Verulam Central Area Urban Design Framework prepared in September 2000; and (2) identify priority interventions to ensure Verulam continues to fulfill its role in the metropolitan space economy.

APPROACH TO CONDUCTING ASSESSMENT
This assessment is based on the following sources of information:
- Existing policy and planning documents;
- Braby’s business database made available by the Economic Development Unit of the eThekwini Municipality;
- Interviews with 62 taxi commuters;
- Interviews with approximately 50 formal business owners / managers;
- Interviews with approximately 20 informal business owners;
- Informal discussion with community leaders and property practitioners;
- Aerial photography and mapping of the area.

OVERVIEW OF SECTION CONTENTS
This section includes seven subsections.
Section 2.1 – Introduction: Providing overview of purpose and approach to assessment.

Section 2.2 – The Economic Planning Context: Considering strategic and local planning initiatives impacting on future spatial economic development.

Section 2.3 – Overview of the Verulam Economy: Developing an understanding of the Verulam economy.

Section 2.4 – A Socio-economic Overview: Reflecting on the socio-economic situation in Verulam and surrounding areas.

Section 2.5 – The Economic Sectors: Providing a more detailed assessment of each of the key economic sectors present in Verulam.

Section 2.6 – The 2000 Verulam Central Area Framework Plan: Considering specifically those proposals of the plan impacting on future economic development.

Section 2.7 – SWOT Analysis of the Verulam Economy: Assessing the information collected through the process and determining the implications thereof for the future development of the Town Centre.
2.2 THE ECONOMIC PLANNING CONTEXT

PROVINCIAL SPATIAL PLANNING

The Provincial Spatial Economic Development Strategy (PSEDS) identifies the eThekwini-Umhlatuze Corridor as the priority development corridor in the Province. As a result of this focus the Provincial Corridor Development Programme is now funding a range of projects in eThekwini that will contribute to strengthening this corridor. The projects include:

• Local Area Plan for the R102 Corridor between Verulam and Dube;
• Tongaat East and West Bypass Planning and Design;
• M4 Bridge road widening detailed design, EIA and implementation;
• R102 / Dube Trade Port Link and Interchange Planning and Design; and
• Verulam Town Centre Revitalisation Plan (this initiative).

Over and above these initiatives in eThekwini, a number of projects relating to this corridor, ranging from tourism to industrial development projects, is also planned for the Ilembe and uThungulu Districts.

The strengthening and continued development of this corridor, together with the improved linkages to the N2, will impact directly on the future development potential of the Verulam Town Centre.

THE 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 on the diagram below. Future investment in Verulam will relate specifically to Strategy 5 as reflected. Where possible the regeneration of Verulam should support the implementation of these strategies.
2.2 THE ECONOMIC PLANNING CONTEXT (CONTINUED…)

THE NORTHERN SPATIAL DEVELOPMENT PLAN

INTRODUCTION

The eThekwini Northern Spatial Development Plan has been prepared with a view to guide future development in the areas to the north of Durban currently experiencing major development pressures.

THE NORTHERN ECONOMIC CONTEXT

The 2005 Economic Assessment undertaken by Van Coller considered the economic activity of a number of sub-zones in the northern spatial plan area based on employment estimates. The result of this assessment is reflected in the Table below.

DISTRIBUTION OF ECONOMIC ACTIVITY IN NORTHERN SPATIAL PLAN AREA (BASE ON EMPLOYMENT)

<table>
<thead>
<tr>
<th>ECONOMIC NODE</th>
<th>AVE EMPLOYMENT PER UNIT</th>
<th>ESTIMATED 2004 EMPLOYMENT</th>
<th>% OF NORTHERN WORKFORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durban North</td>
<td>9</td>
<td>13,335</td>
<td>21%</td>
</tr>
<tr>
<td>Inanda / KwaMashu</td>
<td>16</td>
<td>4,546</td>
<td>7%</td>
</tr>
<tr>
<td>Phoenix</td>
<td>13</td>
<td>12,866</td>
<td>20%</td>
</tr>
<tr>
<td>Mount Edgecombe</td>
<td>12</td>
<td>2,547</td>
<td>4%</td>
</tr>
<tr>
<td>Verulam</td>
<td>11</td>
<td>8,168</td>
<td>13%</td>
</tr>
<tr>
<td>Tongaat</td>
<td>13</td>
<td>10,194</td>
<td>16%</td>
</tr>
<tr>
<td>Umdloti</td>
<td>11</td>
<td>1,008</td>
<td>2%</td>
</tr>
<tr>
<td>Umhlanga</td>
<td>8</td>
<td>11,533</td>
<td>18%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>64,197</td>
<td>100%</td>
</tr>
</tbody>
</table>

It is noted that the Verulam area contributes 13% of the employment opportunities in the Region.

The economic assessment prepared for the Northern Spatial Plan (Van Coller 2005) made a number of recommendations specifically relating to Verulam that informed the strategic spatial planning for the area. The recommendations / findings included that:

- There is a strong entrepreneurial and work ethic and that it will continue to experience good generic growth;
- Industrial areas are viewed as important from an employment perspective and opportunities for growth and expansion should be considered;
- Cost-sensitive manufacturing sectors that could benefit from the Dube Trade Port should be clustered in the area (specialty textiles, designer clothing, footwear and leather goods are mentioned);
- Adequate public transport for daily commuters must be provided;
- The location is ideal for agri-processing linked to Dube; and
- Skills development initiatives focussed on addressing the high unemployment and low skills levels.

THE SPATIAL CONTEXT

The Northern Spatial Development Plan identifies a number of components that will in future reflect the urban fabric of the area. Of relevance to Verulam are:

- The Metropolitan and Sub-Metropolitan Spines;
- The metropolitan nodes;
- The sub-metropolitan nodes;
- The local areas.
Verulam is located on a metropolitan spine which includes the R102 / North Coast Road and the Rail Line. This spine is to be expanded from Warwicks to Tongaat and will be part of the “metropolitan public transportation feed system” to link Verulam, Dube TradePort / KSIA and Tongaat Sub-metropolitan nodes. High density residential development either side of the spine will be supported and the spine will also link existing and new industrial nodes and opportunity areas.

The Verulam Town Centre is then also identified as a sub-metropolitan node providing “day to day business, transport and social services for existing and future residential communities”. The Verulam Town Centre as such a node is commented on as follows:

The existing Town Centre of Verulam is to be regenerated, consolidated and enhanced to perform the role of a multi-purpose business, social services and intermodal transportation terminal centre to serve surrounding areas within the northern development corridor as well as provide higher order services and transport services for the rural hinterland to the west.

The Verulam / Cornubia local area is identified in the Spatial Plan. From the more detailed description of this local area it is evident that the future focus should be on:

- Residential expansion and densification;
- Regeneration of the existing Town Centre; and
- Improving linkages and public transport

Specifically the anticipated increase in residential development in this local area is to be considered in future planning for the Verulam Town Centre.

### THE TONGAAT ECONOMIC DEVELOPMENT PLAN

The 2008 Economic Development Strategy for Tongaat (Urban Econ 2008) proposes the following strategies to be implemented to grow the economy of the area.

1. To accelerate the bulk infrastructure development in Tongaat;
2. To unlock the economy through land availability and management;
3. To develop manufacturing and construction sectors;
4. To improve the transport system in Tongaat;
5. To develop agriculture and agri-processing;
6. To develop tourism sector;
7. To improve retail and commerce in Tongaat;
8. To develop the ICT sector;
2.2 THE ECONOMIC PLANNING CONTEXT (CONTINUED…)

9. To improve the informal economy and SMME in Tongaat;
10. To improve the BEE and Skills in Tongaat;
11. To address HIV/AIDS and social assistance issues;
12. To empower women and youth of Tongaat;
13. To organise an economic development structure in Tongaat;
14. To establish regulation and planning frameworks.

As Tongaat and Verulam have a number of characteristics in common it is worth noting how it is proposed economic development is to be addressed in Tongaat and surrounding areas.

2.3 OVERVIEW OF THE VERULAM ECONOMY

AN ECONOMIC OVERVIEW

The diagram below indicates that Ward 60, of which Verulam forms part, contributes 9% to the GDP (Gross Domestic Product) of selected wards in the Northern Region of eThekwini Municipality. (Areas included in Ward 60: Canelands, Hazelmere, Mountview, Redcliffe, Verulam, Verulam Everest, Verulam Park, Zweilitsha, Canelands, Gwala’s, Kwasumubi, Lot 18, Redcliffe, Thandanani, Verulam 2).

It is evident from the diagram that the coastal strip contributes nearly 50% (Ward 58) of the GDP for the Region. This reflects the unevenness in levels of development between the coastal strip and the hinterland.

GDP CONTRIBUTION TO NORTHERN REGION

Source: eThekwini 2007
### 2.3 OVERVIEW OF THE VERULAM ECONOMY (CONTINUED…)

#### SECTOR CONTRIBUTION TO GDP IN WARD 60 (TOTAL GDP R534 122 MILLION)

- Wholesale & retail trade: 14.9%
- Transport: 14.1%
- General government services: 9.3%
- Furniture and other manufacturing: 7.6%
- Petroleum products, chemicals, etc.: 7.3%
- Business services: 5.6%
- Textiles, clothing and leather goods: 5.6%
- Agriculture, forestry and fishing: 5.2%
- Community, social and other services: 5.1%
- Food, beverages and tobacco: 4.8%
- Finance and insurance: 4.1%
- Construction: 3.4%
- Communication: 3.3%
- Wood and paper; publishing and printing: 2.2%
- Transport equipment: 1.4%
- Electricity: 1.3%
- Metals, metal products, machinery, etc.: 1.2%
- Catering and accommodation: 1.0%
- Other non-metal mineral products: 0.9%
- Electrical machinery and apparatus: 0.6%
- Water: 0.5%
- Mining: 0.4%
- Radio, TV, instruments, watches and clocks: 0.2%

Source: eThekwini 2007

The above diagram reflects on the sector contribution of various sectors to the total GDP of Ward 60. The four dominant sectors in the economy of Ward 60 is wholesale and retail trade (14.9%), transport (14.1%), general government services (9.3%) and furniture and other manufacturing (7.6%). It is interesting to note that not one sector dominates the production in the ward which supports Van Coller’s (2005) that “Verulam has a well developed local economy”.

### OVERVIEW OF REGIONAL BUSINESS ACTIVITY

Van Coller’s assessment of the Northern Regional economy in 2005, based on the information of the Braby’s database, and his classification used to estimate employment, provides valuable insights into the Verulam economy. It should be noted that these figures relate to a much wider area than just the Verulam Town Centre. (Includes the areas Canelands, Hazelmere, KwaSumubi, New Glasgow, Ottawa, Parkgate, Riet River, Southridge Circle, Blackburn, Nigeria, Trenance Park, Zwelitsha, Lotusville, Riyadh, Southridge, Temple Valley, Valdin Heights, Verulam Central, Brindhavan, Dawncrest, Everest Heights, Grange Extn 13, Grangerstown, Mountview, Oaklands, Riverview Park, Surya Heights, Umdloti Heights, Mount Moreland, Neilsworth, Windermere, Waterloo).

Van Coller concludes from the Braby assessment that:
- Verulam has a well-developed local economy with a retail sector that offers a comprehensive range of goods;
- Industrial development in the area should specifically be considered;
- Although the area is home to only 7% of the population of the Northern Areas it provides 13% of the employment opportunities;
- 46% of the workforce can be accommodated in the local economy, however, some 9 000 people must still travel from the area for employment opportunities;
- High unemployment and a growing poor population is viewed as a major concern.
2.3 OVERVIEW OF THE VERULAM ECONOMY (CONTINUED…)

OVERVIEW OF BUSINESS ACTIVITY IN THE TOWN CENTRE

Based on a 2006 Braby’s business database sourced from the eThekwini Economic Development Unit a more detailed assessment of businesses in the Verulam Town Centre area was undertaken.

The table on page 20 reflects the type of businesses located in the Verulam Town Centre. From this it is noted that a large number of businesses are categorised as manufacturing and wholesale businesses.

The table below indicates the spatial distribution of the 487 businesses in the Verulam Town Centre. The major concentration of businesses in Wicks Street is evident and should be considered in future planning.

<table>
<thead>
<tr>
<th>STREET NAME</th>
<th>NUMBER OF BUSINESSES</th>
<th>% OF BUSINESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wicks</td>
<td>186</td>
<td>43.5%</td>
</tr>
<tr>
<td>Moss</td>
<td>77</td>
<td>18.0%</td>
</tr>
<tr>
<td>Todd</td>
<td>44</td>
<td>10.3%</td>
</tr>
<tr>
<td>Ireland</td>
<td>33</td>
<td>7.7%</td>
</tr>
<tr>
<td>Russom</td>
<td>14</td>
<td>3.3%</td>
</tr>
<tr>
<td>Groom</td>
<td>13</td>
<td>3.0%</td>
</tr>
<tr>
<td>Republic</td>
<td>6</td>
<td>1.4%</td>
</tr>
<tr>
<td>Court</td>
<td>5</td>
<td>1.2%</td>
</tr>
<tr>
<td>Garden</td>
<td>5</td>
<td>1.2%</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>10.5%</td>
</tr>
<tr>
<td>(blank)</td>
<td>59</td>
<td>13.8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>487</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Businesses that reflected Verulam in both the neighbourhood and town fields were extracted

<table>
<thead>
<tr>
<th>SECTOR Contribution to GDP in Ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Sector</td>
</tr>
<tr>
<td>Building &amp; Construction</td>
</tr>
<tr>
<td>Education &amp; Training</td>
</tr>
<tr>
<td>Automotive &amp; Transport</td>
</tr>
<tr>
<td>Retail - Other</td>
</tr>
<tr>
<td>Services - Other</td>
</tr>
<tr>
<td>Retail - Food &amp; Beverages</td>
</tr>
<tr>
<td>Manufacturing</td>
</tr>
<tr>
<td>Services - Financial</td>
</tr>
<tr>
<td>Agriculture &amp; Horticulture</td>
</tr>
<tr>
<td>Medical</td>
</tr>
<tr>
<td>Light Industrial</td>
</tr>
<tr>
<td>Government (all 3 levels)</td>
</tr>
<tr>
<td>Catering &amp; Accommodation</td>
</tr>
<tr>
<td>Wholesale &amp; Distribution</td>
</tr>
<tr>
<td>Unspecified</td>
</tr>
<tr>
<td>Churches &amp; Religious Organise.</td>
</tr>
<tr>
<td>Tourism, Sport &amp; Leisure</td>
</tr>
<tr>
<td>Arts &amp; Crafts</td>
</tr>
<tr>
<td>Conservation &amp; Game Parks</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>
### 2.3 OVERVIEW OF THE VERULAM ECONOMY (CONTINUED…)

#### TYPE OF BUSINESSES IN THE VERULAM TOWN CENTRE

<table>
<thead>
<tr>
<th>TYPE OF BUSINESS</th>
<th>NUMBER</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>78</td>
<td>16.0%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>71</td>
<td>14.6%</td>
</tr>
<tr>
<td>Legal and Business Services</td>
<td>42</td>
<td>8.6%</td>
</tr>
<tr>
<td>Restaurants, bars and canteens</td>
<td>28</td>
<td>5.7%</td>
</tr>
<tr>
<td>Medical services</td>
<td>27</td>
<td>5.5%</td>
</tr>
<tr>
<td>Maintenance and repair of motor vehicles</td>
<td>25</td>
<td>5.1%</td>
</tr>
<tr>
<td>Non specialised retail</td>
<td>24</td>
<td>4.9%</td>
</tr>
<tr>
<td>Financial services</td>
<td>21</td>
<td>4.3%</td>
</tr>
<tr>
<td>Not relevant</td>
<td>21</td>
<td>4.3%</td>
</tr>
<tr>
<td>Other retail</td>
<td>19</td>
<td>3.9%</td>
</tr>
<tr>
<td>Personal Services</td>
<td>16</td>
<td>3.3%</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
<td>2.1%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>10</td>
<td>2.1%</td>
</tr>
<tr>
<td>Activities Of Religious Organisations</td>
<td>9</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other land transport</td>
<td>8</td>
<td>1.6%</td>
</tr>
<tr>
<td>Retail in food, beverages and tobacco</td>
<td>8</td>
<td>1.6%</td>
</tr>
<tr>
<td>Sporting and other recreational activities</td>
<td>8</td>
<td>1.6%</td>
</tr>
<tr>
<td>Hotels and short-stay accommodation</td>
<td>6</td>
<td>1.2%</td>
</tr>
<tr>
<td>Other Business Activities N.E.C.</td>
<td>6</td>
<td>1.2%</td>
</tr>
<tr>
<td>Renting of personal and household goods</td>
<td>5</td>
<td>1.0%</td>
</tr>
<tr>
<td>Funeral &amp; Related Activities</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Investigation &amp; Security Activities</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Printing</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Sale of motor vehicles</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Supporting transport activities; travel agencies</td>
<td>4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
<td>5.1%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>487</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

#### SPATIAL LOCATION OF COMMERCIAL AND SERVICES SECTOR ACTIVITY

Economic infrastructure is distributed throughout the Verulam Town Centre and includes industrial areas, major retail facilities, public sector services and transport infrastructure. The majority of the Town Centre however is made up of small to medium sized facilities accommodating shops, services and offices. A number of interesting historical landmarks are also found in the Town Centre.

The map overleaf reflects some of the key components of the economic infrastructure in the Verulam Town Centre.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>ACTIVITY / FACILITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Industrial Areas" /></td>
<td>1 Mission Lands</td>
<td>1 Mission Lands</td>
</tr>
<tr>
<td></td>
<td>2 Mission Lands</td>
<td>3 Northern Town Centre</td>
</tr>
<tr>
<td></td>
<td>4 Towards Canelands</td>
<td></td>
</tr>
<tr>
<td><img src="image2" alt="Major Retail Facilities" /></td>
<td>1 Verulam Cash and Carry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Shoprite</td>
<td>3 Gate Rite Centre</td>
</tr>
<tr>
<td></td>
<td>4 Shoprite</td>
<td>5 Pick and Pay</td>
</tr>
<tr>
<td><img src="image3" alt="Public Sector Services/Facilities" /></td>
<td>1 Morning Market</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Sizakhalo Service Centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Magistrates Court</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Library</td>
<td>5 Station</td>
</tr>
<tr>
<td></td>
<td>6 Primary Health Care Centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 eThekwini Depot</td>
<td>8 SAPS</td>
</tr>
<tr>
<td></td>
<td>9 Department of Labour</td>
<td></td>
</tr>
<tr>
<td><img src="image4" alt="Transport Infrastructure" /></td>
<td>1 Taxi Rank</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Bus Rank</td>
<td>3 Station</td>
</tr>
</tbody>
</table>
2.3 OVERVIEW OF THE VERULAM ECONOMY (CONTINUED...)

VERULAM CBD – SPATIAL LOCATION OF ECONOMIC ACTIVITY
2.4 STRATEGIC ECONOMIC IMPACTS

Future planning and development in Verulam cannot be viewed in isolation of major development initiatives currently shaping the urban landscape in the northern regions of eThekwini. The initiatives include:

- The Northern Spatial Plan;
- The upgrading of the R102;
- The eThekwini Public Transport Strategy;
- The Dube Tradeport / King Shaka International Airport;
- The Cornubia development;
- The eThekwini Rural Development Strategy; and
- Commercial and retail development in Ndwedwe Village.

NORTHERN SPATIAL PLAN

The Northern Spatial Plan confirms Verulam as being located on a metropolitan spine, as well as its position as a sub-metropolitan node. The future impact of the Airport and Dube Tradeport on the Verulam node is acknowledged through this.

This confirmation of the position of Verulam in the urban structure should ensure that this node receives appropriate levels of investment.

UPGRADING OF THE R102

The Northern Spatial plan confirms the R102 as one of the Metropolitan Spines. The current and planned upgrading of the R102 to accommodate anticipated increased traffic flow improves the locational advantage of Verulam and, if appropriately planned, will benefit the development of the transport, commercial and services sector in the town. It is anticipated that up to a third of all traffic relating to the Dube Tradeport will be accommodated on the R102.

ETHEKWINI PUBLIC TRANSPORT STRATEGY

The eThekwini Public Transport Restructuring Strategy will inform future transport planning in Verulam. A key feature of the plan is the proposed integration of various modes of transport, specifically the integration of road and rail transport. In terms of transport planning Verulam is still acknowledged as a metropolitan transfer hub and this in itself suggests a specific economic development focus.

DUBE TRADEPORT

The Dube Tradeport will impact on the Verulam economy through:

- The establishment of an "efficient airfreight / logistics facility within a national multi-nodal transport framework;"
- The development of new business opportunities by providing supporting facilities (e.g. ICT, high value manufacturing, agri-processing, value added logistics); and
- Promotion of tourism through the access to direct international flights; and
- Significant growth in employment.

Specific areas of economic impact considered and discussed in more detail by Van Coller (2005) include:

- The establishment of totally new areas of business establishment;
- The rapid growth of the tourism sector;
- Clustering of certain production activities in the vicinity of the airport;
- Likely escalation of commercial and industrial sectors.

---

2.4 STRATEGIC ECONOMIC IMPACTS (CONTINUED…)

CORNUBIA
The much discussed Cornubia development is located in close proximity to the Verulam Town Centre and this development has the potential to impact substantially on the extent and type of development to take place in Verulam in future.

Not only will this development, with the potential to add 120 000 housing units to the area, increase the number of residents by up to half a million people, it will also attract “new” economic investment in well located business zones. The extent to which these will compete with the Verulam Town Centre will only be established once more detailed planning for the development of the area is available.

RURAL ECONOMIC DEVELOPMENT STRATEGY
In planning undertaken for the Rural Area Based Management Team Verulam has been acknowledged as a rural service centre providing the vast peri-urban and rural populations residing to the north and west of Verulam with access to a range of social and commercial services.

COMMERCIAL AND RETAIL DEVELOPMENT IN NDWEDWE
Ndwedwe Village, the Municipal Centre for the Ndwedwe Municipality, at present only provides the approximately 150 000 residents of the municipality with some access to government services. The commercial sector activity in the village and the municipality as a whole is, however, extremely limited and the majority of residents of this municipality access retail and commercial services in Verulam or other areas of eThekwini, requiring them to travel to or through Verulam.

The Ndwedwe Village is attempting to change the travel patterns of its residents through substantial investment in the formalisation of Ndwedwe Village, the provision of bulk infrastructure and the establishment of higher density housing in the Village. It is hoped that these interventions will attract private sector investors and businesses to Ndwedwe. Project funding in the order of R250 million has been secured from the Neighbourhood Development Grant Fund for this purpose.

If successful, this could have a substantial impact on the number of rural people visiting and making use of services in Verulam on a daily basis.
2.5 A SOCIO-ECONOMIC OVERVIEW

INTRODUCTION

The Verulam Town Centre is located in a larger area bordering on Phoenix in the south, Tongaat (and the Dube Tradeport) in the north, Cornubia in the east and the Hazelmere Dam and Ndwedwe to the west. In order to better understand the role of the Verulam Town Centre in the regional economy it is necessary to have an understanding of the people this node serves.

In the case of the Verulam Town Centre a distinction is made between the local population and the regional population. The local population includes the people residing in the Verulam Town Centre and all those in neighbourhoods surrounding the Town Centre who can reasonably be expected to view Verulam as the closest town where goods are acquired and services are accessed. The regional population include the people residing substantial distances from Verulam, but who are not served by a Town Centre in their immediate vicinity. In this case it generally refers to the people residing in the Ndwedwe Municipality and the hinterland of Inanda.

THE LOCAL POPULATION

Table 6 indicates the contribution of the various residential areas to the population numbers of the Greater Verulam area. A large number of residential areas with populations of between 1 000 and 4 000 people are included in the local population catchment areas.

It is noted that “Verulam Central” only provides accommodation to around 3% of the population of the area. Trenance Park and Waterloo each contributes around 15% to the total population, which make them substantially larger than other areas. The total population for the Greater Verulam Area in 2001 was nearly 55 000 people.

<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>Study Area Population</td>
<td>48%</td>
<td>52%</td>
<td>54618</td>
<td>100.0%</td>
</tr>
<tr>
<td>Riverview Park</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Redcliff</td>
<td>52%</td>
<td>48%</td>
<td>404</td>
<td>0.7%</td>
</tr>
<tr>
<td>Mt Vemon</td>
<td>48%</td>
<td>52%</td>
<td>413</td>
<td>0.8%</td>
</tr>
<tr>
<td>Valdin Heights</td>
<td>51%</td>
<td>49%</td>
<td>491</td>
<td>0.9%</td>
</tr>
<tr>
<td>Grange Ext 13</td>
<td>48%</td>
<td>52%</td>
<td>534</td>
<td>1.0%</td>
</tr>
<tr>
<td>Temple Valley</td>
<td>47%</td>
<td>53%</td>
<td>535</td>
<td>1.0%</td>
</tr>
<tr>
<td>Grange Ext 1</td>
<td>45%</td>
<td>55%</td>
<td>629</td>
<td>1.2%</td>
</tr>
<tr>
<td>Granetown</td>
<td>45%</td>
<td>55%</td>
<td>714</td>
<td>1.3%</td>
</tr>
<tr>
<td>Gracetown</td>
<td>47%</td>
<td>53%</td>
<td>834</td>
<td>1.5%</td>
</tr>
<tr>
<td>New Glasgow</td>
<td>50%</td>
<td>50%</td>
<td>750</td>
<td>1.4%</td>
</tr>
<tr>
<td>Surya Heights</td>
<td>48%</td>
<td>52%</td>
<td>989</td>
<td>1.8%</td>
</tr>
<tr>
<td>Umdloti Heights</td>
<td>48%</td>
<td>52%</td>
<td>1058</td>
<td>1.9%</td>
</tr>
<tr>
<td>Southridge Circle</td>
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<td>54%</td>
<td>1485</td>
<td>2.7%</td>
</tr>
<tr>
<td>Ret River</td>
<td>53%</td>
<td>47%</td>
<td>1244</td>
<td>2.3%</td>
</tr>
<tr>
<td>Lotusville</td>
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<td>53%</td>
<td>1102</td>
<td>2.0%</td>
</tr>
<tr>
<td>Sonthridge</td>
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<td>52%</td>
<td>1071</td>
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</tr>
<tr>
<td>Parkgate</td>
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<td>51%</td>
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</tr>
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<td>Ottawa</td>
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<td>50%</td>
<td>1775</td>
<td>3.2%</td>
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<td>Redcliffe</td>
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<td>52%</td>
<td>3669</td>
<td>6.7%</td>
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<td>Zweiliksha</td>
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<td>51%</td>
<td>3593</td>
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<td>53%</td>
<td>2280</td>
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<tr>
<td>Parkgate</td>
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<td>51%</td>
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<td>4.0%</td>
</tr>
<tr>
<td>Ottawa</td>
<td>50%</td>
<td>50%</td>
<td>1775</td>
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</tr>
<tr>
<td>Verulam Central</td>
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<td>1725</td>
<td>3.2%</td>
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<tr>
<td>Oaklands</td>
<td>48%</td>
<td>52%</td>
<td>1628</td>
<td>3.0%</td>
</tr>
<tr>
<td>Dawncrest</td>
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<td>Southridge Circle</td>
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<td>54%</td>
<td>1485</td>
<td>2.7%</td>
</tr>
<tr>
<td>Ret River</td>
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</tr>
<tr>
<td>Lotusville</td>
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<td>53%</td>
<td>1102</td>
<td>2.0%</td>
</tr>
<tr>
<td>Southridge</td>
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<td>1058</td>
<td>1.9%</td>
</tr>
<tr>
<td>Surya Heights</td>
<td>48%</td>
<td>52%</td>
<td>989</td>
<td>1.8%</td>
</tr>
<tr>
<td>Riyadh</td>
<td>49%</td>
<td>51%</td>
<td>939</td>
<td>1.7%</td>
</tr>
<tr>
<td>Canelands</td>
<td>49%</td>
<td>51%</td>
<td>834</td>
<td>1.5%</td>
</tr>
<tr>
<td>New Glasgow</td>
<td>50%</td>
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<td>750</td>
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<td>491</td>
<td>0.9%</td>
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<td>404</td>
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<td>0%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Study Area Population</td>
<td>48%</td>
<td>52%</td>
<td>54618</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Census 2001
2.5 A SOCIO-ECONOMIC OVERVIEW (CONTINUED...)

THE NEIGHBOURHOODS SURROUNDING VERULAM TOWN CENTRE

![Map of Verulam Town Centre precinct](image)

Source: Map Sourced from Braby Web-site 2008

The table on the right reflects the level of employment of the workforce (persons between 15 to 64 years of age) in the areas surrounding the Verulam Town Centre. The residential areas where less than 50% of the workforce is employed is highlighted.

It is noted that this is the case in the majority of the residential areas, with only 33% of the Waterloo workforce employed. The levels of employment are usually mirrored in household income levels. This suggests high levels of poverty in the residential areas around Verulam. However, in some areas such as Surya Heights and Parkgate unemployment levels are comparatively low.

### LEVELS OF WORKFORCE EMPLOYMENT IN AREA

<table>
<thead>
<tr>
<th>AREA</th>
<th>EMPLOY-ED</th>
<th>UNEMPL-LOYED</th>
<th>OTHER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brindhaven</td>
<td>49%</td>
<td>8%</td>
<td>43%</td>
<td>2132</td>
</tr>
<tr>
<td>Canelands</td>
<td>39%</td>
<td>27%</td>
<td>33%</td>
<td>601</td>
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<tr>
<td>Dawncrest</td>
<td>49%</td>
<td>11%</td>
<td>40%</td>
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<td>Everest Heights</td>
<td>52%</td>
<td>4%</td>
<td>44%</td>
<td>1689</td>
</tr>
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<td>Grange Ext 13</td>
<td>48%</td>
<td>12%</td>
<td>40%</td>
<td>379</td>
</tr>
<tr>
<td>Grangtown</td>
<td>43%</td>
<td>11%</td>
<td>47%</td>
<td>475</td>
</tr>
<tr>
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<td>51%</td>
<td>10%</td>
<td>39%</td>
<td>533</td>
</tr>
<tr>
<td>Litana</td>
<td>29%</td>
<td>29%</td>
<td>41%</td>
<td>2468</td>
</tr>
<tr>
<td>Lotusville</td>
<td>49%</td>
<td>4%</td>
<td>47%</td>
<td>766</td>
</tr>
<tr>
<td>Mountview</td>
<td>45%</td>
<td>13%</td>
<td>42%</td>
<td>2751</td>
</tr>
<tr>
<td>Mt Vernon</td>
<td>19%</td>
<td>59%</td>
<td>22%</td>
<td>264</td>
</tr>
<tr>
<td>New Glasgow</td>
<td>41%</td>
<td>36%</td>
<td>23%</td>
<td>559</td>
</tr>
<tr>
<td>Oaklands</td>
<td>49%</td>
<td>11%</td>
<td>40%</td>
<td>1142</td>
</tr>
<tr>
<td>Ottawa</td>
<td>50%</td>
<td>12%</td>
<td>39%</td>
<td>1267</td>
</tr>
<tr>
<td>Parkgate</td>
<td>56%</td>
<td>7%</td>
<td>37%</td>
<td>1465</td>
</tr>
<tr>
<td>Redcliff</td>
<td>44%</td>
<td>35%</td>
<td>20%</td>
<td>286</td>
</tr>
<tr>
<td>Redcliffe</td>
<td>34%</td>
<td>31%</td>
<td>35%</td>
<td>2725</td>
</tr>
<tr>
<td>Riet River</td>
<td>36%</td>
<td>27%</td>
<td>37%</td>
<td>844</td>
</tr>
<tr>
<td>Riverview Park</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Riyadh</td>
<td>39%</td>
<td>5%</td>
<td>57%</td>
<td>699</td>
</tr>
<tr>
<td>Southridge</td>
<td>51%</td>
<td>14%</td>
<td>35%</td>
<td>805</td>
</tr>
<tr>
<td>Southridge Circle</td>
<td>50%</td>
<td>11%</td>
<td>39%</td>
<td>985</td>
</tr>
<tr>
<td>Surya Heights</td>
<td>58%</td>
<td>6%</td>
<td>36%</td>
<td>637</td>
</tr>
<tr>
<td>Temple Valley</td>
<td>40%</td>
<td>21%</td>
<td>38%</td>
<td>388</td>
</tr>
<tr>
<td>Trenance Park</td>
<td>39%</td>
<td>17%</td>
<td>43%</td>
<td>6121</td>
</tr>
<tr>
<td>Umdloti Heights</td>
<td>53%</td>
<td>9%</td>
<td>39%</td>
<td>724</td>
</tr>
<tr>
<td>Valdin Heights</td>
<td>45%</td>
<td>14%</td>
<td>40%</td>
<td>338</td>
</tr>
<tr>
<td>Verulam Central</td>
<td>46%</td>
<td>16%</td>
<td>38%</td>
<td>1225</td>
</tr>
<tr>
<td>Waterloo</td>
<td>33%</td>
<td>37%</td>
<td>30%</td>
<td>5217</td>
</tr>
<tr>
<td>STUDY AREA</td>
<td>42%</td>
<td>19%</td>
<td>39%</td>
<td>38587</td>
</tr>
</tbody>
</table>

Source: Census 2001
2.5 A SOCIO-ECONOMIC OVERVIEW (CONTINUED...)

THE REGIONAL POPULATION
As indicated, distinction is made between the local population and the regional population. The regional population is primarily those people residing in the Ndwedwe Municipality dependent on Verulam for access to commercial, social and government services (as previously indicated there are no commercial facilities of note in the Ndwedwe Municipality, however, a concentration of government services are found in Ndwedwe Village).

The table below indicates that in 2001 the Ndwedwe Municipality population was estimated to be 152,493 people. This is three times the population in the residential areas within eThekwini relating to Verulam.

<table>
<thead>
<tr>
<th>GENDER</th>
<th>NUMBER</th>
<th>% OF POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>70,762</td>
<td>46.4%</td>
</tr>
<tr>
<td>Female</td>
<td>81,731</td>
<td>53.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>152,493</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Census 2001

Following on from the discussion in the previous section on unemployment Table 9 shows that only 13% of the Ndwedwe workforce of 84,000 people is employed. Based on this the high levels of poverty in areas surrounding Verulam is clearly evident.

EMPLOYMENT STATUS OF THE NDWEDWE WORKFORCE

<table>
<thead>
<tr>
<th>EMPLOYMENT STATUS</th>
<th>NUMBER</th>
<th>% OF WORKFORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>11,421</td>
<td>13%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>22,366</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>51,174</td>
<td>60%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84,961</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Census 2001

THE COMMUTERS IN VERULAM

In order to better understand the needs and expectations of the commuters visiting Verulam one-on-one interviews were conducted in November 2008. The commuters were randomly selected in the taxi and bus ranking areas of Verulam.

From this survey it was established that the majority of commuters use taxis as their primary mode of transport. The commuters travel to and from areas such as Ndwedwe, Ntuzuma, Durban, Oakford, Tongaat and others.

The reasons for travelling to or through Verulam differ, but it is mainly to access work and shopping facilities. It is important to note that a number of commuters also indicated that they are looking for work. The commuters focusing on shopping do this on either a weekly or a monthly basis. For some Verulam is just a stop-over between two destinations.

The return taxi fare between Verulam and surrounding residential areas range between six rand (R6) and twelve rand (R12). When travelling to other centres within eThekwini the fare range between R12 (Tongaat) and R30 (Durban). Travelling to other residential areas in eThekwini such as Ntuzuma and Umlazi would cost R18 and R44 respectively.

A number of the commuters interviewed indicated that due to gaps in the Verulam retail and commercial sector they travel to places such as Durban, Tongaat and Umhlanga in order to access these.

Commuters suggested that there is a need for large retail clothing stores such as Edgars, Truworths, Jet, Jam, Hub, Foschini, Total Sport, Woolworths, Mr Price, Legit, Exact, Spitz, Ackerman’s, American’s Wear, Ideals, Bee Gees, Ginger Bagwandas, Casanova, Markhams and even a leather clothing store. Fast food outlets mentioned required in Verulam included Spur, Steers, McDonalds, Hungry Lion and Wimpy. Interviewees also felt that large food and general retailers such as Checkers, Chester Butchery, Cambridge, Fruit and Veg City, Jwayelani Butchery and Game should be present in Verulam.
2.5 A SOCIO-ECONOMIC OVERVIEW (CONTINUED...)

A specific need was expressed for a hardware store that would also offer a delivery service as it is difficult for commuters to transport building materials to their place of residence.

A need for various types of entertainment was mentioned including cinemas and night clubs. The need for places where children can be entertained was also highlighted.

In discussions on public sector services and infrastructure the following were mentioned by interviewees:

- Maintenance of roads;
- Access to water at taxi ranks;
- Improved traffic control;
- Extension of the taxi and bus rank;
- Cleaning services;
- Seating for senior citizens at the taxi and bus ranks;
- General repairs (sewage pipes burst at taxi rank and took longer than a week to fix);
- Better located library facilities;
- Employment opportunities, and
- Need for maintenance of local sports grounds.

The major concern expressed was the lack of appropriate taxi ranking space. Taxis park on the road and there is a lot of conflict between the taxis and pedestrians. Pedestrian casualties are apparently not uncommon.

CRIME IN VERULAM

Crime impacts directly and indirectly on economic development in the area. Following various interviews and based on the prominence given by businesses to the crime when discussing development issues, the crime statistic for Verulam was extracted and are reflected in the table below.

The table below reflects a picture where the crime situation in general is not improving, but the situation in certain categories of crime is actually worsening. Of specific concern should be the sharp rise in cases of crime with aggravated circumstances and assaults. The reasons for high crime levels in Verulam should be further considered.


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>48</td>
<td>54</td>
<td>65</td>
<td>41</td>
</tr>
<tr>
<td>Assaulted miner</td>
<td>37</td>
<td>97</td>
<td>96</td>
<td>66</td>
</tr>
<tr>
<td>Rape April to December</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Assault with intent to inflict grievous bodily harm</td>
<td>865</td>
<td>724</td>
<td>656</td>
<td>670</td>
</tr>
<tr>
<td>Common assault</td>
<td>609</td>
<td>528</td>
<td>516</td>
<td>416</td>
</tr>
<tr>
<td>Assault robbery</td>
<td>209</td>
<td>229</td>
<td>229</td>
<td>219</td>
</tr>
<tr>
<td>Burglary with aggravating circumstances</td>
<td>336</td>
<td>302</td>
<td>296</td>
<td>304</td>
</tr>
<tr>
<td>Carjacking (sub-category of aggravated robbery)</td>
<td>39</td>
<td>15</td>
<td>9</td>
<td>58</td>
</tr>
<tr>
<td>Truck hijacking (sub-category of aggravated robbery)</td>
<td>11</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Robbery at residential premises (sub-category of aggravated robbery)</td>
<td>24</td>
<td>24</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Robbery of business premises (sub-category of aggravated robbery)</td>
<td>15</td>
<td>15</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Arson</td>
<td>13</td>
<td>27</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>Malicious damage to property</td>
<td>298</td>
<td>311</td>
<td>348</td>
<td>352</td>
</tr>
<tr>
<td>Burglary at commercial premises</td>
<td>534</td>
<td>410</td>
<td>416</td>
<td>363</td>
</tr>
<tr>
<td>Burglary at business premises</td>
<td>192</td>
<td>105</td>
<td>121</td>
<td>84</td>
</tr>
<tr>
<td>Theft of motor vehicle and motorcycle</td>
<td>125</td>
<td>146</td>
<td>149</td>
<td>136</td>
</tr>
<tr>
<td>Theft of or from vehicles</td>
<td>656</td>
<td>556</td>
<td>423</td>
<td>388</td>
</tr>
<tr>
<td>Theft</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Robbery of persons</td>
<td>56</td>
<td>45</td>
<td>52</td>
<td>60</td>
</tr>
<tr>
<td>Robbery of business premises (sub-category of aggravated robbery)</td>
<td>254</td>
<td>132</td>
<td>365</td>
<td>561</td>
</tr>
<tr>
<td>Theft under the influence of alcohol or drugs</td>
<td>3</td>
<td>25</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>All theft not mentioned elsewhere</td>
<td>1,292</td>
<td>912</td>
<td>926</td>
<td>767</td>
</tr>
<tr>
<td>Commercial crime</td>
<td>36</td>
<td>71</td>
<td>63</td>
<td>46</td>
</tr>
<tr>
<td>Shoplifting</td>
<td>55</td>
<td>27</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Computer crime</td>
<td>21</td>
<td>17</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Kidnapping</td>
<td>10</td>
<td>14</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Robbery of persons</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Rape</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Public violence</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Criminal damage</td>
<td>183</td>
<td>206</td>
<td>172</td>
<td>211</td>
</tr>
</tbody>
</table>
2.6 THE ECONOMIC SECTORS

INTRODUCTION
This section provides an overview of key economic sectors located in or impacting on the future development of the Verulam Town Centre. The sectors focused on include:

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

Each of these sectors are discussed in terms of current activity in the sector, issues impacting on the development of the sector and highlights issues to be considered in future spatial and economic development planning.

THE RETAIL / COMMERCIAL SECTOR
SPACE FOR THE RETAIL / COMMERCIAL SECTOR
The Verulam Town Planning Scheme limits retail and commercial development in the larger Verulam area to the Verulam Town Centre where most of the sites are zoned General Commercial. These sites are mostly located in the areas surrounding Ireland, Wicks, Moss and Todd Streets. General Commercial sites are also provided for immediately to the west of the Town Centre. This area is linked to the Town Centre via Moss and Todd Streets. Outside of the Town Centre, in neighbouring residential areas, single sites or small clusters of sites have been made available for the commercial sector.

In the 2005 assessment of the northern regions of eThekwini Van Coller indicates that the developed commercial space in the Verulam section is 36.7 hectare, with only 34.1 hectare being zoned for this purpose.

COMMERCIAL SECTOR ACTIVITY IN VERULAM
The tables on the following page (labelled ‘Range of wholesale/retail businesses in Verulam’ and ‘Range of commercial services available in Verulam’) reflects the number and types of wholesale/retail businesses and commercial services available to consumers in the Verulam Town Centre.

The large number of businesses of various types categorised as wholesale businesses is to be noted. These are supported by a range of general retailers, take-aways and businesses focusing on the automotive sector. Telecommunications orientated businesses, focusing on the sale and repair of cell phones and accessories, are prominent in with at least ten outlets in Verulam.

Related to the 5-digit SIC code assigned to businesses in the Braby’s database.
2.6 THE ECONOMIC SECTORS (CONTINUED...)

RANGE OF WHOLESALE/RETAIL BUSINESSES IN VERULAM

<table>
<thead>
<tr>
<th>RETAIL / WHOLESALE BUSINESS</th>
<th>NUMBER</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Trade (Food, Beverages &amp; Tobacco)</td>
<td>21</td>
<td>11%</td>
</tr>
<tr>
<td>Take-Away Counters</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Wholesale Trade In Textiles, Clothing &amp; Footwear</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Wholesale Trade In Construction, Hardware related</td>
<td>18</td>
<td>9%</td>
</tr>
<tr>
<td>Other Maintenance &amp; Repairs of Motor Vehicles</td>
<td>15</td>
<td>8%</td>
</tr>
<tr>
<td>General Wholesale Trade</td>
<td>13</td>
<td>7%</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Wholesale Trade in Household Furniture/Apparances</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Retail Trade In Pharmaceuticals, Toiletries etc</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Maintenance &amp; Repair of Motor Vehicles - Electrical</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>Wholesale Trade In Foodstuffs</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>Restaurants Or Tearooms With Liquor License</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Retail Trade By Other Specialised Stores</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Maintenance &amp; Repair Of Motor Vehicles - Body</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Retail Trade in Beverages (Bottle Stores)</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Retail Trade in Household Furniture etc</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Wholesale Sale Of Motor Vehicles</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
<td>13%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>195</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: StratPlan based on Braby 2006

The table reflects the range of commercial services available in the Verulam Town Centre. More than a quarter of the businesses listed offer legal services which may relate to the location of the magistrates court in Verulam (comparisons will have to be done with other areas in order to verify this). Other than the legal services the Verulam Town Centre offers a broad range of personal, financial and medical services to the population of the region.

RANGE OF COMMERCIAL SERVICES AVAILABLE IN VERULAM

<table>
<thead>
<tr>
<th>TYPE OF SERVICE</th>
<th>NUMBER</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities Of Attorneys, Notaries &amp; Conveyancers</td>
<td>35</td>
<td>27%</td>
</tr>
<tr>
<td>Medical Practitioner &amp; Specialist Activities</td>
<td>13</td>
<td>10%</td>
</tr>
<tr>
<td>Men's &amp; Ladies' Hairdressing</td>
<td>12</td>
<td>9%</td>
</tr>
<tr>
<td>Supplementary Health Services or Paramedical Staff</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Central Banking</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Other Business Activities</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Other Credit Granting</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Activities Auxiliary To Insurance &amp; Pension Funding</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Activities Of Estate Agencies, Valuers etc.</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Dentist &amp; Specialist Dentist Activities</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Funeral &amp; Related Activities</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Investigation &amp; Security Activities</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Beauty Treatment</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Business &amp; Management Consultancy Activities</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Consulting Engineering Activities</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>12%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>129</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: StratPlan based on Braby 2006
2.6 THE ECONOMIC SECTORS (CONTINUED…)

ISSUES IMPACTING ON COMMERCIAL DEVELOPMENT

In telephonic interviews with more than 50 business owners / managers in the Verulam Town Centre, a number of challenges to doing business in Verulam were highlighted.

- **Crime:** It was noted by the majority of businesses that various forms of crime is rife in the Town Centre, ranging from car hijacking to shoplifting and petty theft. Some have even suggested that Verulam has the highest crime rate (in eThekwini).

- **Parking:** The lack of parking specifically for clients was mentioned by many as a concern. This is perceived to impact directly on trading.

- **Traffic Congestion:** Traffic congestion related to the parking shortage and the public transport system was mentioned as a concern.

- **Competing businesses:** A number of businesses mentioned competition as a major challenge. Some suggested that the Gateway Shopping Centre has also drawn away their clientele.

- **Electricity / Water Supply:** A couple of businesses suggested that unscheduled cuts in the power and water supply impacted negatively on their business.

- **Urban management:** Issues relating to the maintenance of infrastructure (specifically roads) and the cleaning of the area were raised.

The majority of businesses that responded to a question on the adequacy of current retail / commercial facilities suggested that major retail and clothing chain stores should be accommodated in the Town Centre. Others however suggested that the area is overtraded and that there is already too much competition between businesses trading with the same products / services. Potential development opportunities supported by businesses in the area include:

- Facilities for youth development including computer centres;
- Public transport facilities and upgrading of roads;
- Redevelopment of the old jail on Moss Road;
- Housing development in proximity to Verulam to support business;
- Service area to be located in the area; and
- Providing space for the expansion of existing businesses.
THE INFORMAL SECTOR

SPACE FOR THE INFORMAL SECTOR

A well-established informal trading sector exists within Verulam. Despite this limited space has been provided for this sector in the Town Centre. Sheltered structures for the informal sector have been established in the bus / taxi rank area and along primarily Ireland Road and dispersed through the Town Centre. From the number of informal sector stalls on the pavements using makeshift or temporary structures it is evident that the facilities provided are not adequate.

INFORMAL SECTOR ACTIVITY IN VERULAM

Unlike in many other areas where traders are employees of others, the majority of traders in the study area own the small businesses themselves. Although there are slightly more female than male traders, there seems to be fair spread of both sexes in the numbers of traders. There is a wide range of trading categories in this sector and include the following:

- Food;
- Take Aways;
- Fruit and Veggies;
- Hardware;
- Telecommunications;
- Manufactured goods
- Others.

There was a very clear pattern in that all those trading in food and other perishables such as fruits and veggies source their stock locally whereas all those trading in other categories source all their stock from the Durban Town Centre rather than locally. It was also not surprising that those sourcing locally primarily stocked up daily while those sourcing their stock from outside replenished their stocks weekly.
ISSUES IMPACTING ON INFORMAL SECTOR

Trading Spaces: The majority of traders expressed concern relating to the limited trading space provided for the sector by the Municipality. The formal shelters provided were so small that on both sunny and rainy days they are forced to extend shelters using other materials and additional structures such as umbrellas or gazebos to protect their goods. However, this is also said to be illegal and attracts law enforcement agents who allegedly confiscate these periodically.

Crime: As reported by the formal sector, the informal sector also reported extremely high levels of crime in the study area which impacts negatively on traders and their trading. It was suggested that crime was not that prevalent during trading hours, but after hours storage places provided by the Municipality were specifically targeted. This has resulted in many traders commuting with their goods or finding alternative storage than that provided. Some traders pay formal business owners a storage fee so they would not pay for special transport for their goods to and from home daily.

Alleged Abuse by Law Enforcement Agencies: There were allegations made by traders that the majority of law enforcement agents were “abusive” towards traders. This is specifically the case when additional shelters are erected in severe weather conditions. However, it was then further suggested that law enforcement officials “turned a blind eye” on the illegal informal sector trading in the study area.

Unfair competition: Informal traders suggested that some formal businesses whom trade in the same goods put out tables on their verandas and then sell goods at lower prices. According to them this represents unfair competition. This poses a challenge for the informal traders who do not have the ability to buy in bulk at lower prices.

Cleanliness: It has been observed that there is a lack of urban management in the area. It is suggested that the informal sector traders are contributing to the untidiness of the streets. The lack of proper public transport facilities contributes to this problem.

RELATIONSHIP WITH FORMAL BUSINESSES

There is no formal relationship between the formal and informal sector. However, individual informal traders have established relationships with the formal sector for the purpose of:

- Storing their goods overnight at reasonable rates;
- Obtaining special discount on goods sold to the informal trader;
- Providing extra trading space on the pavements of their formal businesses (if goods sold are not in competition).

RELATIONSHIP BETWEEN FORMAL AND INFORMAL
2.6 THE ECONOMIC SECTORS (CONTINUED...)

THE GOVERNMENT SERVICE SECTOR

Government services are an economic sector often reported on and discussed separately from other services sectors. In areas where commercial and industrial activity is limited, the government sector is often the major contributor to gross geographic product (e.g. Ndwedwe Municipality neighbouring on eThekwini). This relates to the money spent by the government on establishing and maintaining education, health and other public sector services in these municipalities.

In the case of Verulam government services is not dominant and only makes a modest contribution to the economy (in comparison to retail, industry and other sectors). However, from the perspective of the future development of the Verulam CBD, government services are viewed as critical. It is suggested that, by ensuring the availability of a comprehensive range of government services in the CBD, income leakage will be negated, more people will be attracted to Verulam and the CBD will become a destination rather than being a transfer point (multi-nodal transport transfer point).

This section therefore briefly considers the government services in the Verulam CBD, not from a perspective of the economic contribution of the sector, but rather considering the contribution the sector makes to attracting people to the commercial and other facilities in the area.

GOVERNMENT SECTOR ACTIVITY IN VERULAM

The following government services are located in Verulam:

- Department of Justice (Magistrates Court);
- South African Police Services;
- Sizakhalo Centre (eThekwini);
- Department of Labour; Social Welfare;
- Primary Health Care Centre; and Library.

In discussions with commuters there was only limited mention of gaps in the government services available. Home Affairs was said to not be accessible (closest office in Tongaat) and it was suggested that library facilities are inadequate (possibly from a location point of view).

It is important to note two recent significant events relating to government services offered in Verulam. Firstly, in 2006 the Verulam public library celebrated its 150th anniversary illustrating how long Verulam has served the function of a service hub. Secondly, as a result of proposed redevelopment in Umhlanga the office of eThekwini Water Department serving the northern areas was recently moved to the Sizakhalo Customer Centre in the Market Plaza (Wicks Street). It was suggested that this move was to enhance the “Regional ‘One-Stop-Shop’” in Verulam. Other services already offered in Verulam include payment of electricity and water bills, electricity and water reconnections, disconnections, rates enquiries and others.

VERULAM DAY AND MORNING MARKET

The Verulam Day and Morning Market deserve special mention. Although this is effectively a government service, as the market is managed by the eThekwini Municipality, this market impacts on the agricultural, retail, wholesale and informal sectors of the economy.

The market, established in 1884, moved into a permanent location in 1912 and relocated to its current facilities in 1988. The Day Market includes three cafes, three spice shops, seven fruit shops and eight fruit and vegetable stalls. These facilities are open to the public for six days of the week. Fruit and vegetables sold here are mostly sourced from the Durban Bulk Sales Market.

The Morning Market, open three morning of the week, provides space for 498 stalls, six flower stalls and 16 poultry stands. People using the market include farmers, market gardeners and a large number of speculators. The market also confirms the regional role which Verulam fulfills in the eThekwini economy. It attracts both producers and buyers from far outside the borders of eThekwini, from inland and coastal areas.

ISSUES RELATING TO THE GOVERNMENT SECTOR

Issues to be considered in spatial planning for the Verulam Town Centre include:

- The dispersed nature of the government sector in the Verulam Town Centre;
- The extent and quality of government services provided; and
- The gaps in government services available in the area.
THE INDUSTRIAL SECTOR

EXISTING INDUSTRIAL AREAS

The Verulam CBD is surrounded by a number of smaller industrial areas including Missionlands, Canelands and Ottawa. These industrial areas accommodate a small number of larger industries and the 2006 Braby information lists the following number of industries located in the area (this does not include non-industrial businesses):

- Missionlands (to south of Verulam) – 19 industries;
- Canelands (to north of Verulam) – 12 industries;
- Ottawa (to south of Verulam) – 8 industries

It is important to note that the above industries do not represent the sum total of industries in the Verulam area. The database includes a further 80 manufacturing businesses located within Verulam itself. These are mostly small manufacturing concerns located within the current CBD area and represent a trend to be considered in future planning.

The Northern Spatial Economic Assessment (Van Coller 2005) suggests that there are 223 hectares of land zoned for industry of which 160 hectares has been developed (or 72% has been developed). These figures could not be verified.

TYPES OF INDUSTRY

Industries in Canelands include manufacturers of:

- Medical supplies and products;
- Wrought iron products;
- Bricks;
- Plastics and chemicals;
- Camping equipment.

Missionlands manufacturers focus on:

- Furniture;
- Stationary;
- Clothing and footwear;
- Plastic products and other

Ottawa includes:

- Cupboard builders;
- Gates and gates automation;
- Printers; and
- Clothing.

What is evident from the above is that there does not appear to be any manufacturing focus in the areas surrounding Verulam.

The 80 businesses classified as industries in Verulam range from engineering companies to clothing manufacturers, but again do not reflect any particular focus.

TRENDS IN THE SECTOR

Although industrial development will not impact on the CBD directly the situation relating to industrial land in eThekwini emphasises the strategic nature of this issue. The SAPOA Industrial Vacancy Survey for South Africa and eThekwini, although relatively new and untested, is reflected below as a means to better understand industrial property trends in northern eThekwini.
2.6 THE ECONOMIC SECTORS (CONTINUED…)

NATIONAL INDUSTRIAL VACANCY RATES

<table>
<thead>
<tr>
<th>PROVINCE</th>
<th>TOTAL GLA (m²)</th>
<th>Vacant GLA (m²)</th>
<th>Average Weighted Rental (R/m²)</th>
<th>Vacancy Rate (%)</th>
<th>Number of Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauteng</td>
<td>5,053,853</td>
<td>173,459</td>
<td>29.4</td>
<td>3.2%</td>
<td>715</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>1,440,455</td>
<td>22,579</td>
<td>31.4</td>
<td>1.5%</td>
<td>154</td>
</tr>
<tr>
<td>Western Cape</td>
<td>1,573,826</td>
<td>17,079</td>
<td>29.8</td>
<td>1.8%</td>
<td>97</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>43,077</td>
<td>NULL</td>
<td>22.4</td>
<td>NULL</td>
<td>8</td>
</tr>
<tr>
<td>South Africa</td>
<td>1,897,149</td>
<td>218,809</td>
<td>25.6</td>
<td>2.8%</td>
<td>947</td>
</tr>
</tbody>
</table>

Source: SAPOA Industrial Vacancy Survey – Quarter 2 2008

The above indicates the low industrial vacancy rates in South Africa and in KwaZulu-Natal in particular. Table 14 below further considers the availability of industrial buildings in KwaZulu-Natal.

KWAZULU-NATAL INDUSTRIAL VACANCY RATES

<table>
<thead>
<tr>
<th>NODE</th>
<th>TOTAL GLA (m²)</th>
<th>Vacant GLA (m²)</th>
<th>Average Weighted Rental (R/m²)</th>
<th>Vacancy Rate (%)</th>
<th>Number of Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Anil/Red Hill</td>
<td>461,489</td>
<td>128</td>
<td>29.5</td>
<td>1.2%</td>
<td>8</td>
</tr>
<tr>
<td>Point Ten</td>
<td>186,374</td>
<td>833</td>
<td>24.6</td>
<td>0.6%</td>
<td>7</td>
</tr>
<tr>
<td>Other Durban</td>
<td>99,807</td>
<td>NULL</td>
<td>22.0</td>
<td>NULL</td>
<td>3</td>
</tr>
<tr>
<td>Pretoria</td>
<td>562,594</td>
<td>10,059</td>
<td>26.7</td>
<td>1.8%</td>
<td>62</td>
</tr>
<tr>
<td>Prospecton/Empangeni</td>
<td>114,748</td>
<td>714</td>
<td>30.7</td>
<td>0.3%</td>
<td>11</td>
</tr>
<tr>
<td>Richards Bay/Umkomaas</td>
<td>31,070</td>
<td>NULL</td>
<td>41.0</td>
<td>NULL</td>
<td>7</td>
</tr>
<tr>
<td>River Horse Valley</td>
<td>87,816</td>
<td>NULL</td>
<td>48.0</td>
<td>NULL</td>
<td>4</td>
</tr>
<tr>
<td>Umbilo/Howick/WhatUwimila</td>
<td>169,391</td>
<td>NULL</td>
<td>23.2</td>
<td>NULL</td>
<td>11</td>
</tr>
<tr>
<td>Umgadi</td>
<td>701,393</td>
<td>NULL</td>
<td>36.5</td>
<td>NULL</td>
<td>29</td>
</tr>
<tr>
<td>Umbilo/Howick/Subakwana</td>
<td>24,414</td>
<td>NULL</td>
<td>52.5</td>
<td>NULL</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: SAPOA Industrial Vacancy Survey – Quarter 2 2008

It is noted that the vacancy rates for most areas to the north of Durban is reflected as null. The slow pace at which industrial land is coming onto the market would have reduced vacancy rates even further. In 2005 the rentals ranged on average between R16 per square meter in the oldest industrial areas to R28 in the northern parts of eThekwini. From the above 2008 figures it is obvious that these rates has increased substantially.

FUTURE INDUSTRIAL DEVELOPMENT

Most current and planned developments on the north coast focuses on providing space for light industries and warehousing. Developments include Riverhorse Valley in eThekwini, planned development around the Dube Tradeport and various small developments in the vicinity of Ballito / Shakas Kraal.

It is important to note that over and above the “Sub Metropolitan Node” status assigned to Verulam in the Northern Spatial Plan, it is also identified as a “Future Industrial Opportunity Area”. A similar status is assigned to parts of Cornubia, Canelands and areas immediately to the west of the King Shaka International Airport (See figure below).
2.6 THE ECONOMIC SECTORS (CONTINUED…)

THE PROPERTY SECTOR

Telephone interviews were conducted with Estate Agents operating in the Verulam area. The majority of agents focus on the residential market, but some operate in the residential and commercial markets and some specialise in the industrial market.

THE RESIDENTIAL PROPERTY MARKET

The general negative economic climate in South Africa is also reflected in Verulam. As one agent put it: “the market is dead, flat”. This is, however, a reflection of South African market trends and is not specific to Verulam.

The agents interviewed confirmed that the average price for houses in Verulam is between R300,000 to R450,000. The view was expressed that there is an under supply in this segment of the market.

All the agents involved with the residential market mentioned that there has been an increase in the value of properties in the higher end market and that there are quite a number of properties now in the range of R800,000 to R1.5 million.

The impact of low cost housing projects in the area is perceived to be negative, but there is general acceptance of this being the reality. It was stated that prospective buyers are reluctant to purchase properties in close proximity to areas like Waterloo as they feel it is not safe to live there. The agents were of the opinion that the value of properties in the vicinity of these low cost housing settlements have dropped due to this negative perception that people have.

THE COMMERCIAL PROPERTY MARKET

The commercial property market is generally viewed as a difficult market with limited movement specifically in the CBD. A property practitioner compared it with the market in West Street in Central Durban.

Other than the comments on the situation in this market segment was limited.

THE INDUSTRIAL PROPERTY MARKET

The belief was expressed that industrial land in eThekwini is like “gold”, but that people do not realise this as yet. This belief is based on the impact of the Dube Tradeport (described as a sleeping giant) and specifically the proximity thereof to Verulam. Despite this there appears to be little movement in the industrial property market.

An agent specialising in industrial property was of the opinion that there is a need for serviced industrial sites in Verulam but that these should be priced well as the Verulam market cannot compete with markets much closer to Durban. It was mentioned that a warehouse in the area, which sold for R85/m² in 2007, is now worth R600/m².

GENERAL OBSERVATIONS

In general the agents interviewed were of the opinion that, although still slowly, there definitely has been an increase in investors enquiring about property in the area due to the Dube Tradeport Development. Some of the agents are however of the opinion that the close proximity of the King Shaka International Airport to Verulam will have a negative influence on the residential market due to the uncertainty of the noise levels that will be created by the aircraft. The opposite is of course true for the commercial and industrial market as there will be an increase in demand for such businesses in the area.

In conclusion it should be noted that all the agents made mention of the poor state of the Verulam CBD and that they welcome the fact that there is going to be an upgrade in the area. One agent mentioned that is impossible to go to the CBD on a Saturday as the area is too congested. Another agent mentioned the fact that the Magistrates Court attract many people to Verulam and that some upgrade is necessary in the immediate surrounding area of the Magistrates Court.
THE TOURISM SECTOR
It is noted that the 2000 Framework Plan pertinently states that the Vision (considered in later sections) will “position Verulam well for future growth in the tourism industry”. For this reason the assessment briefly considered the tourism sector.

CURRENT TOURISM SECTOR ACTIVITY
The Framework Plan (2000) suggests that Verulam’s role as a “town of cultural and historical significance” must be reinforced. Two reasons are provided for the potential opportunity offered by this sector. Firstly, the proximity of Verulam to the new International Airport makes it accessible for tourists. Secondly, the town offers a range of cultural / historical attractions. The attractions include:

- A museum;
- Mosques, temples and churches;
- Historically and architecturally significant buildings;
- Monuments;
- Cemeteries;
- Market places; and
- Cultural activities including processions, festivals and events.

The close proximity of the town to the Hazelmere Dam, a potential water sport hub, also adds to the thinking that Verulam should gear up for the tourism market.

ISSUES RELATING TO TOURISM TO CONSIDER
Even though Verulam offers a range of attractions this is not properly packaged and few tourists are aware of the cultural / historical links of the Town. Part of establishing a vision for the future development of the CBD will have to be a decision on the role that this sector can realistically fulfil in the economy of the area. It is suggested that with strong competition from coastal areas, specifically in the accommodation market, Verulam will have difficulty in developing this component of the sector. The town may therefore only remain a destination for short excursions. This will have a negligible impact on economic development in the area.
2.7 THE 2000 VERULAM CENTRAL AREA FRAMEWORK PLAN

This section briefly considers the proposal of the 2000 Framework Plan relating to specifically economic development.

ECONOMIC ISSUES IDENTIFIED

The 2000 Framework summarise the following economic realities facing Verulam:

- Small business: An increase in the growth of the small business sector has generated a need for access to appropriately located premises with secure and affordable tenure in addition to appropriate facilities;
- Gateway: Emergence of large decentralised shopping developments which place pressure on existing smaller retail outlets;
- Tourism: Emphasis on tourism in the northern region of the DMA is prevalent and will in all likelihood be reinforced by future developments;
- Airport: The airport and / or associated development will act as an economic “magnet” in the region and will generate an increase in the demand for existing and new activities and services in smaller towns like Verulam;
- Agriculture: Growing trend toward the accommodation of the agricultural sector within the economy and the reliance on urban centres, such as Verulam, for distribution of products and support for suppliers and business amenities.

ECONOMIC STRATEGIES PROPOSED

The Vision formulated for the development of the Verulam CBD in the 2000 planning process reads as follows:

Within the context of this Vision the 2000 Framework differentiates between the regional and local roles of the Verulam. From an economic perspective the roles are defined as follows:

Regional Role:
- Transport Interchange;
- Commercial Centre and Market Town;
- Community Service Centre.

Local Roles:
- Commercial / Service Centre;
- Multi-functional Residential Area.
## 2.8 SWOT ANALYSIS OF THE VERULAM ECONOMY

### INTRODUCTION

As was the case for the majority of Town Centres in South Africa the Verulam Town Centre was established to serve the commercial and service requirements of the residential areas in its immediate vicinity. However, Verulam has for long now served the commercial and social needs of people in the rural hinterland of eThekwini and the continually growing population on its doorstep, e.g. Waterloo and Amaoti. No major investment has been made in the Town Centre to accommodate this much bigger catchment area.

This SWOT analysis sets out to capture the strengths, weaknesses, opportunities and threats as viewed from the perspective of different “users” of the Verulam Town Centre.

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investors</strong></td>
<td>• Limited opportunity for green fields development&lt;br&gt;• Movement of commercial property is limited&lt;br&gt;• The business environment will not necessarily be attractive to investors (urban management and crime issues)&lt;br&gt;• Crime impacts on attractiveness of area as investment destination</td>
</tr>
<tr>
<td><strong>Formal Business</strong></td>
<td>• Public transport and public services not well located in relation to central business area&lt;br&gt;• Parking continues to constrain business, specifically in certain areas such as the area surrounding the Magistrates Court&lt;br&gt;• Crime (specifically car theft / hi-jacking) impacts on business</td>
</tr>
<tr>
<td><strong>Informal Business</strong></td>
<td>• Limited facilities provided for the informal sector&lt;br&gt;• No well-located dedicated space available for the informal sector to trade&lt;br&gt;• Enforcement viewed by informal sector as being harsh and unfair</td>
</tr>
<tr>
<td><strong>Local Residents</strong></td>
<td>• Congestion and lack of parking impacts on convenience&lt;br&gt;• Public environment not well managed with also a number of private properties in a serious state of disrepair&lt;br&gt;• High levels of unemployment specifically in rural to west of Verulam&lt;br&gt;• Gaps in government services available in Verulam (i.e. has to travel elsewhere)</td>
</tr>
<tr>
<td><strong>Commuters</strong></td>
<td>• Public transport facilities underdeveloped&lt;br&gt;• Public transport facilities located on one end of town (number of services located on opposite site, e.g. library, Department of Labour, SAPS etc)&lt;br&gt;• Gaps in government services available in Verulam (i.e. has to travel elsewhere)</td>
</tr>
<tr>
<td><strong>Municipality</strong></td>
<td>• Limited vacant land available for development&lt;br&gt;• Key facilities dispersed through Town Centre – impacts on planning&lt;br&gt;• (Perceived) lack of maintenance of public environment</td>
</tr>
</tbody>
</table>

- **STRENGTHS**
  - Well located in terms of the Dube Tradeport and the King Shaka International Airport
  - Located on the R102 to be upgraded to a four lane dual carriageway carrying one third of traffic to new airport
  - Generally underdeveloped with a number of well-located properties in disrepair and neglected
  - Large rural market
  - Large local market
  - Established infrastructure and range of support services
  - Verulam already has a vibrant well-diversified economy
  - Strong entrepreneurial ethic (Van Coler 2005)
  - Major transport transfer hub ensuring continual flow of customers through the area
  - eThekwini Municipality already supporting the sector in terms of ablution and storage facilities
  - Range of stock can be purchased locally
  - Some cooperation between formal and informal businesses

- **WEAKNESSES**
  - Limited facilities provided for the informal sector
  - No well-located dedicated space available for the informal sector to trade
  - Enforcement viewed by informal sector as being harsh and unfair
  - Congestion and lack of parking impacts on convenience
  - Public environment not well managed with also a number of private properties in a serious state of disrepair
  - High levels of unemployment specifically in rural to west of Verulam
  - Gaps in government services available in Verulam (i.e. has to travel elsewhere)
## 2.8 SWOT Analysis of the Verulam Economy (Continued...)

### Opportunities

| Investors | • Manufacturing opportunities relating to the Dube Tradeport  
• Service sector support for airport and related industries  
• Redevelopment of vacant and underutilised properties  
• Located on priority provincial corridor  
• Need for space for industrial development to the north of Durban  
• Northern Spatial Plan of the eThekwini Municipality now in place which will effectively coordinate future development |
| --- | --- |
| Formal Business | • Increased traffic on R102 may increase number of customers substantially  
• Opportunities relating to Dube Tradeport and King Shaka Airport must be considered  
• Verulam business can serve range of new developments in area (including Cornubia) |
| Informal Business | • Creating dedicated trading space for informal sector when redeveloping public transport facilities  
• New facilities for sector, including trading, ablution and storage facilities  
• Business support for informal sector |
| Local Residents | • Increase in business opportunities for local residents with growth in Verulam economy |
| Commuters | • Development of intermodal public transport facilities in the vicinity of the taxi rank. |
| Municipality | • Verulam presents opportunity for Municipality to impact on the quality of life of a large number of residents and residents from neighbouring municipalities |

### Threats

| Investors | • Alternative nodes are prioritised for development by the City and the private sector  
• Urban management in Verulam is not improved impacting negatively on the ability to realise investment value  
• Land for additional development cannot be secured |
| --- | --- |
| Formal Business | • Other transport hubs is developed as a result of massive urban development relating to Cornubia and the Airport  
• As a result of the dispersed nature of economic infrastructure and difficulties in moving through the town more people are not attracted to the town  
• More major modern commercial nodes are developed close to Verulam as a result of the Cornubia development  
• Ndwedwe Village establish a shopping centre and other facilities serving the local community  
• Formal businesses relocate to decentralised shopping and commercial nodes |
| Informal Business | • Other transport hubs is developed as a result of massive urban development relating to Cornubia and the Airport, thus reducing the number of people visiting the area  
• Continued enforcement aimed at controlling rather than developing the informal sector |
| Local Residents | • Public transport sector in the town grows further making “forcing” local residents to do business at decentralised shopping centres |
| Commuters | • Other transport hubs is developed as a result of massive urban development relating to Cornubia and the Airport  
• Area not regenerated and quality of businesses in the area not improved |
| Municipality | • Substantial levels of public sector investment will be required to make a difference  
• Currently no focus as to what should be prioritised in the future redevelopment of Verulam  
• Urban degeneration cannot be reversed  
• Lack of cooperation and support from communities with the implementation of planning  
• Most land in private ownership and long processes may be required to acquire appropriately located land for key developments (specifically transport infrastructure) |
BIBLIOGRAPHY:


Other:

- Wikipedia
- Various web-sites
03 PLANNING AND SPATIAL DEVELOPMENT
3.1 INTRODUCTION

PURPOSE OF SECTION

This section aims at providing an understanding of the planning policy context, specifically the eThekwini IDP, SDF and Northern Spatial Development Plan, currently in place to guide development within eThekwini and specifically Verulam. In addition, a previous study prepared by Markewicz English – Urban designers – Architects, entitled Verulam Central Area Urban Design Framework -2000 is also summarised here.

The second part of this section deals with an analysis of the study area, as a whole. The analysis begins with a description of the various components of the natural systems that define and frame the area. This is followed by an analysis of the movement system, existing zoning, land use and building heights for the study area is provided. An analysis of planned F.A.R and actual bulk achieved is also undertaken.

3.2 PLANNING 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.

The City’s 8 point plan is the core of the IDP strategic approach. It is revealed as plans to:

- Sustain 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;
- Financial viability and sustainability.

The City's budget responds to the IDP principles that is developed based on the priorities, programmes and projects of the IDP prioritising the key projects within the City.

The eThekwini Municipality vision for 2020 – ‘By 2020, eThekwini Municipality will be Africa’s most caring and livable city’. To realise this vision basic elements that all citizens, business community and visitors must have;

- Have ease of movement in the city;
- Enjoy a safe environment in all parts of the municipal area;
- Afford what the city offers;
3.2 PLANNING CONTEXT (CONTINUED…)

- Have access to economic opportunities;
- Enjoy homely neighbourhoods;
- Have access to services, in particular municipal, health and education services.

The city’s vision becomes the goals and will guide the planning process within the Verulam Town Centre.

The IDP sets out key choices in order to achieve their vision. The following key choices relate to Verulam:

- Choice Two: Using land use management to increase densities and reduce sprawl;
- Choice Four: Good public transport system;
- Choice Five: Ecological and related tourism;
- Choice six: Ecological integrity.

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 “T” shaped development axes. The Spatial Development Framework depicts the thrust of the IDP indicating the City’s investment intentions and development management approach.

Key principles of the SDF:

- Strive towards a Compact city model, being the urban core, which generally has servicing capacity;
- Emphasis on accessibility and convenience in compacted urban area;
- Durban Town Centre & Umhlanga as major investment areas which include harbour support, regeneration of existing areas such as WarWicks Junction, Clairwood, Jacobs etc.;
- Smaller priority nodes which provide social support;
- Supports high priority PT network;
- Infrastructure excess capacities utilised;
- Utilisation of excess infrastructure capacity in developed areas inside the urban edge rather than extending the platform infrastructure to new areas;
- Upper catchment open space area continues to provide free services and supports health of entire metropolitan area;
- Suburban areas beyond the Urban Edge within which limitations in the current provision of services exist and generally it is not cost effective to provide additional services;
- A Northwards investment direction in response to private sector development needs.
- Development outside the current urban edge in the next 5 to 10 years will be restricted;
- Changes to the urban edge will be limited with the only changes being movement of the urban edge northwards to include the next catchment;
- Urban edge concept used as tool to curb urban sprawl, promote compaction & achieve associated efficiencies, secure agriculture and upper catchment environmental assets;
- Rural development will be aligned with the intent of the SDF.

The SDF will respond to key spatial drivers that will determine of investment and thus the plan specifically responds to these needs such as the Dube Trade Port in the north, Back of Bay in central and in the west Cato ridge industrial precinct and Mpumalanga.
In accordance with the intention of the Municipalities’ “Package of Plans”, six local areas have been identified within the Northern Municipal Planning Region (NMPR), which are defined by major topographical features. The areas are identified as:

- **Northern Rural Corridor**
  - Mzinyathi, Buffelsdraai and Hazelmere – western and central rural hinterland of the NMPR;
- **Northern Urban Development Corridor**
  - Phoenix and INK – southern urban conurbation of the NMPR;
  - Verulam and Cornubia – central urban conurbation of the NMPR;
  - Tongaat and Dube Trade Port – northern urban conurbation of the NMPR;
- **Northern Coastal Residential and Recreational Corridor**
  - Northern Suburbs and Umhlanga – southern coastal portions of the NMPR east of the N2;
  - Ohlanga – Tongati – Northern coastal portions of the NMPR of the N2

Planning and management of development in these areas is aimed at creating and or protecting the role functionality and character of these various urban and or rural precincts and neighbourhoods within them and provide the range of facilities, opportunities and services required.

The Northern Spatial Development Framework (NSDF) provides in tabular form for each local area an initial set of guidelines relating to the role, key characteristics, spatial development concepts and key actions.
3.2 PLANNING CONTEXT (CONTINUED…)


The purpose of the study was to:

- Provide direction for future public investment in Verulam;
- Provide direction for future private investment in Verulam; and
- Provide guidelines for the establishment of urban quality within Verulam.

Key Issues Listed in the Document

Economic Realities facing Verulam

Increased economic opportunities in Verulam due to increase in growth of the small business sector, emergence of new developments such as the Gateway Shopping centre and the Airport and Dube Tradeport.

Socio-demographic trends

Transformation in South Africa and the removal of restrictions with regards to movement, settlement and the ownership of land is resulting in the following:

- Increased threshold for economic activity and community services in well located areas emerging over time,
- Differing cultural and social needs manifesting themselves in changing functions and roles for urban centres.

Local Government transformation

Emerging models remove local decision making ability. Possible implications are that;

- Standardised planning and administration approaches are likely to be implemented with the result that the local uniqueness and identity of a place like Verulam could be eroded.

Verulam and Cornubia Local Area Table

<table>
<thead>
<tr>
<th>Role in the Metro</th>
<th></th>
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<tbody>
<tr>
<td>Residential Expansion zone</td>
<td></td>
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<tr>
<td>Regional Public Transportation Intermodal Terminal (Verulam)</td>
<td></td>
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<tr>
<td>Mixed use, business and industry opportunity</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Development Spaces and Nodes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidate and enhance Verulam Town Centre as Sub Metropolitan Node to support R 102 Metropolitan Development Corridor</td>
<td></td>
</tr>
<tr>
<td>Establish R102 Metropolitan Development Corridor between Verulam Town Centre and Tongaat Town Centre</td>
<td></td>
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<tr>
<td>Establish Cornubia as a new local node</td>
<td></td>
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<tr>
<td>Improve road linkage between Verulam and R102</td>
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</table>

<table>
<thead>
<tr>
<th>Movement System</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>N2 and R102 are metropolitan access and linkage systems</td>
<td></td>
</tr>
<tr>
<td>Local area access and linkage routes include N41 and new link route through Cornubia to M27 / R102 and Dube Trade Port / KSA site</td>
<td></td>
</tr>
<tr>
<td>Light Rail link from existing passenger rail route to KSA proposed</td>
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<table>
<thead>
<tr>
<th>Land Use &amp; Density</th>
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</thead>
<tbody>
<tr>
<td>Consolidate existing formal settlements through renewal and densification along the metropolitan spine (R102)</td>
<td></td>
</tr>
<tr>
<td>Upgrade informal settlements</td>
<td></td>
</tr>
<tr>
<td>Establish new mixed density housing development opportunities in Cornubia along the R102 development spine (minimum 50% 70 du/ha)</td>
<td></td>
</tr>
<tr>
<td>Establish new mixed medium and high density residential areas in underserved zones</td>
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<tr>
<td>Industrial opportunity at Ottawa Flats</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Space/ Environment</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Protect open space assets associated with the Umgeni and Umkomaas river systems and consolidate links integrated park systems providing ecosystem services delivery and recreational opportunities for adjacent residential areas and to &quot;break” the effect of continuous urban settlement within the urban development corridor.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Levels</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Upgrade and or consolidate capacity of waterborne sanitation, water supply, electricity and telecommunications to accommodate increased densities and expansion of urban residential areas and industrial areas.</td>
<td></td>
</tr>
</tbody>
</table>
Environmental Imperatives
Adoption of environmental agenda that requires the DMA to implement plans and actions that are aimed at ensuring the protection of the natural environment.

Vehicular movement routes
Excellent regional location hampered by:
- Limited access off R102;
- “Dead-end” movement system within Town Centre;
- Poor connection in easterly direction;
- Differing cultural and social needs manifesting themselves in changing functions and roles for urban centre's.

Pedestrian Environment
Generally poor due to:
- Changes in level and poorly maintained sidewalks;
- Discontinuous or absent shelter along sidewalk;
- Congestion with street trade;
- Limited pedestrian routes through large blocks;
- Unsafe routes due to lack of surveillance;
- Conflict with servicing activities.

Public Transport
Verulam serves primarily as a transport interchange point. 62% of public transport users entering Verulam do so to change modes of transport. The remaining 38% are destined for Verulam itself. Modal transfers are hampered by the following:
- Distances between bus/taxi and rail transport hubs;
- Inadequate capacity of taxi ranks;
- Poor management of bus terminus;
- Isolated location of railway station;
- Pedestrian crossings at taxi/bus ranks unsafe.

Parking
Off-street parking is adequate at present, but will require re-assessment as development occurs. Additional issues include:
- Dedicated parking areas destroy streetscape;
- Dedicated parking used only during peak periods – unsafe at other times;
- Mid-block parking system not fully implemented.

Land use and Activity
The following issues require attention:
- Limited mixed use within core area;
- Low residential densities in core area – presents a security problem after hours;
- No suitably located land for trade in core area – traders forced to locate on pavements;
- No facilities for traders – ablutions, washing areas, storage;
- Land vacancy within core area – unsightly and unsafe;
3.2 PLANNING CONTEXT (CONTINUED…)

- No public open space within core area;
- Public open space peripheral – underutilized
- Environmental areas inaccessible and poorly managed;
- Residential areas to east of railway line underdevelopment due to poor linkages
- Incongruous light industrial by river in the north and east

Landownership
- Publicly owned land peripheral – limited opportunity for public intervention in the core area;
- Limited opportunity for SMME’s to gain a foothold in the land market.

Urban Character
Urban character is generated through the built form, streetscape, views, vistas and landmarks. The following issues are pertinent:
- Building set-backs destroy sense of streetscape;
- Streetscape imperceptible in areas due to parking arrangements;
- Building frontages require unification through the use colonnades in certain areas;
- In cohesive buildings frontages – unresponsive to floor heights, materials and finishes of adjacent buildings;
- Historically/ architectural significant buildings and landmarks require restoration and conservation;
- Poor landscaping at points of entry to town;
- Blocked vistas require opening.

Public Space
The public space system is comprised of streets, lanes, squares, public buildings, park, sports grounds and environmental areas. In Verulam the following areas require attention:
- Public space system undefined and unstructured;
- Quality of public space elements generally poor: pedestrian routes uneven, uncovered, obstructed by service vehicles, unsurveilled; poor landscaping in street, public spaces and at major entry points to town, parking wastelands; poorly located and maintained parks; environmental areas inaccessible and poorly maintained;
- No public open space (apart from street edges) within core area, public space is peripheralised and therefore under-utilised.
- Poor linkages through core areas;
- Poor linkages across railway line and R102 to surrounding residential fabric.
3.2 PLANNING CONTEXT (CONTINUED...)

The Mdloti River forms an important edge that encloses the town in the north. Surrounding the river is a band of natural open space that is protected under the Durban Metropolitan Open Space System (DMOSS).

The Mdloti River’s 100 year flood line does not effect the Verulam Town Centre, as it lies to the west of the area. Most of the land falling within the flood plain includes sport fields and open space. A portion of the residential component around Iron and Champion Streets does however fall well within the 100 year flood plain.

There is a distinct lack of areas of strong natural environmental quality apart from the river corridor.
The R102 serves as a sub regional connection providing access for Verulam to the broader region. In the west there are two main roads which intersect the R102 into Verulam namely Inanda Road and Todd street. These roads connect the residential component of Verulam to the Town Centre. In the east the Umhloti link connects the town to surrounding areas. The internal system within Verulam generally comprises a traditional grid system, making movement though the town relatively simple and offers users choice.

The strategic advantage of the study area is the proximity to regional scale vehicular (R102) and public transport (road and rail based) systems. However a major draw back of the town from a movement point of view is the limited connections to the R102 corridor. The central artery (Wicks Street) of the town presently terminates in the north effectively rendering the Town Centre as a large urban cul-de-sac.

A functioning railway system lies on the eastern side of the Town Centre which creates a barrier between the typical residential areas of Verulam in the east and the Town Centre itself.

The presence of commuter rail in close proximity to the core of the Town Centre is an important asset for the area.

Ireland Street, particularly the northern sections, serve as an important taxi and bus public transport node. Present public transport functions spill over into the street and public environment.

The grid like system throughout the Town Centre assists pedestrian movement. A number of mid block pedestrian routes exist in the form of lanes and arcades. This system sets up the finer grain pedestrian network.

A number of parking courts are provided within the town. All streets within the Core provide on street parking either parallel or angled parking format.
3.3 STUDY AREA ANALYSIS (CONTINUED...)

KEY ISSUES RELATING TO MOVEMENT

- The Town Centre, based on the present structure as a whole is a ‘Dead-end’. Traffic has to enter and exit essentially from a single point and direction;
- Consequently the Town Centre has limited accessibility and lacks interceptory characteristics. It is unable to be attractive to passing movements. In addition, different movements and access to the various clusters of the Frame and to the Core have to share the limited movement system;
- Traffic movements for shopping to the Core and goods related traffic have to share the same roads and use the same roads for access and exiting;
- Pedestrian circuits are well handled through the Core on both sides of the major roads as a consequence of previous urban improvement and landscaping initiatives. The pedestrian routes in the form of lanes and arcades are not clear and lack clear visible paths for pedestrian movement;
- Parallel and right-angled parking is well handled in the Core of the Town Centre. Access to the internal parking areas lacks visual clarity and ease of use. In addition, integration of the internal parking areas would facilitate improved movement and access;
- There is a clear need to create a second alternative ingress and egress from the Town Centre, especially to separate goods vehicles from pedestrian related activities;
- The bus/taxi terminal is well located in a cluster at the edge of the Core. However, it is clearly too small and there is a need to consolidate, enlarge and formalise the taxi ranks, as well as to integrate or interrelate it with the bus facility.
3.3 STUDY AREA ANALYSIS (CONTINUED…)

CONCERNS IN RESPECT OF ZONING AND LAND USE

Zoning sets up -

- The types of uses permitted in an area;
- The amount of development permitted, including intensity, height and coverage, and
- The positioning the building(s) on the site

The Existing Land Use identifies the manner and amount of Zoning utilized by development

There should be a reasonable correlation between Zoning and Land Use

In many situations the original Zoning, set up many years ago, was usually in excess of that initially expected. Current Zoning practice is to establish almost immediately expected floor area take-up, and rely on either a Scheme Review or a Rezoning application to address any additional or new development demands.

The analysis of Verulam will serve to indicate that the Zoning did anticipate a traditional range of uses expected in a “Town Centre”.

The existing Land Use analysis will indicate that:

- Not all the anticipated uses has been developed in the areas thus zoned;
- Less than the maximum permitted floor area has been developed;
- Some of the zones are inappropriately located;
- Zones/sites for more recent demands, such as the need for bus and taxi ranks, and the informal sector was not demarcated and needs to be inserted in appropriate locations and at appropriate sizes.
3.3 STUDY AREA ANALYSIS (CONTINUED...)

EXISTING ZONING

The existing zoning for Verulam is depicted here and descriptions and tables follow.
3.3 STUDY AREA ANALYSIS (CONTINUED…)

EXISTING ZONING

The “Core” of the Town Centre comprises primarily of the following zones:
- General Commercial;
- Embedded areas of Public Car Park;
- Administration;
- Education.

To the west of the Core is a linear zone of the SAR. Beyond that, to the east, is a zone of Special Residential 1. To the east of Starr Road are small zones of
- Public Open Space;
- Light Industry;
- Special Residential 1;
- River Reserve.

To the south of the Core and/or Todd Road are a number of Zones, viz
- A continuation of General Commercial;
- General Residential 1;
- Public Car Park;
- Private Open Space – which is used as a cemetery);
- A single site of Limited Commercial;
- Administration;
- Service Industry.

To the west of the Core is -
- A further strip of General Commercial Zoning;
- A few sites of General Residential 2;
- To the north of the Core are;
- An extension of General Commercial;
- Administration;
- Service Industry;
- Limited Commercial;
- General Residential 1;
- Light Industry

Clearly, the “mixed-use” character of the Verulam Town Centre already evinces a series of separate, but interrelated zones.

The following table identifies the applicable zones for the Town Centre and their associated town planning controls.

<table>
<thead>
<tr>
<th>Zone</th>
<th>FAR</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Residential 1</td>
<td>0.4</td>
<td>40%</td>
</tr>
<tr>
<td>Special Residential 2</td>
<td>0.4</td>
<td>40%</td>
</tr>
<tr>
<td>General Residential 1</td>
<td>0.75</td>
<td>30%</td>
</tr>
<tr>
<td>General Residential 1</td>
<td>0.50</td>
<td>30%</td>
</tr>
<tr>
<td>General Residential 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate Residential</td>
<td>NA</td>
<td>40%</td>
</tr>
<tr>
<td>Limited Commercial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Commercial</td>
<td>2.0</td>
<td>80%</td>
</tr>
<tr>
<td>Gen Industry</td>
<td>1.0</td>
<td>70%</td>
</tr>
<tr>
<td>Light Industry</td>
<td>1.0</td>
<td>80%</td>
</tr>
<tr>
<td>Service Industry</td>
<td>0.5</td>
<td>50%</td>
</tr>
<tr>
<td>Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worship</td>
<td>0.5</td>
<td>30%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Car Park</td>
<td></td>
<td></td>
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<tr>
<td>Private Open Space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Open Space</td>
<td></td>
<td></td>
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<tr>
<td>River Reserve</td>
<td></td>
<td></td>
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<tr>
<td>SAR</td>
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</tbody>
</table>
3.3 STUDY AREA ANALYSIS (CONTINUED…)

The planning of the Verulam Town Centre needs to consider:

- A review of the current Town Planning Scheme;
- A translation of the current Town Planning Scheme into the LUMS system;
- The introduction of appropriate additional/new zones

Any Town Planning Scheme review needs to find a balance between the following “principles”:

- Unless absolutely necessary, no sites should experience a substantial reduction of “rights”;
- Where change is advocated, existing development will retain “Existing or Non-conforming” use rights.

As town centres expand and evolve into a complex of clusters of a mix of uses it becomes appropriate to move away from a single zone that permits a large range of potentially conflicting uses, and to identify clusters of appropriate zones. It is also possible to introduce and consider a range of “transitional” or “buffering” zones as an interface between high intensity uses areas and adjacent residential uses.

This “mix” of zones should also reflect the structure of a Town Centre, i.e. The Core, and the clusters in the Frame and Periphery.
3.3 STUDY AREA ANALYSIS (CONTINUED...)

EXISTING LAND USE
3.3 STUDY AREA ANALYSIS (CONTINUED…)

This analysis presents a “Generalised” Existing Land Use of the Study Area.

To a large extent all the land uses normally found in a Town Centre are present. These land uses are also found in the structural positions expected.

Core of the Town Centre

The central part of the Verulam Town Centre comprises a conventional mix of land uses, viz. convenience and basic durable goods retail outlets, a substantial range of personal services, offices, a petrol service station, a mosque and a school site.

It is interesting to note that there is an absence of major national chain stores, except for a number of medium sized supermarkets. In this sense the Core of the Town Centre functions as no more than a large “Neighbourhood Centre”. It lacks even a reasonable amount of comparison durable goods outlets.

In the centre of the main block, a number of the sites provide parking facilities, each reached and exited independently.

It would need a substantial amount of “core replacement” or an “extension centre” and the introduction of durable goods comparative outlets in order for it to function as a “Community” level multi-use centre.

Secondary Land Use Clusters

On both the northern and southern edge of the central part of the Town Centre are a mix of second-order retail outlets; viz a supermarket, a cash ‘n’ carry wholesaler, and the market complex.

The northern section of the Town Centre comprises essentially of service and light industrial related activities.

Beyond the central part of the Town Centre are three transport termini, viz.

- a bus/taxi terminal and a secondary Taxi terminal on the western edge of the Core, and
- a rail station in the south eastern corner of the Frame of the Town Centre.

There are several groups of public administrative land uses, either at the edge of the Core or in clusters in the Frame, viz.

- a police station at the southern entrance to the Town Centre,
- a large Magistrates Court at the north-east edge of the Core, which is also associated with a well maintained park and parking area, a welfare facility and a nearby library.

In the vicinity of the Court are a large number of legal offices.

A residual grouping of houses and flats exist in the south–west corner of the Town Centre Frame.

A large public open space (park), adjacent to a prominent petrol filling station, exists at the southern, and main entrance to the Town Centre. The park lacks easy, safe and convenient access. It also lacks high levels of surveillance from adjacent uses.

To the east of the railway line, and not part of the Town Centre is an area of residential development. Many developments are substantial and in good condition; a few are smaller and some are in a poorer condition. A few of these sites are also being used for non-residential uses.

A large set of playing fields lies between the residential area and the surrounding river.

Many pockets vacant land occur around the edges of the Town Centre and study area. Many of these sites are on steep slopes, or lack easy access, and it is not surprising that they have not been developed, especially the industrially zoned sites.
3.3 STUDY AREA ANALYSIS (CONTINUED…)

SYNTHESIS AND COMPARISON OF ZONING AND LANDUSE

THE CORE
- There is a strong consistency between the primary zoning of the Core as General Commercial and the uses contained within it;
- Several of the internally zoned Public Car Parking zones are used as such. The sites zoned as such should be retained, and should be extended over all the internal portions of the sites in the Core;
- The Admin Zones in the Core should be retained and extended to create a cluster overlapping between the Core and the Frame;
- The Core is largely zoned General Commercial and is appropriate for the current uses.
- The internal zoning of the block is zoned for parking, and this too is appropriate and should be extended across all internal lots of both blocks that comprise the Core;
- Where appropriate, sites not zoned General Commercial should be rezoned as such except where it is necessary to create a specific type of cluster.

THE FRAME CLUSTERS
- There are several different zones in the northern part of the Frame, viz. Administration, Residential, Commercial, Light and Service Industrial, but the land uses are largely second order shopping and mainly Service Industrial in nature. This cluster should be considered for rezoning as service Industrial as a whole;
- A Civic uses cluster should be reinforced with an extension of this zoning around the park and the park site should be rezoned Public Open Space;
- The south-west cluster of the Frame is largely residential and vacant. A residential cluster should be reinforced with an appropriate zone extended so that the Service Industrial area is accordingly rezoned;
- The two transport clusters, viz the rail station to the south east of the Core, an the Taxi/bus termini to the north-west of the Core should be appropriately reinforced and extended;
- The Administration zone to the south of the Frame should be size adjusted as a separate and different set of administrative facilities, compared to the nascent Civic Cluster land marked by the Magistrate Court.

Block between Ireland and Wicks
- There are 2 sites in this block currently zoned for Administration and these should also be rezoned to General Commercial;
- The educational sites could be retained as such;
- The Mosque could be appropriately zoned as Place of Worship, unless it has commercial activities.

Block between Wicks and Groom/Church
- The sites currently zoned Administration should be retained. The Library site should be rezoned Administration. Additional sites could be so zoned to create a civic zone;
- The site between Groom and Church could be rezoned Open Space, as it is currently used.

Northern part of Town Centre
The sites zoned GR1 are not developed as such, and together with the Limited Commercial sites, the General Industrial sites, some General Commercial sites, and the Administration sites that comprise the market is an existing area of service industrial uses and has the potential to be extended as such or as an enlargement of the Light Industrial cluster. Consequently it would be more appropriate to rezone this cluster as a whole for Service Industrial or Light Industrial activities.
3.3 STUDY AREA ANALYSIS (CONTINUED…)

South-Western part of Town Centre

This inner part of this area is zoned largely General Residential 1 and General Commercial and is developed as such. This part of the area could remain residential and could possibly be extended to create a stronger residential cluster in the Frame. The service Industrial zone in this part of the Town Centre has not been fully developed as such and could be considered as superfluous, given the large area to the north with such a zoning. This area could be consolidated and rezoned General Residential to reinforce this potential cluster in the Frame. The large site zoned Private Open Space is used as a cemetery, and should be accordingly, zoned as such.

The south-east cluster of the Town Centre Frame comprises a large zone of Administration. Only some of these sites are developed as such. At best this is an area of transition. This could be encouraged to be an office area of some type that would create a “gateway” into the Town Centre. Service and light industrial activities should be discouraged in this cluster.

Eastern Area Outside of the Frame of the Town Centre and east of the Railway

This area is zoned for residential purposes and related uses and should be retained as such.
3.3 STUDY AREA ANALYSIS (CONTINUED…)

EXISTING HEIGHT

The mapping of existing height indicates a predominance of single to 2 storey format of development. It is important to note that the Town Planning Scheme permits a maximum height of 6 storeys within the Core. This indicates the present limited take-up of height permitted in terms of the Scheme.

The relatively low levels of building height and similarity of height has several consequences on the performance of the Town Centre, namely:

- In particularly cases, the relationship of ‘solid to void’ is insufficient to give adequate definition of space;
- The similarity of height reduces the potential for particular buildings to serve as landmarks and reference points, assisting in legibility;
- The limited definition of space impacts negatively on the surveillance of the public environment.

A lower level of development, on the other hand, does offer a human scale, and future design and planning needs to establish a balance between encouraging height in particular areas, whilst maintaining a human scale.
3.3 STUDY AREA ANALYSIS (CONTINUED...)

AN ANALYSIS OF F.A.R, BULK & MASSING

The Verulam Town Planning Scheme permits an FAR of 2, a Coverage of 80% and a Height Restriction of 6 storeys for the General Commercial Zone which applies to the majority of sites within the Core of the study area. The images below provide a evaluation of the following:

- **Image 1** – indicates the present take-up of bulk within the study area and depicts the actual heights for the current development.
- **Image 2** – indicates the height and massing of development based on the use of the permitted bulk being used to the maximum but observing the height restrictions imposed by the scheme.
- **Image 3** – indicates the projected development of the maximum bulk available for each site without any height restrictions.

The findings of this analysis is important as it highlights the potential impact of future development working within the current Town Planning Scheme. It clearly indicates an ‘over-provision’ of bulk in terms of the present context, character and possibly the carrying capacity of the present infrastructure.

Within the context, this represents an important challenge for current planning, as it is difficult to reduce development rights currently granted through the Scheme. The design stages of the process would therefore need to consider recommendations for the channelling of development bulk in a way that contributes positively to the urban environment.
3.4 SUMMARY OF KEY ISSUES

PLANNING CONTEXT
The planning documents which guided development and planning with in KwaZulu-Natal describe Verulam as having an important regional role. The Northern Spatial Development Framework suggests the following key development within Verulam should be guided development in the following ways;

- Consolidate and enhance Verulam Town Centre as sub-metropolitan node to support R102 metropolitan development corridor;
- Improve road linkages between Verulam and R102;
- Light rail from existing passenger route to KSIA proposed;
- Upgrade and or consolidated capacity of waterborne sanitation, water supply, electricity and telecommunications to accommodate increased densities and expansion of urban residential areas and industrial areas.


- Regional connection to the north and east are improved through an additional access to the R102 and Packo Street extension over the railway line;
- Transport hubs are relocated and a direct connection between the bus/ taxi ranks and the railway station is established along Todd Street;
- The central core area is bound by Wicks, Todd, Ireland and Moss Street;
- Secondary connections to the market in the north, and commercial/residential areas in the south and east are established.

The key elements of this framework are establishing;

- A transport hub;
- Cultural shopping destination;
- Surrounding commercial;
- Community service centre with historical;
- Recreational destination;
- Environmental asset; and
- Residential thresholds.

STUDY AREA ANALYSIS
Natural Environment

- The Mdloti River forms an important edge that encloses the town in the north;
- There is a distinct lack of areas of strong natural environmental quality apart from the river corridor.

Movement

- The R102 serves as a sub regional connection providing access for Verulam to the broader region;
- A major draw back of the town from a movement point of view is the limited connections to the R102 corridor;
- The central artery (Wicks Street) of the town presently terminates in the north effectively rendering the Town Centre as a large urban cul-de-sac;
- A functioning railway system lies on the eastern side of the town;
- A transport hub is located along Ireland Street;
- A grid like system throughout the Town Centre assists pedestrian movement.

Existing Zoning

- The ‘mixed-use’ character of the Verulam Town Centre already evinces a series of separate but interrelated zones;
3.4 SUMMARY OF KEY ISSUES (CONTINUED…)

The planning of the Verulam Town Centre needs to consider;

- A review of the current Town Planning system;
- A translation of the current town planning system into the Land Use Management System;

Existing Land use

- To a large extent all land uses normally found in a Town Centre are present within Verulam;
- These land uses are also largely found in the structural positions expected.
- A substantial amount of ‘core replacement’ or an ‘extension centre’ and the introduction of durable goods comparative outlets in order for it to function as a ‘community’ level multi-use centre.

Existing Height

- Mapping of existing heights indicates a predominance of a single 2 story format of development.;
- The relatively low levels of building height and similarity of height has a number of consequences on the performance of the Town Centre.

Analysis of F.A.R, Bulks and Massing

- The Verulam Town Planning Scheme permits an FAR of 2, coverage of 80% and a height restriction of 6 storey's for the majority of sites within the core study area;
- The analysis highlights the potential impact of future development which clearly indicates an ‘over-provision’ of bulks in terms of present context, character and possibly the carrying capacity of the present infrastructure.
04 URBAN MORPHOLOGY
4.1 INTRODUCTION

PURPOSE OF SECTION

This section aims at providing an understanding of the urban structure of the Town Centre and its associated urban performance. This examination of the Town Centre occurs at both an overall study area scale, and at a more detailed precinct scale.

The section is structured in the following manner:

- Sub section 4.1 – The Structure of the Town Centre: provides an evaluation of the structure of the Town Centre based on the conceptual framework of ‘Core’ and ‘Frame’
- Sub section 4.2 – Urban Grain and Visual Character: provides an analysis of the built form, its patterns and perceptual attributes through a study of the ‘figure ground’ of the study area and through an exploration of the ‘form of city’ or ‘Lynchian’ analysis.
- Sub section 4.3 – Urban Design Assessment: provides an evaluation of the present performance of the Town Centre measured against key urban design criteria; and lastly
- Sub-section 4.4 – Precinct Analysis: offers a closer evaluation at the precinct scale providing a description of localised urban form and public realm conditions.

4.2 THE STRUCTURE OF THE TOWN CENTRE

THE NATURE OF A TOWN CENTRE

There are a number of terms used to define the various components of the central parts of towns and cities. These terms have their origins in geographical analyses, and have been incorporated into Town Planning practice as well.

Components of a Town Centre

Many geographers and planners now tend to differentiate the Town Centre into at least two areas, viz. the “Core” and the “Frame”.

Conventionally, the Town Centre, as a whole, is that area of high intensity uses and high land values, usually within 10 minutes walking radius of the “Peak Land Value”. The Core occurs within a 5 minute walking distance.

The “Core” is the highest and most intense retail and office area within about 5 minutes walking radius of the “Peak Land Value”. Some analysts distinguish between the Retail Core and the Office Core. For the most part the Core is distinguished as the area containing the “first order” or best retail and office floor space, or the most intensively used part of the Town Centre.

The “Frame” of the Town Centre is the area around the Core, and usually comprises several clusters of secondary order stores, lower rent type stores (usually those with large display areas such as furniture and motor town), residential clusters, clusters of light / service industry, civic facilities and transport nodes (such as bus, taxi and rail termini). (See forthcoming diagram)

It is clear that a Town Centre comprises a mix of land uses. It is also clear that this mix of land uses emerges organically, however it is also recognised that these uses need to be managed and directed so that the various parts work in consort, are integrated, are mutually reinforcing and create a safe, accessible, easy to use component of a town

This mix of uses will not be managed if open-ended generalised land use zones such as General Commerce and General Business are utilized, as this will not direct land uses to achieve the points made above. A coordinated mixed-use Town Centre is achieved by the appropriate zoning of the various clusters that comprise a Town Centre.
4.2 STRUCTURE OF THE TOWN CENTRE (CONTINUED…)

In addition to the use of fine-grain zoning of a Town Centre, it is necessary to plan, develop and maintain the strategic infrastructure that supports the operation of the Town Centre, e.g. General circulation, Parking, Pedestrian routing, Pavement treatment, landscaping, etc.

TOWN CENTRE REQUIREMENTS

A Town Centre should provide uses that can survive on the market found;

- Within the adjoining residential neighbourhoods (bear in mind these neighbourhoods comprise both permanent and temporal residents);
- From the immediate hinterland if it is located in an interceptory position; and
- From temporal support by tourists and passing traffic.

The Core of a Town Centre should, ideally:

- Be contained within a walking distance of approximately 500 meters, or a maximum of 5 minute walking radius (so that extent is within 10 minutes);
- Individual blocks should not be in excess of 150 meters so that access to adjacent areas is facilitated.

The Core, and the Clusters that comprise the Frame, need to be treated differentially, viz

- The Core should be pedestrian oriented and so that it could be;
  - Fully pedestrianised;
  - Partially pedestrian, or
  - Traffic-calmed.

Individual clusters of the Frame also need to be differently treated, so that;

- Residential clusters are pedestrian friendly;
- Civic clusters are pedestrian oriented;
- Transport termini are clearly linked to the pedestrian routes of the Core;
- Secondary retail and office clusters are also pedestrian orientated;
- Service industrial clusters are vehicle oriented.
4.2 THE STRUCTURE OF THE TOWN CENTRE (CONTINUED…)

THE APPLICATION OF THE CORE AND FRAME CONCEPT

The application of the Core / Frame concept to Verulam identifies a nascent structure that offers an opportunity to be reinforced, extended and developed.

A clear **CORE** can be identified that almost exactly matches with a 5 min. walking distance (500m radius) locus, viz.
- Just south of Todd Street;
- Just north of George Sewpersadh Street (Moss Street);
- From Ireland Street, and through to both sides of Wicks Street.

Latent and incipient clusters occur in a **FRAME** around the **CORE** and partially overlapping with it, viz.
- A large second order shopping area comprising the Market and Service Industrial uses to the north of the Frame;
- Beyond this cluster is a large cluster comprising Service Industrial and Light Industrial uses, albeit that some of the area is zoned residential;
- A small formal taxi/bus termini at the corner of Ireland and George Sewpersadh and spreading south up Ireland Road;
- A latent Civic cluster comprising the magistrates court, a formal park, and a set of Welfare offices, with a nearby library overlaps between the Core and the Frame – a normal situation;
- A residential cluster;
- A police station set back from the boundary of the site and a peripheral park/cemetery acts as an unpretentious “gateway” to the Town Centre.
4.3 URBAN GRAIN & VISUAL CHARACTER

FIGURE GROUND ANALYSIS

The analysis of the ‘Figure Ground’ pattern for Verulam indicates a well defined and finer grain core mainly focused along Wicks Street contributing positively to the definition of the public environment, creating continuity of edge and contributing to the distinctiveness of Wicks Street.

The grain of development varies across the study area with a smaller scale fragmented pattern occurring at the fringes of the study area, whilst a more consolidated, ‘tighter’ pattern occurring within the central portions of the study area. Apart from the central portions of Wicks Street, almost all of the remaining streets within the Town Centre lack a continuity of built edge.

The figure ground analysis also indicates the extent of infill and definition of street edges required within large parts of the study area in order to create greater continuity in the urban fabric.

At a larger scale, the grain and pattern of development within the Core distinguishes this from the general suburban pattern of fragmentation. The format of development east of the Core is of a smaller scale comprising a dispersed pattern of development with large areas of land not fully utilised. This clear distinction between these patterns can be attributed to the rail system acting as a barrier ‘holding’ a more Town Centre format of development within the core.

A coarser grain larger scale development pattern occurs south of the Core, within the Frame of the Town Centre as a result of the light industrial use found within this area.

The pattern of development east of the Core is fundamentally suburban in nature apart from one of the larger retail uses found within this area.

In viewing this analysis with the earlier interpretation of Core and Frame, reinforces quite strongly that the central portion, mainly concentrated on Wicks Street, represents the nucleus of the Verulam Town Centre.
The visual character of the Town Centre largely reflects its structure. The lack of strong and clear visual features also serve to indicate the need to enhance existing features, as well as to introduce or induce a more explicit visual character.

**PATHS**

There is essentially a matrix of four intersecting major vehicle paths, viz:

- Ireland and Wicks streets in the N-S direction, and
- Todd and George Sewpersad in the east-west direction.

The lack of any egress or ingress to the north of the Town Centre clearly limits and truncates the sense or continuity of these paths.

Outside of these vehicle paths, the remaining narrow roads and lanes cannot even be identified as minor vehicle paths.

**Major pedestrian paths** exist primarily on both sides of the Wicks and George Sewpersad intersection, especially from the bus/taxi ranks to and through the centre of the Core of the Town Centre.

A number of **minor pedestrian paths** exist on Todd Road, and along a few of the lanes/arcades between Ireland and Wicks, but these are in need of greater emphasis.

**NODES**

The Town Centre comprises a sense of a **major node** at the centre of the CORE, but needs to be reinforced.

Two other **minor nodes** exist in the form of the two termini.
4.3 URBAN GRAIN & VISUAL CHARACTER (CONTINUED…)

LYNCH ANALYSIS

DISTRICTS
The visual Districts that structure the Town Centre are essentially the same clusters identified in the Town Centre Structure, previously.

LANDMARKS
As with other visual elements, there are no strong or striking Landmarks. Primarily because of their size or architecture, there are two major landmarks, viz. the magistrates Court and the market building. The two small mosques would act as a minor landmark.

EDGES
The R102 acts as an Edge to the west of the Town Centre, except at the two breaks across the road at Todd and George Sewpersadh.

The river to the north also acts as an edge, as does the railway line to the east of the Town Centre.

In this sense the Town Centre, as a whole, is well contained, and lends itself to clear demarcation and treatment.
4.4 URBAN DESIGN ASSESSMENT

“Urban design is the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric, and the processes for ensuring successful villages, towns and cities.

Urban design is a key to creating sustainable developments and the conditions for a flourishing economic life, for the prudent use of resources and for social progress. Good design can help create lively paces with distinct character, streets and public places which are safe, accessible, pleasant to use and human in scale, and places that inspire because of the imagination and sensitivity of their design.”

(By Design, Commission for Architecture and the Built Environment, 2000).

The search for high performance urban environments requires an approach which promotes particular ‘urban truths’. These are the timeless qualities which 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 Urban Design Performance Criteria to evaluate the ‘urban performance’ of the Verulam Town Centre. Four key criteria are adopted as central to the development of high performance environments. These are:

PERMEABILITY, MOVEMENT AND STRUCTURE
To ensure a system of movement which offers a variety of choice for people. Permeability should be enhanced for all users including pedestrian movement.

IMAGE AND IDENTITY
To ensure a positive and memorable image of the Town Centre. A positive image and identity can enhance investment and use within an area.

COMPLEXITY AND A MIX OF USE
To ensure that a high degree of integration of activities exists to promote access to a wider range of opportunities and experiences. A diverse environment increases levels of choice available to its users.

PUBLIC ENVIRONMENT
To ensure that the environment created has as its ultimate basis, a focus on accommodating the needs of people and a human scale. A well developed public realm serves as fundamental supporting layer.
4.4 URBAN DESIGN ASSESSMENT (CONTINUED…)

PERMEABILITY, MOVEMENT AND STRUCTURE

“Street networks should in general be connected. Connected or ‘permeable’ networks encourage walking and cycling and make places easier to navigate through.” (UK Government policy, Department for Transport guidance Manual for Streets[2])

Environments which perform well and efficiently for people are those which 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 increases permeability and imageability within a area.

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. 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.

Existing Movement Networks

The existing movement network consists of the following hierarchy:

- Main sub regional routes: R102 and the M27;
- Main CBD collector routes: Wicks Street, Todd Street and Ireland Street
- Local access routes: Moss Street, Groom Street, Railway Street and Thompson Lane.

Choice in Movement

Choice of movement is influenced by both the structure of the system and the permitted direction of flow. The Verulam Town Centre is characterised by a traditional grid system, which allows for greater choice of movement. Pedestrian links are defined by the built form and the existing movement lattice. However, there are a few connections that are required to create a completed grid or routes within the Town Centre.

Direction of flows – Along all the routes two way access is permitted and therefore enhances choice of movement. All main intersections are signalised. Continuous flow of traffic in some cases throughout the area is hindered by on-street parking. Mobility along Ireland Street is reduced due to the overspill of public transport, mainly taxi’s, onto the street.

Legibility of Systems

The study area consists of a structured traditional grid system which provides for clarity in the system and facilitates legibility, resulting in improved choice. However, 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. Three nodes are clearly defined;

- Commercial and activity street – Wicks Street;
- Transport hub - Ireland Street;
- Civic cluster – Corner of Moss and Wicks Street

Distribution Of Activities/ Pedestrian Proximity

In evaluating pedestrian proximity in relation to the distribution of activities, a five minute walking distance, (400m), is tested from key centers within the Town Centre. In the case of Verulam, the town has been defined by barriers created by both infrastructure and natural elements. Ease of pedestrian movement is experienced in many parts of the Town Centre as mid-block pedestrian linkages and arcades have been created, as well as well defined pavement along all roads. Generally the Core retail and mixed-use centre observes a five minute walking distance.
4.4 URBAN DESIGN ASSESSMENT (CONTINUED…)

IMAGE AND IDENTITY

The imageability of a place determines the success of the place. Identity and memorability assists in understanding the potential of a place to generate clear and memorable images. An area which is successful in achieving this will attract a number of people in turn making the area viable. The initial impression encourages the need to return. Features such as architectural character, street furniture and unique opportunities and places increase an areas imageability.

Basic Structure/ defining Districts and Nodes

The Verulam Town Centre structure resembles similar characteristics to the theoretical concept presented earlier. The main residential component exists to the west of the study area, as well as the east. A small percentage of the population reside within the Town Centre within the upper floors of development. The town is showing a degree of urban decay with a number of abandoned buildings within the town. Open space within the Town Centre is limited. A number of precincts have been identified within the study area;

- Commercial core;
- Service and light industry;
- Transportation and commercial hub;
- Gateway precinct; and the
- Station and civic precinct.

These distinct areas or precincts assist in creating unique individual identities which contributes to the legibility of the study area. Initial observations is that a strong sense of identity is not fully appreciated, in terms of the overall precincts and nodes assisting in orientation and legibility.

Landmarks/ Reference Points

In terms of landmarks and reference point, the analysis illustrates that the area lacks legibility and identity given the similarity and low level of building heights. The few buildings of landmark quality within the Town Centre include;

- The historical building at the intersection of Wicks Street and Moss Street;
- The Mosque along Wicks Street; as well as
- The Municipal Buildings along Wicks Street and Moss Street.

These buildings acts as reference points assisting in orientation and providing distinct images that are associated with the study area. These landmarks need to be celebrated and given a greater significance as they do not serve as strong orientation elements which contribute to the legibility, imageability and sense of place.

Edges and Interfaces

A number of edges and interfaces exist within the study area which include:

- The railway line on the eastern side of the town which separates the residential area from the Town Centre;
- The R102 which frames the Verulam Town Centre on the Western side of the town;
- The Mloti river on the north limiting Wicks Street from connecting to the R102;
- A smaller portion of defined street edges with colonnades within the central core;
- Negative edges and interfaces along the northern and southern portions of Wicks Street, Railway Street, as well as the northern portion of Ireland Street.

The edges and interface do not provide a cohesive and positive condition for the Town Centre. The continuous colonnaded edge along the central core contributes to the imageability and distinctive nature of this particular area. The lack of open spaces throughout the area decreases the quality of the Town Centre. Increased open and softer spaces within the study area would enhance the town centers image as well as create vibrant civic and communal spaces of recreation currently lacking.
4.4 URBAN DESIGN ASSESSMENT (CONTINUED…)

IMAGE AND IDENTITY

The Urban Environment
When evaluating Verulam Town Centre as a ‘whole’, comprising public and private space the following is noted;
- Buildings of landmarks or reference quality are limited;
- Many of the building within the town are of poor quality and need refurbishing;
- Negative and fragmented edge conditions in places add to a negative image;
- There is a lack of passive and active open spaces.

The Town Centre has a considerable mix of uses however due to the urban decay it does not serve as a strong and dynamic urban space. Significant potential exists to enhance the imageability and legibility of the Town Centre.

MIX OF USES
The present range of diverse uses contribute to the vibrancy and energy of towns and cities, and emphasis should be placed on ensuring a dynamic mixed use environment with increasing levels of choice and opportunity. Close proximity of different forms of activity contributes positively to the performance of the Town Centre.

Existing Broad Land Use Distribution
The broad land use within the study area comprises of;
- Mixed-use development, primarily consisting of retail and offices on the ground floor with a small percentage of offices and residential components above;
- Civic and municipal facilities exist at the edge of the commercial Core;
- Transport facilities frame the area from the west and east sides;
- Light and Service Industry to the north of the Core.

There is a good mix of land uses within the Town Centre which enhance choice and opportunity. There are however no major national chains exist within the Town Centre and comparative shopping is limited.

Identifying Clustering of Activities
The study area consists of the following broad clusters of activities;
- The Commercial core along the central portion of Wicks Street;
- Mixed used cluster of Light and Service Industry at the northern end of Wicks Street;
- A transport and commercial hub on the northern portion of Ireland Street;
- A ‘gateway’ precinct at the southern end of the study area where the M27 and the R102 inter the town; and
- A station and civic precinct to the east of the study area which acts as a barrier between the commercial core and the residential component of the town.
4.4 URBAN DESIGN ASSESSMENT (CONTINUED...)

PUBLIC SPACE

Harvey (1998) describes a good urban space as “… one that fashion our sensibilities, extract our sense of wants and needs, and locate our aspirations with respect to a geographical environment that is in large part created”. Well defined and active public space forms an essential “binding” layer with the built environment.

People make spaces and contribute to its vibrancy and ongoing animation. A key focus is ensuring that environments are based on accommodating the needs of people and a human scale.

The Built Environment Defining Space

The built environment within the core of the study area comprises a distinct urban pattern, particularly along Wicks Street. Within this distinct compact urban form the following can be identified:

- A range of architectural styles;
- Colonnaded building edges and building overhangs which provide for pedestrian comfort;
- The building heights are generally low.

Apart from the central potion of Wicks Street, large portions of the study area have discontinuous and fragmented boundaries.

The Public Realm

The public realm comprises all public space including street space. This represents an important layer of the built environment in that it provides the connections between different elements and functions of the urban environment.

The public realm comprises both hard and soft space. Active hard spaces within the Verulam Town Centre are identified as public elements of the commercial core and transport hub. These spaces are most intensely used from a public point of view, and therefore experiences increased pressure from a range of competing uses.

Soft spaces within the study area is limited and primarily found on the edges of the area. There is a need to introduce more soft space as meaningful elements of the Town Centre, to create positive spaces for users within the Town Centre. Apart from the limited amount of trees found along the roads, and as boundaries for properties, very little vegetation is found within the area.

A critical issue currently experienced within the core is the high level of pedestrian accidents experienced in Wicks Street. This is a direct result of an increase in need for pedestrian priority in this zone which is in conflict with the current function, i.e. a primary vehicular route in terms of design and use.

The Quality of the Public Realm

The quality of the public realm has a significant impact on social interaction, identity and economic investment of an area. Importantly, the quality of the public environment acts as a support, and determines the quality of the overall system. The municipal buildings form part of the public realm providing very limited public space. The colonnaded edges along the commercial core encourage street front activity and positive active space. In terms of negative aspects within the public realm as the general street and building conditions are poor which detract from the overall quality of the area.
SYNTHESIS AND CORE ISSUES

Permeability, Movement and Structure

- Mobility along Ireland Street is reduced due to the number of taxi’s along the street;
- Lack of clarity exists due to the similarity of streets;
- Building heights are generally low limiting the landmark potential, which detracts from the legibility of the area;
- Town Centre fits within a 400m range or 5 minute walk.

Image and Identity

A number of precincts have been identified within the study area;

- Commercial core;
- Mixed use Light and Service Industry cluster;
- Transportation and commercial hub;
- Gateway precinct; and
- Station and civic precinct.

A number of landmarks have been identified as;

- Historical building at the intersection of Wicks and Moss Street;
- Mosque along Wicks Street; and
- Civic buildings along Wicks & Moss Street.

The Verulam Town Centre is framed by a number of natural and infrastructural elements;

- Railway line;
- R102;
- Mdloti River;
- Well defined street grid;
- Negative edge conditions along the northern and southern portions of Wicks Street, Railway Street as well as the northern portion of Ireland Street;
- The central portion of Wicks Street typifies a village high street creates a distinct image for the town.

Complexity and a Mix of Uses

There is a mix of basic land uses within the Town Centre, although no major national chains are evident within the Town Centre. Greater residential integration would enhance complexity of the Town Centre.

Public Space

- Very limited public open space exists;
- General street and building conditions are poor which detract from the overall quality of the area;
- Discontinuous building edges detract from a positive building/ space relationship;
- Wicks Street, particularly the central portion, functions as a key linear public space, however this is in conflict with current traffic functions resulting in significant conflict.
4.5 SUB-PRECINCT ANALYSIS

This subsection provides a more detailed evaluation of the town through an analysis of particular sub-precinct. Key performance areas used to analyse these areas include:

- Movement, circulation and parking;
- Definition of space;
- Active edges.

STUDY SUB-PRECINCTS

SUB-PRECINCT 1 – COMMERCIAL CORE

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB

SUB-PRECINCT 4 – GATEWAY PRECINCT

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 1 – COMMERCIAL CORE
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 1 – COMMERCIAL CORE

MOVEMENT, CIRCULATION & PARKING

Vehicular Movement
Wicks Street is a wide two laned road which flows in a northern and southerly direction. Both intersections at Moss and Todd Streets are signalized, controlling the flow of traffic.

Pedestrian Movement
The uses along Wicks Street encourages pedestrian movement along it and results also in pedestrian crossing virtually along the entire length of the central portion in a fairly unmanaged way. Mid-block pedestrian streets are also located centrally within core of the Town Centre. These linkages allow for greater movement between the transport hubs, i.e. the train station in the east and the bus and taxi facilities in the west.

Parking
Wicks Street has angled and parallel on street parking. Private and semi-private parking is located in a number of mid-blocks throughout the commercial core. The mid-block parking courts alleviate on street parking and congestion.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 1 – COMMERCIAL CORE

DEFINITION OF SPACE

CONTINUITY OF BUILT FABRIC

FRAGMENTED BUILT FORM

COLONNADE EDGE

Places of Significance

Continuity of Built Fabric
A strong continuity of building edges exist along the western side of the central part of Wicks Street. The eastern side has less continuity, whilst the northern and southern portion is considerably fragmented and discontinuous.

Colonnade Edge
Due to the lack of continuity of built fabric along the main commercial core building edges such as colonnades, are also disjointed. Colonnades encourage activity and interest along building’s edges and should be actively encouraged.
4.5 SUB-PRECINCT ANALYSIS

SUB-PRECINCT 1 – COMMERCIAL CORE

Active Edges
Wicks Street is the core of the Verulam Town Centre where most of the activity is centered. The western side of Wicks Street has a greater intensity of use, as the street is lined with shops as well as traders on the pavement. The eastern side of the road consists of a few open lots and abandoned buildings as well as some commercial opportunities. The intensity of use decrease along the northern and southern extents of the commercial core.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY

MOVEMENT, CIRCULATION & PARKING

Vehicular Movement
The northern portion of Wicks Street ends in a cul-de-sac as a result of the edge created by the Mdloti river. Due to the lack of connectivity and its largely isolated character, the intensity of activity is low within this precinct.

Pedestrian Movement
Due to the low intensity of activity, pedestrian movement in this precinct is not significant nor well defined.

Parking
A number of private and semi-private parking facilities are located within the mid-blocks. On-street parking is located around the Cash ‘n Carry. Parking requirements within this precinct are generally sufficient due to the low intensity of activities. The cul-de-sac at the end of Wicks street is used as a taxi holding and washing area.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)  

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY  

**Continuity of Built Fabric**  
The northern portion of Wicks Street is lined with individual buildings, most serving light industrial uses. The built fabric is fragmented due to the low intensity of use. The condition of the buildings is poor.

**Colonnade Edge**  
Due to the individual buildings, the majority of which are old houses, colonnaded edges are not found.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY

Active Edges
Low intensity of activities within the northern portion of Wicks Street relates to the existing low intensity of development. Increased activity is located around the Cash ‘n Carry, the Morning Market in the west of the area, and the taxi holding facility.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB
SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB

MOVEMENT, CIRCULATION & PARKING

Vehicular Movement
Ireland Street is one of the main ‘gateways’ into Verulam. It is a wide two laned road which flows in a northern and southerly direction. Both intersections at Moss and Todd Streets are signalized, controlling the flow of traffic. The street is congested with taxis due to the bus and taxi facility at the corner of Moss Street and Ireland Street. Indicating a need for improved and extended facilities being required.

Pedestrian Movement
Pedestrian movement within this area is concentrated around the taxi facility as well as the eastern side of the road where an above grade walk-way lines the street. A mid-block pedestrian lane is located within the main commercial block, allowing for greater movement between the taxi and bus facilities and the train station.

Parking
Parking located along Ireland Street is used predominantly by the overflow of taxies from the bus and taxi ranks. Taxies line the street therefore limiting private car uses from utilising the parking facilities. A number of private and semi-private parking courts exist.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB

**DEFINITION OF SPACE**

**CONTINUITY OF BUILT FABRIC**

Development along Ireland Street is fragmented and the intensity is low.

**Colonnade Edge**

Due to the individual buildings and low intensity of development, colonnaded edges do not exist.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB

Active Edges
Intensive activity is located around the bus and taxi facilities which dissipates towards the southern portion of the street. Intensity increases along Moss street towards the commercial core, as well as along the northern portion of Ireland street around the morning market and taxi holding area.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 4 – GATEWAY PRECINCT
**Vehicular Movement**
Ireland Street and Wicks Street are the main ‘gateways’ into Verulam, Town Centre; both it is undefined and not celebrated. Construction and development of a boulevard, on Ireland street, at the entrance into Verulam is currently being undertaken. Both routes are wide two lane roads which provide access to the Town Centre in a northerly and southerly direction.

**Pedestrian Movement**
A pedestrian bridge is located at the entrance of the Town Centre over Ireland Street. Pedestrian movement is limited within the precinct due to the lack of activity.

**Parking**
Parking generally within this precinct is limited due to the low intensity of activity. Parking is located around a local convenience store on the corner of Todd and Ireland street.
CONTINUITY OF BUILT FABRIC
Buildings with low intensity activity are located within the ‘gateway’ precinct. The entrance to the Town Centre is focused around mobility, rather than accessibility. Therefore the built form is fragmented.

Colonnade Edge
Due to the individual buildings and low intensity of development, colonnaded edges were not visible.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 4 – GATEWAY PRECINCT

Active Edges
Low intensity of activities within the area relates to the existing low intensity of development. Increased activity is located around Todd and Ireland Street at the local convenience store.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED...)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT

[Images of aerial views and ground-level photos of the station and civic precinct area.]

[Map and aerial images showing the layout of the station and civic precinct.]
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT

MOVEMENT, CIRCULATION & PARKING

Vehicular Movement
Railway Street is a narrow lane which is located alongside the railway and terminates in a cul-de-sac. This road provide access from the train station to the commercial core. Garland Street is located on the other side of the railway tracks providing access from the commercial core to the residential component of the town.

Pedestrian Movement
Pedestrian access from the residential area via a pedestrian bridge exists over the railway line near the train station. Limited pedestrian linkages are located within the mid-block area behind the train station to the commercial core and along the eastern portion of Todd Street.

Parking
Parking within the Station and civic precinct is located primarily around and within a park behind the civic facilities. Informal parking and workshops have been established along either side of Railway Street.

PEDESTRIAN LINKAGES
ON STREET PARKING
PARKING COURTS
Continuity of Built Fabric
Low intensity, degraded individual buildings are located within the station precinct. The station precinct is treated as the backend of the Town Centre. Therefore the built form is fragmented and intensity is low.

Colonnade Edge
Due to the individual buildings, the majority of which are old rundown buildings and houses, colonnaded edges are not formal.
4.5 SUB-PRECINCT ANALYSIS (CONTINUED…)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT

Active Edges
Development within this precinct is low, therefore a low intensity of activities is primarily seen. A portion of this precinct falls within the residential component of the town, influencing low intensities. Increased activity is located along the municipal facilities as well as the train station.

ACTIVE EDGES

INTENSIVE ACTIVITY

MODERATE ACTIVITY

LOW ACTIVITY
4.6 CORE ISSUES

SUB-PRECINCT 1 – COMMERCIAL CORE
Movement, circulation and parking
The uses along Wicks Street encourages pedestrian movement and results in pedestrian crossing virtually along the entire length of the central portion, in a fairly unmanaged way.

Definition of space
Due to the lack of continuity of built fabric along the main commercial core, building edges such as colonnades are also disjointed.

Active edge
The eastern side of Wicks Street consists of a few open lots and abandoned buildings as well as some commercial opportunities.

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY PRECINCT
Movement, circulation & parking
The northern portion of Wicks Street ends in a cul-de-sac as a result of the edge created by the Mdloti river. Due to the lack of connectivity and its largely isolated character, the intensity of activity is low within this precinct.

Definition of space
The built fabric is fragmented due to the low intensity of use. The condition of the buildings is poor.

Active edge
Low intensity of activities within the northern portion of Wicks Street relates to the existing low intensity of development.

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB
Movement, circulation & parking
Ireland Street is congested with taxis due to the bus and taxi facility at the corner of Moss Street and Ireland Street. Indicating a need for improved and extended facilities being required.

Definition of space
Development along Ireland Street is fragmented and the intensity is low.

Active edge
Intensive activity is located around the bus and taxi facilities which dissipates towards the southern portion of the street.

SUB-PRECINCT 4 – GATEWAY PRECINCT
Movement, circulation & parking
Ireland Street and Wicks Street are the main ‘gateways’ into the Town Centre. However these are undefined and not celebrated.

Definition of space
The entrance to Verulam is focused around mobility rather than accessibility therefore the built form is fragmented.

Active edge
Low intensity of activities within the area relates to the existing low intensity of development.
4.6 CORE ISSUES (CONTINUED…)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT

Movement, circulation & parking
Limited pedestrian linkages are located within the mid-block behind the train station to the commercial core.

Definition of space
Components of this;
- The station precinct is treated as the backend of town therefore the built form is fragmented and intensity is low;
- The buildings fronting the park offer opportunities to create a focused sub-precinct.

Active edge
Development within this precinct is low therefore a low intensity of activities is primarily seen.
5.1 INTRODUCTION

The purpose of this section is to provide an overview of the existing traffic and transportation conditions within the study area in terms of infrastructure supply and travel demand. The following aspects have been addressed:

- Quantification of public transport demand/supply and movement patterns;
- Desktop assessment of the road network and its pavement condition;
- Assessment of the operational performance of critical intersections;
- Assessment of pedestrian movements within the Town Centre based on the location of public transport facilities and major land uses.

This transportation status quo assessment is to inform the precinct plan development for the area identified to be in need of regeneration. The report also takes into cognisance of planned new development relating to the Dube Tradeport.

5.2 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 prece 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: Operational Assessment - The operational performances of the transport system is documented in this section.

Section 6: Summary of Key Issues – Concludes the report by presenting a summary of the core findings.
5.3 STUDY AREA & REGIONAL CONTEXT

Verulam Town Centre acts as a local economic centre and transportation hub. The Town Centre is serviced by minibus taxi, bus and rail public transport facilities. The Town Centre is framed by the municipality’s main north-south rail to the east and Ireland Street to the west.

The overall study area has been defined as the central area bounded by the R102 to the north and west, the rail line to the east and Wicks Street to the south. In addition, sections bounded by Russom Street to the west, and the Mloti River to the east have been included as part of the study area. The study area is illustrated in plan on the right.

The Verulam Town Centre falls outside the eThekwini Municipality’s core infrastructure investment area. This area is defined by the confluence of the N2 and N3 (Western and North-South) corridors, with the major infrastructure investment being adjacent to these two routes [eThekwini Municipality, The Draft IDP Review 2005/2006]. This outlines this infrastructure investment core and its relative position to Verulam is illustrated in following figure. Although lying outside of this core the same document indicates that Verulam still enjoys relatively high levels of access to services.
5.4 BACKGROUND

Within the eThekwini Municipality, there are four statutory governmental organizations that are responsible for or influence the planning and or implementation of transport related infrastructure:

- N DOT;
- KZN DOT;
- SARCC;
- ETA.

**SARCC**: Parastatal responsible for planning infrastructure and operating the SA commuter rail network.

**National Government**: National Policy, Implementation framework and guidelines to support governments broader objectives to economic development.

**Provincial Government**: Implementation and enforcement of policy at a provincial level, preparation and management of PT contracts, implementation and maintenance of provincial transport infrastructure.

**Local Government**: Municipal level planning and implementation of transportation infrastructure, preparation and management of local PT contracts.

**INSTITUTIONAL ROLES AND 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;
- 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 improving 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.
5.4 BACKGROUND (CONTINUED…)

received. ETA has implemented a road safety programme to increase road safety awareness and reduce the high occurrence of pedestrian accidents areas within eThekwini and highlight public transport. This programme will soon be implemented in the Verulam area.

SARCC - 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. SARCC-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 AND REGIONAL STUDIES

VERULAM PUBLIC TRANSPORT PLANNING – TRAFFIC AND TRANSPORTATION ISSUES – OCTOBER 2004

Iliso Consulting was appointed by the eThekwini Transport Authority to assess the traffic and transportation conditions in the Verulam Town Centre. Assessment of the operational performance of all major traffic intersections were carried out as part of this study. A summary of the results follow.

<table>
<thead>
<tr>
<th>INTERSECTION</th>
<th>OPERATING LEVEL OF SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR93 &amp; MR2</td>
<td>B</td>
</tr>
<tr>
<td>MR79 &amp; Ireland Street</td>
<td>B</td>
</tr>
<tr>
<td>MR98(Todd Street) &amp; Ireland Street</td>
<td>B</td>
</tr>
<tr>
<td>Moss &amp; Ireland Street</td>
<td>B</td>
</tr>
<tr>
<td>Todd &amp; Wick Street</td>
<td>B</td>
</tr>
<tr>
<td>Moss &amp; Wick Street</td>
<td>B</td>
</tr>
<tr>
<td>Wick &amp; Ireland Street</td>
<td>A</td>
</tr>
<tr>
<td>Groom &amp; Todd Street</td>
<td>A</td>
</tr>
<tr>
<td>Groom &amp; Moss Street</td>
<td>A</td>
</tr>
</tbody>
</table>

In addition, a license plate survey was conducted to quantify the “through traffic” movement in the Verulam Town Centre. The results showed that of the 2600 vehicles which turned right at the MR98 (Todd Street)/Ireland Street intersection from the western approach during the Am peak hour, 1850 vehicles were not destined for the Verulam Town Centre. Thus approximately 70% of these vehicles use Ireland Street to access the R102 (MR2) and MR79 (27 – Umldoti Link) due to a lack of an alternative route.

An alternative route was recommended to provide road users to the west of the Verulam Town Centre with access to the R102 (MR2) and MR79 (M27 – Umldoti Link), in order to reduce through traffic. Two options were recommended to deal with this problem:

- The provision of a free flow right-turning onramp onto the R102 (MR2) (southbound) would negate the problematic right turn at the intersection of the MR98(Todd Street)/ and Ireland Street.
- The provision of a link between the MR98(Todd Street)/ and MR93 (Inanda Road) which would reduce traffic volumes at the MR93 (Inanda Road) and R102 (MR2)intersection.

INTEGRATED TRANSPORT PLAN (ITP) 2005-2010 (MASRCH 2005)

The ITP was prepared for the eThekwini Transport Authority by various government departments and consultants/service providers. The document focuses on long term transport planning for the Municipality and provides a description of the primary focus areas namely: public transport, freight, safety, roads and traffic management and control. It also contains a description of the Integrated Development Plan (IDP) Spatial Development Framework, long term trends and key projects such as King Shaka International Airport, Dube Tradeport, The Point Development, The Upgraded and Expanded Port, 2010 World cup and the ICC Expansion. The Dube Tradeport has been identified as having a significant impact on the public transport plan for the Verulam area as a result of employment and trade opportunities arising.

INTEGRATED DEVELOPMENT PLAN (IDP) 2007-2008

The IDP focuses on translating the city’s vision into action. A good public transport system is required to provide ease of movement for commuters to and from work, shopping, leisure and school. The development of Dube
Tradeport and King Shaka International Airport is the most important economic project for the Northern Municipal region and is projected to provide between 150 000 to 240 000 direct and indirect job opportunities for the KZN province. 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 below.

Ohlanga Tongati Local Area Plan & Coastal Management Plan (CMP)
The Ohlanga-Tongati local area extends from the Ohlanga River to the Tongati River and to the N2 Freeway. This area has been identified as a major future growth axis for residential, tourism and commercial land use. This future growth can be attributed to the King Shaka International Airport and Dube Tradeport at La Mercy which is expected to become a major transportation and commercial hub within the next 10 years. The Local Area Plan (LAP) is intended to provide a clear framework for planning and management of the environment, land use activity, transportation and infrastructure in the study area. The CMP aims to provide a framework for the utilisation, protection and management of the coastal assets located in this area. The Location of precincts of the Ohlanga-Tongati local area is shown below.
5.5 EXISTING TRANSPORT INFRASTRUCTURE

RAIL
Verulam is currently served by a rail commuter service. The eThekwini Municipality’s main north-south rail line traverses the eastern boundary of the Town Centre, with the Verulam Rail Station located at the eastern end of Todd Street.

The rail service to the Verulam area falls outside the eThekwini Municipality’s North-South “Public Transport Corridor”, which extends from Bridge City (KwaMashu) in the north to Isipingo in the south as per the eThekwini PTP. Although Verulam is excluded from this corridor, links between Verulam and the Corridor exist through the rail line, R102 and the N2. The rail line provides access further north to Tongaat and Stanger.

Metrorail 2006 census data was utilised in order to identify serviced routes as well as the passenger demand. The following rail service is accessible via Verulam Rail Station:

- Amanzimtoti - Stanger (KwaDukuza)
- Berea Road – Stanger (KwaDukuza)
- Durban-Kenville – Stanger (KwaDukuza)
- Isipingo – Stanger (KwaDukuza)
- Stanger (KwaDukuza) - Berea Road
- Stanger (KwaDukuza) - Isipingo
- Tongaat - Duffsroad
- Tongaat - Isipingo

REGIONAL ROAD NETWORK
The major elements defining the eThekwini Municipality’s road network is the N2 route which traverses the municipality in a north-south direction, and the N3 route in the east-west direction. These national routes are supported by a series of primary district collector roads such as the R102 (MR2), M4, M13, M7 and supporting rail infrastructure which together with the N2 and N3 form the municipality’s north-south and east-west transport corridors, respectively.

The N2 route (via M27) provides high levels of mobility from Verulam to the north of the province and economic centres such as Tongaat, Stanger and further north to Richards Bay. To the south, the N2 acts as a mobility route to economic nodes such as Umhlanga, Mount Edgecombe, Durban Town Centre and then further south to South Durban Basin and beyond.
The R102 (MR2) provides a combination of accessibility and mobility from Verulam to Tongaat in the north and to Phoenix, Mount Edgecombe and Umhlanga in the south. The MR79 (M27 – uMdloti Link) provides a combination of accessibility and mobility between Verulam and Umdloti the coast to the east at uMdloti. Both the R102 (MR2) and MR79 (M27 – uMdloti Link) provide access to the N2. The MR93 (Inanda Road) and Todd Street provide access to the west of Verulam. Access to the west of the municipality and to economic centres such as Westville, Pinetown and New Germany is gained through the N3 corridor, via the N2 corridor.
5.5 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED…)

LOCAL ROAD NETWORK
At a local level, the Verulam Town Centre may be accessed via the R102 (MR2), MR79 (M27 – Umdloti Link), Todd Street, Moss Street (West) and Moss Street (East).

With the exception of Moss Street (East), all routes provide western and southern accessibility to the Town Centre. The Moss Street (East) access has low roadway capacity with only one lane per direction. The presence of the rail line to the east of the Town Centre further limits accessibility between the Town Centre and the residential settlements to the east.

The uMdloti River is a movement barrier to the north of the Town Centre. The combination of the R102 (MR2), uMdloti River and the eastern rail link confines and contains the Verulam Town Centre. These confining elements have the benefit of preventing sprawl of the Town Centre maintaining the compact economic core, but also may pose limitations in terms of enhancing accessibility to the Town Centre and planned lateral expansion.

This being noted, improved transport movement links between the Town Centre core and surrounding areas will require large infrastructure investment. It should therefore be motivated by deliberate development goals which may warrant these large infrastructure investments.

It is also noted that Todd Street and MR79 (M27 – Umdloti Link) are major local/district distributor routes which lead directly into the Verulam Town Centre. These routes have limited integration with not only each other but also with other major routes in the area such as the R102 (MR2) and N2. The result is that the Verulam Town Centre acts as a junction of these routes, thereby attracting traffic not bound for land uses in the Town Centre and adding to congestion. This through traffic between the Todd Street (Todd Street)/Ireland Street intersection and Ireland/Wicks Street intersection accounts for 70% of the right hand turns from the Todd Street approach [Verulam Public Transport Planning, iliso 2004].

Ireland Street and Wicks Street forming the major north-south movement routes in the Town Centre with Moss Street and Todd Street form the major east-west movement routes. These roads should therefore be seen as the key movement system for the Town Centre which;

- Is integral to efficiently promote movement within, into and out of the Town Centre;
- Is most sensitive to changes in development;
- Form critical routes for public transport access.
5.5 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED…)

PUBLIC TRANSPORT FACILITIES

The eThekwini Municipality’s Current Public Transport Record (CPTR) was used to identify all public transport facilities in the study area as well as in the immediate vicinity. The table below contains a summary of relevant information for the various public transport facilities. The Public Transport Facility locations are illustrated in the following plans.

<table>
<thead>
<tr>
<th>GPS No.</th>
<th>Name</th>
<th>Modes</th>
<th>Status</th>
<th>No. Of Bays</th>
</tr>
</thead>
<tbody>
<tr>
<td>H007</td>
<td>Verulam Bus Rank</td>
<td>Bus</td>
<td>Formal</td>
<td>17</td>
</tr>
<tr>
<td>H041</td>
<td>Vawda Road Bus</td>
<td>Bus</td>
<td>Formal</td>
<td>1</td>
</tr>
<tr>
<td>H043</td>
<td>Oaklands Bus</td>
<td>Bus</td>
<td>Formal</td>
<td>1</td>
</tr>
<tr>
<td>H047</td>
<td>Mountview Bus</td>
<td>Bus</td>
<td>Formal</td>
<td>1</td>
</tr>
<tr>
<td>H048</td>
<td>Packo Verulam Bus</td>
<td>Bus</td>
<td>Formal</td>
<td>2</td>
</tr>
<tr>
<td>H049</td>
<td>Missionlands Bus</td>
<td>Bus</td>
<td>Formal</td>
<td>2</td>
</tr>
<tr>
<td>H058</td>
<td>Verulam Taxi Rank</td>
<td>Mini-Bus Taxi</td>
<td>Formal</td>
<td>40</td>
</tr>
<tr>
<td>H065</td>
<td>Ireland Street Mini-Bus Taxi</td>
<td>Formal</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>H066</td>
<td>Moss Street Verulam</td>
<td>Mini-Bus Taxi</td>
<td>Formal</td>
<td>8</td>
</tr>
<tr>
<td>R032</td>
<td>Verulam Railway Station</td>
<td>Railway</td>
<td>Formal</td>
<td>-</td>
</tr>
</tbody>
</table>

Verulam has a significant concentration of bus and taxi facilities both within the Town Centre and in the surrounding residential areas. This is in keeping with the Town Centre’s role as a transportation hub and local economic node.
5.5 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 in the study area and its surrounds. The plan on the right 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 of the R102 (MR2) in the vicinity of the study area is in very poor condition. R102 (MR2) serves not only the Verulam Town Centre and surrounding areas but also acts as a regional collector/distributor route. The route is highly trafficked and therefore should be in acceptable conditions for the volume of traffic utilising it. The MR 98 which provides access to Verulam from the west and the MR79 (M27 – Umdloti Link) which links Verulam to the N2 and the coast is also in a very poor condition in the vicinity of the study area.

Town Centre Roads: The internal roads which serve the Verulam Town Centre range between very good and very poor. Sections which display signs of distress and which will require attention are:

- Moss Street, Groom Street and Court Street are in a fair condition;
- The section of Ireland Street between the MR79 (M27 – Umdloti Link) and Todd Street is in very poor condition. Todd Street to the west of the Ireland Street intersection is in very poor condition.

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 ROUTES

Public Transport routes were identified from the eThekwini Municipality’s Current Public Transport Records (CPTR). The previous plans indicate the public transport routes utilised by mini-bus taxi and bus respectively, within the Verulam Town Centre as well as in the surrounding areas.

Mini-bus taxi routes traverse the major Town Centre routes of Wicks, Todd, Ireland and Moss Streets. In addition the taxi routes also service residential areas to the west, south and immediate east of the Town Centre.

Bus routes traverse the major Town Centre route of Moss and Ireland Streets. As with mini-bus taxi routes, bus routes service residential areas to the west and south of the Town Centre. Limited bus service is extended to the east of the Town Centre.

The eThekwini Transport Authority is currently undertaking a process to restructure the public transport system of the municipality. An Operational Design for the system was completed by Goba (Pty) Ltd in September 2008. The design proposes the use of mini-bus taxi feeder services into the Verulam Town Centre and movement of persons to other locations in the municipality via rail and bus line haul services.

PEDESTRIAN FACILITIES

Site visits were conducted to assess the existing pedestrian facilities in the Verulam Town Centre. Allowance for pedestrian crossings are not adequately provided the Town Centre. Pedestrian phases of traffic signals are provided at the Moss Street/Wicks Street intersection only.

PARKING

Aerial photographs and site visits were conducted to assess the existing parking facilities. On-street parking is currently provided along most routes in the Town Centre. Most major land-use activities have their own off-street parking facilities to cater for large demands. The Verulam produce market has its own parking facilities which is utilized at capacity on Thursdays and Saturdays (market days), and is under-utilized during the remainder of the week. The following plan indicates the location of on-street and off-street parking facilities in the Verulam Town Centre.
5.5 EXISTING TRANSPORT INFRASTRUCTURE (CONTINUED...)

![Diagram of transport infrastructure](image)
5.6 TRAVEL DEMAND ASSESSMENT

The travel demand patterns were estimated using four sources of information;

- The eThekwini Municipality EMME 2 model;
- The eThekwini Municipality Current Public Transport Record (C PTR);
- Vehicle intersection traffic counts;
- Metrorail 2006 utilisation data.

The EMME 2 model represents the theoretical movement patterns in the municipality by private vehicles and public transport, whereas the remaining sources of information are empirical data.

TRIP GROWTH

To estimate the traffic growth in the Verulam Town Centre, transport demand had to be compared over two points in time. The only available source of information covering more than one period is traffic intersection counts which were utilised in the Verulam Public Transport Planning Study (Iliso 2004) and more recent traffic counts at the same intersections.

The "Core Town Centre" area was identified and routes leading into the core were used to determined traffic growth in the Town Centre. These routes into the Town Centre are Moss Street (East), Todd Street, Ireland Street and Wicks Street intersection. Using approach and departure volumes into and out of the Town Centre the growth was estimated. Table 4.1 summarises these volumes and growths.

A comparison of 2006/2008 traffic counts with 2004 traffic counts indicates an 11.5% increase in traffic entering the Town Centre core in the morning peak hour and a 1.3% decrease in traffic entering in the afternoon peak hour. It must be noted that variations in the traffic patterns do occur and these changes in volumes may be biased to a specific day or event. However the 11.4% increase in the morning peak translates to a 2.9% increase per annum which is above typical growth of 2% for mature urban areas. The negative growth in the afternoon peak seems unlikely but could be attributed to changes in travel patterns with a much more spread afternoon peak period, thereby reducing the peak hour volume.

A 16.3% growth was found for traffic exiting the Town Centre in the morning peak hour and 17.5% in the afternoon peak hour. This equates to 4.1% - 4.4% growth per annum in traffic exiting the Town Centre.

The growth rate of 2.9% - 4.4% experienced in the Verulam Town Centre since 2004 may be an indication of growing economic activity, decline in public transport usage or even an increase in vehicle ownership rates.

<table>
<thead>
<tr>
<th>TRAFFIC ENTERING CBD</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Hour</td>
<td>2004</td>
<td>2008</td>
<td>% Growth</td>
</tr>
<tr>
<td>AM</td>
<td>3151</td>
<td>3558</td>
<td>11.4</td>
</tr>
<tr>
<td>PM</td>
<td>2703</td>
<td>2667</td>
<td>-1.33</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>TRAFFIC EXITING CBD</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
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<td>2008</td>
<td>% Growth</td>
</tr>
<tr>
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</tr>
<tr>
<td>PM</td>
<td>2853</td>
<td>3460</td>
<td>17.5</td>
</tr>
</tbody>
</table>

MODAL SPLIT

Current Public Transport Record (C PTR), Metro Rail 2006 Census and Intersection Traffic Counts: The eThekwini Municipality’s C PTR, Metro Rail 2006 Census and 2004 Traffic Counts were analysed in order to person trip demands per mode of transport. Refer to Table 4.2 for summary of person trips. Detailed records of person trips can be found in Appendix B-D.
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED…)

<table>
<thead>
<tr>
<th>MODE</th>
<th>PERSON TRIPS OUT</th>
<th>PERSON TRIPS IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS</td>
<td>1870</td>
<td>1492</td>
</tr>
<tr>
<td>Mini-Bus Taxi</td>
<td>1607</td>
<td>2380</td>
</tr>
<tr>
<td>Rail</td>
<td>868</td>
<td>898</td>
</tr>
<tr>
<td>Total Public Transport</td>
<td>4345</td>
<td>4770</td>
</tr>
<tr>
<td>Private Vehicles(#Vehicles)</td>
<td>4985(3323)</td>
<td>2873(1915)</td>
</tr>
<tr>
<td>Total Trips</td>
<td>9330</td>
<td>7643</td>
</tr>
<tr>
<td>Modal Split (PT:PVT)</td>
<td>47:53</td>
<td>62:38</td>
</tr>
</tbody>
</table>

Public transport person trips into and out of Verulam were taken from the CPTR during the morning peak period between 06:00 and 08:00. In order to make a direct and appropriate comparison, Metro Rail Census trips and passenger vehicles exiting the Verulam region along the R102 (MR2) and MR79 (M27 - Umdloti Link) were identified during the same peak period.

The private vehicle trips were identified by analysing intersection counts at the R102 (MR2) / Wicks Street and MR79 (M27-Umdloti Link) / Wicks Street Intersection. A vehicle occupancy factor of 1.5 persons per private vehicle (MUNICIPAL AVERAGE) was utilised to convert vehicle counts to person trips.

Current modal split indicates that during the AM peak period 37% of person trips into Verulam are by private vehicle and the remaining 63% are by the various modes of public transport that is available. Of the public transport trips, approximately 50% are by minibus taxi, 32% are by bus and 19% by rail.

Considering the person trips out of Verulam during the AM peak period there is a 50:50 split between private vehicles and public transport. Of the public transport trips 48% is by bus, 34% by minibus taxi and 18% by rail.

The higher levels of private vehicle usage out of Verulam are an indication of high levels of private vehicle ownership in Verulam. The 63% of trips via public transport into Verulam may be considered affirmation of the Town Centre’s role as a public transport and economic node in the region.
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED…)

TOTAL PERSON TRIP DISTRIBUTION

The eThekwini Transport Authority’s EMME2 model was used to determine the person trip distribution for trips originating in and destined for Verulam. These trips were classified by mode, i.e. public transport and private vehicles. Detailed records of the EMME2 person trip distribution can be found in Appendix A.

Person trip distribution for trips originating in Verulam was analysed using spatial analysis software. Figure 4.3 and Figure 4.4 outlines the spatial distribution of public transport and private vehicle respectively for trips originating in Verulam.

A total of 37% of public transport trips are destined for the Durban Town Centre (19%), areas along the N3 and to the south of the Town Centre along the N2. The remaining 63% of the trips are destined for areas to the north of the Durban Town Centre. The largest of the trip attractors being the coastal region between Durban North and uMdloti (38%), the INK and Phoenix region (8%) and internal Verulam trips (8%).

A total of 23% of private vehicle trips are destined for the Durban Town Centre (14%), areas along the N3 and to the south of the Town Centre along the N2. The remaining 77% of the trips are destined for areas to the north of the Durban Town Centre. The largest of the trip attractors are the coastal region between Durban North and uMdloti (31 %), the INK and Phoenix region (8.05%) and internal Verulam trips (13%).

Figure 4.5 and Figure 4.6 illustrates the spatial distribution of public transport and private vehicle respectively for trips destined for Verulam, respectively.

A total of 31% of public transport trips originate from the Durban Town Centre (2%), areas along the N3 and the west of the municipality (22%) and from areas to the south of the Town Centre along the N2(8%). The remaining 69% of the trips originate from areas to the north of the Durban Town Centre. The largest of the trip generators are the INK and Phoenix region (26%) and regions to the north of Verulam (31%).
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED...)
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED...)
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED…)

PUBLIC TRANSPORT DEMAND

RAIL

Metrorail 2006 Census data was used to estimate person trip utilisation of rail facilities at the Verulam Rail Station. Table 4.4 summaries the census data at the Verulam Rail Station. Detailed records of person trips and route utilisation can be found in Appendix B.

On Saturdays and Sundays, the demand for services is almost completely isolated to travel between the Durban Town Centre and KwaDukuza. The demand is anticipated with the Durban Town Centre offering greater retail and service provision than the smaller economic nodes to the north.

During weekdays, this demand extends further south along the north-south rail link towards Isipingo and Amanzimtoti. This would be due to the employment potential offered by not only the Durban Town Centre but also by the South Durban Basin.

During the morning peak period 868 persons utilise the Verulam Rail Station to depart from Verulam and 898 persons arrive at Verulam via the Rail Station. The bulk of these trips utilise the Stanger-Isipingo service and the Berea Road-Stanger service.

During the afternoon peak period 547 persons utilise the Verulam Rail Station to depart from Verulam and 635 persons arrive at Verulam via the Rail Station. Once again the bulk of these trips utilise the Stanger-Isipingo service and the Berea Road-Stanger service.

<table>
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<th>Weekday</th>
<th>Service</th>
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<th>Out</th>
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</thead>
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<tr>
<td>Saturday</td>
<td>BEREAROAD-STANGER(kwaDUKUZA)</td>
<td>733</td>
<td>697</td>
</tr>
<tr>
<td></td>
<td>DURBAN-KENVILLE-STANGER(KwaDUKUZA)</td>
<td>10</td>
<td>39</td>
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<td></td>
<td>STANGER(kwaDUKUZA)-BEREAROAD</td>
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<td>585</td>
</tr>
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<td></td>
<td>STANGER(kwaDUKUZA)-KENVILLE-DURBAN</td>
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<td>30</td>
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<td></td>
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<td>0</td>
</tr>
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<td></td>
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<td>22</td>
</tr>
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</tr>
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<td></td>
<td>STANGER(kwaDUKUZA)-KENVILLE-DURBAN</td>
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<td>57</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>552</td>
<td>604</td>
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<tr>
<td>Weekday</td>
<td>AMANZIMTOTI-STANGER(KWADUKUZA)</td>
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<td>214</td>
</tr>
<tr>
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<td>BEREAROAD-STANGER(kwaDUKUZA)</td>
<td>703</td>
<td>975</td>
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<tr>
<td></td>
<td>CATORDGE-TONGAAT</td>
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<td></td>
<td>DURBAN-KENVILLE-STANGER(KwaDUKUZA)</td>
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<td>25</td>
</tr>
<tr>
<td></td>
<td>ISIPINGO-STANGER(kwaDUKUZA)</td>
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<td>607</td>
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<td></td>
<td>STANGER(kwaDUKUZA)-KENVILLE-DURBAN</td>
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<td>25</td>
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<td>TONGAAT-BEREAROAD</td>
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<td></td>
<td>TONGAAT-ISIPINGO</td>
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<td>11</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>4031</td>
<td>4313</td>
</tr>
</tbody>
</table>
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED…)

BUS
The eThekwini Transport Authority’s CPTR was used to estimate the extent of bus utilisation in the study area. Detailed records of person trips and route utilisation can be found in Appendix C.

A total of 1870 person trips originated from the study area in the morning peak period and 1650 person trips in the afternoon peak period. All of these trips identified by the CPTR were destined for areas to the north of the Durban Town Centre. It is possible that not all trips by bus were captured in the CPTR thereby explaining the limited bus operations from Verulam to the southern regions of eThekwini Municipality and in particular to the Durban Town Centre.

A total of 1492 person trips were destined for the Verulam Town Centre in the morning peak period, and 455 person trips in the afternoon peak period. Once again, these trips originate in the northern regions of the eThekwini Municipality.

MINI BUS TAXI
The eThekwini Transport Authority’s CPTR was used to estimate the extent of mini-bus taxi utilisation in the study area. Detailed records of person trips and route utilisation can be found in Appendix C.

A total of 1607 person trips originated from the study area in the morning peak period and 3357 person trips in the afternoon peak period. Approximately 25% of the morning trips are destined for the Durban Town Centre and 22% for Umhlanga and uMdloti. The remaining trips were either internal trips or destined for locations in the north of the municipality. During the afternoon peak period, trips originating from Verulam are destined for areas extending from Phoenix to the northern regions of the municipality or internal trips.

A total of 2380 person trips were destined for the Verulam Town Centre in the morning peak period, and 595 person trips in the afternoon peak period. Once again, trips in the morning peak predominantly originate from areas to the north of the Durban Town Centre. During the afternoon peak period all trips originate from areas from Umhlanga and further north.

PEDESTRIAN MOVEMENT
Accident statistics obtained from the eThekwini Transport Authority indicate that numerous accidents have occurred along Wicks, Moss and Ireland Streets in 2007. Figure 3.4 indicates the distributions of these incidents throughout the Town Centre and surrounding areas.

Accident sites are concentrated along Ireland and Wicks Streets, between Todd Street and Moss Street. In addition, numerous accidents occur along the extreme eastern and western legs of Moss Street. These locations are within the core city centre and are the most trafficked routes. In addition the proximity of the public transport facilities and the associated lack of pedestrian facility such as pedestrian crossings and traffic calming measures, lead to high risks of collisions.

The correlation between sites of vehicular and pedestrian accidents indicates that these two movement streams are in conflict and measures should be taken to;

- Separate the pedestrian and vehicle movement streams;
- Provide adequate levels of control where these streams intersect;
- Make the city core more pedestrian orientated.
5.6 TRAVEL DEMAND ASSESSMENT (CONTINUED…)

REGIONAL ACCESSIBILITY

The study area is well connected to the regional road network through the existing regional and district road network as well as through the rail facilities available.

The eThekwini Municipality’s Pavement Management System was used to identify the number of lanes which every road in the study area and the immediate vicinity consisted of, refer to Figure 5.1. The MR79 (M27-Umdloti Link), R102 (MR2) and Todd Street in the vicinity of the study area all consist of two lanes, one lane in each direction. Additional lanes are present at major intersection along these roads. Using a design speed of 80km/hour and an equivalent theoretical capacity of approximately 1200veh/hour/lane, the capacity of these links can be estimated at >800veh/hour per direction.

Available traffic counts were used to estimate the largest approach and departure volumes experienced along these roads. Available 2008 counts were utilised and available 2006 counts were factored to represent existing conditions using the relative growth indicated by the 2008 counts.

Table 5.1 summarises the greatest estimated vehicle (PCU) demand along the district collectors serving the study area. Using an estimated hourly capacity of 1200veh/hr, the volume-capacity ratio (V/C) was estimated.
5.7 OPERATIONAL ASSESSMENT (CONTINUED…)

For (R102) MR2 and Todd Street (West), the V/C ratio nears a value of 1 indicating that the link is serving traffic volumes nearing the theoretical link capacity. This highlights the need for further, more detailed quantification of the operating conditions which may motivate for capacity expansions of the routes.

It should be highlight that the R102 (MR2) increases in capacity to the south with the provision of additional lanes. It should also be noted that the MR79 (M27 - Umdloti Link), on route to the N2 to the east, is accessed by numerous other land uses that would place additional demand on the link.

PUBLIC TRANSPORT
Data sourced from the eThekwini Transport Authority’s Public Transport Management Information System was used to identify public transport facilities in the study area, as well as to identify the amenities which they provide and their operating capacity, refer to Appendix E for detailed output.

INTERSECTION PERFORMANCE
The existing intersection configurations are shown in Table 5.2. The operational performance intersections are described in Table 5.3. Intersections 1 to 6 have two-phase signals and intersection 7 is a one way stop with priority in the North-South direction.
5.7 OPERATIONAL ASSESSMENT (CONTINUED...)

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Configuration</th>
<th>Control Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MR 93 (Inanda Road)/R102 (MR2)</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td>4 Phase signal</td>
</tr>
<tr>
<td>2. MR 79 (M27 – Umdloti Link)/ Ireland Street</td>
<td><img src="image2.png" alt="Diagram" /></td>
<td>2 Phase signal</td>
</tr>
<tr>
<td>3. MR98 (Todd Street/Ireland Street)</td>
<td><img src="image3.png" alt="Diagram" /></td>
<td>2 Phase signal</td>
</tr>
<tr>
<td>4. Moss/Ireland Street</td>
<td><img src="image4.png" alt="Diagram" /></td>
<td>2 Phase signal</td>
</tr>
<tr>
<td>5. Todd/ Wick Street</td>
<td><img src="image5.png" alt="Diagram" /></td>
<td>2 Phase signal</td>
</tr>
<tr>
<td>6. Moss/ Wick Street</td>
<td><img src="image6.png" alt="Diagram" /></td>
<td>2 Phase signal</td>
</tr>
</tbody>
</table>

**Intersection Analysis**

1 (AM) This intersection operates at a LOS C, with an overall average delay of 24.9 seconds. The western and southern approaches experience LOS C while the eastern approach exhibits LOS D, with a delay of 36.8 seconds. All movements on the northern approach operates at LOS B.

1 (PM) This intersection operates at a LOS C, with an overall average delay of 25.9 seconds. The western, eastern and southern approaches experience LOS C while the northern approach exhibits LOS B on all movements.

2 (AM) This intersection operates at a LOS C, with an overall average delay of 33.0 seconds. The southern and eastern approach exhibits LOS C. The northern and western approaches operate at LOS D.

2 (PM) This intersection operates at a LOS C, with an overall average delay of 23.9 seconds. The southern approach exhibits LOS B. All movements on the northern, eastern and western approaches operates at LOS C.

3 (AM) This intersection operates at a LOS C, with an overall average delay of 20.1 seconds. The eastern approach operates at LOS B. The northern, southern and western approaches experience LOS C.

3 (PM) This intersection operates at a LOS B, with an overall average delay of 19.1 seconds. The eastern approach operates at LOS C. The northern and southern approaches experience LOS B.

4 (AM) This intersection operates at a LOS C, with an overall average delay of 13.0 seconds. The eastern approach operates at LOS A. The western, northern and southern approaches experience LOS B.

4 (PM) This intersection operates at a LOS B, with an overall average delay of 13.9 seconds. The eastern approach operates at LOS A. The western and southern approaches experience LOS B while the northern approach operates at LOS C.

5 (AM) This intersection operates at a LOS B, with an overall average delay of 15.1 seconds. All the approaches experience LOS B.

5 (PM) This intersection operates at a LOS B, with an overall average delay of 16.8 seconds. All the movements on all the approaches experience LOS B.

6 (AM) This intersection operates at a LOS C, with an overall average delay of 20.1 seconds. The eastern and northern approach operates at LOS B while the southern and western approaches experience LOS C.

6 (PM) This intersection operates at a LOS B, with an overall average delay of 15.9 seconds. All the approaches experience LOS B.

7 (AM) This intersection operates at a LOS A, with an overall average delay of 7.4 seconds. All the movements on the southern and northern approaches experience LOS A. All movements on the western approach experience LOS B.

7 (PM) This intersection operates at a LOS A, with an overall average delay of 5.5 seconds. All the movements on the southern and northern approaches experience LOS A. All movements on the western approach experience LOS B.
5.8 SUMMARY OF KEY ISSUES

REGIONAL AND LOCAL ACCESSIBILITY
The Verulam Town Centre and the study area are accessible by rail, due to its proximity to the Verulam Rail Station as well as by road based transport systems due to the proximity of the R102 (MR2), MR79 (M27 - Umdloti Link) and the MR93 (Inanda Road), and Todd Street.

The Mdloti River, R102 (MR2) and rail line impedes movement and limits accessibility between the study area and the surrounding residential areas. These divide are currently crossed at isolated points, thereby limiting integration or permeability between the Verulam Town Centre and the surrounding local areas.

PUBLIC TRANSPORT
The Verulam Town Centre is serviced by rail, bus and mini-bus taxi services, making the area highly accessible by public transport. Due to the high levels of public transport provision, the Verulam Town Centre acts as a transportation hub which serves not only Verulam but also the surrounding residential and rural areas. High levels of public transport trips via bus, minibus taxi and rail into Verulam suggests that the area is utilised as a local economic centre and a transfer node in the northern region of the municipality.

LOCAL ROADWAY CAPACITY
The R102 (MR2), MR79 (M27 - Umdloti Link) and Todd Street district collector routes are currently experiencing traffic demands at close to their capacity. This could impair future development and growth in the study area especially if the Verulam Town Centre is to rely on a wider market area to ensure sustainability.

PEDESTRIAN MOVEMENT
Improved pedestrian facilities are required throughout the Verulam Town Centre to facilitate safe movement of pedestrians and curb existing accident trends.

ROAD PAVEMENT QUALITY
The Town Centre road network is predominantly in good condition, with localised areas where immediate attention is warranted. The road pavement condition of the district collector routes in the vicinity of the study area is in poor condition and requires attention.
06 INFRASTRUCTURE
6.1 INTRODUCTION

The Verulam Central Business District (Town Centre) renewal and regeneration plan aims to promote economic growth and development opportunities within the Town Centre of Verulam. This is to be achieved through the optimising of the current transport infrastructure that exists within the Town Centre and the development of various portions of the Town Centre.

In order to ensure the above is achievable the current bulk service infrastructure needs to be closely examined 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 Verulam Town Centre.

- Stormwater
- Sewer reticulation
- Water reticulation
- Electricity supply
- Solid Waste

The following aspects of the bulk services will be discussed in the report:

- Service coverage and capacity within the Town Centre;
- Demand assessment;
- Operational assessment and key issues within the bulk services network.

This section of the report serves to provide a status quo summary of the existing services currently located in the Verulam Town Centre study area.

6.2 ANALYSIS OF CURRENT AND FUTURE SERVICE CAPACITY

BULK STORMWATER

A meeting was held with Mr M Moodley, Northern Area Manager (28 November 2008) of the Coastal, Stormwater and Catchment Management Department of the eThekwini Engineering Unit in order to determine the current status of the stormwater system within the study area.

To date, no records of the as-built bulk stormwater pipelines within the study area have been able to be obtained from eThekwini Municipality. In discussions with eThekwini Municipality it has been established that a CCTV inspection is presently being undertaken to determine accurate stormwater information i.e. invert levels, pipe diameters, pipe replacement, point repairs etc. within the Verulam Town Centre. Most of the stormwater infrastructure is over 50 years old.

According to eThekwini, due to the fact that Durban is predominantly a summer rainfall region with rain events of high intensity occurring over a short time period a high likelihood of localised flooding within the Town Centre exists. All stormwater is discharged into the Umdloti River flowing along the north eastern border of the Verulam Town Centre.

eThekwini has highlighted 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”.

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

- The Verulam Town Centre currently consists of 17% of undeveloped areas, which means that there is a significant amount of groundwater infiltration. However, the Town Centre consists of mainly hardened areas so majority of the stormwater acts as direct runoff into the stormwater system. Any additional or new developments within the Town Centre will have nominal effect on the flow regime;
6.2 ANALYSIS OF CURRENT AND FUTURE SERVICE CAPACITY (CONTINUED…)

- Once the data set of as-built plans for the stormwater system has been obtained, the capacity of the system will 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.
6.2 ANALYSIS OF CURRENT AND FUTURE SERVICE CAPACITY (CONTINUED...)

BULK SEWER

A meeting was held with Mr P van Brandis (1 December 2008) of the eThekwini Water and Sanitation Unit in order to ascertain the current status of the sewer network within the study area.

The sewer reticulation depicted range from 150mm to 450mm diameter pipes with many of the pipe sizes still unknown. The sewer from the surrounding Verulam areas are pumped or gravitated to the 450mm diameter sewer trunk main which flows through the Verulam Town Centre. The sewer from the Verulam Town Centre flows in an easterly direction and drains to the Verulam Wastewater treatment works located approximately 1.6 km’s from the Verulam Town Centre.

The treatment works is situated about 9km up the Mdloti River from the Umdloti lagoon and serves the western areas of the catchment consisting of Verulam and Canelands. The current hydraulic capacity of the treatment works has recently been upgraded from 10 Ml/day to 12.5 Ml/day. eThekwini has indicated that the Average Daily Flow received may go up to 12Ml/day in summer. In this instance, the treatment works would not have capacity for additional discharge.

It is recommended a comprehensive analysis be carried out on the existing sewer network in the area. This analysis needs to be based on the scale of the development and land use. A survey needs to be undertaken to determine relevant connection points, sewer pipe diameters and gradients. The capacity of the existing system will need to be analysed to determine if the existing system can cater for the additional flow.
6.2 ANALYSIS OF CURRENT AND FUTURE SERVICE CAPACITY (CONTINUED...)

BULK WATER

A meeting was held with Mr V. Allan (2 December 2008) of the eThekwini Water & Sanitation Department in order to determine the current status of the existing water system within the study area.

It was ascertained at the meeting that the study area currently receives water supply predominantly from Durban Heights Water Treatment Works. Grange Water Reservoir is the primary reservoir that supplies most of Verulam Town Centre. Grange Reservoir is situated on Parabat Crescent and has a storage capacity of 9.1 Mt. Mountview Reservoir supplies Ireland Street in the Verulam Town Centre. Mountview Reservoir is situated on Fairview and has a storage capacity of 10 Mt. eThekwini has indicated that there is sufficient capacity for future development.

The current service commitments in the Verulam Town Centre area are the replacement of the Asbestos Cement (AC) watermains, which is a project in progress. Several pipes are also being up sized as part of the project and the project is due to be complete within the next 3 months. Pipe diameters range from 50mm to 300mm and is depicted in following plan.

The pipe infrastructure is currently adequate but would need to be re-assessed for future developments. Additional reservoir storage is available for limited future developments within the area.

The water demand as defined in the “Guidelines for Human Settlement Planning and Design” for the following land uses is defined as:

- General Commercial = 400 l/day per 100 m² of floor space;
- Residential = 600 to 1000 l/day per dwelling unit;
- Government & Municipal = 400 l/day per 100 m² of floor space.

The typical values given above in combination with a typical peak factor will be used to determine the water demand on each pipeline.

A complete bulk water analysis could not be undertaken due to the lack of accurate information and time constraints. A complete hydraulic analysis would involve the following processes:

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

BULK ELECTRICITY

In order to determine the current status of the electricity supply in the Verulam Town Centre region a meeting was held with the eThekwini Electricity Department with Mr Brian Gordon (1 December 2008).

It was determined at the meeting that Verulam Major sub-station provides the majority of the electricity supply in the study region at 33/ 11kV. The electricity from this major sub-station is fed into the network to 3 distributors and smaller sub-stations strategically placed within the Town Centre.

Currently the capacity of the electricity supply within this region can be considered to be at near capacity. The Morelands Major sub-station, situated near Canelands, towards the north of Verulam Town Centre has 2 x 30 MVA transformers but only supplies 12 MVA. The Morelands Major sub-station is linked to the network in certain areas around Verulam. A possible solution to cater for future developments within Verulam Town Centre is to get electrical supply from the Morelands Major sub-station. However, this is heavily dependent on type, extent and geographic position of the future development.

In order for the Electricity Department to cater for the proposed developments in the Verulam Town Centre area the following approach needs to be adopted. Once the scope and category of the development has been determined a proposal needs to be submitted to the municipality. If the electricity network can adequately support the developments electricity demand the proposal will gain approval. If the network can’t meet the demand the development will be delayed until the electricity network can adequately meet the required demand.

SOLID WASTE

In order to determine the current status of solid waste disposal in the Verulam Town Centre region a meeting was held with Mr L. Moodley (25 November 2008) from eThekwini Durban Solid Waste Services.

Currently the solid waste is collected daily by the eThekwini Municipality and is then transported to Buffelsdraai landfill site located in Osintiswini, Verulam, approximately 8.5km’s from Verulam Town Centre.
6.2 ANALYSIS OF CURRENT AND FUTURE SERVICE CAPACITY (CONTINUED...)

The Buffelsdraai landfill has a capacity of 100 ha and a 75 year design life. The landfill is currently receiving between 300 and 400 tons/day. Mr Moodley has indicated that there are presently no capacity problems and the system will be able to manage solid waste produced from the proposed development.

6.3 RECOMMENDATIONS

The following conclusions and recommendations can be reached after obtaining information for each bulk service:

**Bulk Stormwater**

Although the stormwater as-built information could not be obtained from the municipality it can be deduced that once the information is obtained it can be ascertained where critical areas exist. It is recommended that surveys be undertaken in order to improve the data quality of the database.

**Bulk Sewer**

The coverage of sewer reticulation within the Town Centre region is extensive, however it was noted that the current sewer network within the study area is significantly old and in all probability needs replacement. Further investigation needs to be undertaken in terms of planning for the capacity requirements of the Verulam WWTWs.

**Bulk Water**

The coverage of water pipelines in the Town Centre can be considered to be reasonably extensive. The pipe infrastructure is currently adequate. Additional reservoir storage is available for limited future developments within the area.

**Bulk Electricity**

The electricity demand can be considered to be at near capacity. Verulam major sub-station is located just outside of the Town Centre area. In order to ensure that the capacity demands in the future are met it may be necessary to obtain electrical supply from the Morelands Major sub-station.

**Solid Waste**

The Landfill is relatively new and therefore has no current capacity problems. It will also be able to cater for the additional waste generated by the proposed new developments.

It would be beneficial to resurvey the existing gravity services such as sewer, stormwater and water pipelines.
VERULAM DEVELOPMENT PERSPECTIVE
### 7.1 KEY ISSUES

#### SOCIAL AND ECONOMIC DEVELOPMENT

<table>
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<tr>
<th>SECTOR</th>
<th>CORE ISSUE</th>
<th>DESCRIPTION</th>
<th>IMPLICATIONS FOR PLANNING &amp; DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONOMIC DEVELOPMENT</td>
<td>Complete absence of economic development vision for Verulam CBD</td>
<td>Public and private sector investment in the area is ad hoc and is not contributing / building on a longer term vision for the Verulam Town Centre. Investors are uncertain about the future of the Town Centre and therefore a lack of private sector investment in the area.</td>
<td>A clear vision supported by all stakeholders must be developed for the Verulam Town Centre.</td>
</tr>
<tr>
<td></td>
<td>Verulam CBD benefitting from major regional developments, i.e. Airport and Cornubia</td>
<td>The impact of the Airport development as well as the proposed Cornubia development on the economy of the Verulam can be substantial if appropriate opportunities can be established. Failure to establish such opportunities may see other (new nodes) benefitting from potential opportunities.</td>
<td>Economic development opportunities relating to major regional developments must be considered in planning.</td>
</tr>
<tr>
<td></td>
<td>Limited appropriate provision for the informal sector</td>
<td>Substantial “conflict” exists between the informal and formal sectors as well as between the informal sector and authorities. This can primarily be associated to a lack of space for the informal sector (currently occupying leftover space on pavements).</td>
<td>Appropriately located space for the informal sector must be identified.</td>
</tr>
<tr>
<td></td>
<td>Inability of area to attract required levels of investment</td>
<td>Uncertainties as to the future vision for Verulam, as well as the general state of neglect in the area, impacts on the level of investment that can be attracted to the area.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban management issues, including issues such as a lack of parking and crime</td>
<td>Urban management issues has a direct impact on the perception of users of the Verulam Town Centre. At present it would not appear as if urban management issues are being dealt with in an integrated manner.</td>
<td>Not only planning, but also urban management issues must be addressed.</td>
</tr>
<tr>
<td></td>
<td>Location of commercial and public services</td>
<td>Commercial and public services in the Town Centre not well located from a public transport and pedestrian perspective.</td>
<td>Appropriate areas for the location of priority services in relation to transport network should be identified.</td>
</tr>
<tr>
<td>HOUSING</td>
<td>Housing has not been identified as an issue although opportunities for higher density housing within CBD should be considered</td>
<td></td>
<td>Consider opportunities for the location of higher density housing in the Town Centre specifically relating to the transport infrastructure</td>
</tr>
<tr>
<td>SOCIO-ECONOMIC</td>
<td>Range of socio-economic conditions in areas surrounding Verulam CBD</td>
<td>The Verulam Town Centre serves and is located in proximity to neighbourhoods ranging from upmarket to rural peri-urban. Although socio-economic needs vary it is concluded that needs within the area of influence is high.</td>
<td>The Town Centre must continue to address the needs of people on vastly different socio-economic levels.</td>
</tr>
<tr>
<td></td>
<td>Verulam serves large poor unemployed peri-urban and rural population</td>
<td>The Verulam Town Centre fulfils in the economic needs of a larger peri-urban and rural population (both inside and outside eThekwini boundaries). This population is characterised by high levels of unemployment, low income levels and poverty in general.</td>
<td>Verulam should not only be viewed as a service node, but also as a major employment for the sub-region and land use planning should support this opportunity.</td>
</tr>
</tbody>
</table>
## 7.1 KEY ISSUES (CONTINUED…)

### PLANNING AND SPATIAL DEVELOPMENT

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>NATURAL SYSTEMS</td>
<td>The Ohlanga River as the primary natural structuring system</td>
<td>The Mdloti forms a defined edge to the Town Centre forming a natural “barrier” in the north. The river corridor is well preserved and development mostly occurs outside the 1:100 year floodline</td>
<td>The River forms a key structuring system and together with road and rail infrastructure, physically contains the town centre.</td>
</tr>
<tr>
<td>MOVEMENT SYSTEMS</td>
<td>Regional transport systems frame the Town Centre</td>
<td>The R102 located west of the Town Centre and the existing Railway line located south of the Town Centre define the town centre.</td>
<td>As indicated above, together with the Mdloti River, the R102 and rail serve to define and contain the town.</td>
</tr>
<tr>
<td>MOVEMENT SYSTEMS</td>
<td>The R102 as Regional Development Spine</td>
<td>The proximity of the Town Centre to the R102, bodes well with regional connectivity and the potential for Verulam to draw from and contribute to the development of the R102 as a regional development spine.</td>
<td>It is important to ensure connectivity of Verulam and the Town Centre in particular, with the R102 system</td>
</tr>
<tr>
<td>MOVEMENT SYSTEMS</td>
<td>Public Transport as generators</td>
<td>The Town Centre is well served by both road based (taxi and bus) and rail based public transport. A commuter rail station and bus and taxi rank facilities are located within the Frame and are in walking distance to the Core.</td>
<td>The rail station requires greater clarity of connection with the Town Centre, and the station environs requires investment. The taxi and bus facilities located along Ireland Street are under ‘stress’ and as a result there exists a substantial overspill of transport activity within the street. Substantial investment is required in redeveloping, expanding and integrating these transport facilities for the future development and rejuvenation of the Town Centre.</td>
</tr>
<tr>
<td>MOVEMENT SYSTEMS</td>
<td>Town Scale Cul-De-Sac</td>
<td>The primary internal route within the town centre is Wick Street which serves as the Town’s “High Street”, mainly within the Core of the Town Centre. The northern portion of this street terminates in a ‘dead-end’, resulting in a lack of connectivity the town scale level, and also resulting in a lack of accessibility for this cluster of activities (Service Industrial). Consequently, the northern portion of the town centre represents a development vacuum and processes of urban decay are evident.</td>
<td>There is a need to ensure greater accessibility within the northern portion of the Town Centre, and importantly at the level of the Town Centre as a whole. Additional linkage is required with the R102 providing improved choices and enhancing development opportunities within the Town Centre as a whole, and facilitating development in the northern cluster.</td>
</tr>
<tr>
<td>MOVEMENT SYSTEMS</td>
<td>The Crisis of Identity of Wick Street</td>
<td>Wick Street forms the central spine of Town Centre. The central portions of Wick Street, within the Core of the town centre, functions as a retail ‘high street’ with substantial interaction across the street. However the road is designed and operates primarily as a vehicular route. This results in substantial conflicts between pedestrians and motor vehicles, to the extent that the highest incidence of motor vehicle / pedestrian accidents occur within the Core area.</td>
<td>It is essential that future planning re-considers the role of Wick Street and ensures that a conducive environment is created for what has and should become a more pedestrian orientated area.</td>
</tr>
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</table>
### 7.1 KEY ISSUES (CONTINUED…)

#### PLANNING AND SPATIAL DEVELOPMENT

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<tr>
<td><strong>ZONING</strong></td>
<td>Need for Review of Present Zones</td>
<td>Largely unused residential zone amongst service activities in the northern part of the Frame. The balance of this cluster is zoned for both Light and Service Industrial purposes, and needs reconsideration. The area zoned for Service Industrial activities on one side of the southern portion of Ireland Street is largely not taken up. It is also located on steep land and with constrained access. It has a better relationship to adjacent residential development. The Existing park at the entrance to the Town Centre provides no amenity to Town Centre, it lacks surveillance and safe and convenient access. Existing park between Church and Groom is zoned General Commercial.</td>
<td></td>
</tr>
<tr>
<td><strong>LANDUSE</strong></td>
<td>Limited nature of retail opportunities</td>
<td>The Core comprises essentially a duplication of basic convenience and service outlets, offering little comparison shopping. There is leakage of comparison expenditure to centres outside of Verulam.</td>
<td>The town Centre needs to play an appropriate and complimentary role in relation to other nodes along the R102. Consider upgrading to higher order centre.</td>
</tr>
<tr>
<td></td>
<td>No distinguishable Civic Cluster</td>
<td>A number of civic facilities are spread across the Town Centre There are only a limited number of facilities and there are no facilities such as administrative offices, halls, etc.</td>
<td>A latent cluster of civic facilities exist in relation to the magistrates court, the library and welfare facilities, in and around the well maintained park between Church and Groom.</td>
</tr>
<tr>
<td></td>
<td>Emerging office cluster around magistrates court</td>
<td>The regional court attracts the presence of legal offices</td>
<td>This existing trend should be exploited and benefited to create an office cluster within the town Centre.</td>
</tr>
<tr>
<td></td>
<td>Disconnected Parking facilities and poor visibility and access</td>
<td>The Zoning facilitates central block parking. Several of these have been developed, but they are disconnected and lack clear and visible ingress</td>
<td>These should be consolidated and extended with improved entry identification.</td>
</tr>
<tr>
<td></td>
<td>Inadequate Taxi facilities</td>
<td>A major taxi facility exists along both sides of Ireland Street near the intersection with George Sewpersad Street</td>
<td>There is a priority need to eliminate this facility from impeding traffic movement. An appropriately located and sized facility needs to be created.</td>
</tr>
<tr>
<td><strong>HEIGHT</strong></td>
<td>Exiting Town Centre height resembles suburban setting of two stories</td>
<td>The majority of the buildings within the Town Centre have not taken up their maximum height permitted in terms of the scheme.</td>
<td>Intensify redevelopment of the core allowing for the use of existing development rights and adopt a form based approach to zoning to encourage a greater townscape quality.</td>
</tr>
<tr>
<td><strong>F.A.R</strong></td>
<td>Substantial F.A.R with limited take-up</td>
<td>The present F.A.R factor within the core is 2.5. This has not been realised within the present format of development. In projecting full bulk takeup, it appears that the study area has an excessive F.A.R for its scale.</td>
<td>Consider careful distribution of bulk mainly zoning review.</td>
</tr>
</tbody>
</table>


## 7.1 KEY ISSUES (CONTINUED…)

### PLANNING AND SPATIAL DEVELOPMENT

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<tr>
<td>Town Centre Structure</td>
<td>Recognized core; - Walking distance - Cluster in frame around core</td>
<td>The present format of development observes the traditional CBD structure of the Core and Frame.</td>
<td>Future development should reinforce the present well contained structure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A clear and distinctive entrance for Verulam needs to be established to serve as a orientation element which contribute to the legibility, imageability and sense of place;</td>
</tr>
<tr>
<td>Lack of clear gateway or sense of entry.</td>
<td>Although the Town Centre is well defined due to its edges created by the Mdloti River, the R102 and the rail line Verulam lacks a clear gateway or entry point.</td>
<td></td>
<td>Should be maintained and enhanced</td>
</tr>
<tr>
<td>Clear Transport Node</td>
<td>The railway station lacks a clear identity and the present road based facilities are under stress. These however are well located in their present ‘frame’ positions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permeability, Movement and Structure</td>
<td>• Mobility along Ireland street is reduced due to the number of taxi’s along the street; • Lack of clarity exists due to the similarity of streets; • Town centre fits within a 400m range or 5 minute walk and therefore is pedestrian friendly</td>
<td></td>
<td>Redevelopment and restructuring of transport termini to alleviate on street congestion. Redevelopment of streetscapes to create individual character and the roles in which the streets play within the city.</td>
</tr>
<tr>
<td>Image and Identity</td>
<td>A number of landmarks have been identified as; • Historical building at the intersection of Wicks and Moss Street; • Mosque along Wicks Street; and • Municipal buildings along Wicks &amp; Moss Street; • Negative edge conditions along the northern and southern portions of Wicks Street, Railway Street as well as the northern portion of Ireland Street; • The central portion of Wicks Street typifies a village high street creates a distinct image for the town.</td>
<td></td>
<td>Landmarks need to be celebrated and given more emphasis, which will give Verulam a a clear image and identity.</td>
</tr>
<tr>
<td>Complexity and a Mix of Uses</td>
<td>There is a good mix of land use within the town centre, although no major retail brands are evident within the town centre. Greater residential integration would enhance complexity of the town centre.</td>
<td></td>
<td>Consider enhancing residential amenity in town centre and incentivize residential within the core.</td>
</tr>
<tr>
<td>Public Space</td>
<td>• Very limited public open space exists; • General street and building conditions are poor which detract from the overall quality of the area; • Discontinuous building edges detract from a positive building / space relationship; • Wicks Street, particularly the central portion, functions as a key linear public space, however this is in conflict with current traffic functions resulting in significant conflict.</td>
<td></td>
<td>Investigate the redevelopment and upgrading of the public realm, in particular Wicks Street as a liner high street.</td>
</tr>
</tbody>
</table>
### 7.1 KEY ISSUES (CONTINUED…)

**URBAN MORPHOLOGY**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Urban Performance</td>
<td>Local Area 1 - Commercial Core</td>
<td>Movement, circulation &amp; parking: The uses along Wicks Street encourages pedestrian movement and results in pedestrian crossing virtually along the entire length of the central portion in a fairly unmanaged way.</td>
<td>Reconsider the role of Wicks Street within the Town centre.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definition of space: Due to the lack of continuity of built fabric along the main commercial core building edges such as colonnades are also disjointed.</td>
<td>Negative edges and interfaces need to be addressed through city upgrading as well as appropriate land use and zoning controls, such as a more form based zoning approach.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active edge: The eastern side of Wicks Street consists of a few open lots and abandoned buildings as well as some commercial opportunities.</td>
<td>Concentrated infill development and upgrades within the commercial core should be encouraged.</td>
</tr>
<tr>
<td>Urban Performance</td>
<td>Local Area 2 - Service and light industry</td>
<td>Movement, circulation &amp; parking: The northern portion of Wicks Street ends in a cul-de-sac as a result of the edge created by the Mdloti river. Due to the lack of connectivity and its largely isolated character, within this precinct the intensity of activity is low.</td>
<td>Investigate new linkages within the area to increase intensity and continuity of the Town centre.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definition of space: The built fabric is fragmented due to the low intensity of use. The condition of the buildings is poor.</td>
<td>Negative edges and interfaces need to be addressed through city upgrading as well as appropriate land use and zoning controls, such as a more form based zoning approach.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active edge: Low intensity of activities within the northern portion of Wicks Street relates to the existing low intensity of development.</td>
<td></td>
</tr>
<tr>
<td>Urban Performance</td>
<td>Local Area 3 - Transport and commercial hub</td>
<td>Movement, circulation &amp; parking: Ireland Street is congested with taxis due to the bus and taxi facility at the corner of Moss Street and Ireland Street. Indicating a need for improved and extended facilities being required.</td>
<td>Investigate an alternative and improved location for current transport facility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definition of space: Development along Ireland Street is fragmented and the intensity is low.</td>
<td>Negative edges and interfaces need to be addressed through city upgrading as well as appropriate land use and zoning controls, such as a more form based zoning approach.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active edge: Intensive activity is located around the bus and taxi facilities which dissipates towards and southern portion of the street.</td>
<td></td>
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</table>
### Urban Morphology

<table>
<thead>
<tr>
<th>Sector</th>
<th>Core Issue</th>
<th>Description</th>
<th>Implications for Planning &amp; Design</th>
</tr>
</thead>
</table>
| Urban Performance | Local Area 4 - Gateway precinct | **Movement, circulation & parking**  
Ireland Street and Wicks Street are the main gateways into Verulam, however undefined and not celebrated.  
**Definition of space**  
The entrance to Verulam is focused around mobility rather than accessibility therefore the built form is fragmented.  
**Active edge**  
Low intensity of activities within the area relates to the existing low intensity of development. | Create a clear distinct gateway into Verulam  
Negative edges and interfaces need to be addressed through city upgrading as well as appropriate land use and zoning controls, such as a more form based zoning approach. |
| Urban Performance | Local Area 5 – Station Precinct | **Movement, circulation & parking**  
Limited pedestrian linkages are located within the mid-block behind the train station to the commercial core.  
**Definition of space**  
The station precinct is treated as the ‘backend’ of town therefore the built form is fragmented and intensity is low.  
**Active edge**  
Development within this precinct is low therefore a low intensity of activities is primarily seen. | The is a need to define and increase pedestrian access throughout the Town Centre clearly connecting all transport termini  
Negative edges and interfaces need to be addressed through city upgrading as well as appropriate land use and zoning controls, such as a more form based zoning approach. |
## 7.1 KEY ISSUES (CONTINUED…)

### TRAFFIC AND TRANSPORT

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<thead>
<tr>
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<tbody>
<tr>
<td>TRAFFIC AND TRANSPORTATION</td>
<td>Road pavement conditions</td>
<td>The Town Centre road network is predominantly in good condition, with localized areas where immediate attention is warranted. The road pavement condition of the district collector routes in the vicinity of the study area is in poor condition and requires attention.</td>
<td>Poor pavement conditions decreases user comfort, increases travel times and poses safety threats. It therefore makes the access to Verulam Town Centre less attractive and deters trips. Rehabilitation, maintenance and upgrades required to redress this.</td>
</tr>
<tr>
<td>Pedestrian Facilities</td>
<td>Numerous accidents and high risk of collision</td>
<td></td>
<td>Improved pedestrian facilities are required throughout the Verulam Town Centre to facilitate safe movement of pedestrians and reduce existing accident trends. Gear the city core to accommodate pedestrians.</td>
</tr>
<tr>
<td>Public transport</td>
<td>The Verulam Town Center is serviced by rail, bus and mini-bus taxi services, making the area highly accessible by public transport. Due to the high levels of public transport provision, the Verulam Town Centre acts as a transportation hub which serves not only Verulam but also surrounding residential and rural areas. High levels of public transport trips suggests that the area is utilized as a local economic centre and a transfer node to the northern region of the Municipality</td>
<td>The eThekwini Transport Authority is currently undertaking a process to restructure the public transport system of the Municipality.</td>
<td></td>
</tr>
<tr>
<td>Regional and Local Accessibility</td>
<td>The Mdloti River, R102(MR2) and rail line impedes movement and limits accessibility between the study area and the surrounding residential areas.</td>
<td>These divides are currently crossed at isolated points, thereby providing limited integration or permeability between Verulam Town Centre and surrounding local areas.</td>
<td></td>
</tr>
<tr>
<td>Local Roadway Capacity</td>
<td>Todd Street and the MR79 form two of three major district distributors that service the Verulam Town Centre. These routes are utilised by traffic originating/destined for regions to the of the Town Centre due to the lack of suitable alternate routes.</td>
<td>This through traffic results in unnecessary congestion and vehicular movement through the major access into and out of the Town Centre.</td>
<td></td>
</tr>
<tr>
<td>Modal Split</td>
<td>The R102(MR2), MR79(M27-Umdloti Link) and Todd Street district collector routes are currently experiencing traffic demands at close to their theoretical capacity.</td>
<td>This could impair future development and growth in the study area especially if the Verulam Town Centre is to rely on a wider market area to ensure sustainability.</td>
<td></td>
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</table>

Verulam currently has a large public transport patronage (47% out & 62% in). Current public transport modal split should be maintained and improved upon. This must be achieved through improved levels of service to attract a greater person trip market share.
### 7.1 KEY ISSUES (CONTINUED...)

#### INFRASTRUCTURE

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<tr>
<td>BULK SERVICES</td>
<td>Stormwater</td>
<td>No records of the as-built bulk stormwater pipelines within the study area have been able to be obtained from eThekwini Municipality. A CCTV inspection is presently being undertaken to determine accurate stormwater information i.e. invert levels, pipe diameters, pipe replacement, point repairs etc. within the Verulam CBD. Most of the stormwater infrastructure is over 50 years old. All stormwater is discharged into the Umdloti River flowing along the north eastern border of the Verulam CBD.</td>
<td>Once the information is obtained it can be ascertained where critical areas exist. It is recommended that surveys be undertaken in order to improve the data quality of the database. This will identify key areas where stormwater overflows could occur. eThekwini requires on site attenuation for new developments as stipulated in the “eThekwini Design Manual for Guidelines and Policy for the Design of Stormwater Drainage and Stormwater Management Systems”.</td>
</tr>
<tr>
<td>Sewer</td>
<td></td>
<td>The sewer reticulation ranges from 150mm to 450mm diameter pipes with many of the pipe sizes still unknown. The sewer from the surrounding Verulam areas are pumped or gravitated to the 450mm diameter sewer trunk main which flows through the Verulam CBD. The sewer from the Verulam CBD flows in an easterly direction and drains to the Verulam Wastewater treatment works located approximately 1.6 km’s from the Verulam CBD. The treatment works is situated about 9km up the Mdloti River from the Umdloti lagoon and serves the western areas of the catchment consisting of Verulam and Canelands. The current hydraulic capacity of the treatment works has recently been upgraded from 10 Ml/day to 12.5 Ml/day. eThekwini has indicated that the Average Daily Flow received may go up to 12Ml/day in summer. In this instance, the treatment works would not have capacity for additional discharge.</td>
<td>It is recommended a comprehensive analysis be carried out on the existing sewer network in the area. This analysis needs to be based on the scale of the development and landuse. A survey needs to be undertaken to determine relevant connection points, sewer pipe diameters and gradients. The capacity of the existing system will need to be analysed to determine if the existing system can cater for the additional flow.</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td>Verulam CBD currently receives water supply predominantly from Durban Heights Water Treatment Works. Grange Water Reservoir is the primary reservoir that supplies most of Verulam CBD. Grange Reservoir is situated on Parabat Crescent and has a storage capacity of 9.1 Ml. Mountview Reservoir supplies Ireland Street in the Verulam CBD. Mountview Reservoir is situated on Fairview and has a storage capacity of 10 Ml. eThekwini has indicated that there is sufficient capacity for future development. The current service commitments in the Verulam CBD area are the replacement of the Asbestos Cement (AC) watermains, which is a project in progress. Several pipes are also being upsized as part of the project and the project is due to be complete within the next 3 months. Pipe diameters range from 50mm to 300mm.</td>
<td>The pipe infrastructure is currently adequate but would need to be re-assessed for future developments. Additional reservoir storage is available for limited future developments within the area.</td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td>Verulam Major sub-station provides the majority of the electricity supply in the study region at 33/11kV. The electricity from this major sub-station is fed into the network to 3 distributors and smaller sub-stations strategically placed within the CBD. Currently the capacity of the electricity supply within this region can be considered to be at near capacity. The Morelands Major sub-station, situated near Canelands, towards the north of Verulam CBD has 2 x 30 MVA transformers but only supplies 12 MVA. The Morelands Major sub-station is linked to the network in certain areas around Verulam.</td>
<td>A possible solution to cater for future developments within Verulam CBD is to get electrical supply from the Morelands Major sub-station. However, this is heavily dependent on type, extent and geographic position of the future development. Once the scope and category of the development has been determined a proposal needs to be submitted to the municipality.</td>
</tr>
<tr>
<td>Solid Waste</td>
<td></td>
<td>Currently the solid waste is collected daily by the eThekwini Municipality and is then transported to Buffelsdraai landfill site located in Osintsweni, Verulam, approximately 8.5km’s from Verulam CBD. The Buffelsdraai landfill has a capacity of 100 ha and a 75 year design life. The landfill is currently receiving between 300 and 400 tons/day. There are presently no capacity problems and the system will be able to manage solid waste produced from the proposed development.</td>
<td>The Landfill is relatively new and therefore has no current capacity problems. It will also be able to cater for the additional waste generated by the proposed new developments.</td>
</tr>
</tbody>
</table>
08 KEY INFORMANTS
8.1 CORE ISSUES FROM SITUATIONAL ANALYSIS

The following four themes were identified as representing the key issues that emerged through the analysis and assessment phases.

1. The economic sector specialist report and the outcomes of the first workshop reinforced the notion that Verulam lacked a clear economic vision. The issues discussed include:
   - Linkages with Regional Development Corridor;
   - Scale of Retail, role of informal sector; and
   - Potential for Offices.

2. Town Centres need to be connected to surrounding areas as well as movement systems therefore connectivity is vital for the growth and upliftment of the Verulam Town Centre.
   - There is a need to investigate alternative regional level access, in particular linkage with R102.

3. Having appropriate zoning framework and land use management system (LUMS) is only part of solution for the regeneration of the Verulam Town Centre.
   - A key focus should be encouraging a regeneration/reinvestment strategy which includes economic and urban management one;
   - There is a need to induce investment through physical and non physical interventions; and
   - There needs to be a focus on containing and strengthening the Core.

4. The analysis and assessment of the Verulam Town Centre identified two key levers for change. These include:
   - Upgrading and establishing appropriate infrastructure and systems; and
   - Upgrading and supporting the development of the Wick Street as a high Street.
Emanating from the first public workshop the following issues were put forward by the Verulam community as representing key needs:

1. Wicks Street/ Market Area to join the R102 northbound;
2. The need to investigate the continuation of Railway Road (link Todd Street to Lotusville Industrial Area);
3. Consider the widening of the M27 – East Verulam to N2;
4. Consider the widening of Russom Street by schools, and the possibility of creating additional parking;
5. Investigate re-opening the link road between Russom Street and the M27 West;
6. Consider the development of Orient Park;
7. Investigate the possibility of the redevelopment of the existing taxi ranks:
   7.1. Move Tongaat Rank to Russom Street and create a holding rank on Moss Street;
   7.2. Move Trenance Park/ Waterloo rank to Wicks Street;
   7.3. Move Durban/ Phoenix Rank to Gandi Park;
8. Consider demolishing the dilapidated buildings in CBD;
9. Investigate the possibility of establishing an indoor sports facility;
10. Upgrade the old Verulam Prison;
11. Possible development of a parkade for Verulam Market;
12. Consider the possibility of establishing a fire station;
13. Investigate the possibility of developing a land-fill at Wicks/ Ireland Street & R102;
14. Encourage and support the development of a Town Hall;
15. Encourage redevelopment at the bottom of Wicks Street.
9.1 A PERFORMANCE BASED APPROACH TO DESIGN

Getting the basics right requires an approach which promotes particular ‘urban truths’. These are the timeless qualities which create opportunity, facilitate choice, promote safety, encourage investment and which has at its basis the development of places that work for all people. The following represents key criteria considered important in developing successful Town Center’s and CBD’s.

Diversity & Complexity
To ensure that a high degree of integration of activities exists to promote access to a wider range of opportunities and experiences. A diverse environment increases levels of choice available to its users.

People Centered Environments
To ensure that the environment created has as its ultimate basis, a focus on accommodating the needs of people and a human scale.

A Legible Environment
To ensure that the environment created is easily understood by all users to enable choice and that different elements and functions are clearly understood.

Permeability
To enhance a system of movement which offers a variety of choice for people. Permeability should be enhanced for all users including vehicular and pedestrian movement.

Continuity & Enclosure
To ensure that all public spaces and streets are adequately Defined allowing for surveillance, safety and in turn use.

A High Quality Public Realm
To promote the development of a high quality public environment with attractive and safe public spaces and streets.

A Robust City
To respond to growth and is able to adapt to changes in patterns of investment. Allowing for flexibility in growth is vital.
9.2 DEVELOPMENT STRATEGY

The development strategy for the Verulam Town centre; as depicted graphically on the right, seeks to establish a DYNAMIC TOWN CENTRE which is underpinned by six interrelated PILLARS. At an overall level, the vision and role of the Verulam Town Centre is to continue to serve as a diverse town centre catering for a wider range of urban functions serving for its immediate town catchment and its current rural hinterland. Verulam should maintain the highest levels of urban diversity performing as a metropolitan scale urban node. To achieve greater levels of diversity and Town Centre functionality, it is suggested that urban renewal and future growth be underpinned by six PILLARS. These are;

1. Creating an Integrated Movement System: so as to ensure greater regional connectivity and local functionality and choice;

2. Establishing a Supportive Public Space System: to ensure that a town centre of the highest public quality, sense of place and identity is created;

3. Encouraging a Diverse Land Use Mix: ensuring that greater levels of choice are available across a wide range of Town Centre functions;

4. Ensure a Responsive Built Environment: enabling the urban form of the Town Centre to successfully support the needs of its users;

5. Encouraging Local Economic Development: support and ensure the promotion and marketing of the Verulam Town Centre, the integration of the informal sector with the SMME activities and precinct establishment and improvements;

6. Ensure Appropriate Urban Management: appropriate urban management has the potential to make a major contribution to ensuring that the vision for the development of the Verulam CBD is fulfilled.
9.2 DEVELOPMENT STRATEGY

VISION

TO CREATE A DYNAMIC TOWN CENTRE

1. AN INTEGRATED MOVEMENT SYSTEM
   - 1.1 Regional Connectivity
   - 1.2 Create a Permeable CBD
   - 1.3 CBD Parking Strategy
   - 1.4 Create Supportive PT System

2. A SUPPORTIVE PUBLIC SPACE SYSTEM
   - 2.1 Develop Primary Order Town Scale Space
   - 2.2 Establish Secondary Order Urban Space
   - 2.3 Develop Town Centre Planting Strategy
   - 2.4 Enable Access to a Range of Landscapes

3. ENSURE A DIVERSE LAND USE MIX
   - 3.1 Rationalise Land Use Structure
   - 3.2 Build New Competitive Precincts
   - 3.3 Ensure Vibrant and 24hr Activity
   - 3.4 Enhance Retail Opportunity

4. ENSURE A RESPONSIVE BUILT ENVIRONMENT
   - 4.1 Create an Urban Block Structure
   - 4.2 Define the Street / Building Relationship
   - 4.3 Encourage Legibility of Built Environment
   - 4.4 Promote Compaction of Town Centre

5. LOCAL ECONOMIC DEVELOPMENT
   - 5.1 Integration of Informal Sector / SMME Activity
   - 5.2 Precinct Establishment and Improvement
   - 5.3 Promotion and Marketing of Verulam

6. ENSURE APPROPRIATE URBAN MANAGEMENT
   - 6.1 Maintain stakeholder participation
   - 6.2 Establish Transport / Parking Management Plan
   - 6.3 Urban Management Plan
   - 6.4 Precinct Plan Implementation
10 TOWN CENTRE CONCEPT AND VISION
10.1 INTEGRATED MOVEMENT SYSTEM

An integrated movement system is considered essential serving as the ‘backbone’ to the redevelopment and growth of the Town Centre. The following are identified as key strategies for this pillar of the vision.

10.1.1 Regional Connectivity
- Establish improved linkages to the R102

10.1.2 Create a Permeable CBD
- New internal street connections;
- Reinforce pedestrian links;

10.1.3 CBD Parking Strategy
- Develop internal parking courts;

10.1.4 Create Supportive Public Transport System
- Formalise existing and create new holding areas west of Ireland Street;
- Create new taxi rank adjacent to the station;
- Upgrade rail station – linkage – node.

10.1.5 Integrated Movement System Synopsis
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.1 REGIONAL CONNECTIVITY

Establish Improved Linkage to the R102

Creating additional linkages to regional movement networks such as the R102 allows Verulam to grow and connect appropriately to other surrounding centers and reinforce its role within the Northern Development Corridor. The development of the new airport, roughly 10 kilometers away, highlights the need for Verulam to be better connected given the and likelihood for economic growth around the airport.

It is therefore proposed that a new link created by extending the northern end of Ireland Street. This would run parallel to the R102 across the Mdloti River, linking to an existing gravel track along the rivers edge, through the bridge, connecting to the R102 at the Vincent Dickens intersection.

Providing alternative movement routes to the R102 releases the pressure on the existing systems and provides greater permeability and choice within the Town Centre.

Whilst this particular strategy identifies a potential route alignment, it is important to stress that it is the content and concept of regional connectivity that is important. As such various alternatives may exist and future transportation modeling is required to confirm the most feasible option. At a strategy level, the key issue is to find alternative linkages between the R102 and the town centre.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.2 CREATE A PERMEABLE CBD

New Internal Street Connections

Providing additional internal street connections within and around the Verulam Town Centre allows for choice of movement.

The potential new connections include:

1. Providing a link between Russom Street and Inanda Road which relieves the pressure created by Verulam Primary School and Mount View Secondary School;

2. Extending Railway Street in a southerly direction to connect with Wick Street improving the Town Centre grid, improving circulation and permeability of the southern portion of Verulam. This also improves access to the station;

3. The extension of Dore Street creates opportunities within the northern portion of the Town Centre. Land which was previously deemed poor in terms of accessibility would then be connected, with improved accessibility to the R102.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.2 CREATE A PERMEABLE CBD

Reinforce Pedestrian Links

A large percent of the people who use the Verulam CBD rely on public transport and are pedestrian based once in the Town Centre. It therefore becomes a fundamental design principle to improve and encourage pedestrian linkages throughout the Town Centre.

Many arcades and pedestrian walkways exist between the CBD blocks, however additional linkages and connections are required to increase permeability and ease of movement. Improving the existing and the creation of new internal links facilitates a dynamic and robust Town Centre.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.3 CBD PARKING STRATEGY

Develop Internal Parking Courts

The development of internal parking courts allows for better utilisation of mid-blocks as well as alleviates current pressure experienced along the streets within Verulam.

In order for land owners to greater utilise their land rights, mid-block parking courts will need to be established.

Structured parking within the parking courts are also encouraged within these spaces. Mid-block parking courts would also create a new focus within the internal core of each Town Centre block.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.4 CREATE A SUPPORTIVE PUBLIC TRANSPORT (PT) SYSTEM

Formalise the Existing Rank and Create New Holding Areas
West at Ireland Street

The formalisation of the existing ranking facilities along Ireland Street will alleviate pressure currently being experienced. The removal of the taxis along Ireland street to either the upgraded ranking facilities or the new designated holding facility will encourage ease of movement, mobility and safety along Ireland Street.

Taxi holding will be discouraged along Ireland Street and appropriate facilities will be established and encouraged along Shalimar Road. Access and movement to and from the holding and ranking facilities will be via Moss Street.

The development of a quality public transport facility will provide dignity and safety to all users and surrounding property owners and serve as a catalyst for broader regeneration within this part of the Town Centre.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.4 CREATE A SUPPORTIVE PUBLIC TRANSPORT (PT) SYSTEM

Create a New Taxi Rank Adjacent to Station

The development of an additional ranking facility would ease the pressure currently being experienced on Ireland Street. The development of an additional taxi rank facility in close proximity to the station would provide the basis for the creation of an intermodal facility. The development of an intermodal facility provides for better services and choice of movement for all commuters.

The development of the additional ranking facilities as well as the extension of Railway Street gives new impetus for growth for the southern part of the CBD.
10.1 INTEGRATED MOVEMENT SYSTEM

10.1.4 CREATE A SUPPORTIVE PUBLIC TRANSPORT (PT) SYSTEM

Upgrade Rail Station – Linkage - Node

The extension of Railway Street and the development of a taxi rank adjacent to the railway station encourages the upgrading of the railway station. The upgrading will include:

1. Improving pedestrian linkages from Garland Street and the Eastern component of Verulam;
2. Improved linkages between the existing station and the new ranking facilities.

The following sketch gives an indication of what the linkage upgrade at the station node may resemble.
10.1 INTEGRATED MOVEMENT SYSTEM

This illustrates the potential upgrading of the rail station which could include improving the public environment, providing shade and protection for commuters, improving lighting and security.
10.1 INTEGRATED MOVEMENT SYSTEM

There is a need for greater connectivity between the Town Centre and the regional mobility route – R102. The development of additional north/south linkages parallel to the R102 allows Verulam to integrate more fully with the regional corridor giving the town greater choice and opportunity.

Providing additional regional and local connections completes a typical grid like movement system. The grid like system helps the ease of movement within the Town Centre as well as the surrounding areas.

Additional pedestrian connection throughout the town allows maximum movement and choice. An improved pedestrian movement system will allow for a dynamic and active town centre.

Upgrading and developing new transport facilities throughout the Town Centre will allow greater order and focused systems that will meet the needs of commuters better and distribute public transport more equitably and safer within the Town Centre.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

A supportive public space system within a Town Centre improves the value of the area, the quality of life and well-being for the Town Centre users as well as the aesthetic appeal and memorability. The following are considered key strategies in term of a supportive public space system:

10.2.1 Develop Primary Order Town Scale Space
- Reclaim wicks street as a linear high street;
- Redevelopment of Mahatma Gandhi Park and prison;

10.2.2 Establish Secondary Order Urban Space
- Investigate pocket park & courtyard space within the core;
- Develop external space at transport nodes;

10.2.3 Develop Town Centre Planting Strategy
- Develop formal approach & gateway;
- Planting strategy.

10.2.4 Enable Access to a Range of Landscapes
- Improve linkages to active recreation space;
- Enhance quality of uMdloti river corridor.

10.2.5 Supportive Public Space System Synopsis
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.1 DEVELOP PRIMARY ORDER TOWN SCALE SPACE

Reclaim Wicks Street as Linear High Street

Wick Street is considered as the “High Street” of Verulam and is synonymous with the character and identity of place. It contains the highest level of use, greatest intensity and diversity of activity. Whilst it serves as the core of the retail component of the Town Centre it suffers a ‘crisis of identity’, in that it performs a dual function, i.e.: a key traffic route and a key retail space. This results in pedestrian and vehicular conflict. In order to reduce conflict it is proposed that Wicks Street is reclaimed as a linear high street, whilst providing vehicular access to public transport and delivery vehicles only. The road will be narrowed to allow one lane of traffic in each direction. Lay-by’s will be created at a number of points along the street allowing for public transport pick-up and drop-off points as well as loading zones for delivery vehicles. Parking will only be provided for disabled persons. Pavements will be extended providing for a generous public space increasing public amenity and use.

The development of Wicks Street of a linear high street will allow for the creation of a dynamic and vibrant Town Centre, stimulating investment and development of a unique streetscape.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

International and national precedent has demonstrated the positive impacts of pedestrianisation. Key observations include:

- Pedestrian streets usually occur within CBD core areas where critical mass has developed and where retail activities are primarily serviced by pedestrian movement rather than motor vehicle related shopping.
- Pedestrian areas can be established in historic CBD’s or relatively new centers.
- A concerted effort is made in transforming the road way into a pedestrian friendly space which may include areas set aside for planting, seating, dining and trading.
- Pedestrian streets are usually supported by parallel roads providing for vehicular traffic with parking. In particular cases, pedestrian streets can be traversed by vehicular routes with these intersections being carefully managed or trafficked calmed.

The next pages indicate the redevelopment proposals for Wicks Street.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.1 DEVELOP PRIMARY ORDER TOWN SCALE SPACE

Existing Street Typology

Wicks Street currently contains four lanes of traffic - two lanes in each direction. This particular stretch of Wicks Street consists of 45° and parallel parking. Walkways on either side are congested and movement along them is constrained.

Phase 1

The central upgrading of Wicks Street is currently underway. The current phase of work consists of the upgrading of pavements and sidewalks, new street trees and providing feature lighting.

Phase 2

Phase 2 of the redevelopment of Wicks Street could include the extension of the sidewalks alternating on both sides of the road allowing for trading areas and street side café’s. It is suggested that the road is narrowed to two lanes, one in either direction with a public transport lay-by or loading bay provided. This proposal suggests that movement along this stretch of the road will be limited to public transport and delivery vehicles.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

This illustrates the potential upgrading of the Wick Street which consists of narrowing the existing road to allow only public transport and delivery vehicles with lay-by’s for deliveries and public transport users. The redevelopment focuses on improving the public realm and providing permanent structures for traders, bus shelters and ease of movement for Town Centre patrons.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

This illustrates the eastern side of Wick Street with the proposed improvement to the public realm and the widening of the pedestrian space. A bus shelter is also depicted along Wick Street.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.1 DEVELOP PRIMARY ORDER TOWN SCALE SPACE

Redevelopment of Mahatma Gandhi Park and the Historic Prison

The development of an office/civic precinct is encouraged at the eastern end of Moss Street due to the location and close proximity of the regional magistrates court, civic buildings, old prison as well as other associated offices.

The redevelopment of Gandhi Park and the prison will give this precinct a unique and welcoming character. At present the park is underutilised as the nature of the topography creates areas that are underutilised. Leveling and redeveloping the park will allow for a much needed recreational space in the heart of the precinct. The redevelopment of the park should include the hard landscaping and texture change surrounding streets and parking surfaces.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.2 ESTABLISH SECONDARY ORDER URBAN SPACE

Investigate Pocket Park and Courtyard Space within the Core
Coupled with encouraging the development of urban blocks, would include encouraging the redevelopment of the inner block for parking, communal space, and deliveries.

Inner block development along Wick Street will alleviate congestion currently being experienced due to lack of parking and pedestrian movement. Importantly, in terms of this strategy is the potential to redevelop the core of each block as usable public space which is tied to the local pedestrian network.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.2 ESTABLISH SECONDARY ORDER URBAN SPACE

Develop External Space at Transport Nodes

Developing the external spaces surrounding the transport nodes will help create places of dignity that commuters can use and enjoy between destinations. It is proposed that the spaces should be paved, seating and shelters provided as well as landscaping to provide shade and greater aesthetic appeal.

The upgrading of public transport facilities and their environments will encourage greater patronage.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.3 DEVELOP TOWN CENTRE PLANTING STRATEGY

Develop Formal Approaches and Gateways

Developing a formal approach and gateway to the Town Centre will give users a sense of arrival. Establishing improved gateways and approaches would reinforce the legibility and imageability of the Town Centre. This would represent an important component of the overall public space enhancement.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.3 DEVELOP TOWN CENTRE PLANTING STRATEGY

Planting Strategy
A planting strategy throughout the Town Centre will assist in the public realm upgrades. The planting of trees will facilitate the aesthetic appeal of Verulam, as well as provide much needed shaded areas and spaces for gathering within the Town Centre.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.4 ENABLE ACCESS TO A RANGE OF LANDSCAPES

Improve Linkages to Active Recreation Space

Providing better access, both pedestrian and vehicular to recreational spaces within the Verulam Town Centre will increase the value of the open spaces. Increased access will increase usage of the existing facilities.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

10.2.4 ENABLE ACCESS TO A RANGE OF LANDSCAPES

Enhance the Quality of Umdloti River Corridor

Rehabilitating and enhancing the Umdloti river corridor at the end of Wick Street will provide an essential recreational node for the Verulam community. The upgrade could include a park with an established water course, nature trails and picnic facilities and generally contribute to the rehabilitation of the river at this point.
10.2 SUPPORTIVE PUBLIC SPACE SYSTEM

Upgrading and investment in the public realm within the Town Centre will occur through a number of initiatives. These include;

- The reclaiming of Wicks Street;
- Developing civic Precincts
- Creating pocket parks and courtyards within the core;
- Developing external space at transport nodes;
- Creating formal gateways and approaches;
- Introducing a planting strategy;
- Improve access to recreational spaces; and
- Enhance the quality of the Umdloti corridor.
10.3 ENSURE A DIVERSE LAND USE MIX

A dynamic Town Centre relies on a diverse land use mix and vibrant 24 hour activity. The following represents key proposals in terms of land use activity;

10.3.1 Rationalise Land Use Structures
   - Formalise light manufacturing precincts;

10.3.2 Build New Competitive Precincts
   - Define new office & civic cluster;
   - Redefine civic gateway node (police station site);

10.3.3 Ensure Vibrant & 24hr Activity
   - Encourage high density residential development;
   - Ensure an active edge/ base within the core;

10.3.4 Enhance Retail Opportunities
   - Strengthen existing & identify new formal retail centers;

10.3.5 Review Town Planning Scheme

10.3.6 Ensure a Diverse Land Use Mix Synopsis
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.1 RATIONALISE LAND USE STRUCTURE

Formalise A Light Manufacturing Precinct

A mixed use and light industrial precinct is encouraged at the lower end of Wick Street, where activities of this nature are currently located. The development and upgrading of this precinct is important in the redevelopment and upliftment of the Verulam Town Centre.

The proposed additional internal linkages allows for the development of parcels of land which were previously inaccessible. Appropriate infill development within this precinct is to be encouraged. The development of this area as a light manufacturing precinct should be encouraged due to the proximity to the new Airport.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.2 BUILD NEW COMPETITIVE PRECINCTS

Define New Office and Civic Cluster

In perusing the development of this area as a predominantly office-related precinct suggests the need for additional offices framing the precinct and Gandhi Park. The redevelopment of the civic cluster around the court and magistrate offices, may induce further development of this nature. A key proposal in this regard is allowing for new office development.

Framing the park with additional offices will give the park additional surveillance which it currently lacks and at the same time provides improved amenity in this zone.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.2 BUILD NEW COMPETITIVE PRECINCTS

Redefine the Civic Gateway Node (Police Station Site)

A new civic gateway at the Southern end of Wick Street is proposed. It is proposed that the node consists of a new and upgraded police station adjacent to the proposed intermodal facility, therefore providing additional surveillance and support to the transport facility. A town Hall within the precinct at the Southern end of Wick Street. The positioning of the Town Hall at the entrance and high point of Wick Street, which is slightly higher than the rest of the Town Center will give it landmark status and importance.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.3 ENSURE VIBRANT & 24HR ACTIVITY

Encourage High Density Residential Development

Encouraging high density residential development gives the Town Centre a diverse mix of activities, vibrancy and a twenty-four hour appeal.

At a general level throughout the core of the Town Centre, a revised land use scheme should actively encourage through incentive zoning the inclusion of upper floor residential development.

Providing residential development within the Town Centre also allows people to live and work within the same area, reducing travelling distances and costs.
10.3 ENSURE VIBRANT & 24HR ACTIVITY

Ensure an Active Edge/ Base Within The Core
An active base is encouraged within the Town Centre as active edges simulate activity and surveillance within the core. All edges within the core need to respond positively to the public realm encouraging interaction between the buildings and the street interface. Buildings need to be developed along the street edge creating a continuous built façade.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.4 ENHANCE RETAIL OPPORTUNITY

Strengthen Existing and Identify New Formal Retail Centers

A new formal retail centre is proposed for the Southern end of Wick Street opposite to the existing Pick ‘n Pay complex. The shopping precinct within the Verulam Town Centre currently does not include any major retail brands or chain stores. A new shopping precinct could facilitate choice and therefore decreasing the need to shop outside the Town Centre for competitive shopping.

Strengthening of the existing retail component within the core also encouraged and this may be achieved through the redevelopment of the Town Centre and encouraging individual owners to reinvest within the core.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.4 ENHANCE RETAIL OPPORTUNITY

Enhance Formal Retail Opportunity within Transport Nodes

Formalising and improving retail opportunities within the transport nodes assists in the upgrading of the current facilities. The development of a more reliable, purposeful transport node will aid commuters and promote formal development within these nodes.
10.3 ENSURE A DIVERSE LAND USE MIX

This illustrates the potential upgrading of the public realm around the existing transport facility along Ireland Street. The extension of the pavement will create a safer and more user friendly environment for commuters, coupled with improved facilities for traders.
10.3 ENSURE A DIVERSE LAND USE MIX

10.3.4 ENHANCE RETAIL OPPORTUNITY

Provide for Informal Trade and Market Activity

Providing organised trading areas within and around the Verulam Town Centre, will alleviate congested areas and clutter on the high streets. Formalised informal trading areas will uplift the public realm and prevent friction between property and create improved relationships between various sectors of the economy. These trading areas would also become a more meaningful component of the retail offering within the Town Centre and a viable part of the local economy.
10.3 ENSURE A DIVERSE LAND USE MIX

This illustrates the potential upgrading along Wick Street between the existing shop fronts and the realigned road edge. Reclaiming portions of Wicks Street will allow for a more generous public realm as well as organised trading areas.
10.3 ENSURE A DIVERSE LAND USE MIX

10.5 REVIEW TOWN PLANNING SCHEME

Towards a Revised Scheme

The current TPS for Verulam would require review to align with the proposals contained within this study. 11.2 The plan on the left depicts a revised land use structure based on the arguments presented in this report, amongst these, the need to reinforce a “core” and “frame” logic. Section 11.2 provides greater detail in this regard and offers guidance towards establishing a more appropriate Land Use Scheme.

- MIXED USE CORE / COMMERCIAL
- LIMITED COMMERCIAL
- BUSINESS PARK / MIXED USE
- OFFICE
- RESIDENTIAL / MIXED USE
- CIVIC / OFFICE
- TRANSPORT NODES
- GATEWAY / OPEN SPACE
- EDUCATION
10.3 ENSURE A DIVERSE LAND USE MIX

Formalising and defining precincts and different land uses within the Town Centre ensures a greater diversity and mix. Catering for a diverse market reduces the need for local residents to travel outside the centre for goods and services required.

Defining specific precincts within the Town Centre gives direction and confidence to developers and property owners to invest within a specific sector.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

Ensuring a responsive built environment will encourage a more legible and active street interface. Appropriate building design encourages activity and stimulates positive growth. The following strategies are included in this pillar of the vision:

10.4.1 Create an Urban Block Structure
- Encourage build-to-edge infill along discontinuous street edges;

10.4.2 Define the Street/Building Relationship
- Encourage colonnaded street edges;

10.4.3 Encourage Legibility of Built Environment
- Encourage corner accentuation;
- Identify iconic building opportunities;
- Protect building of historic & landmark quality;

10.4.4 Promote Compaction of Town Centre
- Define town centre scale urban edge or frame.

10.4.5 Ensure a Responsive Built Environment Synopsis
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

The Redevelopment of a Typical 'City' Block

The following illustrates the key ideas for the redevelopment and infill of built form within the Town Centre

1. The current situation within the Verulam Town Centre comprises of a typical 'city' block with scattered and fragmented development.

2. The redevelopment of the city block inner core suggests inner block parking courts.

3. Coupled with the parking courts would be a courtyard space.

4. Infill development should be directed to the street edges, therefore creating continuous active streetscapes.

5. Streetscape interfaces are encouraged to have colonnaded edges to facilitate activity and provide protection for pedestrians.

6. Developers and property owners are encouraged to utilise their available existing bulk to develop on the upper floors.

7. Corner treatment is encouraged to increase legibility and landmark qualities within the Town centre.

8. Appropriate landscaping along streetscapes and within the city blocks is encouraged.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

10.4.1 CREATE AN URBAN BLOCK STRUCTURE

Encourage Build-to-edge Infill Along Discontinuous Street Edges

Encouraging infill along discontinuous street edges and enforcing build to edge conditions creates dynamic, vibrant and secure streetscapes. Energy and activity dissipates where gaps in the built fabric exist.

The dark orange buildings within the adjacent plan illustrates the potential infill areas to strengthen the urban form. The majority of the infill exists on the extremities of the Town Centre with minor infill required within the areas surrounding the core.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

10.4.2 DEFINE THE STREET/BUILDING RELATIONSHIP

Encourage Colonnaded Street Edges
To encourage the use of streets within the Town centre colonnaded street edges should be maintained and encouraged. The colonnade provides a stronger defined street edge and an active street frontage.

Colonnaded street edges are particularly encouraged around the central portions of the Town Centre where activity is more dominant.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

10.4.3 ENCOURAGE LEGIBILITY OF BUILT ENVIRONMENT

Encourage Corner Accentuation
Corner accentuation is encouraged within the core of the Town Centre as corner treatment helps with the legibility of the streetscapes. Emphasising certain corner points within the urban fabric help pedestrians and motorists navigate around the town easier. Accentuations also indicate where activity is concentrated, usually the centre of the town and acts as reference points for pedestrians. Corner accentuation also encourages a more diverse built fabric.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

Maintain and restore existing corner buildings, they require high quality design on visible corners where new development is proposed.
Identify Iconic Building Opportunity

Iconic buildings play an important role in the legibility of an area. Places of interest or iconic stature help people navigate and contributes to the memorability of the place. At present the Verulam Town Centre does not have an iconic building however the new proposal identifies a site at the southern end of Wicks Street at the entrance to the Town Centre could be developed for a feature building. The site is currently being used by the police. This particular site is at one of the highest points within the Verulam Town, therefore giving it a prominent position within the town.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

10.4.3 ENCOURAGE LEGIBILITY OF BUILT ENVIRONMENT

Protect Buildings of Historic and Landmark Quality

Historic buildings play an important role as they contain the history and of a place. The old Verulam prison, the chimney at the bottom of Wick Street, and the church within Gandhi square are examples of potential historical landmarks within the Town.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

This illustrates the potential of the old prison to be restored and used as a public space. The building is prominently located and contributes positively to the character of the areas. The sketch on the right indicates a revamp and opening up of the prison to become more attractive and inviting.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

This illustrates the potential of the inner courtyard within the old prison to be redeveloped into a meaningful and vibrant public space.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

10.4.4 PROMOTE COMPACTION OF TOWN CENTRE

Define Town A Centre Scale Urban Edge or Frame

A conceptual urban edge has been established for the Verulam Town Centre. The urban edge or frame is “…a demarcated line to manage, direct and control the outer limits of development” (Department of Environmental Affairs and Development Planning; 2005). Future development within Verulam should be directed to the core of the Town Centre in order to concentrate activity. Once development within the core has reached capacity the urban edge would be reevaluated. The actual determination of the Urban Edge should be undertaken as part of the new Land Use Management Scheme for the Town Centre.
10.4 ENSURE A RESPONSIVE BUILT ENVIRONMENT

Encouraging and prescribing specific form based codes to property owners and developers within the Verulam Town Centre will assist in the development of a responsive built environment. Specific development guidelines will help achieve the desired vision for the Town Centre. The guidelines include:

- Build to edge infill along discontinuous street edges;
- Encouraging colonnaded edges;
- Encourage corner accentuations;
- Identify iconic building opportunity;
- Protection of historic or building of landmark quality; and
- Define Town Centre scale urban edge or frame.
10.5 FACILITATE LOCAL ECONOMIC DEVELOPMENT

In the Northern Spatial Plan of the eThekwini Municipality (2008) the Verulam CBD is acknowledged as a node of Metropolitan significance. This suggests a future focus on the redevelopment of the node as, in its current condition, it is merely a local shopping area and a transit zone for commuters. The status quo assessment for this initiative then also illustrated that Verulam serves as a commercial and service node for a large urban and rural population. Further to this the development of the King Shaka International Airport, immediately to the north of Verulam, and the upgrade of the R102 as an alternative access to the Airport presents a range of opportunities for this node.

In order for the Verulam CBD to benefit from the range of economic development opportunities three basic strategies are proposed. The strategies are:

- Integration of Informal Sector / SMME Activity;
- Precinct Establishment and Improvement; and
- Promotion and Marketing of Verulam.

STRATEGY 1: INTEGRATION OF INFORMAL SECTOR / SMME ACTIVITY

The informal and small business sectors are prominent features of the Verulam CBD, however, this sector has not been integrated into the urban fabric of the area. Only limited arrangements have been made to accommodate these sectors on pavements. The limited space available for this sector is contributing to conflict / competition between the informal sector and the formal business sector, as well as conflict between the informal sector and pedestrians or pedestrian movement.

This strategy proposes a number of basic approaches to support the better integration of the informal sector in the economy of the Verulam CBD:

- Create dedicated space for the informal sector: The possible redevelopment / relocation of the taxi rank and the establishment of new transport nodes present an opportunity to also acquire additional land for accommodating the informal sector in a central well-located area;
- Create dedicated space for small business sector: At present there is a fairly substantial gap between the informal sector and the formal sector, limiting opportunities for small businesses to grow. Redevelopment of the various nodes may present opportunities for accommodating micro and small businesses that cannot afford market related rentals in well located buildings; and
- Provide pro-active business development support: The Business Support Unit already provides this type of support. It is suggested that a programme for the Verulam CBD area be formalized.

It is proposed that initial focus areas for applying this strategy should include:

- Public Transport Nodes;
  - Railway Station;
  - Taxi and Bus Rank
- Pedestrian Movement Corridors focusing on Wick Street and congested pavements
10.5 FACILITATE LOCAL ECONOMIC DEVELOPMENT
(CONTINUED...)

STRATEGY 2: PRECINCT ESTABLISHMENT AND IMPROVEMENT

The CBD Framework Plan distinguishes between a number of precincts each with a specific character, offering unique opportunities. An approach to promoting local economic development in each of the precincts, aligned to the planning interventions, should be developed for each of the precincts.

A broad precinct establishment and improvement approach to be followed in each of the precincts include:

- Detailed Planning for Precincts: Through a consultative process with local land owners an implementation action plan, detailing both public and private sector responsibilities, be developed.
- Implement catalytic projects: One or two catalytic projects per precinct be identified and prioritized in order to initiate development; and
- Manage precinct development: Implementation and monitoring capacity will have to be established in order to ensure the execution of the action plan.

Potential focus areas include:

- Civic/Office Node;
- Mixed Use (Business and Service) Node;
- Transport Precinct;
- Wick Street Area; and
- Residential / Mixed Use Node

STRATEGY 3: PROMOTION AND MARKETING OF VERULAM CBD

Verulam, and specifically the economic development opportunities in Verulam, are not widely recognized. At present there are limited mechanisms available within eThekwini through which area specific opportunities within the Municipality are promoted (the ABM programme presented some opportunities in this regard). The absence of dedicated capacity for the management of the Verulam CBD and other similar nodes of economic significance creates a further challenge. In this regard it should be noted that with the new nodes such as the Point Waterfront, Umhlanga Ridge and various other key new development areas marketing and promotion is actively managed by the developers.

Innovative approaches towards marketing and promoting opportunities in Verulam will have to be identified. It is suggested that a basic marketing / promotion plan be developed with the focus of this plan being to generate an awareness of opportunities in Verulam with:

- The eThekwini Municipality (i.e. promoting Verulam internal to eThekwini);
- Local Users; and
- Investors.
10.6 ENSURE APPROPRIATE URBAN MANAGEMENT

Planning and physical redevelopment is an important component of the future development of the Verulam CBD. However, the assessments undertaken suggested that appropriate urban management has the potential to make a major contribution to ensuring that the vision for the development of the Verulam CBD is fulfilled.

Four basic strategies to improve urban management in the Verulam CBD are proposed:

- **Strategy 1**: Maintain stakeholder participation;
- **Strategy 2**: Establish Transport / Parking Management Plan;
- **Strategy 3**: Urban Management Plan;
- **Strategy 4**: Precinct Plan Implementation.

STRATEGY 1: MAINTAIN STAKEHOLDER PARTICIPATION

At present there are no formalised communication channels between eThekwini and the various stakeholders in the Verulam CBD area. A number of stakeholder groups exists and have a level of organization; the groups include the Civic Association, Taxi Associations, Business Groupings and others.

A basic approach proposed to formalizing communication and ensuring stakeholder participation in the future development of the Verulam CBD is:

- Establish representative Verulam CBD Stakeholders Forum, including representation from:
  - Council;
  - Line Departments;
  - Civic Association(s);
  - Taxi Association(s);
  - Business Groupings; and
  - Other
- Set up quarterly meetings;
- Establish mechanisms for monitoring implementation.

STRATEGY 2: ESTABLISH TRANSPORT / PARKING MANAGEMENT PLAN

Although a range of transport interventions of a capital development nature has been proposed for the Verulam CBD it is evident from assessments undertaken that, through the establishment of an effective transport / parking management plan, a number of the immediate challenges can be addressed.

With this in mind it is proposed that ETA and Metro Police take the lead in developing and implementing an integrated transport and parking management plan aimed primarily at reducing congestion on Verulam roads.
10.6 ENSURE APPROPRIATE URBAN MANAGEMENT

(CONTINUED...)

STRATEGY 3: URBAN MANAGEMENT PLAN

Key areas in the Verulam CBD are characterized by decay, grime, congestion, overcrowding etc. This can partly be attributed to the lack of integrated urban management with the various Departments of eThekwini generally functioning independently.

It is therefore suggested that an urban management plan be developed with the involvement of all relevant departments.

Initial focus areas for the implementation of such an urban management plan could be:

- Informal sector;
- Traffic and parking; and
- Built environment.

STRATEGY 4: PRECINCT PLAN IMPLEMENTATION

The development of the Verulam CBD Precinct Plan is an attempt to guide the eThekwini Municipality with regard to the future development of the area. The Precinct Plan includes an Implementation component. It is important that the Precinct Plan be adopted by Council and that it be accepted by all relevant line departments as a guideline.

In terms of achieving implementation the following basic steps are proposed:

- Finalise Verulam CBD Precinct Framework Plan;
- Council Approval of Verulam CBD Precinct Framework Plan; and
- Prepare Implementation Plan.
11.1 TRAFFIC & TRANSPORTATION
11.1.1 TRAFFIC AND TRANSPORTATION DETAILED EXPLORATION

This section outlines the proposed Development Framework for the Verulam CBD which is based on an integrated transportation and urban design process that took cognisance of the balance of facts presented in previous sections of this report among others. The proposed Development Framework for the Verulam CBD is illustrated in Figure 11.1.4.

REGIONAL LINKAGE

1. R102 Northern Link: Regional connectivity to the northern regions and the Dube Trade Port would be improved through an additional access to the R102 from the northern extremities of the Verulam CBD (Refer to Figure 11.1.4). It is proposed that Ireland Street be extended over the Mdloti River to intersect with the R102 via Townview Road to achieve this connection. This infrastructure is intended to be used in a generative capacity by improving the attractiveness of developing the currently degraded northern CBD areas through enhancing the areas access to the north via the R102.

2. Russom Street Extension: Improved access from the residential areas to the west of the CBD to the R102 would assist in reducing through traffic travelling along Todd Street and Ireland Street to gain access to the R102 and MR79. It is thus proposed that Russom Street be extended to the MR93 to provide an alternate route to the R102. The figure below indicates the typical road cross-section which the Russom Street extension would have.

3. Ireland Street Extension: The extension of Ireland Street north to intersect with Dore Street would improve access to this section of the CBD which is currently experiencing decaying. See figure 11.1.5 that indicates the typical road cross-section which the Ireland Street extension would have.
11.1.1 TRAFFIC AND TRANSPORTATION DETAILED EXPLORATION (CONTINUED…)

Todd/ Wick Street Connection: The Verulam Rail Station is located at the eastern end of Todd Street which terminates as a cul de sac. The proposed development of a rail station precinct which is serviced by mini-bus taxis would benefit from improved access. A link between Wick Street and the Todd Street cul de sac is therefore envisaged to improve access and circulation at this node. See figure 11.1.5 that indicates a proposed typical road cross-section of this new link.

4. Extension of Railway Street: Railway Street is located along the eastern boundary of the CBD and presently terminates in a cul de sac. The extension of the road to Todd Street will improve access and circulation both in the western region of the CBD and also considering the entire CBD movement system. See figure 11.1.5 that indicates the typical road cross-section which the Railway Street extension would have.

5. Verulam Parking Strategy: Parking within CBD’s is in constant demand due to the intensity of land use as well as the prevailing levels of car ownership. Users typically would try to park as close to their destination as possible. Unfortunately, space within the road reserve is limited and the function of the road reserve is primarily to facilitate the movement or vehicles and goods. It is therefore essential that a parking strategy be adopted to cater for parking demands without putting undue burden on the road reserve. The current zoning of mid-block sites within the CBD for parking should be taken advantage of and parking courts and parkades should be promoted. Refer to Figure 11.1.4. The additional benefit of pedestrian arcades through much of the CBD blocks will assist in movement between off-street parking and the street frontages of land-use activities.

6. Public Transport Facilities: Formal Public Transport facilities within the Verulam CBD are located at 4 locations along Ireland Street and Moss Street. These facilities are therefore concentrated in the north western region of the CBD. In addition, informal ranking and holding occurs along Ireland Street, between Moss Street and Todd Street. These informal activities reduce road capacity, cause congestion and may be the cause of numerous accidents along Ireland Street. The formalisation and consolidation of these transport facilities at two locations. (refer to Figure 11.1.6), the current bus rank at the south western corner of the Moss and Ireland Street intersection and a new facility adjacent to the rail station, would:

- Eradicate informal ranking/ holding activities along CBD streets;
- Introduce a road based public transport facility in the southern regions of the CBD.

In addition to these facilities it is envisaged that a series of public transport stops be located at various points along in the CBD to minimize pedestrian walking distances.
11.1.1 TRAFFIC AND TRANSPORTATION DETAILED EXPLORATION (CONTINUED…)

The Ireland Street facility will incorporate a bus ranking facility on the ground floor (existing location) and the introduction of a second level would provide facilities for mini-bus taxi ranking. A mini-bus taxi holding area will be required and is proposed on a site along Moss Street to the immediate west of the R102, refer to figure 11.1.7.

The second public transport facility is proposed adjacent to the existing rail station at the eastern end of Todd Street. This would facilitate intermodal transfers between road and rail-based public transport and will also make the south-eastern quadrant of the CBD more accessible to public transport users.

FIGURE 11.1.7: IRELAND STREET PT FACILITY AND HOLDING SITE

FIGURE 11.1.8: RAIL STATION PRECINCT MINI-BUS TAXI FACILITY
Wick Street Activity Road: It is envisaged that the cross section of Wick Street be changed to better align with the activity characteristics. To this end, a cross section conducive to the promotion of an activity street is recommended. This cross section can be achieved through the reduction in the number of lanes available to vehicles from 4 lanes to 2 lanes as well as the reduction in parking provision. Only Public Transport Stops, parking for the disabled and loading bays would be provided. This additional width of the road reserve would then be used for commercial and social benefits. The typical road cross-section which the Wick Street would have is illustrated in the figure 11.1.5 above.
11.2 LAND USE FRAMEWORK
11.2.1 INTRODUCTION

The Status Quo section of this report described and analyzed the basic nature of the current TPS for the Verulam Town Centre insofar as the use zones are concerned:

The analysis can be summarized as follows:

- The Town Centre comprises a number of separate and cognate zones that broadly reflect the Core-Frame concept for a town centre. Viz
  - General Commercial, with embedded Public Car Park;
  - Limited Commercial;
  - Administration;
  - General industry;
  - Light Industry;
  - Service Industry;
  - General Residential 1; and
  - Education.

- Despite the existence of a range of uses within these zones there are no specific zones for a number of land use types that should be considered, viz.
  - Places of Worship;
  - Petrol Service Stations;
  - Public Open space; and
  - Office

- The size/shape and disposition of these areas do not fully respond to the Core-Frame concept and this requires modification to the current zoning, viz
  - Eliminating the Service Industrial Zone adjacent to the residential enclave;
  - Eliminating the General Residential area in the northern industrial cluster

- The FAR for the General Commercial Zone is considered to be far too high relative to other similar town centres.
- Warehousing should not be considered as a primary use in the Core area and should be confined to the industrial clusters of the Frame.
11.2.2 A CONCEPTUAL ZONING APPROACH

Clearly, the “mixed-use” character of the Verulam Town Centre already evinces a series of separate but interrelated zones that result in a mixed-uses town centre.

The Diagram indicates the broad conceptual approach to be undertaken.

The current zoning needs some alteration, additions and simplification in order to reflect the intentions of the plan. Viz.

- All the small parks in the Plan will be zoned Public Open Space;
- The northern Gateway Precinct will be zoned partly Public Open Space and partly River Reserve;
- The southern Gateway Precinct will also be zoned Public Open space;
- The current Private Open Space, partially developed as a cemetery, will retain its current zoning;
- The details of the current zones that are found in the Town Centre will be seen in an appendix.

- The area defined as the “Mixed-Use Core” should be retained largely as a General Commercial Zone;
- The embedded Public Car Park Zones within this area will also be retained;
- The current Administration zone at the southern entrance to the Town Centre is largely retained to create a Civic zone;
- The “Residential Mixed Use Precinct” to the west of the Town Centre, should be extended and the Service Industry area rezoned so that an enlarged General Residential 1 zone is induced;
- The two Education zoned sites remain in place;
- The area to the west of the Core and north of the residential enclave and hinging around the north of the Core should be zoned Limited Commercial to act as a buffer between residential and commercial uses and is also more in keeping with lower level retail cluster of the Frame;
- A similar cluster of Limited Commercial zoning is appropriate as a cluster between the General Commercial Core and a Civic /Office cluster that forms part of the “Gateway” into the Town centre” in the south;
- The area east of the Core and the Railway reserve should be zoned for Office purposes so that it forms an extension from the court, something that is already occurring;
- The entire area north of the Core should be consolidated into a single Light Industrial zone that can accommodate those industrial uses compatible with a town centre;
- The two “Transport Nodes” should be rezoned to accord with the details of the Nodes, viz a combination of Transport termini and General Commercial zones.
11.2.2 A CONCEPTUAL ZONING APPROACH (CONTINUED...)
11.3 SUB-PRECINCT GUIDELINES
For the purpose of the urban form framework, the Verulam Town Centre has been defined into five local character zones, as previously undertaken in the sub-precinct analysis, which is part of the status quo section 4.5.

**Study Sub-Precincts**
- Sub-Precinct 1 – Commercial Core
- Sub-Precinct 2 – Service and Light Industry
- Sub-Precinct 3 – Transport and Commercial Hub
- Sub-Precinct 4 – Gateway Precinct
- Sub-Precinct 5 – Station and Civic Precinct

The following section gives specific sub-precinct guidelines to each local area in order for the Town Centre to achieve the desired vision. The guidelines are described in terms of:
- Movement and Circulation;
- Land Use and Activity Patterns;
- Urban Form; and
- Urban Landscaping.
11.3.2 GLOSSARY

MOVEMENT AND CIRCULATION

Public Transport Corridor
A circuit running between the two public transport facilities has been created. The systems runs in a southerly direction along Ireland Street to the rail station and second ranking facility and in a northerly direction along Wick Street. The transport corridor is important for the functioning of the town Centre.

Pedestrian Crossing
A number of pedestrian crossings are used at designate intervals along roads to assist pedestrians cross the road safely. Pedestrian crossings have along been used as a traffic calming measures around the public transport facilities as well as the Wick Street High Street.

Provide and Retain Public Access Through Site Links
The plan illustrates the indicative location of pedestrian through site links to improve connectivity and extend the permeability of the area. These linkages are particularly important where connections between public spaces are made.

LAND USE AND ACTIVITY PATTERNS

Potential Development Sites/ Infill
Future development site, land use determined by activity zone s. New development needs to align with and address the street conditions, provide internal courtyard areas for communal open space, and either align with the street or with street setbacks with appropriate landscaping to supplement the existing image.

Adaptive Reuse Potential
If new uses are introduced, maintain the building fabric as far as possible to retain its character and heritage significance.

Encourage Redevelopment
Encourage redevelopment in areas that require upliftment. Development should be compatible with the surrounding uses and character of the area.

Protect & Enhance Special Precincts
Maintain scale and character of the precinct, any redevelopment should be inline with existing conditions.

Potential Landmark/ Iconic Building
Buildings that are prominently located and that contribute positively to an areas character should be retained. These buildings may be significant heritage items such as the old prison. Future development surrounding the building should be designed so as to not lessen the visual impact of the building.

Require Active Retail Frontage
Traditional retail strip typically opening directly onto streets with continuous colonnades thereby increasing amenity to the public realm and encouraging pedestrian activity. Active frontages are required to support the commercial and retail activity and to reinforce the core of the Town Centre.

URBAN FORM

Design Building to Align With and Front onto Public Street and Open Space
An active front is important for all streetscapes and open spaces within the Town Centre. The active fronts provide activity and surveillance therefore building designs are encouraged to adhere and meet this requirement.

Enhance Street Vista
Introduce or extend street tree planting, and encourage buildings to align with the street to focus and strengthen locating views.
11.3.2 GLOSSARY

Retain Landmark Quality of Building
Buildings that are prominently located and that contribute positively to the areas character should be retained. Future adjacent development should be designed so as to not to lessen the visual impact of these buildings.

Encourage and Retain Prominence of Corner Buildings
Maintain/restore existing corner buildings and require high quality design on visible corners where new development is proposed. Corner accentuation is encouraged within the core of the Town Centre as corner treatment helps with the legibility of the streetscape.

Protect Laneway Character
Maintain the low scale and intimate quality as well as character of laneways. Prohibit development that conflicts with the quality of the area.

URBAN LANDSCAPING

Encourage New Public Open Space
The indicative location and size of the proposed new open spaces are shown. Open spaces should not simply be retained but should be maintained and enhanced to ensure that it provides optimum amenity and accessibility for all uses.

Encourage Private Domain Planting
There are some streets and mid-block courtyards within the Town Centre where establishing landscaping in the private domain would contribute positively to the quality of the street or courtyards.

Extend/ Enhance Street Planting
Extend and encourage landscaping along streets where planting is poor or intermittent. This is particularly important within the public realm or where trees help frame a view, or on street with a higher built form where large trees make a transition between large scale buildings and the pedestrian scale street.

Improve Public Domain Treatment
Improved public domain consists of upgrading pavements and sidewalks, planting trees and providing lighting.

Specialised Surface/ Texture Change
Specialised surfaces are encouraged along the Wick Street high street as well as along the roads surrounding the public transport facilities and station. The texture change should illustrate caution to motorists and facilitate traffic calming.
11.3.3 SUB-PRECINCT GUIDELINES

SUB-PRECINCT 1 – COMMERCIAL CORE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED...)

SUB-PRECINCT 1 – COMMERCIAL CORE

MOVEMENT & CIRCULATION

LAND USE/ACTIVITY PATTERNS

- PUBLIC TRANSPORT CORRIDOR
- PEDESTRIAN CROSSING
- PROVIDE & RETAIN PUBLIC ACCESS THROUGH SITE LINKS

- POTENTIAL DEVELOPMENT SITES/INFILL
- ADAPTIVE REUSE POTENTIAL
- ENCOURAGE REDEVELOPMENT
- PROTECT & ENHANCE SPECIAL PRECINCTS
- POTENTIAL LANDMARK/ICONIC BUILDING
- REQUIRE ACTIVE RETAIL FRONTAGE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

URBAN FORM

- DESIGN BUILDING TO ALIGN WITH & FRONT ONTO PUBLIC STREET & OPEN SPACE
- ENHANCE STREET VISTA
- RETAIN LANDMARK QUALITY OF BUILDING
- ENCOURAGE & RETAIN PROMINENCE OF CORNER BUILDINGS
- PROTECT LANEWAY CHARACTER

URBAN LANDSCAPE

- ENCOURAGE NEW PUBLIC OPEN SPACE
- ENCOURAGE PRIVATE DOMAIN PLANTING
- EXTEND/ ENHANCE STREET PLANTING
- IMPROVE PUBLIC DOMAIN TREATMENT
- SPECIALISED SURFACE/ TEXTURE CHANGE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED...)

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

SUB-PRECINCT 2 – SERVICE AND LIGHT INDUSTRY

MOVEMENT & CIRCULATION

LAND USE/ ACTIVITY PATTERNS

- PUBLIC TRANSPORT CORRIDOR
- PEDESTRIAN CROSSING
- PROVIDE & RETAIN PUBLIC ACCESS THROUGH SITE LINKS

- POTENTIAL DEVELOPMENT SITES/ INFILL
- ADAPTIVE REUSE POTENTIAL
- ENCOURAGE REDEVELOPMENT
- PROTECT & ENHANCE SPECIAL PRECINCTS
- POTENTIAL LANDMARK/ ICONIC BUILDING
- REQUIRE ACTIVE RETAIL FRONTAGE

VERULAM TOWN CENTRE PRECINCT PLAN - CONSOLIDATED FINAL REPORT
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

URBAN FORM

- Design building to align with & front onto public street & open space
- Enhance street vista
- Retain landmark quality of building
- Encourage & retain prominence of corner buildings
- Protect laneway character

URBAN LANDSCAPE

- Encourage new public open space
- Encourage private domain planting
- Extend/enhance street planting
- Improve public domain treatment
- Specialised surface/texture change
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED...)

SUB-PRECINCT 3 – TRANSPORT AND COMMERCIAL HUB

MOVEMENT & CIRCULATION

LAND USE/ ACTIVITY PATTERNS

- PUBLIC TRANSPORT CORRIDOR
- PEDESTRIAN CROSSING
- PROVIDE & RETAIN PUBLIC ACCESS THROUGH SITE LINKS

- POTENTIAL DEVELOPMENT SITES/ INFILL
- ADAPTIVE REUSE POTENTIAL
- ENCOURAGE REDEVELOPMENT
- PROTECT & ENHANCE SPECIAL PRECINCTS
- POTENTIAL LANDMARK/ ICONIC BUILDING
- REQUIRE ACTIVE RETAIL FRONTAGE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

URBAN FORM

- DESIGN BUILDING TO ALIGN WITH & FRONT ONTO PUBLIC STREET & OPEN SPACE
- ENHANCE STREET VISTA
- RETAIN LANDMARK QUALITY OF BUILDING
- ENCOURAGE & RETAIN PROMINENCE OF CORNER BUILDINGS
- PROTECT LANEWAY CHARACTER

URBAN LANDSCAPE

- ENCOURAGE NEW PUBLIC OPEN SPACE
- ENCOURAGE PRIVATE DOMAIN PLANTING
- EXTEND/ ENHANCE STREET PLANTING
- IMPROVE PUBLIC DOMAIN TREATMENT
- SPECIALISED SURFACE/ TEXTURE CHANGE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED...)

SUB-PRECINCT 4 – GATEWAY PRECINCT
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED...)

SUB-PRECINCT 4 – GATEWAY PRECINCT

MOVEMENT & CIRCULATION

LAND USE/ ACTIVITY PATTERNS

- PUBLIC TRANSPORT CORRIDOR
- PEDESTRIAN CROSSING
- PROVIDE & RETAIN PUBLIC ACCESS THROUGH SITE LINKS

- POTENTIAL DEVELOPMENT SITES/ INFILL
- ADAPTIVE REUSE POTENTIAL
- ENCOURAGE REDEVELOPMENT
- PROTECT & ENHANCE SPECIAL PRECINCTS
- POTENTIAL LANDMARK/ ICONIC BUILDING
- REQUIRE ACTIVE RETAIL FRONTAGE
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

URBAN FORM

- Design building to align with & front onto public street & open space
- Enhance street vista
- Retain landmark quality of building
- Encourage & retain prominence of corner buildings
- Protect laneway character

URBAN LANDSCAPE

- Encourage new public open space
- Encourage private domain planting
- Extend/enhance street planting
- Improve public domain treatment
- Specialised surface/texture change
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT
11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

SUB-PRECINCT 5 – STATION AND CIVIC PRECINCT

MOVEMENT & CIRCULATION

PUBLIC TRANSPORT CORRIDOR
PEDESTRIAN CROSSING
PROVIDE & RETAIN PUBLIC ACCESS THROUGH SITE LINKS

LAND USE/ ACTIVITY PATTERNS

POTENTIAL DEVELOPMENT SITES/ INFILL
ADAPTIVE REUSE POTENTIAL
ENCourage REDEVELOPMENT
PROTECT & ENHANCE SPECIAL PRECINCTS
POTENTIAL LANDMARK/ ICONIC BUILDING
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11.3.3 SUB-PRECINCT GUIDELINES (CONTINUED…)

URBAN FORM

- Design building to align with & front onto public street & open space
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URBAN LANDSCAPE

- Encourage new public open space
- Encourage private domain planting
- Extend/ enhance street planting
- Improve public domain treatment
- Specialised surface/ texture change
12 IMPLEMENTATION PLAN
12.1 LINKAGE AND OVERVIEW TO STRATEGY PHASE

THE VISION
The basic vision that will guide future development in the Verulam CBD reads:

TO CREATE A DYNAMIC TOWN CENTRE

PILLARS OF THE VISION
The vision will be built on six pillars. The pillars are:

- An integrated movement system;
- A supportive public space system;
- Ensure a diverse land use mix;
- Ensure a responsive built environment;
- Local economic development; and
- Ensure appropriate urban management

Components of each of the pillars, discussed and illustrated in more detail in the Precinct Plan document, are reflected graphically below and the key strategies contributing to the building of the pillars are listed.

The strategies related to this pillar are:
- Ensuring regional connectivity;
- Creating a permeable CBD;
- CBD parking strategy;
- Creating a supportive public transport system.

The strategies related to this pillar are:
- Development of primary order town scale space;
- Establishment of secondary order urban space;
- Development of a town centre planting strategy;
- Enabling access to a range of landscapes.
12.1 LINKAGE AND OVERVIEW TO STRATEGY PHASE

(CONTINUED...)

ENSURE A DIVERSE LAND USE MIX

The framework plan distinguishes between six local character zones in the Verulam CBD:

- Mixed Use Core
- Transport Nodes
- Mixed Uses Business/Service
- Office/Civic
- Residential/Mixed Use
- Gateway/Open Space

ENSURE A RESPONSIVE BUILT ENVIRONMENT

The strategies related to this pillar are:

- Creating an urban block structure;
- Defining the street building relationship;
- Encouraging legibility of the built environment;
- Promoting compaction of the town centre

LOCAL ECONOMIC DEVELOPMENT

In the Northern Spatial Plan of the eThekwini Municipality (2008) the Verulam CBD is acknowledged as a node of Metropolitan significance. This suggests a future focus on the redevelopment of the node as, in its current condition, it is merely a local shopping area and a transit zone for commuters. The status quo assessment for this initiative then also illustrated that Verulam serves as a commercial and service node for a large urban and rural population. Further to this the development of the King Shaka International Airport, immediately to the north of Verulam, and the upgrade of the R102 as an alternative access to the Airport presents a range of opportunities for this node.

In order for the Verulam CBD to benefit from the range of economic development opportunities three basic strategies are proposed. The strategies are:

- Integration of Informal Sector / SMME Activity;
- Precinct Establishment and Improvement;
- Promotion and Marketing of Verulam.

ENSURE APPROPRIATE URBAN MANAGEMENT

Planning and physical redevelopment is an important component of the future development of the Verulam CBD. However, the assessments undertaken suggested that appropriate urban management has the potential to make a major contribution to ensuring that the vision for the development of the Verulam CBD is fulfilled.

Four basic strategies to improve urban management in the Verulam CBD are proposed:

- Strategy 1: Maintain stakeholder participation;
- Strategy 2: Establish Transport / Parking Management Plan;
- Strategy 3: Urban Management Plan;
- Strategy 4: Precinct Plan Implementation
12.2 THE DEVELOPMENT PROCESS

The Precinct Plan for Verulam presents a vision and strategy for the re-development of the CBD over the long term. It has been acknowledged by most 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).

With the above in mind the proposed project programme categorises projects in the following timeframes:

- Immediate: Actions that should immediately be initiated;
- Short Term: Up to end of 2012;
- Medium Term: 2012 to 2015;
- Long Term: 2015 to 2025.

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 precinct plan through more detailed planning, designing and modelling exercises. 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.

THE IMPLEMENTATION PROCESS

IMMEDIATE ACTIONS

The purpose of identifying immediate actions is to ensure that the momentum already achieved through the precinct planning process 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 but which will now be expanded on.

A number of the immediate actions identified will, once implemented, clear the way for larger capital type projects to be motivated for and implemented. This is specifically the case with the Transport Model required to test different transport systems.

SHORT TERM

In the short term, i.e. up till the end of 2010, the focus will be on developing and obtaining buy-in on specific strategies and initiating the implementation thereof. Only two capital development projects, viewed as priorities, are included for short term implementation, i.e. the proposed Ireland Street Upgrade and the formalisation of the Ireland Street taxi rank. The implementation of these priorities in the short term will be dependent on budget availability.
12.2 THE DEVELOPMENT PROCESS

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 CBD function effectively and are seen as contributing to making the existing CBD work.

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 CBD remains a fully functional precinct within the eThekwini Municipality.

12.3 RESOURCES FOR IMPLEMENTATION

The availability of resources or the potential to access resources for implementation is critical in ensuring successful implementation of the plan. In this regards 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 Verulam 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, the Verulam Civic Association, Business Organisations and Transport Organisations.

ETHEKWENI
The ongoing involvement and commitment of the Municipality in the implementation of the Precinct 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 Verulam is integrated into line department planning and budgets. Important organisational resources to be aligned for the implementation of the plan include:

- Political leadership: The Councillor for the area has taken an active interest in the planning process and a commitment exists with the political leadership to support and, where possible, drive implementation;
- Line departments: At present the line departments actively supporting the planning process is Framework Planning and Economic Development, eThekwini Transport Authority, Informal Trade Department, Urban and Landscape Design and the Development Engineering Department has been consulted with regards to the Precinct Plan and will, considering the projects identified, be critical in the implementation of the Plan;
- Management of existing eThekwini facilities in Verulam: A number of eThekwini facilities exists in the eThekwini CBD including the Early Morning Market, the Sizakhala Centre, the Library, Metro Police amongst others. The buy-in and support of the management of these facilities will be an important component of achieving full integration of the plan. Other departments who are responsible for maintaining the public realm aspect, i.e. Parks, DSW, Roads and Stormwater Maintenance etc.
12.3 RESOURCES FOR IMPLEMENTATION (CONTINUED…)

CIVIC ASSOCIATION

The Verulam Civic Association has been in existence for some time and, over and above the roles of a Civic, also supports a diverse range of planning and implementation initiatives. The Civic fulfilled a facilitation role in the meetings held for the development of the Precinct Plan.

It is envisaged that, together with other representative organisations, the Civics, with a much wider area of interest than the CBD, will continue to fulfil a role the implementation of the Precinct Plan.

BUSINESS ORGANISATIONS

Business organisations and groupings have been identified. As a consequence of the limited land owned by eThekwini in the area it is essential for the implementation of the plan for business organisations to be fully involved and for individual land and business owners contributing toward the implementation of the vision and strategies. As it is difficult to work with landowners and businesses individually the establishment and strengthening of links to these organisations are essential.

TRANSPORT ORGANISATIONS

A large number of taxi and bus organisations operate in the Verulam area. The extent of transport related interventions proposed makes it essential that these organisations are consulted with on a regular basis and are allowed to contribute to planning processes. Strengthening relationships between this industry in Verulam and the eThekwini Municipality will be to the benefit of all future development 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 Verulam CBD.

FINANCIAL RESOURCES

Various potential sources of funding for projects in the Verulam CBD exist. However, with regard to financial resources, challenges in terms of accessing funding include:

- Competing priorities and the priority assigned to Verulam CBD;
- 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;
- Municipal Infrastructure Grant;
- Potential exist for establishing a business levy in consultation with stakeholders through establishment of Urban Improvement Precinct; and
- Others.

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.
12.4 MANAGING IMPLEMENTATION

IMPLEMENTATION COORDINATION

The Economic Development Unit, as part of its Town Centre Renewal programme has taken on the responsibility of driving the implementation of the projects in this area.

In coordinating implementation of the Plan the Economic Development Unit will liaise with the local stakeholder forum to ensure ongoing participation of the local community and businesses in the implementation of the Precinct Plan. eThekwini line departments will also be included in activities to coordinate implementation. The relevant Councillor(s) will be represented in such meetings.

THE STAKEHOLDER FORUM

ESTABLISHMENT OF STAKEHOLDERS FORM

At a Verulam CBD Stakeholders Meeting held in June 2009 the issue of stakeholder participation in future development in the Verulam CBD was discussed. It was agreed that a Stakeholder Forum for the implementation of the Verulam CBD Precinct Plan will be established. The organisations that indicated an interest in the participation of such a Stakeholder Forum are listed below:

- Verulam Business Forum;
- Verulam Civic Association;
- CPF - Verulam SAPS;
- Greater North Regional Taxi Cooperative;
- Keep Verulam Beautiful Association;
- Havenridge Civic Association;
- Trenance Park Civic;
- North Local Driving School Owners Association;
- Verulam Bus Owners Association;
- Dawncrest, Suncrest, Surija Heights Civic Association;
- Verulam-Durban Taxi Owners Association

It was agreed at this meeting that representation, purpose and approach relating to the Stakeholder Forum will be discussed and finalised at a future date.

PURPOSE OF STAKEHOLDER FORM

The purpose of the stakeholder forum will be:

- To enable the meaningful contribution of local stakeholders in planning for the redevelopment of Verulam;
- To encourage a high level of communication between eThekwini and local stakeholders in implementation of the Precinct Plan;
- To coordinate development efforts in Verulam;
- To ensure private and non-governmental sector buy-in in implementation of projects; and
- To ensure that this is a public-private partnership and that various organisations and businesses fulfil a role in the renewal efforts.

APPROACH

It is proposed that the Stakeholder Forum meet on a quarterly basis with the focus of the meetings being on components of the 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.
12.5 PROJECTS

OVERVIEW OF PROJECT DATABASE

For the purposes of this Precinct Plan a projects database has been developed. This projects database includes the following information relating to each project:

- Project Name;
- Location;
- Short Description;
- Responsibilities;
- Linkages;
- Priority; and
- Budget.

PROJECT LISTING

A summary project list is provided below per pillar and per strategy. More detailed project sheets are included in Annexure A attached.
### 12.5 PROJECTS (CONTINUED…)

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Regional Connectivity</td>
<td>Transport Model to test transport options (external)</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R 600,000</td>
<td>Operational</td>
<td>1.1.2, 1.1.3</td>
</tr>
<tr>
<td>1.2 Establish improved linkage to the R102</td>
<td>eThekwini Transport Authority</td>
<td>Long</td>
<td>R 6,392,594</td>
<td>Capital</td>
<td></td>
<td>1.1.1</td>
</tr>
<tr>
<td>1.3 Extension of Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>Medium</td>
<td>R 50,747,201</td>
<td>Capital</td>
<td></td>
<td>1.1.1, 1.2.1</td>
</tr>
</tbody>
</table>

#### 1.2 Create Efficient Movement in CBD

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1 Transport Model to test transport options (CBD internal)</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R 150,000</td>
<td>Operational</td>
<td>1.2.2, 1.2.3, 1.2.4, 1.2.5, 2.1.5, 2.1.4</td>
<td></td>
</tr>
<tr>
<td>1.2.2 Upgrading of Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R 18,136,364</td>
<td>Capital</td>
<td></td>
<td>1.2.1, 1.1.1</td>
</tr>
<tr>
<td>1.2.3 CBD Parking Strategy</td>
<td>eThekwini Transport Authority</td>
<td>Short</td>
<td>R 200,000</td>
<td>Operational</td>
<td>1.2.1, 2.2.1</td>
<td></td>
</tr>
<tr>
<td>1.2.4 New Street Connections</td>
<td>eThekwini Transport Authority</td>
<td>Medium to Long</td>
<td>R 5,868,603</td>
<td>Capital</td>
<td></td>
<td>1.2.1</td>
</tr>
<tr>
<td>1.2.5 Reinforce Pedestrian Connectivity</td>
<td>eThekwini Transport Authority</td>
<td>Medium</td>
<td>Operation</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### 1.3 Create Supportive PT System

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1 Formalise Existing Rank at Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R 33,169,289</td>
<td>Capital</td>
<td></td>
<td>1.3.2</td>
</tr>
<tr>
<td>1.3.2 Create New Holding Area West of Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>Medium</td>
<td>R 5,474,204</td>
<td>Capital</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td>1.3.3 Create New Taxi Rank adjacent to Station</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R 10, 158,719</td>
<td>Capital</td>
<td></td>
<td>1.2.4</td>
</tr>
<tr>
<td>1.3.4 Upgrade Rail Station - Linkage &amp; Node</td>
<td>eThekwini Transport Authority</td>
<td>Immediate/ Short</td>
<td>R4,061,529</td>
<td>Capital</td>
<td></td>
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</tr>
</tbody>
</table>

#### 2. A SUPPORTIVE PUBLIC SPACE SYSTEM

2.1 Develop Primary Order Town Scale Space

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1 Public Realm Upgrade for Todd, Moss and Wick Streets</td>
<td>Economic Development</td>
<td>Immediate/ Short</td>
<td>R 22,997,259</td>
<td>Capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.2 Ireland Street Public Realm Upgrade</td>
<td>Economic Development</td>
<td>Short</td>
<td>R 18,259,609</td>
<td>Capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.3 Reclaim Wick Street as Linear High Street (Phase 1)</td>
<td>eThekwini Transport Authority</td>
<td>Immediate</td>
<td>N/A</td>
<td>Capital</td>
<td></td>
<td>1.2.1</td>
</tr>
<tr>
<td>2.1.4 Reclaim Wick Street as Linear High Street (Phase 2)</td>
<td>eThekwini Transport Authority</td>
<td>Long</td>
<td>R 33,647,934</td>
<td>Capital</td>
<td></td>
<td>1.2.1</td>
</tr>
<tr>
<td>2.1.5 Civic/ Office Node Redevelopment (including prison)</td>
<td>Economic Development</td>
<td>Immediate/ Short</td>
<td>R 350,000</td>
<td>Operational</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.6 Prison Redevelopment</td>
<td>Economic Development</td>
<td>Short</td>
<td>R 500,000</td>
<td>Operational</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.7 Redevelopment of Gandhi Park</td>
<td>Parks and Recreation</td>
<td>Short</td>
<td>R 3,000,000</td>
<td>Capital</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 Establish Secondary Order Urban Space

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.1 Investigate Pocket Park &amp; Courtyard Space within the Core</td>
<td>eThekwini Transport Authority</td>
<td>Short</td>
<td>R 350,000</td>
<td>Operational</td>
<td>1.2.1</td>
<td></td>
</tr>
<tr>
<td>2.2.2 Develop external space at Transport Nodes</td>
<td>Business Support</td>
<td>Medium</td>
<td>R 500,000</td>
<td>Operational</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 12.5 PROJECTS (CONTINUED…)

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
<th>LINKAGES (PROJ Nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>Develop Town Centre Planting Strategy</td>
<td>Parks and Recreation</td>
<td>Short</td>
<td>R 200,000</td>
<td>Operational</td>
<td>Various</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Verulam CBD Planting Strategy</td>
<td>Parks and Recreation</td>
<td>Short</td>
<td>R 100,000</td>
<td>Operational</td>
<td></td>
</tr>
<tr>
<td>2.3.2</td>
<td>Enable Access to a Range of Landscapes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Improve linkages to Active Recreation Space</td>
<td>Parks and Recreation</td>
<td>Medium</td>
<td>R 250,000</td>
<td>Operational</td>
<td>2.3.1.1.2</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Enhance quality of Umdloti River Corridor</td>
<td>Parks and Recreation</td>
<td>Immediate/ Short</td>
<td>R 100,000</td>
<td>Operational</td>
<td></td>
</tr>
<tr>
<td>3.1 to 4.4</td>
<td>Develop revised TPS for Town Centre (incorporation form based codes)</td>
<td></td>
<td>Immediate/ Short</td>
<td>R 500,000</td>
<td>Operational</td>
<td></td>
</tr>
<tr>
<td>5.1</td>
<td>Integration of Informal Sector / SMME Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.1</td>
<td>Create dedicated space for informal sector</td>
<td>Business Support</td>
<td>Immediate/ Short</td>
<td>R 10,000,000</td>
<td>Operational</td>
<td>1.3.1, 2.2.2</td>
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<tr>
<td>5.1.2</td>
<td>Create dedicated space for small business sector</td>
<td>Business Support</td>
<td>Medium</td>
<td>R 4,000,000</td>
<td>Capital</td>
<td>2.1.6, 5.1.3</td>
</tr>
<tr>
<td>5.1.3</td>
<td>Establish Business Development Support Programme</td>
<td>Business Support</td>
<td>Short</td>
<td>R 50,000</td>
<td>Operational</td>
<td>2.1.6, 5.1.2</td>
</tr>
<tr>
<td>5.2</td>
<td>Node Establishment and Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2.1</td>
<td>Detailed consultation and planning for nodes</td>
<td>Economic Development</td>
<td>Short</td>
<td>R 0</td>
<td>Operational</td>
<td>5.2.2</td>
</tr>
<tr>
<td>5.2.2</td>
<td>LED Strategy (catalytic project per node)</td>
<td>Economic Development</td>
<td>Short</td>
<td>R 0</td>
<td>Operational</td>
<td>5.2.1</td>
</tr>
<tr>
<td>5.3</td>
<td>Promontion and Marketing of Verulam CBD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3.1</td>
<td>Develop Marketing and Promotion Plan</td>
<td></td>
<td>Short</td>
<td>R 50,000</td>
<td>Operational</td>
<td>6.1.1, 5.2.1</td>
</tr>
<tr>
<td>6.1</td>
<td>Maintain Stakeholder Participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1.1</td>
<td>Establish and Manage representative Stakeholders Forum</td>
<td>Economic Development</td>
<td>Immediate/ Short</td>
<td>R 50,000</td>
<td>Operational</td>
<td>6.2.1.6.2.4</td>
</tr>
<tr>
<td>6.2</td>
<td>Establish Transport / Parking Management Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.2.1</td>
<td>Establish and Implement Transport / Parking Management Plan</td>
<td>eThekwini Transport Authority</td>
<td>Short</td>
<td>R 0</td>
<td>Operational</td>
<td>1.1.1, 1.2.3, 1.2.5</td>
</tr>
<tr>
<td>6.3</td>
<td>Urban Management Plan</td>
<td></td>
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<tr>
<td>6.2.3</td>
<td>Establish and Implement Urban Management Plan</td>
<td>Stakeholder Forum</td>
<td>Short</td>
<td>R 0</td>
<td>Operational</td>
<td>3.1</td>
</tr>
<tr>
<td>6.4</td>
<td>Precinct Plan Implementation</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6.2.4</td>
<td>Obtain approval for Precinct Plan</td>
<td>Framework Planning</td>
<td>Immediate/ Short</td>
<td>R 0</td>
<td>Operational</td>
<td>All</td>
</tr>
</tbody>
</table>
12.6 CONCEPT BUSINESS PLAN

(TO BE DEVELOPED FOR PRIORITY PROJECTS)

Fields to be included in 3-5 Concept Business Plans

- Project Name;
- Fields as per project listing (above);
- Project Description;
- Sketch Layout Plans;
- Funding Proposals;
- Cost Estimates; and
- Operation and Maintenance Strategy.
ANNEXURE: LAND USE CATEGORIES
**ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED**

<table>
<thead>
<tr>
<th>ZONE</th>
<th>SPECIAL RESIDENTIAL</th>
<th>GENERAL RESIDENTIAL 1</th>
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</thead>
<tbody>
<tr>
<td>BUILDING AND LAND USE CATEGORY</td>
<td>PRIMARY USE</td>
<td>LAND USE PERMITTED BY SPECIAL CONSENT</td>
</tr>
</tbody>
</table>
| RESIDENTIAL | Dwelling House | • Creche  
• Medium Density Housing  
• Bed and Breakfast Facility  
• Day Care Facility  
• Home Business  
• Place of Worship  
• Place of Instruction  
Others not in Primary Use or Prohibited category. | Agricultural Industry  
RESIDENTIAL  
Caravan park  
Chalet development  
Extended Residential Building  
Residential Building  
COMMERCIAL  
Commercial workshop  
Drive-in Cinema  
Restaurant  
Place of Public Amusement  
Funeral Parlour  
Garage  
Parking Garage  
Service Station  
Shop  
INDUSTRIAL  
Extractive Industry  
General industrial Building  
Light Industrial building  
Restricted Building  
Warehouse | 

**DEVELOPMENT REGULATIONS**

<table>
<thead>
<tr>
<th>FAR</th>
<th>COVERAGE (%)</th>
<th>HEIGHT (Storey)</th>
</tr>
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<tbody>
<tr>
<td>Special Residential 1</td>
<td>0.4</td>
<td>40%</td>
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<table>
<thead>
<tr>
<th>ZONE</th>
<th>GENERAL RESIDENTIAL 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING AND LAND USE CATEGORY</td>
<td>PRIMARY USE</td>
</tr>
</tbody>
</table>
| RESIDENTIAL | • Dwelling House  
• Medium Density Housing  
• Residential Building  
• Laundrette  | Agricultural Industry  
RESIDENTIAL  
Caravan park  
Chalet development  
Extended Residential Building  
Residential Building  
COMMERCIAL  
Arts and Crafts Workshop  
Conference Centre (as part of a Hotel/Guest House or Lodge)  
RECREATION  
Private Recreation Area (restricted to use by the residents of the residential building or medium density housing site)  
Recreational Building (restricted to the residents of the residential building or medium density housing site) | 

**DEVELOPMENT REGULATIONS**

<table>
<thead>
<tr>
<th>FAR</th>
<th>COVERAGE (%)</th>
<th>HEIGHT (Storey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Residential 1</td>
<td>0.75</td>
<td>30</td>
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### ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED

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<th>GENERAL RESIDENTIAL 2</th>
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<td>LAND USE PERMITTED BY SPECIAL CONSENT</td>
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<tr>
<td>RESIDENTIAL</td>
<td>Dwelling House</td>
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<td></td>
<td>Extended Residential Building</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium Density Housing</td>
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</tr>
<tr>
<td></td>
<td>Laundrette</td>
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</tr>
<tr>
<td></td>
<td>(excluding hotel with Liquor license)</td>
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### DEVELOPMENT REGULATIONS

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<tr>
<th>FAR</th>
<th>COVERAGE (%)</th>
<th>HEIGHT (Storey)</th>
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### ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED

#### ZONE: GENERAL COMMERCIAL

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<thead>
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<th>BUILDING AND LAND USE CATEGORY</th>
<th>PRIMARY USE</th>
<th>LAND USE PERMITTED BY SPECIAL CONSENT</th>
<th>PROHIBITED LAND USES AND BUILDINGS</th>
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<tbody>
<tr>
<td><strong>RESIDENTIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential Building (except on Ground Floor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMMERCIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Launderette</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place of Public Amusement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(except on ground floor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouse</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>COMMERCIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Building</td>
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</tr>
<tr>
<td>Agricultural Industry</td>
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<td></td>
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</tr>
<tr>
<td>Caravan park</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chalet development</td>
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</tr>
<tr>
<td>Dwelling house</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended Residential Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium density Housing (on ground Floor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMMERCIAL</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Drive in cinema</td>
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</tr>
<tr>
<td><strong>INDUSTRIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Industrial Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Industrial building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RESIDENTIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dwelling House (subject to restrictions)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(Subject to restrictions)</td>
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#### ZONE: GENERAL INDUSTRY

<table>
<thead>
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<th>PRIMARY USE</th>
<th>LAND USE PERMITTED BY SPECIAL CONSENT</th>
<th>PROHIBITED LAND USES AND BUILDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDUSTRIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Industrial Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Industrial building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RESIDENTIAL</strong></td>
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<tr>
<td>Caravan park</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chalet development</td>
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<tr>
<td>Creche</td>
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<td></td>
<td></td>
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<tr>
<td>Dwelling House</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Building</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Extended Residential Building</td>
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</tr>
<tr>
<td>Medium density Housing</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>INDUSTRIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place of Public Amusement</td>
<td></td>
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<tr>
<td>Place of Public Assembly</td>
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<td>Funeral Parlour</td>
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#### DEVELOPMENT REGULATIONS

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**ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED**

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<th>BUILDING AND LAND USE CATEGORY</th>
<th>PRIMARY USE</th>
<th>LAND USE PERMITTED BY SPECIAL CONSENT</th>
<th>PROHIBITED LAND USES AND BUILDINGS</th>
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</thead>
<tbody>
<tr>
<td>LIGHT INDUSTRY</td>
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<td>Commercial Workshop</td>
<td>Others</td>
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<td>Light Industrial building</td>
<td>Caravan park</td>
<td>Commercial Workshop</td>
<td>Public Office</td>
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<td>Public Office</td>
<td>Chalet development</td>
<td>Residential Building</td>
<td>Educational Building</td>
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<tr>
<td></td>
<td>Warehouse</td>
<td>Creche</td>
<td>Extended Residential Building</td>
<td>Extractive Industry</td>
</tr>
<tr>
<td></td>
<td>RESIDENTIAL</td>
<td>Dwelling House (subject to restrictions)</td>
<td>Medium density Housing</td>
<td>General industrial Building</td>
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<tr>
<td></td>
<td>Dwelling House</td>
<td>Residential Building</td>
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**DEVELOPMENT REGULATIONS**

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<thead>
<tr>
<th>ZONE</th>
<th>FAR</th>
<th>COVERAGE (%)</th>
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<tbody>
<tr>
<td>Light Industry</td>
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<td>Light Industrial building</td>
<td>Caravan park</td>
<td>Residential Building</td>
<td>Educational Building</td>
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<td></td>
<td>Public Office</td>
<td>Chalet development</td>
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<td>Extractive Industry</td>
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<td>Warehouse</td>
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**DEVELOPMENT REGULATIONS**

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# ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED

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<th>PROHIBITED LAND USES AND BUILDINGS</th>
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</thead>
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<td>ADMINISTRATION</td>
<td>Institution</td>
<td>All others</td>
<td>Agricultural Building</td>
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<td></td>
<td>Place of Public Amusement</td>
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<td>Caravan park</td>
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</tr>
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<td></td>
<td>Place of Public Assembly</td>
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<td>Chalet development</td>
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<td>Public Offices</td>
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<td>Extended</td>
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<td>Dwelling House</td>
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<td>Medium density Housing</td>
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## DEVELOPMENT REGULATIONS

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<td>EDUCATION</td>
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<td></td>
<td>RESIDENTIAL</td>
<td></td>
<td>Commercial Workshop</td>
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<td></td>
<td>Dwelling house (Staff)</td>
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<td>Drive-in Cinema</td>
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## DEVELOPMENT REGULATIONS

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<th>LAND USE PERMITTED BY SPECIAL CONSENT</th>
<th>PROHIBITED LAND USES AND BUILDINGS</th>
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## ANNEXURE A: LAND USE CATEGORIES – TO BE COMPLETED

### ZONE: PUBLIC CAR PARK

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<th>LAND USE PERMITTED BY SPECIAL CONSENT</th>
<th>PROHIBITED LAND USES AND BUILDINGS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>All others</td>
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### DEVELOPMENT REGULATIONS

<table>
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<tr>
<th>FAR COVERAGE (%)</th>
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<tr>
<td>Public car Park</td>
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### ZONE: PRIVATE OPEN SPACE

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<th>PROHIBITED LAND USES AND BUILDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All others</td>
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### DEVELOPMENT REGULATIONS

<table>
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<th>FAR COVERAGE (%)</th>
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<tr>
<td>Private Open Space</td>
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### ZONE: RIVER RESERVE

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<th>PROHIBITED LAND USES AND BUILDINGS</th>
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### DEVELOPMENT REGULATIONS

<table>
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<th>FAR COVERAGE (%)</th>
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<tr>
<td>River Reserve</td>
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ANNEXURE: DETAILED PROJECT SHEETS
## ANNEXURE B: DETAILED PROJECT SHEET

### PROJECT NO 1.1.1: TRANSPORT MODEL TO TEST TRANSPORT OPTIONS (EXTERNAL)

<table>
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<th>PILAR OF VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
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<td>STRATEGY</td>
<td>1.1 Regional Connectivity</td>
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<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>This project involves the development of a local area transport model using a mesoscopic modelling environment like SATURN. This model would be used to test the effectiveness of the proposed interventions interns of new road network linkages both within the CBD and local area. The existing EMME/2 transportation model should form the basis of the mesoscopic model along with more recent traffic counts and vehicle occupancy surveys.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Immediate/ Short</td>
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<tr>
<td>BUDGET</td>
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<td>TYPE</td>
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<td>LINKAGES</td>
<td>1.1.2, 1.1.3</td>
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### PROJECT NO 1.1.2: ESTABLISH IMPROVED LINKAGE TO THE R102

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<tr>
<th>PILAR OF VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.1 Regional Connectivity</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Mixed Use Business / Service</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Access to the R102 for the inhabitants of Verulam is largely limited to the intersection of the R102 and Wick Street. Consequently, traffic routes from the western suburbs via Todd and Moss Streets onto Ireland Street and eventually the R102. This routing pattern is a possible cause of congestion along Ireland Street during the peak travel demand periods and is a contributing factor to poor gate way access to the CBD. To this end, the continuation of Russom Street to the M27 would provide an additional access to the R102. In addition, the provision of parking along Russom Street in the vicinity of the school would be required to cater for existing demands.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Long</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R6,392,594 (Excl VAT)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>1.1.1</td>
</tr>
</tbody>
</table>

### PROJECT NO 1.1.3: EXTENSION OF IRELAND STREET

<table>
<thead>
<tr>
<th>PILAR OF VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.1 Regional Connectivity</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Mixed Use Business / Service</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The northern extremities of the Verulam CBD currently exhibit signs of urban decay and general lack of investment. This is symptomatic of its isolation in terms of access to the regional transportation network. To attract investment into the northern extremities of the Verulam CBD, the continuation of Ireland Street across the Mloti River to connect with the R102 is proposed. The link would involve the construction of a new via-duct and would improve the CBD accessibility to existing and planned developments north of the verulam CBD.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R50,747,201</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design/ Implementation</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>1.1.1, 1.2.1</td>
</tr>
</tbody>
</table>

### PROJECT NO 1.2.1: TRANSPORT MODEL TO TEST TRANSPORT OPTIONS (CBD INTERNAL)

<table>
<thead>
<tr>
<th>PILAR OF VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.2 Create Efficient Movement in CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Within the CBD, there is a constant high intensity interaction between vehicles, pedestrians and the transportation network. It would therefore be prudent to test the various design options for the CBD with a micro-simulation model like AIMSUN or VISSIM to ensure that the proposed strategies are achieving their intended goals and objectives.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Immediate/ Short</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R150,000 (Excl VAT)</td>
</tr>
<tr>
<td>TYPE</td>
<td>Design/ Implementation</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>1.2.2, 1.2.3, 1.2.4, 1.2.5, 2.1.3, 2.1.4</td>
</tr>
</tbody>
</table>
ANNEXURE B: DETAILED PROJECT SHEET

PROJECT NO 1.2.2: UPGRADING OF IRELAND STREET

<table>
<thead>
<tr>
<th>PILLAR OF</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.2 Create Efficient Movement in CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Residential Mixed Use / Transport Nodes</td>
</tr>
</tbody>
</table>
| DESCRIPTION | With the reclamation of Wick Street as a more pedestrian orientated street (1.3.1) and the provision of new public transport facilities (1.3.1 and 1.3.2), there is both a need and opportunity improve the operational performance in terms of mobility and capacity of Ireland Street through the limiting of side friction. The upgrade envisage would include:  
Minor road widening  
Better channelization of traffic  
Removal of informal public transport ranking/holding opportunities |
| RESPONSIBILITY | eThekwini Transport Authority |
| PRIORITY | Immediate/ Short |
| BUDGET | R18,136,364 |
| LINKAGES | 1.2.1, 1.1.1, 1.3.1, 1.3.2 |

PROJECT NO 1.2.3: CBD PARKING STRATEGY

<table>
<thead>
<tr>
<th>PILLAR OF</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.2 Create Efficient Movement in CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Parking within CBD’s are both useful and harmful to the urban environment. No parking can reduce the accessibility of businesses and the relative attractiveness of a CBD. However, too much parking within the CBD results in an increased loading on the road network and eventually the need for wider roads that tend to impact on the sustainability of the CBD as a whole in terms of growth and urban quality. To this end, a parking strategy that ensures the appropriate balance of on-street and off-street parking facilities must be developed for the Verulam CBD. There exists numerous opportunities to create mid block parking courts and parkades and these should be explored within the planning framework for the CBD.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R 200,000</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>1.2.1, 2.2.1</td>
</tr>
</tbody>
</table>

PROJECT NO 1.2.4: NEW STREET CONNECTIONS

<table>
<thead>
<tr>
<th>PILLAR OF</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.2 Create Efficient Movement in CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
</tbody>
</table>
| DESCRIPTION | A number of new street connections within the Verulam CBD are proposed to improve circulation and access. These include:  
- A 12m wide link between Wick Street and the Todd Street cul de sac to improve access and circulation to the rail station precinct.  
The extension of the Railway Street to Todd Street will improve access and circulation both in the western region of the CBD and the CBD as a whole. |
| RESPONSIBILITY | eThekwini Transport Authority |
| PRIORITY | Medium to Long |
| BUDGET | R 5,860,603 |
| LINKAGES | 1.2.1 |

PROJECT NO 1.2.5: REINFORCE PEDESTRIAN CONNECTIVITY

<table>
<thead>
<tr>
<th>PILLAR OF</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>1.2 Create Efficient Movement in CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Initial focus should be on setting up consultation structures between eThekwini and landowners. Once this has been achieved the connections can be properly planned before implementation.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>eThekwini Transport Authority</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Medium</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R100,000</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>Operational</td>
</tr>
</tbody>
</table>
### ANNEXURE B: DETAILED PROJECT SHEET

#### PROJECT NO 1.3.1: FORMALISE EXISTING RANK AT IRELAND STREET

**PILLAR**

<table>
<thead>
<tr>
<th>VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
</table>

**STRATEGY**

1.3 Create Supportive PT System

**LOCATION**

Transport Nodes

**DESCRIPTION**

This project involves the development of minibus taxi and bus rank facility off Ireland Street. This facility is to comprise approximately 70 ranking and hold minibus taxi bays at the upper level with bus facilities being provided at the lower level. This facility is intended to consolidate existing informal minibus taxi ranking operations into a formal facility.

The sizing of the facility needs to be verified during the facility design phase and should take cognisance of various routing strategies.

**RESPONSIBILITY**

eThekwini Transport Authority

**PRIORITY**

Immediate/ Short

**BUDGET**

R 33,169,289

**TYPE** (CAP/OPS) Capital

**LINKAGES** 1.3.2

#### PROJECT NO 1.3.2: CREATE NEW HOLDING AREA WEST OF IRELAND STREET

**PILLAR**

<table>
<thead>
<tr>
<th>VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
</table>

**STRATEGY**

1.3 Create Supportive PT System

**LOCATION**

Transport Nodes

**DESCRIPTION**

Related to project 1.3.1. is the provision of additional minibus taxi holding. The holding area provided comprises 46 bays on a site along Moss Street to the immediate west of the R102.

**RESPONSIBILITY**

eThekwini Transport Authority

**PRIORITY**

Medium

**BUDGET**

R 5,474,204

**TYPE** (CAP/OPS) Capital

**LINKAGES** 1.3.1

#### PROJECT NO 1.3.3: CREATE NEW TAXI RANK ADJACENT TO STATION

**PILLAR**

<table>
<thead>
<tr>
<th>VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
</table>

**STRATEGY**

1.3 Create Supportive PT System

**LOCATION**

Transport Nodes

**DESCRIPTION**

The existing Verulam Rail Station is the primary gateway to accessing the cities rail network. However, the station is disadvantaged with poor visibility and accessibility both from a private car and road based public transport perspective. To this end, a minibus taxi pick-up and drop off area is required at the station and would form part of the public transport network serving the Verulam CBD and the broader Verulam area. A maximum of some 40 bays can be provided within the precinct. However, the size of this facility would ultimately be informed by the potential for rail as a mode of travel to and from Verulam and the level of activity that would be achieved within the rail precinct.

**RESPONSIBILITY**

eThekwini Transport Authority

**PRIORITY**

Immediate/ Short

**BUDGET**

R 10,158,719

**TYPE** (CAP/OPS) Capital

**LINKAGES** 1.2.4

#### PROJECT NO 1.3.4: UPGRADE RAIL STATION - LINKAGE & NODE

**PILLAR**

<table>
<thead>
<tr>
<th>VISION</th>
<th>1. AN INTEGRATED MOVEMENT SYSTEM</th>
</tr>
</thead>
</table>

**STRATEGY**

1.3 Create Supportive PT System

**LOCATION**

Transport Nodes

**DESCRIPTION**

The rail station is an asset with additional capacity that can be exploited for the benefit of public transport users. In addition, proposed development of the Rail Precinct will offer new opportunities for economic activity. In this regard promoting use of rail through improved access from the predominantly residential areas to the east via a pedestrian bridge is essential.

**RESPONSIBILITY**

eThekwini Transport Authority

**PRIORITY**

Immediate/ Short

**BUDGET**

R 4,061,529

**TYPE** (CAP/OPS) Capital

**LINKAGES** 1.3.1

**TYPE** (CAP/OPS) Design/Implementation

**LIMITATIONS**

- **Environmental Impact:**
  - The project is subject to environmental impact assessments and mitigation plans.

- **Budget:**
  - The project is funded within the existing budget allocations.

- **Community Engagement:**
  - Regular community meetings and consultations are held to ensure stakeholder buy-in.

**Monitoring & Evaluation:**

- The project will be evaluated through performance indicators such as passenger numbers, travel times, and system reliability.

- Feedback from users will be collected through surveys and interviews to continually improve the facility.

**Conclusion:**

The project is essential for improving the accessibility and efficiency of public transport in the area, promoting a more sustainable and inclusive urban transport system.
### ANNEXURE B: DETAILED PROJECT SHEET

#### PROJECT NO. 2.1.1: PUBLIC REALM UPGRADE FOR TODD, MOSS AND WICK STREETS

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>TYPE</th>
<th>RESPONSIBILITY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>Capital</td>
<td>Economic Development</td>
<td>Mixed Use Core</td>
<td>The current phase of work consists of upgrading paving and sidewalks, planting trees and providing lighting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develop Primary Order Town Scale Space</td>
<td>Immediate/Short</td>
<td>R 22,997,259</td>
</tr>
</tbody>
</table>

#### PROJECT NO. 2.1.2: IRELAND STREET PUBLIC REALM UPGRADE

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>TYPE</th>
<th>RESPONSIBILITY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>Capital</td>
<td>Economic Development</td>
<td>Mixed Use Core</td>
<td>The proposed Ireland Street upgrade consists of upgrading paving and sidewalks, planting trees and providing lighting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develop Primary Order Town Scale Space</td>
<td>Short</td>
<td>R 18,529,609</td>
</tr>
</tbody>
</table>

#### PROJECT NO. 2.1.3: RECLAIM WICK STREET AS LINEAR HIGH STREET (PHASE 1)

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>TYPE</th>
<th>RESPONSIBILITY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>Capital</td>
<td>eThekwini Transport Authority</td>
<td>Mixed Use Core</td>
<td>Upgrading of Wicks Street is currently underway. The current phase of work consists of upgrading pavements and sidewalks, planting trees and providing lighting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develop Primary Order Town Scale Space</td>
<td>Immediate/Short</td>
<td>R 350 000</td>
</tr>
</tbody>
</table>

#### PROJECT NO. 2.1.4: RECLAIM WICK STREET AS LINEAR HIGH STREET (PHASE 2)

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>TYPE</th>
<th>RESPONSIBILITY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>Capital</td>
<td>eThekwini Transport Authority</td>
<td>Mixed Use Core</td>
<td>Phase 2 and the ultimate phase of the redevelopment of Wick Street will see the extension of the current paving on the western side of the road allowing for trading areas and street side café's. It is suggested that the road is narrowed to two lanes, one in either direction with a lay-by or loading and public transport bay provided. Movement along this stretch of the road will be limited to public transport and delivery vehicles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develop Primary Order Town Scale Space</td>
<td>Long</td>
<td>R 33,647,934</td>
</tr>
</tbody>
</table>

#### PROJECT NO. 2.1.5: CIVIC/ OFFICE NODE REDEVELOPMENT (INCLUDING PRISON)

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>TYPE</th>
<th>RESPONSIBILITY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>Operational</td>
<td>Economic Development</td>
<td>Office/ Civic Precinct</td>
<td>A detailed precinct plan needs to be developed for the redevelopment of the civic and office node. The plan will be designed in light of a reviewed Verulam Town Planning Scheme and development and implementation of the Land Use Management Systems.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develop Primary Order Town Scale Space</td>
<td>Immediate/Short</td>
<td>R 350 000</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office/ Civic Precinct</td>
<td>R 350 000</td>
</tr>
</tbody>
</table>
### Project No 2.1.6: Prison Redevelopment

**Pillar of Vision**: 2. A Supportive Public Space System

**Strategy**: 2.1 Develop Primary Order Town Scale Space

**Location**: Office/ Civic Precinct

**Description**: The prison redevelopment will occur in two phases. Phase 1 - Land legal investigation as well as feasibility studies need to be conducted to establish whether the proposed redevelopment of the prison is viable. Phase 2 - Requires a detailed Site Development Plan.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (CAP/OPS)</th>
<th>Priority</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Development</td>
<td>Operational</td>
<td>Short</td>
<td>R500 000</td>
</tr>
</tbody>
</table>

### Project No 2.1.7: Redevelopment of Gandhi Park

**Pillar of Vision**: 2. A Supportive Public Space System

**Strategy**: 2.1 Develop Primary Order Town Scale Space

**Location**: Office/ Civic Precinct

**Description**: At present the park is underutilised as the nature of the topography creates areas of uncertainty. A Site Development Plan needs to be completed for the leveling and redeveloping the park to allow for a much needed recreational space in the heart of the civic precinct.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (CAP/OPS)</th>
<th>Priority</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Recreation</td>
<td>Capital</td>
<td>Short</td>
<td>R3,000,000</td>
</tr>
</tbody>
</table>

### Project No 2.2.1: Investigate Pocket Park & Courtyard Space within the Core

**Pillar of Vision**: 2. A Supportive Public Space System

**Strategy**: 2.2 Establish Secondary Order Urban Space

**Location**: All areas

**Description**: Further investigation and research needs to be conducted as well as pilot studies commissioned. To establish the feasibility of introducing pocket parking and courtyard spaces with the inner city blocks.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (CAP/OPS)</th>
<th>Priority</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>eThekwini Transport Authority</td>
<td>Operational</td>
<td>Short</td>
<td>R350,000</td>
</tr>
</tbody>
</table>

### Project No 2.2.2: Develop External Space at Transport Nodes

**Pillar of Vision**: 2. A Supportive Public Space System

**Strategy**: 2.2 Establish Secondary Order Urban Space

**Location**: Transport Nodes

**Description**: Detailed design needs to be carried out in terms of the suggested proposals for the area, i.e. external spaces should be paved, seating and shelters provided as well as landscaping for shade and a rich aesthetic appeal. The designs for the external spaces at Transport Nodes needs to be influenced by the public realm upgrades as well as the redevelopment and upgrade of the transport facilities.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Type (CAP/OPS)</th>
<th>Priority</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Support</td>
<td>Design</td>
<td>Medium</td>
<td>R500,000</td>
</tr>
</tbody>
</table>
## ANNEXURE B: DETAILED PROJECT SHEET

### PROJECT NO 2.3.1: VERULAM CBD PLANTING STRATEGY

<table>
<thead>
<tr>
<th>PILAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>2.3 Develop Town Centre Planting Strategy</td>
<td>All areas</td>
<td>Planting strategy for Wick and Ireland Streets, Formal Approaches and Gateways, as well as Highway (R102). This project will be informed by the public realm upgrades proposed for Wick, Moss and Todd Street.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>TYPE (CAP/OPS)</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Recreation</td>
<td>Operational</td>
<td>Short</td>
<td>R200 00</td>
</tr>
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</table>

### PROJECT NO 2.4.1: IMPROVE LINKAGES TO ACTIVE RECREATION SPACE

<table>
<thead>
<tr>
<th>PILAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>2.4 Enable Access to a Range of Landscapes</td>
<td>All areas</td>
<td>Detailed designs will have to be established for the improve linkages from the CBD across railway to active recreation space. This project should be informed by the public realm upgrades.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>TYPE (CAP/OPS)</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Recreation</td>
<td>Operational</td>
<td>Medium</td>
<td>R100 000</td>
</tr>
</tbody>
</table>

### PROJECT NO 2.4.2: ENHANCE QUALITY OF UMDLOTI RIVER CORRIDOR

<table>
<thead>
<tr>
<th>PILAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A SUPPORTIVE PUBLIC SPACE SYSTEM</td>
<td>2.4 Enable Access to a Range of Landscapes</td>
<td>Gateway Precinct</td>
<td>Rehabilitating and enhancing the Umdloti river corridor will provide an essential recreational node for the Verulam community. Once the area has been rehabilitated and upgraded it will consist of a park with an established water course, nature trails and picnic facilities. A rehabilitation plan would need to be developed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>TYPE (CAP/OPS)</th>
<th>PRIORITY</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Recreation</td>
<td>Operational</td>
<td>Immediate/Short</td>
<td>R250 000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSIBILITY</th>
<th>LINKAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Recreation</td>
<td>2.3.1, 1.1.2</td>
</tr>
</tbody>
</table>
### ANNEXURE B: DETAILED PROJECT SHEET

#### PROJECT NO. 3.1 TO 4.4: DEVELOP REVISED TPS FOR TOWN CENTRE (INCORPORATION FORM BASED CODES)

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. ENSURE A DIVERSE LAND USE MIX</td>
<td>3.1 Rationalise Land Use Structure</td>
<td>All areas</td>
<td>A review of the Verulam Town Planning Scheme needs to be commissioned together with the development of Land Use Management Systems (LUMS). The focus of this review will be on addressing issues as highlighted relating to Pillar 3 and 4, Ensuring a Diverse Land Use Mix and Ensuring a Responsive Built Environment. Specific precincts such as the Light Manufacturing, Office and Civic Cluster, and Civic Gateway will require feasibility studies before detailed precinct plans for each area are conducted. A number of cross cutting issues are identified within this section and therefore will be addressed within and linked to other projects and detailed design. A detailed listing of issues to be considered in reviewing the TPS include: Formalise Light Manufacturing Precinct, Define New Office and Civic Cluster, Redefine Civic Gateway Node (police station site), Encourage High Density Residential Development, Ensure an Active Edge / Base within the Core, Strengthen Existing and Identify New formal Retail Centres, Enhance formal retail opportunity within Transport Nodes, Provide for Informal Trade and Market Activity, Encourage build-to-edge Infill along discontinuous street edges, Facilitate Internal multiple use courtyard typology, Encourage Collonaded Street Edges, Encourage Corner Accentuation, Identify Iconic Building Opportunity, Protect Buildings of Historic and Landmark Quality, Define Town Centre Scale Urban Edge or Frame.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>BUSINESS SUPPORT</td>
<td>TYPE (CAP/OPS)</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>IMMEDIATE/ SHORT</td>
<td>TYPE</td>
<td>Design</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R500 000</td>
<td>LINKAGES</td>
<td></td>
</tr>
</tbody>
</table>

#### PROJECT NO. 5.1.1: CREATE DEDICATED SPACE FOR INFORMAL SECTOR

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</td>
<td>5.1 Integration of Informal Sector / SMME Activity</td>
<td>All areas</td>
<td>Verulam as a multi-nodal transport node attracts numerous informal sector businesses. These businesses are currently located on pavements either in formal or informal structures. The project is aimed at creating more space for the informal sector. This space should be integrated with the future public transport infrastructure and the movement routes used by pedestrians in Verulam. It is recommended that the facilities be provided throughout the CBD, but that provision of a market area in the vicinity of the proposed taxi rank be considered. This will require additional land, adjacent to the proposed multi-nodal transport facility be purchased for this purpose.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>BUSINESS SUPPORT</td>
<td>TYPE (CAP/OPS)</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>IMMEDIATE/ SHORT</td>
<td>TYPE</td>
<td>Design/ Implementation</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R 10,000,000</td>
<td>LINKAGES</td>
<td>1.3.1, 2.2.2</td>
</tr>
</tbody>
</table>

#### PROJECT NO. 5.1.2: CREATE DEDICATED SPACE FOR SMALL BUSINESS SECTOR

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>STRATEGY</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</td>
<td>5.1 Integration of Informal Sector / SMME Activity</td>
<td>Mixed Use Business / Service</td>
<td>Verulam already supports a vibrant small business sector offering a range of products and services. In order for the area to continue to grow this sector space for new entrants to the small business sector is required. Existing underutilised eThekwini facilities or new facilities can be provided for this purpose. The project will entail the establishment of an industrial hive type facility, providing entrepreneurs with access to space and services at a reasonable rate.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>BUSINESS SUPPORT</td>
<td>TYPE (CAP/OPS)</td>
<td>Capital</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>MEDIUM</td>
<td>TYPE</td>
<td>Design/ Implementation</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R 4,000,000</td>
<td>LINKAGES</td>
<td>2.1.6, 5.1.3</td>
</tr>
</tbody>
</table>
## ANNEXURE B: DETAILED PROJECT SHEET

### PROJECT NO 5.1.3: ESTABLISH BUSINESS DEVELOPMENT SUPPORT PROGRAMME

<table>
<thead>
<tr>
<th>VISION</th>
<th>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>5.1 Integration of Informal Sector / SMME Activity</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The Verulam CBD has a vibrant small business sector and can serve as a springboard for future entrepreneurs. eThekwini is already making substantial effort to develop this sector and it is suggested that the provision of dedicated business support services in Verulam can further grow this sector.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Business Support</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>BUDGET</td>
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<tr>
<td>LINKAGES</td>
<td>2.1.6, 5.1.2</td>
</tr>
</tbody>
</table>

### PROJECT NO 5.2.2: LED STRATEGY (CATALYTIC PROJECT PER NODE)

<table>
<thead>
<tr>
<th>VISION</th>
<th>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>5.2 Node Establishment and Improvement</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>In order to give effect to and support the spatial planning proposals as presented an LED Strategy should be developed for Verulam. The LED Strategy should be focussed on developing action plans, in consultation with stakeholders, for a catalytic project in each of the identified nodes. The catalytic projects should be identified through the Stakeholders Forum.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Economic Development</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
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<tr>
<td>BUDGET</td>
<td>R 300,000</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>5.2.1</td>
</tr>
</tbody>
</table>

### PROJECT NO 5.2.1: DETAILED CONSULTATION AND PLANNING FOR NODES

<table>
<thead>
<tr>
<th>VISION</th>
<th>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>5.2 Node Establishment and Improvement</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Each of the nodes as identified through the spatial planning process presents unique opportunities to potential investors / developers. These opportunities should be further considered with the support of the Stakeholders Forum and where relevant more detailed planning for nodes will be undertaken.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Economic Development</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R 0</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>5.2.2</td>
</tr>
</tbody>
</table>

### PROJECT NO 5.3.1: DEVELOP MARKETING AND PROMOTION PLAN

<table>
<thead>
<tr>
<th>VISION</th>
<th>5. FACILITATE LOCAL ECONOMIC DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>5.3 Promotion and Marketing of Verulam CBD</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Innovative approaches towards marketing and promoting opportunities in Verulam will have to be identified. It is suggested that a basic marketing / promotion plan be developed with the focus of this plan being to generate an awareness of opportunities in Verulam with: (a) the eThekwini Municipality, (b) Local users and (c) Investors.</td>
</tr>
<tr>
<td>RESPONSIBILITY</td>
<td>Economic Development</td>
</tr>
<tr>
<td>TYPE</td>
<td>Operational</td>
</tr>
<tr>
<td>PRIORITY</td>
<td>Short</td>
</tr>
<tr>
<td>BUDGET</td>
<td>R 50,000</td>
</tr>
<tr>
<td>LINKAGES</td>
<td>6.1.1, 5.2.1</td>
</tr>
</tbody>
</table>
### ANNEXURE B: DETAILED PROJECT SHEET

#### PROJECT NO 6.1.1: ESTABLISH AND MANAGE REPRESENTATIVE STAKEHOLDERS FORUM

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>6. ENSURE APPROPRIATE URBAN MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>6.1 Maintain Stakeholder Participation</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>A large number of stakeholders provided inputs during the Precinct Planning process. eThekwini Municipality has indicated their interest in establishment a Stakeholders Forum in Verulam that will serve as the consultative body for development in the CBD. At a Stakeholders meeting held in June 2009 it was agreed that such a Forum will be created and that stakeholders will be nominated by the various relevant groups. Once established the activities of this Forum must be managed, ensuring that a strong contribution is made by stakeholders in shaping future development.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY   | Economic Development                |
| TYPE             | Operational                          |
| PRIORITY         | Immediate/ Short                     |
| BUDGET           | R 50,000                             |

#### PROJECT NO 6.2.1: ESTABLISH AND IMPLEMENT TRANSPORT / PARKING MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>6. ENSURE APPROPRIATE URBAN MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>6.2 Establish Transport / Parking Management Plan</td>
</tr>
<tr>
<td>LOCATION</td>
<td>All areas</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Capital development aimed at addressing transport and traffic related issues will take some time to put in place. It has, however, been established that through the development of a transport / parking plan and the implementation thereof the situation in the Verulam CBD can be substantially improved. A basic traffic / parking plan therefore should be developed. The plan will indicate approaches to be adopted to better manage traffic and parking, including improved signage, focussed policing, agreements to be reached with users of parking area and communication with stakeholders. The Stakeholder Forum should participate in the development of this plan.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY   | eThekwini Transport Authority         |
| TYPE             | Operational                          |
| PRIORITY         | Short                                 |
| BUDGET           | R 0                                   |

#### PROJECT NO 6.2.2: ESTABLISH AND IMPLEMENT URBAN MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>6. ENSURE APPROPRIATE URBAN MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>6.3 Urban Management Plan</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The urban environment in the Verulam CBD is not appropriately managed and maintained. This is both a public and private sector responsibility. An urban management plan focussing on addressing crime and grime issues, as well as promoting the general upgrading of the CBD, 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>

| RESPONSIBILITY   | Stakeholder Forum                    |
| TYPE             | Operational                          |
| PRIORITY         | Short                                |
| BUDGET           | R 0                                  |

#### PROJECT NO 6.2.3: ESTABLISH AND IMPLEMENT URBAN MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>6. ENSURE APPROPRIATE URBAN MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>6.3 Urban Management Plan</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>The urban environment in the Verulam CBD is not appropriately managed and maintained. This is both a public and private sector responsibility. An urban management plan focussing on addressing crime and grime issues, as well as promoting the general upgrading of the CBD, 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>

| RESPONSIBILITY   | Stakeholder Forum                    |
| TYPE             | Operational                          |
| PRIORITY         | Short                                |
| BUDGET           | R 0                                  |

#### PROJECT NO 6.2.4: OBTAIN APPROVAL FOR PRECINCT PLAN

<table>
<thead>
<tr>
<th>PILLAR OF VISION</th>
<th>6. ENSURE APPROPRIATE URBAN MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY</td>
<td>6.4 Precinct Plan Implementation</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Not relevant</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>In order for the Precinct Plan to taken forward to implementation it must be formally approved and adopted by Council. This process should be initiated immediately.</td>
</tr>
</tbody>
</table>

| RESPONSIBILITY   | Framework Planning                   |
| TYPE             | Operational                          |
| PRIORITY         | Immediate/ Short                     |
| BUDGET           | R 0                                  |
ANNEXURE: MINUTES FROM PUBLIC STAKEHOLDER MEETINGS
C.1. PUBLIC MEETING 1 NOTES

19 February 2009
VERULAM CBD REGENERATION - PUBLIC MEETING NOTES

Stakeholders present at meeting –
Verulam historical association, taxi association, business form, metro police, Verulam civic association, taxi owners association

Question 1 – What would your vision for the future development of the Verulam Town Centre (form an economic perspective)?

- Since the beginning of development within Verulam the town has been connected in a number of various locations. It was agreed that making additional linkages around the R102 was supported. Verulam was previously restricted to an FAR of 1:1, additional FAR is welcomed and needed. However the question was raised whether Verulam has sufficient infrastructure to cope with additional development?
- Anthony Naidoo - Concern – Verulam needs to be more open and less congested. Lots of transport problems at present. Tourism needs to be driven due to new surrounding developments opportunities. Verulam is used as a centralised area or connection point from adjacent rural area to Durban. What can happen to attract commuters to stay within Verulam instead of using it as just a connection put?;
- CBD is limited and very congested, land owners within the CBD are holding onto their properties and not allowing outside investment to increase to encourage and stimulate development;
- Development should occur in phases due to restricted budgets. Need a short and long term vision. Notice should be given to building owner who have not looked after the building in order for regeneration to occur. Residential development is supported with the Town Centre to allow and increased usage, surveillance as well as increase the life of the town;
- Suggestion – the condition of Verulam is due to business being centralised. Business around the park are declining; new investment needs to occur to alleviate crime and grime in the area. The attraction of a game or hyper would help stimulate development;

Question 2 – As a Town Centre Verulam is a cul-de-sac or dead end town is this acceptable or should this change and how?
- The reason for the dead end town is due to the deviation of R102 (link Russell street to M27);
- Concerned resident – Has any consultation occurred yet? Eger to see development and growth because issue and ideas are presented and nothing is ever done. It would be great to see development and growth in the next couple of years;
- Vasu Moodley – Too many building within Verulam are eye sores what are the municipality going to do about it;
- Mr Ram – Old prison is a dilapidated building which is now an eye sore, the metro base is also an eye sore – a large track of land which is not properly utilised.
- S. Naicker – Represents the taxi and bus passenger - Vision - safe and crime free environment/ city. No parking, banks and ATMS are congested. More people are going to gateway because of the congestion and transport to Gateway is only R1 more than a trip to Verulam. (R6) Banks and home affairs are over crowded. Development and investment is not encouraged and supported because of the crime and congestion. Affordable housing needs to be established close to Verulam to prevent long travelling distances and to prevent Verulam being a connection point. Shoprite is looking for larger land because current premised is too small.

Question 3 – A key concern with Verulam is that it is not attracting new investment. How can we ensure that investment is attracted to the Verulam Town Centre?

Question 4 – Taxi and vehicle congestion appears to be a major problem in the Town Centre. What can be done to address this?

Question 5 – How can we improve the circulation of pedestrian through the Town Centre?
C.1. PUBLIC MEETING 1 NOTES

General Discussion

- A management framework needs to be established to encourage building owners to take pride in the properties;
- Decentralisation – housing has occurred around Verulam therefore resulting in Verulam being only a connecting point. Land needs to be opened up within the city to allow for greater investment. Quick entrance and exists need to be created due to the new development;
- The old prison building adjacent to the civic building, should be acquire by the municipality and redevelop, as it is attracting the wrong type of the attractions;
- Redistributed taxi ranks to alleviated traffic congestion along Ireland Street;
- Video cameras need to be included in the new vision for the Town Centre;
- Traffic congestion and parking are big issues within Verulam. The Town Centre will not attract new investment and people if they cannot access and address there issues for being in the city; move taxi rank are needed to ease congestion;
- Verulam is a dormant town – in order to attract development authorities need to identify land for additional development. New linkages within the town are identified as a bridge across the river from Wicks Street, and linking the road from the station to industrial area. High rise trucks are hitting the bridge and trucks are using residential roads due to internal congestion. Taxi rank need to be split to increase investment opportunities around the town;
- Going to the market on a Sunday is difficult due to congestion and lack of parking. A parking arcade could be located near the morning market;
- Short term goal – regulate and control movement. Wicks Street could be made a one way street for better flow. Problem with the street vendors needs to be addressed. To increase the image of Verulam a solution need to be created to look after all traders. Look after the business and opportunities with the Town Centre before looking externally. Need to address traders all over the pavements, regulate and control. People do not feel safe and the image needs to be changed. Award grants to buildings in need within the Town Centre to upgrade and stimulate growth and development and a renewed interest in the area. Additional industrial space needs to be located. Need to contain and control taxi rank;
- Trucks are not adhering to height restriction and damaging property. Pedestrian bridge could be converted into a traffic road to address traffic congestion. There is a number of potential site within the area which could be used as recreational site to encourage people to use facilities within the city and not just surrounding facilities;
- Moving market to the end of Wicks Street. Convert the morning market in addition taxi facility.
## C.1. PUBLIC MEETING 1 NOTES

Comments received from public on sheets distributed at the public meeting.

<table>
<thead>
<tr>
<th>NO</th>
<th>NAME</th>
<th>SURNAME</th>
<th>TEL.NO</th>
<th>ISSUE 1</th>
<th>ISSUE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mohamed</td>
<td>Akbar</td>
<td>032 533 1735 / 082 856 7864</td>
<td>Requesting a report</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Farouk</td>
<td>Asmal</td>
<td>032 533 1526 / 083 792 3534</td>
<td>Verulam Business Forum</td>
<td>Re-distribute transport system</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>Bhabha</td>
<td>032 533 1735 / 083 792 3534</td>
<td>Prison area can be developed as a taxi area / port</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Imran</td>
<td>Bux</td>
<td>084 601 3105</td>
<td>Requesting a report</td>
<td><a href="mailto:zbus@mweb.co.za">zbus@mweb.co.za</a></td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>Ferumal</td>
<td>084 601 3105</td>
<td>Decentralise Metro police in the township</td>
<td>Widen and open new roads</td>
</tr>
<tr>
<td>6</td>
<td>Farouk</td>
<td>Gunny</td>
<td>032 533 7082 / 032 533 0778</td>
<td>Gandhi Park: move informal hawkers to the park area at the Verulam court. Renovate the old Post office building, convert to shops at the park area. Railway Station: Area wasted, change to Taxi parking provide some quick shops around area, remove pedestrian bridge over railway line and replace with vehicle bridge. Bus Rank: Drain running parallel of free-way and behind the buildings. Cover drain fill road level. move taxi rank form Ireland street to Drain area, to cut the traffic flow. Remove tower and high shelter at rank area to widen rank</td>
<td>Conner Wick and Ireland Street utilise as recreation centre. Move Metro Police to vacant land next to testing ground then change existing Metro Police Office and adjacent vacant land into community Hall with ample parking</td>
</tr>
<tr>
<td>7</td>
<td>Leonard</td>
<td>Lekoba</td>
<td>072 463 4551 / 076 754 5780</td>
<td>Municipality to support the informal sector to operate in the CBD (driving Schools)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Sipho</td>
<td>Mgwabe</td>
<td>073 819 3810</td>
<td>Identification of a Taxi rank location</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>VS</td>
<td>Moodley</td>
<td>073 376 3871</td>
<td>Introduce island and Palm trees in the Centre of Wick street to improve the image of Verulam</td>
<td>Health hazard in the building next to Standard Bank the area is filthy</td>
</tr>
<tr>
<td>10</td>
<td>Hansa</td>
<td>Naicker</td>
<td>032 533 8863 / 032 533 4041</td>
<td>Old prison to be used as a small business Hub or manufacture plant / encourage informal traders</td>
<td>Usage of the railway station</td>
</tr>
<tr>
<td>11</td>
<td>Hansa</td>
<td>Naicker</td>
<td>032 533 8863 / 032 533 4041</td>
<td>Shortage of housing in formal areas</td>
<td>High price for taxi and bus fare, Standardise taxi fares</td>
</tr>
<tr>
<td>12</td>
<td>S</td>
<td>Naicker</td>
<td>032 533 4996</td>
<td>Build fly-over and Under-pass at intersection of R102 and M27 Todd Street should continue as fly-over near the railway station.</td>
<td>Develop the park alongside R102 an Mt View. Develop Gardens in CBD, trees etc. Verulam bowling Green needs to be urgently attended to.</td>
</tr>
<tr>
<td>13</td>
<td>K</td>
<td>Perumal</td>
<td>082 487 1412</td>
<td>Is any land along the Ireland Street / Bus -taxi rank due for expropriation in the process of expanding the transport corridor</td>
<td>Redistribute transport system within the CBD (the Prison area can be used and also the Mahatma Gandhi Park</td>
</tr>
<tr>
<td>14</td>
<td>Ram</td>
<td>Pitamber</td>
<td>083 340 5522</td>
<td>Bus operators are pleased with the area where bus rank is situated and are not prepared to move</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>D</td>
<td>Ramroop</td>
<td>084 958 6714</td>
<td>Poltholes unattended to robots in most case do not work - das or month for repairs to be conducted. Install camera in CBD to monitor crime. Pavements to be constructed for pedestrians at South Ridge Streetlights to be provided R102 Umlhloti road near the driving test station Overgrowth grass cutting needs to be attended</td>
<td>Water leaks should be attended by Metro water - causes damages to motor vehicles due to trenches in roads that it creates</td>
</tr>
<tr>
<td>16</td>
<td>H</td>
<td>Rattan</td>
<td>083 268 6277 / 032 533 1781</td>
<td>Dangerous conditions at intersection Umlhloti Beach road and Olgwana road</td>
<td>Congestion during peak traffic hours at intersection of Ireland street and Coria / Adam Road opposite Testing grounds should be attended to</td>
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<tr>
<td>17</td>
<td>D</td>
<td>Sevelall</td>
<td>084 205 8544</td>
<td>Vacant land surrounding Lotusville Primary School for development of a Mini road safety village, Utilisation of cant Ian surrounding Lotusville Primary School</td>
<td>Trevennen road: needs additional road bumps and restriction of heavy vehicles and restrict on street vendors due to danger it causes for children at Lotusville Primary School</td>
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<td>18</td>
<td>Verulam</td>
<td>Historical Society</td>
<td>032 533 1260</td>
<td>Requesting prison to be included in the development of the CBD since it is of historical significance to the Town</td>
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### C.1. PUBLIC MEETING 1 REGISTER

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<td>Chetty</td>
<td>ETA</td>
<td>031 311 7737</td>
<td>083 275 5514</td>
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<tr>
<td>2</td>
<td>Mr</td>
<td>Dean</td>
<td>Ashie</td>
<td>RSWM</td>
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<td><a href="mailto:dean@durban.gov.za">dean@durban.gov.za</a></td>
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<tr>
<td>3</td>
<td>Mr</td>
<td>Andreas</td>
<td>Mkhoze</td>
<td>Business Support Unit</td>
<td>031 322 1717</td>
<td>083 377 6114</td>
<td>031 322 6408</td>
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<td>Arthur</td>
<td>Simgamge</td>
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<td>031 311 7616</td>
<td>078 563 8658</td>
<td>031 311 7111</td>
<td><a href="mailto:simgamage@durban.gov.za">simgamage@durban.gov.za</a></td>
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<td>Govender</td>
<td>Development Eng</td>
<td>031 311 6042</td>
<td>083 789 9335</td>
<td>031 561 6470</td>
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<td>083 630 2358</td>
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<td>031 311 4097</td>
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<td>083 775 8977</td>
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### C.2. PUBLIC MEETING 2 REGISTER

**Ethekwini Municipality - Verulam CBD Precinct Plan**

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**Ethekwini Municipality - Verulam CBD Precinct Plan**

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**IYER**

**Verulam Town Centre Precinct Plan - Consolidated Final Report**

JANUARY 2010

272
C.3. ESTABLISHMENT OF STAKEHOLDERS FORUM

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| 1 | WELCOME, INTRODUCTIONS & APOLOGIES:  

Dennis Nikosi (StratPlan) welcome all to the meeting and requested all present to introduce themselves. 

Apologies were received from Mr Singh (Verulam Historical Society) and Imran Bux (Verulam Business Forum).  

Hermien Wright confirmed that StratPlan could not get hold of the following people: Mrs Hansa Naicker (Terance Park Civic) and Mr Narain Murugas (Havenridge Civic).  

The meeting was well attended and various local groups and sectors were represented.  

(See attached list of all attendees with contact details.) |
| 2 | PURPOSE OF THE MEETING  

Tindall Kruger (StratPlan) gave a short background to the planning process that has been followed to date. This was necessary in order to obtain a common understanding of the way forward. The main purpose of the meeting was for the members present to consider the establishment of a Verulam CBD Stakeholder Forum. |
| 3 | OVERVIEW OF THE PRECINCT PLAN  

Nathan Iyer (Iyer Urban Design Studio) gave a short overview of the approved Precinct Plan. This included an overview of the Integrated Movement System, the Supportive Public Space System, the Diverse Land Use Mix and the Responsive Built Environment. |
| 4 | PROPOSED IMPLEMENTATION, APPROVAL PROCESS AND IMPLEMENTATION OF THE PLAN  

Tindall Kruger (StratPlan) gave an overview of the proposed implementation plan, Thembali Masimulu (eThekwini) explained the approval process relating to the plan and Steve Angelos (eThekwini) gave background regarding the implementation of the Plan on behalf of the Municipality.  

The following issues were raised and discussed:  

- A number of stakeholders were skeptical whether this exercise will bare any fruit. This is as a result of past experiences whereby there have been plans and discussions to develop the CBD which proved to be futile in the end. The eThekwini representatives however were able to address these concerns in a manner that gave hope to the stakeholders that this time around ‘things would be different’.  

- It was clear that some stakeholders experienced some frustration related to urban management. These vary from lack of law enforcement, visible policing, litter and a host of other related matters. The Project Team responded by indicating that some of these frustrations are due to teething problems with Verulam being part of the eThekwini Metro Municipality.  

- Although some representatives expressed dissatisfaction with the fact that some of their proposals tabled at previous meeting were not included in the current plan, the majority of the stakeholders were generally satisfied with the consultative principles adopted by the Project Team. |
| 5 | ESTABLISHMENT AND MANAGEMENT OF A VERULAM CBD STAKEHOLDER FORUM  

Dennis Nikosi (StratPlan) explained the purpose of the establishment of a Stakeholder Forum. It was agreed that the Stakeholder Forum will comprise of all the various sectors and groups present at the meeting and that each organization is allowed two representatives.  

The Temple Valley Civic Association as well as representatives from the Informal Traders in Verulam should be added to the list. The eThekwini Councillors should also be invited to the next meeting.  

It was unanimously agreed that eThekwini Municipality will assume the chair of the Forum for the first meeting and that they will call the next meeting within four weeks. The venue and the time will remain the same. At this meeting relevant office bearers will be selected. |
| 6 | CLOSURE  

Tindall Kruger thanked every one for their commitment to the process. He said that the Project Team sees the Stakeholder Forum as the only viable vehicle by which the planning process could reach implementation stage and beyond. This Stakeholder Forum presents an opportunity for all individual groups and sectors to collectively work closer with the eThekwini Municipality to jointly plan, implement and monitor development initiatives in Verulam. This was seen as a historic initiative which will encourage deeper understanding between the municipality and the leaders of the community in the study area. |
C.4. FIRST MEETING OF STAKEHOLDERS FORUM

VERULAM CBD STAKEHOLDER FORUM

MEETING: 3 DECEMBER 2009

RECORD OF MEETING: FOCUS ON DECISIONS

Purpose of Meeting: Second meeting of Verulam CBD Stakeholder Forum Meeting. Focus of meeting to ensure common understanding between eThekwini Municipality representatives and the Stakeholder Forum on the Way Forward in terms of the implementation of the Verulam CBD Precinct Plan.

Background: The following gave rise to the focus of the meeting: At the first meeting of the Stakeholder Forum held in November 2009 members expressed the opinion that they did not have adequate opportunity to study and comment on the final plan submitted. It was therefore requested that the submission of the Plan for adoption by Council should be delayed. The item was subsequently withdrawn from the relevant Council agenda (Economic Development Portfolio Committee).

Attendance at Meeting:
eThekwini Councillors represented (see attached)
Members of Stakeholder Forum represented (see attached)
Service Provider responsible for Precinct Plan represented (see attached)
Apologies received from representatives of the Economic Development Unit

Discussion:
The meeting started with Forum members expressing their concern with the final list of projects included in the Implementation Plan and specifically the prioritisation thereof. Mr Kruger was requested to provide a more detailed presentation of the Implementation Plan, whereafter the prioritisation process, and approaches to doing this was discussed.

The following were mentioned by the Service Providers and Councillor Arunajallam: The list of projects and priorities assigned is not final and can be adjusted in discussions with the Municipality depending on changing situations.

At present Verulam is losing out on attracting development funding as a Council and Stakeholder supported Precinct Plan is not in place.

Following a short discussion a project prioritisation exercise was proposed.

Decisions Reached:
Stakeholders in attendance confirmed their acceptance for the development direction proposed by the Precinct Plan and acknowledged that this should serve as a strategic decision-making instrument for the area.

Following deliberations on priority assigned to various projects, consensus was reached on the following priorities to be focussed on by the Stakeholder Forum.

PRIORITIES FOR CONSIDERATION BY STAKEHOLDER FORUM

<table>
<thead>
<tr>
<th>NO</th>
<th>PROJECT NAME</th>
<th>RESPONSIBILITY</th>
<th>BUDGET</th>
<th>CAPITAL / OPERATIONAL</th>
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<tbody>
<tr>
<td>1.1.1</td>
<td>Transport Model to test transport options (external)</td>
<td>eThekwini Transport Authority</td>
<td>R600,000</td>
<td>Operational</td>
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<td>1.2.1</td>
<td>Transport Model to test transport options (CBD internal)</td>
<td>eThekwini Transport Authority</td>
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<td>1.2.2</td>
<td>Upgrading of Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>R18,196,364</td>
<td>Capital</td>
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<tr>
<td>1.3.1</td>
<td>Formalise Existing Rank at Ireland Street</td>
<td>eThekwini Transport Authority</td>
<td>R33,169,289</td>
<td>Capital</td>
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<tr>
<td>1.3.3</td>
<td>Create New Taxi Rank adjacent to Station</td>
<td>eThekwini Transport Authority</td>
<td>R10,158,719</td>
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<tr>
<td>1.3.4</td>
<td>Upgrade Rail Station - Linkage &amp; Node</td>
<td>eThekwini Transport Authority</td>
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<tr>
<td>2.1.1</td>
<td>Public Realm Upgrade for Todd, Moss and Wick Streets</td>
<td>Economic Development Authority</td>
<td>R22,997,259</td>
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<td>2.1.5</td>
<td>Civil Office Node Redevelopment (including prison)</td>
<td>Economic Development Authority</td>
<td>R350,000</td>
<td>Operational</td>
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<tr>
<td>2.4.2</td>
<td>Enhance quality of Umdloti River Corridor</td>
<td>Parks and Recreation</td>
<td>R250,000</td>
<td>Operational</td>
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<td>3.1</td>
<td>Develop revised TPS for Town Centre (incorporation form based codes)</td>
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<td>R500,000</td>
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<td>5.1.1</td>
<td>Create dedicated space for informal sector</td>
<td>Business Support</td>
<td>R300,000</td>
<td>Operational</td>
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<tr>
<td>6.1.1</td>
<td>Establish and Manage representative Stakeholders Forum</td>
<td>Economic Development</td>
<td>R 50,000 p.a.</td>
<td>Operational</td>
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<tr>
<td>6.2.4</td>
<td>Obtain approval for Precinct Plan</td>
<td>Framework Planning</td>
<td>R 0</td>
<td>Operational</td>
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</tbody>
</table>

Note: Project 5.1.1 was amended to be an operational project
C.4. FIRST MEETING OF STAKEHOLDERS FORUM

It was agreed that details around actual implementation of concepts would follow as alternatives can only be generated through appropriate testing of concepts through, as an example, the traffic model.

There was an acknowledgement that funding for these projects must still be secured.

Future projects for review and inclusion were identified and are to be recorded, viz. space for driving schools, and facilities for emergency services. It was also suggested that a detailed vacant land assessment be undertaken in order to identify further opportunities.

The Way Forward

It was agreed by stakeholders that:

The Service Provider will prepare a record of the meeting;

The record will be circulated for consideration by the various organisations present at the meeting;

Once confirmed a true record of the outcome of the meeting the notes will, together with the final Verulam CBD Precinct Plan, be submitted to Council for adoption;

Priorities will then be discussed in more detail with Council representatives in future meetings of the Forum.

Following discussions with regard to the structuring of the Forum it was agreed that a management structure will not be elected at the meeting and that the Acting Chair for the Forum will remain Mr Stephen Angelos of the Economic Development Unit of the eThekwini Municipality.

The next meeting of the Forum will be called by the Acting Chair in discussion with stakeholders.
C.4. FIRST MEETING OF STAKEHOLDERS FORUM

VERULAM CBD STAKEHOLDERS MEETING - 3 DECEMBER 2009 - 18:00

<table>
<thead>
<tr>
<th>NO</th>
<th>NAME</th>
<th>SURNAME</th>
<th>ORGANISATION</th>
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<tr>
<td>1</td>
<td>Christy</td>
<td>Subraya</td>
<td>Brudhavan Civic</td>
<td>083 793 7938</td>
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<tr>
<td>2</td>
<td>Chocks</td>
<td>Arunajallam</td>
<td>eThekwini Councillor (Ward 60)</td>
<td>082 302 1925</td>
<td><a href="mailto:chocks@telkomsa.net">chocks@telkomsa.net</a></td>
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<tr>
<td>3</td>
<td>A</td>
<td>Samlall</td>
<td>CPF Verulam</td>
<td>082 376 3816</td>
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<td>4</td>
<td>VD</td>
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<td>CPF Verulam</td>
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<tr>
<td>6</td>
<td>Geoff</td>
<td>Pullan</td>
<td>Ethekwini Cllr</td>
<td>083 695 9190</td>
<td><a href="mailto:geoffpullan@iafrica.com">geoffpullan@iafrica.com</a></td>
</tr>
<tr>
<td>7</td>
<td>Vasu</td>
<td>Moodley</td>
<td>Keep Verulam Beautiful</td>
<td>083 787 4747</td>
<td><a href="mailto:vasu.moodley@gmail.com">vasu.moodley@gmail.com</a></td>
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<tr>
<td>8</td>
<td>Mandla</td>
<td>Ndlovu</td>
<td>North Local Driving School Association</td>
<td>082 295 3361</td>
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<td>Ram</td>
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<td>S</td>
<td>Venkatas</td>
<td>Verulam Bus Association</td>
<td>083 270 0889</td>
<td><a href="mailto:nis@absamail.co.za">nis@absamail.co.za</a></td>
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<td>V</td>
<td>Pather</td>
<td>Verulam Business Forum</td>
<td>032 533 8293</td>
<td><a href="mailto:sales@optim.co.za">sales@optim.co.za</a></td>
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<td>D</td>
<td>Sevelall</td>
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<tr>
<td>19</td>
<td>JS</td>
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<td>Verulam Historical Society</td>
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<td>J</td>
<td>Naidu</td>
<td></td>
<td>082 368 0835</td>
<td><a href="mailto:railwayhotel@line.co.za">railwayhotel@line.co.za</a></td>
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<tr>
<td>21</td>
<td>Nathan</td>
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<td>Iyer Urban Design Studio</td>
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<td><a href="mailto:nathan@iyer.co.za">nathan@iyer.co.za</a></td>
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<tr>
<td>22</td>
<td>Suzanne</td>
<td>Logan</td>
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<td>031 202 9550</td>
<td><a href="mailto:suzanne@iyer.co.za">suzanne@iyer.co.za</a></td>
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<tr>
<td>23</td>
<td>Tindall</td>
<td>Kruger</td>
<td>StratPlan</td>
<td>031 262 7014</td>
<td><a href="mailto:tindall@strategicplan.co.za">tindall@strategicplan.co.za</a></td>
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