# ETHEKWINI INDUSTRIAL SPATIAL STRATEGY

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EXECUTIVE SUMMARY

Until now, eThekwini Municipality has not had an overarching, city-wide, approach to industrial development. Industries have located in areas of convenience and in areas that have been historically zoned for such purposes. Given the lack of appropriate land and the high demand it is critical that strategies to provide space for these activities are developed. Given this and the port expansion and progress of Dube Trade Port, the Industrial Spatial Strategy focuses on areas of potential within the city and will recommend the approach to addressing this.

The areas with industrial activities were investigated and a detailed analysis of the zoning quantum was also undertaken. The strategy analyses these areas according to their occupation and illustrates the potential for industrial development in this regard. Cato Ridge and Pinetown South emerged as the 2 areas with the highest percentages of unoccupied zoned land. This does not mean, however, that they are areas of highest potential as they are subject to service and access constraints. This is further investigated in this document, however in a later phase of the strategy, initiatives and approaches to addressing this will be investigated.

The key industrial sectors were analysed according to which are the most prevalent and their performance as such. The Automotive, Transport and Logistic and Marine Services and Shipbuilding emerged as the 3 highest performing sectors within eThekwini’s industrial economy. The spatial distribution of all the sectors is reflected in a series of maps. This gives an understanding of the nature of industrial sector clustering and points to why certain areas might be more attractive to such activities. Marine services and ship building for example need to locate close to the port. Chemicals and building products have clustered in Pinetown. The distribution of sectors may be affected by the development of the new airport and the outcome of the back of port.

The above analysis resulted in strategic selection of key potential industrial sites, these being: Cato Ridge, for its strategic location along the Durban-Pietermaritzburg corridor and available flat land; Back of Airport, due to its proximity to the new airport and its potential to develop into an international industrial zone; Back of Port, due to its proximity to the seaport and the high demand for industrial space in this area and finally Shongweni, due to its proximity to the N3 and that it faces fewer constraints than Cato Ridge in terms of infrastructure.

Three scenarios were explored. These scenarios are related to the outcomes of the port and how the development of the port impacts the rest of eThekwini’s industrial spatial occupation. The first scenario addresses the impacts of not digging out Bayhead and DIA with incremental interventions only. The result of this is very little economic growth for the city. The second Scenario addresses the impacts of digging out Bayhead only. Economic growth would be higher than in Scenario 1, import and export capacity would improve and unemployment would decrease. The final scenario, Scenario 3, assumes dig out of DIA and Bayhead. This option is the most economically productive with industrial activities becoming a strong contributor to eThekwini’s economy. This scenario will reduce timeframes for industrial land take up as it will catalyse growth in this regard.

Potential industrial land typologies were identified as existing zoned areas that need to be unlocked, existing industrial areas that need to be reorganised and finally new industrial areas that need to be planned. Critical issues are identified in all of the areas and initiatives and incentives to encourage this explored. These issues include, poor services, poor access, lack of available space and disinterest in certain developed areas.

This document finally introduces the next phases of the Industrial Spatial Strategy. That is how to gain an understanding of the local market (sector and land) demand at the ground level, how to package land for industrial development and finally, how to overcome institutional complexities in order to develop a comprehensive and convincing strategy.
The Industrial Spatial Strategy is formatted into a phased approach which has addressed the status quo extensively, and will continue to develop a strategy, leading to action plans, which will guide and encourage industrial development in eThekwini Municipality.
PREAMBLE

The Industrial Spatial Strategy will be carried out in a series of phases. Whilst the objectives and the outcomes of the strategy are clear, the phases in which they occur may alter slightly if and when necessary. At the time of writing the following phases are identified:

Phase 1 - Strategic Assessment and future direction (complete)
This will provide a clear understanding of the existing industrial land occupancy within the eThekwini Municipality (zoned land, existing take up, potential available zoned land). It also analyses the performance of key sectors, spatially where these sectors are located and identifies areas for re-organization of spatial sector activity and identifies new land for future industrial land take-up.

Estimated date for Council Approval: March/April 2009

Phase 2 - Testing and Finalizing Key Industrial Areas
Dube Trade Port (and back of airport), Cato Ridge and Mpumalanga, Back-of-Port (Jacobs, Clairwood, Mobeni and Congella). This phase involves a first level of market testing for existing and future industrial areas.

The analysis in particular are interview based, giving direction to what the market needs and trends are and more importantly, how eThekwini Municipality can facilitate and gear up to meet such needs. This involves:

- Industrial Property interviews.
- Presentations and engagements with municipal departments to test service requirements, planning, environmental and economic alignment.
- Drawing up implementation proposals on certain agreed areas for industrial development for example, unlocking Mpumalanga and Cato Ridge Industrial complexes.

This Phase will unpack land development opportunities (existing and future land with time frames and key infrastructural requirements to release such opportunities). It will unpack such requirements within the context of understanding key industrial player’s demands, timing, critical locational and other cost factors. In this Phase, initiatives to unblock existing zoned land and to release new areas for industrial development will be identified.

Estimated date for Council Approval: October 2009

Piloting: Emanating from Phase 2, Industrial Spatial Strategy: Industrial Spatial Precinct Plans for key industrial sites (existing and new areas) will be prepared and with a clear articulation of budget requirements for the provision of infrastructure and times lines for such land to be available for development. Furthermore, detailed precinct plans and studies currently underway (in particular the Back of Port and Back of Airport) will inform the Industrial Spatial Plans.

The intention of this phase is to enable agreed priorities and subsequent capital and other requirements to feature in the 2010/11 and 11/12 and 12/13 capital years, with agreed future needs going beyond the 3 year MTEF years.

Land Packaging of key pilot industrial sites, will enable the testing of demand and response to incentives (should these apply), in particular for the Mpumalanga and Cato Ridge Industrial Complexes.

March-September 2009
Council Approval for Precinct plans and Infrastructure Plans November/December 2009
Estimated Time for Availability of Land: 2 - 5 years (2010-2015)

Whilst, a phasing approach with key timeframes will be pursued, the intention is to unlock agreed priorities for specific priority investments as such opportunities become available whilst at the same time drafting, testing and approving the industrial spatial strategy.

Phase 3 - Land Packaging
This Phase is a culmination of Phase 1 and Phase 2, of the Industrial Spatial Strategy and the Industrial Strategy (which will be submitted
by the Economic Development Unit) and involves land packaging of existing and new serviced industrial sites for development.

Council Approval of Industrial Land Packages: March 2010
Estimated Time for Availability of Land: 2-10 years (2010-2020)

**Stakeholder Engagements: Ongoing Throughout All Phases**
The objective is to reach Chamber leadership. It is proposed that this be done through the Durban Chamber of Commerce and Industry, with them also issuing invitations to office bearers of other chambers and Sector Clusters that are operational.

Ongoing engagement with large land owners and industry players has, and will, continue to take place in shaping the Industrial Spatial Strategy.

Engagement and alignment with other spheres of government and key parastatals is factored into the process of constructing and aligning the Industrial Spatial Strategy.

**Phase 4 - Road Show to Key Sectors**
As there are several key sectors, which will collectively be responsible for leading the major economic growth and employment creation over the next 20 years, it will be important to communicate with these and to solicit their comments and reactions. Getting wide buy-in to the strategy is critical.
1.0 INTRODUCTION

Faced with a number of strategic questions around the future of industrial land development in the eThekwini region, the Development Planning, Environment and Management Unit; Framework Planning Branch, together with the Economic Development Unit and Strategic Projects Unit embarked on a process to develop an Industrial Strategy with assistance of Jon Van Coller of Vancometrics Economic Consultancy in 2007.

Whist there is particular focus on the Industrial Spatial Strategy component of the encompassing Industrial Strategy, it is envisaged that other key components of the Industrial Strategy will be dealt with in due course. These will be given specific attention as an Industrial Skills Strategy.

1.1 Strategic Intent and Context

The eThekwini Municipality approach to industrial development has largely been to permit industrial activity in areas that are zoned for such use and an approach of facilitating certain key investments for the City. Clustering has occurred, to a certain degree, but is unconvincing and can be fortified in order for industrial business to maximise the concept.

However, recently, the River Horse Industrial Park and the current Bridge City Project demonstrates a new approach to facilitating industrial development for the City. Notwithstanding, these key changes in eThekwini’s approach to doing business, it is apparent and well overdue that an overarching Industrial Strategy is necessary. This must be underpinned by an implementable Spatial Industrial Strategy which, until now, has had consolidated approach, for addressing industrial activities within its confines.

Over the past few years industrial activities within the eThekwini Municipality have been in decline. The clothing, textiles, footwear and leather industries in particular have been thwarted by the competitive textile industry in Asia with the automotive industry impacted by the current economic downturn. Many industries have either been forced to drastically reduce their labour forces or closed altogether. This has enormous negative implications for the economy.

Another industrial-related demand issue is with regards to the growth of the port and demand for land logistics in close proximity. Uncertainty of the port expansion also puts further pressure to rethink and re-design industrial land within and land outside the port (back of port). Allowances for the relocation of certain industrial activities in the back of port must be made; and appropriate spaces allocated packaged with incentives.

It is also opportune for the City; together with major land owners and industrial players, Provincial Government and Dube Trade Port to develop a competitive, efficient and sustainable industrial sub-regional node in the north (back of airport).

An overarching city strategy will be achieved by:

- Analysing existing industrial land and the performance of industrial sectors in terms of addressing which sectors to encourage and where (spatially) to encourage such activity;
- Identifying weaknesses and opportunities of the city’s industrial land;
- Developing a comprehensive strategy which will guide industrial development;
- Identifying the objectives and vision of industrial activities/growth in the city;
- Identifying demarcated areas within the city for industrial development; and
- Creating a mechanism (institutional response) and actions to achieve the above.
1.1.1 Objectives

It should be noted that guiding the spatial redevelopment of industrial activities within the city is addressed, largely, in aspatial terms. Further to the strategic intent the objectives of the industrial spatial strategy is as follows:

- Guide industrial development within city
  - Identify gaps in sectors and or identify which sectors to target and their spatial and infrastructural needs
  - Identify available space and the appropriateness of these locations
- Provide motivation for external investment
- Provide motivation for the growth of existing industries
- Fortify “sick” industries offer assistance in business redevelopment
- Identification of actions for implementation of strategy
- Identification of possibilities of offering incentives
- Provide city with a marketable identity and product
- To ascertain the extent and location of industry clustering
- To identify eThekwini’s key industrial sectors based on growth prospects, employment and export contribution;
- To measure the likely impact of continued Port capacity expansion
- To assess spatial development needs linked to Dube Trade Port
- To identify key sectors and their needs i.t.o infrastructure, spatial requirements and essential local government support
- To formulate long-term spatial development plans which will accommodate industrial growth, encourage clustering benefits, and create a cost-competitive and efficient operating environment
- To formulate a long-term strategy for the period 2010 to 2030 to guide planning and spatial development of the EMA, as well as to identify necessary local government interventions

Whilst all of the above is not meant to be achieved in the Industrial Spatial Strategy, it will be assessed and articulated in supporting strategies that underpin the Industrial Strategy for eThekwini Municipality.

In order to fulfil its industrial spatial needs, the City may from time to time be forced to redevelop old and dated industrial areas and as part of the process, encourage certain industries or factories to relocate to alternate sites. The objective of such redevelopment would be to optimise locational benefits for key sectors and to enable them to maximise advantages inherent in clustering. In this manner the City can facilitate a business environment where efficiency and productivity in all spheres is maintained at internationally competitive levels.
1.2 Legislation

1.2.1 National Policy

The National Industrial Policy Framework (NIPF) of the Department of Trade and Industries (DTI) is a comprehensive document dealing with a wide range of issues. Under the headings of Principles for Industrial and Sector Strategies, Industrial Upgrading, Spatial Industrial Development and Industrial Infrastructure Programme, a number of important points are emphasised as follows:

- The experiences of Newly Industrialised Countries (NICs) are not restricted to responding reactively to global forces but can strategise about their current and potential participation in the global division of labour, through purposive interventions in their industrial economies.
- The overall approach to South Africa’s industrial policy is based on the identification of growth and employment constraints operating at the microeconomic, sectoral, spatial and firm level of the economy, rather than a ‘one size fits all’ policy template.
- Greater priority should be given to sectors that are capable of generating the highest levels of employment and growth, particularly in new or expanded non-traditional tradable activities. Consideration also needs to be given to sectors that will move South Africa towards a technologically sophisticated and knowledge-driven economy in the long-term.
- Industrial upgrading is a logical progression in order to avoid cut-throat price competition as certain parts of manufacturing become increasingly commoditised, particularly due to a combination of global trade liberalisation and pressure from Chinese and Indian firms. Consequently, a strategic programme focusing on supporting various aspects of industrial upgrading is identified as necessary for the South African manufacturing sector.
- The provision of industrial infrastructure is an important way to foster industrial clustering in areas of traditional industrial agglomerations as well as in underdeveloped areas with latent economic potential.

- Appropriately placed industrial infrastructure can play a fundamental role in generating qualitatively new economic activity. It supports clustering of firms to take advantage of an existing resource such as a port, airport, telecommunications infrastructure or a university or science council.
- There is a need for much stronger alignment between the education system and industrial policy.

Illustrative interventions envisaged under SA’s industrial policy are shown in the following three domains:

Cost based Interventions:
- Currency/Interest rates
- Transport/Logistics
- Labour Cost/Productivity
- Cost of capital - selected sectors/activities
- Competition policy
- Selected import tariffs
- Market access

Inclusion Based Interventions:
- Support for Labour intensive processes
- SMME/Co-op support
- BBBEE
- Spatial interventions

Industrial Upgrading Interventions:
- Sector/activity specific financing
- Manufact., excellence support
- Industry-specific infrastructure
- Skills Development
- Innovation & Technol. support
- Leveraging Public Expenditure
- Standards, Quality & Accreditation support

It is clear from the above that the industrial strategy guidelines envisaged for the eThekwini Municipal Area are fully compatible with the National Industrial Policy Framework.

1.2.2 KZN Provincial Policy

The KwaZulu-Natal Department of Economic Development’s Provincial Industrial Development Strategy (PIDS) tends to follow the direction set down by the National Department of Trade and
Industry (DTI). Two key directions are those related to Sector Development and Trade and Logistics.

The core purpose of its Sector Development strategy is “to unlock and stimulate the competitiveness of prioritised economic sectors across the value-chain in partnership with stakeholders.” In this regard its objective is to “stimulate the international competitiveness of the KZN economy by

- Leveraging resources through strategic partnership for implementing economic projects,
- Enabling the retention and creation of sustainable quality jobs through productivity, training, technology and investments,
- Facilitating the implementation of strategic high impact projects that stimulate the international competitiveness of prioritised projects,
- Facilitate the development of logistics enablers in support of sectors.”

Under its Trade and Logistics Strategy the core purpose is “to enable the continuous reduction in logistics costs and costs of conducting trade. Several objectives are specified of which the following two are pertinent to this study.

- Development of the Trade Gateway,
- To enhance logistical and transportation infrastructure in KZN, leading to reduction in the real costs of conducting business, and positioning the Province as the preferred “Trade Gateway” of Southern Africa.

The following labour market strategy is also applicable:

“Development and facilitation of strategy to strengthen match between labour market supply and demand.”

The eThekwini Industrial Spatial Plan is compatible with all of these policy statements and objectives. There are some differences in the manner in which the Province has approached Sector development and the approach of the eThekwini plan. The Province has identified six sectors on which it will focus. These are a combination of labour-intensive industries and the new knowledge industries, which are poorly developed in the Province. The City on the other hand is focusing on all existing industries, with special locational and infrastructure focus on those which already have well developed clusters. The six sectors on which the Province is focusing are:

- Arts and Crafts
- Creative Industries
- Clothing & Textiles
- Info. & Communications Technology
- Wood & Wood Products
- Agribusiness

The City will also have to address locational and infrastructure issues related to the ICT and Agricultural Processing sectors, which have only limited development at present, as there will be logistics interfaces between these sectors and the new Dube Trade Port. Arts & Crafts and Creative Industries are already receiving attention by the City (e.g. Durban Trade Point SA Durban, Durban Craft Hub) but are not covered in detail in this spatial strategy. The Clothing and Textile Sector is covered in depth in this strategy.

1.2.3 Local Government Policy

In the eThekwini Municipality’s 2008 Economic Development Strategy (EDS), five economic strategic choices are highlighted, viz.

i) Specialised sector and investment support to ensure that the requisite conditions are met for growth;
ii) Spatial integration and efficiency at a micro-level;
iii) Strategic industry skills development;
iv) Strategic economic infrastructure;
v) Specialised enterprise development and innovation.
The Spatial Industrial Strategy is aligned and responsive to National, Provincial and Local Policy.

1.3 Good / Best Practices

The City of Tshwane in their Integrated Transport Plan 2004 - 2009, identified an area which they termed the “Zone of Choice” as a focus area for strategic industrial investments on the northern outskirts of the city. Vacant land is readily available and future development will integrate industrial, high-density low and medium cost housing and areas for small businesses. There is also mention of a possible freight airport being developed within this zone.

Ekurhuleni Municipality emphasise the importance of public institutions and firms working together effectively, and for technologies to be the foundation for growth of output and employment. “Building the local industrial base requires getting groups of companies to work together effectively, utilising local testing and training facilities and linkages with tertiary education institutions.”

They emphasise the importance of technical centres and innovation centres having concrete locations as part of growth clusters. They say it is crucial that initiatives to provide an enabling environment for improved competitiveness for industry are centred in strengthening linkages and improving levels of intra-industry co-ordination.

1.3.1 International Port Cities

In general those Port Cities researched have adopted a very pragmatic approach to Industrial spatial development. Many of the problems being dealt with are similar to those of Durban, i.e. redeveloping old industrial townships, road transport bottlenecks, overloaded or outdated rail systems, steady increases in demand for industrial land, establishing innovation centres for the new knowledge industries, ensuring supply of the right skills, etc. The following are the approaches of four such cities.

Vancouver B.C., Canada - The port city is located on the west coast of Canada in an area with strong mining and timber industries. They have focused on an area called Richmond, which is their largest industry township. Their key objective is ensuring that Richmond remains a destination of choice for British Columbia’s leading edge companies by removing constraints to industrial opportunities.

They list the following 6 main objectives:

- Ensure a supply of well-located and serviced land to enhance Richmond’s attractiveness for high tech, specialised manufacturing, distribution and film industries of various sizes.
- Reserve strategic sites for Port and water dependent industrial use.
- Utilities - ensure that city servicing infrastructure serves the needs of local businesses.
- Transportation - ensure local transport infrastructure serves the needs of industrial business and their employees.
- Customer Service - keep industrial customers satisfied by providing relevant, timely and cost-efficient services (e.g. crime prevention, permit processing).
- Partnerships - enhance existing partnerships and develop new ones to deliver a range of services outside the city’s normal jurisdiction, e.g. education, attracting industrial development, creating a positive business climate.

Adelaide, South Australia - a key factor in the future economic prosperity of South Australia is a supply of well located, affordable and serviced industrial land. Availability of developable land does not seem to be a problem. Key strategies for the land development programme are given as the following:

- Identify and protect a rolling 15 year bank of land suitable for industrial purposes.
• Maintain planning for a rolling 3-5 year supply of development-ready industrial land that accommodates forecast demand.
• Facilitate development of industrial land through improved policy and regulation.
• Identify industrial land in a variety of locations and in variable size configurations to satisfy potential demand.
• Identify a lead Government agency to take responsibility for the future supply of industrial land.
• Retain the stock and capacity of industrial land.
• Improve the current data and information base to better understand industry sector requirements and market demand.
• Identify additional land supply opportunities including under-used and surplus Government land.

The above is a very brief overview of good/best practices on facilitating and securing industrial land and investment. The case studies researched, confirms that many other Port cities around the world are grappling with. Development and upgrading challenges in respect of the ports and industrial nodes and the sector clusters located there are similar to those facing the eThekwini Municipality.

1.4 Definitions and Industrial Typologies

This study focuses on Secondary Industry plus all sub-sectors involved in Shipping, Transport and Logistics. Secondary Industry includes all Manufacturing, Light Industrial, Industrial Supplies and Services, and Industrial Machinery Supplies, a total of 24% contribution to GDP in 2007. Given that these are the key sectors operational in the Ethekwini economy. Primary Industry, which includes Mining, Quarrying, Agriculture, Horticulture, Forestry and Fishing, has not been included as these play a minor role, contributing only 1.7% of the eThekwini GDP.

Primary activities (extractive and agriculture) are dependant upon natural physical resources and therefore there are few spatial planning interventions that would apply to these “industries”.

The Tertiary Sector, which includes all commerce, catering hospitality, finance and non-industrial services etc, is not included, as these industries are located predominantly, with some limited exceptions, out of the industrial townships. Some parts of Shipping, Transport and Logistics can be classified as tertiary activities, but the majority of companies in these sub-sectors, especially those such as warehousing, container handling and transport, tend to locate in industrial areas due to their spatial requirements, and are therefore included in the industrial study.

In order to place a context of industry within eThekwini’s definitions the following Land use Management (LUMS) definitions apply:

**Noxious industrial**: has impact of fumes, gasses, vapours, dust, smell, noise, vibrations or other causes which may become injurious or a source of danger, nuisance, discomfort or annoyance to neighbourhood.

**Industrial purposes**: means in relation to any land or building the use thereof for the manufacture, production, extraction, adaptation, alteration, renovation, repair, processing or servicing of any article or material and shall include the use thereof:

(a) as a factory as defined in the Machinery and Occupational Safety Act No. 6 of 1983 as amended;
(b) by a building contractor for the storage of builders material
(c) for the stacking, storing or preparation for resale of scrap material
(d) as a storage warehouse;
(e) as an office, caretakers flat or for any purpose which is incidental to or reasonably necessary in connection with the use thereof as a factory, builder’s yard or scrap yard; but shall not include the use of any land or building as a petrol service station.

**Light industrial**: means an industry which can be carried on in a Light Industrial zone without causing nuisance to other properties within such Light Industrial Zone or to the general public or without detriment to the amenities of other use.
zones by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust, grit, traffic generation or other causes.

It more apparent now than ever before that conventional land use definitions of industry are insufficient and non-effective in reserving land for, and promoting sector clustering. Furthermore, the vagueness and non-performance practice of town planning controls (LUMS) definitions do not support true economic value and performance expectations for prime industrial land. A case in point, would be the large parts of the back of port area, that results in industrial activity that has little or no dependency on the port and thus limiting land availability for back of port related activity.

In order to fully develop the industrial strategy, especially in the light of potential precinct plans, a comprehensive list of permissible industrial activities will need to be established. It is envisaged that key industrial areas for particular sectors are managed through a performance based land use management system. In particular, whether or not logistics are included as part of the industrial sector is a key issue. This will be fleshed out in a later phase of the project.

In addition to noxious and non-noxious industries, a distinction between heavy and light industry can be identified.
### Table 1: Heavy and Light Industry Definitions

Industrial land in the eThekwini Municipal area (EMA) can be grouped together forming different typologies.

- **Older long established industrial townships** originally set up to cater for medium and heavy industry requiring support of mainly rail transport for inward and outward movement of materials and finished goods. Building designs are very dated, often shabby and poorly maintained and have sometimes been modified on an ad hoc basis. Infrastructure is also dated and in need of upgrading, e.g. Jacobs and Mobeni.

- **More modern townships** catering mainly for heavy industry, e.g. Prospecton.

- **Townships catering for Transport/Logistics/Warehousing type industries**, especially in close proximity to the Port. Originally designed around rail transport, now have to adjust to accommodate heavy road transport in the form of large articulated trucks. Township layouts and road widths are usually not ideal for the latest transport developments, e.g. Maydon Wharf.

- **More modern townships** catering for medium sized manufacturing and service industries, e.g. Phoenix, Canelands (Verulam), Queensburgh.

- **Older townships** set up for medium sized industry, still operating reasonably effectively, e.g. New Germany, Umbogintwini.

- **Townships catering for small and medium sized light and service industries** covering a wide variety of activities. Several industrial parks may be included within the township, e.g. Westmead, Mahogany Ridge, Southgate.

- **Townships targeted at specific industry sectors** established in semi rural areas to achieve historical political objectives, e.g. Hammarsdale.

- **New developments** targeted at light and medium sized industrial and service organisations, e.g. River Horse Valley.

Over time some industry sectors have tended to cluster in specific townships. This is seen as a desirable trend as it tends to increase sector co-operation and efficiency. The Municipality will support these clustering trends in some cases and, in others, encourage clusters to relocate, either to give them the advantage of lower costs, or because their existing location is required for new developments, or for socio-environmental reasons.
2.0 SPATIAL SITUATIONAL ANALYSIS AND STRATEGIC SELECTION OF SITES

2.1 Industrial Sector Spatial Analysis

The physical location of each manufacturing company, subject to the Braby’s Business Database, has been recorded and marked spatially. This resulted in a detailed manufacturing profile of each of the various industrial townships in eThekweni, as well as the extent and location of clustering of these individual industry sectors.

Figure 1 and Table 2 provide an understanding of the sector contribution to eThekweni’s GDP. It is evident that Clothing, Footwear and Textiles as well as Chemicals and Plastics are the primary contributors with the automotive industry following suit.

![Figure 1: Manufacturing Sector Contribution Distribution](image)

<table>
<thead>
<tr>
<th>Sector</th>
<th>R (billion)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>5.2</td>
<td>12.0</td>
</tr>
<tr>
<td>Chemicals &amp; Plastics</td>
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<td><strong>TOTAL</strong></td>
<td><strong>43.2</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Table 2: Manufacturing Contribution by Sector (2007 Estimate)**

Figure 2 spatially represents the Automotive Sector within the EMA. Clusters are focused in the SDB and Inner West with the biggest concentrations found in Prospecton and Westmead. Linkages to the port and between Toyota and component manufacturers are important in developing this sector of the industry. Overall the automotive sector represents approximately 8% of manufacturing companies.

![Figure 2: The Spatial Distribution of Automotive Companies in the EMA](image)
The **Chemical Sector** is well developed but cross-linkages, between companies, are relatively undeveloped due to specialisation and market niche focuses. The medium sized factories are located mostly in SDB (Umbogintwini & Jacobs), and small factories in the Inner West, especially Westmead.

The plastics sub-sector is the most strongly developed of all sub-areas, with main focus in Inner West. The chemical sector is very important for Durban as it is highly concentrated and contributes convincingly to the GDP; however the export capacity is under developed and should be addressed in future industrial programmes.

**Figure 3:** The Spatial Distribution of Chemical Companies in the EMA

Historically, the **Textiles, Clothing, Footwear and Leather** have been a strongly developed cluster however it has lost ground in recent years. The clothing sub-sector is the main core of the sector with over 200 formally developed factories. Its possible that there is an additional 200 small production units, currently operating out of homes and informal premises. These usually act as sub-contractors to main firms. There are also a substantial number of small firms manufacturing clothing, accessories and components. Therefore the scale and extent of this sector cannot be accurately captured, however it is understood that the informal market is as comprehensive as the formal.

Clothing firms are located in all the sub-areas with strongest groupings in Clairwood, Durban Central & Phoenix. Similarly to the clothing industry, footwear firms have also lost ground to cheap imports, particularly from Asia, in recent years. Finally leather products very poorly developed in relation to current fashion demand and may provide a strategic opportunity in this area.

**Figure 5:** The Spatial Distribution of TCFL Companies in the EMA

The **Building Products** sector is weakly developed. A cluster is focused in the Inner West (Pinetown) area. A minor node of building products can be found in Durban Central. Further investigations as to whether this sector should be fortified need to be undertaken.

**Figure 4:** The Spatial Distribution of Building Products Companies in the EMA
Furniture and Bedding make up 3 small clusters in the Inner West, Durban Central and the North Area. It is currently weakly developed in relation to the regional market potential and local availability of raw materials. It may potentially be a sector that the eThekwini Municipality chooses to develop upon, given its potential.

Figure 6: The Spatial Distribution of Furniture and Bedding Companies in the EMA

The Food and Beverage Sector is poorly developed and has no cohesive clustering. Businesses are spread evenly throughout the EMA, with the exception of Cato Ridge, which has little/no food and beverage industries located there.

Figure 7: The Spatial Distribution of Food and Beverage Companies in the EMA

Packaging and Paper Converting are also a relatively under-developed sector. As with food and beverages, companies are clustered into the north, south, central and inner west areas. However, these clusters are unconvincing in their intensity.

Figure 8: The Spatial Distribution of Packaging and Paper Converting Companies in the EMA

In contrast to the spatial clustering of the previous sectors mentioned, the Logistics and Transport businesses are found in high concentrations close to the port, with dispersed concentrations moving away from the port. The scale and intensity of this sector reflects the importance of the role of Durban’s port within the industrial sector as a whole. The future Dube Trade Port will most likely have an impact on the spatial distribution of these logistics and transportation firms. However, it is envisaged that demand for logistics from this area will remain high as it is linked directly to the port.
eThekwini has an excellent pool of engineering and metal-working skills and in the light industrial sector the engineering sub-sector is well developed. These skills spread into automotive manufacture, ship building, metal products, household appliances, the sugar industry and in general factory maintenance and engineering. The household appliance and housewares sectors appear to be underdeveloped. Similarly, considering KZN’s strength in Aluminium production, the local contribution to this sector of manufacture is weak.

The ICT and Pharmaceuticals sectors are very weakly developed. With the high growth rate in ICT, it has become strategically important to strengthen Durban’s capacity in this field. Locally manufactured pharmaceuticals come mainly from Gauteng, but it may be an opportunity area.

With the local availability of timber, it would be expected that the wood products sector would be more strongly developed. The type of skills suits our labour profile but the development has been weak. Timber is primarily being exported as logs or chips, which requires little local production and therefore minimizes employment capacities.

Pulp, paper, board, packaging and paper converting are adequately developed for local needs, with Mondi Paper providing a strong international export capability. SAPPI have a strong pulp mill at Umkomaas, which is predominately an export facility.

To conclude, the manufacturing sector contributes significantly to eThekwini’s economy, however not to its potential. The pattern of industries situating themselves in clusters indicates that there are benefits in doing so. The key sectors discussed above further informs future spatial growth of the city’s manufacturing sector.

2.2 Industrial Spatial Economy

The previous section illustrates how manufacturing firms have a tendency to cluster in their sub-sectors. eThekwini has developed industrial sector clusters in specific townships. The concept of clustering is seen as a desirable by manufacturing companies as it encourages an increase in sector co-operation, benefits and efficiency and maximizes infrastructure. In terms of a future strategy, these clustering trends may be supported and in others, clusters may need to relocate to other townships either; to give them the advantage of lower costs, because their existing location is required for new developments, or for environmental reasons. Different clusters and the dominance of one sector over another in an area hint at a future spatial logic for the City.

The below figure (Figure 10) illustrates the 5 general areas as they are addressed in this strategy. This includes; the North, Central, South, Inner West and Outer West.

Please note that due to gaps in our mapping certain areas are excluded from the below map, however these are not excluded in detailed analysis and discussion, E.G. Umbogintwini.
For the purposes of this study, the Inner West has been separated from Durban Central. This emphasises each area’s importance and contribution to the industrial sector. Each contribute significantly to the EMA’s GDP but have different sector identities.

With respect to the land quantums given in the below sections, these are based on zoned land only and therefore include areas that are subject to Durban Metropolitan Open Space System - DMOS (a layer on the zoning map that indicates that land is environmental sensitive (including overstep, unstable soil and undevelopable land. The figures therefore represented may not necessarily be a precise reflection of available land and should be viewed as a gross estimates only.

The land quantums do not include unzoned areas with industrial potential, e.g. Shongweni and Back of Airport. The land available may be higher than indicated here.

2.1.1 North

Broadly speaking, the north is made up of the following areas; Springfield Park, Briardene, River Horse Valley, Red Hill, Glen Anil, Avoca Hills, Phoenix, Mount Edgecombe, Verulam, Canelands and Tongaat. In addition to contributing R25-27bn towards the EMA GDP, the north has an enormous potential to develop this sector of the economy with respect to the new airport and its potential to develop into a logistics/industrial hub.

The northern area currently has a zoning of 1,046.6ha, which is 14.8% of the total in the eThekwini Municipality. 70% of this is unoccupied which presents an opportunity for industrial development. This excludes the Dube Trade Port and Back of Airport.

The following table provides an understanding of the amount of existing occupied industrial land in the north, as well as the potential amount of land available for development.

<table>
<thead>
<tr>
<th>Regions</th>
<th>Industrial Area (ha)</th>
<th>Contribution to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durban Central</td>
<td>803</td>
<td>R65bn-R67bn</td>
</tr>
<tr>
<td>SDB</td>
<td>3,333</td>
<td>R38bn-R40bn</td>
</tr>
<tr>
<td>Inner West</td>
<td>2,258</td>
<td>R33bn-R35bn</td>
</tr>
<tr>
<td>North</td>
<td>1,254</td>
<td>R25bn-R27bn</td>
</tr>
<tr>
<td>Outer West</td>
<td>1,464</td>
<td>R5bn-R6bn</td>
</tr>
<tr>
<td>Ethekwini</td>
<td>9,112</td>
<td>R166bn-R175bn</td>
</tr>
</tbody>
</table>

Figure 10: Industrial Spatial Distribution in the EMA
<table>
<thead>
<tr>
<th>Industrial township</th>
<th>Industrial Zoning (Ha)</th>
<th>Taken up (Ha)</th>
<th>Unoccupied (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control'd/ Noxious Industry</td>
<td>General Industry</td>
<td>Service/ Light Industry</td>
</tr>
<tr>
<td>Springfield Park</td>
<td>0.0</td>
<td>94.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Briardene/ North Coast Road</td>
<td>0.0</td>
<td>36.5</td>
<td>60.7</td>
</tr>
<tr>
<td>River Horse Valley</td>
<td>0.0</td>
<td>0.0</td>
<td>245.0</td>
</tr>
<tr>
<td>Red Hill</td>
<td>0.0</td>
<td>11.6</td>
<td>38.2</td>
</tr>
<tr>
<td>Glen Anil</td>
<td>0.0</td>
<td>0.0</td>
<td>37.8</td>
</tr>
<tr>
<td>Avoca Hills</td>
<td>0.0</td>
<td>0.0</td>
<td>21.5</td>
</tr>
<tr>
<td>Phoenix</td>
<td>0.0</td>
<td>205.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Mount Edgecombe</td>
<td>0.0</td>
<td>0.0</td>
<td>37.9</td>
</tr>
<tr>
<td>Verulam/Canelands</td>
<td>0.0</td>
<td>53.8</td>
<td>53.8</td>
</tr>
<tr>
<td>Verulam South</td>
<td>0.0</td>
<td>0.0</td>
<td>15.7</td>
</tr>
<tr>
<td>Tongaat/Maidstone</td>
<td>0.0</td>
<td>98.7</td>
<td>32.5</td>
</tr>
<tr>
<td>North Sub-Total</td>
<td>0.0</td>
<td>500.6</td>
<td>260.2</td>
</tr>
<tr>
<td></td>
<td>TOTAL EMA</td>
<td>636.6</td>
<td>3,262.7</td>
</tr>
<tr>
<td>North as a portion of the EMA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Industrial land occupancy rates for the North
The above figure provides some insight into the spatial distribution of the manufacturing sectors located in the north. Industries considered include the automotive, building produces, chemicals, food and beverages, furniture and bedding, packaging and paper and textiles, clothing and footwear.

**Industrial Spatial Strategy**
In summary, the north is an important manufacturing area with mostly small/medium sized firms. The clusters dominated by textile, clothing footwear and leather products (43.6% of the market) with smaller clusters evident in plastics, chemicals and furniture & bedding. Demand in the area is expected to increase substantially with the opening of new Airport and the impact this will have in unlocking the surrounding land.

Future planning for the North, identifies 1224 ha as potential industrial land. To a large extent the new Airport and Trade Port are the drivers for change and demand for industrial land.

The North Spatial Development Plan is still in draft stage and will have to go through level of infrastructure testing and public participation.

2.1.2 Centre and South Durban Basin

The South Durban Basin includes the areas surrounding the harbour of Mobeni, Jacobs, Clairwood, Bayhead, Maydon Wharf and Island view. This part of the study area falls within the Central planning region. It also includes the areas of Congella/Umbilo to the west of the harbour, Mayville, Springfield and Greyville/Umgeni.

The future of the back of port area is uncertain although it has an enormous potential to develop into a world-class modern port which will support and encourage industrial and logistics activities in it surrounds. This area can be considered one of the most critical pieces of land in the industrial strategy.

The South Durban Basin and city centre has a combined total of 2,189.1ha of which 98.1% is occupied. This area forms 30.9% of the total industrial land in the metro.
<table>
<thead>
<tr>
<th>South Durban Basin</th>
<th>Control'd/ Noxious Industry</th>
<th>General Industry</th>
<th>Service/ Light Industry</th>
<th>Other</th>
<th>Total</th>
<th>Control'd/ Noxious Industry</th>
<th>General Industry</th>
<th>Service/ Light Industry</th>
<th>Other</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondi</td>
<td>0.7</td>
<td>41.8</td>
<td>-</td>
<td>-</td>
<td>42.5</td>
<td>0.7</td>
<td>31.6</td>
<td>-</td>
<td>-</td>
<td>32.3</td>
<td>76.0%</td>
</tr>
<tr>
<td>Stanvac</td>
<td>-</td>
<td>-</td>
<td>129.0</td>
<td>129.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>117.0</td>
<td>117.0</td>
<td>90.7%</td>
<td></td>
</tr>
<tr>
<td>Mobeni</td>
<td>64.6</td>
<td>110.0</td>
<td>-</td>
<td>-</td>
<td>174.6</td>
<td>53.3</td>
<td>108.7</td>
<td>-</td>
<td>-</td>
<td>162.0</td>
<td>92.8%</td>
</tr>
<tr>
<td>Jacobs</td>
<td>108.4</td>
<td>87.5</td>
<td>2.4</td>
<td>198.3</td>
<td>108.4</td>
<td>87.5</td>
<td>2.0</td>
<td>197.9</td>
<td>99.8%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Clairwood</td>
<td>32.1</td>
<td>71.8</td>
<td>-</td>
<td>103.9</td>
<td>31.4</td>
<td>66.1</td>
<td>-</td>
<td>97.5</td>
<td>93.8%</td>
<td>0.7</td>
<td>5.7</td>
</tr>
<tr>
<td>SDB Sub-Total</td>
<td>205.8</td>
<td>311.1</td>
<td>2.4</td>
<td>129.0</td>
<td>648.3</td>
<td>193.8</td>
<td>293.9</td>
<td>117.0</td>
<td>606.7</td>
<td>93.6%</td>
<td></td>
</tr>
<tr>
<td>Island View &amp; Pier 1</td>
<td>-</td>
<td>-</td>
<td>618.2</td>
<td>-</td>
<td>618.2</td>
<td>618.2</td>
<td>-</td>
<td>618.2</td>
<td>618.2</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Bay Head</td>
<td>-</td>
<td>-</td>
<td>120.5</td>
<td>-</td>
<td>120.5</td>
<td>120.5</td>
<td>-</td>
<td>120.5</td>
<td>120.5</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Bayhead South</td>
<td>-</td>
<td>-</td>
<td>488.0</td>
<td>-</td>
<td>488.0</td>
<td>488.0</td>
<td>-</td>
<td>488.0</td>
<td>488.0</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Maydon Wharf</td>
<td>-</td>
<td>-</td>
<td>123.6</td>
<td>-</td>
<td>123.6</td>
<td>123.6</td>
<td>-</td>
<td>123.6</td>
<td>123.6</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>South Bay Sub-Total</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1,350.3</td>
<td>1,350.3</td>
<td>0.0</td>
<td>0.0</td>
<td>1,350.3</td>
<td>1,350.3</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Mayville</td>
<td>-</td>
<td>9.0</td>
<td>-</td>
<td>9.0</td>
<td>-</td>
<td>9.0</td>
<td>-</td>
<td>9.0</td>
<td>9.0</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Umgeni Road</td>
<td>-</td>
<td>7.6</td>
<td>15.7</td>
<td>23.3</td>
<td>-</td>
<td>7.6</td>
<td>15.7</td>
<td>23.3</td>
<td>100.0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Congella</td>
<td>43.5</td>
<td>113.3</td>
<td>1.4</td>
<td>158.2</td>
<td>43.2</td>
<td>113.3</td>
<td>1.4</td>
<td>157.9</td>
<td>99.8%</td>
<td>0.3</td>
<td>-</td>
</tr>
<tr>
<td>Durban Central Sub-Total</td>
<td>43.5</td>
<td>129.9</td>
<td>17.1</td>
<td>0.0</td>
<td>190.5</td>
<td>43.2</td>
<td>129.9</td>
<td>17.1</td>
<td>0.0</td>
<td>190.2</td>
<td>99.8%</td>
</tr>
<tr>
<td>Durban Central TOTAL</td>
<td>249.3</td>
<td>441.0</td>
<td>19.5</td>
<td>1479.3</td>
<td>2189.1</td>
<td>237.0</td>
<td>423.8</td>
<td>19.1</td>
<td>1467.3</td>
<td>2147.2</td>
<td>98.1%</td>
</tr>
<tr>
<td>TOTAL EMA</td>
<td>636.6</td>
<td>3,262.7</td>
<td>1,406.6</td>
<td>1,780.3</td>
<td>7,086.2</td>
<td>564.5</td>
<td>2,150.8</td>
<td>1,153.1</td>
<td>1,606.0</td>
<td>5,474.4</td>
<td>77.3%</td>
</tr>
<tr>
<td>SDB &amp; Centre as a portion of the EMA</td>
<td>30.9%</td>
<td>39.2%</td>
<td>2.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Industrial land occupancy in The South Durban Basin and the Centre

Industrial Spatial Strategy
Figure 12: Spatial Schematic of industry in the South Durban Basin and Central areas
2.1.3 South

There is only a small amount of industrial activity in the South region of the EMA. This is due to the inappropriate terrain and traditional authority ownership.

The south has 14.5% of the total industrial land in the city (1,029ha). 77.3% of this is occupied. Although there may be potential for industrial development, it is not situated on a major freight route and therefore is not a preferable location for industries.

The below spreadsheet provides and indication of the industrial zoning and vacant land in the south region:

<table>
<thead>
<tr>
<th>Industrial township</th>
<th>Control’d/Noxious Industry</th>
<th>General Industry</th>
<th>Service/Light Industry</th>
<th>Other</th>
<th>Total</th>
<th>Control’d/Noxious Industry</th>
<th>General Industry</th>
<th>Service/Light Industry</th>
<th>Other</th>
<th>Total</th>
<th>%</th>
<th>Control’d/Noxious Industry</th>
<th>General Industry</th>
<th>Service/Light Industry</th>
<th>Other</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southgate</td>
<td>109.1</td>
<td>7.2</td>
<td>6.8</td>
<td>-</td>
<td>123.1</td>
<td>98.5</td>
<td>7.2</td>
<td>2.5</td>
<td>-</td>
<td>108.2</td>
<td>87.9%</td>
<td>10.6</td>
<td>-</td>
<td>4.3</td>
<td>-</td>
<td>108.2</td>
<td>87.9%</td>
</tr>
<tr>
<td>Umbogintwini</td>
<td>-</td>
<td>249.3</td>
<td>-</td>
<td>-</td>
<td>249.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>238.3</td>
<td>95.6%</td>
<td>-</td>
<td>11.0</td>
<td>-</td>
<td>-</td>
<td>11.0</td>
<td>95.6%</td>
</tr>
<tr>
<td>Prospecton</td>
<td>278.2</td>
<td>295.0</td>
<td>45.2</td>
<td>-</td>
<td>618.4</td>
<td>229.0</td>
<td>289.9</td>
<td>33.0</td>
<td>-</td>
<td>551.9</td>
<td>89.2%</td>
<td>49.2</td>
<td>5.1</td>
<td>12.2</td>
<td>-</td>
<td>66.5</td>
<td>10.8%</td>
</tr>
<tr>
<td>Isipingo</td>
<td>-</td>
<td>-</td>
<td>22.0</td>
<td>16.2</td>
<td>38.2</td>
<td>-</td>
<td>-</td>
<td>20.9</td>
<td>15.2</td>
<td>36.1</td>
<td>94.5%</td>
<td>-</td>
<td>-</td>
<td>1.1</td>
<td>1.0</td>
<td>2.1</td>
<td>5.5%</td>
</tr>
<tr>
<td>SOUTH</td>
<td>387.3</td>
<td>551.5</td>
<td>74.0</td>
<td>16.2</td>
<td>1,029.0</td>
<td>327.5</td>
<td>535.4</td>
<td>56.4</td>
<td>15.2</td>
<td>934.5</td>
<td>90.8%</td>
<td>59.8</td>
<td>16.1</td>
<td>17.8</td>
<td>1.0</td>
<td>94.5</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

TOTAL EMA | 636.6 | 3,262.7 | 1,406.6 | 1,780.3 | 7,086.2 | 564.5 | 2,150.8 | 1,153.1 | 1,606.0 | 5,474.4 | 77.3% | 72.1 | 1,144.1 | 288.7 | 176.3 | 1,611.8 | 22.7% |

South as a portion of the EMA | 14.5% | 17.1% | 5.9%

Table 5: Industrial land occupancy in the South
2.1.4 Inner West

The industrial activities in the Inner West are evenly distributed throughout the cluster. The production of chemicals dominates this manufacturing sector being 23.8% of the total number of firms. Plastics take up 18.5% of the total number of firms with textiles, clothing, leather and footwear totalling 14.6%. The area of Westmead has the largest concentration of firms; however has a small percentage of available land (as indicated in Table 6). Pinetown South, however, has an enormous potential to fortify the industrial sector with a total of over 200ha of available industrial land.

Most of the firms located in the Inner West are small and medium sized, with a few larger plants such as the Frame Group, Nampak’s packaging plants and Behr and Smiths for automotive components. The majority of the chemical plants are of the smaller mixer/blender type, each catering for a specific market segment.

<table>
<thead>
<tr>
<th>Industrial township</th>
<th>Industrial Zoning (Ha)</th>
<th>Taken up (Ha)</th>
<th>Unoccupied (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>Inner West Sub-Total</td>
<td>0.0</td>
<td>396.3</td>
<td>970.7</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>Interior West</td>
<td>0.0</td>
<td>0.0</td>
<td>144.3</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>Queensburgh</td>
<td>0.0</td>
<td>0.0</td>
<td>144.3</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>Pinetown South</td>
<td>0.0</td>
<td>0.0</td>
<td>342.5</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>Pinetown</td>
<td>0.0</td>
<td>0.0</td>
<td>140.0</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
<tr>
<td>New Germany</td>
<td>0.0</td>
<td>0.0</td>
<td>119.4</td>
</tr>
<tr>
<td></td>
<td>Control'd/ Noxious</td>
<td>General</td>
<td>Service/ Light</td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td>Industry</td>
<td>Industry</td>
</tr>
</tbody>
</table>
| Westmead/Mahogany Ridge | 0.0                  | 0.0           | 344.5          | 0.0   | 344.5 | 100.0%
|                     | Control'd/ Noxious      | General       | Service/ Light  | Other | Total | % |
|                     | Industry               | Industry      | Industry       |       |       |   |
| Inner West Sub-Total| 0.0                    | 0.0           | 396.3          | 0.0   | 396.3 | 81.3% |
|                     | Control'd/ Noxious      | General       | Service/ Light  | Other | Total | % |
|                     | Industry               | Industry      | Industry       |       |       |   |

Table 6: Industrial land occupancy rates for the Inner West

With nearly 19.3% of the total industrial land in the EMA and nearly 36% of the firms located here, the Inner West plays a significant role in the existing and future industrial sector of eThekwini’s economy.
Figure 13: Spatial Schematic of Industrial Activities by sector in the Inner West
2.1.5 Outer West

Table and figures below demonstrate the Outer West’s enormous potential to develop the industrial sector. Whilst, noxious industry may have an impact on water catchments, the remote location and vacant land would make it the only viable location for noxious industry. This would need to be on a basis of strict emission controls that limit the risk such activity has on eThekwini’s main water source.

However, 62.4% (908ha) as indicated in the table is currently undeveloped in the Outer West area. Despite the dispersed spatial distribution of industries as reflected in Figure 14, much of this land is subject to DMOSS, service and accessibility constraints and is there subject to further investigation and feasibility studies. The amount of available land within the Outer West, in comparison to the EMA as a whole is a vast 1,500ha or 60% of the total.

The availability of this land promotes the strategic significance of the Outer West in the Industrial Spatial Strategy. The two sectors that are most frequently found in the Outer West are Chemical products (23.8%) and Plastics (18.5%).

The Outer West is industrially under-developed, with the only cluster of significance being the Textile/Clothing cluster at Hammarsdale. There is also a small Truck/Transport Service and Spares cluster at Cato Ridge/Camperdown. The largest factory in the area is Assmang’s Ferro-Alloy smelter at Cato Ridge. This area is coming under focus due to the shortage of industrial land elsewhere in the EMA. It is strategically important because of its location on the western corridor between Durban and Pietermaritzburg and also being on the main road and rail connection to Gauteng and the Free State. Furthermore most of the land is zoned for industrial uses, which has encouraged a steady market interest.

<table>
<thead>
<tr>
<th>Industrial township</th>
<th>Industrial Zoning (Ha)</th>
<th>Taken up (Ha)</th>
<th>Unoccupied (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control’d/Noxious Industry</td>
<td>General Industry</td>
<td>Service/Light Industry</td>
</tr>
<tr>
<td>Outer West Sub-Total</td>
<td>0.0</td>
<td>1,373.3</td>
<td>82.2</td>
</tr>
<tr>
<td>Waterfall</td>
<td>0.0</td>
<td>22.2</td>
<td>43.3</td>
</tr>
<tr>
<td>Hammarsdale</td>
<td>0.0</td>
<td>268.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Cato Ridge</td>
<td>0.0</td>
<td>1,083.1</td>
<td>38.9</td>
</tr>
<tr>
<td>Outer West</td>
<td>0.0</td>
<td>1,151.0</td>
<td>82.2</td>
</tr>
<tr>
<td>TOTAL EMA</td>
<td>636.6</td>
<td>3,262.7</td>
<td>1,406.6</td>
</tr>
<tr>
<td>Outer West as a portion of the EMA</td>
<td>20.5</td>
<td>12.1</td>
<td>46.7</td>
</tr>
</tbody>
</table>

Table 7: Industrial land occupancy rates for the Outer West
Figure 14: Spatial Schematic of Industrial Activities by sector in the Outer West
2.3 Key Issues

From the analysis of the 5 broad areas the following issues are identified:

- Existing available land is not serviced adequately
- Road linkages and access is poor
- Existing rail linkages not optimised
- Existing industrial areas have little to no room for growth
- The uncertainty with the future of the port makes it difficult to identify areas for industrial activities, as land adjacent to the port is the most desirable, however such land might not be available in the future and if it becomes available it will be costly from both and economic and social perspective. It will also mean that additional industrial land will need to be released to meet requirements of non-related port industrial activity.
- Aggressive industrial strategies adopted by adjacent municipalities may result in potential loss of private sector investment.

These issues whilst highlighted further would need to addressed in different phases of the industrial strategy.

2.4 Strategic Selection of Future Locations

The Back of Port, Back of Airport and Cato Ridge are the three areas have been identified as the areas of most potential for industrial growth. However, other areas such as Shongweni may potentially play an industrial role.

<table>
<thead>
<tr>
<th></th>
<th>Available</th>
<th>Required</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back of Port</td>
<td>761</td>
<td>761</td>
<td>0</td>
</tr>
<tr>
<td>Back of Airport</td>
<td>2,232</td>
<td>933</td>
<td>1,299</td>
</tr>
<tr>
<td>Cato Ridge</td>
<td>1,122</td>
<td>860</td>
<td>262</td>
</tr>
<tr>
<td>Shongweni</td>
<td>500</td>
<td>150</td>
<td>350</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,615</strong></td>
<td><strong>2,704</strong></td>
<td><strong>1,911</strong></td>
</tr>
</tbody>
</table>

Table 8: Land Quantums for the future industrial areas (in ha)

The above table has made the assumption that the DIA land will be dug out and maximum occupation of the land occurs. The Dube Trade Port available land is based on vacant land that potentially can be made available for industrial activities. With regards to Cato Ridge, the land figures here reflect the zoned land only and not all the land that could potentially be used for industrial activities. Finally, the land required is based on medium term take-up i.e. approx. next 10 years, with all land being occupied by 2060.

2.4.1 Back of Port

The areas covered in the Back of Port include; Clairwood, Mobeni, Jacobs, Bayhead and Maydon Wharf. The current scenarios planned for the area will have a huge impact on the spatial composition and implications therein.

The areas surrounding the port are the most ideal location for industrial activities. In particular, logistics companies and those involved in shipping. The expansion of the port will allow for these sectors to grow which will consequently have positive economic spin-offs for the eThekwini Municipality. There is an enormous potential for the redevelopment of industrial activities, however these are hampered by poor road linkages and poor rail usage.
2.4.2 Back of Airport

Development proposals surrounding the DTP, at present, are largely centred on mixed use, business parks including light industrial, manufacturing and logistics activities. In addition to its proximity to the airport, the land surrounding the airport is vacant and available. This therefore is a strategic location for future industrial development in eThekwini.

Accurate spatial estimates prior to planning completion of Back of Airport are virtually impossible. However when considering that DTP management is expecting an initial airfreight throughput in the opening phase of operation of approximately 40,000 tpa, gradually growing to 100,000 tpa by the end of the first phase, then additional industrial spatial requirements will not be great. Much of the spatial needs will be catered for from facilities available within the DTP precinct as well as from existing businesses. Some of these businesses will want to open offices and small operations closer to the airport and some new investors will also seek suitable space.

However, the Northern Area is weak in terms of Transport & Logistics capacity and it is from these sectors where the most noticeable demand is likely to come. Light Industrial services and supplies will be essential for servicing the needs of both King Shaka Airport and Dube Trade Port, so one can expect steady development and spatial demand in these categories as well.

Thus the spatial demand during the first phase can be catered for as follows:

<table>
<thead>
<tr>
<th>Local Area</th>
<th>Tongaat &amp; Dube Tradeport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>134</td>
</tr>
<tr>
<td>Future Industry</td>
<td>691</td>
</tr>
<tr>
<td>Airport</td>
<td>608</td>
</tr>
<tr>
<td>Airport Support Zone</td>
<td>633</td>
</tr>
<tr>
<td>Tradezone</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>2232</td>
</tr>
</tbody>
</table>

Adapted from the NSDP, 2008

Table 9: Northern area land quantum

2.4.3 Cato Ridge

A location for noxious industry within the city is required. Cato Ridge has been identified as one of the only possible sites. At present the area already supports industrial activities and has vast amounts of available, flat land. This area has been designated for industrial activities for a significant length of time and should therefore be met with minimal resistance.

One complication is the environmental implications and drainage catchments. Before making the decision to promote noxious industry in this area, further detailed environmental investigations must be undertaken.

In addition to providing incentives or by simply permitting noxious industry in Cato Ridge, infrastructure needs to support such activities. The Cato Ridge/Harrison Flats Infrastructure Plan as well as the Cato Ridge Industrial Precinct Plan, (a project jointly supported by the Provincial and Local Government) is currently in the process of being commissioned. This will further investigate and make
recommendations in this regard. The time line for this project is 12 months from date of appointment.

In terms of industrial zoning and take-up the following table provides and understanding of the zoned land availability. Please note that this land is subject to DMOSS limitations and therefore significant portions may not be available.

<table>
<thead>
<tr>
<th></th>
<th>Total Zoned (ha)</th>
<th>Total Taken Up</th>
<th>%</th>
<th>Total Available</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cato Ridge</td>
<td>1,122.0</td>
<td>363.6</td>
<td>32.4%</td>
<td>758.4</td>
<td>67.6%</td>
</tr>
</tbody>
</table>

Table 10: Land Quantums in Cato Ridge

In addition to the land identified in the table above, it is estimated that a further 120ha may be available, that is not yet zoned for industrial use.

2.4.4 Shongweni

Recently, interest in the Shongweni area for new greenfields development has emerged. Its position, adjacent to the N3 and its undulating terrain make it possible to permit industrial development as well as some commercial.

At present it is used as agricultural land and is therefore unserviced and unzoned. However, due to its altitude it might be possible to service Shongweni before Cato Ridge, thereby making it a strategic piece of potential industrial land in the EMA. This is subject to analysis pertaining to the sustainability of this area, should industrial activities be permitted.

To surmise, the Shongweni node is roughly 500ha of agricultural land. Should development be permitted, it is expect that roughly 30% of this would be available for industrial development.

3.0 INDUSTRY TRENDS

Key sectors are defined as those which are essential to satisfy local needs, as well as those which over time have established themselves as being substantial in terms of overall investment in the city. Of particular importance to ensure continued growth and improved standards of living at all income levels, is to focus on those major sectors, which exhibit

- strong growth,
- export market potential,
- good employment capacity.

Research has shown that the following sectors are firmly established in the eThekwini Municipal Area.

- **Established Clusters**
  - Automotive
  - Building Products
  - Chemicals
  - Furniture & Bedding
  - Marine Services, Shipping & Ship Building
  - Textiles, Clothing & Footwear
  - Transport & Logistics

- **Other**
  - Electrical Equipment & Components
  - Food & Beverages
  - Housewares & Appliances
  - Machinery
  - Metal Products
  - Pulp & Paper
  - Paper Converting & Packaging
  - Tents, Awnings & Canopies

(See also Annexure B)

Of the above, the following sectors are experiencing difficult international market forces which are severely restricting their ability to grow, viz. Textiles, Clothing & Footwear and Ship Building. All are important to the City and will need special support if they are to prosper in the long-term. More discussion on the above sectors follows, together with some growth trend analysis.
3.1 Strategic Analysis and Selection by Sector

In the three tables below we have attempted to rank the above sectors in terms of their strategic importance to the eThekwini economy. Whilst, this is a useful analysis, there is a level of subjectivity and absolute scores should not be the focus.

<table>
<thead>
<tr>
<th>Category</th>
<th>1 Pt</th>
<th>2 Pts</th>
<th>3 pts</th>
<th>4 Pts</th>
<th>5pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Essential to local population</td>
<td>Not essential</td>
<td>Slightly essential</td>
<td>Fairly essential</td>
<td>Reasonably essential</td>
<td>Absolutely essential</td>
</tr>
<tr>
<td>2. Multiplier effect</td>
<td>&lt; 0.5</td>
<td>0.5 - 0.9</td>
<td>1.0 - 1.4</td>
<td>1.5 - 1.9</td>
<td>2+</td>
</tr>
<tr>
<td>3. Growth Rate (ave.pa)</td>
<td>Declining</td>
<td>0.1 to 3.0</td>
<td>3.1 to 7.0</td>
<td>7.1 to 10.0</td>
<td>10+</td>
</tr>
<tr>
<td>4. Employment</td>
<td>&lt; 2500</td>
<td>2500 to 4999</td>
<td>5000 to 9999</td>
<td>10000 to 19999</td>
<td>20000+</td>
</tr>
<tr>
<td>5. Export Potential (% of Output)</td>
<td>&gt; 2.5%</td>
<td>2.5% to 4.9%</td>
<td>5% to 9.9%</td>
<td>10% to 20%</td>
<td>20% +</td>
</tr>
<tr>
<td>6. Clustering</td>
<td>Undeveloped</td>
<td>Slightly Developed</td>
<td>Fairly Developed</td>
<td>Developed</td>
<td>Well developed</td>
</tr>
<tr>
<td>7. National Importance</td>
<td>Not important</td>
<td>Slight attention</td>
<td>Fairly High</td>
<td>High</td>
<td>Priority Sector</td>
</tr>
<tr>
<td>8. Life Cycle</td>
<td>Declining</td>
<td>Peaking</td>
<td>Mature</td>
<td>Medium Growth Phase</td>
<td>High Growth Phase</td>
</tr>
<tr>
<td>9. International Competitiveness</td>
<td>Uncompetitive</td>
<td>Partly Competitive</td>
<td>Fairly Competitive</td>
<td>Competitive</td>
<td>Very Competitive</td>
</tr>
</tbody>
</table>

Table 11: Industrial Sector Selection Criteria
<table>
<thead>
<tr>
<th>Industrial Sector</th>
<th>No. of Firms</th>
<th>Employment Estimate</th>
<th>Ave. per Firm</th>
<th>Criteria Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>86</td>
<td>17,200 (Toyota 9000)</td>
<td>200</td>
<td>4</td>
</tr>
<tr>
<td>Building Products</td>
<td>280</td>
<td>5,600</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Chemicals</td>
<td>208</td>
<td>10,400</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Electrical Equipment &amp; Components</td>
<td>22</td>
<td>660</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>48</td>
<td>5,280</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>Furniture &amp; Bedding</td>
<td>215</td>
<td>3,020</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Housewares &amp; Appliances</td>
<td>14</td>
<td>700</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>Machinery</td>
<td>8</td>
<td>80</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Marine Services, Shipping &amp; Ship Building</td>
<td>565</td>
<td>18,645</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>Metal Products</td>
<td>22</td>
<td>550</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Paper Converting &amp; Packaging</td>
<td>40</td>
<td>2,080</td>
<td>52</td>
<td>1</td>
</tr>
<tr>
<td>Pulp &amp; Paper</td>
<td>4</td>
<td>1,200</td>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>Tents, Awnings &amp; Canopies</td>
<td>7</td>
<td>210</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Textiles, Clothing &amp; Footwear</td>
<td>298</td>
<td>23,840</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>Transport, Logistics &amp; Shipping</td>
<td>1398</td>
<td>41,940</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3215</strong></td>
<td><strong>131,405</strong></td>
<td><strong>41</strong></td>
<td>-</td>
</tr>
</tbody>
</table>

*Table 12: Sector Employment Estimate for Ethekwini 2007*
The criteria used for evaluating the strategic importance of the different industry sectors are inevitably somewhat subjective, but every effort has been made to provide a fair comparison of what are considered to be the most important criteria.

The top seven sectors (Automotive; Transport and Logistics; Marine Services, Shipping and Ship Building; Furniture and Bedding; Building products; Chemicals; Food and Beverage) are the major contributors from an overall strategic point of view. Textiles, Clothing and Footwear should by rights also be in the top category as they are major employers. However they lose points because of recent declining growth and lack of international competitiveness. This points strongly towards urgent priority debate for both local and national government intervention.

The lower eight (Textile, Clothing and Footwear; Pulp and Paper; Electrical Equipment and Components; Paper Converting and Packaging; Housewares and Appliances; Metal Products; Tents, Awnings and canopies and Machinery) sectors are all strategically important to the local economy, but do not match the top seven in terms of all-round contribution, and this is reflected in their employment numbers (T C & F and Food & Bev, exceptions).

3.2 Spatial Estimates and Forecasts by Sector

Whilst comprehensive details regarding the extent of spatial development in the various industrial townships are on record and has been analysed, details by Industrial Sector are not available. It is very important to get to the sector level of detail in order to provide a basis for forecasting future spatial needs for the municipal area. Ideally this information should also be by manufacturing sector as Manufacturing occupies two-thirds of industrial space. The municipality must know how much additional industrial land it must plan for in order to accommodate expected industrial growth.

**Methodology:** In order to achieve the above objectives it has been necessary to rely on informed estimates and a series of growth assumptions. Firstly an estimate of the average land site size required to accommodate each type of industrial activity, was applied and multiplied by the number of firms in that category. The results were then adjusted by a factor so as to equate with the known total land taken up in each industrial township. From that it was possible to estimate the total land take-up by each of the industrial sector groupings. As a further step the same procedure was used to estimate the spatial take-up and forecast requirements for each of the main manufacturing sectors. Changing the growth assumptions can vary forecasts in each case, and this is entirely at the discretion of the reader or researcher. It is believed that the base data provides a realistic view of the status quo. Details of spatial estimates and forecasts are shown in Tables 13 to 17 below.

### Industrial Sector as a whole

<table>
<thead>
<tr>
<th>Sector</th>
<th>No. of Firms</th>
<th>Ave. Ha.</th>
<th>Total Ha</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>1087</td>
<td>3.23</td>
<td>3512</td>
<td>66.1</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>996</td>
<td>0.73</td>
<td>733</td>
<td>13.8</td>
</tr>
<tr>
<td>Services Financial</td>
<td>66</td>
<td>0.32</td>
<td>21</td>
<td>0.4</td>
</tr>
<tr>
<td>Services Other</td>
<td>258</td>
<td>0.46</td>
<td>119</td>
<td>2.2</td>
</tr>
<tr>
<td>Retail/Wholesale</td>
<td>185</td>
<td>0.17</td>
<td>31</td>
<td>0.6</td>
</tr>
<tr>
<td>Transport/Logistics</td>
<td>608</td>
<td>1.32</td>
<td>803</td>
<td>15.1</td>
</tr>
<tr>
<td>Other</td>
<td>327</td>
<td>0.29</td>
<td>96</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3527</strong></td>
<td><strong>1.51</strong></td>
<td><strong>5315</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Table 13: Industrial Sector Spatial Estimates (Hectares)*

By utilising 66.1% of industrial land, it is clear that Manufacturing is the major tenant. Transport/Logistics (15.1%) and Light Industrial (13.8%) are also important industrial land occupiers.
### Table 14: Industrial Sector Spatial Forecasts

Growth rate range assumptions in Table 14 are based on a combination of actual rates achieved in the recent past, and expected future trends, provided that the economy maintains its strong long-term growth rate. Allowance has been made in the short-term for the severe economic downturn, which commenced in the second half of 2008. The lower rates in the range apply to 2009 and the first half of 2010. However although Business Cycle movements have been taken into account during 2009/10, the long-term trend is the key determinant when forecasting at this level. The high economic development potential for Southern Africa provides the main argument underpinning sustained strong growth. Downside factors which could upset these assumptions are firstly, a serious further decline of financial and commodity market situations, causing a protracted global recession of several years, secondly, developments in the domestic political situation, particularly if there is violence or other factors causing serious loss of investor confidence, and thirdly, unexpected international factors such as regional wars, particularly in the Middle East, or Afghanistan.

### Table 15: Manufacturing Spatial Estimates (Hectares)

The manufacturing sector provides an interesting picture when viewed in detail. Automotive Vehicles are a special case in that a vehicle manufacturer or assembler requires substantial space. Toyota is a case in point, currently occupying well over 100 hectares amongst its various operations. It is inevitable as the Automotive Industry Programme unfolds, that other vehicle manufacturers will make representations for a suitable site in the EMA, and this is likely to be around 20 to 30 hectares as a starting point. Overall, the Automotive Sector (14.8%) and the Chemical Sector (25%) are the biggest manufacturing sectors in terms of spatial take-up. However, as can be seen from Table 15, there are several sectors already occupying substantial land areas. In total it is estimated that the manufacturing sector occupies approximately 3500 hectares, which is 66% of the developed industrial land in the EMA.
Table 16: Average Annual Growth Estimates - %

<table>
<thead>
<tr>
<th>Manufacturing Sector</th>
<th>2009 to 2012 (%)</th>
<th>2013 to 2016 (%)</th>
<th>2017 to 2020 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive - Components</td>
<td>2.00</td>
<td>7.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Automotive - Vehicles</td>
<td>2.00</td>
<td>7.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Building Products</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Chemicals - Large</td>
<td>2.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Chemicals - Medium</td>
<td>2.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Chemicals - Small</td>
<td>3.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Large</td>
<td>2.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Small</td>
<td>2.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Packaging &amp; Paper Converting</td>
<td>3.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Plastics</td>
<td>1.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>TCFL - Large</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TCFL - Medium</td>
<td>0.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>TCFL - Small</td>
<td>2.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>2.00</td>
<td>4.00</td>
<td>6.00</td>
</tr>
<tr>
<td><strong>Weighted Ave. All Sectors</strong></td>
<td><strong>1.71</strong></td>
<td><strong>3.87</strong></td>
<td><strong>4.26</strong></td>
</tr>
</tbody>
</table>

Some allowance has been included in the above growth estimates (Table 16) for business cycle conditions. Individual assumptions have been rationalised as follows:

**Automotive** - Continued focus on expanding export capacity and capability through the revised MIDP in the form of the new Automotive Industrial Programme (AIP), which takes effect at the end of 2009. Rising household incomes and improvements in wealth distribution equitability in the domestic economy are also expected to cause strong internal growth.

**Building Products** - Accelerating demand with short-term business cycle slowdown impact.

**Food & Beverages** - Well developed sector, extrapolation of long-term historical trend.

**Chemicals** - Emphasis on medium and small plants, with short-term business cycle slowdown impact.

**Furniture & Bedding** - Steady growth accelerating after slowdown.

**Packaging and Paper Converting** - Steady growth accelerating after slowdown.

**Plastics** - Well developed sector, extrapolation of long-term historical trend.

**Textiles, Clothing, Footwear & Leather** - Continuation of competitiveness problems, with some growth in small enterprises.

**Other Manufacturing** - Accelerating after slowdown.

<table>
<thead>
<tr>
<th>Manufacturing Sector</th>
<th>2008 (Ha)</th>
<th>2012 (Ha)</th>
<th>2016 (Ha)</th>
<th>2020 (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive - Components</td>
<td>362</td>
<td>384</td>
<td>503</td>
<td>612</td>
</tr>
<tr>
<td>Automotive - Vehicles</td>
<td>159</td>
<td>169</td>
<td>221</td>
<td>269</td>
</tr>
<tr>
<td>Building Products</td>
<td>207</td>
<td>242</td>
<td>294</td>
<td>372</td>
</tr>
<tr>
<td>Chemicals - Large</td>
<td>174</td>
<td>188</td>
<td>212</td>
<td>239</td>
</tr>
<tr>
<td>Chemicals - Medium</td>
<td>509</td>
<td>551</td>
<td>645</td>
<td>783</td>
</tr>
<tr>
<td>Chemicals - Small</td>
<td>192</td>
<td>216</td>
<td>263</td>
<td>332</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>140</td>
<td>146</td>
<td>152</td>
<td>158</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Large</td>
<td>371</td>
<td>402</td>
<td>470</td>
<td>571</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Small</td>
<td>15</td>
<td>16</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Packaging &amp; Paper Converting</td>
<td>145</td>
<td>163</td>
<td>198</td>
<td>250</td>
</tr>
<tr>
<td>Plastics</td>
<td>307</td>
<td>320</td>
<td>346</td>
<td>374</td>
</tr>
<tr>
<td>TCFL - Large</td>
<td>294</td>
<td>294</td>
<td>294</td>
<td>294</td>
</tr>
<tr>
<td>TCFL - Medium</td>
<td>262</td>
<td>262</td>
<td>284</td>
<td>307</td>
</tr>
<tr>
<td>TCFL - Small</td>
<td>100</td>
<td>108</td>
<td>127</td>
<td>148</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>275</td>
<td>298</td>
<td>348</td>
<td>440</td>
</tr>
<tr>
<td><strong>TOTAL HECTARES</strong></td>
<td><strong>3512</strong></td>
<td><strong>3758</strong></td>
<td><strong>4375</strong></td>
<td><strong>5170</strong></td>
</tr>
<tr>
<td><strong>4 yr. Spatial Increases</strong></td>
<td><strong>0</strong></td>
<td><strong>246</strong></td>
<td><strong>617</strong></td>
<td><strong>795</strong></td>
</tr>
</tbody>
</table>

Table 17: Manufacturing Spatial Forecasts
4.0 SCENARIO PLANNING AND INDUSTRIAL SPATIAL LAND FORECASTS

The aspect of spatial issues is discussed together with recommendations to encourage strategic clustering by the key sectors. The discussion is formulated under three different scenarios. This is necessary as the spatial requirements and location of clusters will be strongly affected by the manner in which the Port is developed and whether the Airport land is used for industrial development or used for the construction of a new dig-out port.

South Africa is experiencing the financial crisis and the take up of industrial land (in particular to an economy that is linked to a port) is vulnerable. The economy in this context must be noted and growth patterns at this point is therefore difficult to determine.

See ANNEXURE A for detailed description of the three scenarios

<table>
<thead>
<tr>
<th>Industrial Sub-Area</th>
<th>Zoned</th>
<th>Occupied</th>
<th>Unoccupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Durban Basin</td>
<td>1667.3</td>
<td>1541.2</td>
<td>126.1</td>
</tr>
<tr>
<td>South Bay</td>
<td>1350.3</td>
<td>1350.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Durban Central</td>
<td>190.5</td>
<td>190.2</td>
<td>0.3</td>
</tr>
<tr>
<td>North</td>
<td>1045.6</td>
<td>733.9</td>
<td>311.7</td>
</tr>
<tr>
<td>Inner West</td>
<td>1367</td>
<td>1111.8</td>
<td>255.2</td>
</tr>
<tr>
<td>Outer West</td>
<td>1455.5</td>
<td>547</td>
<td>908.5</td>
</tr>
<tr>
<td><strong>TOTAL EMA</strong></td>
<td><strong>7076.2</strong></td>
<td><strong>5474.4</strong></td>
<td><strong>1601.8</strong></td>
</tr>
</tbody>
</table>

Table 18: Summary of Land Availability

Table 19: Area Totals as a percentage of overall land quantums

From the above it appears that there are just over 1600 hectares of undeveloped land, 22.7% of total zoned “Industrial”, still available. Approximately 56% of this unoccupied land is in the Outer West area. Both the North and Inner West also still have significant amounts unoccupied, representing 19% and 16% of total unoccupied respectively.

Scenario Concepts:
In order to have a more strategic and structured view of growth in eThekwini Municipality, within the context of uncertainty, a level of 3 scenarios were identified. In essence, the scenarios are centred on port expansion options. In all three scenarios it will be evident that the Dube Trade Port is factored as a GIVEN.

Whilst the scenarios provide an indication of land available, the demand for take up will depend on the economic stability of the country.

Notwithstanding, current and future industrial land, the release of serviced land, will continue to be in high demand for eThekwini.
4.1 Scenario 1: Incremental Interventions

4.0m – 4.6 m TEUs

Port Conditions:
- No dig-out expansions (Bayhead and DIA),
- Productivity in existing port raised by approx. 40% to 50% i.e. from 16-18 TEUs per hr. to 23-25 TEUs per hr.
- Container handling throughput peaks at 4 to 4.6 million TEUs pa.

Economic effects of Scenario 1:
- Constraints on cargo handling capacity would curtail export expansion.
- Probability that industry dependent on import/export (e.g. Automotive, Pulp & Paper, Wood Products, Clothing & Footwear, Metal Products, etc.) would slow down or curtail their future investments in Durban operations, and some might relocate completely.
- Substantial bulk and break-bulk cargo would be transferred to Richards Bay and other ports → loss of local jobs.
- Some of the growth in containerised cargo would be redirected to Richards Bay.
- Shipbuilding - limited growth plus change of target markets to central and southern African port needs. Competition from Richards Bay could become a factor.
- Growth emphasis would change towards servicing local and domestic SA markets and developing Dube Trade Port capability.
- Emphasis on development of tourism, conferences, events and sport would continue (not dependent on industrial growth).
- Durban would lose status as an international trade gateway and hub port.
- Unemployment unlikely to decline below 25% of economically active.
- Economic growth rate ± 4.0% pa.

Land Implications:

Redevelopment of Bay-head (marshalling yards) 470 ha
Redevelopment of Maydon Warf 124 ha
Total Redevelopment 594 ha

Total redevelopment area 594 ha /470 ha (if Maydon Warf is not included as medium term change)

The Maydon Wharf area, with long term leases and investments and high land value, will less likely experience redevelopment over the medium term (10-20 years).

4.1.1 Jacobs/Mobeni/Clairwood/Congella

Mobeni 297.8 Ha
Clairwood 270.6 Ha
Congella 308.6 Ha
Jacobs 371.3 Ha
Sub Total 1816.1 Ha

High land values from Jacobs, makes Jacobs a less likely area for medium term changes (10-20 years is expected)

It is evident in Scenario 1 (2 and 3 to follow) that the Back of Port Area is in high demand and is not just simply available without long term investment and socio-economic mitigation.

It is envisaged that in the medium to long term future (20 - 50 years) that back of port activity and port related industry should be facilitated and encouraged to cluster in this area.

It is also envisaged that in Scenario 1 (2 and 3 to follow) that this area also be dominated by petro chemical sector, auto motive and back of port requirements.
4.1.2 **DIA Land**

Under Scenario 1 there will be no dig-out container port on the DIA site. Thus the land will become available for industrial development. Under such a scenario there will be competition between the Petro-Chemical sector, the Transport/Logistics sector and the manufacturing sector, especially Automotive. Altogether the DIA land is approximately 660 hectares in extent and the following development mix for the land would cater for economic needs under this scenario.

In particular, provision should be made for:

- Petronet Terminal
- Automotive Supplier Park
- 2nd Automotive OEM
- Petro-Chem cluster
- Container Terminal or Logistics Park

4.1.3 **Redevelopment of Hammarsdale**

Hammarsdale as an industrial township is in serious need of a “new deal”. Several of the factories have closed down and several others have been forced to scale down their operations to some degree. The problem relates to the state of the textile and clothing markets where they find themselves less and less competitive against countries such as China, India, Pakistan, Brazil, etc. Total employment in the township is estimated to be currently around 3500, of which approximately two thirds are in Textiles. Hammarsdale provides an important source of jobs for residents of the adjoining Mpumalanga township which has a population of approximately 110 000 people.

Hammarsdale is also not fully developed in terms of land originally zoned “Industrial”. The current spatial situation is as follows:

<table>
<thead>
<tr>
<th>Type of Land</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed land</td>
<td>148 ha</td>
</tr>
<tr>
<td>Undeveloped land</td>
<td>120 ha</td>
</tr>
</tbody>
</table>

Roads and access are reasonable, although the township generally needs a clean-up and security interventions. Incentives around utility costs and appropriate treatment and disposal of effluent are key to address the existing and potential land in this area. Public transport is also another intervention that can make this area more attractive for investors.

It is possible that some additional adjoining land (say 100 ha) could be incorporated into the township if required.

In the Industrial Spatial Strategy it is envisaged that Hammarsdale should be re-targeted towards labour-intensive industries such as a Textiles, Clothing, Footwear, Soft Toys, Tents & Awnings, Furniture & Cupboards, Household Appliances, Small Engineering & Welding, Ceramic Products, Fresh Produce & Horticulture Export Packagers.

4.1.4 **Development of Cato Ridge**

Cato Ridge remains the only major undeveloped area with significant industrial potential. At present the spatial uptake situation is as follows:

<table>
<thead>
<tr>
<th>Type of Land</th>
<th>Developed</th>
<th>Undeveloped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial zoned</td>
<td>364 ha</td>
<td>758 ha</td>
</tr>
</tbody>
</table>

There are currently approximately 10 manufacturing plants at Cato Ridge plus a small number of light industrial companies. The largest plant is the Manganese smelter belonging to Assmang who are also the largest land owner.

There is a limited rail shunting facility at the Cato Ridge Station and the N3 highway passes through the centre of the town. Thus it has good transport connectivity however the configuration of the off-ramp makes it difficult to enter and exit.

In viewing Cato Ridge as a future industrial area, it is important to look at the bigger picture of long-term industrial development within the Province. Cato Ridge is the starting point for what is a natural...
industrial corridor from Durban through Pietermaritzburg to Ladysmith and Harrismith. In time, this can extend right through the Free State to Gauteng to greater or lesser extents. In the shorter term the section from Cato Ridge to Pietermaritzburg should be planned as an integrated corridor. It is said that Cato Ridge has the potential to develop into the Midrand of KwaZulu Natal.

The environmental performance of industry (existing and future) at Cato Ridge is important. Further investigation and planning is underway for Cato Ridge and will provide more specifics of what is available and what is required to take advantage of current industrial zoned land in this area.

In this industrial strategy Cato Ridge is envisaged as the next noxious industrial complex and logistic node for the eThekwini region.

4.1.5 Dube Trade Port and Back of Airport

Dube Trade Port is likely to bring online 436 Ha for Industrial and Logistics utilisation. In addition surrounding areas suitable for industrial activity is likely to be unlocked. The surrounding industrial land potential is likely to come on stream in the short to medium term (10-20 years).

The port expansion would represent a maximisation of output from the existing port spatial footprint by focusing on productivity improvement with some modernisation of Maydon Wharf and Island View. Coastal linkages to Gauteng would be more evenly distributed between Richards Bay, Durban, and Ngqura, with Maputo also coming into the equation. Under this scenario industrial development would focus on the domestic market with little growth in exports.

DTP would receive the bulk of development focus, which would occur in phases until the trade port achieves its planned full potential in about 2060.

The export of agricultural and horticultural products as well as marine products through Durban under Scenario 1 should not be inhibited in any way. The negative effects would come from the fact that the local industrial market would not be developed to the extent of Scenarios 2 and 3 and that would reduce the airfreight tonnage throughput related to industry.

In this industrial strategy (Phase 1) the release of 1660 ha for DTP and Back of Airport should be facilitated for the provision of industrial land supporting the Logistics sector.

Note: all figures submitted herein are gross values and
### Scenario 1 Matrix

<table>
<thead>
<tr>
<th>Land Implications</th>
<th>Total Quantum</th>
<th>Useable in Scenario 1</th>
<th>Reclaimed, Brownfields, Existing Greenfields; New Greenfields</th>
<th>Key Issues</th>
<th>Future Use</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayhead</td>
<td>tbc</td>
<td>tbc</td>
<td>Reclaimed</td>
<td>• Displacement and relocation of existing industry</td>
<td>• Back of Port; • Port Related Industry, • Petro Chemical • Automotive</td>
<td>Medium Term (10-20 yrs) Timeframe can be longer 30-50 years</td>
</tr>
<tr>
<td>DIA</td>
<td>660 ha</td>
<td>660 ha</td>
<td>Existing Greenfields</td>
<td>• Socio-economic</td>
<td>• Back of Port; • Port Related Industry, • Petro Chemical • Automotive</td>
<td>Medium Term (10-20 years)</td>
</tr>
<tr>
<td>Maydon Wharf</td>
<td>470 ha</td>
<td>470 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Clairwood</td>
<td>270.6 ha</td>
<td>270.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mobeni</td>
<td>297.8 ha</td>
<td>297.8 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 years</td>
</tr>
<tr>
<td>Jacobs</td>
<td>371.3 ha</td>
<td>371.3 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 years</td>
</tr>
<tr>
<td>Congella</td>
<td>308.6 ha</td>
<td>308.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>27 ha</td>
<td>27 ha</td>
<td>Existing Greenfields</td>
<td>• Utility Costs, • Public realm, • Security, • Public Transport • Removed from N3</td>
<td>• Textiles and Footwear • Furniture • Light &amp; service industrial</td>
<td>Short term (5-10 years)</td>
</tr>
<tr>
<td>Location</td>
<td>Area (ha)</td>
<td>Proposed Area (ha)</td>
<td>Type of Development</td>
<td>Benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------</td>
<td>--------------------</td>
<td>---------------------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Shongweni         | 150       | 150                | New Greenfields     | - No services  
                  |           |                    |         | - Not priority in industrial plan  
                  |           |                    |         | - Little labour force located nearby - thereby increasing journey times to work and traffic.  
|                   |           |                    |                     | - Truck stop  
                  |           |                    |         | - Light Industrial  
                  |           |                    |         | - Warehousing  
|                   |           |                    |                     | Short to medium term (5-20 years)  
| Cato Ridge        | 1120      | 1120               | Existing Greenfields | - Poor access  
                  |           |                    |         | - Poor infrastructure  
                  |           |                    |         | - Area covered to a large extent by DMOSS  
                  |           |                    |         | - Sensitivity of Umgeni river catchment  
                  |           |                    |         | - Landfill  
|                   |           |                    |                     | - Logistics Park/ Container terminal  
                  |           |                    |         | - Light Industrial  
                  |           |                    |         | - Noxious Industry  
                  |           |                    |         | - Warehousing  
                  |           |                    |         | - Chemicals  
                  |           |                    |         | - Holding area for trucks  
|                   |           |                    |                     | Short to Medium term (5-20 yrs)  
| Hammarsdale       | 370       | 650                | Brownfields         | - Crime and grime,  
                  |           |                    |         | - Industrial sectors seen a decline in productivity in recent years,  
                  |           |                    |         | - Removed from the N3  
                  |           |                    |         | - Issue of redevelopment rather than developing  
|                   |           |                    |                     | - Textiles and Clothing  
                  |           |                    |         | - Chemicals  
                  |           |                    |         | - Warehousing  
                  |           |                    |         | - Furniture and Bedding  
|                   |           |                    |                     | Short term (5-10 yrs)  
| Dube Trade Port   | 436       |                    | Existing Greenfields | - To be developed in phases until 2060  
                  |           |                    |         | - Fresh produce Exports  
                  |           |                    |         | - High Value Products exports & Imports  
|                   |           |                    |                     | - Logistics  
                  |           |                    |         | - Transport  
                  |           |                    |         | - Light Industrial  
                  |           |                    |         | - Agrizone  
|                   |           |                    |                     | Long term (50 years)  
| Back of Airport   | 1224      |                    | New Greenfields     | - Bulk Unzoned  
                  |           |                    |         | - Small qtys in existing Ind. Town ships zoned  
|                   |           |                    |                     | - Heavy Industry  
                  |           |                    |         | - Transport / Logistics  
                  |           |                    |         | - Light Industry  
                  |           |                    |         | - Agri-Processing  
|                   |           |                    |                     | Long term (50 years)  

**Table 20: Scenario 1 Matrix**
4.2 Scenario 2: Limited Port Expansion

*Dig-out of Bayhead only: 6.5m to 7.0m TEUs*

Effects of Port:

- Productivity improvements would raise container throughput to approximately 4.0m to 4.6m TEUs pa.
- Implementation of Bayhead dig-out expansion would raise container throughput further to 6.5m to 8m TEUs pa. *(Possibly higher depending on the configuration chosen).*
- Truck numbers accessing Bayhead area transporting containers to and from the Port would escalate by 150% or more, than 2007 levels.

Economic effects of Scenario 2:

- Import/Export industrial capacity would continue to grow, especially from existing medium and heavy sized industry.
- Improvements in the transport logistics capability would attract new exporters, particularly medium sized companies.
- Traffic congestion in Bayhead area would be chaotic during the Port’s Bayhead dig-out expansion phase and would require substantial infrastructure spending to solve the problem.
- DIA land would be quickly taken up by industry with a strong emphasis on Automotive, Petroleum, Petro-Chemical, Container Logistics and possibly Metals Engineering and Food & Beverages.
- Hammarsdale would grow to full spatial capacity with strong emphasis on Textiles, Clothing and Footwear.
- Cato Ridge/Harrison Flats could possibly be developed as a new heavy industry township.
- Dube Trade Port will facilitate development of new fresh produce export marketing with spin-off effects to all KZN farming areas.
- eThekwini population would grow to approximately 4 million people.
- Unemployment would decline to between 15% and 20% of economically active population.
- Long-Term Economic growth rate would be between 5-6% pa.

Land Implications:

- Dig-out at Bay-head (marshalling yards) 470 ha (excluded from redevelopment option)
- Redevelopment of Maydon Warf 124 ha
- Total Redevelopment 124 ha
- Total redevelopment area 124 Ha (on the basis of Maydon Wharf being included as a long re-development option (20-50 years)).

The dig-out at bay-head will result in:

1. certain back of port activities to be re-located
2. other land within the back of port area to be reclaimed(Congella, Clairwood, Maydon Warf, Jacobs, Mobeni) and also
3. relocation of some of the displaced back of port functions on DIA.

4.2.1 Jacobs/Mobeni/Clairwood/Congella

Redevelopment of these three sub-areas would be the same as under Scenario 1 except that the pressure for BoP and transport/logistics space would intensify. Thus the relocation programme would have to be speeded up.

4.2.2 DIA Land

Redevelopment of the DIA land would be similar to the proposals under Scenario 1, but demand for the land would become even stronger and the pressure for the establishment of a larger Container Terminal would also be likely.

4.2.3 Hammarsdale

Same as for Scenario 1.
4.2.4 **Cato Ridge**

The anticipated increase in cargo volumes handled through the Port under Scenario 2 (and the necessary relocation of industries operating in the area to be redeveloped) would strongly intensify the need for additional logistics space. An important additional dimension, which should therefore be considered, is the development of an inland Container Terminal, possibly supported by a logistics park and overnight truck-stop. This depends largely on the form and extent of development decided for the Port and the amount of space on the DIA land allocated for container handling and distribution.

Such a development to provide sufficient capacity for the Logistics sector would also impact on Transport volumes, forms and movements. Ideally a hotshot service either by road or rail or both, linking the Cato Ridge Terminal/Logistics Park directly with the Port, should be established to ensure speedy and efficient movement of cargoes between the two locations.

There is considerable undeveloped land in the Cato Ridge area and a large population of low-income residents in adjoining semi-rural areas from which to draw the bulk of factory employees. The town of Cato Ridge is also expanding and well placed relative to Durban and Pietermaritzburg, and could thus be attractive for administrative and middle management staff. Negative factors are the lack of industrial township development and very inadequate utilities infrastructure. Thus a decision to develop Cato Ridge’s industrial potential would require substantial infrastructure spending and planning as well as comprehensive EIAs and innovative offset solutions.

Some important catchment areas feeding the northern suburbs and coastal resort areas start there.

4.2.5 **Dube Trade Port and Back of Airport**

Same as under Scenario 1, however pressure to support the increase in cargo handling will intensify. Consequently the demand for available land will be greater due to growth in Industrial investment and activity. Therefore the timeframes for development activity will be reduced, with land take up occurring sooner.
### 4.2.6 Scenario 2 Matrix

<table>
<thead>
<tr>
<th>Land Implications</th>
<th>Total Quantum</th>
<th>Useable in Scenario 2</th>
<th>Reclaimed, Brownfields, Existing Greenfields; New Greenfields</th>
<th>Key Issues</th>
<th>Future Use</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayhead</td>
<td>tbc</td>
<td>tbc</td>
<td>Reclaimed</td>
<td>Displacement and relocation of existing industry</td>
<td>Dig-Out Port</td>
<td>Medium Term (10 -20 yrs) Time frame can be longer 30 -50 years</td>
</tr>
<tr>
<td>DIA</td>
<td>660 ha</td>
<td>660 ha</td>
<td>Existing Greenfields</td>
<td>Socio-economic</td>
<td>Automotive, Petro Chemical Back of Port</td>
<td>Medium Term (10-20years)</td>
</tr>
<tr>
<td>Maydon Warf</td>
<td>470 ha</td>
<td>124 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Clairwood</td>
<td>270.6 ha</td>
<td>270.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mobeni</td>
<td>297.8 ha</td>
<td>297.8 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Jacobs</td>
<td>371.3 ha</td>
<td>371.3 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Congella</td>
<td>308.6 ha</td>
<td>308.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic • Infrastructure</td>
<td>• Back of Port;</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>27 ha</td>
<td>27 ha</td>
<td>Existing Greenfields</td>
<td>• Utility Costs, • Public realm, • Security, • Public Transport</td>
<td>• Textile and Foot Wear • Furniture • Light &amp; service industrial</td>
<td>Short - medium term 5-20 yrs</td>
</tr>
<tr>
<td>Cato Ridge</td>
<td>1120 ha</td>
<td>1120 ha</td>
<td>Existing Greenfields</td>
<td>• Poor access • Poor infrastructure • Area covered to a large extent by DMOSS • Sensitivity of Umgeni river catchment • Landfill</td>
<td>• Logistics Park/ Container terminal • Light Industrial • Noxious Industry • Warehousing • Chemicals • Holding area for trucks</td>
<td>Short to Medium term (5-20 yrs)</td>
</tr>
<tr>
<td>Location</td>
<td>Land Area 1</td>
<td>Land Area 2</td>
<td>Type</td>
<td>Issues and Constraints</td>
<td>Potential Uses</td>
<td>Timeframe</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-----------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Hammarsdale</td>
<td>370 ha</td>
<td>650 ha</td>
<td>Brownfields</td>
<td>• Crime and grime, • Industrial sectors seen a decline in productivity in recent years, • Removed from the N3 • Issue of redevelopment rather than developing</td>
<td>• Textiles and Clothing • Chemicals • Warehousing • Furniture and Bedding</td>
<td>Short term (5-10 yrs)</td>
</tr>
<tr>
<td>Shongweni</td>
<td>150 ha</td>
<td>150 ha</td>
<td>New Greenfields</td>
<td>• No services • Not priority in industrial plan • Little labour force located nearby - thereby increasing journey times to work and traffic.</td>
<td>• Truck stop • Light Industrial • Warehousing</td>
<td>Short to medium term (5-20 yrs)</td>
</tr>
<tr>
<td>Dube Trade Port</td>
<td>436 ha</td>
<td>278 ha</td>
<td>New Greenfields</td>
<td>• Services • Access • Effects of higher Industrial growth</td>
<td>o Logistics o Transport o Light Industrial o Agrizone</td>
<td>Short - medium term 5-20 yrs</td>
</tr>
<tr>
<td>Back of Airport</td>
<td>1224 ha</td>
<td>954 ha</td>
<td>New Greenfields</td>
<td>• Higher Industrial and Transport/Logistics growth throughout eThekwini</td>
<td>• Heavy Industry • Transport / Logistics • Light Industry • Agri-Processing</td>
<td>Short - medium term 5-20 yrs</td>
</tr>
</tbody>
</table>

**Table 21: Scenario 2 Matrix**
4.3 Scenario 3: Maximum Port Expansion

_Dig-out of Bayhead and DIA: Port Capacity Maximised Between 10m and 15m TEUs._

- DIA dig-out port option implemented - state-of-the-art container and bulk liquid port with special focus on Automotive and Petroleum industries.
- Followed some years later by the Bayhead dig-out option (timing between the 2 dig-out options could alternate)
- Container handling capacity would rise to between 10m and 15m TEUs, depending on dig-out configurations.
- Shipbuilding would be discontinued and transferred to Richards Bay.
- A total redesign of traffic corridors and entry/exit points from the city would be required in order to accommodate the substantially increased traffic volumes.
- High demand for industrial land will cause overflow of demand along western corridor towards Pietermaritzburg and northwards up the coast towards Stanger, Mandini and iSithebe.

Economic effects of Scenario 3:

- This represents an ambitious scenario, which has the potential for high economic growth with a substantial lowering of unemployment and an opportunity to seriously address local poverty.
- As some of the projects would require substantial funding, the plan would unfold over approximately 15 to 20 years, if not longer given current decline in volumes and access to capital.
- Durban would unquestionably become the major gateway for trade into Southern Africa and would be a significant hub port.
- New maxi container ships would be regular visitors to the port, yielding substantial local spending on services needs.
- The cost and time efficient shipping/transport/logistics system would attract investments in import/export oriented manufacturing projects to the municipal area as well as to the adjoining areas, e.g. western and northern corridors.
  - Demand for industrial land within 100kms of the port would escalate strongly.
  - Some bulk and break-bulk cargo handling would inevitably be redirected to Richards Bay.
  - The inland container terminal at Cato Ridge would shorten turnaround times for long haul transport carriers travelling from and into the interior. The same would apply to rail transport.
  - There would be great pressure on tertiary educational and training institutions to provide the numbers of skilled people. Inevitably there would be an accelerated influx of aspirant job seekers as well specialist recruitments from external sources.
  - Many jobs would be created and unemployment would decline to 10% or less of the economically active population.
  - Long-Term Economic growth in real terms would reach around 7% pa, and possibly higher for certain periods during the development phase.
  - The population would increase well beyond the 4 million mark, possibly eventually reaching close to 5 million.

Land Implications:

- Dig-out at Bay-head (marshalling yards) 470 ha (excluded from redevelopment option)
- Redevelopment of Maydon Warf 124 ha
- Total Redevelopment 124 ha

Total redevelopment area 124 Ha (on the basis of Maydon Warf is included as a long re-development option (20-50 years).

The dig-out at bay-head will result in certain back of port activities to be relocated to other reclaimed land within the back of port area (Congella, Clairwood, Maydon Warf, Jacobs, Mobeni). It would also be necessary to relocate some industry to the north and west.
4.3.1 Jacobs/Mobeni/Clairwood/Congella
Redevelopment of these three sub-areas would be the same as under Scenario 1 and 2 except that the pressure for BoP and transport/logistics space would be more urgent and intensified. Thus the reclamation and the relocation programme would have to be speeded up.

4.3.2 DIA Land
Design of the dig-out port at Prospection would firstly need to minimise environmental impact, especially around the perimeter areas as well as at the mouth of the Isipingo River.

This container port should ideally focus primarily on servicing the Automotive Industry’s needs as well as the Petro-Chemical Industry and the planned Petronet pipeline terminal. However there would also be container-handling capacity for substantial volumes of general containerised cargo.

A trucking corridor/freight corridor from the N3 to both ports would be a key requirement.

The dig-out at DIA would also mean that not all 660 ha would be available for back of port and other industrial activity. In addition, this scenario would trigger more land to meet the new port expansion options.

4.3.3 Hammarsdale and Cato Ridge
Development of Hammarsdale would be the same as under Scenario 1 and 2.

The development possibilities for Cato Ridge listed under Scenario 1 and 2 would become essential. Given the massive increase of cargo handling in the port, timeframes for unlocking development in Cato Ridge and Hammarsdale as well as Shongweni, would depend on the implementation and activity of the dig-out port.

Planning and establishment of development areas to accommodate industrial, commercial and residential demand along the Cato Ridge/Pietermaritzburg corridor would become a priority.

4.3.4 Dube Trade Port and Back of Airport
Under this scenario eThekwini would become a very modern and efficient international gateway city with world class intermodal transport/logistics capability including substantial freight handling capacity. Air freight is critical to the development of this vision. The local industrial market would more than double the present level, expanding strongly along the western and northern corridors beyond the municipal limits. DTP and Back of Airport would become an essential contributor to this level of growth and would underpin the City’s status as a modern international trade gateway. Durban would become firmly entrenched as both a trade hub and a travel hub.

DTP and surrounds will be the same for scenario 3 as in scenarios 1 and 2 but timeframes would be reduced further with most (or a significant part) land taken-up in the short-term.
### Scenario 3 Matrix

<table>
<thead>
<tr>
<th>Land Implications</th>
<th>Total Quantum</th>
<th>Useable in Scenario 3</th>
<th>Reclaimed, Brownfields, Existing Greenfields</th>
<th>Key Issues</th>
<th>Future Use</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayhead</td>
<td>tbc</td>
<td>tbc</td>
<td>Reclaimed</td>
<td>Displacement and relocation of existing industry</td>
<td>• Dig-Out Port</td>
<td>Medium Term (10-20 yrs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Time frame can be longer 30-50 years</td>
</tr>
<tr>
<td>DIA</td>
<td>660 ha</td>
<td>Existing Greenfields</td>
<td>• Socio-Economic</td>
<td>• Dig-out Port</td>
<td>Medium Term (10-20 years)</td>
<td></td>
</tr>
<tr>
<td>Maydon Wharf</td>
<td>470 ha</td>
<td>124 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic</td>
<td>• Back of Port; Logistics; Automotive</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Clairwood</td>
<td>270.6 ha</td>
<td>270.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic; Infrastructure</td>
<td>• Back of Port; Logistics; Automotive</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mobeni</td>
<td>297.8 ha</td>
<td>297.8 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic; Infrastructure</td>
<td>• Back of Port; Logistics; Automotive</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Jacobs</td>
<td>371.3 ha</td>
<td>371.3 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic; Infrastructure</td>
<td>• Back of Port; Logistics; Automotive</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Congella</td>
<td>308.6 ha</td>
<td>308.6 ha</td>
<td>Reclaimed</td>
<td>• Socio-economic; Infrastructure</td>
<td>• Back of Port; Logistics; Automotive</td>
<td>Medium to long term 10-50 yrs</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>27 ha</td>
<td>27 ha</td>
<td>Existing Greenfields</td>
<td>• Utility Costs, Public realm, Security, Public Transport</td>
<td>• Textile and Foot Wear; Furniture; Light &amp; service industrial</td>
<td>Short - medium term 5-20 yrs</td>
</tr>
<tr>
<td>Location</td>
<td>Area 1</td>
<td>Area 2</td>
<td>Type</td>
<td>Characteristics</td>
<td>Uses</td>
<td>Development Timeframe</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>--------</td>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
| Cato Ridge        | 1120 ha| 1120 ha| Existing Greenfields | - Poor access  
- Poor infrastructure  
- Area covered to a large extent by DMOSS  
- Sensitivity of Umgeni river catchment  
- Landfill                                                                 | - Logistics Park/ Container terminal  
- Light Industrial  
- Noxious Industry  
- Warehousing  
- Chemicals  
- Holding area for trucks                                                                 | Short to Medium term (5-20 yrs) |
| Hammarsdale       | 370 ha | 650 ha | Brownfields      | - Crime and grime,  
- Industrial sectors seen a decline in productivity in recent years,  
- Removed from the N3  
- Issue of redevelopment rather than developing                                                                 | - Textiles and Clothing  
- Chemicals  
- Warehousing  
- Furniture and Bedding                                                                 | Short term (5-10 yrs) |
| Shongweni         | 150 ha | 150 ha | New Greenfields  | - No services  
- Not priority in industrial plan  
- Little labour force located nearby - thereby increasing journey times to work and traffic.                                                                 | - Truck stop  
- Light Industrial  
- Warehousing                                                                 | Short to medium term (5-20 years) |
| Dube Trade Port   | 436 ha | 436 ha | New Greenfields  | - Services  
- Access  
- Effects of much higher Industrial growth                                                                 | - Logistics  
- Transport  
- Light Industrial  
- Agrizone  
- Technical Parks                                                                 | Short to medium term (5-20 years) |
| Back of Airport   | 1224 ha| 1224 ha| New Greenfields  | - Very high Industrial and Transport/Logistics growth throughout eThekwini  
- Export emphasis                                                                 | - Transport / Logistics  
- Light Industry  
- Agri-Processing  
- Hi-Tech  
- ICT                                                                 | Short to medium term (5-20 years) |
Table 22: Scenario 3 Matrix
5.0 UNLOCKING POTENTIAL INDUSTRIAL LAND

5.1 Key Existing Zoned Areas that Require Unlocking
There are several areas within the municipality that have the required/necessary zoning for industrial activities, notwithstanding set constraints that inhibit the release or detracts from the demand. This will be unpacked, with clear action commitments in the next section.

In addition, large parts of land zoned are regard as environmentally sensitive areas that contribute to the provision of biodiversity, upper catchment protection and the provision of goods and services.

5.1.1 Special Focus on Cato Ridge and Mpumalanga
Cato Ridge and Mpumalanga are earmarked for industrial development within eThekwini Municipality. These have been identified as suitable locations due to:
- Vast amounts of vacant land
- Ideal location between the Port, Pietermaritzburg and even Gauteng
- The market interest in the area
- Its potential to act as support to port and the new airport
- The land already being zoned for industrial uses
- The major landowners in the area support the notion to expand industrial development.

There are several issues preventing the area from reaching its potential:
- Poor infrastructure in terms of access (roads and rail), little/no supply of water and sanitation, little/no supply of electricity etc.
- No detailed planning and land packaging has been put in place to encourage development in these areas
- The uncertainty of the future of the port makes it difficult to anticipate the scale and nature, and consequently requirements, of industrial development in Cato Ridge and Mpumalanga.

5.1.2 Initiatives to Unlock
Some very basic concepts with regards to developing industrial related activities are outlined below:
- The development and implementation of a detailed transport, road, rail and services plan will provide the potential industrial investor with a clear idea of what to expect, and importantly, by when.
- Create precinct plans which will serve as a development layout plan which will designate industrial activities to allocated land parcels
- Incentives where applicable

Further environmental assessments that provide an overall framework for individual EIA’s thus reducing uncertainty and time requirements for the assessment of EIA’s

5.1.3 Timeframe to Unlock
At the time of writing, there are certain studies being initiated with respect to Cato Ridge and that mentioned above; it is anticipated that a timeline of 5 years from the installation of infrastructure to the beginning of industrial land use occupation.

In total the Cato Ridge/Hammarsdale and Mpumalanga area has the potential to release 1797ha of land for industrial usage. Of this, part of the zoning is occupied and requires rejuvenation.

5.2 Re-organization of Key Industrial Sites

5.2.1 Problem Statement
The existing organisation of industrial activities is not necessarily the most effective and efficient and deriving maximum value from a limited supply of land. Clustering activities is a desirable approach, for industrial development, competiveness and sustainable practices for land use planning and development. However until now eThekwini Municipality have not had a consolidated approach to industrial
development. Through the course of this strategy, actions and steps will be identified which will address the future clustering of industrial activities.

5.2.2 Special Focus on Back of Port

The back of port is a critical location for industrial activities in the city. It caters to the logistics, shipping, ship building and other marine port related industrial activities. There is therefore a huge opportunity to reorganise and consolidate the industrial activities in this area. This may require relocating some industrial activities in order to make way for others that would benefit more from the location. Should this be the case, strong partnerships would be required over a long period of time.

Should the preferred scenario of the “dig-out port” be taken, this would provide a “fresh start” to developing the industrial sector in this area.

Should a dig-out port be the preferred scenario, existing industrial activity will need to be relocated to areas largely in close proximity to the port.

Should both the dig out ports materialise the demand on land and reorganization of industrial activity in the prime back of port zone becomes a necessity.

It is further noted, at current volumes without a dig-out port in the immediate future, re-organization of the back of port zone still remains a priority.

Assuming Scenario 3 takes place, the Back of Port has the opportunity to release 1818ha of land.

5.2.3 Initiatives to Unlock

Challenges to the Strategy

- Lack of readily available data
  - There is no single database on Industrial land
  - Readily available information regarding zoning rights, vacancy rates, the efficiency of land use, the redundancy of buildings and ownership is not accessible.
  - Existing databases that are not complimentary or compatible with the City’s GIS system.
- Supply and demand of land
  - The monitoring of the supply and demand of industrial land is done in a very ad hoc manner.
  - The City, outside of providing zoning rights, has little effective control over land owners who decide when to release land.
  - Zoned land may be undeveloped, but is often unavailable for development.
  - Major land owners leverage their land sales to their advantage by providing a “trickle” of industrial land onto the market in order to create premium land values on their landholdings.
  - Topography prohibits industrial development
  - The most strategically placed area for export and logistics orientated manufacturing remains the South Durban Basin where land is at an absolute premium and social justice issues are rife. New areas that can be opened up are invariably on the periphery of the City, in upper catchment areas and away from where industry wishes to locate.
  - The tightening-up of environmental legislation makes the introduction of new general industrial land uses more difficult to acquire.
- Limited capacity of bulk services
- Reclamation, Brownfields and Greenfield development
- Reclamation of land and Brownfield redevelopment is more complex, often involves a number of land owners, more costly, and as a result developers favour Greenfield redevelopment to ensure higher returns. It is areas for reclaim and brownfield areas that are however the most strategically located parcels of land that require redevelopment.
Existing schemes are quite explicit in terms of what types of industry would be permitted in an area, and do not manage activity based on performance and clustering of activity in particular locations.

- Decisions beyond the control of the local municipality
  - The role of external agents.
  - Transnet who plans logistic infrastructure at a National level. Their priorities don’t necessarily meet those of the City.
  - Funds for infrastructure, budgets and maintenance sit at either National or Provincial levels of government.

5.3 New Opportunity Areas to Unlock

5.3.1 Preferred Industrial Use of New Opportunity Areas

With vast tranches of undeveloped and available land, eThekwini has the means of delivering industrial areas that are planned for industrial usage at the outset.

These areas would therefore be greenfields developments which provide a clean sheet with which to work with.

Once we have identified which industries to target, we will be able to have a clearer understanding of what the spatial and infrastructural requirements would be necessary to sustain industrial precincts.

Dube Tradeport will create a significant demand for industrial activities in the areas surrounding it. It is possible that local and international investors will express interest and therefore these opportunities can be maximised by planning and unlocking these precincts.

5.3.2 Special Focus on North, DTP and Cornubia

Given the significant role the northern eThekwini area will have on the city in the future, there is an enormous opportunity to package this land by developing a cohesive and rational approach.

As established the land surrounding airport is critical to growing existing industrial activities and attracting new industrial activities in eThekwini. Furthermore, there is an urgency to capture international trade as the city faces competition from other South African municipalities. However, the city has the advantage of possessing the most convenient locations given its proximity to the international terminal.

Finally, it must be acknowledged that there is currently existing Provincial and Private Sector response to the northern area of Ethekwini and therefore there is the opportunity to capitalise and align industrial strategies for the area with other planning initiatives.

5.3.3 Initiatives to Unlock

The most effective approach to unlocking the land surrounding the airport is to develop packages which will address all necessary actions for developing industrial activities. These packages would include addressing incentives, developing master plans, developing a business support system, identifying necessary infrastructural requirements and their timelines for delivery, securing finances, undertaking necessary environmental, planning and design requirements to facilitate implementation.

5.3.4 Timeframe to Unlock

It is anticipated that total occupation of the land identified will occur by 2060 - 2080 (considering the economic crises we currently in). This will coincide with the completion of the second runway at King Shaka International Airport.

The North area has the potential to release 1660ha of land for potential industrial activities.

6.0 WAY FORWARD
In order to continue to drive the Industrial Spatial Strategy, the following is required:

Agreement on both the Industrial Strategy and this Industrial Spatial Strategy.

To further advance and conclude of Phase 2 and Phase 3, in summary this will include:

- The execution of questionnaires/interviews with industrial developers and consultants. This will provide an understanding of:
  - The amounts of land necessary for industrial growth
  - The preferred location of new sites
  - What services will be required
  - What industries are potentially likely to grow
  - The benefits to the community (i.e. jobs, training etc)
- Develop a spatial plan, which arranges industrial activities in the city.
- Formulate a local government steering committee
- Formulate database of existing industrial zoned land, and their existing services
- Identify the appropriate locations for certain sectors and set mechanisms in place to accelerate planning applications.
- Begin to package land for development. Undertake detailed guide plans which will address industrial precinct layouts, services and road infrastructure.
- Testing infrastructure needs and industrial demand for key industrial sites (existing greenfields and new greenfields).

Advancing and concluding Phase 3: Land Packaging and Implementation Strategy, scheduled for approval in 2010.
The table below summarizes the phases of the Industrial Spatial Strategy:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Time Frame for Council Consideration</th>
<th>Responsible Units</th>
<th>Supporting Unit/s</th>
<th>Key Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategic Assessment and Future Direction</td>
<td>April 2009</td>
<td>DPME</td>
<td>EDU, SPU, DIPA</td>
<td>Key Private Land Owners; Provincial Planning; DTP; Big Business, Chamber of Business</td>
</tr>
<tr>
<td>2</td>
<td>Testing and Finalizing Key Industrial Areas Piloting: Key Industrial Areas</td>
<td>September/October 2009 - December 2009 - February 2010</td>
<td>DPME</td>
<td>EDU, DIPA, SPU, WWS, ETA</td>
<td>Key Private Land Owners; Provincial Planning; DTP; Big Business, Chamber of Business</td>
</tr>
<tr>
<td>3</td>
<td>Land Packing and Implementation Strategy</td>
<td>March - June 2010</td>
<td>DPME; EDU; DIPA; SPU</td>
<td>ALL</td>
<td>Key Private Land Owners; Provincial Planning; DTP; Big Business, Chamber of Business</td>
</tr>
</tbody>
</table>

**Table 23:** Industrial Spatial Strategy Phasing
7.0 CONCLUSION

The Industrial Spatial Strategy will provide the foundation for industrial growth within eThekwini Municipality. It will provide a marketable product and a city identity which will attract private investors, locally and possible internationally. However, extensive infrastructure is required and land packaged in order to make it accessible to industrial sector investors.

Issues regarding unavailable, inaccessible land and the decline in industrial growth are addressed in the strategy. Various steps that will achieve maximum industrial growth have been discussed in this document.

The strategy is approached in phases that will guide municipal and political actions in the future.
ANNEXURE A: THREE LONG-TERM SCENARIOS

SCENARIO 1 — Port Expansion capped at 4.0m to 4.6m TEUs

This scenario envisages that the country’s port linkages to Gauteng will be more evenly distributed between Richards Bay, Durban and Ngqura, with Maputo also coming into the equation. Focus would be on improving productivity within existing port structures, with some modernisation of Maydon Wharf. Ship Building would be maintained but its market focus would shift to making tugs and other coastal vessels used around the Southern and Central African coasts. Bulk and break-bulk cargo handling capacity would also be maximised by productivity improvements within existing port structures.

Whilst the City’s economic growth would be strongly oriented towards tourism, conferencing and sport, some industrial growth would take place. Import/Export oriented industries would be restricted in their throughput by the port’s cargo handling capacity. Some back-of port improvements would take place in Jacobs/Mobeni as well as on the DIA land. Industrial expansion would focus predominantly on medium sized companies targeting the domestic market with limited export intensions, as well as small companies targeting specific niches in the local eThekwini and KZN markets. Road congestion around the port would be addressed as far as possible, with a medium sized truck-stop facility somewhere in the Bayhead Marshalling Yards area. New Industrial land would become available on the DIA site, Hammarsdale and Cato Ridge, with one or two small locations on the northern side towards the new Dube Trade Port.

Export growth would be focused more on Dube Trade Port than through the existing maritime port. Under this scenario it would also be feasible to develop a second airport on the present DIA site to cater for a selection of business jets and medium sized aircraft doing charters etc. A cost-benefit analysis of an airport vs. industrial/logistics development would indicate the most appropriate choice.

Economic effects of Scenario 1:

- Constraints on cargo handling capacity would curtail export expansion.
- Probability that industry dependent on import/export (e.g. Automotive, Pulp & Paper, Wood Products, Clothing & Footwear, Metal Products, etc.) would gradually reduce their Durban operations or relocate completely.
- Substantial bulk and break-bulk cargo would be transferred to Richards Bay and other ports → loss of local jobs.
- Shipbuilding - some growth plus change of target markets to central and southern African port needs.
- Growth emphasis would change towards servicing local and domestic SA markets and developing Dube Trade Port capability.
- Emphasis on development of tourism, conferences and sport would continue (not dependent on industrial growth).
- Durban would lose status as an international trade gateway and hub port.
- Unemployment unlikely to decline below 25% of economically active.
- Economic growth rate ± 4.0% pa.
SCENARIO 2 — Limited Port Expansion to 6.5m to 8.0m TEUs

Under this scenario Port expansion is limited to the existing Port area and Bayhead dig-out. Ultimate container handling capacity is pegged at maximum of 7.0 million TEUs. Maydon Wharf is modernised with road widening and redevelopment of selected buildings. Road congestion in the Bayhead is relieved to some extent by addition of new road and access infrastructure. A system similar to the Pier Pass system is introduced to create a more even 24-hour spread of truck access to the port container terminals. The industrial areas of Congella, Clairwood, Jacobs and Mobeni are gradually redeveloped to accommodate back-of-port needs. Many of the larger manufacturing plants in these townships as well as the Clairwood Clothing cluster are left undisturbed. The DIA land is retained intact and is ultimately redeveloped for a combination of industry and back-of-port operations. Hammarsdale is upgraded to attract more manufacturing companies and a new industrial township for heavy industry is established at Cato Ridge.

A concerted effort to maximise utilisation of Dube Trade Port’s capability focuses planning on development of industrial areas (light/medium) in the northern area and beyond Tongaat in order to achieve this. Existing industrial townships in the north (Mt. Edgecombe, Phoenix, Canelands, River Horse Valley, Tongaat/Maidstone) would all experience some upgrading and/or redevelopment. The approximately 200 hectares of fairly flat land at Ottawa would be a potential new development.

A key question is which entry channel should be used for the Bayhead dig-out - via the sandbank or direct through the Island View area? This also raises the question of the feasibility of relocating the Tank farms at Island View to the DIA site, bearing in mind the lengthy land leases in place at Island View.

Economic effects of Scenario 2:

- Import/Export industrial capacity would continue to grow, especially from existing heavy and medium sized industry.
- Improvements in the transport logistics capability would attract new exporters, particularly medium sized companies.
- Traffic congestion in Bayhead area would be chaotic during the Port’s Bayhead dig-out expansion phase and would require substantial infrastructure spending to solve the problem.
- DIA land would be quickly taken up by industry with a strong emphasis on Automotive, Petroleum and possibly Metals Engineering and Food & Beverages.
- Hammarsdale would grow to full spatial capacity with strong emphasis on Textiles, Clothing and Footwear.
- Cato Ridge/ Harrison Flats would be developed as a new heavy industry township.
- Dube Trade Port will facilitate development of new fresh produce export market with spin-off effects to all KZN farming areas.
- eThekwini Population would grow towards 4 million people.
- Economic growth rate would be between 5% and 6% per annum.
- Unemployment would decline to between 15% and 20% of economically active population.
**SCENARIO 3 — Port Cargo capacity maximised at between 10m and 15m TEUs**

Focus would be on maximising Durban’s potential as an international gateway for trade and tourism. Port cargo handling capacity would be trebled over approximately 20 years to well above 10 million TEUs per annum by fully developing both the Bayhead and DIA dig-out options. Shipbuilding would be discontinued and only an adequate ship repair facility would be retained. The Bayhead area would undergo substantial redesign, with a totally new traffic layout in order to cope with the substantial growth in cargo volumes. As under Scenario 2, a system similar to the Pier Pass system would be introduced to create a more even 24-hour spread of truck access to the container terminals. Back-of Port operations would dominate the industrial areas of Congella, Clairwood, Jacobs and Mobeni, which would undergo significant redevelopment in order to achieve international standards of efficiency and cost-competitiveness by the transport, logistics and marine services sectors. As a result there would be some relocation of medium and heavy industry out of the area.

The new dig-out port on the DIA land would be a state-of-the-art container and bulk liquid port with special focus on the Automotive and Petroleum industries. Whilst many other containerised products would be handled through this second port, the Automotive and Petroleum industries would receive preference in terms of infrastructure. Berth allocation would be a mix of dedicated petroleum and automotive berths, as well as a range of general cargo berths. Special infrastructure for the automotive sector would include an Automotive Supplier Park and a new Vehicle Terminal. Sections of the container handling areas would be dedicated to the automotive sector.

The planned new Petronet Oil Terminal at the start of the new oil pipeline to Gauteng would be located alongside the dig-out port and there would be substantial redesign in the pipeline network. It may also be possible to transfer some of the bulk liquid storage facilities from Island View to the new oil terminal facility.

In order to accommodate the substantially increased traffic volumes brought about by the high growth in cargo volumes, a total redesign of traffic corridors and entry/exit points from the city will be required. The Municipal Transport Authority’s new Integrated Transport Plan already deals with some of the many issues, which will arise.

Industrial development will be constrained by shortage of suitable land within the EMA and development will inevitably overflow along the western corridor towards Pietermaritzburg, as well as northwards towards Stanger, Mandini and Isithobhi. Hammarsdale, Cato Ridge and Camperdown will be prime development focus areas. There would be a strong case for the establishment of a modern inland container terminal with overnight truckstop and accommodation for trucking personnel at Cato Ridge. Such a system would require a hotshot train/truck service between Cato Ridge and the two port operations.

Economic effects of Scenario 3:

- This represents an ambitious scenario, which has the potential for high economic growth with a substantial lowering of unemployment and an opportunity to seriously address local poverty.
- As some of the projects would require substantial funding, the plan would unfold over approximately 15 to 20 years.
- Durban would unquestionably become the major gateway for trade into Southern Africa and would be a significant hub port.
- New maxi container ships would be regular visitors to the port, yielding substantial local spending on services needs.
- The cost and time efficient shipping/transport/logistics system would attract investments in import/export oriented manufacturing projects to the municipal area as well as to the adjoining areas, e.g. western and northern corridors.
- Demand for industrial land within 100kms of the port would escalate strongly.
- Some bulk and break-bulk cargo handling would inevitably be redirected to Richards Bay.
The inland container terminal at Cato Ridge would shorten turnaround times for long haul transport carriers travelling from and into the interior. The same would apply to rail transport.

There would be great pressure on tertiary educational and training institutions to provide the numbers of skilled people. Inevitably there would be an accelerated influx of aspirant job seekers as well specialist recruitments from external sources.

Many jobs would be created and unemployment would decline to 10% or less of the economically active population.

Economic growth in real terms would reach around 7% pa, and possibly higher for certain periods during the development phase.
Key sectors are defined as those which are essential to satisfy local needs, as well as those which over time have established themselves as being substantial in terms of overall investment in the city. Of particular importance to ensure continued growth and improved standards of living at all income levels, is to focus on those major sectors, which exhibit

- strong growth,
- export market potential,
- good employment capacity.

Research has shown that the following sectors are firmly established in the eThekwini Municipal Area.

<table>
<thead>
<tr>
<th>Established Clusters Significant Sectors</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>Electrical Equipment &amp; Components</td>
</tr>
<tr>
<td>Building Products</td>
<td>Food &amp; Beverages</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Housewares &amp; Appliances</td>
</tr>
<tr>
<td>Furniture &amp; Bedding</td>
<td>Machinery</td>
</tr>
<tr>
<td>Marine Services, Shipping &amp; Ship Building</td>
<td>Metal Products</td>
</tr>
<tr>
<td>Textiles, Clothing &amp; Footwear</td>
<td>Pulp &amp; Paper</td>
</tr>
<tr>
<td>Transport &amp; Logistics</td>
<td>Paper Converting &amp; Packaging</td>
</tr>
<tr>
<td></td>
<td>Tents, Awnings &amp; Canopies</td>
</tr>
</tbody>
</table>

Of the above, the following sectors are experiencing difficult international market forces which are severely restricting their ability to grow, viz. Textiles, Clothing & Footwear and Ship Building. All are important to the City and will need special support if they are to prosper in the long-term. More discussion on the above sectors follows, together with some growth trend analysis.

1.1 **Strategic Analysis and Selection by Sector**

In the three tables below we have attempted to rank the above sectors in terms of their strategic importance to the eThekwini economy.
<table>
<thead>
<tr>
<th>Category</th>
<th>1 Pt</th>
<th>2 Pts</th>
<th>3 pts</th>
<th>4 Pts</th>
<th>5pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Essential to local population</td>
<td>Not essential</td>
<td>Slightly essential</td>
<td>Fairly essential</td>
<td>Reasonably essential</td>
<td>Absolutely essential</td>
</tr>
<tr>
<td>2. Multiplier effect</td>
<td>&lt; 0.5</td>
<td>0.5 - 0.9</td>
<td>1.0 - 1.4</td>
<td>1.5 - 1.9</td>
<td>2+</td>
</tr>
<tr>
<td>3. Growth Rate (ave.pa)</td>
<td>Declining</td>
<td>0.1 to 3.0</td>
<td>3.1 to 7.0</td>
<td>7.1 to 10.0</td>
<td>10+</td>
</tr>
<tr>
<td>4. Employment</td>
<td>&lt; 2500</td>
<td>2500 to 4999</td>
<td>5000 to 9999</td>
<td>10000 to 19999</td>
<td>20 000+</td>
</tr>
<tr>
<td>5. Export Potential (% of Output)</td>
<td>&gt; 2.5%</td>
<td>2.5% to 4.9%</td>
<td>5% to 9.9%</td>
<td>10% to 20%</td>
<td>20% +</td>
</tr>
<tr>
<td>6. Clustering</td>
<td>Undeveloped</td>
<td>Slightly Developed</td>
<td>Fairly Developed</td>
<td>Developed</td>
<td>Well developed</td>
</tr>
<tr>
<td>7. National Importance</td>
<td>Not important</td>
<td>Slight attention</td>
<td>Fairly High</td>
<td>High</td>
<td>Priority Sector</td>
</tr>
<tr>
<td>8. Life Cycle</td>
<td>Declining</td>
<td>Peaking</td>
<td>Mature</td>
<td>Medium Growth Phase</td>
<td>High Growth Phase</td>
</tr>
<tr>
<td>9. International Competitiveness</td>
<td>Uncompetitive</td>
<td>Partly Competitive</td>
<td>Fairly Competitive</td>
<td>Competitive</td>
<td>Very Competitive</td>
</tr>
</tbody>
</table>

Table 1: Industrial Sector Selection Criteria
<table>
<thead>
<tr>
<th>Industrial Sector</th>
<th>No. of Firms</th>
<th>Employment Estimate</th>
<th>Ave. per Firm</th>
<th>Criteria Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>86</td>
<td>17,200 (Toyota 9000)</td>
<td>200</td>
<td>4</td>
</tr>
<tr>
<td>Building Products</td>
<td>280</td>
<td>5,600</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Chemicals</td>
<td>208</td>
<td>10,400</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Electrical Equipment &amp; Components</td>
<td>22</td>
<td>660</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>48</td>
<td>5,280</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>Furniture &amp; Bedding</td>
<td>215</td>
<td>3,020</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Housewares &amp; Appliances</td>
<td>14</td>
<td>700</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>Machinery</td>
<td>8</td>
<td>80</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Marine Services, Shipping &amp; Ship Building</td>
<td>565</td>
<td>18,645</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>Metal Products</td>
<td>22</td>
<td>550</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Paper Converting &amp; Packaging</td>
<td>40</td>
<td>2,080</td>
<td>52</td>
<td>1</td>
</tr>
<tr>
<td>Pulp &amp; Paper</td>
<td>4</td>
<td>1,200</td>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>Tents, Awnings &amp; Canopies</td>
<td>7</td>
<td>210</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Textiles, Clothing &amp; Footwear</td>
<td>298</td>
<td>23,840</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>Transport, Logistics &amp; Shipping</td>
<td>1398</td>
<td>41,940</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3215</td>
<td>131,405</td>
<td>41</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2: Sector Employment Estimate for ETHEKWINI 2007
<table>
<thead>
<tr>
<th>Sector</th>
<th>Criteria Points</th>
<th>Total Points</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cr 1</td>
<td>Cr 2</td>
<td>Cr 3</td>
</tr>
<tr>
<td>Automotive</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Transport &amp; Logistics</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Marine Services, Shipping &amp; Ship Building</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Furniture &amp; Bedding</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Building Products</td>
<td>5</td>
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<td>Chemicals</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Textiles, Clothing &amp; Footwear</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Pulp &amp; Paper</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Electrical Equipment &amp; Components</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Paper Converting &amp; Packaging</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Housewares &amp; Appliances</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Metal Products</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Tents, Awnings &amp; Canopies</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Machinery</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3: Sector Rating and Ranking
The criteria used for evaluating the strategic importance of the different industry sectors are inevitably somewhat subjective, but every effort has been made to provide a fair comparison of what are considered to be the most important criteria.

The top seven sectors which score 30 or more points, are the major contributors from an overall strategic point of view. Textiles, Clothing and Footwear should by rights also be in the top category as they are major employers. However they lose points because of recent declining growth and lack of international competitiveness. This points strongly towards urgent priority debate for both local and national government intervention.

The lower eight sectors are all strategically important to the local economy, but do not match the top seven in terms of all-round contribution, and this is reflected in their employment numbers (T C & F and Food & Bev. excepted).

The Automotive Sector scores top points with 40 out of a possible 45, this by virtue of rating very high in all 9 criteria. Its greatest value to eThekwini is its high multiplier effect throughout the local economy. During 2008 Toyota expects to manufacture around 227 000 vehicles of which 147 000 will be exported. Another 80 000 will be imported. In addition to Toyota, substantial numbers of new vehicle imports and exports for and from Gauteng pass through Durban port. There are also significant numbers of used vehicles being imported and exported. In addition, substantial quantities of Automotive Components, mostly containerised, are imported and exported. Toyota handles over 700 containers per month between their plant at Prospecton and the Port.

The needs of the Automotive Industry have placed heavy demands on the Shipping, Transport and Logistics sectors in recent years, and indications are that cargo volumes from the automotive sector will continue to increase in the foreseeable future. South Africa has been very successful in achieving world class manufacturing quality in automotive components and vehicles and has benefited tremendously from the Motor Industry Development Programme (MIDP), which has been confirmed by the Department of Trade and Industry through to 2012.

The Transport and Logistics Sector, together with Marine Services and Shipping are collectively a major component of the local economy, together providing over 60 000 jobs. It is also a high growth area with cargo volumes averaging growth of well above 10% pa for the last five years. The industry has developed somewhat haphazardly over the years with little co-ordinated planning between the sub-sectors or for the industry as a whole. The result is that there are many inefficiencies and bottlenecks in the system, which must be sorted out if Durban Port is to provide a world class cost competitive service. This aspect is discussed in more detail later on in this document.

Furniture and Bedding and Building Products are naturally of prime importance to the local economy as their role is to fulfil basic living requirements, whereas additional sales to national and export markets are dependent on their own innovation and desire to grow beyond the local market. They presently score medium points against these external criteria and there is probably room for further development. It is difficult to understand why for instance, with two of the world’s largest and most modern Aluminium smelters in the Province, the local building industry is not adding more value in this area.

The Chemical Sector has grown into a very important local industrial sector, started many years ago by the development of Umbogintwini by AE & CI. In addition two of SA’s largest Petroleum Refineries are located in the South Durban Basin. The two refineries have the potential to produce upstream petro-chemical feedstocks from by-products via an Ethylene Cracker and other processes to supply a local intermediate petro-chemical industry, but there are difficulties attached to such developments. Ideally such plants need to be located close to the refineries for logistics reasons and the only suitable land is the present airport land whose future has not yet been finalised. Secondly such plants produce pollutive emissions, which would be a problem as the location is close to residential areas. Should such developments find favour with the local authorities in the foreseeable
future, much more stringent and perhaps costly management of the environmental impacts will be necessary from both the firms and the City. Petro-chemical plants can also be quite spatially demanding because of all the underground support piping which is necessary.

There are several other important sub-sectors to the Chemical sector, which collectively contribute to its overall local importance. There are approximately 30 medium-sized plants serving a wide range of markets and especially Food, Beverages, Automotive, Paint, Textiles, Cosmetics, Pharmaceuticals etc. Both the Paint Industry, which uses mostly basic non-organic chemicals and the Plastics Industry, which is a downstream component of the petro-chemical value-chain, are well developed. Finally there are over 200 small mixer/blender operations supplying specialised niches, such as cosmetics, toiletries, detergents, etc., often direct to the retail market.

Although chemical processes tend to be capital intensive, the local industry by virtue of its size, is a significant employer of over 10 000 people and also has a fairly good multiplier effect throughout the municipal area.

**Food and Beverages** are priority sectors in any major city and Durban also has the advantage of being in a province with a strong agricultural economy. The industry tends to be geared towards the local and provincial economies and can be regarded as mature in terms of its growth rate. The industry is significant with over 5000 employees. The opening of Dube Trade Port will add a new dimension to the local and regional food industry in that a wide range of export opportunities for processed horticultural and other fresh produce will be made possible.

### 1.2 Sector Growth Trends

The following graphs of National Production Output of some of the key sectors are informative in terms of their current growth rates and product cycles.

**Automotive** - SA has reduced the number of models manufactured locally in order to increase volume base per model and be able to produce for export. Exports are offset by a similar number of imports, which allows local consumers a wide choice. This is all facilitated via the MIDP.
Chemicals - Strong growth in Non-Petroleum chemicals. Petroleum sector has suffered from the fire at Engen in 2007 and general de-bottlenecking in order to meet the clean-fuels programme. There has also been some bottlenecks at Sasol’s new flexi-cracker, which has affected their synfuels output. The production trend is expected to resume an upward direction once these issues have been fully addressed. Additional refinery capacity is also required nationally.

Textiles, Clothing, Leather and Footwear - Declining growth trend clearly evident. More detailed discussion later in study.

Furniture - Note high growth over last five years, due mainly to rapidly increasing domestic demand. South Africa has also had success with exports of Pine furniture.
Food and Beverages - Steady growth, accelerating since 2000.

Wood & Paper Products - Wood Products tend to be linked mainly to the Building Industry including roofing structures, flooring, and chipboard for shelving and cupboard making. Steady market growth is evident. Paper products, derived from Wood Pulp have a high export component as well as a steadily growing local market. Both categories are essential to the local economy.

Average Annual Growth Rates:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Production</td>
<td>+1.2%</td>
<td>+5.0%</td>
<td>+10.0%</td>
</tr>
<tr>
<td>Domestic Sales</td>
<td>-0.4%</td>
<td>+10.8%</td>
<td>+4.5%</td>
</tr>
<tr>
<td>Exports</td>
<td>+46.5%</td>
<td>+9.1%</td>
<td>+23.4%</td>
</tr>
<tr>
<td>Imports</td>
<td>+23.8%</td>
<td>+27.4%</td>
<td>+4.3%</td>
</tr>
</tbody>
</table>

Table 4: Automotive Sector

The foregoing analysis and assessment tends to confirm the list of industry sectors highlighted on Page 4 at the beginning of Chapter 2 as being the most important to eThekwini Municipal Area from a Strategic point of view.
1.3 Spatial Estimates and Forecasts by Sector

Whilst comprehensive details regarding the extent of spatial development in the various industrial townships is on record and has been analysed, details by Industrial Sector are not available. It is very important to get to the sector level of detail in order to provide a basis for forecasting future spatial needs for the municipal area. Ideally this information should also be by manufacturing sector as Manufacturing occupies two-thirds of industrial space. The municipality must know how much additional industrial land it must plan for in order to accommodate expected industrial growth.

**Methodology:** In order to achieve the above objectives it has been necessary to rely on informed estimates and a series of growth assumptions. Firstly an estimate of the average land site size required to accommodate each type of industrial activity, was applied and multiplied by the number of firms in that category. The results were then adjusted by a factor so as to equate with the known total land taken up in each industrial township. From that it was possible to estimate the total land take-up by each of the industrial sector groupings. As a further step the same procedure was used to estimate the spatial take-up and forecast requirements for each of the main manufacturing sectors. Changing the growth assumptions can vary forecasts in each case, and this is entirely at the discretion of the reader or researcher. It is believed that the base data provides a realistic view of the status quo. Details of spatial estimates and forecasts are shown in Tables 7 to 11 below.

<table>
<thead>
<tr>
<th>Sector</th>
<th>No. of Firms</th>
<th>Ave. Ha.</th>
<th>Total Ha</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>1087</td>
<td>3.23</td>
<td>3512</td>
<td>66.1</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>996</td>
<td>0.73</td>
<td>733</td>
<td>13.8</td>
</tr>
<tr>
<td>Services Financial</td>
<td>66</td>
<td>0.32</td>
<td>21</td>
<td>0.4</td>
</tr>
<tr>
<td>Services Other</td>
<td>258</td>
<td>0.46</td>
<td>119</td>
<td>2.2</td>
</tr>
<tr>
<td>Retail/Wholesale</td>
<td>185</td>
<td>0.17</td>
<td>31</td>
<td>0.6</td>
</tr>
<tr>
<td>Transport/Logistics</td>
<td>608</td>
<td>1.32</td>
<td>803</td>
<td>15.1</td>
</tr>
<tr>
<td>Other</td>
<td>327</td>
<td>0.29</td>
<td>96</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3527</strong></td>
<td><strong>1.51</strong></td>
<td><strong>5315</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Table 6: Industrial Sector Spatial Estimates (Hectares)**

By utilising 66.1% of industrial land, it is clear that Manufacturing is the major tenant. Transport/Logistics (15.1%) and Light Industrial (13.8%) are also important industrial land occupiers.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Growth rate assumption</th>
<th>2008 (Ha)</th>
<th>2012 (Ha)</th>
<th>2016 (Ha)</th>
<th>2020 (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>4%</td>
<td>3512</td>
<td>4109</td>
<td>4806</td>
<td>5612</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>5%</td>
<td>733</td>
<td>891</td>
<td>1083</td>
<td>1316</td>
</tr>
<tr>
<td>Services Financial</td>
<td>7%</td>
<td>21</td>
<td>28</td>
<td>36</td>
<td>47</td>
</tr>
<tr>
<td>Services Other</td>
<td>7%</td>
<td>119</td>
<td>156</td>
<td>204</td>
<td>268</td>
</tr>
<tr>
<td>Retail/Wholesale</td>
<td>5%</td>
<td>31</td>
<td>38</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>Transport/Logistics</td>
<td>8%</td>
<td>803</td>
<td>1092</td>
<td>1486</td>
<td>2022</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>96</td>
<td>117</td>
<td>142</td>
<td>172</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>5315</strong></td>
<td><strong>6431</strong></td>
<td><strong>7803</strong></td>
<td><strong>9493</strong></td>
</tr>
</tbody>
</table>

**Table 7: Industrial Sector Spatial Forecasts**

4 yr. Spatial increases

<table>
<thead>
<tr>
<th></th>
<th>Growth rate assumption</th>
<th>2008 (Ha)</th>
<th>2012 (Ha)</th>
<th>2016 (Ha)</th>
<th>2020 (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>1116</strong></td>
<td><strong>1372</strong></td>
<td><strong>1690</strong></td>
<td></td>
</tr>
</tbody>
</table>
Growth rate assumptions in Table 8 are based on a combination of actual rates achieved in the recent past, and expected future trends, provided that the economy maintains its strong growth rate. The high economic development potential for Southern Africa provides the main argument underpinning sustained strong growth. Business Cycle movements have not been taken into account, as the long-term trend is the key determinant when forecasting at this level. Downside factors which could upset these assumptions are firstly, developments in the internal political situation, particularly if there is violence or other factors causing loss of investor confidence, and secondly, unexpected international factors such as regional wars, particularly in the Middle East, or a serious further decline of financial and commodity market situations, causing a full and protracted global recession.

1.3.2 Manufacturing Sectors

<table>
<thead>
<tr>
<th>Manufacturing Sector</th>
<th>No. of Firms</th>
<th>Ave. Ha</th>
<th>Total Ha</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive - Components</td>
<td>83</td>
<td>4.36</td>
<td>361.88</td>
<td>10.3</td>
</tr>
<tr>
<td>Automotive - Vehicles</td>
<td>3</td>
<td>53.05</td>
<td>159.14</td>
<td>4.5</td>
</tr>
<tr>
<td>Building Products</td>
<td>57</td>
<td>3.63</td>
<td>207.10</td>
<td>5.9</td>
</tr>
<tr>
<td>Chemicals - Large</td>
<td>6</td>
<td>29.07</td>
<td>174.40</td>
<td>5.0</td>
</tr>
<tr>
<td>Chemicals - Medium</td>
<td>70</td>
<td>7.27</td>
<td>508.67</td>
<td>14.5</td>
</tr>
<tr>
<td>Chemicals - Small</td>
<td>132</td>
<td>1.45</td>
<td>191.84</td>
<td>5.5</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>48</td>
<td>2.91</td>
<td>139.52</td>
<td>4.0</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Large</td>
<td>73</td>
<td>5.09</td>
<td>371.33</td>
<td>10.6</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Small</td>
<td>10</td>
<td>1.45</td>
<td>14.53</td>
<td>0.4</td>
</tr>
<tr>
<td>Packaging &amp; Paper Converting</td>
<td>40</td>
<td>3.63</td>
<td>145.33</td>
<td>4.1</td>
</tr>
<tr>
<td>Plastics</td>
<td>141</td>
<td>2.18</td>
<td>307.38</td>
<td>8.8</td>
</tr>
<tr>
<td>TCFL - Large</td>
<td>27</td>
<td>10.90</td>
<td>294.30</td>
<td>8.4</td>
</tr>
<tr>
<td>TCFL - Medium</td>
<td>120</td>
<td>2.18</td>
<td>261.60</td>
<td>7.4</td>
</tr>
<tr>
<td>TCFL - Small</td>
<td>138</td>
<td>0.73</td>
<td>100.28</td>
<td>2.9</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>126</td>
<td>2.18</td>
<td>274.68</td>
<td>7.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1087</strong></td>
<td><strong>3.23</strong></td>
<td><strong>3512.00</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 8: Manufacturing Spatial Estimates (Hectares)

The manufacturing sector provides an interesting picture when viewed in detail. Automotive Vehicles are a special case in that a vehicle manufacturer or assembler requires substantial space. Toyota is a case in point, currently occupying well over 100 hectares amongst its various operations. It is inevitable as the Automotive Industry Programme unfolds, that other vehicle manufacturers will make representations for a suitable site in the EMA, and this is likely to be around 20 to 30 hectares as a starting point. Overall, the Automotive Sector (14.8%) and the Chemical Sector (25%) are the biggest manufacturing sectors in terms of spatial take-up. However, as can be seen from Table 9, there are several sectors already occupying substantial land areas. In total it is estimated that the
manufacturing sector occupies approximately 3500 hectares, which is 66% of the developed industrial land in the EMA.

<table>
<thead>
<tr>
<th>Manufacturing Sector</th>
<th>2009 to 2012 (%)</th>
<th>2013 to 2016 (%)</th>
<th>2017 to 2020 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive - Components</td>
<td>10.00</td>
<td>7.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Automotive - Vehicles</td>
<td>10.00</td>
<td>7.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Building Products</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Chemicals - Large</td>
<td>2.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Chemicals - Medium</td>
<td>3.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Chemicals - Small</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Food &amp; Beverages</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Large</td>
<td>2.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Furniture &amp; Bedding - Small</td>
<td>2.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Packaging &amp; Paper Converting</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Plastics</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>TCFL - Large</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TCFL - Medium</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>TCFL - Small</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>2.00</td>
<td>4.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Weighted Ave. All Sectors</td>
<td>3.62</td>
<td>4.03</td>
<td>4.30</td>
</tr>
</tbody>
</table>

Table 9: Average Annual Growth Estimates - %

Some allowance has been included in the above growth estimates for business cycle conditions. Individual assumptions have been rationalised as follows:

**Automotive** - Continued focus on expanding export capacity and capability through the revised MIDP in the form of the new Automotive Industrial Programme (AIP), which takes effect at the end of 2009. Rising household incomes and improvements in wealth distribution equitability in the domestic economy, are also expected to cause strong internal growth.

**Building Products** - Accelerating demand with short-term business cycle slowdown impact.

**Food & Beverages** - Well developed sector, extrapolation of long-term historical trend.

**Chemicals** - Emphasis on medium and small plants, with short-term business cycle slowdown impact.

**Furniture & Bedding** - Steady growth accelerating after slowdown.

**Packaging and Paper Converting** - Steady growth accelerating after slowdown.

**Plastics** - Well developed sector, extrapolation of long-term historical trend.

**Textiles, Clothing, Footwear & Leather** - Continuation of competitiveness problems, with some growth in small enterprises.

**Other Manufacturing** - Accelerating after slowdown.
Table 10: Manufacturing Spatial Forecasts

Table 11 is very interesting in that it indicates that at the growth rates assumed in Table 10, an additional 2100 hectares of land will need to be found in order to accommodate manufacturing growth. As this much suitable land is not available in the EMA, it means that there will be overflow demand spilling over into the industrial corridors, mostly to the west towards Pietermaritzburg, but also to some extent to the north beyond Tongaat. This is a very positive picture and naturally depends on whether the economy is enabled to grow to its full potential. Some possible downside factors have been mentioned above and those are really the key issues as to what levels of future growth will be achieved. The potential and the need are certainly there.

- Declining industrial growth in the past few years, particularly for the clothing and textiles industry
- Uncertainty with which industrial sectors to encourage/support
ANNEXURE C: DURBAN’S KEY INDUSTRIAL SECTORS

(i) Transport and Logistics Sector
- Transport (Multi-Modal)
- Logistics & Warehousing
- Marine Services
- Ship & Boat Building

(ii) Petroleum Sector (Petronet, Sapref, Genref, Sasol Petroleum, Other Oil Companies).

(iii) Chemical Sector:
- Umbogintwini Group
- Other medium/large manufacturers
- Small mixer/blenders
- Paint Manufacturers
- Bio-Chem Manufacturers
- Bulk Liquid Storage Companies
- Plastics Manufacturers

(iv) Automotive Sector:
- Light Vehicle Manufacturers (Toyota)
- Heavy Truck Assemblers (MAN Trucks, Volvo Trucks)
- Automotive Component manufacturers

(v) Metal Products & Engineering Sector
- Metal Smelters
- Machinery Manufacturers
- Engineering Sector
- Steel & Metal Distributors
- Household Appliances, Housewares and other metal goods manufacturers

(vi) Forest Products Sector:
- (see also Building Materials and Furniture)
- Paper & Pulp (Mondi, Sappi)
- Paper Converters

- Packaging & Printing (Paper & Board)

(vii) Textiles, Clothing & Footwear
- Textile Manufacturers
- Carpet & Floor covering Manufacturers
- Clothing Manufacturers
- Footwear Manufacturers

(viii) Building Materials
- Brick & Tile Manufacturers
- Timber & Board Mills
- Door & Window Manufacturers
- Roofing Manufacturers
- Building Materials Distributors

(ix) Furniture
- Wooden Furniture
- Metal Furniture
- Upholstered Furniture
- Plastic Furniture
- Cupboards

(x) Food & Beverage Manufacturers
- Food Manufacturers & Flour Mills
- Fresh Produce & Horticultural Export Packagers
- Sugar Mills
- Beverage Manufacturers
- Produce Markets
- Abattoirs (Animal, Chicken & Fish)

(x) Electronics, IT & Telecom Manufacturers.
Timeframes for Phase 1: Council Approval February 2009
Timeframe for Planning, Piloting Phase 1: January - December 2009
Timeframe for Implementation, land available for development, which
includes the provision of suitable services, access and a broad
environmental framework and land zoning scheme to facilitate
suitable industrial development over a 1-3 (2009-2011) year time
horizon.
ANNEXURE D: ANALYSIS OF KEY ISSUES BY INDUSTRIAL SECTOR

1.0 Textiles, Clothing and Footwear

1.1 Textiles

The Textile Industry is established at three clearly demarked manufacturing levels, i.e.

i) Upstream Level - Natural and Synthetic Fibre and Filament production;
ii) Intermediate Level - Spinning, Weaving, Knitting, Felting, Dyeing and Finishing;
iii) Downstream Level - Household Textiles (e.g. Bed Linen, Curtains, etc.), Carpets and Ropes & Twines, and some Industrial Textiles.

As stated previously, the textile industry in SA is currently struggling to maintain its competitiveness. This varies according to industry sub-sector. Any sub-sector targeted at downstream volume areas such as budget clothing, is under threat from imported competition from low-cost countries. Some key issues mentioned at recent interviews with three of the larger manufacturers were the following:

- Local raw material prices too high and production base too small;
- Cost of freight on imports;
- Protective pricing of imports from competing countries (China, etc.);
- Current doctrine in SA not linked to world class benchmarks;
- Utility costs too high, especially in major cities (e.g. Water costs in Newcastle are one third of those at Hammarsdale);
- Water treatment costs for dyehouse effluent very high;
- Transport/Logistics services linked to the Port extremely inefficient and costly;
- Coal costs increased by 48% from April 08 (linked to Eskom problems);
- Public Transport systems costly and very inefficient;
- Difficulty in getting skills;
- Problem of finding development finance ex Banks. Because of current poor performance, industry seen as high risk;
- Lack of government protection on high-tech fabrics - cheap imports often below specification, e.g. for the military.

Areas where Local and Regional Government can play a supportive role:

- Encourage clustering on City outskirts, Hammarsdale, Tongaat, etc., by means of incentives, e.g.
  - Rates
  - Utility Costs
  - Special Services Costs
  - Public Transport Subsidies with shift-worker orientation
- Facilitate through spatial restructuring and other initiatives improvements in operating efficiencies of the transport, logistics and other back-of-port operations.
- By working together with industry leaders identify areas where National Government intervention is necessary to address international competitiveness issues, e.g.
  - Domestic upstream raw material provision,
  - Export incentive schemes,
  - Development finance schemes,
  - Implementing effective anti-dumping duties,
  - Appropriate import tariff protection,
  - Skills development support schemes.

1.2 Clothing and Footwear

Problems facing the domestic Clothing and Footwear sectors, whilst also related to fierce competition from imports, are somewhat different to those in the textile industry. Thus a different approach to interventions is required.

Clothing and Footwear manufacturers are scattered fairly prolifically throughout the EMA. There are over 220 formal companies and three
to four times as many informal micro manufacturers operating either from home or some small space within an old building. Many such micro enterprises are found in older buildings along the Umgeni Road area. Several clothing/footwear sub-clusters have already formed, of which the following are the most developed.

<table>
<thead>
<tr>
<th>No. of Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clairwood</td>
</tr>
<tr>
<td>New Germany/</td>
</tr>
<tr>
<td>Pinetown/Westmead</td>
</tr>
<tr>
<td>Durban Central (Congella/Mayville/Greyville)</td>
</tr>
<tr>
<td>Phoenix</td>
</tr>
<tr>
<td>Verulam/Canelands/Tongaat</td>
</tr>
<tr>
<td>Total sub-clusters</td>
</tr>
</tbody>
</table>

These two local sectors are very cost sensitive against imported competition. They import their fabric requirements and since time immemorial have been badgering the government to allow them to import fabric duty free.

There is also labour cost competition within the country, e.g. a machinist in Mobeni would be paid around R670 per 42½ hr week (R15.75 per hr.) compared to Ladysmith at R360 per week (R8.50 per hr.). The factories in outlying areas also tend to work longer hours than the city based factories. As can be expected the Trade Union is applying much pressure to equalise such differentials.

The problems facing the industry fall into a larger domain than that handled at local government level. Nevertheless, interventions from local government can assist the industry’s competitiveness in certain areas, and this should be the main objective. One major initiative has been put forward by some of the industry leaders, and this concerns the establishment of a Clothing Supplier Park.

**“Blue Skies” Project for Textiles and Clothing:**

Discussions involving both the local industry and local and regional government should be held with the DTI as to the possibility/feasibility of instigating an initiative to attract a major investor in the Synthetic fibres and/or filament yarns industry to establish a plant in SA in a joint venture. This plant should have substantial production capacity, to enable it to compete against the mega-plants in other parts of the world. This should be seen as an important strategic move to underpin the Southern African Textile and Clothing Industries and ensure their international competitiveness. Petro-Chemical feedstocks could be supplied either from a joint venture by Durban’s two refineries or from Sasol’s flexible cracker at Secunda near Bethal. Selective subsidisation of the process would possibly be necessary to ensure early international pricing competitiveness.

Such a project would compare to the original Sasol, which was set up to counter oil sanctions against SA at the time. Another example was Iscor, which was established to add value to local iron ore resources and to provide the manufacturing sector with low-cost steel. A smaller example was the initiative by the Pietermaritzburg Municipality in the late 1980s to attract the Belgotex Carpets plant, which is today SA’s No.1 carpet producer.

The Textile and Clothing industries of the SADC countries could form a strong trade bloc, producing natural fibres such as cotton on a large scale to complement the synthetic plant, thereby placing themselves at the forefront of being able to meet their own rapidly increasing needs for competitively priced textiles, clothing and footwear.

**Interviews in the South Durban Basin**

During the recently conducted Industrial Spatial Strategy Study, the CEOs of four of the very large firms in the South Durban Basin were interviewed and asked to discuss their blue skies strategic thinking in terms of their medium to long-term outlook. The four firms interviewed were:

- Toyota Manufacturing
- Sapref Refinery
- Engen Refinery
- Mondi Paper

The following is a summary of the key aspects put forward by the interviewees.
2.0 Automotive Sector

Toyota Manufacturing SA, Prospecton – Interview with Mr. Henry Pretorious (Senior Vice President P,D & P):

RECENT DEVELOPMENTS

Critical issues facing Toyota Manufacturing SA includes locating parking space for vehicles. There is a lack of parking space and they require a site large enough to hold all of the vehicles, as opposed to storing them in locations all over the city.

Toyota has negotiated to take over the lease of a site in Platt Dr., Prospecton on the west side of the N2, owned by the Municipality and currently leased to Langa Cibane Investments. The land is required for a container park and vehicle park. They are awaiting ratification from the Municipality as they wish to start building immediately.

Toyota has also bought the site in Jacobs occupied by Fine Scrap Metals from Mittal Steel, to be used as a vehicle park. Furthermore, they are looking at other premises in their vicinity, which can be refurbished to their requirements.

They are disappointed that there has been no progress in respect of future ownership and development of the Airport land (DIA land), on which they had hoped to establish a much needed Automotive Supplier Park (ASP). They believe there is substantial supplier interest in coming to Durban and locating in a supplier park.

Establishing an ASP is still a key issue for Toyota and they are hoping that the Municipality will soon be able to offer them a suitable site of 30 to 50 hectares. Fifty hectares is preferable, as this would allow Toyota to secure 10 hectares for their own use. A Supplier Forum has been founded in SA between Toyota and several other OEMs with the main objective of increasing the supplier base in this country. This is essential if SA is to entrench its position as a serious contender in the world vehicle supply chain.

SOME CURRENT STATISTICS:

The following statistics provide some insight into the scale of Toyota’s current level of activity in Durban. (Figures as of 2008, prior to the economic downturn)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Production 2008</td>
<td>227 000 vehicles</td>
</tr>
<tr>
<td>Planned Exports 2008</td>
<td>147 000 vehicles</td>
</tr>
<tr>
<td>Domestic Mkt (excl. impts.) 2008</td>
<td>80 000 vehicles</td>
</tr>
<tr>
<td>Planned Imports 2008</td>
<td>80 000 vehicles</td>
</tr>
<tr>
<td>Current Employment (Dbn)</td>
<td>9 000 people</td>
</tr>
<tr>
<td>Ave. number of container TEUs handled</td>
<td>710 per month</td>
</tr>
</tbody>
</table>

VEHICLE TRANSPORT

Toyota use both rail and road to transport CBUs (Completely Built-up Vehicle Units) to and from the Port and into the hinterland. They are planning with Transnet to introduce a daily train shuttle to the Port from Isipingo Rail, which is the nearest rail siding to their main assembly plant.

A vehicle park for 10 000 vehicles at Camperdown is planned. Toyota are required by the port authorities to clear imported CBUs from the vehicle terminal within 4 days of arrival and vehicles to be exported must be shipped within 14 days thereafter. It is planned that the new vehicle park at Camperdown will operate as a distribution hub for all vehicles transported by road.
The above structure will considerably improve the vehicle logistics between Durban and Gauteng, for both domestic production and imports. It will also improve logistics between the Prospecton factory and the Port.

**MOTOR INDUSTRY DEVELOPMENT PROGRAMME (MIDP)**

The MIDP was initiated in order to make the industry competitive through global integration, increasing local production, expanding exports and modernising. At the beginning of 2002, the DTI initiated a review of the Motor Industry Development Programme (MIDP) with the objective of providing clarity regarding policy for the period post-2007 to 2012. Both government and the industry consider it crucial that motor industry policy stability and certainty be maintained so as to provide investors with a long-term planning horizon.

While assistance to the industry will continue to decline, the MIDP seeks to strike a balance between further opening to international competition and maintaining a certain measure of protection. It is anticipated that the existing policy, together with the proposals from 2008 to 2012 set out below, will encourage further positive developments. This is borne out by recent announcements of significant expansions by leading vehicle producers and further growth in automotive component exports. Therefore an important part of encouraging motor industry growth in South Africa and Durban will become critical in the economic upswing.

Sept 1 2008 (Reuters) - South Africa's government and motor vehicle industry agreed on Monday a new programme to help boost production in the sector, including offering incentives for expansion. The Automotive Industry Programme (AIP) will replace the motor industry development programme, and would ensure "moderate" tariff protection, the Department of Trade and Industry said in a statement. The motor industry is one of the biggest in South Africa's manufacturing sector and key to creating much-needed jobs.

New vehicle sales have been falling for more than a year due to higher interest rates, but motor exports are rising sharply, jumping 85 percent year-on-year in July, albeit from a low base. "This statement serves to express the common satisfaction of all stakeholders with the final details of the programme," the department said. "All stakeholders are satisfied that the new programme will form the basis for sustaining growth, employment and exports of the automotive sector."
industry until 2020 in line with government's objectives, in an increasingly competitive global environment." The new programme -- which must still be approved by cabinet -- will also allow manufacturers with plant volume of at least 50,000 units a year to import a portion of components duty free. It will give incentives based on a company's production value added and an investment allowance and company-specific allowances for training and research. (Reporting by Gordon Bell; Editing by Quentin Bryar)

3.0 Petroleum Refineries

**SAPREF**

*Interview with Mr. Bart Voet (CEO)*  
Mr. John Withey (BP, Cape Town)  
Mr. Patrick Lavelle (Shell, Cape Town)  
Mr. Torr Findlay (Shell, Cape Town)

Key issues facing the local refinery industry are:
- The final location selected for the new Petronet Pipeline Terminal - will it be Island View or the Durban International Airport land?
- How will the refineries link up with the new pipeline to Gauteng?
- The Clean Fuels Programme and how best to expand local capacity?

It appears that the design for a terminal at Island View has already been completed, but no decision about the site has been taken by Transnet as yet. All of Sapref’s pipelines are currently connect directly to Island View and they are anxiously awaiting a decision on the EIA for some extensive refurbishing and upgrading of these pipes, with certain areas being brought above ground. Sapref are concerned about the integrity of their pipelines from the refinery to Island View and those around Island View. They would like to be able to fast-track the EIA etc. to enable them to proceed with upgrading their pipelines.

There is a suitable site for the Petronet terminal at Island View next to the BP/Shell tank-farm, which currently has some Sasol tanks on it. The objective is to install storage capacity of 170 000 cubic metres on the site. Sapref favour the Island View site because all their pipelines run in that direction. If the terminal were to be constructed on the airport land, a totally new pipeline network would be required for Sapref, which would be very costly.

There is currently a shortage of refinery capacity in South Africa, with all existing refineries running at full capacity. There is a high concentration of demand along the Durban/Gauteng corridor and particularly at the Gauteng end, and in theory that demand must be fed from Durban, or Richards Bay and/or Maputo. There is a pipeline from Maputo into Mpumalanga, which could possibly be extended, but no pipeline from Richards Bay, so that is not an option. Thus the main focus is on Durban. Asked whether it was feasible to locate a new refinery somewhere inland in close proximity to the new pipeline, the answer was a firm “no”. The problem would be the need to pump crude oil from the coast to supply the refinery, which would become too costly an exercise. Sapref could accommodate up to double their present refinery capacity on their existing site.

Domestic refined petroleum output has declined by about 10% over the past three years. This has been mainly due to implementation of Phase 1 of the Clean Fuels Programme, but was also aggravated by Engen’s fire in 2007.

**ENGEN**

*Interview with Mr. Louis Oosthuizen (CEO)*

Engen have been talking to Sapref about the possibility of a joint expansion of local capacity as they believe that the best option for Durban is a combined Sapref/Engen development. It appears that by joining forces the cost of the project would be considerably lower, i.e. R15bn in total as compared to R10bn each if they go separate routes. Such a project would require approximately 10 hectares of land, which also has implications for the land around it in terms of pipelines and
environmental issues. There are however some differing viewpoints between Sapref and Engen on how best to address expansion needs, including the optimal site for the location of the new terminal and storage tanks for the oil pipeline to Gauteng. Pipeline linkages from refinery to the terminal are key issues for both companies.

They felt that environmental issues, e.g. global warming, are more likely to limit the amount of oil production rather than peak oil, as there are plenty of reserves still available, although these could be more costly to bring into production, e.g. Brazil’s recent discovery of new oilfields off their coast. There are initiatives underway in KZN to look at Bio-Ethanol production linked to subsistence sugar farming in Maputoland. Up to 2% could be blended into Petrol and it would then be feasible to pump it inland via the pipeline. The downside is that this could cause problems at Island View because of tank capacity limitations.

Demand for diesel is up increased recently, whereas petrol demand increased only marginally. Much of the imported fuel is therefore diesel. Transport usage has increased considerably, and as the pipeline is now at full capacity, transport of fuel is 50:50 between road and rail. Previously it was 80:20 in favour of rail. There is currently a shortage of rail tankers but this issue is being addressed as part of the Transnet recapitalisation programme. A new pipeline will also make a substantial difference.

Road access to Engen for tankers is far from ideal, as there are too many trucks relative to the road infrastructure. They currently load 2 trucks every 15 minutes for 18 hours per day. For Engen the key issue over the next 4 to 5 years is finding ways to increase road transport to and from their depot. They are also having difficulty reducing their electricity consumption.

They feel strongly that the Greenfields Refinery Phase 2 development must be properly planned by Central Government.

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**Former BP CEO on oil prices and energy:**

Submitted by Mikael Höök (Secretary of The Association for the Study of Peak Oil & Gas)
on Tues., 2008-08-26 22:41.

John Browne, the former chief executive of BP said at the opening conference session of the Offshore Northern Seas show that he expected oil prices to stay above $80 to $100 a barrel.

"It is difficult to see oil prices much below $100, so $80-$100," Browne told the conference.

Browne said energy subsidies have a habit of screwing up the market. “We need to see a 10-fold increase in energy efficiency in the next 40 years. It is a very challenging task and there are critical questions about whether or not it can be achieved”

He said renewable energy presented a very mixed picture around the world “It all depends on whether or not rules are in place.” He added “It is very difficult to get out of the subsidies business once you are in it.”

“What we have to do is to improve our energy productivity three times faster than we improved our labour productivity during the industrial revolution,” he added.

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4.0 Pulp and Paper Industry

**MONDI PAPER**

*Interview with Mr. Ron Traill (CEO).*

Mondi’s operations in SA are divided into three divisions, viz. Forests, Pulp (Richards Bay) and Paper (Merebank). Their key international strategy is to develop low cost investments in low cost countries. The
international pulp and paper industry is very competitive and thus very cost sensitive.

Domestically Mondi operates via a geographical organisation structure. They have 300 000 hectares of forests and find that domestic forest growth rates are amongst the fastest by world standards, which vary substantially from country to country.

The Richards Bay pulp plant is operationally efficient by SA standards, whereas Merebank is not fully efficient. The SA market is highly competitive and Mondi holds a strong domestic market position. Although they employ some highly capable people, local labour costs are by no means the cheapest worldwide. They are facing several very big future challenges, e.g. 50% of their forests are the subject of land claims. Two of the worst performing units in the international group at present are Merebank and Richards Bay. It is therefore a major challenge for them to achieve worldwide benchmarks in productive efficiency.

Skills development is a big issue, and at present they have to rely on staff from Austria to be able to meet their skills requirements. Their longer-term objective is to develop local people to the appropriate level of skills. Previous policies were directed at bringing in foreigners.

There is more profit in selling pulp than cut paper. South and Southern Africa are currently their main markets, but with 50% of output going to exports. Exports are transported in a mix of break-bulk and containerised cargo forms. Production output is moving in favour of the domestic market but any capacity increase will be from improvements in efficiency rather than from expansion. Focus at present is on improving profitability, which they are confident of achieving, but therefore do not envisage any major investments over the next two years. The land claims are a major issue and are slowing progress at present.

Pulp is delivered by on average twenty road trucks per day to their city warehouse. At present transport is predominantly by road, but in the longer term they are looking to increase their use of rail transport. Virtually all their pulp is made at Richards Bay, but Mondi Shanduka makes a very small quantity for newsprint locally. Mondi also have a large waste paper recycling set up at Maydon Wharf and Mondi Packaging has units at Maydon Wharf and Pinetown where local paper conversion is carried out.

Employment on site is approximately 850 people for Mondi, to which must be added outsourced local contractors and Shanduka. Approximately 80% of contractors are drawn from local communities in their vicinity.

Approximately 25% to 30% of the cost of material is in logistics costs, mainly moving trees and timber from the forest areas to the plants.
ANNEXURE E: STRATEGY FOR RELOCATION

Much of the discussion and recommendations outlined in the document so far presupposes that it will be possible to relocate factories from the Jacobs/Clairwood/Mobeni industrial townships to make way for redevelopment into a major back-of-port transport and logistics cluster. Clearly, a well rehearsed and flexible strategy is required in order to deal with the special circumstances relating to industry sectors and individual firms. The following broad approach is suggested at this stage to form the basis of a debate on the subject.

- **Sufficient land for relocation must be identified.** This would include new development projects such as Hammarsdale, Cato Ridge and Ottawa as well as odd parcels of both greenfields and brownfields properties, which could be identified prior to the programme. Planning for the new projects should be well down the track prior to approaching the factories identified for relocation, so that a clear picture of the land and environment on offer is available.

- **Attractive relocation packages with a range of incentives should be developed for each major industry sector.** In some cases, e.g. Textiles, the incentive package would be tied to a specific location, e.g. Hammarsdale.

- **Incentive packages should also be developed for individual firms not falling within sectors targeted for clustering programmes.**

- **The intentions of the Municipality regarding redevelopment and clustering with target time-frames should be made clear up front early in the process, to all affected parties.** Firms should be advised that no company will be forced to move but that rates and utility costs in their areas could be raised unless they fall into the Shipping/Transport/Logistics category, and that there will be cost subsidising incentives for them if they relocate. Furthermore they must understand that no special infrastructure required for their specific sector or firm will be available if they remain where they are.

- **Nevertheless it is realised that the cost of moving some factories may be prohibitive.** There is also the question of key staff and their residential location in relation to the proposed new location. This needs in-depth consideration and the Municipality will need to show flexibility in dealing with individual issues, e.g. subsidising the moving of factory equipment, or setting up suitable public transport arrangements, etc. Firms should be informed up front of the Municipality’s approach to dealing with such matters. It should be made clear that the objective is a win-win solution for the firms and the municipality.

- **It may be necessary to consider selective expropriation in extreme cases where co-operation cannot be achieved, in spite of the circumstances being fairly straight forward, or because a particular site is required to accommodate planned new infrastructure development.**

### Challenges to the Strategy

- **Lack of readily available data**
  - There is no single database on Industrial land in the eThekwini region. Information regarding zoning rights, vacancy rates, the efficiency of land use, the redundancy of buildings and ownership exists, but in the hands of a number of individuals and organizations who are not necessarily willing to share their work product, or in databases that are not complimentary or compatible with the City’s GIS system. Braby’s Business database has proved to be a valuable source of information to build from but still required extensive manipulation in order to ‘tell a story’.

- **Supply and demand of land**
  - The monitoring of the supply and demand of industrial land is done in a very ad hoc manner and is invariably left to a number of industrial estate agents to match need and demand. A mechanism needs to be put in place to ensure that data on the supply of industrial land is readily
available to investors through the Durban Investment Promotion Agency (DIPA).

- The City, outside of providing zoning rights, has little effective control over land owners who choose to ‘sit’ on land. Zoned land may well be undeveloped, but this does not necessarily imply that the land is available for development. Major land owners leverage their land sales to their advantage by providing a ‘trickle’ of industrial land onto the market in order to create premium land values on their landholdings.

- eThekwini’s unique topography also ensures that land for industrial development remains in short supply. The most strategically placed area for export and logistics orientated manufacturing remains the South Durban Basin where land is at an absolute premium and social justice issues are rife. New areas that can be opened up are invariably on the periphery of the City, in upper catchment areas and away from where industry wishes to locate.

- The tightening-up of environmental legislation makes the introduction of new general industrial land uses more difficult to acquire, especially given the fact that these areas are located in either upper-catchment areas, or in river catchments that are relatively pristine in nature and would result in a downgrading of the status of the river system.

- Provision of bulk services
  - Urban services are at capacity, especially in terms of road capacity for the transportation of industrial goods. The supply of quality services e.g. electricity also has a major implication on the types of industrial activity that can be attracted to an area.

- Brownfield vs. Greenfield development
  - Brownfield redevelopment is more complex, often involves a number of land owners, more costly, and as a result developers favour Greenfield redevelopment to ensure higher returns. It is our brownfield areas that are however the most strategically located parcels of land that require redevelopment. How to incentives redevelopment is a key component to the industrial strategy.

- Inappropriate use of industrial land
  - Our existing schemes are quite explicit in terms of what types of industry would be permitted in an area, but the do not preclude inappropriate uses. An example in eThekwini is the Umbogintwini complex to the South of Durban. The zoning in area is one of the few zones in eThekwini that allows for noxious industry. The area however has been ‘taken-over’ by light manufacturing uses that are forcing out noxious industry that is unable to relocate to other existed industrial townships in the City, due to zoning restrictions or neighbouring communities. In most Industrial townships, general industrial zonings are taken up by light manufacturing uses.

- Industrial zoning is also inflexible to changing land use demands as a result of industrial innovation

- Decisions beyond the control of the local municipality
  - A key issue related to industrial growth in eThekwini is the role of external agents. Decisions around the provision of logistic infrastructure lies within the realm of Transnet who plans at a National level and whose goals and objectives don’t necessarily meet those of the City. Whilst functionally the City may have control over key road infrastructure, budgets and maintenance funds sit at either National or Provincial levels of government.