WATSON NORTH AND GREYLANDS FUNCTIONAL AREA PLAN AND DRAFT SCHEME

Watson North and Greylands DRAFT SCHEME
1N-17013

The Planning Initiative and Team

September 2016
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1 INTRODUCTION

The Planning Initiative team was appointed in January 2016 to prepare Functional Area Plans for the areas of Watson North and Greylands, north of Durban in the eThekweni Municipal area, as well as a draft Scheme. This report covers the Scheme component of this appointment. It should be read together with the Functional Area Plan Report as well as the Bulk Infrastructure and Phasing Report (still to be prepared).

1.1 PROJECT BACKGROUND

The Municipal Systems Act, Act No 32 of 2000 requires Municipalities to prepare a Spatial Development Framework (SDF) as part of their Integrated Development Plan (IDP), which gives guidance on the preparation of a Land Use Management System (LUMS) for the area. In accordance with these requirements the eThekwini Municipality has prepared their IDP and SDF. They have proceeded further to develop a package of plans to assist in land use management and decision making (Figure 1) including Spatial Development Plans, Local Area Plans, Functional Area Plans and Land Use Schemes. To this end, the Northern Spatial Development Plan, the Northern Urban Development Corridor Plan and the Tongaat-Dube Local Area Plan have been prepared and approved by Council. To complete the package of plans, this project is being undertaken to prepare Functional Area Plans (FAPs) and Draft Schemes for identified portions in Watson North and Greylands.

FIGURE 1: PACKAGE OF PLANS AND CITY MANAGEMENT
1.2 PROJECT AIMS AND OBJECTIVES

The primary aim of this project is to take the work that has already been completed forward in a manner that will ensure that the Municipality is well prepared to facilitate future development opportunities and manage land use in the best interests of the public. To this end the project is essentially aimed at translating the work that has already been undertaken into a tool box of planning, engineering, transportation and environmental information that will allow the Municipality to respond efficiently, effectively and appropriately to development proposals put to them by private developers.

It is important to understand that much of the land in question is privately owned and that the major land owners are currently preparing proposals for the development of their land. It is therefore unnecessary for the Municipality to prepare detailed layout plans for these areas, however, it is critical that they are in a position to respond effectively to proposals when they are submitted by developers. Moreover, the area forms a key component of the proposed Aerotropolis surrounding the new international airport and has the potential to be earmarked as a Special Economic Zone. The product delivered should therefore provide a toolkit to assist the Municipality with rational decision making and land use management in the public interest to stimulate sustainable city development. Extremely tight project time frames and budgets also dictate the level of planning that can be achieved here, and may prompt additional more focused studies and planning and design detail where public interests are primary.

The final product delivered here is intended to offer a framework of adequate flexibility to allow for future proposals to respond to market trends and shifts over time as the development of the aerotropolis and potential special economic zone unfolds. The work therefore needs to focus on:

- Creating a framework at the functional planning level created by the conceptual road and open space framework within which development will infill over time.
- Creating a toolkit of draft Scheme mechanisms from which the Municipality can draw when applications form private developers are submitted.

The deliverables of this project were as follows:

- Phase 1: Status Quo Analysis of the Study Area
- Phase 2: Translate the directives of the Tongaat- DTP LAP Land Use and Activity Framework into more detailed level Functional Area Plans.
- Phase 3: Prepare of a basket of Land Use Scheme mechanisms to manage future development in the area
- Phase 4: Prepare Preliminary Budgets for projects identified and a Phasing Plan to guide development decisions.

1.3 REPORT OUTLINE

This report covers phase 3 of the study and includes:

1. Introduction to provide the reader with an understanding of the background to the project, the purpose of the project, and the background to the Scheme.
2. The draft Scheme proposals
3. Conclusion and suggested Way Forward

1.4 LOCATION OF THE STUDY AREA

The project area is located within the Northern portion of the eThekwini Municipality (Figure 2). It is approximately 35 kilometres north of the eThekwini CBD. The study area is located directly to the North of the new King Shaka International Airport and Dube TradePort.

FIGURE 2: WATSON NORTH AND GREYLANDS- LOCALITY PLAN
1.5 Functional Area Plans

Phase 2 of the project involved the preparation of Functional Area Plans for Watson North and Greylands (See Figures 3 and 4). These Functional Area Plans provide a broad land use and intensity framework which informs the preparation of the draft Scheme tools for Phase 3 of the project.

The development of the Functional Area was informed by a range of background reports which covered:

- Final Environmental Sector Report (May 2016)
- Final Planning Review (May 2016)
- Property Trends Report (May 2016)
- Status Quo Assessment- Bulk Services (May 2016)
- Transport Status Quo Report (April 2016)
FIGURE 3: FUNCTIONAL AREA PLAN WATSON NORTH
FIGURE 4: FUNCTIONAL AREA PLAN GREYLANDS
1.6 PREPARATION OF THE SCHEME

The purpose of this phase of the work is to use the work undertaken in Phase 2 of the project, to inform the preparation of a Draft Scheme toolkit for the study area. The reason that a toolkit is to be prepared instead of a full Draft Scheme is due to the fact that much of the land is privately owned by private land owners, and it is the private sectors responsibility to prepare a layout plan/s which then would be used as the basis for the preparation of a Scheme for the area. Thus, the deliverable at the end of Phase 3 needs to be a toolkit which enables the Municipality to respond to, and guide, development applications within the area.
FIGURE 5: WATSON NORTH AND GREYLANDS LAND OWNERSHIP

SOURCE: ETHEKWINI VALUATION ROLL, TONGAAT HULETT DEVELOPMENT LANDHOLDINGS (2016)
TABLE 1: LAND OWNERSHIP

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Area (ha)</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>eThekwini Municipality</td>
<td>63.7</td>
<td>2.64</td>
</tr>
<tr>
<td>Tongaat Hulett</td>
<td>875.0</td>
<td>36.31</td>
</tr>
<tr>
<td>Dube TradePort</td>
<td>13.7</td>
<td>0.57</td>
</tr>
<tr>
<td>KZN Provincial Government</td>
<td>9.6</td>
<td>0.40</td>
</tr>
<tr>
<td>South African Government</td>
<td>7.6</td>
<td>0.32</td>
</tr>
<tr>
<td>Transnet</td>
<td>24.0</td>
<td>1.00</td>
</tr>
<tr>
<td>Other land owners</td>
<td>1 416.5</td>
<td>58.77</td>
</tr>
<tr>
<td>Total</td>
<td>2 410.1</td>
<td>100</td>
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<tr>
<td>Not clear (valuation blanks)</td>
<td>118.12</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2 528.2</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: eThekwini Municipality (2016) and Tongaat Hulett Developments (2016)

1.7 LAND USE MANAGEMENT GUIDELINES

The successful implementation of this Local Area Plan requires an effective link between the vision and development concept and the management of land use and development which will take place in the local area. The purpose of these Land Use Management Guidelines is to encourage development to take place in such a manner that it supports and realises the development vision for the area. The guidelines are intended to be used by property owners and developers to guide site development design, and by the Municipality and other stakeholders to review and make decisions on development proposals.

1.7.1 DEFINING LAND USE MANAGEMENT

Land use management encapsulates the following activities:

- The regulation and management of land-use changes;
- The regulation and management of ‘green fields’ land development, i.e. the development of previously undeveloped land;
- The regulation of the subdivision and consolidation of land parcels;
- The regulation and management of the regularization and upgrading process of informal settlements, neglected urban centres and other areas requiring such processes; and
- The facilitation of land development through the more active participation of the municipality in the land development process, especially through public-private partnerships.

Land use management plays an important role by responding to a range of impacts and concerns relating to the transformation of the natural and built environment, including:

- Impacts on the natural environment and environmental systems, including loss of open space and natural habitat, catchment management and water quality, soil erosion, loss of

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1 Adapted from White Paper on Spatial Planning and Land Use Management, 2001
agricultural land, food production and food security, access to open spaces for recreation, cultural and educational purposes;

- Health and safety concerns including access to sufficient ventilation and light, the provision of adequate water and sanitation services, safe building construction, noise and air quality, adequate access for fire and ambulance services, safe traffic conditions, site and building design that can minimise crime.

- Efficiency of infrastructure provision and traffic management, including the provision of adequate facilities for loading, parking, pedestrians and public transport, and consideration of development on traffic movement.

- Promotion of amenity in development, including landscape quality and built form aesthetics, privacy and views.

- Social considerations including the impact of development on women, children, the elderly and disadvantaged people, and the adequate provision of social facilities.

- Protecting architectural, historical, cultural and environmentally important land and buildings.

Land use management also promotes specific social, economic and environmental objectives of government that may be neglected by the private land development market. Government interventions to achieve such objectives can include investment promotion, public-private partnerships, relaxing of development controls in certain areas, rating policy, and development levies, etc. The desirability of an area for economic development can be maximised by land use management interventions, for example by managing adjoining and ancillary uses, protecting important view sheds and by controlling traffic and access.

A Land Use Management System (LUMS) refers to all the actions undertaken by a municipality to manage land use, of which Schemes are one component. The Municipality’s Land Use Management System relevant to this area includes:

- The Municipal Spatial Development Framework, Northern Spatial Development Plan, the Tongaat-DTP Local Area Plan, and the North Scheme eThekwini Municipality.

- Valuation and rating system

- Property registration, ownership and tenure

- Infrastructure and services provision

- Building regulations and bylaws, including signage and elevation control

- Health bylaws

- Environmental legislation and requirements, and

- Road and transportation requirements.

These Land Use Management Guidelines are therefore one of a range of tools available to the Municipality to guide and manage development in the local area.

1.7.2 Status of Schemes in the Local Area

The North Scheme eThekwini Municipality adopted in terms of the Planning and Development Act, Act No. 6 of 2008 is operational in the area. This represents a consolidation of all previous Town Planning Schemes applicable to the area.
1.7.3 Spatial Planning and Land Use Management Act, Act No. 16 of 2013 Principles

The following principles must be used to guide site development planning and design, and the assessment of development proposals in the area.

- **Spatial Justice** - Improved access to land, Inclusivity, Flexibility and Appropriateness for management of land and land use
- **Spatial Sustainability** - Financial, Agriculture, Environmental, Land Markets, Infrastructure and Social Services Densification
- **Spatial Efficiency** - Optimise existing Resources and Infrastructure, Minimise Negative Impacts, Procedures are Efficient
- **Spatial Resilience** - Flexibility of systems to ensure sustainable livelihoods for those most likely to suffer economic and environmental shocks
- **Good Administration** - Integrated Approach to land use and land development; Sector coordination, Timeous decisions, Transparent public processes, Empower people

1.8 Purpose of the Scheme

The KwaZulu Natal Land Use Management System Guidelines for the Preparation of Schemes for Municipalities states the following important aspects relating to Schemes (COGTA 2011:3):

“A Scheme is a statutory document which divides a municipality into zones. These zones are then regulated according to:

- The use of land and buildings for commercial, industrial, residential and other purposes
- The height and bulk of buildings and other structures
- The area of a lot which may be occupied, and sometimes the size of required open spaces
- Indirectly the density of population.

A Scheme regulates the impact of the use of land and buildings on:

- Its own lot
- The immediate neighbours
- The impact on the surrounding area, or precinct
- The impact on adjacent zones, especially in residential areas.”

Schemes are a tool used by Municipalities to **guide and manage** development according to the vision, strategies and policies of the Integrated Development Plan and Spatial Development Framework and in the interests of the general public to promote sustainable development and quality of life.

The general purpose of a Scheme is to create coordinated, harmonious and sustainable development of a municipal area in such a way that it efficiently promotes health, safety, order, amenity, convenience and general welfare, as well as efficiency and economy in the process of development.

The objectives of Schemes can be summarized as follows:

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• To designate desirable land uses and provide clarity on what may or may not occur on a property and what may be considered at the discretion of the municipality
• To promote the certainty of land use which protects property values and creates investor confidence
• To promote and protect the amenity within areas and neighbourhoods
• To resolve conflict between different land uses and to control negative externalities
• To balance the interests of individuals with those of the public
• To enable the co-ordinated and efficient use of land
• To enable the efficient movement of persons and goods
• To promote the economy
• To protect natural resources (ecosystem services) including agricultural resources (high potential agricultural land)
• To protect unique areas or features
• To protect cultural resources and places of religious and cultural significance
• To manage land generally including change of land use and building type
• To provide a statutory basis for public involvement. This is done through the Planning and Development Act, Act No. 6 of 2008, with the Scheme acting as the mechanism and focus for a particular area
• To provide a means of enforcement
• To ensure the retention of land for future uses, the need for, location and extent of which is not presently certain

Prepared and administered by planners, Schemes provide a management tool for other interests such as health, transport, environment, finance and infrastructure. Ultimately, however, Schemes have a particular role to play and cannot be expected to manage all development issues. Schemes are intended to be transparent and to provide information to officials, consultants, home-owners, developers and politicians on what may or may not occur on a parcel of land or what uses the municipality may consider at its own discretion.

Thus, the Scheme is the mechanism that the Municipality uses to manage individual parcels of land ensuring compatible land uses, adequate servicing and the quality of the local environment.

1.9 A SCHEME FOR THE STUDY AREA

Whilst it has been agreed that a formal Scheme will not be prepared for the study area (this will be undertaken once layout plans, which form the basis of the Scheme, have been prepared), a toolkit (such as guiding documentation, a list of suitable zones etc.) is proposed which the Municipality may use in their engagement with the private sector.
2 BACKGROUND RESEARCH SUMMARY AND IMPLICATIONS

2.1 INTRODUCTION

As part of the brief, the consultants were required to give consideration to the Aerotropolis concept as well as Form Based Codes and how they should inform the preparation of the Scheme for Watson North and Greylands. The following is a summary of these concepts and how they relate to this project.

2.3 THE AEROTROPOLIS

2.3.1 INTRODUCTION

In 2002 John Kasarda coined the term “Aerotropolis” to capture the characteristics of the urban form that tend to occur around airports. Currently, work is being undertaken by KZN Provincial Government for the Dube TradePort and King Shaka International Airport, showing these sites as the core component of the Aerotropolis Region in KwaZulu Natal. This “aerotropolis” includes an area up to one hour’s drive from the airport. Watson North and Greylands, being directly to the North of the airport will form part of what has been termed the airport city. This is effectively the heart of the aerotropolis. The greenfields area around the King Shaka International Airport and Dube TradePort site represent the perfect opportunity for a well-planned aerotropolis.

2.3.2 THE AEROTROPOLIS CONCEPT OVERVIEW

An aerotropolis is a metropolitan sub region where the layout, infrastructure, and economy are centered on an airport which serves as a multimodal “airport city” commercial core.[1][2] It is similar in form to a traditional metropolis, which contains a central city commercial core and commuter-linked suburbs.[3] http://en.wikipedia.org/wiki/Aerotropolis

2.3.3 WHY THE AEROTROPOLIS

The realities of running a business today are the need for speed and agility, networks and supply chains, to sell to anyone anywhere in the world, flexibility and customization. Effectively connectivity is now the phrase that drives business. Traditionally, business location was affected by transportation infrastructure, however, in recent years there has been a huge growth in e-commerce and air logistics with the main drivers being higher value to weight ratios, just-in-time technology, global sourcing and sales, built to order processes, the fact that customers will not wait and that time is money. On this basis John Kasarda (2002) has identified a range of land uses relative to their proximity to the airport and a particular urban form which he has conceptualised as the Aerotropolis.

There is a distinction between uses “inside” and “outside the fence” of airport owned property and the synergies between them. A diagrammatic representation of Kasarda’s concept is shown in Figure 6.
The Aerotropolis may emerge in two ways – either in an ad-hoc manner or as a planned economic, spatial strategy. International research clearly demonstrates the advantages of the planned approach where benefits are wider spread and far higher rates of growth are achieved.

As mentioned previously, the relatively greenfields nature of the land around King Shaka International Airport means that a planned spatial strategy is possible. It is also far easier to undertake a planned spatial strategy on a greenfields site, than trying to retrofit.

The main elements of the international Aerotropolis urban form are as follows:

- Distinct clusters and spines of aviation-linked business radiating outward from airport;
- Aerolanes (dedicated expressways), Aerotrails (dedicated fast rail), Intermodal interfaces;
- New metric for determining land-value is time and cost of moving people and goods to and from the Airport (not distance);
- The Three “a’s” (Accessibility, Accessibility, Accessibility) replace the three “l’s” (Location, Location, Location) as the most important commercial real estate organizing principle; and
- Cluster development, wide lanes, and fast movements are optimal (Aerotropolis form follows function).
- Flexibility and adaptability in the management of land use

It is noted that an Aerotropolis Master Plan is in the process of being developed. This plan will seek to promote the appropriate development of land around the airport and will also seek to ensure alignment between various government departments in the implementation of the aerotropolis strategy.
2.3.4 Land Use Management Implications

John Kasarda has noted the following with respect to planning for Aerotropolis and the land use management implications of facilitating aerotropolis development. “Although most aerotropolis development to date has been organic, spontaneous and haphazard — often spawning congestion and environmental problems — in the future it can be markedly improved through strategic infrastructure and urban planning.

- Dedicated airport expressway links (aerolanes) and airport express trains (aerotrails) should efficiently connect airports to major regional business and residential concentrations.
- Special truck-only lanes should be added to airport expressways, as should improved interchanges to reduce congestion.
- Time-cost accessibility between key nodes should be the primary aerotropolis planning metric rather than distance.
- Businesses should be steered to locate in proximity to the airport based on their frequency of use, further reducing traffic while improving time-cost access.
- Airport area goods-processing activities (manufacturing, warehousing, trucking) should be spatially segregated from white-collar service facilities and airport passenger flows.
- Noise and emission-sensitive commercial and residential developments should be sited outside high-intensity flight paths.
• Cluster rather than strip development should be encouraged along airport transportation corridors with sufficient green space between clusters.
• Form-based codes should establish general design standards for airport area buildings, walkways, travel lanes, landscaping, and public space.
• Place-making and way-finding enhanced by thematic architectural features, public art, and iconic structures should make aerotropolis developments interpretable, navigable, and welcoming.
• Mixed-use residential/commercial communities housing airport area workers and frequent air travellers should be developed with easy commutes and designed to human scale providing local services and sense of neighbourhood.

In short, aerotropolis development and sustainable “smart growth” can and should go hand-in-hand.”

http://www.aerotropolis.com/airportCities/about-the-aerotropolis

It is imperative that the urban form be managed in a way that allows it to be

• Highly competitive on the international market,
• Aesthetically attractive, and
• Economically and environmentally sustainable.

The land use management system therefore needs to be

• Efficient and cost effective. The application process must be reviewed as long delays cannot be condoned. Fast-tracking approvals through specific mechanisms/entities needs to be implemented. The current application approval timeframe for statutory applications is well in excess of 6 months and in fact often runs to well over the year mark. This is unacceptable for investors and developers.
• Facilitate a high quality public and private realm.
• Flexible and adaptable to market trends and demands.
• Promote sustainability in building and management processes.

2.4 FORM BASED CODES

2.4.1 INTRODUCTION

As part of the brief, the consultants were required to look at Form Based Codes as a concept which may inform the Scheme component of the work. The following section provides a summary of the concept of Form Based Codes as well as the associated concept of Smart Codes, and how these could potentially guide, or be incorporated into, the Scheme.

2.4.2 DEFINITION

Current zoning practices can be restrictive and limiting. They do not always result in the required aesthetic or amenity being applied to an area. Alternate mechanism to such an approach need to be comprehensive and cost-effective. The Form-Based / “SmartCode” is seen by some to be such a tool. The Smart Code, originally developed by Duany, Plater-Zyberk and Co, is a model of planning control that is designed to create walkable neighbourhoods with the full range of the rural-urban transect. It
focuses on what the Municipality wants to happen in an area i.e. a physical outcome, rather than what it does not want. New urbanism, on which the Form Based and SmartCode approach is based, attempts to control the built environment using strict building controls and performance criteria to ensure the desired environment. This then tends to also control land use, albeit indirectly (e.g. by placing certain built form criteria in place, that in itself can limit an area to specific uses).

2.4.3 Elements and Implications
Because a SmartCode or Form-Based Code is prescriptive (it states what you want), rather than prescriptive (what you don’t want), form-based code (FBCs) can achieve a more predictable physical result.

The elements controlled by Form-Based Codes are those that are most important to the shaping of a high quality built environment. They encourage public participation because they allow citizens to see what will happen where. They control built form, are very visual and provide for a range of typologies. They tend to not control use specifically, however, controls are put in place that automatically filter uses. For example, the SmartCode may say “No noise above x Decibels” which may then filter out certain industries. Furthermore, by placing emphasis on built form, this too can filter uses ensuring appropriate development within an area.

Although the use of Form-based and SmartCodes is becoming more frequent, according to the SmartCode Central website, many communities (their city management, planning, and legal staff included) remain unfamiliar with them and may be hesitant to what appears to be such a dramatic change in development regulations. It must also be noted that, municipal officials/staff may be reluctant to embrace the concept because they lack the skill sets necessary to properly implement, maintain and administer such a code. They can be difficult to use and require a specific skill set, which could be problematic considering the technical capacity restraints facing many municipalities. Finally, the development of appropriate Form Based Codes can be costly if done thoroughly.

2.4.4 Critical Elements of Form-Based Codes and How They Relate to the Study Area
The following are the major elements of Form Based Codes based on Form Based Codes: A Step-by-Step Guide for Communities (2012) as they relate to Watson North and Greylands:

- A mix of land uses is promoted which reduces the need to travel extensively. This is reflected in the approach taken by the Functional Area Plans prepared.
- A mix of housing types is promoted. This is reflected in the range of housing typologies used to inform the FAPS, a description of which is found in the Annexure to the Watson North and Greylands Functional Area Plan report (2016).
- Focuses on what the community wants and not on what it dislikes. This is an element that, as the area develops over time will need to be reviewed/monitored through possible Management Associations or the like.
- Tailors the requirements to fit places or neighbourhoods by reflecting the overall character. The public realm is important (streetscapes, building character etc.). The change in typology across land uses/public realm etc. is represented graphically. This is something that, as a greenfields development, will need to be reviewed/monitored through possible Management Associations or the like. However, the initial landscape character of the area has been
promoted through sensitive planning around the environmental assets of Watson North and Greylands.

- Emphasis on site design and building form over density and regulations that can change over time. It should also provide information that is easier to use that conventional zoning. The FAP has taken a flexible approach to building form and land uses, and the level of detail of design is something that the private sector will need to address. However, it is noted that the current planning system is still dictated by the Town Planning Scheme and thus, whilst the overall approach of not dictating uses at this time is relevant from the Form Based Codes Perspective, eventually the land that is taken up will be zoned (appropriately) and this will have associated controls.

- Neighbourhoods should be walkable. In the Watson North and Greylands FAP, a variation of the walkable neighbourhoods and intensity zones approach is in fact seen throughout the plan. This is especially clear in the residential component whereby a walkable neighbourhood (approximately 400 metres around a node) is clearly seen through changes in intensity as one moves away from the urban centre. Whilst this may not be as clear in the industrial and business components of the plan, a nodal/walkable neighbourhood approach is still applied.

Based on the research undertaken it is concluded that much of what is proposed in the Form-Based or SmartCode approach is incorporated into our planning approach, albeit, presented in a modified format. Furthermore, the land uses even within these areas have taken a mixed-use approach to ensure that for example, workers in the industrial area can still shop within a short walk from their place of work. Thus, the mixed-use approach enhances the walkability of the area.

It is noted that Form-Based Code presentation is very visual and the approach can be very prescriptive and complex, which is not possible to address at the FAP and draft Scheme level. It is also noted that currently, the Town Planning Scheme is the mechanism for managing land use, and therefore whilst Form Based Codes are a useful tool, land still needs to be managed in terms of what is statutorily required.

2.4.5 SECTIONS ACROSS DEVELOPMENT BLOCKS

One element of Form Based Codes as described above, is the use of sections across land use typologies and across streetscapes to assist in designing a high quality built environment. Whilst at this project level (considering land ownership issues, timing issues etc.) determining exact sections is not possible, it is possible to conceptually represent these relationships. What follows is a series of potential sections that represent how the area could look and feel. At the appropriate time, and if a development is substantial enough to warrant it, detailed precinct plans could be developed to create more detailed plans to guide development. Such plans could also be further enhanced through the creation of appropriate management associations/precinct bodies. However, this is subject to many factors such as timing, size of project, nature of project etc.
FIGURE 8: FORM BASED CODES - LOCATIONS OF SECTIONS

A. LIGHT INDUSTRIAL / BUSINESS CORRIDOR

B. MIXED USE CORRIDOR

C. NEIGHBOURHOOD CENTRE

D. RESIDENTIAL CORRIDOR
FIGURE 9: BUSINESS CORRIDOR FORM BASED CODE

LAND USE CATEGORIES

- **Business**
  - High-rise and business park office development with potential high-rise retail, small
  - High-rise and business mixed-use development
  - Light industrial and warehousing

- **Light Industrial Corridor**
  - Higher density development along the arterial road and major thoroughfares
  - Higher density development along the arterial road and major thoroughfares

- **Business**
  - High-rise and business park office development with potential high-rise retail, small
  - High-rise and business mixed-use development
  - Light industrial and warehousing

MOBILE RESERVES

- **Local**
  - Access to road on site
  - Access to road on site

- **Provincial**
  - Access to road on site
  - Access to road on site

- **Metro**
  - Access to road on site
  - Access to road on site

BUILT FORM PLAN

- **Business**
  - Mixed-use commercial
  - Mixed-use commercial

- **Light Industrial Corridor**
  - Mixed-use commercial
  - Mixed-use commercial

- **Business**
  - Mixed-use commercial
  - Mixed-use commercial

FORM BASED CODE:

- **Light Industrial / Business Corridor**
  - Form based code
  - Form based code

The Planning Initiative and Team
FIGURE 10: MIXED USE CORE FORM BASED CODE

LAND USE CATEGORIES

MOVEMENT RESERVES

BUILT FORM PLAN

BUILT FORM SECTION
FIGURE 11: NEIGHBOURHOOD CENTRE FORM BASED CODE

LAND USE CATEGORIES

MOVEMENT RESERVES

BUILT FORM PLAN

BUILT FORM SECTION

5 minute walk

Page 22
FIGURE 12: RESIDENTIAL CENTRE FORM BASED CODE
LAND USE CATEGORIES

MOUVEMENT RESERVES

BUILT FORM PLAN

BUILT FORM SECTION
2.5 CONCLUSIONS

The study area is located directly North of a major international airport and is well connected to the rest of the country and world economy. It also lies within the eThekwini Metropolitan Municipality which is the third biggest Municipality in South Africa and part of its vision it aims to be Africa’s most liveable city by 2020. It is through significant developments such as the Aerotropolis that economic growth can be stimulated to ensure poverty alleviation and wealth creation. However, this needs to be done in an appropriately managed manner, and this is where land use control plays a key role. As such, projects such as this one have an important contribution to make to the economy and landscape of eThekwini.

From the research conducted, the following are the key lessons have emerged:

- Flexibility of land use
- Fast tracking applications
- Focus on intensity of development and performance rather than on separating specific land uses
- Factor in noise and safety of aircraft operation
- High quality public and private realm
- The establishment on Management Associations for larger developments will assist in maintaining a high quality urban landscape.
- The development of Precinct plans for major nodes can be a means of building Form Based Codes into certain areas.

Based on the research undertaken, the following two approaches have emerged with respect to the preparation of a Scheme for the area:

- Conventional approach: using zones from the recently adopted North Scheme, eThekwini Municipality. The Municipality has prepared a Consolidated Scheme for the North, which includes all the zones from all the Schemes in the area. These zones are presented in the Municipality’s Development Facilitation Tables, which is easy to use and comprehensive.
- Adapted approach using lessons from Aerotropolis and high level Form-based Code Approaches to suggest new zones that should be included in the North Scheme. Such an approach would use the template from the Municipality’s Development Facilitation Tables, however, new zones would be proposed that promote flexibility and performance. With reference to Form Based Codes, precinct plans may be appropriate for certain developments in order to develop a true Form Based Code kit.
3 DRAFT SCHEME RECOMMENDATIONS

3.1 INTRODUCTION

The following section details the recommendations for the preparation of a Scheme for the study area that have arisen from the research undertaken and documented in this report and the FAPs prepared for the study area.

It is noted that when preparing the Functional Area Plan, areas that are already developed, or plans highly advanced and broadly agreed to, were excluded from this work. The FAP focussed on the greenfields potential in the study area as this is where the Municipality has the ability to influence future development.

3.2 PROCESS ISSUES

3.2.1 SUB-DIVISION OF AGRICULTURAL LAND ACT, ACT NO. 70 OF 1970

All land that is not currently zoned in terms of a Scheme will require an application to the Department of Agriculture in terms of the Sub-Division of Agricultural Land Act, Act No. 70 of 1970 to release the land from Agricultural Use.

It is recommended that the Municipality front end this application by engaging with and submitting the various strategic plans to the Department of Agriculture for approval. This will set the context for the Department to consider the applications on pieces of land within a broader context of strategic planning. The plans should be formally submitted and presentations and workshops held to reach agreement with the Department of Agriculture on the strategic plans for the area. It is understood that this process has commenced.

3.2.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT (NEMA) NO. 107 OF 1998 AND ASSOCIATED REGULATIONS

The purpose of NEMA is to promote sustainable development and facilitate integrated environmental management. The 2014 Environmental Impact Assessment (EIA) regulations published in terms of Section 24(5) and 44 of the Act in Government Notices 982-985 list activities for which environmental authorisation is required and prescribe a set of processes to be followed in investigating the sustainability of a development proposal. The following points should be noted regarding the EIA process:

- **Processes & Timeframes:** The EIA regulations include 3 listing notices. In the event that a proposal triggers activities in listing notices 1 and 3, the Basic Environmental Assessment Process (BA) must be followed. The minimum timeframe for the BA process from the date of application to a decision is 197 days and a maximum of 247 days. Where activities in Listing Notice 2 are triggered the full Environmental Scoping and Impact Reporting (SEIR) process is to be followed, for which the minimum timeframe is 300 days and a maximum of 350 days.

- **Cost:** There is an application fee. In addition, the proponent is required to appoint an independent and recognised Environmental Assessment Practitioner (EAP) to manage the application and assessment process.
Alignment with other Regulatory processes: Depending on the nature of the development, its ancillary activities, its outputs (effluent, waste), and/or the type sensitivity of the receiving environment, several other licenses or authorisations may be required in terms of other Specific Environmental Management Acts (SEMAs) which include:

- National Environmental Management: Protected Areas Act (57 of 2003), known as the NEM:PAA
- National Environmental Management: Biodiversity Act (10 of 2004), known as the NEM:BA
- National Environmental Management: Air Quality Act (39 of 2004), known as the NEM:AQA
- National Environmental Management: Integrated Coastal Management Act (24 of 2008), known as the NEM:ICM
- National Environmental Management: Waste Act (59 of 2008), known as the NEM:WA

In addition to the SEMAs, other relevant Acts that may be triggered include and for authorisation is required may include:

ii. National Forests Act No 84 of 1998: Permission is required to destroy either forest of protected tree species listed in terms of the Act.
iii. National Heritage Resources Act, No 25 of 1999: Permission is required to destroy heritage resources and deal with graves.
v. Minerals and Petroleum Resources Development Act No 28 of 2002: Where the activity is mining, or where a new borrow site is required to source material.
vi. Planning: Where approval in terms of SPLUMA or the PDA (see section 3.2.4 below)

The EIA process requires and provides for the alignment of these various regulatory processes in terms of the specialist investigations required to support the decision, the consultation process demanded by each, and importantly the decision making and associated conditions. Certain processes require the EIA decision as a prerequisite for issuing their decision, for example a Water Use License and planning decisions.

Key Authorities: The Competent Authority (CA) responsible for administering the EIA regulations KwaZulu-Natal is the Department of Economic development, Tourism and Environmental Affairs (EDTEA). While the EIA regulations requires a comprehensive and inclusive public participation process (PPP) that will require engagement with all authorities identified in terms of the relevant legislation, the Municipality’s Environmental Planning and Climate Protection Department (EPCPD) provides important information and guidance regarding relevant to the assessment of development applications, whether they trigger the EIA process, or require an assessment to support a planning application.

3.2.3 A SEPARATE SCHEME OR PART OF THE NORTH SCHEME?
It was agreed that any new zones proposed for the study area should be incorporated into the North Scheme eThekwini Municipality which has been approved by the eThekwini Council. A separate scheme is not required.
3.2.4 THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, ACT NO 16 OF 2013 (SPLUMA) AND KwaZULU-NATAL PLANNING AND DEVELOPMENT ACT, ACT NO. 6 OF 2008 (PDA)

1.2.4.1 OVERVIEW
The application of a Scheme in the study area will require applications to zone the land in terms of the SPLUMA and the KZN PDA. Whilst SPLUMA will be applicable into the future the eThekwini Municipality is currently in the processing of developing its own Land Use Management by-law. Once this is enacted applications will be made in terms of SLUMA and the By-law instead of the PDA.

1.2.4.2 SUMMARY OF REQUIREMENTS FOR SUBMISSION
Currently, in order to apply for the approval of a Town Planning Scheme, the following is required

The proposal and motivation along with the following in terms of Clause 11 of the PDA:

- Registered planner's written Evaluation and recommendation on the proposal
- A certificate supplied by a registered planner which confirms that the proposal complies in all respects with the Act; or if it does not comply in all respects then stating that the proposal is defective and provide details of the defect.

In terms of Clause 12 of the PDA the motivation needs to provide an analysis of:

- The potential impact of the proposal on the environment, socio-economic conditions, and cultural heritage;
- The impact of the proposal on existing or proposed developments or land uses in the municipality's area, or on existing developmental or mineral rights;
- The impact of the proposal on the road networks;
- The resources likely to be available for implementing the proposal, including access to the road network, engineering services, public transport, municipal services, sewage, water and electricity supply, waste management and removal, policing and security, health and educational facilities, and the fiscal ability of the municipality to pay compensation;
- In the event of the adoption of a scheme, the benefits that will accrue from the adoption thereof compared to the cost of compensation;
- The historical effects of past racially discriminatory and segregatory legislation on land ownership, land development and access to engineering services and public facilities, and the need to address the historical imbalances;
- The protection or preservation of cultural and natural resources, including agricultural resources, unique areas or features and biodiversity;
- The natural and physical qualities of that area;
- The general principles for land development as stated in section 3 of the Development Facilitation Act, 1995 (Act No. 67 of 1995), and other national norms and standards, frameworks and policies contemplated in section 146(2) (b) of the Constitution.

1.2.4.3 SPECIALIST STUDIES REQUIRED FOR APPLICATION:
In order for an application to be made in terms of the KZN PDA, the Municipality will probably be required to prepare specialist studies to accompany the motivation, including:
• Environmental Impact Assessment statement, including a heritage report (if an EIA is called for in terms of the NEMA regulations this may be appended to the zoning application; if not an environmental statement as required by the PDA will need to be included in the motivation report.
• Traffic Impact Assessment.
• Bulk Infrastructure Servicing Report outlining existing services and required services.

1.2.4.4 APPLICATION PROCEDURE
Schedule One of PDA outlines the application procedure that needs to be followed for any application, as follows.

Part 1: Application procedure for applicants

1. Lodging of applications for amendment of municipality's scheme, subdivision or consolidation of land, development of land situated outside the area of a scheme, and alteration, suspension or deletion of restrictions relating to land
2. Records of receipt of application and request for further documents
3. Provision of additional information
4. Confirmation of lodging of complete application
5. Giving public notice
6. Manner of public notice
7. Petitions and delivery to groups
8. Amendments to application prior to approval
9. Applicants' right to reply
10. Power of municipality to conduct site inspection
11. Public hearing
12. Period for municipality to make decision

Part 2: Procedure for Municipality

1. Giving public notice
2. Manner of public notice
3. Petitions and delivery to groups
4. Amendments to proposal prior to approval
5. Municipality's right to reply
6. Power of municipality to conduct site inspection
7. Public hearing and accompanying inspection
8. Period for municipality to make decision

3.2.5 INCORPORATING ENVIRONMENTAL SUSTAINABILITY INTO THE SCHEME
The environmental analysis of the study area (Environmental Sector Report, Institute of Natural Resource, 2016) concluded that existing levels of ecosystem functioning are currently having a negative impact on the socio-economic components of the planning and adjoining/downstream areas. This situation also presents a significant risk to the sustainability of the area going forward. These conclusions are summarised below as the basis for a number of recommendations made with respect to incorporating environmental sustainability into detailed design and land use management.
• Systems that produce ecosystem services help developers by reducing liabilities and infrastructure costs, shortening permitting times, enhancing brand, and increasing property desirability and value. They help government by reducing infrastructure costs and future liability risks. They also help people by increasing human well-being on- and off-site.

• The current state of natural systems (limited extent, poor condition and fragmented state of natural systems) means there is low capacity to deliver key ecosystem services e.g. improve water quality and resilience of the system to buffer and mitigate extreme natural events – such as flooding and drought.

• The status quo translates into poor environmental quality which undermines social well-being and economic activities e.g. sedimentation and poor water quality are key factors in the degraded state of the Tongaat Estuary – an important recreational and tourism asset. Poor water quality in the Dudley Pringle Dam diminishes its value for recreational and residential use – as proposed in plans for this node.

• The remaining natural systems in the Watson North and Greylands areas will come under increasing pressure in the form of transformation, fragmentation and pollution from increased development both in these areas and in adjacent areas.

• Climate change adds a further risk and pressure through increased occurrence and intensity of extreme events.

• Natural systems are linked and land-use within the planning area transfers negative impacts on downstream assets e.g. the Tongaat Estuary, associated beaches an inshore marine habitat.

• Given that the socio-ecological system is already below sustainable thresholds and under pressure for further decline, maintaining the status quo is not an option. The natural systems need to be rebuilt where ‘lost’ and enhanced where they remain.

• Planning has a major role to play in redressing the current negative impact on these key assets.

Such issues are typically not necessarily addressed in the Scheme other than ensuring appropriate zoning of environmental resources. This is typically done as an overlay to the Scheme (DMOSS), or through the use of the relevant Land Use Zone (Public Open Space, Private Open Space etc.). Therefore, those areas identified as environmental services or similar in the Functional Area Plan will need to be included into the Draft Scheme through the appropriate mechanism. D’MOSS has already been prepared, but will need to be amended to reflect the Functional Area Plan. The environmental component of the FAP has been developed in collaboration with the Municipality’s Environmental Planning, and Climate Protection Department (EPCD) and there are some additions to D’MOSS that will be required. It is also noted that eThekwini Municipality’s EPCD, Dube TradePort (DTP) and Tongaat Hulett Developments (THD) have defined receiving areas to offset the residual impact of 7 development projects proposed by THD and DTP in the Tongaat, Mdloti and Olanga Catchments. The offset receiving areas are focused on Wetland systems. The offset areas defined through this process have been incorporated into the open space framework as part of the FAP process. A principal of an effective offset is that the site is secured for conservation purposes through an appropriate mechanism e.g. as a Nature Reserve or Protected Environment through the Protected Areas Act. These offset areas will in future need to be zoned accordingly based on the mechanism used to secure them.
3.3 Scheme Proposals

3.3.1 Vision Statement and Statements of Intent for the Watson North and Greylands Study Area

Vision Statements and Statements of Intent for areas within a Municipality form the basis for decision making with respect to the implementation of Scheme changes. They provide a link between the strategic planning documents and the Scheme and should guide the planners understanding of the future development of the area. Based on the NUDC (2011) work and the more detailed FAPs prepared, the following vision statement for the Watson North and Greylands Area and statements of intent for each area have been proposed. Ideally these should be included in the Scheme document itself.

**TABLE 2: VISION STATEMENT FOR WATSON NORTH AND GREYLANDS AREA**

<table>
<thead>
<tr>
<th>AREA AND STRATEGIC REFERENCE DOCUMENTS</th>
<th>VISION STATEMENT FOR WATSON NORTH AND GREYLANDS AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUDC (2011)</td>
<td>Watson North</td>
</tr>
<tr>
<td></td>
<td>• Metropolitan environmental asset (Tongati River and associated ecological corridors).</td>
</tr>
<tr>
<td></td>
<td>• Future sub-metropolitan business park/office/light industrial/logistics expansion zone and support zone to King Shaka Airport and Dube Trade Port (+2030).</td>
</tr>
<tr>
<td></td>
<td>• Future hospitality support zone to King Shaka Airport (+2030).</td>
</tr>
<tr>
<td></td>
<td>Greylands</td>
</tr>
<tr>
<td></td>
<td>• Metropolitan environmental asset (Tongati River).</td>
</tr>
<tr>
<td></td>
<td>• Local environmental asset (Dudley Pringle Dam).</td>
</tr>
<tr>
<td></td>
<td>• Future Sub-metropolitan light industrial expansion zone to support Dube Trade Port (+2030).</td>
</tr>
<tr>
<td></td>
<td>• Local mixed use, mixed density and mixed income urban living areas</td>
</tr>
<tr>
<td></td>
<td>• Future local mixed use, mixed density and mixed income urban living areas expansion zone north of Tongati River tributary (+2030).</td>
</tr>
</tbody>
</table>

**WATSON NORTH AND GREYLANDS FAP (2016)**

**WATSON NORTH VISION STATEMENT**

*Setting high standards in: Environmental conservation, sugar cultivation and business park development*”

In the short to medium term, environmental conservation efforts combined with the need for sugar cultivation limit urban development prospects. However, that business park development which does occur will be world class and almost entirely middle to higher skills oriented, closely connected with the demands of the aerotropolis.

**Long Term Vision**

“A key component of the airport city, and South Africa’s leading centre for Research and Development and knowledge-based economic growth and employment, high tech business parks within five minutes’ reach of the airport and near to outstanding areas of natural vegetation and conservation in stream/river valleys”.

The Planning Initiative and Team
VISION STATEMENT FOR WATSON NORTH AND GREYLANDS AREA

In the long term, small pockets of agriculture remain in Watson North and between Amanzimyama and the N2, and there are important, relatively low density, very high quality business parks with maximized public transport connectivity to the airport. There is also the potential within Watson North, near to Amanznyama, for a tertiary educational and research institution serving most of the north coast with top quality skills enhancement and education, the offices/laboratories of leading national R&D organisations, and Pharmaceuticals, IT industries and BPO enterprises amongst others.

GREYLANDS VISION STATEMENT
Short/Medium Term Vision
“Setting high standards in a variety of developments within an evolving metro/rural fringe”.
The establishment of the Eastern Bypass, and East/West connections to it, creates a new ‘connectivity skeleton’ which accelerates a variety of node formations at key crossroads. East of the R102, Airport and aerotropolis related business/industry will develop along key movement routes in response to accessibility provision. West of the R102, Residential and related uses will start to develop as demand increases. A tourist node near Dudley Pringle Dam will develop in the near future in response to the natural associated natural assets. However, the majority of Greylands is likely to remain agricultural and related uses in the short to medium term.

Long Term Vision
“A region playing an important role within the airport city, both in terms of accommodating industrial and logistics supply, and in terms of helping to meet the demand for residential land within eThekwini. The people who live in the Greylands area will help form the workforce that makes the aerotropolis thrive”.
West of the R102, a balanced mix of peri-urban environments consisting of varying intensities of development, co-existing with and complementing large areas of pristine sub-tropical, near-coastal natural environments. East of the R102, aerotropolis related business/industry along key movement routes will develop over time as a result of the need for quick access to the airport. Strong East/West transport links however now complement the North/South links, enabling the full functional integration of the expanding villages into the work and facilities offered by Ballito/KwaDukuza/Compensation.
### TABLE 3: AREA STATEMENT OF INTENT – WATSON NORTH

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>CHARACTER / IMPACT and BUILT FORM</th>
<th>TIME FRAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptually, Watson North will primarily function as a Business and related use area. It will form a natural extension of Tongaat and the airport/aerotropolis. The development would primarily be high end and/or high tech business/research/knowledge park or light industrial park developments that benefit from links to the airport. Such links relate to the need for the quick movement of high value, low mass goods, or the need for personnel to be located close to the airport.</td>
<td>A wide mix of business related uses located within the area. The mixed-use development can occur on both the horizontal and vertical planes.</td>
<td>Short to medium</td>
</tr>
<tr>
<td></td>
<td>• In terms of the built form, the most intense development is located at main interceptory points.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• As one moves away from the core there is a step down in intensity, although the uses are largely the same.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Along the Eastern Bypass, there is the potential for light industrial and logistics uses linked into the airport.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• There is opportunity to rehabilitate the environmental assets in the area, resulting in higher amenity and value. This create a high value working environment and will draw in important corporates.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• This area would be highly desirable for a tertiary educational/research institution and associated educational village development near the Amanzimyama Offices. This area falls outside the 2035, 55 Db Noise Contour and is a very attractive development area. However, this is just one of many possibilities, and is dependent on future market demands and trends.</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4: AREA STATEMENT OF INTENT – GREYLANDS

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>CHARACTER / IMPACT and BUILT FORM</th>
<th>TIME FRAME</th>
</tr>
</thead>
</table>
| Residential Development to the West of the R102 as well as Industrial and Business supporting the Aerotropolis to the East of the R102 | **West of the R102**  
- Located along, and West of the R102 is a number of urban residential suburbs to Tongaat developing around intersections, and are surrounded by Agriculture and Open Space. These villages are linked by corridor development along movement routes.  
- These villages have a highly mixed core, with the most intense development located at intersections. This development is mixed on both the horizontal and vertical plane. Moving away from the core, intensity decreases and becomes more residential in nature. These villages are surrounded by agriculture and open space, creating in demand pockets of suburbs that people want to live in.  
**East of R102**  
- East of R102 is aerotropolis related industry, logistics and business. A wide mix of business related uses located within the area. The mixed-use development can occur on both the horizontal and vertical planes.  
- In terms of the built form, the most intense business development is located at metro road interceptory points. As one moves away from these cores, there is a step down in intensity, although the uses are largely the same.  
- Airport related industry and logistics are located in a corridor fashion along the Eastern bypass  
- It is noted that pockets of intense agriculture/ agri-industry will occur towards the periphery of the industrial/warehouse/logistics uses. | Medium to Long with some short |
3.3.2 DEVELOPABLE BLOCKS
In the process of preparing the FAPs for Watson North and Greylands, the environmental constraints, land use constraints (including the quarry) and high order road networks with both sets of associated required buffers/ reserves were first applied. The FAPs also reflect exclusions such as existing built development (e.g. Tongaat, Lindokuhle etc.) and these are shown as grey on the plans. Once all appropriate filters/ fixes were applied, the remaining land was determined as developable.

Within this developable land, developable blocks were then designed in line with the node/ corridor approach to development. Potential local scale roads between the blocks are shown, however, these are indicative only. The blocks show areas of potential development by forming a series of “corridors” and “nodes” along major movement routes and at intersections. These indicative blocks are at the 1-3 ha scale (typical urban block size). Land use intensities (potential bulk development) as well as potential broad land use category splits were then applied to the blocks. Further detail on the Bulk Ratios and land use category splits for each intensity zone are found in the sections that follow.

When the developable blocks are combined with the other elements such as the environment and road hierarchy, the full Functional Area Plan is developed.

The focus of the plan is on development intensity. However, there are also broad land use intentions associated with each of the areas and these are described below. Included in the descriptions are possible Floor Area Ratios as well as possible land use breakdowns. Due to the nature of the plan though, it must be noted that these are potential allocations and may not necessarily reflect the exact future nature of development. The tables after each of the descriptions below reflect the land use breakdown for each area and this assists in understanding the development intention.

The Broad Land Use Categories include:

- Natural Environment
- Mixed Use Core Business
- Mixed Use Neighbourhood Centre
- Light Industrial Corridor
- Business
- Mixed Use residential
- Residential
- Agri-Residential
- Agriculture

The land use categories are further explained in Table 5.

3.3.3 PROPOSED ZONING

1.3.1.1 INTRODUCTION
Based on the Functional Area Plans prepared in the earlier phases of the project a series of potential zones for the various developable blocks has been developed as described above. It is stressed that the zones are potential zones due to the fact that much of the land is privately owned, and the actual zones will be determined through the development application process. What is important is that the
suggested zones within the various broad land uses are appropriate and align both with the visions for the FAP areas, as well as the aerotropolis concept.

The section that follows describes the broad intentions of each of the intensity zones, and lists possible zones from the Northern Scheme or new zones that could be applied to these intensity zones.

1.3.1.2 Basket of Zones Approach

Using a basket of zones approach to the zoning in the Watson North and Greylands areas, zones have been identified from the Northern Consolidated Scheme of eThekweni Municipality, as well as the proposals in the Inyanyinga Tongaat FAP and Draft Scheme (See Appendix A), that may be appropriate within the Watson North and Greylands areas. Broad land use categories proposed in the Functional Area Plan have been listed in the table below and suggested zones from the Northern Scheme that could be assigned to these land uses identified and listed.

It is noted that due to the nature of the FAPs as well as the aerotropolis concept (i.e. a mixed and flexible approach to development), the list of potential zones within each of the developable blocks can be quite large depending on the nature of the zone. The key issue when reviewing a development application is whether it is in line with the overall vision for the area, both in terms of the FAP, and in terms of the aerotropolis. At this stage, and scale of planning, it is impossible to provide a site by site zoning layout. It is far more appropriate to develop a basket of potential zones that are appropriate within the area that the developer can examine and determine what best suits their intentions.

It is also stressed that broadly, the development within the FAP areas is likely to be in the medium to long term, and therefore it will be appropriate to review the FAP and Scheme proposals as the development horizon is approached, or as and when is deemed appropriate. The key project outcome at this stage is preparing an FAP for Council approval that highlights the key fixes (e.g. major road alignments and environmental opportunities and constraints), and provides the Municipality with a framework to use when responding to development proposals.

1.3.1.3 Proposed Appropriate Zones per Broad Land Category

The following table reflects the proposed appropriate zones per FAP broad land use category. These zones are taken from the North Scheme unless otherwise stated. The selection of zones was developed through a workshop process and takes into account the Intentions for the possible zones as well as the permitted uses and the development controls. As Watson North and Greylands develops, the Municipality will need to use the table below to determine whether a proposed development is appropriate based on the basket of zones. However, if new zones are added to the North Scheme, there may be a need to review the basket is new zones that are appropriate are developed.
### TABLE 5: LAND USES AND SUGGESTED ZONES FROM NORTHERN CONSOLIDATED SCHEME AND INYANINGA TONGAAT FAP (SEE APPENDIX A)

<table>
<thead>
<tr>
<th>Land Use as per FAP</th>
<th>Broad Vision and Function</th>
<th>Max Floor Area ratio</th>
<th>Proposed Land Use Split</th>
<th>Basket of Zones extracted from Northern Scheme</th>
<th>Basket of Zones extracted from Inyaninga Tongaat FAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Use Core Business</td>
<td>Mixed Use Core Business is the <strong>most intense aerotropolis related zone</strong> proposed within the Industrial and Commercial Uses. It is located around major movement intersections. It should contain a mix of industrial, retail and commercial/office development and effectively will form the heart of the nodes in the business and related portions of the study area.</td>
<td>2.5</td>
<td>Retail 20% Commercial/office 40% Light Industrial 40% Other 0%</td>
<td>• Commercial Office  • Office  • Business Park  • Education  • Fuelling and Service Station  • General Industry  • Light Industry  • Service Industry</td>
<td></td>
</tr>
<tr>
<td>Mixed Use Neighbourhood Centre</td>
<td>Mixed Use Neighbourhood Centre is the <strong>most intense zone</strong> proposed within the Residential and related portion of the study area (West of the R102 in Greylands). It is located around major movement intersections. It should contain a mix of residential, commercial and retail development and effectively will form the heart of the nodes in the residential portions of the study area. This is located at key movement intersections and forming the heart of the village developments.</td>
<td>2.5</td>
<td>Retail 10% Commercial/office 20% Residential 60% Other 10%</td>
<td>• Administration  • Commercial  • Commercial Office  • Education  • General Commercial  • Institution  • Limited Commercial</td>
<td>• Mixed Use Urban Node (from Inyaninga Tongaat FAP - not in current Northern Scheme)</td>
</tr>
<tr>
<td>Light Industrial Corridor</td>
<td>Light Industrial Corridor is relatively high density development <strong>along the Provincial and major metropolitan roads</strong>. It should contain a mix of airport/aerotropolis and similar related uses and helps to create the stepdown in development intensity away from the Mixed-Use Core Business. Uses would include airport related industry</td>
<td>1</td>
<td>Retail 5% Commercial/office 30% Light Industrial 60% Other 5%</td>
<td>• Activity  • Business Park (note additional controls in Scheme)  • Commercial  • Commercial Office</td>
<td>• Aerotropolis Enterprise Zone (from Inyaninga Tongaat FAP - not in current Northern Scheme)</td>
</tr>
</tbody>
</table>
### Land Use as per FAP

<table>
<thead>
<tr>
<th>Land Use as per FAP</th>
<th>Broad Vision and Function</th>
<th>Max Floor Area ratio</th>
<th>Proposed Land Use Split</th>
<th>Basket of Zones extracted from Northern Scheme</th>
<th>Basket of Zones extracted from Inyaninga Tongaat FAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>(generally high value, low weight goods), logistics and so forth. There is also potential within this area for agri-processing, especially that which is related to the airport.</td>
<td>1</td>
<td>Retail 2%</td>
<td>• Light Industry</td>
<td>• Aerotropolis Business Park (from Inyaninga Tongaat FAP - not in current Northern Scheme)</td>
</tr>
<tr>
<td></td>
<td>The Business area is effectively a mix of high end business park/office development with potential light industry and logistics. Within Watson North in particular, the vision is to have a high-end business park environment than aligns with the aerotropolis principle of bringing important corporates close to the airport. The means of doing this is ensuring both a <strong>high quality built environment</strong> and a <strong>beautiful natural environment</strong>. One can think of it as <strong>“moving away from the city lifestyle to work”</strong>. These business parks are located within Watson North and link in to the intentions of having a world class high end business and technology park near the airport. The business component within Greylands may also have high end business parks, but it may also have more of a logistics/ light industry component. Hotel and temporary accommodation also occurs within this zone in response to the need for such uses near the airport. The purpose of the flexible approach as per the needs of an aerotropolis means that prescribing exactly what happens and where within this zone is not appropriate.</td>
<td>Commercial/office 49% Light Industrial 49% Other 0%</td>
<td>• Activity</td>
<td>• Commercial Office</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Business Park</td>
<td>• General Commercial (no residential in noise zone)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Commercial (no residential in noise zone)</td>
<td>• Light Industry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• General Industry</td>
<td>• Limited Commercial (no residential in noise zone)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Service Industry</td>
<td></td>
</tr>
</tbody>
</table>
### Mixed Use Residential

Mixed Use Residential is a proposed area of intensity that is not typical residential only development in that it also contains other uses such as retail, commercial, services and the like. It also has a slightly higher floor area than is typical with residential development. This area is located between the less intense residential area and the more intense land uses around the core of the nodes. It is only located within Greylands.

<table>
<thead>
<tr>
<th>Land Use as per FAP</th>
<th>Max Floor Area ratio</th>
<th>Proposed Land Use Split</th>
<th>Basket of Zones extracted from Northern Scheme</th>
<th>Basket of Zones extracted from Inyaninga Tongaat FAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Use Residential</td>
<td>0.8</td>
<td>Retail: 5%</td>
<td>• Administration</td>
<td>• Residential- Mixed Density (from Inyaninga Tongaat FAP- not in current Northern Scheme)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commercial: 15%</td>
<td>• Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Residential: 68%</td>
<td>• Place of Public Worship</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other: 12%</td>
<td>• Commercial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Commercial Office</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Fuelling and Service Station</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• General Commercial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Institution</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• General Residential 1, 2, 3, 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Intermediate Commercial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Intermediate Residential</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Limited Commercial</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Medium Density Residential 1-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Residential 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Retirement Centre</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Special Residential 250-450</td>
<td></td>
</tr>
</tbody>
</table>

### Residential

Residential development in Greylands as reflected in the FAP should allow for a range of housing typologies and lifestyle choices distinguished by the environment, density and their location relative to the movement system and access to employment nodes. No residential development is reflected or permitted within the 2035 55 Decibel Noise Contour.

<table>
<thead>
<tr>
<th>Land Use as per FAP</th>
<th>Max Floor Area ratio</th>
<th>Proposed Land Use Split</th>
<th>Basket of Zones extracted from Northern Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0.5</td>
<td>Retail: 3%</td>
<td>• Education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commercial: 5%</td>
<td>• General Residential 4, 5, 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Residential: 77%</td>
<td>• Intermediate Commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other: 15%</td>
<td>• Intermediate Residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Limited Commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Medium Commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Medium Density Residential 1</td>
</tr>
</tbody>
</table>
### Land Use as per FAP

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</thead>
<tbody>
<tr>
<td>Agri-Residential</td>
<td>Potential development along the lines of smallholdings, agri-processing facilities and the like. Located as part of the shift from urban to rural.</td>
<td>0.4</td>
<td>Retail 3%</td>
<td>• Residential 1</td>
<td>• Residential- Urban Rural Transition (from Inyaninga Tongaat FAP- not in current Northern Scheme)</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Agriculture and associated uses including residential acting as the last part of the shift between urban and the environment. Greenhouses and intensive agriculture related to the airport is permitted, however, high impact uses such as abattoirs, fertilizer plants and so forth are not promoted. Note: Residential not permitted within the noise zone.</td>
<td>0.1</td>
<td>Retail 2%</td>
<td>• Agriculture (include condition to exclude agriculture activity)</td>
<td>• Rural Residential</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td>Commercial 8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td>Residential 60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td>Other 15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is noted that the Agriculture and Agri-Residential Zones will also have a residential component. The Agri-Residential Zone refers to potential development along the lines of smallholdings, agri-processing facilities and the like. This has a slightly higher intensity of development than the pure agricultural development which could also potentially have residential and agri-processing facilities. This development zone is only located in the land West of the R102. In terms of the Agriculture Zone, residential activity is permitted in this zone, as long as it is outside of the Noise Zone.
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Natural Environment</td>
<td>This is applied to the Natural Environment assets (including buffers), and is to be developed to provide ecosystem services. Possible uses other than as natural spaces are parks, sports fields, boardwalks, light agriculture and so forth.</td>
<td></td>
<td></td>
<td>• Public Open Space Reservation • Private Open Space • River Reserve Reservation • Conservation Reservation</td>
<td></td>
</tr>
</tbody>
</table>
1.3.1.4 **Addressing Agriculture within the Study Area**

Given the fact that agriculture, as defined in the Scheme is quite broad, it is suggested for the purposes of the Watson North and Greylands FAP area, that whilst the Agricultural zone is appropriate for the Agricultural uses, a condition be included in the additional controls whereby Agricultural Activity should be a Special Consent Application. Agricultural Activity as defined in the scheme is “**Agricultural Activity**: means a premises used for the intensive production in any form whatsoever, of poultry, game birds, livestock, aquatic animals, vegetables, timber production, fruit, and allied products, and includes any preparation or processing and or sale of these commodities and may include an abattoir.” This definition includes quite intensive agricultural uses that may have a high impact on neighbours and is not necessarily appropriate within the agriculture envisioned here. By making this a Special Consent use in terms of the additional controls within the zone, the overall integrity of the area would be promoted.

The alternative is to create a separate Agricultural Zone that is the same as the current Agricultural Zone, however, the Agricultural Activity which is currently a free entry use, should be placed in the Special Consent column.

1.3.1.5 **Airport Safety and Noise**

Given the proximity of the area to the airport it is proposed that the Municipality introduce some general clauses into the Scheme to address issues of safety and noise.

With respect to **safety**, developers need to comply with PART 139.01.33 Of the Civil Aviation Regulations, 1997 to the Aviation Act, 1962 (Act No 74 of 1962): Obstacle limitations and Marking outside Aerodrome or Heliport, as follows:

*Part 139.01.33*

(1) All objects, whether temporary or permanent, which project above the horizontal surface within a specified radius of 8 kilometres as measured from the aerodrome reference point should be marked as specified in Document SA-CATS-AH.

(2) Any other object which projects the horizontal surface beyond these radii or above the conical surface and which constitutes a potential hazard to aircraft shall be marked as specified in Document SA-CATS-AH.

(3) Buildings or other objects which will constitute an obstruction or potential hazard to aircraft moving in the navigable air space in the vicinity of an aerodrome, or navigation aid, or which will adversely affect the performance of the radio navigation or instrument landing systems, shall not be erected or allowed to come into existence without the prior approval of the Commissioner for Civil Aviation.

(4) No buildings or objects higher than 45 metres above the mean level of the landing area, or, in the case of a water aerodrome or heliport, the normal level of the water, shall without the approval of the Commissioner be erected within a distance of 8 kilometre measured from the nearest point on the boundary of an aerodrome or heliport.

(5) No building, structure or object which projects above a slope of 1 in 20 and which is within 3 000 metres measured from the nearest point on the boundary of an aerodrome or heliport.
shall, without the prior approval of the Commissioner be erected or be allowed to come into existence.

(6) No building, structure or other object which will project above the approach, transitional or horizontal surfaces of an aerodrome or heliport shall, without the prior approval of the Commissioner, be erected or allowed to come into existence.

(7) In cases where special circumstances do not permit the requirements of these Regulations to be met, the Commissioner may in public interest grant exemption from compliance with any or all the provisions of this Chapter in terms of Part 11 of the Regulations.”.

It is suggested that a clause be drafted for the North Scheme that states that the applicants responsible for any developments affected by these regulations are required to obtain written consent/approval from the Civil Aviation Authority or their nominated agent prior to submitting town planning or building applications to the Municipality. An information overlay could be prepared that illustrates the horizontal and conical surface and the extent of the 8km radius to assist the officials in determining which applications would be affected.

With respect to the noise impact of the airport it is important that all levels of strategic planning as well as the Scheme take this into account using a compatible land use approach, as follows:

- Forward plans: Integrated Development Plans, Spatial Development Frameworks, 5-year Capital investment framework, Spatial Development Plans and Local Area Plans. These can designate areas of broad land use that would be compatible with the development of the airport as well as indicating where infrastructural expenditure will or should occur to support and encourage or discourage development.
- Schemes: zones can be defined within the scheme that encourage compatible uses in potentially noisy areas and discourage incompatible uses from locating near the airport or in the case of existing zones an overlay can be prepared that highlights areas where noise may be a factor in approving any new land use applications for noise sensitive developments.

In addressing appropriate land use planning two elements need to be considered and balanced;

- Protecting the opportunities for future development and expansion of the airport as a critical component of the nation’s transport infrastructure and economic base by not planning incompatible land uses that will limit the operation and expansion of the airport.
- Protecting the interests of the public from the effects of noise pollution.

To this end it is proposed that a new clause be drafted to be included in the North Scheme that states that “all new developments and alterations should take into account the impact of noise on the development and, if necessary, take adequate steps to mitigate against noise that may arise from the take-off, landing or movement of aircraft at the King Shaka International Airport. All costs of noise mitigation shall be borne by the developer. The Municipality may have the right to call for a noise assessment report to accompany the application.”

It is noted that currently the Municipality has adopted a policy that no residential development may be permitted within the approved 55 Decibel Day Night Average Sound Level Noise contour modelled for the year 2035.
4 CONCLUSION AND WAY FORWARD

This report has outlined recommendations for the Draft Scheme for Watson North and Greylands. These recommendations have built on the work undertaken in the Northern Urban Development Corridor Local Area Plan for Tongaat- Dube (SSI, 2011), and research set out in this report on Aerotropolis, and Form Based Codes.

Research Conclusions

From the research conducted, the following are the key lessons have emerged:

- Flexibility of land use is imperative
- Fast tracking applications is imperative
- Focus on intensity of development and performance rather than on separating specific land uses
- Factor in noise and safety of aircraft operation
- High quality public and private realm

New Zones

The new zones proposed (as originally proposed in the Inyaninga Tongaat FAP and Draft Scheme) are:

- Residential - Urban Rural Transition
- Residential – Mixed Density
- Mixed Use Urban Node
- Aerotropolis Enterprise Zone
- Aerotropolis Business Park

Zones for Social Facilities

Although we have recommended the use of various mixed use residential zones, within the residential areas, layouts submitted by developers will have to identify sites for educational and social/community facilities and these must be zoned appropriately as Education, Institution or Administration or reserved for various services. The number of schools and social facilities required has been estimated in the Functional Area Plan report for Greylands and Watson North and should be provided on this basis. This allocation of land for educational and social facilities is imperative as one of the primary functions of a Scheme is to ensure that sufficient land is reserved for these purposes to serve both current and future generations. Land identified for open space purposes should also be appropriately zoned to ensure its protection into the future.

Legal Review and Consultation

It is strongly recommended that the proposed zones and clauses set out in this report are reviewed by a legal expert to ensure that the zones are sound and that all terminology used is valid in terms of the law and does not conflict with other legislation.

As the Scheme issues have health, traffic and environmental implications it is also necessary that the Scheme proposals are fully reviewed by inter alia the Health, Environmental (Provincial, KZN Ezemvelo
Wildlife, Metropolitan), Traffic (National, Provincial and Metropolitan) and Municipal Legal Department before being advertised for public comment.

Before advertisement for public comment it is necessary to liaise with and receive formal written comment from the following agencies:

- Councillors and Council Ward Committees
- All relevant Government Departments *inter alia*:
  - National and Provincial Roads
  - Education
  - Health
  - Housing
  - Water Affairs
  - Agriculture
  - ESKOM
  - Umgeni Water
  - COGTA – Planning and Traditional Affairs
  - Metropolitan Departments – Waste water, Water, Electricity, Environmental Health, EPDC, Framework Planning, LUMS, Roads, eTA, and Economic Departments

**Way Forward**

The suggested way forward to take the proposals from this project forward are as follows:

- Obtain Council approval of the FAPs and Scheme recommendations
- When applications are received, the Watson North and Greylands Functional Area Plan in association with the draft Scheme toolkit will need to be used to assess the proposals. It is noted that this process is likely to occur over an extended period of time, and in the interim, the study area will remain as agriculture.
- Advertise the proposed amendments
- Adopt the proposed amendments
- Develop proposals for fast tracking applications in the Aerotropolis region e.g. special approval committee
- Resolve the environmental debate in the area through the preparation of a regional aerotropolis open space system. This is currently being addressed through engagements between Dube TradePort, Tongaat Hulett Developments and eThekwini Municipality.
**APPENDIX A: OTHER POTENTIAL ZONES AS IDENTIFIED IN THE INYANINGA TONGAAT FAP AND DRAFT SCHEME (2012)**

**ZONE: Residential - Urban Rural Transition**

**ZONE INTENTION:** To provide for low density residential and agricultural uses and ancillary uses that lie within the area between the urban development line and the urban development interface line. Development within this area is intended to act as a buffer/transition area between urban development and the rural area. The built landscape within this zone is intended to be low density in character and no intensive development is permitted. The protection of agricultural land is encouraged.

**MAP COLOUR REFERENCE:**

<table>
<thead>
<tr>
<th>Primary</th>
<th>Special Consent</th>
<th>Precluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Activity</td>
<td>BTTS</td>
<td>Action Sports Bar</td>
</tr>
<tr>
<td>Agricultural Land</td>
<td>Boarding House</td>
<td>Adult Premises</td>
</tr>
<tr>
<td>Arts and Crafts Workshop</td>
<td>Builders Yard</td>
<td>Airport</td>
</tr>
<tr>
<td>Crèche</td>
<td>Car Wash</td>
<td>Betting Depot</td>
</tr>
<tr>
<td>Dwelling House</td>
<td>Cemetery / Crematorium</td>
<td>Container Depot</td>
</tr>
<tr>
<td>Educational Establishment</td>
<td>Chalet Development</td>
<td>Correctional Facility</td>
</tr>
<tr>
<td>Garden Nursery</td>
<td>Convention Centre</td>
<td>Direct Access Service Centre</td>
</tr>
<tr>
<td>Institution</td>
<td>Flea Market</td>
<td>Display Area</td>
</tr>
<tr>
<td>Nature Reserve</td>
<td>Funeral Parlour</td>
<td>Escort Agency</td>
</tr>
<tr>
<td>Place of Public of Worship</td>
<td>Government / Municipal</td>
<td>Flat</td>
</tr>
<tr>
<td>Private Open Space</td>
<td>Health &amp; Beauty Clinic</td>
<td>Fuelling and Service Station</td>
</tr>
<tr>
<td>Health Studio</td>
<td>Mobile Home Park &amp; Camping Ground</td>
<td>Landfill</td>
</tr>
<tr>
<td></td>
<td>Mortuary</td>
<td>Motor Display Area</td>
</tr>
<tr>
<td></td>
<td>Museum</td>
<td>Motor Garage</td>
</tr>
<tr>
<td></td>
<td>Office – Medical</td>
<td>Motor Vehicle Test Centre</td>
</tr>
<tr>
<td></td>
<td>Pet Grooming Parlour</td>
<td>Motor Workshop</td>
</tr>
<tr>
<td></td>
<td>Place of Public Entertainment</td>
<td>Multiple Unit Development</td>
</tr>
<tr>
<td></td>
<td>Restaurant / Fast Food Outlet</td>
<td>Night Club</td>
</tr>
<tr>
<td></td>
<td>Retirement Centre</td>
<td>Office</td>
</tr>
<tr>
<td></td>
<td>Riding Stables</td>
<td>Parkade</td>
</tr>
<tr>
<td></td>
<td>Shop</td>
<td>Recycling Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reform School</td>
</tr>
</tbody>
</table>
Additional Controls

1. Stormwater management plans **must** accompany building plans
2. The building plans must indicate permeable and soft surfaces to manage run-off
3. Building materials must be energy efficient and comply with the Energy Efficiency requirement of the NBR.
4. All development applications shall be accompanied by a landscaping plan, which shall comply with Councils requirements for indigenous planting.
5. Design must take into account facilities for the physically challenged, and in this regard paving features, lighting, landscaping, street furniture, signage must be considered.
6. Parking and loading shall be provided in accordance with the relevant clauses of this scheme. Surfaces of parking areas shall be of a permeable material where feasible.
7. Please refer to Part 139.01.33 of the Civil Aviation Regulations, 1997 to The Aviation Act, 1962 (Act No 74 of 1962) for possible requirements of approval by SA-CAA due to proximity to the airport.

<table>
<thead>
<tr>
<th>Development Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Space About Buildings</strong></td>
</tr>
<tr>
<td>Building Line: Front</td>
</tr>
</tbody>
</table>
**ZONE: Residential - Mixed Density**

**ZONE INTENTION:** To provide for a vibrant suburban environment with primarily a residential urban fabric that allows for a range of housing types and land uses to cater for the needs of the residential population. The urban fabric generally has a low to medium density character with higher densities and a mix of uses along public transport routes and within urban nodes identified in the relevant Functional Area Plan. Development should aim to promote efficient public transport. The public realm should be well maintained and the formulation of UIPs/ Management associations is encouraged to maintain the public realm.

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<td>Airport</td>
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<td>Builders Yard</td>
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<td>Industry – Light</td>
</tr>
<tr>
<td>Flat</td>
<td>Public Open Space</td>
<td>Industry – Noxious</td>
</tr>
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<td></td>
<td>Truck Stop</td>
<td></td>
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<tr>
<td></td>
<td>Warehouse</td>
<td></td>
</tr>
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</table>
Additional Controls

1. Stormwater management plans must accompany building plans. The building plans must indicate permeable and soft surfaces to manage run-off.
2. Building materials must be energy efficient and comply with the Energy Efficiency requirement of the NBR.
3. All development applications shall be accompanied by a landscaping plan, which shall comply with Councils requirements for indigenous planting.
4. Design must take into account facilities for the physically challenged, and in this regard paving features, lighting, landscaping, street furniture, signage must be considered.
5. For mixed use sites in excess of 2 storeys where the ground floor is to be used for non-residential purposes, the ground floor shall be set back 7.5 metres with the first floor set back 4.0 metres from the site boundary. This will encourage urban form of colonnaded walkways under which coffee shops and alfresco dining will be promoted. No retail or extension of shops shall be permitted in this space other than for coffee shops and alfresco dining.
6. Parking and loading shall be provided in accordance with the relevant clauses of this scheme. Surfaces of parking areas shall be of a permeable material where feasible.
7. All infrastructure such as sub-stations shall be designed and integrated into the said developments.
8. BTTS shall be integrated into the design and no roof-top antennae’s may be considered.
9. Please refer to Part 139.01.33 of the Civil Aviation Regulations, 1997 to The Aviation Act, 1962 (Act No 74 of 1962) for possible requirements of approval by SA-CAA due to proximity to the airport.

Development Parameters

<table>
<thead>
<tr>
<th>Space About Buildings</th>
<th>Max Dwelling Units per Hectare</th>
<th>Minimun Erf Size</th>
<th>Max Height in Storeys</th>
<th>Max Coverage</th>
<th>Max Floor Area Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Line: Front</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Side and Rear Spaces</td>
<td>40 – 80 du/ha</td>
<td>N/A</td>
<td>4 storey for 40 – 80 du/ha</td>
<td>50 %</td>
<td>1</td>
</tr>
<tr>
<td>7.5 m</td>
<td>80-150 along major public transport routes and within nodes identified in the Functional Area Plan for the area</td>
<td></td>
<td>6 storey for 80 -150 du/ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May be relaxed to a nil building line with the special consent of Council along major transport/activity routes</td>
<td>On residential sites, side and rear spaces may be relaxed to nil for single storey structures only.</td>
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<tr>
<td>metres from side boundaries and no relaxation is permitted.</td>
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<tr>
<td>A 3 metres side space is applicable to all other uses.</td>
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</tr>
</tbody>
</table>
**ZONE: Mixed Use Urban Node**

**SCHEME INTENTION:** To promote the development of a compact, high density, public transport orientated, mixed use urban node with a balanced mix of compatible residential and non-residential land uses within the same area, on the same property or even within the same building. The intensity/density of land uses is intended to facilitate efficient public transport and a vibrant local urban environment. Land uses such as retail, restaurant, entertainment and other pedestrian-oriented uses are encouraged at street level, with offices and flats above in the mixed-use building types, at high intensities and densities. Indigenous landscaping of the public and private areas is encouraged. The formulation of UIPs/ Management associations is encouraged to maintain the public realm.

**MAP COLOUR REFERENCE:**

<table>
<thead>
<tr>
<th>Primary</th>
<th>Special Consent</th>
<th>Precluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Sports Bar</td>
<td>Adult Premises</td>
<td>Agricultural Activity</td>
</tr>
<tr>
<td>Arts and Crafts Workshop</td>
<td>BTTS</td>
<td>Agricultural Land</td>
</tr>
<tr>
<td>Betting Depot</td>
<td>Chalet Development</td>
<td>Airport</td>
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<tr>
<td>Boarding House</td>
<td>Escort Agency</td>
<td>Builders Yard</td>
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<tr>
<td>Car Wash</td>
<td>Flea Market</td>
<td>Cemetery / Crematorium</td>
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<tr>
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<td>Funeral Parlour</td>
<td>Container Depot</td>
</tr>
<tr>
<td>Créche</td>
<td>Industry – Light</td>
<td>Correctional Facility</td>
</tr>
<tr>
<td>Display Area</td>
<td>Institution</td>
<td>Direct Access Service Centre</td>
</tr>
<tr>
<td>Dwelling House</td>
<td>Laundry</td>
<td>Garden Centre</td>
</tr>
<tr>
<td>Educational Establishment</td>
<td>Mortuary</td>
<td>Nursery</td>
</tr>
<tr>
<td>Flat</td>
<td>Motor Display Area</td>
<td>Industry - Extractive</td>
</tr>
<tr>
<td>Fuelling and Service Station</td>
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<td>Night Club</td>
<td>Place of Public Entertainment</td>
<td>Scrap Yard</td>
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<tr>
<td>Office</td>
<td>Place of Public Worship</td>
<td>Transport Depot</td>
</tr>
<tr>
<td>Office – Medical</td>
<td>Public Open Space</td>
<td>Truck Stop</td>
</tr>
<tr>
<td>Parkade</td>
<td>Private Open Space</td>
<td>Warehouse</td>
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### Additional Controls

1. All development to be subject to provisions of an approved Precinct Plan which is to be prepared by the Primary Developer or failing this the Municipality. This Precinct Plan is to detail building controls and urban design guidelines and landscaping guidelines.

2. A Design and Review Panel is to be established to review the design of buildings within the precinct. This Design and Review Panel will constitute members from the Primary Developer and the Municipality and their recommendation will be required before detailed building plans are submitted to the Municipality for approval.

3. Landscaping, Signage and Lighting Plans are mandatory with each development application.

4. All building plan applications shall be accompanied by a landscaping plan, which shall comply with Councils requirements for indigenous planting.

5. All building, landscaping, signage and lighting plans shall be subject to scrutiny and recommendation by the Design and Review Panel.

6. A Storm-water Design and Management Plan is required with each development application and a Sustainable Drainage Systems (SuDS) approach should be adopted.

7. Design must take into account facilities for the physically challenged, and in this regard paving features, lighting, landscaping, street furniture, signage must be considered.

8. Parking and loading shall be provided in accordance with the relevant clauses of this scheme. Surfaces of parking areas shall be of a permeable material where feasible.

9. Parking areas should be landscaped to prevent heat build-up, to attenuate storm water and to integrate building clusters where appropriate.

10. Open areas not required for parking and traffic circulation shall be landscaped with indigenous vegetation in accordance with the landscaping plan that must be approved.

11. Storage of materials of any sort shall be confined to buildings erected for that purpose or in areas approved by the Municipality which are satisfactorily screened from view.

12. Building materials must be energy efficient and comply with the Energy Efficiency requirement of the NBR.

13. For mixed use sites in excess of 2 storeys where the ground floor is to be used for non-residential purposes, the ground floor shall be set back 7.5 metres with the first floor set back 4.0 metres from the site boundary. This will encourage urban form of colonnaded walkways under which coffee shops and alfresco dining will be promoted. No retail or extension of shops shall be permitted in this space other than for coffee shops and alfresco dining.

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<td>Building Line: Front</td>
<td>Building Line: Side and Rear</td>
<td>7.5 m</td>
<td>Not Applicable</td>
<td>6</td>
<td>80 %</td>
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<td>6</td>
<td>80 %</td>
<td>4.0</td>
</tr>
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</table>
ZONE: Aerotropolis Enterprise Zone

SCHEME INTENTION: To provide for the use of land or buildings primarily for General Industrial uses, together with associated office, logistics, warehouse, storage, distribution and service activities in such way that the uses contribute towards the creation of a harmonious, well balanced environment of the highest aesthetic, landscaping and urban design quality. This zone is also intended to promote the development of the aerotropolis and as such, suitable design and uses are to be promoted. The area could include a Multimodal logistics park associated with the rail line. Land Uses in this zone are supportive of a Special Economic Zone, and will respond to the “just in time” concept.

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<td>Veterinary Clinic</td>
<td>Landfill</td>
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<td></td>
<td>Shop</td>
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</tbody>
</table>

Density control
No height limit
Far 1
Coverage 80%

A range of site sizes to accommodate multiple land use and activity

Commercial and support facilities included and located centrally

Adequate public realm treatment with landscaping, pedestrian walkways

Open space system integrated with public space network
**Additional Controls**

1. All development to be subject to provisions of an approved Precinct Plan which is to be prepared by the Primary Developer or failing this the Municipality. This Precinct Plan is to detail building controls and urban design guidelines and landscaping guidelines.

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10. Open areas not required for parking and traffic circulation shall be landscaped with indigenous vegetation in accordance with the landscaping plan that must be approved.

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16. * restricted to accommodation for caretakers related to the business running on site only.

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<td>Mobile Home Park &amp; Camping Ground</td>
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</table>
### ZONE: Aerotropolis Business Park

**SCHEME INTENTION:** Intended for clean light industrial and commercial uses that will be compatible the adjacent land uses in the area, as well as with the Dube TradePort. It is intended to accommodate offices, warehousing, distribution, commercial light fabrication, storage activities, hi-tech industry and other related activities to ensure a high-quality industrial/business park that is in line with the aerotropolis concept.

**MAP COLOUR REFERENCE:**
- Arts and Crafts Workshop
- Crèche
- Container Depot
- Convention Centre
- Display Area

- Action Sports Bar
- Adult Premises
- BTTS
- Betting Depot
- Car Wash

- Agricultural Activity
- Agricultural Land
- Airport
- Boarding House
- Builders Yard

- Multiple Unit Development
- Nature Reserve
- Pet Grooming Parlour
- Reform School
### Educational Establishment
- Garden Nursery
- Government / Municipal
- Health Studio
- Health & Beauty Clinic
- Hotel
- Industry – Light
- Institution
- Laundry
- Motor Display Area
- Motor Vehicle Test Centre
- Museum
- Office
- Office – Medical
- Place of Public Entertainment
- Place of Public of Worship
- Private Open Space
- Public Open Space
- Restaurant / Fast Food Outlet
- Shop
- Warehouse

### Direct Access Service Centre
- Escort Agency
- Flat
- Fuelling and Service Station
- Night Club
- Parkade
- Recycling Centre
- Special Building

### Cemetery / Crematorium
- Chalet Development
- Correctional Facility
- Dwelling House
- Flea Market
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- Industry - Extractive
- Industry – General
- Industry – Noxious
- Landfill
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- Mortuary
- Motor Garage
- Motor Workshop

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<tr>
<td>Building Line: Front</td>
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<td>Not Applicable</td>
<td>Not Applicable</td>
<td>No limit</td>
<td>80 %</td>
</tr>
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