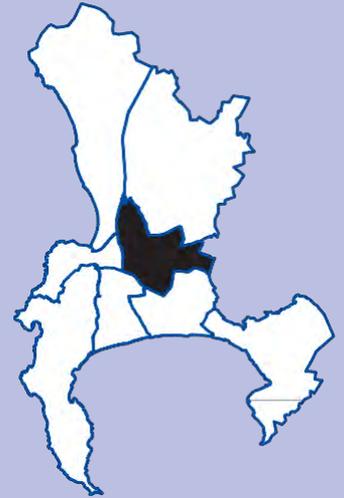


FINAL DRAFT

# TYGERBERG DISTRICT PLAN



SPATIAL DEVELOPMENT PLAN &  
ENVIRONMENTAL MANAGEMENT FRAMEWORK

## TECHNICAL REPORT

2012



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

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**Approved as a Structure Plan in terms of section 4(10) of the Land Use  
Planning Ordinance, Ordinance 15 of 1985**

27 September 2012

## REFERENCE GUIDE TO CONTENTS OF THE DISTRICT PLAN:

Section	Purpose and focus
<b>1. INTRODUCTION</b>	<ul style="list-style-type: none"> <li>Outline of background and legislative status of SDP and EMF</li> </ul>
<b>2. DEVELOPMENT AND POLICY CONTEXT</b>	<ul style="list-style-type: none"> <li>Planning directives and policy that inform the SDP.</li> </ul>
<b>3. KEY STRATEGIES: THE CONTEXT AND CENTRAL SPATIAL IDEAS</b>	<ul style="list-style-type: none"> <li>Key spatial strategies of the CTSDF and how they are applied to the district.</li> <li>Contextualises strategies in terms of the “district now” and “what action is needed” to address issues.</li> <li>Identifies what spatial concepts should be applied to achieve strategy and address issues.</li> <li>Highlights the central spatial ideas, specific to the district, that are key to reinforcing a positive long term metropolitan and district spatial structure</li> </ul>
<b>3.1. Plan for employment and improve access to economic opportunities</b>	<ul style="list-style-type: none"> <li>Identifies the key challenges in respect of economic activity and employment in the district, giving consideration to the form and functioning of economic activity, the relationship between transport systems and land use</li> <li>Spatial concepts and structuring elements include: multi-directional accessibility grid, areas for intensification.</li> </ul>
<b>3.2. Manage urban growth and create a balance between urban development and environmental protection</b>	<ul style="list-style-type: none"> <li>Identifies the key challenges in terms of the natural environment and managing urban growth within the district.</li> <li>Spatial concepts and structuring elements include: natural assets, development edges, future urban growth areas.</li> </ul>
<b>3.3. Build inclusive, integrated and vibrant city</b>	<ul style="list-style-type: none"> <li>Identifies opportunities for integration and improving public environments including opportunities for civic precincts, destination places.</li> <li>Spatial concepts and structuring elements include: civic precincts, destination places, structuring open space and critical public links, integrated settlement patterns.</li> </ul>
<b>4. SPATIAL DEVELOPMENT PLAN: DISTRICT DEVELOPMENT GUIDELINES</b>	<ul style="list-style-type: none"> <li>Application of the spatial concepts and structuring elements identified in section 3, to the district.</li> <li>Forms the “broad level” guide to the desired future spatial form of the district and is supplemented by more detailed “sub-district land use guidelines” in section 6.2. Guidelines are grouped into 5 sections.</li> </ul>
4.1. Spatial planning categories	<ul style="list-style-type: none"> <li>This includes development guidelines at a broad district scale for the major land areas in the district (e.g. natural, agricultural and urban areas). The categories are aligned to those adopted by the PSDF and CTSDF.</li> </ul>
4.2. Transport infrastructure and route designation	<ul style="list-style-type: none"> <li>Provides direction to the desired positive functioning of land use / transport network to support the public transport network and the accessibility of social and economic opportunities in the district.</li> </ul>
4.3. Conceptual designations	<ul style="list-style-type: none"> <li>Provides broad guidance in relation to spatial concepts that are not precisely spatially defined at the district scale. (e.g. urban nodes, civic precincts, destination places). Land use and form implications may be detailed through local area plans.</li> </ul>
4.4. Development edges	<ul style="list-style-type: none"> <li>Provides direction to urban growth in relation to the definition of development edges in the district.</li> </ul>
4.5. Precautionary areas and utility service infrastructure installations and networks	<ul style="list-style-type: none"> <li>Provides development guidance in relation to areas which may present a risk or limits land use or activities in the district (e.g. flood prone areas, buffers associated with noxious uses).</li> </ul>
<b>5. ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF)</b>	<ul style="list-style-type: none"> <li>Provides support mechanism (inclusive of spatial development plan: district development guidelines) in review of development applications.</li> </ul>
5.1. Environmental Impact Management Zones (EIMZs)	<ul style="list-style-type: none"> <li>Provides a summary of status, environmental management priorities for environmental attributes.</li> <li>Based on environmental attributes, describes EIMZs, which provide an indication of possible impacts of activities on environmental attributes.</li> </ul>
<b>6. IMPLEMENTATION</b>	<ul style="list-style-type: none"> <li>Provides guidance in terms of actions required to implement the proposals contained in the spatial development plan.</li> </ul>
6.1. Urban restructuring and upgrading: framework for capital investment	<ul style="list-style-type: none"> <li>Provides an informant to aligning spatial planning (including new development areas and areas for land use intensification) with service and infrastructure planning.</li> <li>Identifies sector specific proposals (capital investment framework) in support of the spatial development plan (including for example new transport links, areas for public space investment, publicly assisted housing, new district scale open space proposals).</li> </ul>
6.2. Sub-district development guidelines	<ul style="list-style-type: none"> <li>Supplements the spatial development plan: district development guidelines with more detailed “sub-district development guidelines” that provide further direction in terms of achieving desired spatial form at a local level.</li> <li>Reference is made to where more detailed local area plans exist and will continue to</li> </ul>

	provide guidance to decision making.
6.3. Local area planning priorities	<ul style="list-style-type: none"> <li>Identifies key local area planning priorities for the district where further work is required along with lead actions and role players.</li> </ul>

### REFERENCE GUIDE TO ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF)\*:

Content elements	Guide to location of content in the district plan
<ul style="list-style-type: none"> <li>Identification of the area to which EMF applies</li> <li>An indication of the conservation status of the area</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information and analysis report: Section 2.1: Section 2.1</li> </ul>
<ul style="list-style-type: none"> <li>A description of how information was captured;</li> <li>Identification of information gaps</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information and analysis report: Section 1</li> <li>Baseline information and analysis report: Section 1</li> </ul>
<ul style="list-style-type: none"> <li>Specification of the environmental attributes in the area as well as parts of the area to which attributes relate</li> <li>Interrelationship and significance of the attributes;</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information and analysis report: Section 2.1 – 2.3</li> <li>Summarised in Vol 2: Section 5.2</li> </ul>
<ul style="list-style-type: none"> <li>Development pressures and trends; opportunities and constraints</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information and analysis report: Section 2.4. (see also section 3)</li> </ul>
<ul style="list-style-type: none"> <li>Description of the environmental (management) priorities in the area</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information and analysis report: Section 2.4</li> <li>Summarised in Vol 2: Section 5.2</li> </ul>
<ul style="list-style-type: none"> <li>Information on activities that would have a significant impact on those attributes and those that would not</li> <li>Information on activities that would be undesirable in the area or specific parts of the area</li> </ul>	<ul style="list-style-type: none"> <li>Technical report: Section 5.2 read with Section 4.</li> </ul>
<ul style="list-style-type: none"> <li>Management proposals and guidelines</li> <li>The desired state of the environment</li> </ul>	<ul style="list-style-type: none"> <li>Technical report: Section 5.2 (see also section 4 and section 6.2)</li> <li>Technical report: Section 4 (see also section 3)</li> </ul>
<ul style="list-style-type: none"> <li>Revision schedule for the environmental management framework</li> </ul>	<ul style="list-style-type: none"> <li>Technical report: Section 1.6</li> </ul>
<ul style="list-style-type: none"> <li>A description of the public participation process including issues raised by I&amp;APs</li> </ul>	<ul style="list-style-type: none"> <li>Technical report: Section 1.5</li> <li>Baseline information and analysis report (annexure)</li> </ul>

\*The EMF is an integrated though distinguishable component of the district plan. For ease of reference, the table indicates how the EMF is structured across the district plan product.

### ANNEXURES

Annexure A	Schedule of existing spatial plans/ policies
Annexure B	Principles for dealing with development proposals in areas of potential impact, as well as areas where there are significant natural resources
Annexure C	EMF – relevant legislation and policies per impact management zone
Annexure D	Relationship between CTSDf & District Plan spatial planning categories and the biodiversity network classification
Annexure E	Relationship between the CTSDf and District Plan route designation, PSDf and City Road Network Hierarchical Classification System

## ACRONYMS AND ABBREVIATIONS

<b>Acronym</b>	<b>Abbreviation</b>
CBA	Critical biodiversity area
CBD	Central business district
CESA	Critical ecological support area
CMA	Cape Metropolitan Area
CoCT	City of Cape Town
CTIA	Cape Town International Airport
CTZS	Cape Town Zoning Scheme
DFA	Development Facilitation Act (No 108 of 1996)
DSDP	District Spatial Development Plan
du/ha	dwelling units per hectare
EIA	Environmental Impact Assessment
EIMZ	Environmental Impact Management Zone
EIP	Environmental Implementation Plan
EMP	Environmental Management Plan (in terms of Section 11 of NEMA)
EMF	Environmental Management Framework
GIS	Geographic Information System
ICT	Information communication technology
IDP	Integrated Development Plan (in terms of the MSA)
IDZ	Industrial development zone
IEM	Integrated environmental management
IRT	Integrated rapid transit
ITP	Integrated Transport Plan
LGTA	Local Government Transition Act
LUMS	Land use management system
LUPO	Land Use Planning Ordinance (No. 15 of 1985)
MOSS	Metropolitan open space system
MSA	Municipal Systems Act (No 32 of 2000)
MSDF	Metropolitan Spatial Development Framework
NEMA	National Environmental Management Act (No 107 of 1998)
NLTA	National Land Transport Act (No 5 of 2009)
NHRA	National Heritage Resources Act (No 25 of 1999)
NMT	Non-motorised transport
NSDP	National Spatial Development Perspective
OESA	Other ecological support area
PGDS	Provincial Growth and Development Strategy
PIIF	Public Infrastructure Investment Framework
POS	Public open space
PSDF	Provincial Spatial Development Framework
PTP	Public Transport Plan
SANRAL	South African National Roads Agency Ltd
SAHRA	South African Heritage Resources Agency
SDF	Spatial Development Framework
SDP	Spatial Development Plan
SMME	Small, medium and micro enterprises
TPC	Town-planning compliant
UDZ	Urban development zone
VPADD	Voluntary proactive deal driven
WSUD	Water-sensitive urban design

## TERMS AND DEFINITIONS (A-Z)

<b>Term</b>	<b>Definition</b>
<b>Accessibility grid</b>	The grid of structuring routes (development and activity routes and activity streets) that facilitates convenient public transport access and multidirectional movement between the district and other parts of the city and within the district .See also section 3.1.3
<b>Activities</b>	In the context of the development guidelines (section 4), refers to the use of land or pursuits in particular locations that may be related to projects or programmes.
<b>Activity route</b>	See section 3.1.3
<b>Activity street</b>	See section 3.1.3
<b>Aquifer</b>	Area identified as reflecting physical extent of a water-bearing layer of soil, sand, gravel, or rock that will yield significant usable quantities of water.
<b>Biodiversity</b>	Biological wealth of a specific geographical region: including the different marine, aquatic, and terrestrial ecosystems, communities of organisms within these, and their component species, number and genetic variation.
<b>Biodiversity network</b>	The map of protected and critical biodiversity areas (including natural vegetation and wetlands) for the city based on the fine scale systematic conservation plan, in accordance with legal requirements.
<b>Buffer 1 and 2 areas</b>	See section 3.2.3
<b>Cemetery</b>	A place for the burial of human remains, and may include ancillary buildings such as an office and chapel, but does not include a crematorium.
<b>Civic precinct</b>	Concentration of public facilities (e.g. schools, clinics, libraries, etc.) located in close proximity. See also section 3.3.3
<b>Commercial / business area</b>	General business activity and mixed-use development of a medium to high intensity. Whilst the focus of development of these areas is commercial (office and retail development) a mix of uses including high and medium density residential development could be appropriate in these areas. Industrial development is generally not suitable in these areas.
<b>Connector route</b>	See section 3.1.3
<b>Core 1 and 2 areas</b>	See section 3.2.3
<b>Critical biodiversity areas</b>	Critical biodiversity areas are unprotected terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecosystem functioning.
<b>Critical ecological support area</b>	Natural and rural areas with biodiversity importance which are essential for management consolidation, connectivity and viability of biodiversity in CBAs and protected areas.
<b>Critical public link</b>	Route link / public access that does or should serve to provide access to destination places and/or is associated with an existing or potential positive experiential quality relating to the surrounding environment along its length.
<b>Cultural landscape</b>	Sites and landscapes of historical significance, areas of scenic beauty and places of spiritual and/or cultural importance.
<b>Densification</b>	Increased use of space, both horizontally and vertically, within existing residential areas / properties and new developments, accompanied by an increased number of units.
<b>Destination place</b>	A place that forms a significant landmark or area of attraction and is part of a unique identity of Cape Town. Due to these qualities, these places hold potential for exploiting economic opportunities particularly in relation to their role as destinations for locals and tourists.
<b>Development corridor</b>	See section 3.1.3.
<b>Development edge</b>	A demarcated edge line defining the outer limits of urban development for a determined period of time; there are two types of edge lines, namely urban edge lines and coastal edge lines, - the former being a medium- to long-term edge line, where the line has been demarcated in a position to phase urban growth appropriately, or to protect natural resources.
<b>Development route</b>	See section 3.1.3
<b>District park</b>	Park of landscaped / maintained open space with recreational facilities which serves the needs of several surrounding local communities or suburbs. Generally multifunctional, can include formal & informal recreational facilities, sports facilities including kick-about areas, playing fields & playgrounds (perhaps with play equipment). The diversity of activities caters for different age groups & may include a special interest component and/or a natural feature (e.g. river, water body or nature conservation area).
<b>District Plan</b>	Document which includes integrated District Spatial Development Plan (DSDP) and Environmental Management Framework (EMF)
<b>District Spatial Development Plan</b>	Document of which sections 4 and 6.2 feature as statutory components in terms of section 4(10) of LUPO.
<b>Ecological buffer</b>	Strip of land adjacent to a watercourse, wetland or vlei required for the protection and enhancement of aquatic and riparian ecosystems.
<b>Flood prone areas</b>	Areas which are susceptible to inundation by a specific recurrence interval flood (e.g. a 1:100 year flood) which must be managed in terms of catchment management policies and by-law.
<b>50yr flood line</b>	Line to which flooding is likely to occur on average once every 50 years.
<b>100yr flood line:</b>	Line to which flooding is likely to occur on average once every 100 years.
<b>Gap housing</b>	Housing for households with a monthly income that fall outside the government housing subsidy income limit and find it difficult or are unable to access finance for housing in the private market (as their income is below the minimum typical income which would allow them

	to qualify for a conventional mortgage loan). Small-scale densification that is almost invisible, e.g. subdivisions and second dwellings.
<b>Incremental densification</b>	
<b>Inclusionary housing</b>	Used to describe the inclusion (preferably on site) of residential units targeted at the gap and/or rental (social housing) market as part of the development of new areas. Where contextually appropriate and feasible, a subsidy housing component may be targeted.
<b>Industrial development</b>	Allows for all forms of industrial uses, except noxious industries. Allowance is made for limited forms of non-industrial activity, such as a factory shop, service station, motor repair garage, but these activities should not compromise the general use of the industrial area.
<b>Informal settlement</b>	Settlement area consisting of informal structures, the occupants of which may or may not have rights to the property or land upon which they reside.
<b>Land use Intensification</b>	Refers to achieving a greater spectrum of mixed uses (commercial, industrial and residential) through the increased use of space, both horizontally and vertically, within existing areas or properties and new developments, accompanied by an increased number of units and/or population thresholds, in accessible, high-opportunity locations.
<b>Metropolitan park</b>	Park of landscaped / maintained open space with recreational facilities or an aspect of special interest which serves the needs of the metropolitan community. Generally significant in size and tend towards being large-scale multi-functional parks. Likely to be integrated with other large scale public facilities such as formal sports fields or with natural areas or including natural features such as a river or water body.
<b>Mixed land use</b>	Area of existing or proposed horizontal and/or vertical integration of suitable and compatible residential and non-residential land uses within the same area or on the same parcel of land: implies contextually-appropriate intensity of land use that should facilitate efficient public transport and a vibrant local urban environment.
<b>Metropolitan open space system.</b>	Inter-connected and managed open space network that supports interactions between social, economic and ecological activities, sustaining and enhancing both ecological processes and human settlements: includes natural areas, and active and passive recreation areas such as sports fields and parks, also cemeteries, detention ponds servitudes, river corridors and road reserves to promote interconnection and multi-use.
<b>Mobility Multi-functional</b>	The ease with which people can travel with minimal delay on route. The combination of different yet compatible functions within one physical framework to serve a variety of social and community groups; allow for a wider range of facilities that reinforce one another in close proximity, offering greater access to potential users. Differentiation in activity may be physical (different activities on different floors or premises of the same building) or in time (using the same facility for different activities, but at different times).
<b>New development area Nodal Development</b>	An area earmarked for future development. Significant and concentrated development in terms of scale, location, impact, diversity and agglomeration of function (facilities, services and economic activities).
<b>Non-motorised transport</b>	Transport modes which are not motorised (e.g. walking and cycling).
<b>Risky activity/noxious industry</b>	Comprises hazardous and noxious land uses in terms of smell, product, waste or other objectionable consequences of operation, or that carry a high risk in the event of fire or accident.
<b>Other ecological support area</b>	Transformed (e.g. extensive agriculture) sites with conservation importance.
<b>Other structuring open space</b>	Open space which is not part of the biodiversity network or significant agricultural areas, but has been identified to promote access to open space for active and passive recreation. Whilst the focus is on areas that usable and accessible for most of the year, the identification has included cemeteries, detention ponds, servitudes, river corridors and road reserves in order to promote the notion of a linked open space system.
<b>Overlay zone</b>	A category of zoning applicable to a particular area or land unit which: (i) stipulates development rules in addition to the underlying zone or base zone requirements, which may be more or less restrictive; (ii) may include provisions and development rules relating to primary uses additional uses or consent uses, limitations in addition to the underlying base zone, subdivision and subdivisional areas, special planning areas, development incentives, urban form, urban renewal, heritage and environmental protection, etc.
<b>Potential high density development</b>	Area proposed for new higher density development where the gross density should average 40+ du/ha. The achievement of this target could occur via a range of housing typologies and varying net densities across the area. The development of required community facilities and open space should be addressed as part of the development of this area. Controlled opportunities for home employment and low intensity mixed use development could be considered in these areas.
<b>Potential medium density development:</b>	Area proposed for new medium density development where the gross density should average 25-40du/ha du/ha. The achievement of this target could occur via a range of housing typologies and varying net densities across the area. The development of required community facilities and open space should be addressed as part of the development of this area. Controlled opportunities for home employment and low intensity mixed use development could be considered in these areas.
<b>Potential low density</b>	Area proposed for new lower density development where the gross density could average 10-

<b>development</b>	25du/ha. The achievement of this target could occur via a range of housing typologies and varying net densities across the area. The development of required community facilities and open space should be addressed as part of the development of this area. Controlled opportunities for home employment, additional dwellings and low intensity mixed use development on could be considered within these areas.
<b>Public transport interchange</b>	Public transport interchange which supports the transfer of public transport users between modes (rail/bus/taxi), but also functions to support economic activity.
<b>Publicly assisted housing</b>	The realisation of a range of housing opportunities, formal or informal, that the public sector plays a role in providing or supporting through its housing programmes.
<b>Railway station upgrade</b>	Upgrading of the physical station buildings and / or station environment. This could include the development of station forecourts, public access and landscaping intervention.
<b>Rural living estates</b>	Extensive residential land units (ranging in size) located inside the urban edge.
<b>Scenic routes (SR1 and SR2)</b>	Public roads that traverse areas of outstanding scenic quality or that provide a view of scenic areas. Scenic routes facilitate appreciation of Cape Town's natural, built and cultural heritage, and in themselves have become attractions. Two types of scenic routes exist – SR1 routes, which are limited access routes that traverse areas of high scenic quality and SR2 routes which traverse areas of high scenic quality and are frequently accessed.
<b>Smallholdings</b>	Extensive land units (ranging in size) located outside the urban edge
<b>Spatial concept</b>	A concept used to describe a particular set of spatial features (e.g. urban node, civic precinct).
<b>Strategic site</b>	A land parcel or group of land parcels which due to its/their location or other unique attributes holds the potential to impact significantly on planning policy objectives such as densification and integration and in so doing make a significant contribution to restructuring the city.
<b>Structuring element</b>	Spatial aspect that provides structure or form to urban development (e.g. a main road provides structure to which land uses respond).
<b>Subsidised housing</b>	Housing supplied in terms of the National Department of Housing's housing subsidy scheme.
<b>Transit station area</b>	Refers to the areas that support transit (public transport) stations (including rail stations and trunk, road based IRT stations). These supportive areas are conceptually defined in the district plan, but are generally within comfortable walking distance of these stations (i.e. +/- 800m). Transit stations are categorised in the district plan (e.g. neighbourhood station / urban station), which provides an informant to potential development opportunities / desired land use mix in the supportive areas and which should be further defined and detailed at the local area level.
<b>Urban civic upgrade</b>	An area where public investment and/or improved urban management is required as a precondition for an improvement in the local social and economic conditions. These areas are generally strategically located to ensure that public investment has the greatest impact on the most number of people.
<b>Urban development</b>	Buildings and infrastructure with a residential purpose as well as offices, shops, community facilities and other associated buildings, infrastructure and public open space necessary to provide for proper functioning of urban areas and amenity and recreation. The term 'urban development' includes golf estates, vineyard estates with a residential component, equestrian estates with a residential component, rural living estates, eco-estates, gated communities and regional shopping centres, However, for the purposes of this report 'urban development' excludes noxious industry, land for industrial purposes and mixed use intensification areas, as they are designated separately in the spatial plan. But service trades which are compatible with mixed-use development that generate a low impact on surrounding urban uses may be permissible if the nature and type of industry is deemed to form an integral part of an area demarcated for urban development purposes.
<b>Urban edge</b>	See development edge.
<b>Urban edge management zone</b>	Zone or buffer area on either side of the urban edge, where land uses are to be managed to protect the integrity of the urban edge line.
<b>Urban node</b>	Area characterised by the intensity, mix and clustering of activities/land uses (including commercial/business development and associated employment opportunities, higher-order services and higher residential densities). See also section 3.1.3.
<b>Zoning</b>	A category of directions setting out the purpose for which land may be used and the land use restrictions (e.g. height limits, building lines, bulk, and coverage) applicable in respect of the said category of directions by the scheme regulations.
<b>Zoning scheme</b>	A scheme consisting of scheme regulations and a register with (or without) a zoning map.

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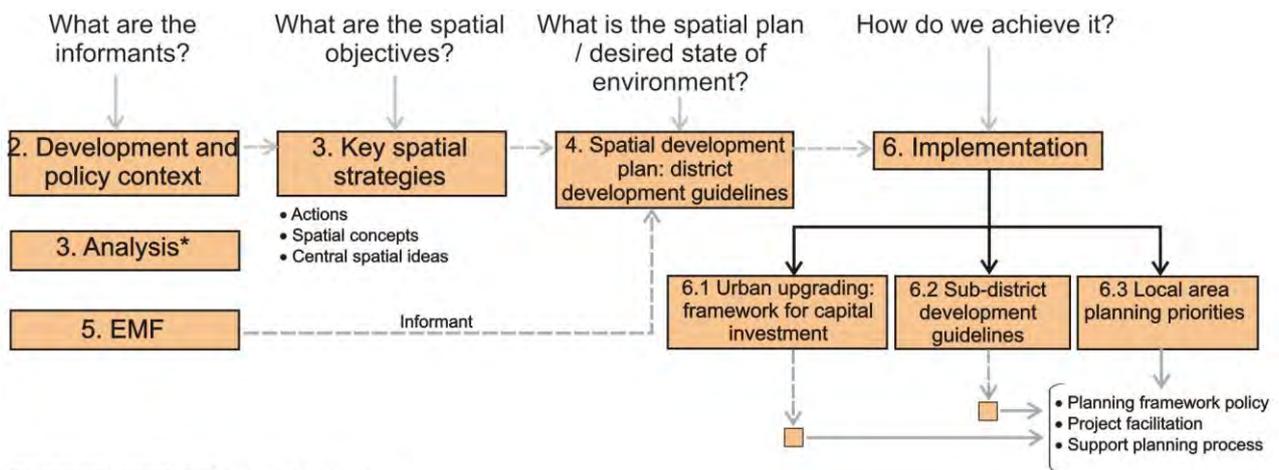
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# 1. INTRODUCTION

This district plan forms one of 8 plans developed for each of the planning districts of the City of Cape Town (CoCT), all of them informed by the city-wide Cape Town Spatial Development Framework (CTSDF). Whilst this plan is grounded in a sense of the current realities in the district, its focus is influencing the future today. In doing so it needs to have relevance to a wide range of stakeholders including communities and interest groups, the drivers of development and regulatory decision makers who all play a role in shaping urban development. As such the plan comprises of a number of elements which include a discussion of the context and informants to the plan, the objectives of the plan (and spatial building blocks), the plan itself and related to this, a set of implementation tools that are targeted at taking the broad proposals of the plan to a greater level of detail and action. To assist users of the plan, the diagram below summarises its contents.



\*See also Baseline Information and Analysis Report

**Note:**

- This district plan has been informed by a Baseline Information and Analysis Report prepared separately. It is used as an information source and it is not intended that this separate report would be consulted for statutory decision making processes.
- The “district plan” is the term given to the integrated “structure plan” or spatial development plan (SDP) and environmental management framework (EMF) as contained in this document.

## 1.1 Purpose

The District Plan is a medium term plan (developed on a +/- 10 year planning frame) that will guide spatial development processes within the district. It will pursue the several strategic actions including:

- Aligning with and facilitating the implementation of the Provincial Spatial Development Framework (PSDF), Cape Town’s integrated Development Plan (IDP) and Cape Town Spatial Development Framework within the district;
- Performing part of a package of decision support tools to assist in land use and environmental decision making processes;
- Delineating fixes and sensitivities which will provide an informant to such statutory decision making processes;
- Clearly giving direction to the form and direction of areas for new urban development in the district in a manner that is in line with the principles and policies of higher level planning frameworks;

- Providing a basis for land use change within the existing footprint at well as strategic public and private investment initiatives which will assist in achieving the principles and policies of higher level planning frameworks;
- Informing the development of priorities for more detailed local area planning exercises and frameworks that should provide detailed guidance to land use management and public and private investment.

## 1.2 Towards a rationalised policy-driven land use management system

The City's current planning framework comprises outdated plans with inconsistent status and conflicting development objectives. The City is updating and rationalising all aspects of the current planning framework guided by the relevant legislative and policy development environment. These initiatives promote a more responsive, flexible and policy-driven approach to land use management, in which a broader range of instruments and policies set the guidelines against which all land use decision-making takes place. The District Plan is one of the tools for evaluating applications for new or enhanced land use rights. The hierarchy and role of plans, policies and guidelines that form the cornerstone of the rationalised, policy-driven LUMS are outlined in Table 1.1.

*Table 1.1: Hierarchy of spatial plans and policies*

Spatial plan/ policy	Purpose	What it is replacing/ adding to	Who approves	Legislation/ policy guiding approval
CTSDP	Long-term (20+ years) citywide spatial structuring elements and plans, and overarching policy framework	Guide Plans (citywide), Metropolitan Spatial Development Frameworks and sub-regional plans approved in terms of Section 4(6) of LUPO	Province Council	MSA LUPO (Section 4(6))
District SDP	Medium-term ( $\pm 10$ years) district-level spatial development plans which indicate land uses in new development areas, and upgrade interventions	Selected district and local structure plans approved in terms of LUPO and policy plans of district and sub-district significance.	Council	LUPO (Section 4(10)) – provision on the lapsing of structure plans after a specified time frame  City's system of delegations
Environmental Management Frameworks	Environmental Impact Assessment and review of development applications.	First EMF for the district	DEA&DP with the concurrence of DWEA	GN 547 of 18 June 2010 under the NEMA and draft EMF guidelines
Local Development Plans	Detailed SDF related to, for example, the management of land uses and detailed local-level planning such as density plans.	Selected local structure plans approved in terms of LUPO and policy plans of local significance.	Council	LUPO (Section 4(10))  City's system of delegations
Strategy/policy documents	Detailed issue/land use-specific policy parameters that should determine land use decisions, such as densification, urban edge, and guest houses and bed and breakfast (B&B) policy.	Will replace or complement existing policies	Council	City's system of delegations
Development guidelines	Detailed guidelines that should inform land use decisions, such as fire protection guidelines and	Will replace or complement pre-existing guidelines	Council	City's system of delegations

Spatial plan/ policy	Purpose	What it is replacing/ adding to	Who approves	Legislation/ policy guiding approval
	urban design guidelines (for example tall buildings guidelines)			

The CTSDF has initiated the process of rationalisation of spatial plans and policies by replacing the Guide Plans (Urban Structure Plans), where relevant, and previous metropolitan level planning frameworks. The District Plan will further contribute to the rationalisation of spatial plans through replacing selected s4 (10) and City approved spatial plans of relevance to district planning.

The list of plans to be withdrawn is reflected as it pertains to this district in Annexure A.

Central to policy rationalisation efforts will be the **retention of a number of local development plans and policies that continue to provide direction** to development in parts of the metropolitan area. These will be reviewed over time and supplemented by new local plans in areas that are selected as priorities for local area planning initiatives. Selected local development plans and policies that will continue to provide direction are listed, where relevant, in relation to the sub-district development guidelines (see section 6.2) of the district plan.

### 1.3 Legal status of the district plan and the consistency principle

The district plan consists of two components, a Spatial Development Plan (SDP) and Environmental Management Framework (EMF) developed in terms of separate pieces of legislation:

- The term “Spatial Development Plan” (SDP) has been used to differentiate it from the Cape Town Spatial Development Framework. It is however regarded as a structure plan as provided for in terms of section 4(10) of the Land Use Planning Ordinance (LUPO) of 1985 and/or the equivalent as provided for in terms of any subsequent legislation that may replace LUPO.
- The Environmental Management Framework has been developed in compliance with the requirements of the National Environmental Management Act (NEMA) Action 107 of 1998 and regulations pertaining to environmental management frameworks promulgated under sections 24(5) and 44 of the said Act.

The statutory components of the District Spatial Development Plan in terms of section 4(10) of LUPO include:

- Section 4: Spatial Development Plan: District Development Guidelines and the accompanying Spatial Development Plan
- Section 6.2: Sub-district development guidelines and accompanying sub-district plans

The request for deviation from the spatial development plan will therefore only relate to cases in which the City of Cape Town deems there is a conflict between a development proposal and the statutory components of the SDP. The other maps, figures and text in the district plan are included for illustrative purposes and are intended to broaden the general understanding of the SDP and act as informants to the interpretation of the statutory components of the SDP. The preparation of local development plans and the assessment of development applications should therefore be guided by due consideration of these informants when interpreting the statutory components of the plan.

As specified in terms of section 5(3) of LUPO, neither the CTSDF, nor the district spatial development plan will confer or take away rights in terms of land. No guidelines or policies or any other provisions in respect of land designation that result from the CTSDF or district plan shall create any rights or exempt anyone from their obligations in terms of any other legislation.

With regard to the EMF, no provision in law is made for its amendment or for deviation processes. It must, however, be taken into account in the consideration of applications for environmental authorisation in or affecting the geographical area to which the framework applies. (See regulations pertaining to environmental management frameworks under sections 24(5) and 44 of the National Environmental Management Act, 1998, (Act No. 107 of 1998).

### **1.3.1 Determining policy compliance and measuring consistency between plans**

In line with the consistency principle and hierarchical system of plans, a development proposal (or proposal contained in a lower-order framework plan) must be measured for consistency against the statutory components of the PSDF and the CTSDf. The findings of such an assessment must be weighed as follows:

1. The statutory designation and/or text of the CTSDf provides for the proposal (and is generally in line with land development proposals);
2. The statutory designation and/or text of the CTSDf does not explicitly provide for the proposal; but on the other hand, the proposal is not necessarily clearly in conflict with the intent and purpose of the designation and/or text concerned;
3. The proposal is in conflict with the statutory designation and/or text of the PSDF or CTSDf.
4. The proposal is in conflict with the statutory designation and/or text of the District SDP and / or any other structure plan in terms of s4(10) of LUPO or City of Cape Town approved local development plans / land use policies.

These four initial findings lead to different planning and procedural outcomes, respectively:

- In the case of (1), the proposal is considered to be policy compliant and evaluated further, without any further action in terms of the framework or plan against which the proposal was measured;
- In the case of (2), a consistency ruling must be made. If it is positive, the development proposal can be further evaluated or considered;
- In the case of (3), consideration may be given to amending the framework or plan against which the proposal was measured as provided for in terms of Section 34(b) of MSA and Section 4(7) of LUPO (or subsequent provisions in legislation, which may replace it). The amendment of the impacted framework or plan should occur prior to or simultaneous with any other applications in terms of LUPO. Should this amendment not be approved, the proposal is not supported and may not go ahead.
- In the case of (4), the City of Cape Town can consider condoning a deviation from the approved policy. This deviation should be fully motivated as part of any LUPO or building plan applications that may be required. A guide is provided to inform the approach to considering these deviations. (see second note below).

#### **Note: The hierarchy of plans and the consistency principle**

- In terms of the consistency principle lower order spatial plans and policies must be consistent with higher order spatial plans and policies.
- The CTSDf is deemed to be consistent with the PSDF. Should the provisions of plans of a lower order in the hierarchy (including local scale structure plans) be deemed to be inconsistent with the CTSDf, the CTSDf will take precedence.
- The district spatial development plan, as a structure plan in terms of s4(10) of LUPO is be deemed to be consistent with the CTSDf. Should the provisions of plans of a lower order in the hierarchy be deemed to be inconsistent with the district plan, the district plan will take precedence.
- In cases where an amendment of the CTSDf is approved, a simultaneous amendment to the district spatial development plan will be deemed to have been affected.

**Note: Guide to considering deviations from the district plan**

If no amendment to the CTSDF is required, but the findings of the assessment of an application trigger 4 (see above), a deviation from the district spatial development plan (relating specifically to the statutory components of the district spatial development plan) could be considered.

Should a deviation from policy be determined to be necessary, this should be advertised as part of the land use application. The assessment of a deviation from the district plan, should be integral to the LUPO process (i.e. consideration of LUPO applications such as rezoning). In relation to considering deviation from the district plan, reflection on the desirability of the proposed development (as specified in LUPO of replacement legislation) along with any possible negative impacts should be considered in the context of, but not limited to:

- The provisions of relevant legislation and higher order planning policy principles;
- Whether the proposal supports broader city planning imperatives including the CTSDF spatial development principles and strategies and city wide planning policies (e.g. policies relating to densification);
- Whether the proposal, in terms of proposed use and development form, supports the overall goals for the local area in which it is proposed, as reflected by City of Cape Town policy (e.g. local area spatial development frameworks);
- Whether the proposed land use reflects general compatibility or appropriateness within the surrounding land use context;
- The extent of any negative impacts on safety, health and well-being of the local community that may be affected and the degree to which these can be mitigated against.
- The extent of opportunity costs in terms of considerations of the highest and best use of the site(s) in question.
- Whether there are likely to be unacceptable impacts on the environment;
- Any changes in underlying context (e.g. environmental features) or new information which potentially support a different view of development suitability (as may be reflected in the district plan) at the location in question.
- Whether the land use is appropriate to occur in the proposed location at this point in time (i.e. a timing consideration related to growth informants, for instance the availability of bulk services).

### 1.3.2 Relationship between the SDP and EMF

The EIA regulations promulgated in terms of NEMA provide for the development of EMFs, which are intended to inform planning and environmental management. The various components of the EMF (as required in terms of the NEMA regulations) are spelt out in the reference guide in the front of the district plan.

The CoCT has integrated an EMF into each of the SDPs in order to ensure that the EMF effectively informs and responds to the planning context. The broad objectives of the EMF are:

- To inform and guide spatial planning in the district;
- To assist in facilitating investment;
- To function as a support mechanism in the environmental impact assessment process in the evaluation and review of development applications, as well as making strategic informed decisions regarding land use planning applications (as an integral part of the District Plan);
- To guide sustainable development in the area and determine the environmental management priorities; and
- To provide support to the process of delineating geographical areas within which specified activities are to be identified (or excluded from those listed) in terms of NEMA based on sensitivity of the environment to the potential impacts.

The EMF is developed as an input to the Spatial Development Plan, whilst also having some overlapping components. This should not create confusion or a basis for misalignment as:

- The proposals of the SDP (specifically the spatial development plan: district development guidelines, section 4) are also regarded as the “desired state of environment” (fulfilling the requirement for such a component of an EMF in terms of NEMA);
- The area / activity suitability matrix reflected as EIMZs should be read as an informant to section 4 (the spatial development plan: district development guidelines / EMF desired state of the environment) rather than a stand alone component of the district plan.

In a limited number of cases, there are instances where significant environmental attributes are potentially impacted by the development proposals in the spatial development plan. These areas of impact are identified as part of the EMF in section 5. Development proposals in these areas would be evaluated as reflected in section 1.3.1 and would be subject to normal statutory processes where required in terms of LUPO, NEMA or other relevant legislation. Furthermore, a set of principles are proposed to guide the manner in which these “areas of potential impact” are addressed. These are included as Annexure B.

## 1.4 Alignment with Cape Town Zoning Scheme

The district plan offers a broad level of guidance to decision making at the district scale with supplementary guidelines at a sub-district level. In many cases, there will be a need to develop policies and plans at a greater level of local detail that provide further direction to land use management decision making. As part of these local area planning initiatives, a number of potential products may be developed (e.g. local area structure plans or spatial development frameworks or plans, densification plans, urban design frameworks).

In addition to these policy and guideline tools, and with the approval of the Cape Town zoning scheme, the concept of overlay zones is introduced. A number of these overlay zones will be put in place with the promulgation of the CTZS. An overlay zone may be imposed if it complies with the rules set out in the CTZS, and, as the City aims to establish a policy-driven LUM system, it must as far as possible be preceded by local planning policies. The development or updating of such local planning policies may be motivated and prioritised through the district plan process. Overlay zones are thus not developed as part of the district plan itself. The introduction of overlay zones is not an inevitable consequence of local area planning initiatives, but needs to be considered carefully, based on the strength of individual motivation around the need for (more or less restrictive) development rules in addition to the underlying zone or base zone requirements. Overlay zones are a tool that would be employed on an exceptional basis, when it is critical and strategic that actual land use rights are managed to achieve the vision for Cape Town.

## 1.5 Overview of the District Plan drafting process

The drafting of the district plan has been undertaken in line with the legislative requirements of LUPO as well as NEMA. The district plan has also been the subject of a process of internal engagement within the City of Cape Town. A rigorous and inclusive public engagement process is critical for the successful preparation of the district plan(s) and as such has included three phases:

- *Phase 1:* In February 2008, the City initiated the first phase of the public engagement process in its 23 subcouncil areas. The purpose was to launch the process; create a sense of public / stakeholder ownership of and involvement in the process; to elicit stakeholder views on the development issues facing Cape Town and also to identify the principles and strategic goals that should guide the preparation of the district plan (and CTSDP).
- *Phase 2:* The aforementioned engagement informed the preparation of the district plan(s) circulated for public comment between August 2009 and November 2009. The purpose of this round of engagement was to table and discuss the proposals contained in the draft district plan(s) including the integrated EMF and SDP.

- *Phase 3:* A final draft for public engagement was undertaken in 2011. This round of engagement was aimed at allowing for comments on the amended draft district plan(s), following which the final draft district plan has been submitted to Council structures for approval. The EMF (as a component of the district plan) will be submitted to the PGWC, (who have been granted concurrence of National government) for approval.

## 1.6 Review of the District Plan

It is envisaged that the district plan will be reviewed on a 10 year basis and to some extent should fulfil the need for a sense of continuity and predictability, however, within that period there are likely to be components of the district plan that will require amendment or review as summarised below.

*Table 1.2: Schedule for review of the district plan*

<b>Component of district plan</b>	<b>Scope of review</b>	<b>Period</b>
District plan (SDP and EMF)	Comprehensive	10 years
Spatial development plan: district development guidelines	Limited, focussed on urban edge line.	5 year basis to coincide with review period for urban edge line.
EMF (EIMZ)	Limited to components that are potentially dynamic (e.g. biodiversity network)	5 year basis (may be updated more frequently)
Urban upgrading plan / framework for capital investment	Comprehensive	5 year (if required)
Local area planning priorities	Comprehensive	5 year (may be updated more frequently as progress made with local area planning initiatives)

The district plan could also be the subject of amendment as contemplated under section 4(7) of LUPO should this be necessary on a basis other than specified above.

## 1.7 Study area

Tygerberg District is centrally situated in the metropolitan area, covers approximately 18 965 ha (189 km<sup>2</sup>) and contains a broad spectrum of urban land uses. It comprises a number of well-established, older suburbs such as Goodwood, Elsies River, Bonteheuwel, Bishop Lavis, Parow, Bellville and Kuilsrivier and newer suburbs such as Delft, Belhar, Bothasig, Panorama, Ridgewood and Edgemoed. The district includes significant land uses: a number of industrial areas, commercial development concentrated in the Goodwood, Parow and Bellville CBD's and along Voortrekker/Van Riebeeck Road, community facilities, utility services, transport infrastructure, The Transnet Marshalling Yard (Belcon), dispersed open spaces and the Cape Town International Airport.

Tygerberg District study area boundaries are along Vanguard Drive/ N7 in the west, the Urban Edge and the Tygerberg Hills in the north-east, the N1 National Road in the north, the R300, Bottelary Road, The City of Cape Town municipal boundary in the east, Polkadraai Road, the R300 and the N2 National Road in the south. The district has common boundaries with Table Bay, Blaauwberg, Northern, Khayelitsha/Mitchells Plain, and Cape Flats Districts. Refer to Map 1 for the location of Tygerberg District.

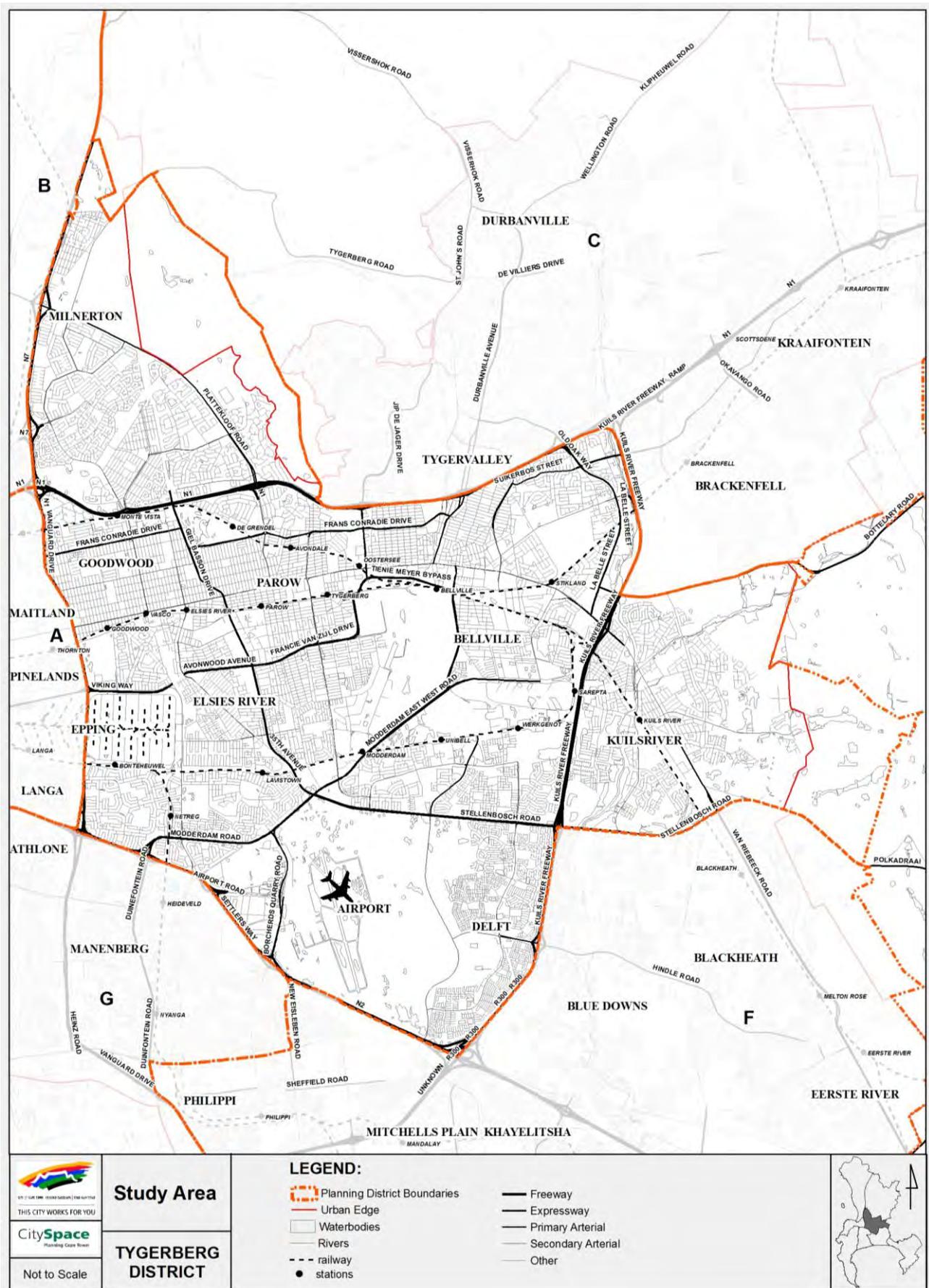


Figure 1: The study area

## 2. DEVELOPMENT AND POLICY CONTEXT

### 2.1 Legislative context

The district plan which forms a structure plan in terms of the Land Use Planning Ordinance and an EMF in terms of NEMA has also aligned with the requirements of legislation including:

- Municipal Systems Act (No 31 of 2000) and municipal planning and performance management regulations (2001). The district plans compliment and support the Cape Town SDF which is a central component of the IDP in terms of the Act. They provide guidelines for land use management and inform a Capital Investment Framework
- Development Facilitation Act (no 108 of 1996): its principles apply in the Western Cape and have informed the preparation of the CTSDF and District Plan
- National Environmental Management Act (107 of 1998): it has informed the preparation of the district plan and specifically the EMF component.
- National Environmental Biodiversity Management Act (Act 10 of 2004)
- National Heritage Resources Act (Act 25 of 1999)
- National Land Transport Act (Act 5 of 2009)
- Land Use Planning Ordinance (No 15 of 1985). Section 4(10) makes provision for the preparation and submission of structure plans to council for its approval. The purpose is to lay down guidelines for the future spatial development of the area to which it relates in such a way as will most effectively promote the order of the area as well as the general welfare of the community concerned.

### 2.2 Strategy and policy planning informants

#### 2.2.1 National and regional planning informants

The District plan is developed and aligned to the CTSDF and as such is aligned to a range of national and provincial planning informants including:

- The policy directives of the National Spatial Development Perspective
- Provincial Growth and Development Strategy (2008)
- Provincial Spatial Development Framework (2009);

#### 2.2.2 Metropolitan and district planning informants

The District plan is developed in a manner that is aligned to the CTSDF, seeking to detail its strategies and proposals at the district scale. Proposals regarding land development and public investment in space have thus been informed by:

- The spatial principles reflected in the CTSDF which should be used to guide decisions regarding the future development of Cape Town as reflected in Figure 2.1.
- The three spatial strategies of the CTSDF – which have been detailed through the district plan reflected in table 2.1:
- The spatial development policies and guidelines for land use management as detailed in the CTSDF.

*Table 2.1: Key CTSDF Strategies to achieve sustainable, equitable and managed growth*

Strategy	Sub strategy
<b>PLAN FOR EMPLOYMENT AND IMPROVE ACCESS TO ECONOMIC OPPORTUNITIES:</b> To improve the accessibility of people to urban opportunities, the City must adopt an integrated approach to land use planning,	<ul style="list-style-type: none"> <li>• Promote inclusive shared economic growth and development</li> <li>• Address spatial economic imbalances</li> <li>• Establish an integrated city-wide public</li> </ul>

<p>economic development and transport operations. Spatial planning will have a limited impact on economic growth and development unless the key drivers of growth are recognised and land and infrastructure are made available to guide and support economic investment and facilitate specialisation in desirable city locations. To this end, the City must ensure that it remains competitive and capitalises on existing and future sectoral comparative advantages to promote economic integration and efficiency. A clear spatial logic is necessary to inform economic investment and accommodate freight and logistics demands and improves access to economic opportunities</p>	<p>transport system that supports the accessibility grid</p> <ul style="list-style-type: none"> <li>• Integrate land use, economic and transport planning.</li> <li>• Support the rationalisation, upgrade and/or development of economic gateways, and manage land uses around the appropriately.</li> </ul>
<p><b>MANAGE URBAN GROWTH AND CREATE A BALANCE BETWEEN URBAN DEVELOPMENT AND ENVIRONMENTAL PROTECTION:</b></p> <p>To put Cape Town on a more sustainable growth path the City needs to protect and enhance its exceptional natural and rural environments. New urban development should be directed towards locations where its impact on critical biodiversity areas, wetlands and agricultural areas will be minimised. The City needs to promote a compact and efficient form of urban development. Densification must be promoted in appropriate locations in order to improve economies of scale and increase thresholds required for public transport. Urban expansion should be managed and ensure effective and efficient use of the city's resources. Planning decisions must be balanced, weighing the competing and conflicting demands of different interests in order to arrive at an optimum level of consensus to ensure short, medium and long term social equity, economic efficiency and environmental sustainability.</p>	<ul style="list-style-type: none"> <li>• Facilitate urban development</li> <li>• Support incremental development processes</li> <li>• Encourage a more compact form of development</li> <li>• Appropriately protect the citizens of Cape Town from hazardous areas/activities</li> <li>• Appropriately manage urban development impacts on natural resources critical biodiversity networks</li> <li>• Make efficient use of non-renewable resources]</li> <li>• Protect and enhance the city's rural environment</li> </ul>
<p><b>BUILD AN INCLUSIVE, INTEGRATED, VIBRANT CITY:</b> The City must promote integrated settlement patterns in existing and new residential areas to accommodate Cape Town's growing population and redress social and land use fragmentation. An inclusive, integrated and vibrant city requires that basic services, social facilities and public open spaces are available and accessible to everyone. The City needs to promote equal opportunities, improve the quality of living environments, and reduce the levels of crime. Cape Town's heritage must be respected, protected and enhanced and a network of great destinations and public spaces should be established.</p>	<ul style="list-style-type: none"> <li>• Transform the apartheid city</li> <li>• Proactively support publicly-led land reform and new housing delivery</li> <li>• Encourage integrated settlement patterns</li> <li>• Enhance the unique sense of place and quality of built form of Cape Town</li> <li>• Enhance the value of heritage resources and scenic routes</li> <li>• Promote accessible, city wide destination places</li> </ul>

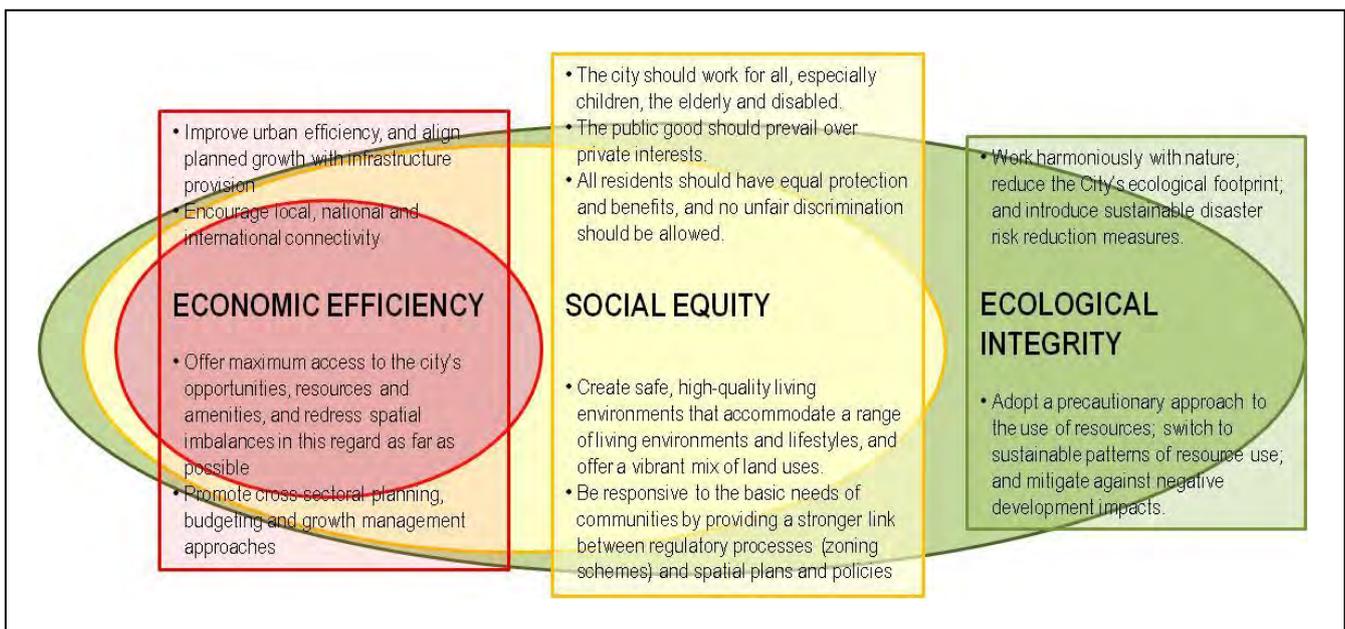
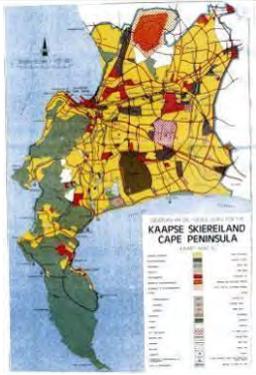


Figure 2: The PSDF and City Spatial Development Principles

Furthermore, as part of the preparation of the District Plan for Tygerberg, several key metropolitan and district level plans have been reviewed and served as informants.

*Table 2.2: Key metropolitan and district level plans*

Plan & Status		Key features	Overview and Directives
Guide plan:  Approved by PGWC, 1988		<ul style="list-style-type: none"> <li>• Approved LUPO 4(6) plan;</li> <li>• Guidelines for location major land uses</li> <li>•</li> </ul>	<p>Whilst the metropolitan and district level plans vary in terms of the detail of certain proposals, several themes are consistent including:</p> <ul style="list-style-type: none"> <li>• Improving conditions for local economic development and recognising that job creation in this area of the City is critical.</li> <li>• Improving environmental quality and rationalising the undeveloped open space.</li> <li>• Improving access to public facilities clustering them within nodes close to public transport interchanges.</li> </ul>
MSDF redraft:  Adopted by Council, 2001		<ul style="list-style-type: none"> <li>• Protect natural resources (Urban Edge)</li> <li>• Open space system (MOSS)</li> <li>• Densification on key public transport routes (Corridors)</li> </ul>	
Cape Town SDF:  Adopted as part of the Integrated Development Plan, 2011		<ul style="list-style-type: none"> <li>• Enhance the accessibility and value of the natural and rural environment and open spaces for the people of Cape Town</li> <li>• Establish an integrated grid-based movement system</li> <li>• Consolidate and intensify development on the accessibility grid</li> <li>• Direct urban growth and promote compact, integrated development</li> <li>• Develop more great people places</li> </ul>	
Tygerberg Spatial Development Framework and Area Plans		<ul style="list-style-type: none"> <li>• Activity routes and streets</li> <li>• MOSS (Tygerberg river corridors)</li> <li>• Area plans providing detailed spatial policy guidance at district level.</li> </ul>	

### 2.2.3 Local area planning informants

In addition to the above district scale policies and plans, there are a number of local area plans that have relevance to the district. These plans have been considered to carry through any relevant and scale appropriate proposals into the district plan. These plans include:

- Bellville CBD Development Framework, 1999
- Bonteheuvel CBD Development Framework, 1998
- Bonteheuvel Urban Design and Landscape Plan, 2000
- Boston Policy Plan (currently under review), 2010 draft
- Elsies River Structure Plan, 1995
- Upper Halt Road Urban Design Framework, 2000
- Lower Halt Road: Elsies River Integrated Revitalization Strategy, 1999
- Kuils River Metropolitan Open Space Study, 1998
- Oakdale Land Use & Traffic Management Plan, 2002

- Monte Vista Triangle Policy Plan, 2002
- Vasco Boulevard / Hugo Street Policy Plan, 1999
- Voortrekker Road Growth Management Study, 1998
- Voortrekker Road Triangle Development Plan
- McIntyre Street Local Structure Plan
- Leonsdale Neighbourhood Recovery Strategy, 2002

### 3. KEY SPATIAL STRATEGIES: THE CONTEXT AND CENTRAL SPATIAL IDEAS

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The District Plan gives effect to the key spatial strategies proposed by the Cape Town Spatial Development Framework at a district scale. These strategies are used as a basis for organising this chapter in relation to four key questions:

1. **What are the key spatial planning challenges facing the Tygerberg District Now?** Key issues are drawn from the *Tygerberg District Spatial Development Plan: Baseline Document*, which provides detailed information on the state of the district.
2. **What Action is needed to address these challenges?** This includes an articulation of a number of spatial objectives (both in terms of the role of the Tygerberg District in the City and at an intra-district level) which aim to address the key issues identified.
3. **What are the general structuring elements and spatial concepts** proposed by the CTSDP and district plan to contribute to addressing those challenges.
4. Associated with these structuring elements and spatial concepts, what are the **central spatial ideas** around which proposals for the future spatial development of the Tygerberg District will be built?

This chapter concludes by bringing together the ideas into a spatial vision and a composite spatial concept for the Tygerberg District.

Key issues are drawn from the *Tygerberg District Spatial Plan: Baseline Document*, which provides detailed information on the state of the district. What action is needed in the district is reflected in the articulation of a number of spatial objectives (both in terms of the role of Tygerberg District in the city and at intra-district level), which aim to address the key issues identified. Finally, a number of central spatial ideas (e.g. reinforcement of land use around a multi-directional accessibility grid) are proposed as the means through which the strategies can be achieved.

## **3.1 Strategy 1: Plan for employment and improve access to economic opportunities**

This strategy focuses on encouraging economic development, both formal and informal, in accessible locations in order to ensure that the opportunities they offer can be accessed by a broader range of people.

### **3.1.1 Tygerberg Now**

This section identifies the key challenges in respect of economic activity and employment in the Tygerberg District, giving consideration to the form and functioning of economic activity, the relationship between transport systems and land use, and reflecting on accessibility of economic opportunities in the district.

A number of challenges are presented when considering the Tygerberg District in relation to the City of Cape Town as a whole, and include the following:

#### **Population and socio-economic issues:**

- At an estimated population of approximately 699 217 residents, the Tygerberg District accommodates 19% of the City's population, and is the second most populous planning district after Khayelitsha Mitchells Plain District.
- Areas within the district exhibit poor socio-economic conditions, with a general lack of integration of income groups. Housing shortages, severe overcrowding, a degraded urban environment and high crime rates have resulted in unhealthy living conditions and unfavourable investment conditions;

#### **Movement and urban form:**

- The lack of north-south continuity of movement routes throughout the district further compounds the lack of investment opportunities linked with the accessibility grid.
- The urban fabric within parts of Tygerberg District can be described as 'cellular' in nature. The internal 'compartmentalisation' of the district can be attributed to a number of critical factors including: The barrier effect of east-west railway lines; discontinuous north-south road linkages; the 'buffer effect' of the existing land use structure, especially industrial centres; and a dysfunctional spatial structure of inwardly-focused neighbourhood design (e.g. Bonteheuwel, Bishop Lavis, Uitsig, Belhar, Kalkfontein and Delft).
- The Delft settlement has rapidly developed during a short period of time as a "housing solution" with extensive RDP type housing units. When the phased development of Delft is completed, approximately 110 000 people will be housed in the area. Delft is geographically isolated by Cape Town International Airport and the barrier effect of Symphony Way, Stellenbosch Arterial, N2 and R300 Freeways. Delft is not served by rail and has poor access to the public transport network. As a result, Delft is isolated and exhibits a lack of metropolitan connectivity, which has ultimately stunted economic activity in Delft CBD and other locations along Delft Main Road.
- The University of Western Cape (UWC) and Cape Peninsula University of Technology (PenTech) Campuses are extremely important employment generators and destination places within the Tygerberg District as well as the CMA. This tertiary education precinct is rich in political and cultural history related to pre-1994 Apartheid education. Although regional access to this precinct is well provided for. The site is rather isolated by major transport barriers and industrial areas. Stronger pedestrian links should be sought across the Sarepta Railway Line to Belhar in the south, maximising the areas surrounding Unibell and Pentech (Werkgenot) Stations.

### **Economy and development:**

- The lack of centralised and accessible nodal areas, predominantly in areas south of the Bellville railway line, limit investment opportunities. This is also reflected in past investment in “stand alone” public facilities precincts that are isolated from areas of economic opportunity.
- The Cape Town International Airport (CTIA) precinct is a significant economic contributor to district and the city as a whole, and provides a thriving environment for commercial and industrial development. The CTIA, in addition to aviation operations, is a focal point for logistics, freight, distribution and light industrial activities among others, which benefit from the locational advantage and critical massing of businesses around airport. The high demand for industrial land in close proximity to the airport precinct is testament to the fact that the airport is a significant economic generator located strategically between prosperous areas along the Voortrekker Road activity corridor and poorer areas in the Metro South-east. Any development in and around this precinct should reinforce economic activity around the airport. Greater links between the airport precinct and industrial land south of the N2 Freeway need to be made to harness this economic energy for more impoverished areas.
- Of particular significance to the Tygerberg economy is the large proportion of informal economic activity and small businesses, predominantly in the southern parts of the district. However, little provision is made in terms of allocation of appropriate space for informal traders operating at numerous transport interchanges and other places of high accessibility. Furthermore, home-based businesses conflicting with residential properties have limited growth potential. Those areas that have been provided for informal trading reflect management challenges, and are now mostly in a state of disrepair.
- The Voortrekker Road activity corridor, identified as the “economic backbone” of the city, is the primary urban structuring element within the District along which the greatest proportion of commercial and semi-industrial activities are concentrated. Furthermore, the Bellville CBD, the 2nd largest economic growth node and a major employment precinct in the city with several corporate offices, is located within Tygerberg District.
- The district has the greatest amount of industrial property in the city, with 31% of all industrial property located within the Tygerberg District. Furthermore, the district boasts the greatest value of industrial plans submitted in the city. This indicates that existing industrial centres are generally healthy and providing a substantial amount of employment opportunities.
- The Transnet Marshalling Yard (Belcon Site) is ±233ha in extent. Historically, utilised as a marshalling yard, diesel depot and a civil maintenance department, the precinct represents a significant investment in rail infrastructure and comprises the central hub of Transnet operations which have recently relocated from Culemborg. The site is currently being investigated by Transnet to determine the future use thereof. Due to the development potential that the site offers, it is regarded as a “strategic site”. The Belcon Site, together with surrounding industrial areas in Sacks Circle and Parow can be considered as the ‘industrial heart’ of the city along with the Epping and CTIA precincts. The Belcon Site plays a major role within the citywide context as an important break-bulk of rail-based-freight goods into the city and transferring this to road-based freight for distribution. Conversely, the site serves as an urban consolidation centre for “less than train load” freight movements, where goods are consolidated from a number of sources and transferred onto rail. This consolidated load is transported from Belcon either to the Cape Town port via the shuttle CapeCor rail shuttle, or is transported along the long-haul freight line to Johannesburg. However, at a district scale the strategic location and extent of the site causes it to act as a substantial ‘mono-functional’ buffer with little or no interaction or interface with surrounding areas. The precinct forms a constraint to the southern extension of the Bellville CBD and spatially reinforces the barrier effect of the rail line by preventing access to and from the south of Bellville Station, and stifling economic development south of Voortrekker Road. However, the potential exists for

portions of the Belcon Site abutting Modderdam Road to accommodate more intense mixed use activity.

- Tourism potential of the Stellenbosch Winelands in Kuils River is being undermined by severe development pressure on the periphery of the city. The Winelands area is a cultural landscape that contributes to the economy of the city in the way of agriculture, tourism and recreation, and should be preserved as such.

### 3.1.2 What Action is needed? (Spatial development objectives)

The following spatial objectives are aimed at addressing key spatial challenges and are relevant to the district in relation to the economy and movement networks of the City as a whole. They include:

- **Maximise corridor opportunities:** Harness economic energy around the Voortrekker Road Activity Corridor and encouraging the attraction of further investment in areas branching off to other parts of the district.
- **Facilitating better access:**
  - Improve access to economic opportunities within strategic areas along the accessibility grid. For this to happen, the focus should be to facilitate developmental activity around routes of highest continuity within the district, which, besides Voortrekker / Van Riebeeck Road, include: *Giel Basson Drive / Jan Van Riebeeck Road / 35<sup>th</sup> Avenue, Stellenbosch Arterial, and Durban Road/Modderdam Road/Symphony Way.*
  - Improving north-south access through the district to provide access to employment opportunities within the Voortrekker Road Corridor.
  - Focus on externalising areas within the district that have historically been isolated as a result of the urban structure that was planned, where sections along routes display the characteristics of development routes or where the potential to serve this role exists. Increase the efficiency of the road system through the provision of new road links to increase connectivity and continuity throughout the district.
- **Improving public transport:** Support the development of an efficient, integrated and complementary non-motorised and public transport network within and across the district.
- **Intensifying development around nodes:** Focusing nodal development around strategic intersections (e.g. Van Riebeeck/Stellenbosch Arterial Roads) and highly accessible public transport interchanges related to rail stations.
- **Reinforce and support a diversity of economic areas which hold competitive advantages within the Tygerberg District:**
  - Support well-functioning existing industrial and commercial areas;
  - Encourage the expansion of emerging industrial and mixed use areas (with priority on the CTIA precinct, opportunities along Symphony Way/Modderdam Road and the Transnet Marshalling Yard (Belcon site);
  - Protect agricultural areas and encourage further development of the rural economy outside the urban edge.
  - Support the growth of existing major economic nodes, especially the Bellville CBD.
  - Create the space for greater interaction and synergy between formal business, small business and the informal economy in locations which allow for this.

### **3.1.3 Spatial concepts and structuring elements**

Spatially, there is a need to ensure that the movement system provides convenient access to jobs and other opportunities. Furthermore, there is a need to further concentrate employment in areas that are convenient and easy for people to access. In this regard, several spatial structuring elements and concepts are significant in thinking about the spatial organisation of the City and district:

### a) The multi-directional accessibility grid

The aim is to set up a grid of accessibility that facilitates convenient access and multidirectional movement between the district and other parts of the city (“primary accessibility grid”) and within the district (“secondary accessibility grid”) which will feed the primary grid (see figure 3).

This grid will comprise a hierarchy of routes which provide varied, but complimentary roles in terms of accommodating a continuum of mobility and accessibility functions.

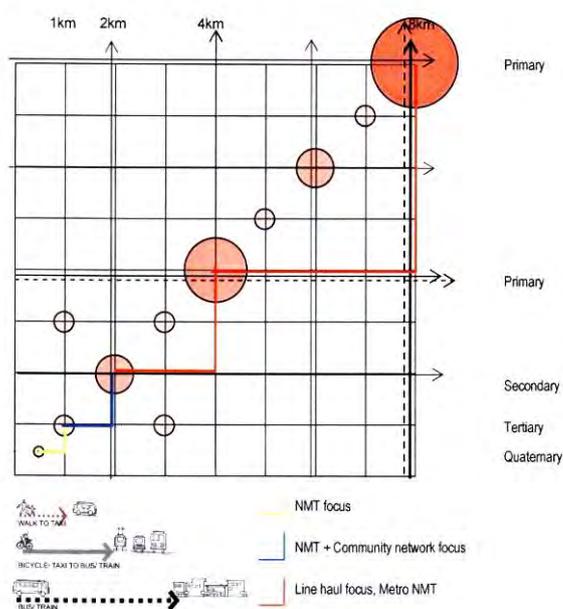
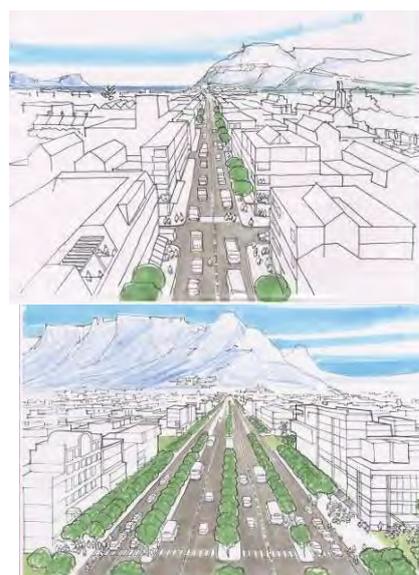


Figure 3: The multi-directional accessibility grid

The *primary accessibility grid* incorporates:

- **Activity routes:** Activity routes are characterised by strip and/or nodal urban development along sections of the route. Activity routes are generally supported by a mix of land uses and higher density urban development. Activity routes are characterised by direct access and interrupted movement flows, especially at bus and taxi stops and traffic lights.
- **Development Routes:** Development routes have a greater mobility function than activity routes. Mixed land use and higher-density development tend to be nodal, with access provided at intersections and generally linked to parallel and connecting side routes. Development routes may include short stretches of activity route-type development.



The primary accessibility grid is supported by a system of mobility links, which play a key role in reinforcing urban structure and include:

- **Urban Freeways:** Urban freeways fulfil a mobility function, and do not permit direct accessibility to abutting land uses. The high connectivity provided by direct freeway/expressway connections tends to attract manufacturing, warehousing, major retail and industrial land uses. These opportunities tend to be realised around key intersections / off ramps and roads running parallel or linked to urban freeways.
- **The Rail network:** the rail network provides for mobility over longer trip distances. The stations supporting the rail service are primary points of accessibility, particularly when

associated with areas of high road based accessibility and can generally support intense concentrations of activity and medium to high land use densities

The *secondary accessibility grid* incorporates:

- **Activity Streets:** Activity streets are characterised by strip and/or nodal urban development along sections of the route, although generally of lower intensity than typically found on activity routes. Activity streets are generally supported by a mix of land uses and medium-higher density residential development. Activity streets are characterised by direct access and interrupted movement flows, especially at bus and taxi stops and traffic lights.
- **Other structuring route:** routes which provide structure (ordering land use configuration and intensities) to local areas and may accommodate a mixed activity / mobility function, but do their role in accommodating activity is less intense than activity routes/streets.

The secondary accessibility grid is supported by a system of lower order connector routes offering increased mobility.

- **Connector route:** Connector routes connect different areas of the city and are typically characterised by high volumes of fast-moving traffic. In some instances, direct access to abutting land uses and residential properties is provided along connector routes.

**Note:** The route designation reflected above does not replace the City's Hierarchical Road Network Classification system, nor is it intended to run in parallel as a duplicate classification system. Annexure E describes the relationship between the CTSDF / district plan route designations and DoT, the PSDF and the City's hierarchical road classification network.

The hierarchical, multidirectional accessibility grid envisaged for Cape Town lays the foundation for the routing and service design of an Integrated Public Transport Network (IPTN) intended to place over 85% of the city's population within 1 km of a high-quality public transport system. The IPTN will inform a hierarchy of public transport services relating to the accessibility grid, including:

- A **rail service** that provides a high-performance, high-volume and safe public transport service, which will be the preferred mode of choice of long-distance commuters. Conceptually, this service should be provided at 8-16km intervals on a city-wide to district level - forming part of the *Primary* tier of the accessibility grid.
- A **road based trunk service**, provided by articulated and standard buses on dedicated and semi-dedicated right-of-way infrastructure that offers an 18-hour frequent and rapid service along major metropolitan and district level roads, and along development and activity routes – forming part of the *Primary* tier of the accessibility grid.
- A **community (feeder and distribution) service**, at 4-8km intervals, provided by standard buses and smaller vehicles, that feeds into the trunk bus and rail services. The community service will operate at a district to inter-suburb scale, along district-level activity routes and streets – forming the *Secondary* tier of the accessibility grid.
- **Pedestrian and cycle lanes** should be provided along public transport routes and around public transport stops, stations and interchanges to facilitate safe and convenient access to public transport services – forming the *Tertiary and Quaternary* tier of the accessibility grid.

*NMT: Bicycle route classification:* Pedestrian and bicycle ways can be provided in the form of pavement and identifiable cycle ways. Pedestrian and cycle ways can also be shared, although this is not recommended. Types of pedestrian and cycle ways include: Sidewalks provided parallel to a street or road within the road reserve; or walkways which are independently aligned and not typically provided in the road reserve. Bicycle routes are classified as follows:

- **Class 1:** Located along an independent alignment outside of the road reserve and reserved for either cyclist or shared by pedestrians and cyclists.

- *Class 2:* A path which is located with the road reserve, but separated from the roadway and reserved for either cyclist or shared by pedestrians and cyclists.
- *Class 3:* A bicycle path that forms part of the street or the roadway and is marked accordingly, referred to as a cycle lane.
- *Class 4:* Located on a low-volume street to serve as a link in a network of cycle facilities. The path is indicated by signs and markings.

## STRATEGY 1 – THE CENTRAL SPATIAL IDEAS

### a) Tygerberg District: The multi-directional accessibility grid

In the Tygerberg District, increased intensity and greater mix of land use activity is proposed along activity routes and at specific points along development routes (which will form the backbone of the trunk or line haul road based public transport network), in relation to accessible modal interchanges and along local activity streets and other structuring routes in support of feeder road based public transport services.

In this context, the central spatial ideas in relation to the **accessibility grid** highlighted in the district spatial concept include:

- **The reinforcement and expansion of the “primary accessibility grid”:**
  - This involves predominantly the reinforcement of the **east-west Voortrekker Road corridor**. High intensity development and improved public transport services along the length of Voortrekker Road is proposed in certain areas where urban revitalisation is required.
  - Facilitating access to the urban core corridor and opportunities to the north is a priority. North-south linkages including **Durban Road/Modderdam North Road/Symphony Way (DMS)** and **Giel Basson/35th Avenue/Stellenbosch Arterial**, should be promoted as significant development routes within the district by encouraging high intensity activity along the length of these routes where access allows. The DMS development route, in particular, should be prioritised to address the missing link in the City’s public transport system and improve citywide linkage to economic and developmental opportunities.
  - The development of the **Blue Downs rail** link to connect the Khayelitsha/Mitchells Plain line and the Strand-Bellville rail line through Sarepta, should be prioritized as a citywide transport infrastructure project in order to restructure the current radial citywide rail transport network to a more complete circular network. The Blue Downs rail link is also envisaged to alleviate capacity problems along the Khayelitsha to Cape Town rail line and relieve the interchange congestions at Langa and Mutual Stations by providing a more direct line to Bellville CBD.
- **Promoting the development of a “secondary accessibility grid”:** feeding local movement generators and the primary grid including:
  - A system of local activity streets, which allow for concentration of a mix of activities, local institutions and facilities, public transport and medium to high residential densities along their length is essential for promoting local development and investment at a sub-district scale. These include **Halt Road (Elsies River), Vasco Boulevard (Goodwood), and Belhar/Delft Main Road**.
  - A range of other structuring routes which contribute to completing the secondary accessibility grid by ordering land use configurations and intensities thereof (less intensely than activity routes/streets) is promoted throughout the district (see 4.2(f)).
- **Rationalising the mobility and activity functions** of key metropolitan and sub-metropolitan structuring routes by:
  - To this end, the designation of various routes should not be uniform along the entire length of those routes (i.e. either mobility or activity functions), but should be able to change according to the dominant function at any given location along the route, such as **Giel Basson Drive Drive/35<sup>th</sup> Avenue/Stellenbosch Arterial and Symphony Way**.

b) Areas of land use intensification

The city's intention is to encourage land use intensification along the accessibility grid to ensure that the opportunities they offer can be accessed by a broader range of people (see Table 3.1). The process of land use intensification refers to achieving a greater spectrum of mixed uses (commercial, industrial and residential) through the increased use of space, both horizontally and vertically, in accessible, high-opportunity locations. Employment-generating activities, retail development, social facilities, public institutions and intensive mixed-use and residential development should be encouraged on and adjacent to the accessibility grid, particularly the primary accessibility grid. The spatial organisation of development in the areas of land use intensification can take a variety of forms, including development corridors, strip development and urban nodes:

- Development corridors:** Development corridors are broad areas of high intensity urban development focused along activity and development routes. They are characterised by a dynamic, mutually supporting relationship between land use and the supporting movement system. Development corridors are generally supported by a hierarchy of transport services which function as an integrated system to facilitate ease of movement for private and public transport users. Corridor development is focused predominantly on activity / development routes serviced by mass rapid public transport services (i.e. rail or BRT). However, the system of routes may serve different functions, with some routes combining route functionality in terms of accessibility and mobility. Figure 4 shows the basic elements of development corridors, including activity routes, passenger rail, stations, modal interchanges and freeways/expressways. The combined operational capacity of the public and private transportation system supports a mix of land uses, and enables the development of medium and high levels of land use intensity.

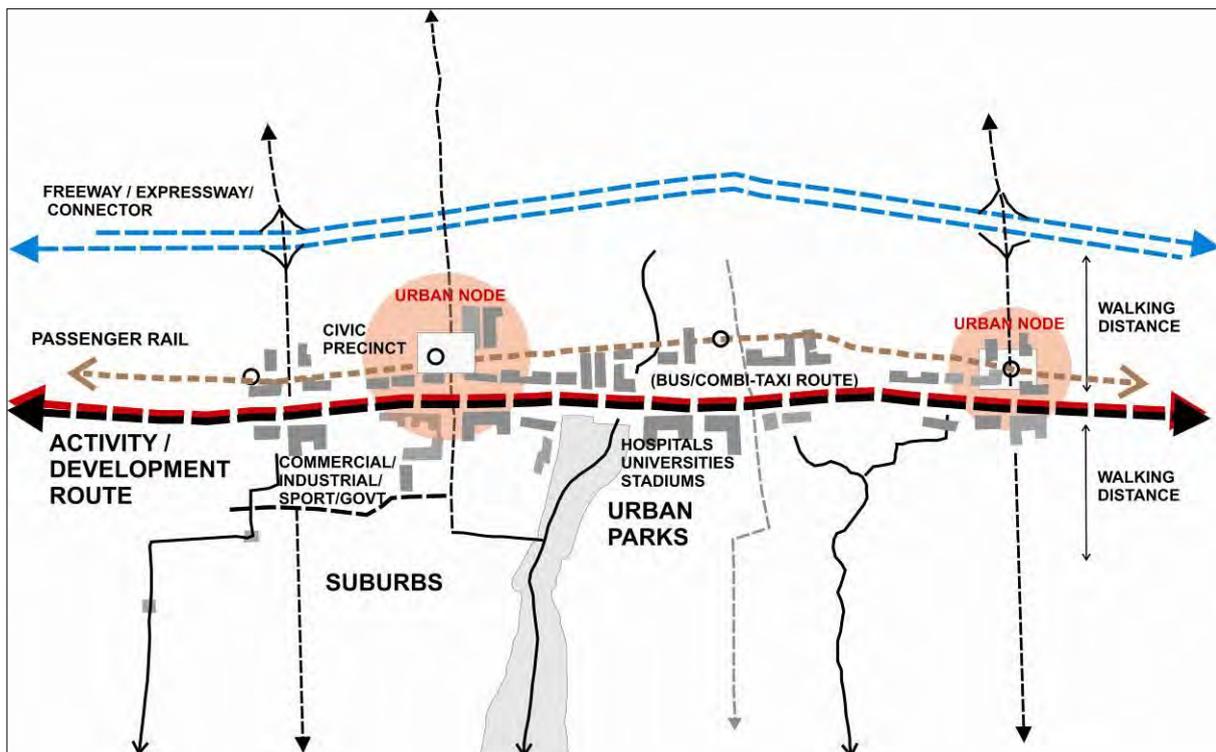


Figure 4: Corridor-type development

- Urban nodes:** Urban nodes are characterised by the intensity, mix and clustering of activities or land uses (including commercial/business development and associated employment opportunities, higher-order services and higher residential densities) at points of maximum accessibility, exposure, convenience and urban opportunity. The generative capacity of an

urban node is generally a function of the mix of land uses that it supports and its position in the accessibility grid (see Table 3.1). The role and function of urban nodes is differentiated in terms of scale (metropolitan, sub-metropolitan, district, local) based upon its structural position within the accessibility grid, and the intensity and mix of land uses it supports. Urban nodes are identified as areas for further land use intensification, clustering and reinforcing economic land uses, public services and high-density residential development.

**Table 3.1: Alignment and hierarchy of the accessibility grid and areas of intensification**

Accessibility grid	Span	Associated nodal development	Scale of operation	Areas of land use intensification
Primary	8-16km	Corridor/strip development/urban nodes	Citywide	Corridor/strip development/urban nodes
Primary	4-8km	Corridor/strip development/urban nodes	Sub-metropolitan	Corridor/strip development/urban nodes
Secondary	2-4km	Strip / urban node	Inter-district significance	Strip development/urban nodes
Tertiary	1-2km	Strip / urban node	Inter suburb	Usually urban nodes
Quaternary	0.5-1km	Usually nodal	Suburb	Usually nodal

- **Strip type development:** Strip development is characterised by intense and mixed use development often located along portions of activity routes/streets and development routes. Depending on the intensity of development, the width of the strip could range from half a street block to two or more blocks. The mix of activity along these strips may vary, with some areas having a stronger commercial/retail focus, while other may be characterised by dense residential development.

Other forms of intensification of development, on the accessibility grid (development routes, activity routes and streets) could be encouraged in a locally appropriate manner including:

- **Industrial areas** where the changing of their nature is supported by the District plan (e.g. Elsie's River Industrial Area at the Riverton Business Node);
- Particular **business complexes** that are on the accessibility grid (development and activity routes / streets). Business complexes within Tygerberg District include Grand West Casino Precinct, N1 City Precinct, Parow Centre, and The CTIA Terminal Precinct; and
- Areas associated with **transit stations (system of rail stations and the IRT trunk stations)** especially those which are a component of identified urban nodes. With regard to these areas, a typology of opportunities is proposed which considers the transport and land use role of the transit stations (rail and IRT trunk stations) and associated areas (comfortable walking distance from the station) in the broader urban system (see table below). Transit station areas that are associated with urban nodes as well as associated significant foot movement (based on their role in the transit system) are generally more likely to support more intense mixed use environments.

Table 3.2: Transit (Rail and IRT trunk) station precinct typology

<b>Transit station area typology</b>	<b>Land use character / role</b>	<b>Intermodal connectivity</b>	<b>Structural urban position</b>	<b>Example station</b>
<b>Metropolitan station</b>	High intensity land use mix (office, residential, commercial, civic and government)	Major intermodal connectivity and destinations	Generally associated with metropolitan urban node	Bellville Station
<b>Major urban station</b>	Mix of office, retail, residential, commercial and public uses	Major intermodal connectivity	Generally associated with sub-metropolitan / district urban node	Kuilsrivier Station
<b>Employment station</b>	Specific industrial / commercial uses and destination	Limited intermodal connectivity	Generally associated with industrial area.	Bonteheuwel Station
<b>Urban neighbourhood station</b>	Local centre of activity, live, work, shop	Transit feeder station with parking	Generally associated with local urban node	Monte Vista station
<b>Neighbourhood station</b>	Primarily residential function.	Local transit feeder station with limited parking	Likely to reflect embedded position in urban fabric.	Lavistown Station

## STRATEGY 1 - THE CENTRAL SPATIAL IDEAS

### b) Tygerberg District: Areas of Land Use Intensification

- **Intensifying existing regional, district and local nodes:** focusing on commercial, mixed use development and densification including the Goodwood, Parow, Bellville, Kuils River and Delft CBD's; Develop new opportunities for urban nodes along the accessibility grid. The system of interchanges or points of access where the secondary accessibility grid (community/feeder public transport network) meets with the primary grid (line haul, 18hr public transport network) should be the focus of urban nodal growth.
- **Intensification within Voortrekker Road corridor:** Reinforce Voortrekker Road corridor with the focus on greater intensity of mixed use and suitably located medium-high density housing. The area between Voortrekker Road and the Bellville railway line holds much potential for mixed use intensification. Intensification of Durban Road in accordance with its realignment with Modderdam Road and Carl Cronje Road; Intensification in suitable locations abutting development and activity routes (for example the Belcon area along Modderdam Road).
- **Realising economic potential along the DMS Development Corridor:** Aside from fulfilling its intended role as a public transport trunk route between Bellville/Tyger Valley and the Metro South-East, intensification is proposed in relation to several catalytic economic generators concentrated within this corridor. This would need to be supported by infrastructural upgrades such as the Durban-Modderdam Road re-alignment, which would enable Bellville CBD to expand towards Tygervally.
- **Reinforcing the Cape Town International Airport (CTIA) Precinct as a superior commercial and industrial hub within the Cape Flats:** The CTIA, through the development of several precincts not required for aeronautical use for business purposes, has become a superior business location for those commercial and industrial uses requiring location in close proximity to the airport. Given the current and historic trend of lack of economic investment in the Cape Flats and Metro South-east of Cape Town, the CTIA precinct represents an important economic centre providing a substantial amount of job opportunities to traditionally poorer communities surrounding it. Urban nodal development can be realised in the airport northern logistics node (Airport Precinct 2) at Modderdam/Borchard's Quarry intersection, as well as at Stellenbosch Arterial/Symphony Way intersection. The IRT link between the Cape Town Metropolitan Node and the airport as well as planned future IRT routings, has increased public transport in support of the airport node.
- **Local urban nodes in a "pedestrianized context":** The establishment of a hierarchy of urban civic precincts/nodes of a district and local scale associated with the accessibility grid is likely to provide greater opportunities for small-scale economic development and informal business development in areas dominated by "foot traffic" — the emerging role of Delft Main Road will optimise accessibility, as well as reduce travelling costs and time.

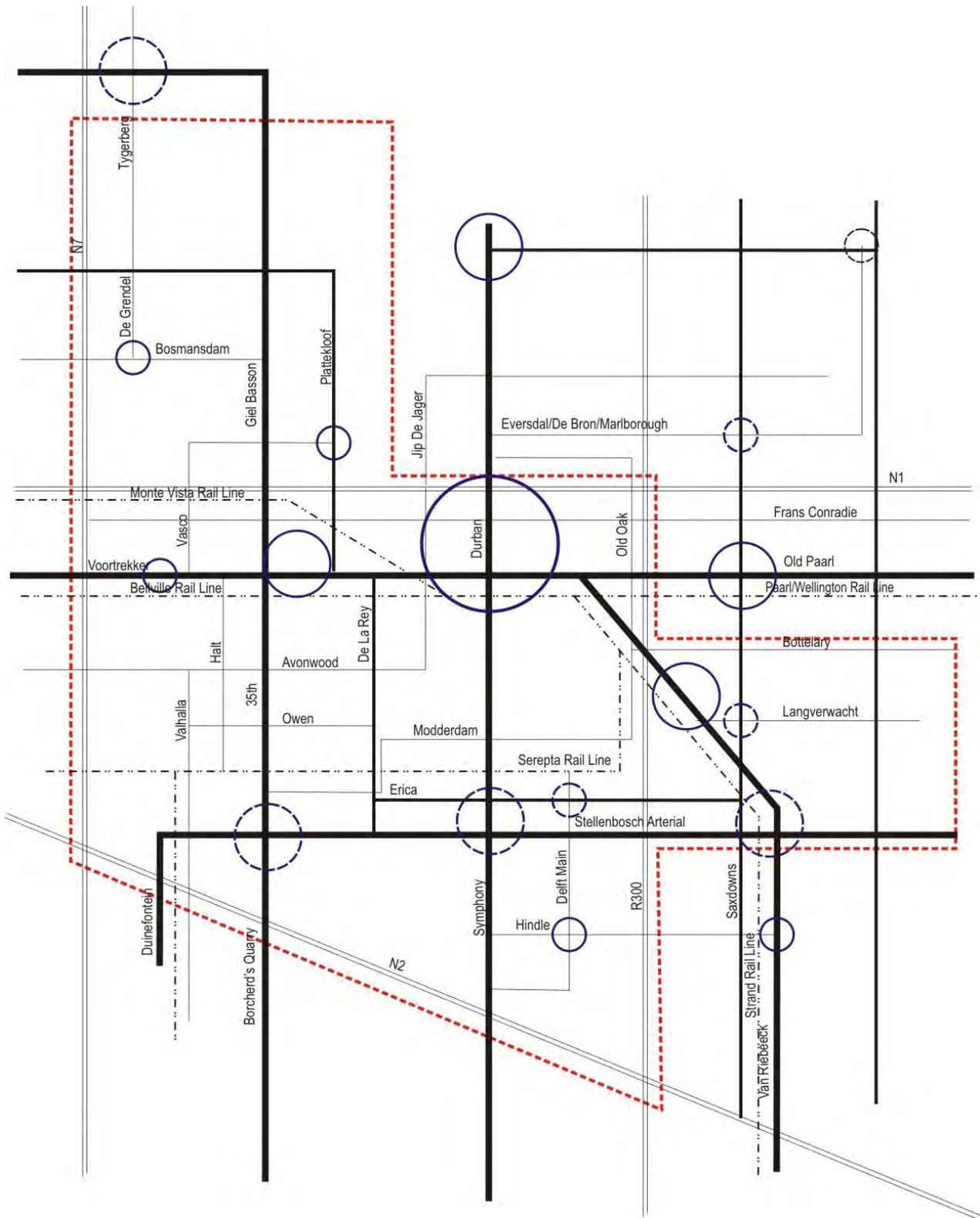


Figure 5: A conceptual representation of the accessibility grid and system of urban nodes within Tygerberg District.

## **3.2 Strategy 2: Manage urban growth and create a balance between urban development and environmental protection**

This strategy focuses on managing the pressures of urbanisation in a deliberate and coordinated manner and one that is environmentally sustainable.

### **3.2.1 Tygerberg now**

A number of challenges are presented when considering the Tygerberg District in relation to the City of Cape Town as a whole. These include:

#### **Development:**

- Development pressure on environmentally sensitive areas (e.g. the airport east precinct, Baronetcy Estate)
- Development pressure on valuable agricultural land (e.g. Kuils River/Stellenbosch Farms). The agricultural and tourism value of farmland in the Kuils River Winelands as well as De Grendel Farm in the Tygerberg Hills. These are important assets, which are under constant pressure due to expansion of urban development on the periphery of the city.

#### **Accessibility and quality of open space:**

- Lack of access to quality public recreation facilities in the southern parts of the district.
- Large components of the district south of the Bellville railway have poorly developed or unmaintained open spaces, which present challenges to the district as a threat to community safety and security. Due to over-provision, poor integration with the surrounding urban fabric or lack of maintenance, a general lack of use occurs and results in the attraction of anti-social and criminal behaviour.

#### **Environment:**

- Pollution of river systems (most of which are canalised) and vleis within the Tygerberg District.
- The river corridors within the district (Kuils River, Bottelary River, and Elsieskraal River) serve as significant structuring elements. However, structuring open spaces have diminished in parts along these corridors through canalisation and poor development interfaces, thereby negating the amenity value of river corridors.
- Illegal dumping in undeveloped open spaces that are left unmaintained and unmonitored.
- The existence of livestock practices is highly prevalent within the Tygerberg District including Elsies River, Delft and Kalkfontein. This poses several problems related to the accommodation of animals in an urban context, over-grazing of natural open space, pollution and public health/nuisances (noise and odours).

### **3.2.2 What action is needed?**

The following spatial objectives are aimed at addressing key spatial challenges relevant at a city scale in relation to proactively managing the natural and rural environment and urban growth. They include:

- Rationalisation of the open space system, where contextually appropriate in order to promote safety through improving interfaces, as well as viability by reducing the amount of unmanaged open space where its provision is excessive;
- Protecting riverine corridors such as the Elsieskraal and Kuils River systems and associated sensitive natural environments, flood prone areas and natural water courses such as wetlands and streams;
- Protecting the rural environment, which include biodiversity areas, nature reserves (including the Tygerberg Hills) and areas with significant agricultural potential;
- Demarcate areas where livestock may be kept and put out to pasture and actively manage these areas so that they do not suffer environmental degradation as a result;

- Discourage/manage the use of open spaces as a dumping ground (vacant open spaces throughout the Greater Elsies River area);
- Increase safe enjoyment of open spaces by facilitating the development intensely used activities with positive interfaces around open spaces; and
- Clustering of various public facilities around open spaces.

### 3.2.3 Spatial concepts and structuring elements

#### a) Natural assets

Cape Town's natural assets and biological diversity are part of what makes Cape Town a unique and desirable place in which to live, work and play. Because people derive benefits from the natural environment in a number of direct and indirect ways, natural resources play an important role in shaping where and how the city develops. The recreational functionality and functional integrity and connectivity of ecosystems must be improved, and an interlinking network of linear parks with foot and cycle paths should be established to facilitate easy movement of fauna and flora. Urban development must respect the presence, role and function of natural assets, and should make the most of the possible benefits residents and visitors can derive from them. The CTSDF and district plan identifies the natural assets that are of value to the city, merit protection in the longer term, and/or where the impacts of development need to be carefully managed.

Informed by their underlying environmental significance (e.g. agricultural land, biodiversity areas), the natural assets are categorised, each demanding different management approaches:

- **Core 1:** Statutory conservation areas (biodiversity areas that are formally protected and managed); critical biodiversity areas; conservation priority zones; critical, irreplaceable and restorable biodiversity sites; public conservation areas and private conservation areas.
- **Core 2:** Ecological corridors; critical ecological support areas; significant coastal and dune protection zones, major river corridors and water bodies excluding waste water treatment works.
- **Buffer 1:** Rural areas, game and livestock farming areas and other natural vegetation areas that do not form part of the core areas, but are recognised as areas that could provide opportunities to establish biodiversity offsets. Essential utility service infrastructure may be located in buffer 1 areas.
- **Buffer 2:** Other ecological support areas, transformed game and livestock farming areas, and rural areas that do not form part of core 1 and core 2 areas. Essential utility service infrastructure, cemeteries outside the urban edge, and areas zoned public open space may be accommodated in buffer 2 areas.
- **Intensive agriculture (high potential and unique agricultural land):** high potential and unique agricultural land worthy of long term protection given unique production, cultural and heritage attributes.
- **Intensive agriculture (agricultural areas of significant value):** agricultural areas of significant value given (1) existing use, (2) potential and emerging agricultural use due to new cultivation technology, availability of irrigation water, new varieties and crop types and the realisation of terroir qualities, and (3) food security.

This categorisation is consistent with the categorisation contained in the Provincial Spatial Development Framework (PSDF) and also the Cape Town Spatial Development Framework (CTSDF). The network of natural assets is further integrated and linked into the urban areas via a system of structuring open space (including parks, sports fields). (See section 3.3.3)

## STRATEGY 2 - THE CENTRAL SPATIAL IDEAS

### a) Tygerberg District: Natural Assets

- **Conserving protected areas such as the Tygerberg and Cape Flats Nature Reserves:** Active and passive recreational opportunities should form part of these open space systems to promote these spaces as places of natural amenity. It is thus important for improved public links to be created to enhance access to these protected areas for the benefit of local communities. Other areas to be protected include the Haasendal Conservation Site, Wingfield Military Base and Monte Vista powerline servitude (ecological corridor), and Bothasig Conservation Area (Erven 8354 & 7794).
- **Protecting the Elsieskraal and Kuils River systems:** these river systems, associated sensitive natural environments and floodprone areas serve as essential structuring elements within the district. These systems should be conserved and reinforced with complementary uses along their length that would enhance the natural amenity value of open spaces along these river corridors. The development of a district park along the [Kuils River corridor in the Sarepta area](#) and the upgrading of [Elizabeth Park \(Bellville CBD\)](#) and [Riverton Park \(Elsies River/Ruyterwacht\)](#) is encouraged in support of this central spatial idea.
- **Retaining and developing linked and continuous multi-functional open space corridors:** These open space corridors are often associated with powerline servitudes and stormwater channels. The development of district level sports and recreation facilities as part of the open space system serves should continue to reinforce these open space corridors as district structuring elements. (e.g. through the formalisation of the sports fields in the Kalkfontein area).

## b) Development edges

The spatial growth of the district will be managed through the use of development edges, and the identification of future urban growth areas. Since Tygerberg District is a landlocked district, the only development edge used to manage urban development is the urban edge.

The **urban edge line** is a medium to long-term edge line that has been demarcated to phase urban growth appropriately, or to protect natural resources. Spatial growth in the medium term (10–15 years) should be prioritised within the urban edge. In the longer term (15–50 years), the City will need to provide more undeveloped land for urban development, and the edge line will have to be adjusted on the basis of the city's growth direction.

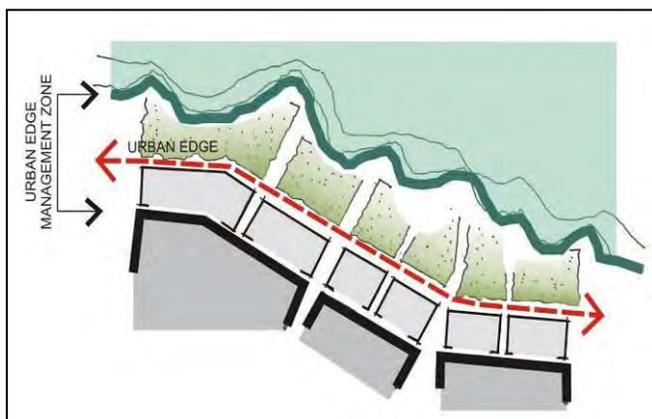


Figure 6: Urban edge management zone

## STRATEGY 2 - THE CENTRAL SPATIAL IDEAS

### b) Tygerberg District: urban edges

- **Urban edge – protection of natural assets:** The designation of edge lines is vital to the protection of environmental areas, but also human habitation and activities (re- riverine flooding, veldfires, rock falls, etc.). An essential component of this is appropriate treatment of the urban interface areas. In the Tygerberg District this takes the form of:
  - An urban edge line to protect the [Tygerberg Hills](#).
  - An urban edge line to protect the Stellenbosch Farms in the [Kuilsvier area](#). The high potential agricultural lands within this area represent an important natural asset as a cultural landscape and destination place. Therefore, the urban edge in this area should be respected and strictly adhered to.

### c) Further urban growth areas:

Urban development should be directed away from significant natural asset resource areas (e.g. nature and agricultural areas, aquifer) and hazards. It should occur as a priority within the existing footprint (such as development of underutilised infill sites or other forms of densification), and where it expands beyond this into areas of settlement / developmental opportunity that are appropriate for urban development. Future urban development should be as part of a phased, coordinated growth process associated with infrastructure provision (e.g. roads, stormwater, water, waste water, solid waste, and electricity services) as well as planning for the required range of social and community facility provision (e.g. health facilities, schools, libraries, parks and cemeteries).

## STRATEGY 2 - THE CENTRAL SPATIAL IDEAS

### c) Tygerberg District: further urban growth areas

- **Mixed use intensification:**
  - **Focused development along Voortrekker Road corridor:** Despite the Voortrekker Road corridor being an established activity corridor, it is still acknowledged as the predominant intensification area for residential densification and mixed use intensification. This is due primarily to its good public transport and access to significant work and social opportunities. It is essential for the Voortrekker to be reinforced as the economic backbone of Cape Town. This growth should respond directly to available opportunities, identified nodes and mixed use areas, and primary public transport route. The corridor should therefore be prioritised for infrastructure maintenance and upgrading linked to increased capacities.
  - **Realising the development potential along Modderdam North and Symphony Way development route:** This route of strategic significance and high development potential represents one of the few key opportunities for land use intensification and economic development to filter to areas south of Voortrekker Road into the Cape Flats and Metro Southeast. To this end, the Transnet Marshalling Yard interface onto Modderdam North Road and the Airport East Precinct, together with other nodal areas, is seen as important strategic prospects for intensification and new urban development.
- **Manage new development in the greater Kuilsriver area:** The Bottelary, Polkadraai and Kalkfontein Smallholdings Areas are seen as important urban growth areas within the district. However, this should be carried out responsibly, taking into account high potential agricultural land and cultural and scenic landscapes, and respecting the urban edge.
- **Urban Restructuring:** This constitutes a crucial part of urban growth within the district and comprises urban infill, redevelopment, incremental densification and strategic sites. Several strategic land parcels exist within the district, including:
  - **Stikland Psychiatric and Tygerberg Hospital Grounds** – the potential for the rationalisation of the current building footprints of the hospital buildings on these sites exists, which may make certain portions of these sites available for development.
  - **The Transnet Marshalling Yard (Belcon)** – this site is presently under-utilised, but it is proposed that activities be intensified to serve as an inland/dry port, increasing container stacking activities, also serving as a multimodal freight break-bulk and urban consolidation centre.
  - **The CISCO Iron and Steel Works in Kuils River** – As development has taken place around it, the steel works has become a nuisance industry that is located within the Van Riebeeck Activity Corridor. This land use is not considered a complementary activity corridor use. However, increased investment has been put into the steel works to increase its production capacity within the last 5 years as a result of increased demand for reinforcing steel from the construction industry. Should this activity be required to move or be closed, the site would be strategically located for high intensity mixed-use development.
  - **The Vacant Goodwood Prison grounds** – The vacant portion of the prison grounds abutting Montagu Drive should be considered for development. The possibility of acquiring this portion of land from the Department of Public Works should be investigated if the department does not require it for their core functions.

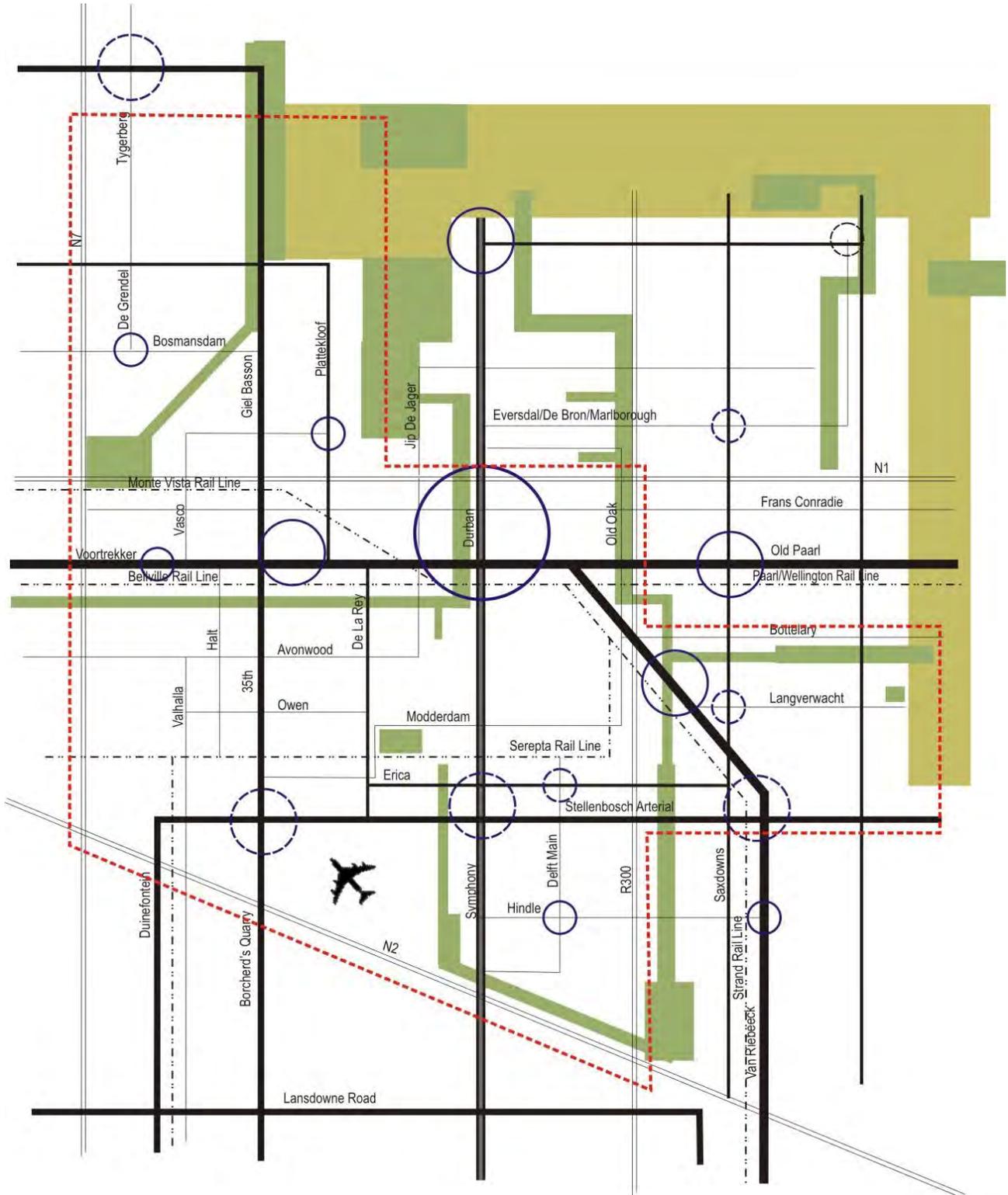


Figure 7: A conceptual representation of the natural assets within Tygerberg District.

### **3.3 Strategy 3: Build an inclusive, integrated and vibrant city**

This strategy focuses on redressing and transforming the apartheid city and encouraging more integrated settlement patterns. Furthermore, the intent is to enhance the quality and value of the qualitative aspects the urban fabric and the unique aspects of the City and district for its people as well as those that visit the area.

#### **3.2.1 Tygerberg now**

A number of challenges are evident when considering the Tygerberg District in relation to the City of Cape Town as a whole, and include:

##### **Low income residential development:**

- Areas such as Uitsig, Delft, and Belhar Extension 13 have become areas where extensive concentration of low income development and backyard settlement has taken place, thus necessitating the provision of a range of public facilities and services to accommodate under-provision in terms of existing demand as well as demand relating to future development.
- Areas where informal settlements have grown rapidly and have been identified for formalisation (Nooiensefontein, Kalkfontein) have increased the demand for public facilities and services
- Areas within the south of the district where a significant number of rental stock (walk-up flats) with poor socio-economic living conditions exist, require extensive public space upgrading (e.g., Bishop Lavis, Matroosfontein, Leonsdale, Cravenby, Eureka, Uitsig, Adriaanse, Belhar, etc.).
- Socio-economic challenges and high crime rates associated with high unemployment rates affect poorer communities predominantly south of Voortrekker Road.

##### **Amenities and facilities:**

- A stark contrast in respect of investment in public facilities and services occurs between the northern and southern areas within the district. Gaps in service provision in southern areas in the way of health, education and community safety are required to be addressed.
- Limited opportunities for good quality passive recreation space exist within the district as a result of lack of maintenance of existing spaces.
- Open spaces are incoherently organised, offering little structuring value within the context of the district.
- The spatial distribution of local civic precincts south of Voortrekker Road is problematic where these precincts are embedded within neighbourhood units and are removed from the accessibility grid. As a result, these precincts cannot be reinforced as destination places with high intensity commercial development because such locations do not make good business sense.

#### **3.3.2 What action is needed?**

The following spatial objectives are aimed at addressing key spatial challenges in relation to building inclusive, integrated and vibrant living environments. They include:

- Encouraging public investment that will be a catalyst to urban regeneration in areas which suffer from a severe lack of public investment in public facilities and services, as well as urban infrastructure. High order public investment should be oriented around the accessibility grid.
- Guiding possible locations for infrastructure development which aim to address socio-economic challenges and accommodate social programmes, in a way that makes public facilities and services more accessible to a greater number of people with the district.
- Creating places where people from across the district can gather, interact, socialise and participate in passive recreation while experiencing things which make the district unique by capitalising on significant untapped opportunities which present themselves in the form of

points along the coastline and adjacent to large water bodies and within areas of unique natural value and character.

- Encouraging focused facilities provision in the area of greatest need, predominantly in the southern areas within the district.
- Consolidating and reinforcing clusters of existing facilities in accessible locations.

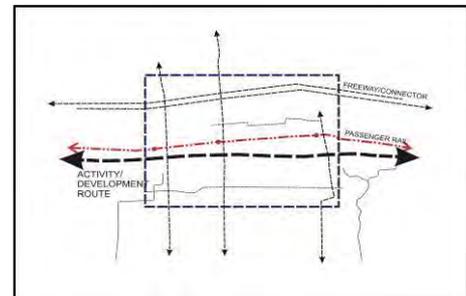
### 3.3.3 Spatial concepts and structuring elements

The key spatial concepts and structuring elements in respect to this strategy, along with the accessibility grid include:

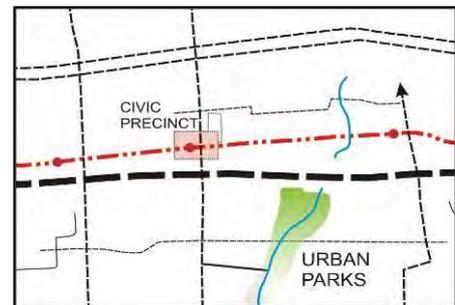
- Civic and urban precincts, where residents are able to access public facilities and services.
- Destination places where they can interact whilst experiencing the locations which make their district unique and special.

#### a) Civic precincts

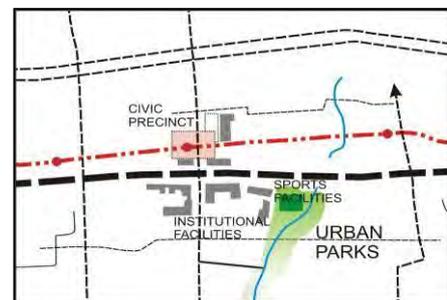
Social facilities and public institutions should be clustered in civic precincts, at the points of highest accessibility (the intersections of the grid). The hierarchy of the civic precincts will be determined by the hierarchy of the accessibility grid. The civic precincts that are of citywide significance will by and large be located at the intersection of the primary grid, such as Bellville. The civic precinct will be the focus of public investment, and will create opportunity for private-sector investment in commercial, mixed-use and higher-density residential development. They will therefore be closely associated with urban nodes.



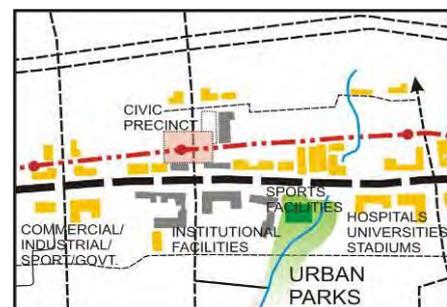
Road hierarchy



Interchange



Public investment



Private response

F

Figure 8: Spatial building blocks of civic precincts and destination places

### STRATEGY 3 - THE CENTRAL SPATIAL IDEAS

#### a) Tygerberg District: Civic precincts

Reinforcement of a hierarchy of civic precincts distributed equitably across the district. These are associated with intense urban environments, located close to public transport where commercial and high density residential activity is encouraged.

- **Higher order civic precincts on the accessibility grid:** Higher order civic precincts which offer facilities and services of metropolitan significance (eg. Bellville CBD, Parow CBD, Kuils River CBD, and Delft CBD).
- **Building on local civic precincts to support areas of need:** Accessible civic precincts that provide access to local level public facilities and services should be reinforced by encouraging local mixed use development around these precincts.

In general, the institutional arrangements between various line departments around sharing the responsibility of managing and maintaining of existing infrastructure (buildings, fences/walls and other structures), should be co-ordinated better. In this way, public resources can be allocated more efficiently.

#### b) Destination places

A destination place is a node, landmark or location that forms a significant point or area of attraction, and is part of the identity of Cape Town and the district. High-order destinations are those that every resident and visitor should visit at least once, while, at a local level, destinations include public spaces, such as squares, parks and sports facilities.

### STRATEGY 3 - THE CENTRAL SPATIAL IDEAS

#### b) Tygerberg District: destination places

- **Nature area attractions:** Potential exists to provide greater access to natural areas within the district in support of recreation and tourism. Places of natural or scenic beauty within the district include the Tygerberg and Cape Flats nature reserves, and also include the greater Kuilsriver agricultural landscape.
- **Special places of cultural/heritage significance:** Places of cultural and historic significance that require conservation and enhancement within the district include the University of Western Cape.

#### c) The structuring open space system and critical public links

The structuring open space system reflects an interlinking network of parks, sports fields and green links for walking and cycling. This system provides structure to urban areas and provides for escape from the more intense urban environment.

Critical public links are identified as a component of the broader non-motorised transport network linking through these open spaces to significant destinations.

### STRATEGY 3 - THE CENTRAL SPATIAL IDEAS

#### c) Tygerberg District: Structuring open space system and critical public links

- **Other district structuring open space:** In addition to the district's major natural asset areas, other open spaces of district significance include district parks, sports facilities, school grounds, golf courses, and cemeteries. These are major attractions to communities within the district and beyond. Their specific functions of each, as well as minor open space linkages between them, should be reinforced to support the greater open space system. Similarly, their role as areas of open space, providing relief within the urban area should be exploited with intensified urban development and improved urban interfaces around them.
- **Critical public links:** Key open space public linkages should be developed to maximise public access to various special attractions and destination places within the district. Continuous public footpath access should be realised along river corridors in the district. In addition several NMT interventions are required to increase local pedestrian movement between areas that have historically been isolated by major transport mobility routes and other major barriers.

#### d) Integrated human settlement patterns

The promotion of integrated human settlement patterns is based on the qualitative aspects of the built environment as it pertains to the new growth areas of the City as well as upgrading of existing areas. In principle these areas should support the creation of a wider mix of residential options and income groups, as well as make provision for an appropriate provision of social (including civic precincts) and economic opportunities.

### STRATEGY 3 - THE CENTRAL SPATIAL IDEAS

#### d) Tygerberg District: Integrated settlement patterns

- **Infill pockets:** Those undeveloped areas within the urban edge which are suitable for urban development should be identified for such. These should, in general, be developed at slightly higher densities than their surrounding areas in support of a more compact city, but not to the detriment of the local area. Creating more integrated urban areas and creating thresholds to support non residential land uses in specific locations is a key task in this regard. Smaller scale infill opportunities to address localised housing demand through public assisted means are identified in Bellville East, Bothasig, Elsies River, Belhar, and Valhalla Park.
- **Promoting publicly assisted housing opportunities** in a manner that enables social and economic integration should be promoted on an on-going basis through social and inclusionary housing opportunities.



Figure 9: A conceptual representation of civic precincts, destination places and structuring open space within Tygerberg District.

### 3.4 Synthesis: Tygerberg spatial concept and vision

All the abovementioned central spatial ideas (e.g. reinforcement of land use around a multi-directional accessibility grid) are proposed as the means through which the strategies can be achieved. These central spatial ideas combine to form the spatial vision for the Tygerberg District, which indicates the overall concept for the district (see figure 10 below).

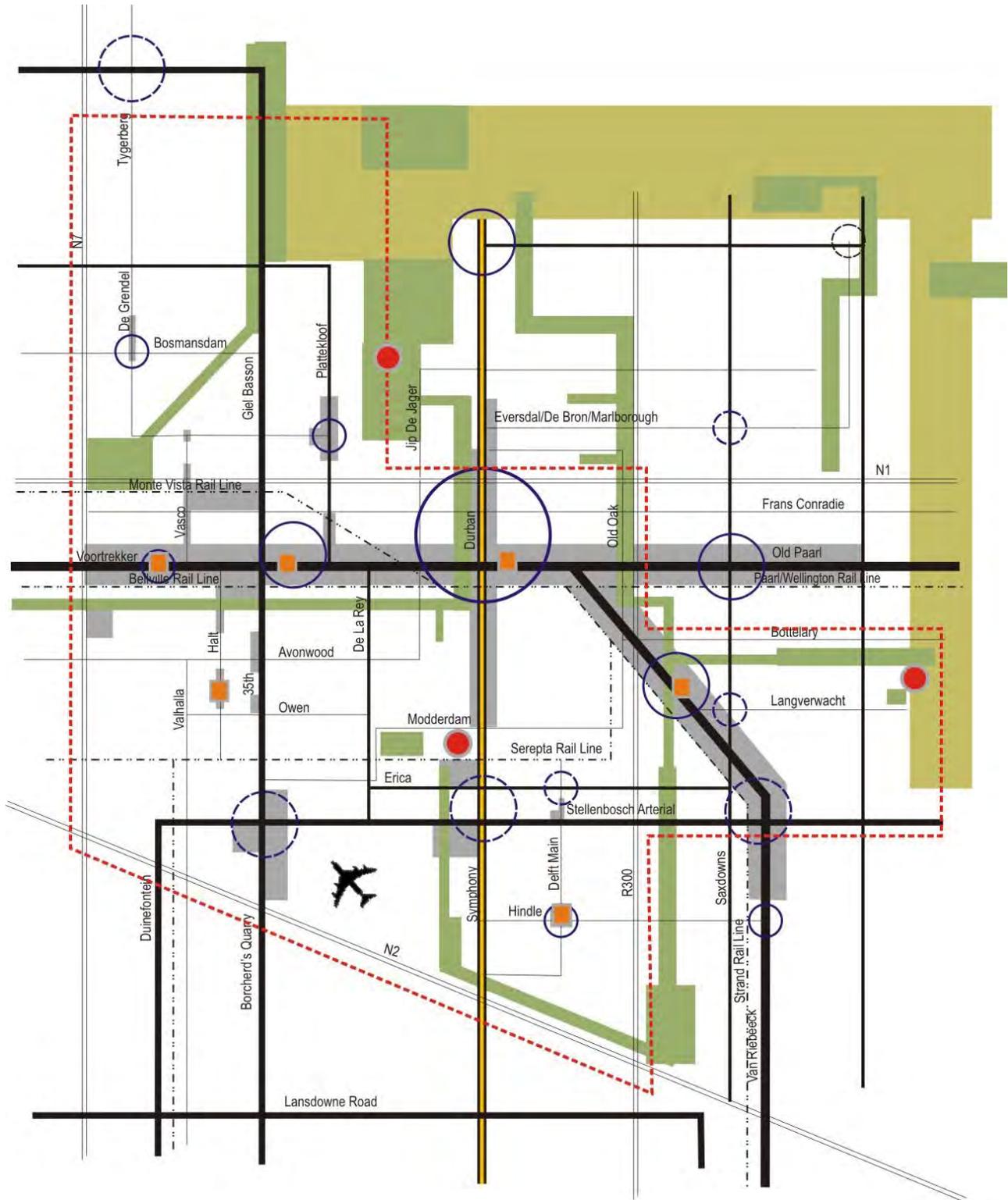


Figure 10: Spatial vision for Tygerberg District

The spatial vision focuses on the following key elements:

- The reinforcement of Voortrekker Road as the urban core. High intensity development along the length of the Voortrekker Corridor is the long term goal, promoting urban revitalisation in support of the urban core.
- Developmental activity concentrated along routes of highest continuity. Two such routes exist within the Tygerberg District. These include the DMS (Durban-Modderdam-Symphony Way) Corridor, and 35th Avenue/Stellenbosch Arterial. The realising of development potential along the DMS Corridor is especially significant as it represents one of the few key opportunities for land use intensification and economic development south of Voortrekker Road.
- Places of land use intensification: High order urban nodal activity around points of highest accessibility. Bellville CBD is the primary nodal investment hub, while other high order urban nodes exist at the intersections of activity and development routes within the district. The development of the CTIA land-side precincts for commercial and industrial purposes will reinforce the airport's location as a strategic business location within the Cape Flats.
- Preservation and enhancement of riverine and open space corridors. The concept emphasizes the three primary river systems, namely the Elsieskraal, Kuils and Bottelary River systems, which provide continuous open space corridors throughout the district. The Elsieskraal River system provides a riverine linkage from the Tygerberg Hills Nature Reserve to the Salt River and M5 open space corridor. The Kuils River/Bottelary River Corridor is identified as a metropolitan open space corridor and an important natural asset in terms of recreational functionality and functional integrity and connectivity of ecosystems.
- Destination places: The concept identifies places of natural and cultural heritage as places of attraction within the district. In this regard, the Tygerberg Hills Nature Reserve (including De Grendel Farm), the Kuils River farmlands and cultural landscape, as well as the University of Western Cape and CPUT campus (including Cape Flats Nature Reserve) are identified as district destination places.

## 4. Spatial Development Plan: District Development Guidelines

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### EMF: DESIRED STATE OF THE ENVIRONMENT

The spatial development plan essentially comprises the application of the spatial concepts and structuring elements discussed in chapter 3 to the context of the Tygerberg district. The identification and active promotion of the spatial concepts and structuring elements are fundamental to responding to the 3 spatial strategies identified in chapter 3 and realising the appropriate medium to long term spatial structure for the district. This is also reflected graphically in the progression from spatial concepts and structuring elements at citywide scale, to the spatial vision for the district, to the spatial development plan (see figure 11). The purpose of this graphic is, firstly: to illustrate the strategies at conceptual level as the 'golden thread' between the two scales of planning; and secondly, to illustrate the application of the strategies from concept to reality in the spatial development plan.

This section also serves to synthesise the proposed broad spatial structure for the district and intended "end state" that will provide a guide to investment and land use decision making. It should be read in conjunction with the relevant CTSDF policies and actions (referenced in the category tables in the sub-sections below) and sub-district development guidelines (contained in section 6.2 of this document).

The District plan comprises 5 broad types of categories:

- Spatial planning categories
- Transport infrastructure and route designation
- Conceptual designations
- Development edges
- Precautionary areas and utility service infrastructure installations

Each of these sections includes a description of each of the applied spatial concepts and structuring elements to the Tygerberg District. This section also serves to synthesise the proposed broad spatial structure for the district and desired "end state" that will guide investment and land use decision-making.

The District spatial development plan has been generated on a geographic information system (GIS), which improves the accuracy and legibility of mapping. This is particularly useful to the mapping of development edges and the precautionary areas, which are generally defined according to cadastral boundaries (see figure 12). However, the spatial planning categories, although appropriate at a district and sub-district scale, are generally broad classifications, which may require a greater level of detail, through sector specific plans or local area planning frameworks, to further guide decision-making at a local and site level.

The spatial development plan is the application of the conceptual framework and structuring elements to the Tygerberg District at a greater level of detail.

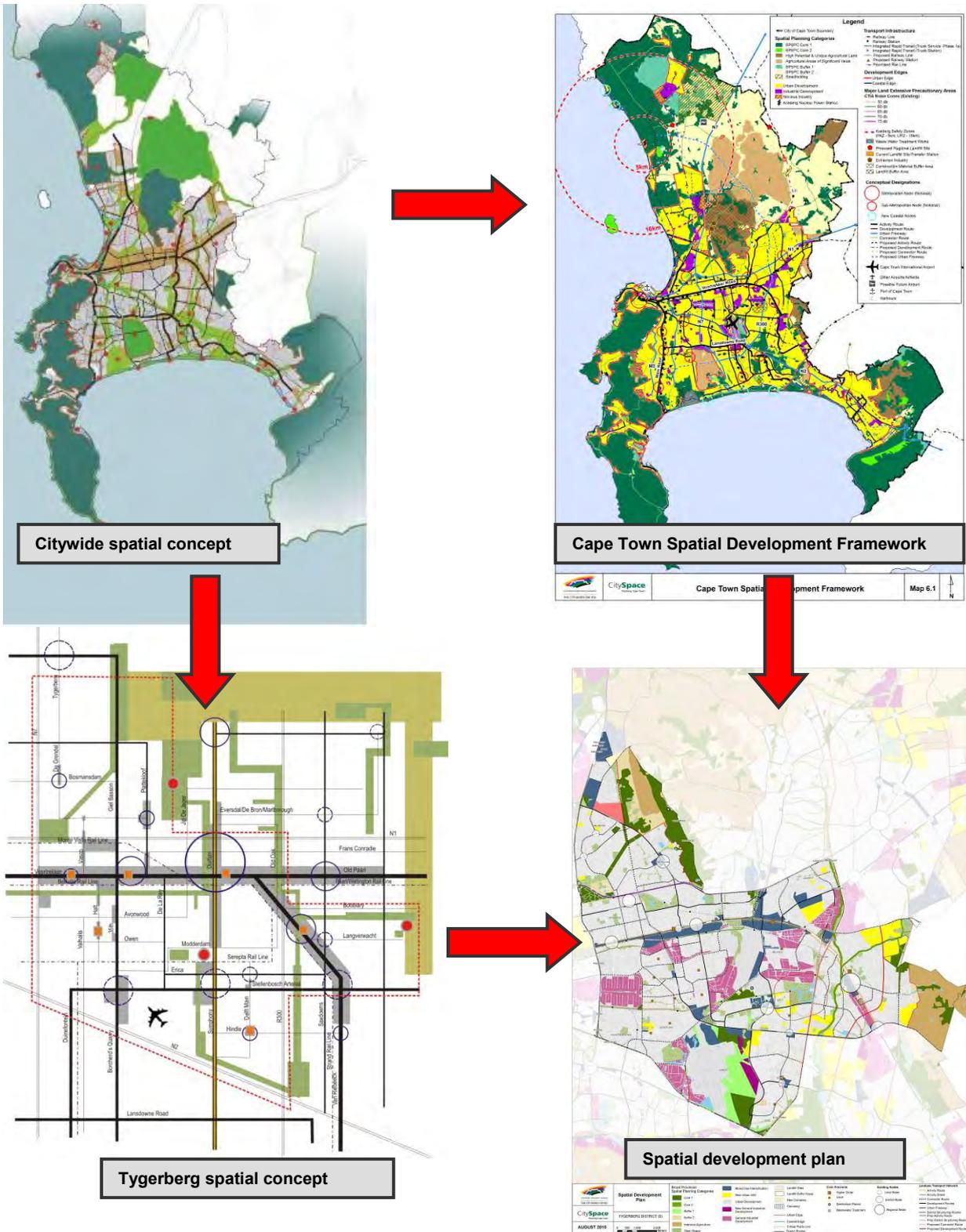


Figure 11: Evolution of the Spatial Development Plan from concept to reality

## 4.1 Spatial planning categories

The land use classification system adopted by the Tygerberg district plan is consistent with the bio-regional planning framework and broad provincial spatial planning categories (SPCs) adopted by the PSDF (2009), and utilised by the CTSDF. Additional categories included in the district plan, commensurate with the greater level of planning detail, are included (e.g. other structuring open space, mixed use intensification, and cemeteries). The SPCs specify the inherent land use suitability of the city's environmental, cultural, and urban landscapes.

Further guidance on more detailed land use management at the sub-district scale can also be found in section 6.2.

**Table 4.1: Spatial planning categories (SPCs)**

Spatial planning category	District elements	District development guidelines	Relevant CTSDF policies*
a. Core 1	<p>Core 1 areas are areas of high conservation importance and that should be protected in terms of their underlying high level of biodiversity. They include:</p> <ul style="list-style-type: none"> <li>• Statutory conservation areas: biodiversity areas that are formally protected and managed.</li> <li>• Conservation Priority Zone (CBA 1 &amp; CBA 2): critical irreplaceable and connectivity biodiversity sites as defined in terms of the CCT Biodiversity network (CBA 1), as well as important restorable biodiversity sites (CBA 2).</li> </ul> <p>Core 1 areas identified within the Tygerberg district include:</p> <ul style="list-style-type: none"> <li>• Tygerberg Hills Nature Reserve</li> <li>• Cape Flats Nature Reserve</li> <li>• Haasendal Conservation Site</li> <li>• Wingfield Military Base and Monte Vista power line servitude</li> <li>• Airport north-east and south-east precinct</li> <li>• Jack Muller/Danie Uys District Park</li> <li>• Erven 8354 &amp; 7794,</li> </ul>	<ol style="list-style-type: none"> <li>1. Activities in these areas should focus on conservation use with conservation management activities (e.g. alien clearing, research) encouraged.</li> <li>2. In general, low impact activities such as passive recreation (e.g. walkways and trails), environmental education and tourism may be appropriate, but should be subject to stringent controls (e.g. limits to development footprint, management plans).</li> <li>3. Where possible, all new utility infrastructure, services and structures should be located outside of these areas.</li> <li>4. Formalised reserves and sites (e.g. Tygerberg and Cape Flats Nature Reserves) should be regarded as 'no-go' areas and no further development of any kind should be allowed in these areas without a detailed assessment of the impacts.</li> <li>5. Areas of high biodiversity importance outside the urban edge should be regarded as "no-go" areas for development.</li> <li>6. Environmentally sensitive areas that are under severe development pressure (e.g. the airport north-east precinct) require a broad planning framework to guide the future development of these areas and ensure the long-term environmental protection of these areas.</li> <li>7. Further subdivision of these areas should generally be discouraged and consolidation encouraged.</li> <li>8. Reference should be made to the EMF's conservation and biodiversity priority zone and specific environmental attribute detail for further guidance around the potential desirability of specific activities.</li> <li>9. New development inside of the urban edge that potentially impacts on areas of high biodiversity importance should only be considered under exceptional circumstances or where social and economic imperatives merit consideration of development in parts. Such development should then be sensitive to</li> </ol>	<p>P1 P25-27</p>

	Bothasig (Bothasig Conservation Area)	biodiversity considerations affecting these areas.	
<b>b. Core 2</b>	<p>Reference should be made to the EMF's conservation and biodiversity priority zone and specific environmental attribute detail for further guidance around the desirability of specific activities. They include:</p> <ul style="list-style-type: none"> <li>• Ecological corridors</li> <li>• River and wetland corridors</li> <li>• Flood risk areas</li> </ul> <p>Core 2 areas identified with the Tygerberg district include:</p> <ul style="list-style-type: none"> <li>• The Kuils River</li> <li>• The Bottelary River</li> <li>• Portions along the Elsieskraal River</li> </ul>	<ol style="list-style-type: none"> <li>1. Activities in these areas should focus on conservation use with conservation management activities (e.g. alien clearing, research) encouraged.</li> <li>2. In general, low impact activities such as passive recreation (e.g. walkways and trails), environmental education and tourism may be appropriate, but should be subject to stringent controls (e.g. limits to development footprint, management plans).</li> <li>3. Where possible, all new utility infrastructure, services and structures should be located outside of these areas.</li> <li>4. Sites indicated as Core 2, but which also fall within identified precautionary areas (i.e. flood prone areas) should take into account district development guidelines identified for these areas.</li> <li>5. Maintain and enhance river courses within the district. This should include efforts to improve amenity value of these areas and encouraging positive interfaces (e.g. through building orientation, permeable fencing) between abutting development and open space systems.</li> <li>6. Further extension of agricultural activity, beyond existing uses and rights within these areas should generally be discouraged.</li> <li>7. Reference should be made to the EMF's conservation and biodiversity priority zone and specific environmental attribute detail for further guidance around the desirability of specific activities in these areas.</li> <li>8. Although some agricultural activities may be permitted within the flood risk and flood fringe areas, the nature of the impacts and appropriate mitigation must be determined in the EIA process, and must be shown to be acceptable prior to approval (i.e. they must not pollute water resources or increase flood risk).</li> <li>9. No agricultural activities should be approved within the 1:2 year flood line.</li> <li>10. Undesirable activities should only be authorised under exceptional circumstances, subject to compelling motivation (e.g. where there is an existing right).</li> <li>11. New development within the 1:100 year flood line should be subject to formal acknowledgement by the owner of flood risk, and is only permissible where there are existing rights.</li> <li>12. Where facilities associated with sports fields, golf courses or picnic areas have been conditionally permitted in the 1:50 year zone, floor levels must be above the 1:50 year flood line.</li> <li>13. All new buildings and developments along rivers should be orientated towards the river, where possible, and the principles of Water Sensitive Urban Design should be</li> </ol>	P1 P25-27

		applied.	
<b>c. Buffer 1</b>	<p>Buffer 1 areas contain <i>Other Natural Vegetation</i> areas and <i>Other Ecological Support Areas</i> (OESAs), which comprise natural or endangered areas which do not justify designation as core areas. They include:</p> <ul style="list-style-type: none"> <li>• Airport east precinct</li> <li>• Belhar dune system</li> </ul>	<ol style="list-style-type: none"> <li>1. Low impact activities (as per Core 1/2) may be appropriate.</li> <li>2. Development (e.g. structures) in support of both tourism and biodiversity conservation in Core Areas should preferably be located in Buffer 1 and 2 areas if logistically feasible.</li> <li>3. Extensive agricultural activities occurring in these areas, and which may impact on remnant natural vegetation should adopt low impact practices. (E.g. rotational grazing / resting cycles).</li> <li>4. Reference should be made to the EMF's conservation and biodiversity priority zone and specific environmental attribute detail for further guidance around the desirability of specific activities in these areas.</li> </ol>	P24-27 P32-33
<b>d. Buffer 2</b>	<p>Buffer 2 areas include least threatened areas of biodiversity (OESA areas), as well as extensive agricultural and smallholdings areas. They include:</p> <ul style="list-style-type: none"> <li>• Goodwood Prison grounds</li> <li>• The western slopes of the Tygerberg Hills south of De Grendel Farm (abutting Platteklouf Road).</li> </ul>	<ol style="list-style-type: none"> <li>1. Low impact activities (as per Core 1/2) may be appropriate.</li> <li>2. Development (e.g. structures) in support of both tourism and biodiversity conservation in Core Areas should preferably be located in Buffer 1 and 2 areas if logistically feasible.</li> <li>3. Furthermore, agricultural use could be considered appropriate in these areas as well as uses or activities directly relating to the agricultural enterprise. This could include farm buildings and farm worker accommodation.</li> <li>4. Further uses and activities could be considered where contextually appropriate such as small scale holiday accommodation, restaurants, and farm stall / shop and tourist facilities.</li> <li>5. Non agricultural uses (e.g. those specified above) should be managed through spot rezoning or consent uses and fragmentation of farm units should be discouraged.</li> <li>6. Reference should be made to the EMF's conservation and biodiversity priority zone and specific environmental attribute detail for further guidance around the desirability of specific activities in these areas.</li> </ol>	P25-27
<b>e. Intensive agriculture</b>	<p>Intensive agriculture areas: high potential and unique agricultural land include areas that have been ploughed for orchards, vineyards, forestry plantations, annual crops, pastures and irrigations lands. Intensive agricultural land shall be protected against conversion to other land uses, particularly urban development.</p> <ul style="list-style-type: none"> <li>• De Grendel</li> <li>• Kuilsrivier Farmlands</li> </ul>	<ol style="list-style-type: none"> <li>1. Preserve and utilise high potential agricultural land, particularly in the Kuilsrivier Farmlands.</li> <li>2. Adhere to identified urban edges around the periphery of high-value agricultural areas to prevent urban intrusion</li> <li>3. Development outside the urban edge into areas of high agricultural value and high agricultural significance should not be authorised.</li> <li>4. Encourage activities that reinforce primary agricultural use of these areas.</li> <li>5. Limit non-agricultural uses to ancillary rural activities that do not detract from the primary agricultural use and character of the area, but contribute to local character and associated recreational and tourism potential.</li> <li>6. Limit (residential) development to existing</li> </ol>	P25 P2 P31-33

		<p>zoning rights for agricultural land in these areas.</p> <p>7. Rural development outside of the urban edge should not exceed densities of 1 dwelling unit per 10 ha (PSDF, 2005) and sub-division should be discouraged. In some areas, a lower density may be appropriate.</p> <p>8. Discourage further sub-division of agricultural land.</p> <p>9. Reference should be made to the EMF's natural economic resources zone and specific environmental attribute detail for further guidance around the desirability of specific activities in these areas in these areas.</p>	
<b>f. Small-holdings</b>	<p>Properties that came about primarily as a result of subdivision of former agricultural farm land and that still predominantly present a rural character, however with property sizes that do not support extensive farming.</p>	<p>1. Discourage the development of further smallholding areas in the district.</p> <p>2. Smallholdings outside of the urban edge: Discourage the use of these properties for uses other than low density residential, agricultural or related purposes to prevent the undermining of the predominantly rural character of these areas and potential decay of these areas as a result of establishment of undesirable uses such as industries.</p> <p>3. Smallholdings inside the urban edge: Encourage the redevelopment of these areas in a holistic and coherent manner in accordance with approved development frameworks that are consistent with the proposals of the District Plan. Discourage the use of these properties in the interim for uses other than low density residential, agricultural or related purposes to prevent the potential decay of these areas as a result of establishment of undesirable uses such as industries.</p>	P32-34
<b>g. Other structuring open space</b>	<p>Other Structuring Open Space includes recreational, sports, and education related open spaces, which are closely related to urban development and meeting human need and satisfaction within them. It also includes smaller linkage open spaces aimed at creating a broader integrated and linked open space system within the district.</p>	<p>1. In general, avoid development of these areas in a manner that would compromise open space linkage.</p> <p>2. Encourage development to respond to and promote opportunities for linkage between identified structuring open spaces in developed areas.</p> <p>3. In general, development adjacent to open spaces, or which rationalises these spaces, should be orientated towards the open space to encourage the use and passive surveillance of these areas. Design which compromises this condition (e.g. excessive blank walls and backing of development onto these spaces) should be discouraged.</p> <p>4. Subject to contextual informants, appropriate high or medium density development (e.g. 2/3 storey development) along open space interfaces could be considered to improve passive surveillance.</p> <p>5. Safety and security should be considered in the upgrading, landscaping or development of public open spaces.</p> <p>6. Where contextually appropriate, consider commercial activities such as small cafes, kiosks and restaurants that will enhance</p>	P41

		<p>the open space.</p> <p>7. Where feasible, opportunities for low impact sustainable use of open spaces, by local communities, should be considered (e.g. small scale urban agriculture) but this should take into account the wider access / linkage needs and public open space provision requirements.</p>	
<b>h. Urban development</b>	General (all areas)	<p>1. These areas should be considered for a wide variety of urban uses such as housing development, public open spaces, community facilities, mixed use / business development (where appropriate), but should not include noxious industrial uses.</p> <p>2. Sites indicated for urban development, but which also fall within identified precautionary areas should take into account associated district development guidelines.</p> <p>3. Sites indicated for urban development, but where potential impact may occur with natural ecosystems (e.g. critical biodiversity areas) should be subject to EIA processes which take into account principles for dealing with development proposals in these areas of potential impact (see annexure B). In the Tygerberg district these include:</p> <ul style="list-style-type: none"> <li>• The airport north east precinct</li> <li>• Richmond Park, Richwood</li> </ul>	P1-50
	Existing developed urban areas	<p>4. Support the incremental densification over time of urban areas where appropriate. This should be guided by available infrastructure capacity, neighbourhood density and character, proximity to job opportunities and social facilities, and access to public transport.</p> <p>5. Applications for land use change (whether temporary or permanent) within predominantly residential areas should be treated sensitively. Key consideration should be given to soft landscaping along street edges as well as street facades of buildings.</p> <p>6. Encourage and facilitate the establishment of home-occupation / guest accommodation in a manner that does not impact on the character of the residential area. In this regard, applications must at all times adhere to the relevant policies for home occupation.</p> <p>7. Consider the existing character and heritage value of areas of significance (as may be reflected in detailed policies) as an informant to development and redevelopment proposals.</p>	P1-50  P41, P45
	New development areas / new urban infill: <ul style="list-style-type: none"> <li>• Richmond Park</li> <li>• Valhalla Park and Nooitgedacht</li> <li>• Modderdam Triangle</li> </ul>	<p>8. Acknowledge and respect the surrounding urban environment and develop accordingly. This includes considerations relating to neighbourhood density and character, and access to public transport, job opportunities and social facilities.</p>	P39-42

	<ul style="list-style-type: none"> <li>and Uitsig</li> <li>• Belhar mixed use precinct at Unibell Station</li> <li>• Delft (Stellenbosch Arterial/Delft Main Road; Delft CBD)</li> <li>• Airport Northeast precinct</li> <li>• Stikland Triangle</li> <li>• Stikland Hospital grounds</li> <li>• Goodwood Prison grounds</li> <li>• Kalkfontein Smallholdings</li> <li>• Bottelary Smallholdings</li> <li>• Jagtershof Sports Field</li> <li>• Polkadraai Smallholdings</li> <li>• Bothasig infill sites</li> <li>• Bellville infill sites</li> <li>• Belhar infill sites</li> </ul>	<p>9. In general, support the development of new development areas at higher densities than exist in these locations, but with due regard for appropriate transition to surrounding areas.</p> <p>10. Develop utilising the principle of socio-economic integration so as not to create poverty traps.</p> <p>11. Particular design attention should be given in applications to interface areas between existing development and new development areas, especially where urban character may be impacted or where socio-economic gradient is steep.</p> <p>12. Support the appropriate development of identified new development areas subject to infrastructure availability and in line with requirements for provision of associated social facilities and recreational spaces.</p>	
	<p>Informal Settlements:</p> <ul style="list-style-type: none"> <li>• Nooitgedacht</li> <li>• Malawi Camp</li> <li>• Freedom Farm</li> <li>• Kalkfontein</li> </ul>	<p>13. Support incremental upgrading and formalisation of existing formal settlements that are identified as appropriate to remain as urban areas according to the criteria for categorisation of informal settlements (see section 6.1). This includes primarily Nooitgedacht and Kalkfontein. The sites of Malawi Camp and Freedom Farm are not suitable for human habitation and are to be relocated to more appropriate sites.</p> <p>14. Support for incremental upgrading and formalisation should also apply to areas where backyard shacks are widely prevalent, again primarily within the formal areas, such as the greater Elsies River, Bishop Lavis and Bonteheuvel areas.</p> <p>15. Limit expansion of informal settlements into identified precautionary areas (e.g. flood prone and veldfire risk areas), or sensitive environmental areas such as high visual impact areas or biodiversity network areas.</p>	P36
<p><b>i. Mixed use intensification</b></p>	<ul style="list-style-type: none"> <li>• All business areas associated with identified urban nodes and business complexes</li> <li>• Business strip areas, including along Halt Rd, Vasco Blvd, Vryburger/De Grendel Ave, Jan Van Riebeeck Rd, Durban Road corridor, Modderdam North/Symphony Way, Langverwacht Road Rd.</li> </ul>	<p>1. Generally, support mixed use intensification as indicated, subject to any local guidelines and bulk service and transport infrastructure availability.</p> <p>2. The nature of mixed use intensification should be subject to local context. Higher intensity and more intrusive commercial activities to be limited to core parts of identified areas, or preferably be guided by a local area framework. Promote an appropriate interface between these mixed use areas and adjacent residential areas through the use of sensitive design and informed by local level guidance and plans where applicable.</p>	P11-P16 P20 P22 P39-42

<b>j. Commercial and Industrial development</b>	<ul style="list-style-type: none"> <li>• Airport East precinct</li> </ul>	<ol style="list-style-type: none"> <li>1. General industrial uses should generally be supported in these areas.</li> <li>2. Due to particular requirements for road and waste infrastructure associated with industrial zoned land, these areas should generally be reserved to optimise this infrastructure and mitigate potential impacts</li> <li>3. Allowance could be made for limited forms of non-industrial activity, but these activities should not compromise the general use of the areas zoned for industry.</li> <li>4. Where proposed new industrial areas are surrounded by dense residential development, consideration has to be given to the social, health and safety impacts of proposed industries.</li> <li>5. Facilitate industrial and other commercial development around the airport to take advantage of the competitive advantage and economic, freight and logistical benefits related to the airport.</li> <li>6. Encourage the development of specialised high value small and medium-scale light industrial activities within the existing industrial areas.</li> <li>7. Semi-industrial areas, where a greater mix of business activities and some residential development in certain instances, can be tolerated where the mix of activities does not negatively impact on the competitive advantage of the industrial activities in the area. These areas include sections of Voortrekker Corridor between Voortrekker Road and the Railway line.</li> <li>8. No activity or use which includes the on-site storage of hazardous substances shall be permitted unless a risk management and prevention plan has been submitted and Council has given approval thereto (Cape Town Zoning Scheme Regulations (March 2010)).</li> </ol>	P4-5 P7-8 P16
<b>k. Noxious industry</b>		<ol style="list-style-type: none"> <li>1. These areas should be reserved for noxious trade, and risk activity. Consent for uses outside of this zoning should take into account potential negative impacts.</li> </ol>	P4-5 P7-8 P16
<b>l. Cemeteries</b>	<ul style="list-style-type: none"> <li>• Stikland (Strand Street)</li> <li>• Belhar (Modderdam Road)</li> <li>• Delft (Symphony Way)</li> <li>• Kuilsrivier (Van Riebeeck Road)</li> </ul>	<ol style="list-style-type: none"> <li>1. Support continued use of cemeteries for this purpose.</li> <li>2. Support the utilisation of parts of older cemeteries (such as Stikland and Belhar) for other social and recreational activities (e.g. memorial gardens, public parks) subject to further exploration.</li> </ol>	P41 P47

\* List is not exhaustive

## 4.2 Transport infrastructure and route designation

Transport infrastructure is reflected indicating selected elements of the district-wide movement system. In alignment with the CTSDP, the Tygerberg District Plan utilises a route designation indicating land use functionality that will encourage an appropriate level of development and more

intense land uses to locate on, or adjacent to, the accessibility grid. This will contribute towards establishing the thresholds required for sustainable and cost effective public transport. It is important to note that opportunities along routes can also be linked to parallel streets and side roads. Furthermore, routes exhibit different characters and do not exhibit a uniform mix and density of land uses along their length. The district development guidelines should thus be read along with sub-district guidelines and local plans and policies where applicable and not necessarily be interpreted in a blanket manner for the length of the route.

**Table 4.2: Transport infrastructure and route designation**

Transport infrastructure and route designations	District elements	District development guidelines	Relevant CTSDF policies *
<b>a. Activity routes</b>	<ul style="list-style-type: none"> <li>• Voortrekker Road (between Vanguard Drive and the R300)</li> <li>• Strand Street/Van Riebeeck Road (between the R300 and Stellenbosch Arterial)</li> </ul>	<ol style="list-style-type: none"> <li>1. Support the functioning of Voortrekker Road as an activity route by encouraging its public transport role.</li> <li>2. In general, intensification of land use along most sections of Voortrekker Road is appropriate in close proximity to the route and subject to sub-district and local area policy guidelines where relevant.</li> <li>3. The process of land use intensification along the route must consider the nature of access roads, additional traffic impacts, and parking requirements.</li> <li>4. In general, development should front onto the activity route, active street interfaces should be encouraged along with consolidated parking areas orientated towards the rear of buildings. Large extents of blank wall should be avoided.</li> <li>5. Civic upgrades, landscaping and NMT provision should be made as and where appropriate to ensure quality streetscapes.</li> <li>6. A wide range of facilities and services that are supported and shared by communities should be encouraged.</li> <li>7. Where open spaces intersect with the corridor, the former should be retained and enhanced in order to develop the 'green' network, and also contribute to a variety of uses along the corridor.</li> </ol>	P3-4 P10-11 P13-16 P35 P39
<b>b. Activity streets</b>	<ul style="list-style-type: none"> <li>• Halt Road</li> <li>• Vasco Boulevard (from Voortrekker Road to the N1 freeway)</li> <li>• Belhar/Delft Main Road</li> </ul>	<ol style="list-style-type: none"> <li>1. Support the functioning of these routes as activity streets through encouraging their role as community service public transport routes,</li> <li>2. Whilst these routes are not likely to reflect the same level of intensity of land use as activity routes, higher intensity land uses, including mixed use development should be supported at high accessibility areas.</li> <li>3. The process of land use intensification along these streets must consider the nature of access roads, additional traffic impacts, and parking requirements.</li> <li>4. In general, development should front onto the activity street, active street interfaces should be encouraged and large extents of blank wall should be avoided.</li> <li>5. Direct access onto these streets from abutting properties is generally</li> </ol>	P3-4 P10-11 P13-16 P35 P39

		<p>supported, but should be consolidated where possible.</p> <p>6. Civic upgrades, landscaping and NMT provision should be made as and where appropriate to ensure quality streetscapes.</p> <p>7. A wide range of facilities and services that are supported and shared by communities should be encouraged.</p> <p>8. Where open spaces intersect with the street, the former should be retained and enhanced in order to develop the 'green' network, and also contribute to a variety of uses along the street.</p>	
<b>c. Development routes</b>	<ul style="list-style-type: none"> <li>• Giel Basson/35<sup>th</sup> Avenue/Stellenbosch Arterial</li> <li>• Durban Road</li> <li>• Modderdam North Road and Symphony Way</li> <li>• Plattekloof Road</li> <li>• Frans Conradie Drive</li> <li>• D La Rey Road</li> <li>• Erica/Belhar Drive</li> <li>• Old Paarl Road</li> <li>• Hindle Road</li> </ul>	<ol style="list-style-type: none"> <li>1. These routes should continue to perform a mobility function. Their role as structuring routes providing improved access and movement continuity between districts and between distant work and living areas should be reinforced.</li> <li>2. In general, intensification of development should be promoted to support line haul public transport, but this should be concentrated at identified nodal points.</li> <li>3. The process of land use intensification along these routes must consider the nature of access roads, additional traffic impacts, and parking requirements.</li> <li>4. Direct access onto these routes from abutting properties is not supported. Instead, limited access, with a focus on high access nodal points, should be permitted, and where necessary service roads should be developed.</li> <li>5. Mitigation of the impact of the road's dominant mobility function (including design efforts to slow traffic) may be appropriate at high intensity nodal intersections. The route between these nodes should remain primarily mobility orientated through residential areas, with appropriate landscaping and adherence to the boundary walls policy.</li> <li>6. Civic upgrades, landscaping and NMT provision should be made as and where appropriate to ensure quality streetscapes.</li> </ol>	<p>P3-4 P10-11 P13-16 P35 P39</p>
<b>d. Urban freeways</b>	<ul style="list-style-type: none"> <li>• The N1 freeway</li> <li>• The R300 freeway</li> <li>• The N2 freeway</li> <li>• Vanguard Drive</li> </ul>	<ol style="list-style-type: none"> <li>1. In general, the mobility role of these routes should not be compromised.</li> <li>2. Intensification of development, which is in part a response to freeway access, and is associated with the accessibility grid (development routes and activity routes / streets), should be supported. (e.g. N1 City Business Complex, Durban Road Intensification area, Borchard's Quarry and Airport City, Grand West Casino)</li> </ol>	<p>P6 P10 P14-16</p>
<b>e. Connector routes</b>	<ul style="list-style-type: none"> <li>• Giel Basson (north of N1)</li> <li>• Mike Pienaar Road</li> <li>• Modderdam Road</li> <li>• La Belle Road</li> <li>• Avonwood/Francis Van Zyl Drive</li> <li>• The future Okavango</li> </ul>	<ol style="list-style-type: none"> <li>1. In general, support the dominant mobility role of these routes.</li> <li>2. Development along connector routes which are also indicated as scenic routes should take related guidelines into account (see below).</li> </ol>	<p>P10 P14-16</p>

	<p>Bypass Route</p> <ul style="list-style-type: none"> <li>• Bottelary Road</li> <li>• Polkadraai Road</li> </ul>		
<b>f. Other structuring routes</b>	<ul style="list-style-type: none"> <li>• Hendrick Verwoerd Drive</li> <li>• Edgemean Drive, Vryburger Ave. De Grendel Ave.</li> <li>• Monte Vista Blvd.</li> <li>• Rothschild Blvd.</li> <li>• Valhalla Drive</li> <li>• Balvenie Ave.</li> <li>• Connaught Road</li> <li>• Kasselsvlei Road</li> <li>• Nooiensfontein Road</li> <li>• Langverwacht Road</li> <li>• Amandel Road</li> </ul>	<ol style="list-style-type: none"> <li>1. The characteristic mix of predominantly residential function and character but interspersed with small mixed use areas, as well as mix of mobility and activity functions should remain and generally be contained in their current forms.</li> <li>2. The role of these routes as (in many cases future) significant community service public transport routes should be reinforced.</li> <li>3. Support, where appropriate, limited commercial or mixed use activity at points on or along specified portions of these routes, subject to sub-district development guidelines and / or local area plans. Expansion of these uses should be strongly controlled.</li> <li>4. Civic upgrades, landscaping and NMT provision should be made as and where appropriate to ensure quality streetscapes.</li> </ol>	P10 P13
<b>g. Railway infrastructure</b>	<ul style="list-style-type: none"> <li>• The Monte Vista line</li> <li>• The Bellville-Strand line (from Goodwood station through Kuilsrivier station).</li> <li>• The Bellville-Kraaifontein line (through Stikland)</li> <li>• The Lavistown line</li> <li>• The Khayelitsha/ Mitchells Plain line (through Netreg Station).</li> <li>• Future railway lines: The Blue Downs line; the Cape Town-Airport rail line</li> <li>• 19 rail stations</li> </ul>	<ol style="list-style-type: none"> <li>1. Retain existing passenger rail lines for public transport right of way.</li> <li>2. Develop Public land holdings in proximity of station precincts to accommodate high density housing and mixed use.</li> <li>3. Adopt a precautionary approach to alienation of land associated with freight rail.</li> <li>4. Retain the opportunity for new public transport right of way links, such as the Blue Downs rail line.</li> </ol>	P9-18
<b>h. IRT (trunk routes)</b>	(None identified as yet).	<ol style="list-style-type: none"> <li>1. Support the general alignment of proposed IRT trunk routes in the district with the accessibility grid (designated Activity Routes, Development Routes, and Activity Streets) and subject to the spatial planning principles for public transport route alignment (see CTSDf).</li> <li>2. Ensure public transport infrastructure is complementary to the identified land use and development role of the route. This includes Voortrekker Road (although the 'IRT trunk route' function would be carried by the railway line), Symphony Way, Giel Basson/35<sup>th</sup> Avenue/Jan Van Riebeeck Road, Durban Road, Frans Conradie Drive, Valhalla Drive, Modderdam Road, Hindle Road, and Borchard's Quarry Road.</li> <li>3. Any future redevelopment of these roads, associated pavement areas, and land uses fronting these, should take</li> </ol>	P9-18

		place with the potential IRT infrastructure improvements in mind (e.g. potential stations). This focus should also include NMT considerations.	
<b>i. Scenic routes</b>	<b>SR 1 routes:</b> <ul style="list-style-type: none"> <li>N1 Freeway</li> </ul> <b>SR 2 routes:</b> <ul style="list-style-type: none"> <li>None identified</li> </ul>	<ol style="list-style-type: none"> <li>In general, development along scenic drives and routes should seek to retain views from the route and avoid negatively affecting the character of the landscape through which it passes.</li> <li>Any redevelopment along scenic drives and routes should focus on landscaping improvements to the (public and private) areas abutting the road.</li> <li>Land use management decisions should be guided by the Scenic Drive Network Management Plan (Vol 3, 2003) or subsequently approved management plans.</li> </ol>	P50-51

\* List is not exhaustive

### 4.3 Conceptual designations

These are designated areas in the District plan having significance in guiding urban development, but which are not precisely geographically defined (or exclusive) areas, but rather conceptually indicated. Land use and form implications may be detailed through local area plans.

**Table 4.3: Conceptual designations**

Conceptual designations	District elements	District development guidelines	Relevant CTSDF policies*
<b>a. Urban nodes</b>	Metropolitan urban nodes: <ul style="list-style-type: none"> <li>Bellville CBD</li> </ul>	<ol style="list-style-type: none"> <li>1. Encourage private investment in the Bellville CBD by creating an enabling environment for high intensity mixed use development, (such as relaxing parking requirements in lieu of high public transport access).</li> <li>2. Upgrade the station precinct to promote seamless pedestrian movement to and from the station precinct to accommodate peak commuter flows better.</li> </ol>	P3-4 P10 P16 P22
	Sub-metropolitan urban nodes: <ul style="list-style-type: none"> <li>Parow urban node</li> <li>Kuilsrivier CBD</li> <li>Delft CBD</li> <li>Cape Town International Airport Precinct</li> </ul>	<ol style="list-style-type: none"> <li>3. In general, support high intensity mixed use development (e.g. office, retail, residential), the extent of which should be guided by relevant city/district and local area policy guidelines.</li> <li>4. In general, support residential densification in line with the provisions of the City's Densification Policy (2012) and sub-district / relevant local area development guidelines.</li> <li>5. Support a more flexible position to parking provision and related departures in these nodes, where well served by public transport.</li> </ol>	P3-4 P10 P16 P22
	District urban nodes: <ul style="list-style-type: none"> <li>Goodwood urban node</li> <li>Elsies River</li> <li>Unibell Station future mixed use precinct</li> <li>Bishop Lavis Town Centre</li> </ul>	<ol style="list-style-type: none"> <li>1. In general, support high intensity mixed use development (e.g. office, retail, residential), the extent of which should be guided by relevant city/district and local area policy guidelines.</li> <li>2. In general, support residential densification in line with the provision of the City's Densification Policy (2012) and sub-district / relevant local area development guidelines.</li> <li>3. Support a more flexible position to parking provision and related departures in these nodes, where well served by public transport.</li> </ol>	P3-4 P10 P16 P28
	Local urban nodes: <ul style="list-style-type: none"> <li>Leonsdale</li> <li>Uitsig,</li> <li>Bonteheuwel CBD,</li> <li>Valhalla Park,</li> <li>Belhar</li> <li>Sarepta</li> </ul>	<ol style="list-style-type: none"> <li>1. In general, support locally appropriate mixed use development.</li> <li>2. In general, support locally appropriate residential densification in line with the provision of the City's Densification Policy (2012) and sub-district / relevant local area development guidelines.</li> <li>3. Support a more flexible position to parking provision and related departures in these nodes, where well served by public transport.</li> </ol>	P10 P16 P22
<b>b. Transit station areas</b>	Metropolitan station <ul style="list-style-type: none"> <li>Bellville</li> </ul>	1. See metropolitan nodes	P10 P16 P22
	Major urban station: <ul style="list-style-type: none"> <li>Elsies River</li> <li>Kuilsrivier</li> <li>Parow</li> <li>Tygerberg</li> </ul>	2. See sub-metropolitan or district urban nodes as relevant.	
	Employment station <ul style="list-style-type: none"> <li>Modderdam</li> <li>Sarepta</li> <li>Bonteheuwel</li> </ul>	3. Promote intense development focussing on employment (e.g. industrial uses) and where contextually appropriate local mixed use development.	

	<p>Urban neighbourhood station</p> <ul style="list-style-type: none"> <li>• Goodwood</li> <li>• Vasco</li> <li>• Mote Vista</li> </ul>	<p>4. Promote appropriate mixed use development (e.g. including local retail development) and densification in line with guidelines for the associated urban nodes and areas for mixed use intensification.</p> <p>5. Retain opportunities for park and ride (including shared parking opportunities), subject to local assessments and transport planning.</p>	
	<p>Neighbourhood station</p> <ul style="list-style-type: none"> <li>• Oostersee</li> <li>• De Grendel</li> <li>• Lavistown</li> <li>• Netreg</li> </ul>	<p>6. Allow for moderately scaled densification where appropriate in a manner that is sensitive to existing preservation worthy character and subject to infrastructure availability.</p> <p>7. Retain opportunities for park and ride, subject to local assessments and transport planning.</p>	
<b>c. Civic precincts</b>	<p>Higher order civic precincts:</p> <ul style="list-style-type: none"> <li>• Generally associated with metropolitan and sub-metropolitan urban nodes including Bellville, Kuilsrivier, Parow, and Delft CBD.</li> </ul>	<p>1. Support the development and improvement / upgrade of higher order public facilities / facility clusters and public spaces at the identified higher order civic precincts.</p> <p>2. The focus should be on the reinforcement of existing high order civic precincts.</p> <p>3. Where feasible, link the development of civic precincts to the redevelopment of business districts through public-private partnerships.</p>	P41 P47 P50
	<p>Local civic precincts:</p> <ul style="list-style-type: none"> <li>• Generally associated with district and local nodes.</li> </ul>	<p>1. Support the development and improvement / upgrade of local public facilities / facility clusters and public spaces at the identified local civic precincts.</p>	
<b>d. Destination places</b>	<p>Natural places:</p> <ul style="list-style-type: none"> <li>• Tygerberg Hills Nature Reserve</li> <li>• Cape Flats Nature Reserve</li> </ul> <p>Cultural places:</p> <ul style="list-style-type: none"> <li>• University of Western Cape (UWC)</li> <li>• Kuilsrivier/ Stellenbosch farmlands and cultural landscapes</li> </ul>	<p>1. Promote greater recreational and tourism opportunities at these key high visitor number destination places, and particularly where potential exists for significant improvement. The Kuilsrivier area is the gateway to the Stellenbosch Wine Route, the Zevenwacht Wine Estate being an example of several popular tourist and recreation attractions within this area, thus contributing the scenic beauty of the landscape as a destination place.</p> <p>2. Appropriate development opportunities in the adjacent urban areas could be associated with these improvements.</p> <p>3. Support the retention and improvement of public access and recreational opportunities associated with further development of destination places. This is particularly important with regards to the UWC precinct, as non-motorised access to the precinct remains problematic.</p> <p>4. Support the maintenance and enhancement of the character of natural, recreational, and / or heritage aspects of smaller (i.e. those that shouldn't or can't expand) but valuable recreational and tourism nodes. This includes the Tygerberg Hills and Cape Flats Nature Reserve.</p> <p>5. Support the many existing small natural</p>	P1 P50  Actions: <ul style="list-style-type: none"> <li>• Increasing local access to and around these destinations remains a key challenge. It is proposed that future transport investment in these areas have a strong focus on NMT planning.</li> </ul>

		special places, which are not appropriate for large numbers of people and attendant support facilities, but which nevertheless are valuable natural assets that contribute to quality of life, recreation and the tourism economy.	
<b>e. Critical public links</b>	<p>f. Riverton link (linking Halt Road and Vasco Station through the proposed Riverton district park.</p> <p>g. Belhar Drive-Pentech rail station link</p> <p>h. Elsieskraal River link from Tyger Valley Precinct to Bellville CBD</p> <p>i. The link between Bonteheuwel CBD and Valhalla Park local node through Netreg Station</p> <p>j. Matroosfontein pedestrian link between Matroosfontein and Adriaanse local nodes</p> <p>k. Pedestrian link across the R300 freeway and Kuils River linking the Belhar Main road civic precinct with the Kalkfontein informal settlement to the east</p> <p>l. The Vredenburg link is an informal path which runs along the banks of the Kuils River in the Bellville East area.</p> <p>The Delft South link across the R300 freeway to Green Park and Los Angeles.</p>	<ol style="list-style-type: none"> <li>Any development should ensure that critical public links are maintained.</li> <li>Uninterrupted public access along river corridors and green belts should be maintained.</li> <li>Informal pedestrian links should be formalised/upgraded wherever possible to provide for safer and better quality pedestrian environments (e.g. Belhar Drive-Pentech Station link).</li> </ol>	P13

\* List is not exhaustive

## 4.4 Development edges

Development edges are lines defining the outer limits of urban development for a determined period of time. In the Tygerberg District these are generally either resource or hazard protection lines that should be maintained in the long term.

**Table 4.4: Development Edges**

Development edges	District elements	District Development Guidelines	Relevant CTSDF policies*
<b>a. Urban edge</b>	<ul style="list-style-type: none"> <li>Platteklouf urban edge</li> </ul>	1. Land beyond the urban edge line should not be used for urban development.	P22 P23

	<ul style="list-style-type: none"> <li>• Kuilsrivier urban edge</li> </ul>	<p>2. Promote development forms which support positive urban edge conditions with due regard for local considerations (e.g. fire risk, visual impact).</p> <p>3. In general, the urban edge in Tygerberg District is considered a long-term edge line to strongly protect the rural/agricultural hinterlands outside the edge line. The line has been delineated in a position to protect natural resource areas, as a hazard protection measure (re: veldfires, and also steep slopes, geo-technical constraints and slumping and rock falls), and for visual impact and economic reasons (re-tourism, agriculture and environmental quality).</p>	<p>P25-26 P28 P33</p>
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\* List is not exhaustive

## 4.5 Precautionary areas and utility service infrastructure installations and networks

These areas are generally defined at a cadastral level and are likely to present a form of risk to development or activities. Although this may not exclude any underlying use as depicted (e.g. urban development) the risks related to the identified precautionary areas may place certain restrictions on development (e.g. In terms of use, density, form).

**Table 4.5: Precautionary areas and utility service infrastructure installations and networks**

Precautionary areas and utility service infrastructure installations	District elements	District development guidelines	Relevant CTSDF policies*
a. Flood prone areas	<ul style="list-style-type: none"> <li>• Sections along the Elsiekraal River (between Tygerberg Hospital and the Transnet Marshalling Yard)</li> <li>• Sections of the Kuils River (at the Kalkfontein Smallholdings/Highbury)</li> <li>• Stellendale Triangle</li> </ul>	<ol style="list-style-type: none"> <li>1. Reference should be made to the EMF's hydrological zone, and specific environmental attribute detail for further guidance around the desirability of specific activities within specified flood risk areas.</li> <li>2. Undesirable activities in terms of the EIM Zone should only be authorised under exceptional circumstances, subject to compelling motivation (e.g. where there is an existing right).</li> <li>3. Apply more restrictive building setback lines and maximise on-site water infiltration and permeability in relation to redevelopment initiatives in flood prone areas.</li> <li>4. Although some agricultural activities may be permitted within the flood risk and flood fringe areas, the nature of the impacts and appropriate mitigation must be determined in the EIA process, and must be shown to be acceptable prior to approval (i.e. they must not pollute water resources or increase flood risk).</li> <li>5. No agricultural activities should be approved within the 1:2 year flood line.</li> <li>6. New development within the 1:100 year flood line should be subject to formal acknowledgement by the owner of flood risk, and is only permissible where there</li> </ol>	<p>P24</p>

		<p>are existing rights.</p> <p>7. Where facilities associated with sports fields, golf courses or picnic areas have been conditionally permitted in the 1:50 year zone, floor levels must be above the 1:50 year flood line.</p> <p>8. In general, new buildings and developments abutting rivers should be orientated towards the river, where possible, and the principles of Water Sensitive Urban Design should be applied.</p> <p>9. Aquifer re-charge areas and sole-source aquifers should be protected from potential sources of pollution.</p>	
b. Noise exclusion zones	<ul style="list-style-type: none"> <li>• CTIA noise zones (2025 ultimate scenario)</li> <li>• Airport obstacle limitation surfaces (AOLS)</li> </ul>	<p>10. Residential uses are not recommended within the 65 dBA noise contour zone of the CTIA planned primary runway to be re-aligned as well as the planned secondary runway. Although, the noise contours for the 2025 CTIA ultimate development scenario are still to be finalised through the EIA process for the planned second runway, any potential new developments should be cautious of this informant. To this end, no new residential developments should be encouraged within the affected areas without noise mitigation measures in place. Noise zones indicated are not fixed and are subject to future refinement.</p> <p>11. Non-residential uses may be accommodated up to the 70dBA noise contour, provided that certain mitigating measures against the noise pollution are put in place.</p> <p>12. A portion of the airport east site was investigated and found suitable for use as a cemetery.</p> <p>13. The AOLS limit building heights of developments located in proximity to the airport flight paths. These developments are subject to comment from the South African Civil Aviation Authority.</p>	P24
c. Landfill buffer zones	<ul style="list-style-type: none"> <li>• Bellville South</li> </ul>	<p>14. Environmental conditions in these areas should be monitored to assess the need for appropriate buffer areas around landfill sites. In the case of the Bellville Landfill, the site was decommissioned, after which development up to the eastern, southern and western boundary of the landfill occurred. Subsequently, the landfill was reopen, thus stricter health safety measures are required management of the landfill site.</p>	P24
d. Utility service infrastructure installations and networks	<ul style="list-style-type: none"> <li>• Bellville South, and Boquinar WWTW</li> <li>• Electricity transmission / power line and utility / bulk services servitudes</li> <li>• Other bulk infrastructure</li> </ul>	<p>1. Where possible, all new infrastructure, services and structures should be located outside of patches of vegetation that have been identified as Core 1 and 2 areas.</p> <p>2. In general, and in addition to the upgrade of existing installations, land within the structure plan designated as buffer 1 or buffer 2 may be used for the establishment of space extensive essential engineering infrastructure services and installations such as</p>	P24

		<p>municipal engineering services, power substations, landfill sites, wind turbine infrastructure and for telecommunications purposes, subject to any necessary environmental authorisations.</p> <p>3. Linear infrastructure which forms part of a services network such as power lines, bulk service pipes and ICT cabling may be suitable in any of the identified planning categories subject to relevant statutory authorisations and taking visual impact into account.</p> <p>4. Where feasible, new electrical power lines should be located or planned for underground through existing urban areas or new development areas. This infrastructure should avoid or at worst be sensitively located in relation to areas of scenic or visual significance (e.g. associated with scenic drives / routes).</p> <p>5. In general, support the use of bulk services servitudes for uses such as public open space, and urban agriculture, subject to the relevant planning approvals.</p> <p>6. No permanent activities or structures should be approved within servitudes, except for the designated infrastructure and bulk services activities and structures.</p>	
<p>e. <b>Major Hazardous installations of regional significance</b></p>	<ul style="list-style-type: none"> <li>• Caltex Refinery in Milnerton</li> <li>• SFF fuel storage tanks on Plattekloof Road</li> </ul>	<p>1. Cognisance should be taken of the findings of the Risk Assessments undertaken for each of these installations, in any development application that is affected by the operations of these installations.</p> <p>2. Any development application within the risk impact area of these installations, as identified in the Risk Assessment Reports, should be referred to the operators of these facilities for input/comment.</p> <p>3. The granting of additional development rights on properties that are affected by these facilities should be treated with caution and should also take cognisance of the findings of the Risk Assessments mentioned above.</p>	P24

\* List is not exhaustive

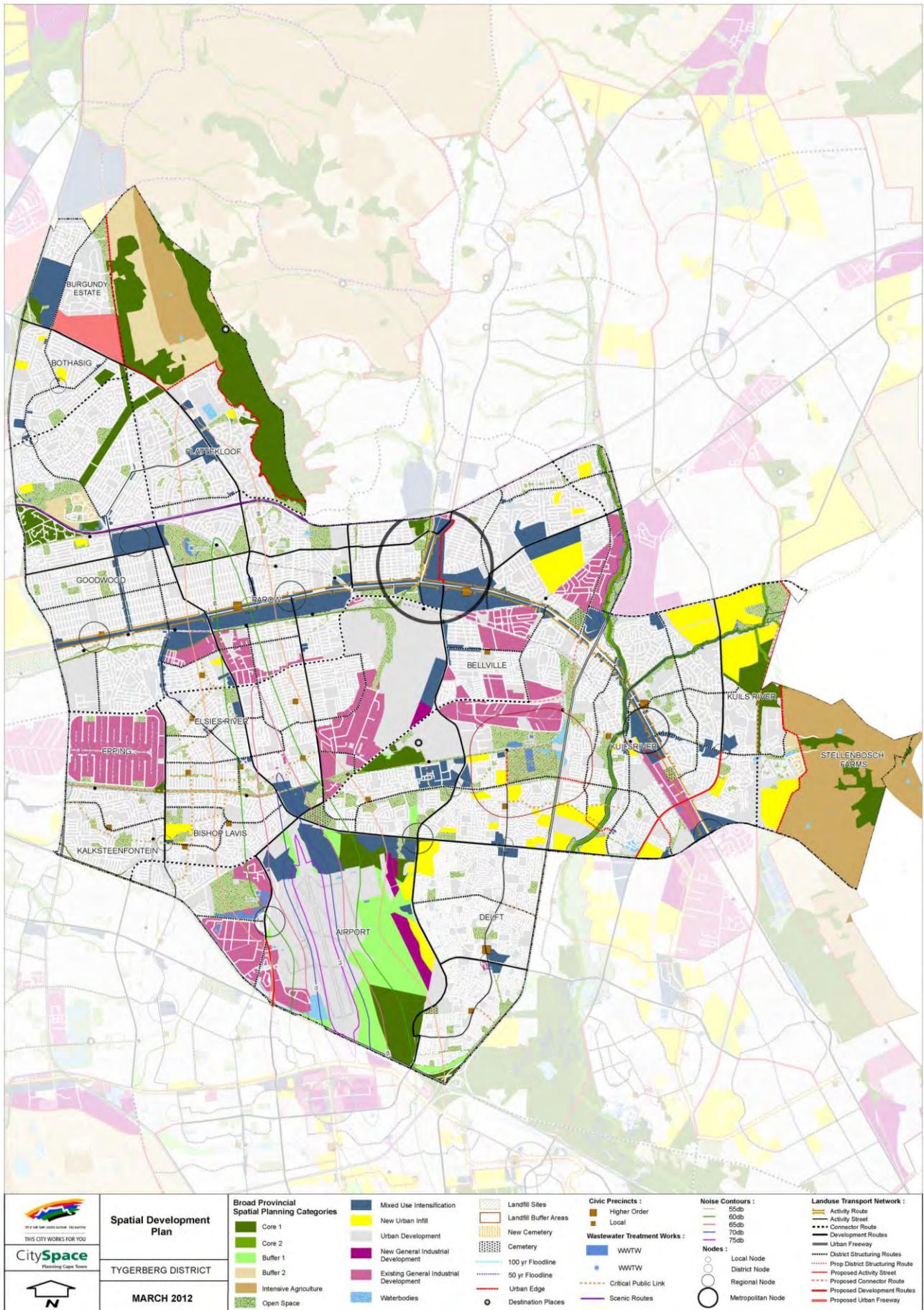


Figure 12: Tygerberg Spatial Development Plan

## 5. ENVIRONMENTAL IMPACT MANAGEMENT ZONES

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### 5.1 Introduction

The following section describes the Environmental Impact Management Zones (EIMZ), which must be considered in planning, development and environmental and land management decisions. The information provided in this section has been informed by the attributes (characteristics and sensitivity) of the various environments described in the baseline information and analysis document. This chapter included management guidelines for each management zone. Further to these impact management zones, areas of potential impact have been identified that reflect areas prioritised for development purposes, but where underlying environmental attributes may be impacted.

### 5.2 Environmental impact management zones and land use development informants

Environmental Impact Management (EIM) zones have been identified using the best available information at the time of report compilation. They comprise areas with homogenous or similar environmental attributes. These EIM zones are intended to guide and inform planning and decisions regarding activities that require environmental authorisation and / or planning approval within these areas. They should be regarded as a basis for the possible future exclusion of certain activities listed in the NEMA EIA Regulations (2010) from the requirement for environmental authorisation. The following tables should be read together with the accompanying EIM Zone maps<sup>1</sup>. Each attribute which is mapped as an environmentally sensitive zone, has an accompanying table indicating the following:

- **Kinds of developments, land uses or activities that would be undesirable:** These are types of activities which may be contrary to the desired state of the environment in a particular zone and should be discouraged, unless there is compelling motivation to the contrary.
- **Kinds of developments, land uses or activities that may have a significant impact:** These are types of activities that could be considered in a particular zone, provided potential impacts resulting from the activity are adequately assessed, prior to approval, and adequate mitigation measures to limit and reduce the negative impacts are identified and implemented.
- **Kinds of developments, land uses or activities that may not have a significant impact:** These are types of activities that are generally desirable and unlikely to cause significant impacts in a particular zone. However these activities are still subject to legislative requirements in terms of NEMA and other relevant legislation, as well as impact management norms and standards such as implementation of an Environmental Management Programme (EMP).

Additionally, each table indicates relevant **policy and guideline documents** which should be consulted (see also Annexure C).

**Important note:** The **kinds of developments, land uses or activities** described in the EIM tables below are not the listed activities as contained in the National Environmental Management Act (NEMA) EIA Regulations (2010). In order to determine which activities will trigger the requirements for an Environmental Assessment process, reference must always be made to the NEMA EIA Regulations as well as the National Environmental Management (NEM): Waste Act, the NEM: Integrated Coastal Management Act and the NEM: Air Quality Management Act. Reference should also be made to section 38 of the National Heritage Resources Act.

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<sup>1</sup> The District Planning Office needs to be contacted for finer scale maps that enable the placement of individual properties relative to the EIM zones.

The need to undertake an EIA in any of the environmental impact management zones listed below should be determined by whether the proposed project includes one or more listed activities as identified in the EIA Regulations (2010, as amended).

Furthermore, should an EIA not be required, the local authority may still require an assessment of possible impacts on environmental attributes or specific environmental information in order to have sufficient information to evaluate an application made in terms of the Land Use Planning Ordinance (15 of 1985) or replacement legislation. Such requests for assessment or information may also apply in cases when there is likely to be any significant damage to or degradation of the environment, in which case an environmental assessment (or other precautionary steps as listed in section 28(3)) should be undertaken in terms of the Duty of Care Principle of NEMA (see below), sections 28(1), (2) and (3).

Note: Duty of Care Principle

Any person undertaking any activity that may cause damage or degradation to the environment is subject to the Duty of Care Principle in terms of NEMA, section 28.

NEMA (S 28(1)) requires that: Every person who may cause significant ... degradation of the environment must take reasonable measures to prevent such degradation from occurring ...or, in so far as such harm to the environment is authorized by law or cannot reasonably be avoided ... to minimize or rectify such ... degradation of the environment.

The Duty of Care Principle therefore may apply to any activity or land use, irrespective of whether it is included in the listed activities in the EIA Regulations (2010).

The measures required in terms of subsection (1) may include measures to -

- (a) investigate, assess and evaluate the impact on the environment;
- (b) inform and educate employees about the environmental risks of their work and the manner in which their tasks must be performed in order to avoid causing significant pollution or degradation of the environment;
- (c) cease, modify or control any act, activity or process causing the pollution or degradation;
- (d) contain or prevent the movement of pollutants or the cause of degradation;
- (e) eliminate any source of the pollution or degradation; or
- (f) remedy the effects of the pollution or degradation.

The environmental attributes are grouped on a number of EIM Zone maps as shown in Table 5.1 below.

Each zone is preceded by a summary of its status (summarised from the detailed description in the baseline report) and a description of the environmental management priorities.

The environmental attributes are grouped on a number of EIM Zone maps in section 5 as follows:

**Table 5.1: Tygerberg District (District D): Overview of EIM Zone Maps**

<b>ZONE MAP NUMBER</b>	<b>Figure 14</b>	<b>Figure 15</b>	<b>Figure 16</b>	<b>Figure 17</b>	<b>Figure 18</b>	<b>Figure 19</b>
<b>ZONE MAP NAME</b>	<i>Hydrological Zone</i>	<i>Dune Zone</i>	<i>Conservation and Biodiversity Priority Zone</i>	<i>Cultural and Recreational Resources Zone</i>	<i>Natural Economic Resources Zone</i>	<i>Urban Uses and Utilities Zone</i>
<b>ENVIRONMENTAL ATTRIBUTES</b>	<p><b>Flood Risk Areas</b></p> <ul style="list-style-type: none"> <li>• Flood Risk Area 1 (1:50 flood line)</li> <li>• Flood Risk Area 2 (1:100 flood line)</li> <li>• Flood Risk Area 3</li> </ul> <p><b>Rivers, Estuaries and Wetlands</b></p> <ul style="list-style-type: none"> <li>• Rivers and associated buffers</li> <li>• Wetlands and associated buffers</li> </ul> <p><b>Aquifers</b></p> <ul style="list-style-type: none"> <li>• Moderately productive aquifers</li> </ul>	<p><b>Dune Areas</b></p> <ul style="list-style-type: none"> <li>• Sensitive dune fields</li> </ul>	<p><b>Conservation and Biodiversity Areas</b></p> <ul style="list-style-type: none"> <li>• Protected areas</li> <li>• Critical Biodiversity Areas 1</li> <li>• Critical Biodiversity Areas 2</li> <li>• Critical Ecological Support Areas</li> <li>• Other Ecological Support Areas</li> <li>• Other Natural Vegetation</li> </ul>	<p><b>Cultural and Heritage Areas</b></p> <ul style="list-style-type: none"> <li>• Durbanville Hills Cultural landscape</li> <li>• Voortrekker Road Urban Corridor</li> <li>• Haardekraaltje Camp Site</li> <li>• Scenic Routes</li> </ul> <p><b>Public Open Spaces</b></p> <ul style="list-style-type: none"> <li>• Structuring Open Spaces</li> </ul>	<p><b>High Potential Agricultural Areas</b></p> <ul style="list-style-type: none"> <li>• High potential and unique agricultural land worthy of long-term protection</li> <li>• Other agricultural areas</li> <li>• Smallholdings and agricultural areas</li> </ul> <p><b>Mineral Extraction Areas</b></p> <ul style="list-style-type: none"> <li>• Priority mineral resources</li> </ul>	<p><b>Landfill and Noise Exclusion Areas</b></p> <ul style="list-style-type: none"> <li>• Landfill sites and buffer zones</li> <li>• Airport noise exclusion areas</li> </ul> <p><b>Industrial and Commercial Areas</b></p> <ul style="list-style-type: none"> <li>• Industrial areas</li> <li>• Commercial areas</li> </ul> <p><b>Infrastructure and Utilities Areas</b></p> <ul style="list-style-type: none"> <li>• Infrastructure servitudes, including WWTWs</li> </ul>

## 5.2.1 Hydrological Zone

### SUMMARY OF STATUS

The pollution and degradation of rivers, wetlands and groundwater systems within the Tygerberg District, and the Western Cape in general, are critical issues. The two streams in Tygerberg District, Elsieskraal and Jakkalsvlei, are largely canalised and their environmental functioning has been seriously compromised (see Pollution and Waste Management). The streams have also been degraded by pollution from agricultural and urban stormwater run-off as well as infestation by invasive alien fish and vegetation.

### ENVIRONMENTAL MANAGEMENT PRIORITIES

Management Priority	Priority area of focus
1. Enhance and restore	<ul style="list-style-type: none"> <li>• Implement measures to improve the functioning of, and water quality in the Elsieskraal and Jakkalsvlei by rehabilitating these rivers, where possible, and implementing engineering solutions to improve ecosystem health, where rivers are canalised.</li> <li>• Remove invasive alien vegetation and restore indigenous riparian vegetation.</li> </ul>
2. EIA Requirements	<ul style="list-style-type: none"> <li>• Key issues to be considered: Storm water quality and quantity management; catchment management; Health &amp; Safety issues; biodiversity and rehabilitation; visual and heritage issues.</li> <li>• Establish and maintain appropriate river and wetland buffers<sup>i</sup> and prevent inappropriate land uses in these areas</li> <li>• Establish 1:50 and 1:100 year flood lines for rivers where they have not yet been determined (e.g. Elsieskraal and Jakkalsvlei) as well as flood prone areas and prevent inappropriate land uses in these areas</li> <li>• Orientate proposed new development (industrial, mixed use and residential) along the Elsieskraal towards the river, and include the river corridor into the district's open space system to maximise the amenity value of the river corridor</li> <li>• A detailed Environmental Management Programme (EMP) must be drawn up and implemented for all activities approved in these zones, in accordance with the City of Cape Town's specifications for EMPs</li> <li>• Obtain input from the City of Cape Town Catchment, Stormwater and River Management Branch where development is contemplated on or near wetlands.</li> <li>• Types of activities that may have a significant impact (orange category) must demonstrate that there will be no significant impacts on aquifer water quality. Alternative locations (sites) for such activities must be considered in the EIA process.</li> <li>• Although some agricultural activities may be permitted in the flood risk and flood fringe areas, the nature of the impacts and appropriate mitigation must be determined in the EIA process and must be shown to be acceptable prior to approval (i.e. they must not pollute water resources or increase flood risk or damage potential).</li> <li>• No agricultural activities should be approved within the 1:2 year flood line.</li> <li>• Where facilities associated with sports fields, golf courses or picnic areas have been conditionally permitted in the 1:50 year zone, floor levels must be above the 1:50 year flood line.</li> </ul>

	<ul style="list-style-type: none"> <li>Where large volumes of water are to be abstracted from aquifers, it must be demonstrated that such abstraction is sustainable.</li> </ul>
3. Monitor and manage impacts	<ul style="list-style-type: none"> <li>Control illegal dumping and littering, particularly in areas where dumped material can enter or alter stormwater and river systems;</li> <li>Ensure effluent from industrial development is not discharged into the stormwater system or rivers, such as the Kuils River at Stikland Industria and the Elsieskraal River at Elsiesriver/Beaconvale Industria;</li> <li>Consider introducing a nutrient stripping project at WWTWs;</li> <li>Discourage and monitor unfavourable practises leading to the contamination of stormwater (such as the washing of surfaces containing oils and other chemicals);</li> <li>Require all future development to treat water quality and quantity at source, according to the criteria set out in the CoCT's Policy on Minimising the Impact of Stormwater from Urban Development on Receiving Waters (2008);</li> <li>A stormwater analysis is required to determine the extent and scale of activities that are or are not permitted.</li> <li>Aquifer re-charge areas and sole-source aquifers should be protected from potential sources of pollution.</li> </ul>

ENVIRONMENTAL IMPACT MANAGEMENT TABLE: HYDROLOGICAL ZONE: Refer to Figure 14

Note: All activities contemplated within the hydrological zone must be supplemented with the activities as contained in the Floodplain and River Corridor Management Policy (2009)

**Table5.1a): Flood Risk Areas**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Flood Risk Area 1</b></p> <p><i>These constitute areas within the 1:50 flood line, i.e. where floods of this magnitude are equalled or exceeded on average once in 50 years.</i></p> <p><b>NOTE: ALL ACTIVITIES LISTED AS UNDESIRABLE ARE PROHIBITED IN TERMS OF THE FLOODPLAIN AND RIVER CORRIDOR MANAGEMENT POLICY (2009).</b></p>	<ul style="list-style-type: none"> <li>Any activity which impedes the hydrological functioning and flooding of a river.</li> <li>Bulk infrastructure, including Waste Water Treatment Works (WWTWs), pump stations and power generation, electrical substations.</li> <li>Solid and liquid waste disposal.</li> <li>Telecommunication exchanges and transmitters.</li> <li>Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>Any permanent building with foundations such as residential, business, educational,</li> </ul>	<ul style="list-style-type: none"> <li>Conservation related facilities or infrastructure.</li> <li>All excavation and mining related activities.</li> <li>Essential engineering and utility services relating to outfall sewers, stormwater systems and underground services.</li> <li>Transmission towers</li> <li>On-site sewage treatment (conservancy tanks).</li> <li>Road, rail, pipeline and cable crossings and bridges.</li> <li>Bank protection, flow diversion structures and earthworks (e.g. dams weirs, walls, levees).</li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Public open space areas with appropriate low-impact recreation activities.</li> <li>Agriculture (excluding grazing activities where the presence of stock will affect water quality of a river, wetland, estuary or stream, or cause erosion)</li> </ul>	<ul style="list-style-type: none"> <li>City of Cape Town's Floodplain and River Corridor Management Policy (2009)</li> <li>City of Cape Town's Policy on Minimising the Impact of Stormwater from Urban Development on Receiving Waters (2008)</li> <li>City of Cape Town's Policy for Development Control near Water (2002)</li> </ul>

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
	<p>community and public facilities and institutions e.g. prisons, military bases, police stations, fire stations, hospitals, old age homes.</p> <ul style="list-style-type: none"> <li>• Informal residential area.</li> <li>• Railway stations, modal interchanges or bus depots.</li> <li>• Any structure that would pollute the river if it was flooded.</li> <li>• The infilling or depositing of any material into a watercourse, in stream dam or wetland.</li> <li>• Establishment of cemeteries.</li> <li>• Abattoirs.</li> <li>• Industrial activities.</li> <li>• Service stations.</li> </ul>	<ul style="list-style-type: none"> <li>• Parking areas.</li> <li>• Pedestrian walkways.</li> <li>• Agricultural and Agri-industrial activities.</li> <li>• Resorts and camping/caravan sites.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Sports fields and picnic areas.</li> </ul>		
<p><b>Flood Risk Areas 2</b></p> <p><i>These constitute areas within the 1:100 flood line, i.e. floods of this magnitude are equalled or exceeded on average once in 100 years</i></p> <p><b>NOTE: ALL ACTIVITIES LISTED AS UNDESIRABLE ARE PROHIBITED IN TERMS OF THE FLOODPLAIN AND RIVER CORRIDOR MANAGEMENT POLICY (2009).</b></p>	<ul style="list-style-type: none"> <li>• Bulk infrastructure, including WWTWs, pump stations and power generation, electrical substations.</li> <li>• Solid waste disposal sites.</li> <li>• Telecommunication exchangers and transmitters.</li> <li>• Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>• Community and public facilities (including hospitals, old age homes, fire stations, educational facilities etc.)</li> <li>• Informal residential areas</li> <li>• Railway stations or bus depots.</li> <li>• Any structure that would pollute the river if it was flooded.</li> <li>• Establishment of cemeteries.</li> <li>• Abattoirs.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation related facilities or infrastructure.</li> <li>• All excavation and mining related activities.</li> <li>• Roads and railways.</li> <li>• Transmission towers and rooftop base stations</li> <li>• Formal Residential development (which complies with specific conditions for development within this zone*).</li> <li>• Bank protection, flow diversion structures and earthworks (e.g. dams weirs, walls, levees, infilling)</li> <li>• Tourism facilities (which comply with specific conditions for development within this zone*).</li> <li>• Commercial development (which complies with specific conditions for development within this zone*).</li> <li>• Renewable power generation.</li> <li>• Agri-industrial activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation activities.</li> <li>• Public open space areas with appropriate low-impact recreation activities.</li> <li>• Resorts and camping/caravan sites.</li> <li>• Essential engineering and utility services relating to outfall sewers, stormwater systems and underground services.</li> <li>• On-site sewage treatment (conservancy tanks).</li> <li>• Agricultural activities.</li> <li>• Sustainable harvesting of natural resources.</li> </ul>	

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
	<ul style="list-style-type: none"> <li>• Industrial activities.</li> <li>• Service stations</li> <li>• Filling/reclamation activities</li> </ul>	<ul style="list-style-type: none"> <li>• Resorts</li> <li>• Parking areas.</li> </ul>		
<p><b>Flood Risk Area 3</b></p> <p><i>These are areas prone to flooding. They are not necessarily associated with river or vlei systems, as flooding may originate from groundwater, collection of stormwater or runoff in low lying areas.</i></p>	<p>#Activities can be considered in conjunction with the implementation of appropriate engineering solutions to localised potential flooding.</p>	<p>#Activities can be considered in conjunction with the implementation of appropriate engineering solutions to localised potential flooding.</p>	<p>#Activities can be considered in conjunction with the implementation of appropriate engineering solutions to localised potential flooding.</p>	<ul style="list-style-type: none"> <li>•</li> </ul>

**Table 5.1b) Rivers and Wetlands: Buffer Areas**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
Rivers and Wetlands and their associated buffer areas <i>These are the buffer areas that have been determined via a series of standardised methodologies for the calculation of buffers (refer to the Floodplain and River Corridor Management Policy, 2009). River buffer widths range from 10 – 40m from the top of the river bank. Wetland buffer widths vary in width and may extend up to 75m from the outer delineated edge of the wetland.</i>	<ul style="list-style-type: none"> <li>Any land use or activity that will have an impact on the vegetation cover or hydrological functioning of the buffer area, including:                             <ul style="list-style-type: none"> <li>Industrial development;</li> <li>Mining activities;</li> <li>Business development;</li> <li>Residential development;</li> <li>Community and public facilities;</li> <li>Utilities and infrastructure;</li> <li>Agricultural activities; and</li> <li>Transport systems</li> <li>Infilling/reclamation activities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Conservation related facilities or infrastructure.</li> <li>Essential engineering and utility services relating to outfall sewers and storm water systems.</li> <li>Essential road, rail, pipeline and cable crossings and bridges.</li> <li>Sports fields and picnic areas.</li> <li>Resorts and camping/caravan sites.</li> <li>Sustainable harvesting of natural resources.</li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Public open space areas with appropriate low-impact recreation activities.</li> </ul>	<ul style="list-style-type: none"> <li>City of Cape Town's Floodplain and River Corridor Management Policy (2009)</li> <li>City of Cape Town's Policy on Minimising the Impact of Stormwater from Urban Development on Receiving Waters (2008)</li> <li>City of Cape Town: Prioritization of City Wetlands (2009)</li> <li>City of Cape Town Biodiversity Strategy</li> </ul>

**Table 5.1c): Aquifers**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<b>Moderately productive aquifers</b> <i>This zone includes moderately productive intergranular and fractured aquifers</i>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>All activities can be considered in this zone, however the following activities may have a significant impact:                             <ul style="list-style-type: none"> <li>Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>Solid and liquid waste disposal.</li> <li>WWTWs.</li> <li>Mining activities.</li> <li>Establishment of cemeteries.</li> <li>Water abstraction.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Conservation related facilities or infrastructure.</li> <li>Engineering and utility services (excluding waste disposal and WWTW).</li> <li>Public open space areas with appropriate recreation activities.</li> <li>Residential development.</li> <li>Commercial development.</li> <li>Tourism facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Water and Environmental Affairs (DWEA's) Guideline for the Assessment, Planning and Management of Groundwater Resources in South Africa (2008)</li> <li>DWEA Groundwater Resource Directed Measures (2006)</li> <li>DEAD&amp;DP's Guideline for Involving Hydrogeologists</li> </ul>

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
		<ul style="list-style-type: none"> <li>- Industrial activities.</li> <li>- Agricultural activities</li> <li>- Stormwater management by means of infiltration</li> </ul>	<ul style="list-style-type: none"> <li>• Light industrial activities.</li> <li>• Roads, rail, pipelines and cables.</li> <li>• Transmission towers and rooftop base stations.</li> <li>• Sustainable harvesting of natural resources.</li> </ul>	<p>Specialists in EIA Processes (2005)</p> <p>City of Cape Town's Management of Urban Stormwater Impacts Policy (2009)</p>

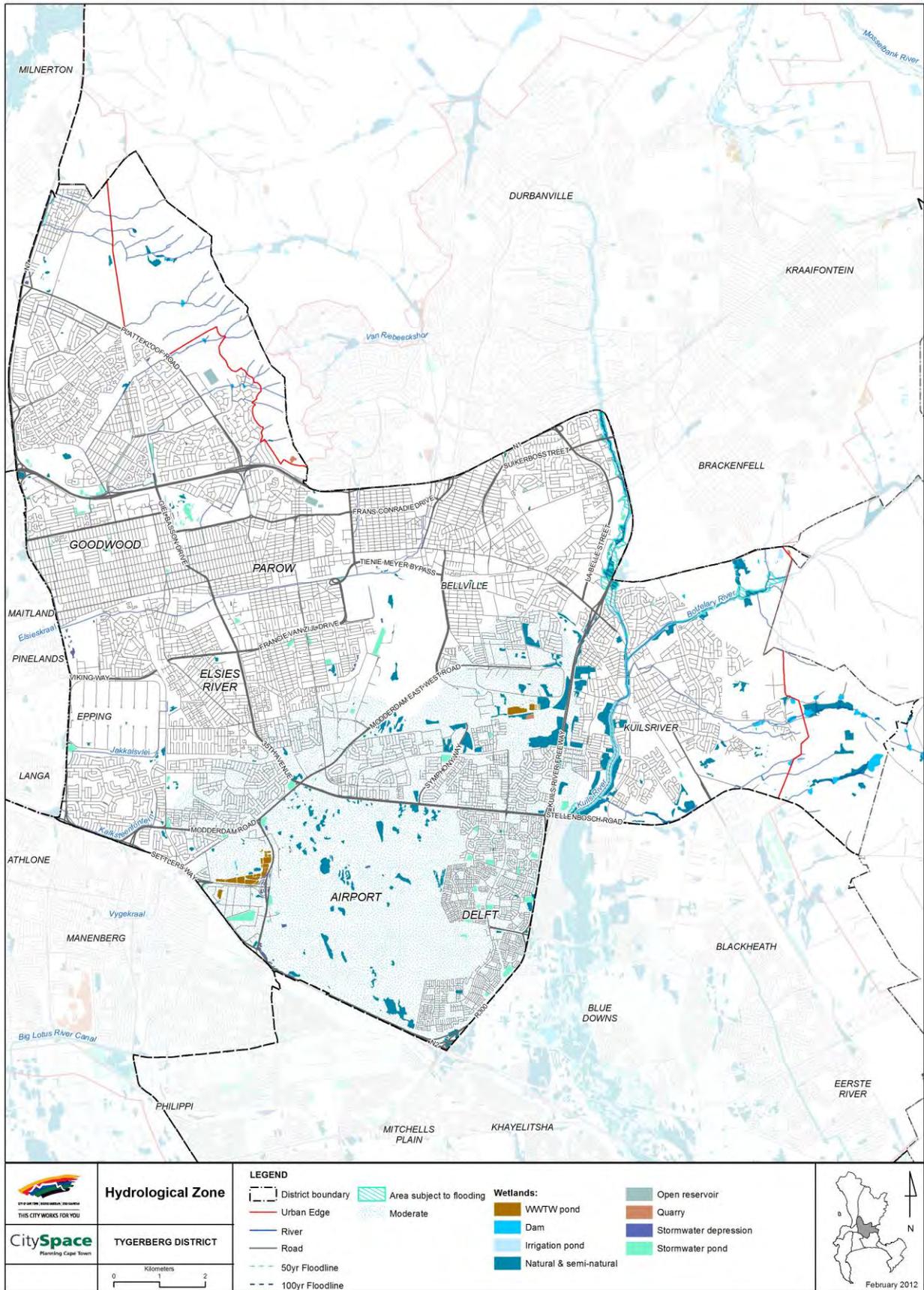


Figure 13: Hydrological Zone

## 5.2.2 Dune Zone

### SUMMARY OF STATUS

This area's remaining dune fields are under significant pressure from development. The remaining dune areas do support biodiversity but it has been degraded over time, largely through presence of alien vegetation.

### ENVIRONMENTAL MANAGEMENT PRIORITIES

Management Priority	Priority area of focus
1. Monitor and manage impacts	<ul style="list-style-type: none"> <li>EMPs for developments in the Delft and Airport areas will need to address management of sand</li> </ul>
2. EIA requirements	<ul style="list-style-type: none"> <li>A detailed assessment of the impacts on dunes and related systems should be incorporated into EIA where required.</li> </ul>

### ENVIRONMENTAL IMPACT MANAGEMENT TABLE: DUNE ZONE: Refer to Figure 15

Table 5.2a): Dune Areas

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<b>Sensitive dune fields</b> <i>This zone constitutes sensitive dune fields, including embryo, linear, parabolic, sand sheet and transverse dunes. Locations of these different dune types are indicated on Zone Map D2.</i>	<p>Note: In this district – the following activities would be undesirable in areas that are retained for conservation and amenity/landscaping purposes</p> <ul style="list-style-type: none"> <li>Activities involving excavation and mining.</li> <li>Activities which harden the surface and stabilise the dunes.</li> <li>Activities which result in high traffic (pedestrian and vehicular) activity*.</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian walkways.</li> <li>Landscaping</li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Public open spaces with appropriate low impact recreation activities.</li> <li>Essential activities required for the environmental management of the dune areas.</li> </ul>	<ul style="list-style-type: none"> <li>City of Cape Town Biodiversity Strategy</li> <li>City of Cape Town's Management of Urban Stormwater Impacts Policy</li> </ul>

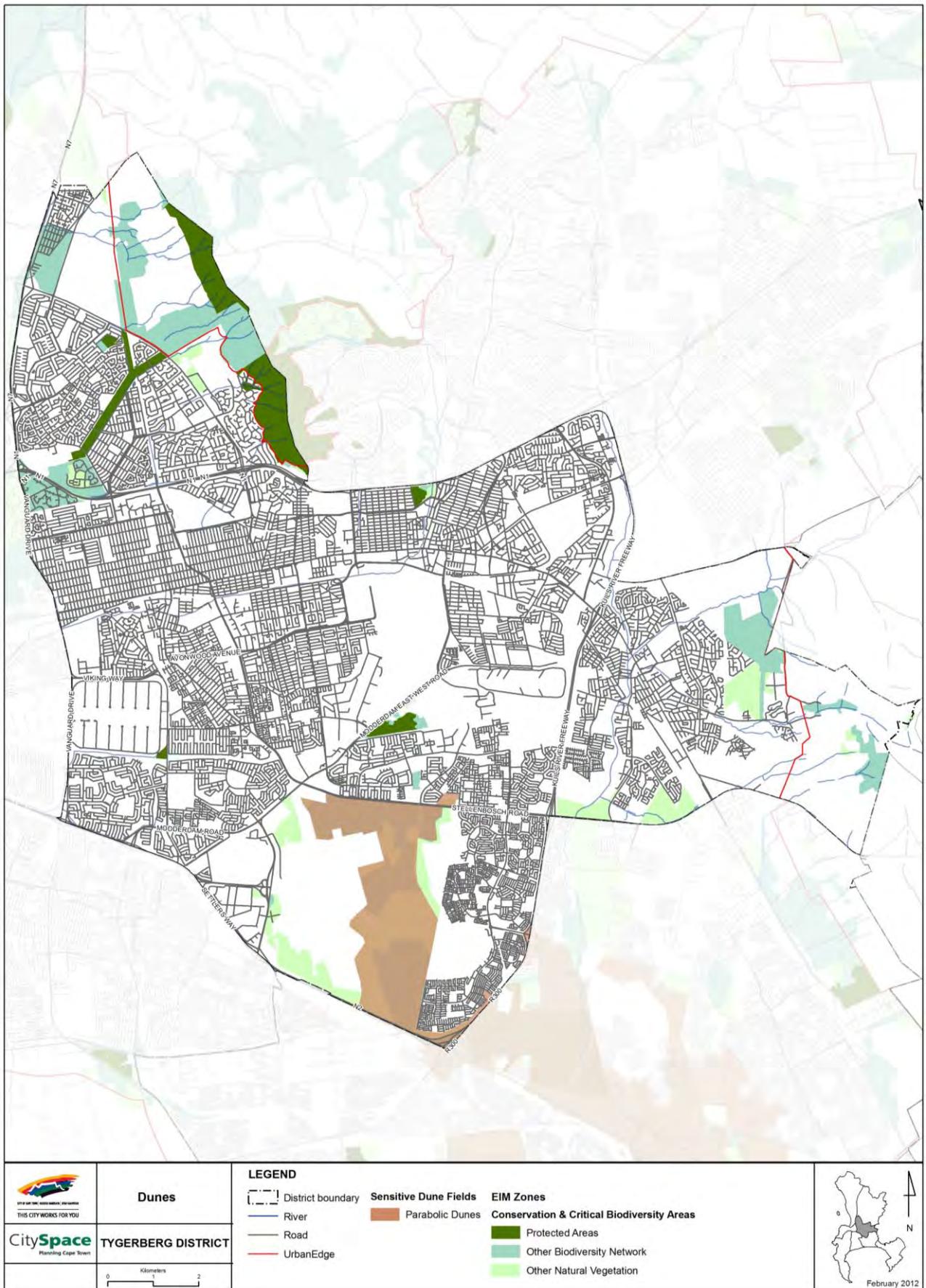


Figure 14: The dune zone

### 5.2.3 Conservation and Biodiversity Priority Zone

#### SUMMARY OF STATUS

The Tygerberg District is largely urbanised but contains some remaining fragments of two of South Africa's rarest vegetation types, namely sand fynbos and renosterveld, in the north-western section of the district. Both of these vegetation types are exceptionally high in species diversity, and have a high incidence of Vulnerable, Endangered and Critically Endangered Red Data species, as well as extinct plant species and many endemic faunal species. Biodiversity in the district is under threat from rapid and insensitive development and infestation by invasive alien vegetation.

#### ENVIRONMENTAL MANAGEMENT PRIORITIES

<b>Management Priority</b>	<b>Priority area of focus</b>
1. Enhance and restore	<ul style="list-style-type: none"> <li>Rehabilitate and maintain areas of sensitive natural vegetation and high biodiversity value and establish and maintain "green corridors" where possible (particularly the Eskom servitude (Platteklouf Natural Heritage Site) between Edgemead and Monte Vista, Bothasig Conservation Area, and Haasendal Conservation Area)</li> </ul>
2. Retain and protect	<ul style="list-style-type: none"> <li>Conserve remnants of sensitive and threatened vegetation types, particularly the Critically Endangered Cape Flats Sand Fynbos (in the lower-lying areas at the foot of the Tygerberg Hills), renosterveld (in the moderately undulating plains, valleys and lowlands of the Tygerberg Hills) and the Endangered Cape Flats Dunes Strandveld in the south-eastern portion of the district</li> </ul>
3. EIA requirements	<ul style="list-style-type: none"> <li>Issues to be considered: Vegetation; Connectivity &amp; access; fire control &amp; land management; pollution; invasive alien vegetation &amp; faunal species.</li> <li>An EMP must be drawn up and implemented for all activities in Conservation Biodiversity priority zones.</li> <li>The Biodiversity Management Branch must be consulted about developments in areas of high biodiversity importance.</li> <li>Control development pressure in the key sensitive areas, such as Platteklouf and the Cape Town International Airport.</li> <li>Where biodiversity remnants conflict with areas earmarked for commercial, industrial or residential development, ensure adequate botanical and faunal impact assessments, identifying appropriate mitigation measures, before these activities are approved. Current conflicts include proposed residential areas outside of the urban edge near Richwood and Platteklouf, and mixed use residential and commercial development on the eastern portion of the Cape Town International Airport</li> <li>Identify opportunities to permit low impact sustainable development which contributes to a net increase in the protection of biodiversity and the establishment of functional biodiversity nodes and corridors.</li> <li>Where possible, all infrastructure and services should be located outside CBA areas.</li> <li>Note that unless the Biodiversity Network is secured elsewhere, Other Natural Vegetation Areas may become more important if required as biodiversity offsets.</li> </ul>

4. Monitor and manage impacts	<ul style="list-style-type: none"> <li>Control and remove invasive alien vegetation in line with the City's Invasive Alien Species Strategy (and particularly in and close to nature conservation and biodiversity priority areas, for example the Tygerberg Nature Reserve, Cape Flats Nature Reserve and Symphony Way near Delft);</li> <li>Implement effective veldfire management strategies in line with the City's Veldfire Management Guidelines;</li> <li>Control illegal dumping, particularly in and adjacent to important biodiversity sites; and</li> <li>Restrict access to, and the illegal removal of, terrestrial species, particularly in the Tygerberg Nature Reserve.</li> <li>A variety of different types of critical vegetation are included within the CBA 1 zone. For planning purposes, reference must be made to a detailed biodiversity map and consultation with the Biodiversity Branch must take place.</li> <li></li> </ul>
5. Research and Educate	<ul style="list-style-type: none"> <li>Maximise utilisation of biodiversity areas for educational and recreational activities that are in keeping with the environment</li> <li>Opportunities for sustainable, low impact community utilisation of biodiversity resources should be identified.</li> </ul>

ENVIRONMENTAL IMPACT MANAGEMENT TABLE: CONSERVATION AND BIODIVERSITY ZONE: Refer to Figure 16

**Table 5.3a) Conservation and Biodiversity Areas**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<b>Protected Areas</b> <i>This zone includes protected and managed biodiversity areas</i>	<ul style="list-style-type: none"> <li>Any land use or activity that will have an impact on the vegetation cover or ecological functioning of the area, including: <ul style="list-style-type: none"> <li>Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>Solid and liquid waste disposal.</li> <li>Industrial activities.</li> <li>Residential and commercial development.</li> <li>All excavation and mining related activities.</li> <li>Establishment of cemeteries.</li> <li>Abattoirs.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Tourism and hospitality facilities.</li> <li>Environmental education facilities.</li> <li>Essential engineering and utility services.</li> <li>Institutional activities (museums etc.)</li> <li>Parking areas and offices (related to conservation activities).</li> <li>Transmission towers and rooftop base stations.</li> <li>Any other activity entailing clearance of 3 hectares or more of critically endangered indigenous vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Activities necessary for the management of the conservation area/ reserve.</li> <li>Hiking trails and walks.</li> <li>View points for e.g. bird watching.</li> </ul>	<ul style="list-style-type: none"> <li>City of Cape Town Biodiversity Strategy</li> <li>Reserve Sensitivity and Zonation Plans (June 2010)</li> <li>City of Cape Town's Natural Interface Study: Veldfire Planning Guidelines (2004)</li> <li>City of Cape Town's Management of Urban Stormwater Impacts Policy (2009)</li> <li>DEAD&amp;DP's Guideline for Involving</li> </ul>

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
	<ul style="list-style-type: none"> <li>- Agricultural and agri-industrial activities.</li> <li>- Outdoor advertising.</li> </ul>			<p>Biodiversity Specialists in EIA Processes (2005)</p>
<p><b>Critical Biodiversity Areas 1</b></p> <p><i>This zone encompasses critical, irreplaceable minimum selection, consolidation and connectivity biodiversity sites i.e. Bionet categories CBA 1a–e.</i></p>	<ul style="list-style-type: none"> <li>• Any land use or activity that will have an impact on the vegetation cover or ecological functioning of the area, including: <ul style="list-style-type: none"> <li>- Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>- Solid and liquid waste disposal.</li> <li>- Bulk infrastructure including WWTWs and power generation.</li> <li>- Industrial and agric-industrial activities.</li> <li>- Residential and commercial development.</li> <li>- All excavation and mining related activities.</li> <li>- Establishment of cemeteries.</li> <li>- Abattoirs.</li> <li>- Outdoor advertising.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Conservation related facilities or infrastructure.</li> <li>• Essential roads, rail, pipelines and cables.</li> <li>• Essential engineering and utility services.</li> <li>• Tourism facilities.</li> <li>• Hiking trails and walks.</li> <li>• Environmental education facilities.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Any other activity entailing clearance of critically endangered indigenous vegetation.</li> <li>• Agricultural activities (outside the urban edge).</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation activities</li> <li>• Urban open space areas with appropriate low-impact recreation activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Western Cape Provincial Spatial Development Framework: Statutory Report</li> <li>• The Fynbos Forum's Guidelines for Environmental Assessment in the Western Cape (2005)</li> <li>• City of Cape Town Biodiversity Network: C-plan and Marxan Analysis:2009 Methods and Results</li> <li>• A Climate Change Strategy and Action Plan for the Western Cape, South Africa (2008)</li> </ul>
<p><b>Critical Biodiversity Areas 2 (Restorable Irreplaceable Sites)</b></p> <p><i>This zone encompasses the irreplaceable restorable sites biodiversity sites i.e. Bionet category CBA 2</i></p>	<ul style="list-style-type: none"> <li>• Any land use or activity that will have an impact on the vegetation cover or ecological functioning of the area, including: <ul style="list-style-type: none"> <li>- Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>- Solid and liquid waste disposal.</li> <li>- Bulk infrastructure including WWTW and power generation.</li> <li>- Industrial and agric-industrial</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Conservation related facilities or infrastructure.</li> <li>• Essential roads, rail, pipelines and cables.</li> <li>• Essential engineering and utility services.</li> <li>• Tourism facilities.</li> <li>• Hiking trails and walks.</li> <li>• Environmental education facilities.</li> <li>• Sustainable harvesting of natural resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation activities</li> <li>• Urban open space areas with appropriate low-impact recreation activities.</li> </ul>	

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
	activities. <ul style="list-style-type: none"> <li>– Residential and commercial development.</li> <li>– All excavation and mining related activities.</li> <li>– Establishment of Cemeteries.</li> <li>– Abattoirs.</li> <li>– Outdoor advertising.</li> </ul>	<ul style="list-style-type: none"> <li>• Any other activity entailing clearance of critically endangered indigenous vegetation.</li> <li>• Agricultural activities (outside the urban edge).</li> </ul>		
<p><b>Critical Ecological Support Areas (CESAs)</b></p> <p><i>These sites may comprise any habitat quality from very low condition to pristine. They provide for essential ecosystem services. They are required for additional consolidation and ecological support and are essential for management consolidation, connectivity and viability of biodiversity elements in protected areas and CBAs.</i></p> <p><b>Other Ecological Support Areas (OESAs)</b></p> <p>These sites are essential for management consolidation, connectivity and viability of biodiversity elements in CBA1, CBA2 and Protected sites.</p>	<ul style="list-style-type: none"> <li>• Any land use or activity that will change the existing land use and /or harden the surface of the site, including:               <ul style="list-style-type: none"> <li>– Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>– Solid and liquid waste disposal.</li> <li>– Bulk infrastructure including WWTW and power generation.</li> <li>– Higher-density residential development.</li> <li>– Industrial activities.</li> <li>– Mining related activities.</li> <li>– Establishment of Cemeteries.</li> <li>– Abattoirs.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural activities (outside the urban edge).</li> <li>• Conservation related facilities or infrastructure.</li> <li>• Essential road, rail, pipelines and cables.</li> <li>• Essential engineering services relating to tourism facilities.</li> <li>• Tourism facilities.</li> <li>• Transmission towers and rooftop base stations.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Any other activity that is in keeping with the existing land use.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation and restoration activities.</li> <li>• Urban open space areas with appropriate low-impact recreation activities.</li> <li>• Pedestrian walkways and trails.</li> </ul>	
<p><b>Other Natural Vegetation</b></p> <p><i>This zone encompasses other natural vegetation sites that do not fall into the categories</i></p>	<ul style="list-style-type: none"> <li>• Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> <li>• Industrial activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation related facilities or infrastructure.</li> <li>• Essential road, rail, pipelines and cables.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation activities.</li> <li>• Urban open space areas with appropriate low-impact recreation activities.</li> </ul>	

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<i>discussed above.</i>	<ul style="list-style-type: none"> <li>• Mining related activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Essential engineering services relating to tourism facilities.</li> <li>• Pedestrian walkways and trails</li> <li>• Tourism facilities.</li> <li>• Institutional activities.</li> <li>• Residential and commercial development.</li> <li>• Agricultural activities.</li> <li>• Transmission towers and rooftop base stations.</li> <li>• Establishment of cemeteries.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Any other activity entailing clearance of critically endangered indigenous vegetation.</li> </ul>		

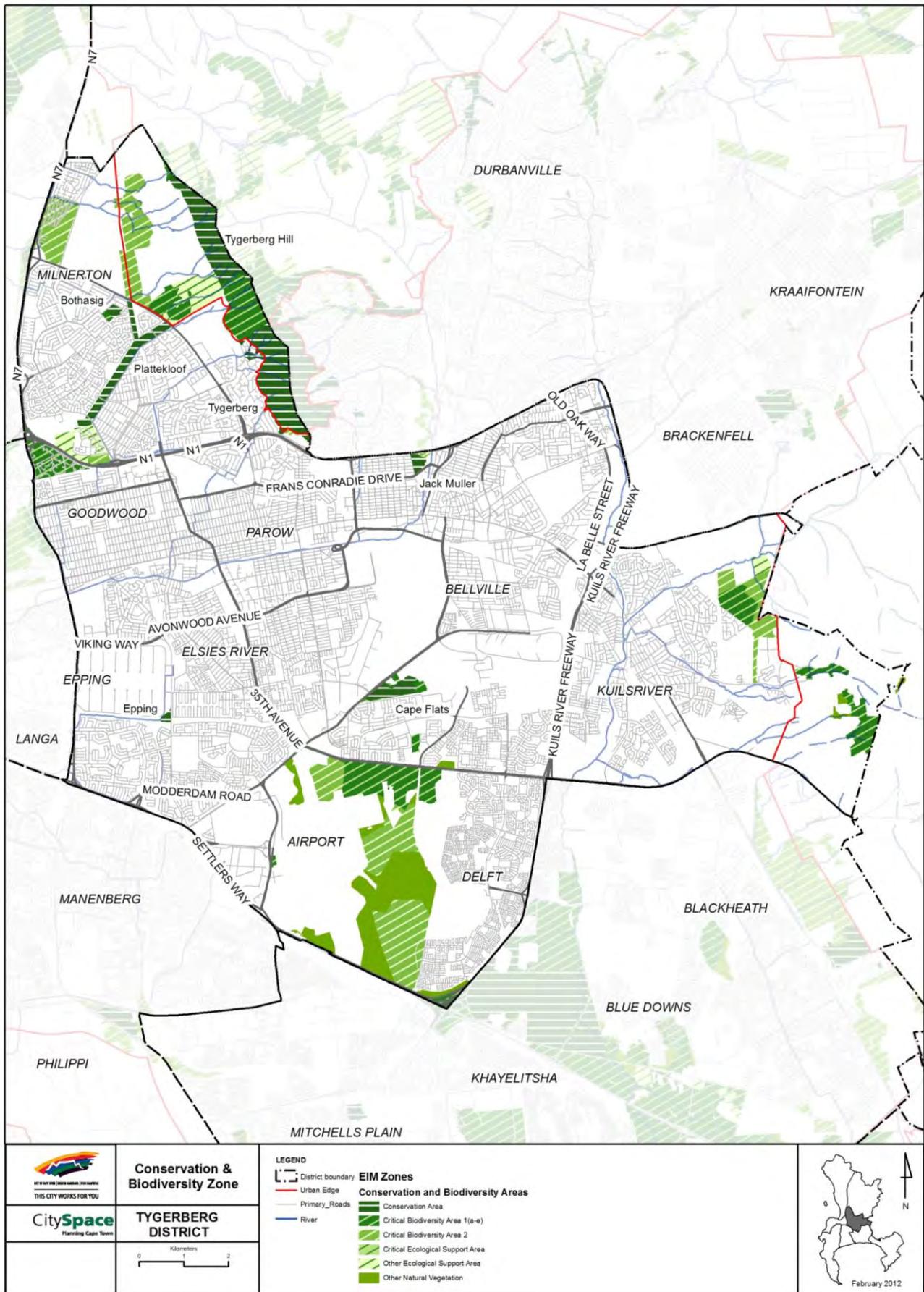


Figure 15: Conservation and Biodiversity Zone

## 5.2.4 Cultural and Recreational Resources Zone

### SUMMARY OF STATUS

The heritage resources in the Tygerberg District are relatively limited. The district is characterised by post World War II urban expansion and Apartheid Era town planning. A small section of the Durbanville Hills cultural landscape is included in the north of the district and the Voortrekker Road Urban Corridor includes many isolated conservation worthy buildings in the vicinity of Parow and Bellville. Other sites of significance include the Hardekraaltjie camp site, a major outspan, which marked the entrance to Cape Town as well as the Halt Road struggle site.

### ENVIRONMENTAL MANAGEMENT PRIORITIES

Management Priority	Priority area of focus
1. Enhance and restore	<ul style="list-style-type: none"> <li>• Enhance the heritage value of the Voortrekker Road Urban Corridor, focusing on pockets of historic structures such as the Roman Catholic Church and various turn-of-the-century industrial structure</li> </ul>
2. Retain and protect	<ul style="list-style-type: none"> <li>• Protect the Durbanville Hills Cultural Landscape</li> <li>• Protect the conservation-worthy structures in the Voortrekker Road Urban Corridor</li> <li>• Protect where possible wood and iron buildings, and enclaves of conservation-worthy houses</li> <li>• Conserve the Haardekraaltjie Camp Site</li> <li>• Consider adaptive reuse of the Wingfield World War II aircraft hangers</li> </ul>
3. Research and Educate	<ul style="list-style-type: none"> <li>• Confirm and refine mapping of cultural landscape and heritage resources</li> <li>• Conduct further studies regarding the Halt Road and other struggle sites in the vicinity, and recognise appropriately</li> </ul>
4. EIA requirements	<p><i>Important heritage issues in these zones include: archaeological, built environment, landscape and visual issues.</i></p> <ul style="list-style-type: none"> <li>• Authorisation of the activities must be in compliance with the requirements in the National Heritage Resources Act 25 of 1999 including impact assessment and for heritage resources. (Heritage Protections: S27 - provincial and national heritage sites, S28 – protected areas, S29 – provisionally protected areas, S30 – heritage register, S31 – heritage areas, S34 – structures over 60 years old, S35 archaeology, palaeontology and meteorite sites, S36 – burial grounds and graves, S37 – public monuments and memorials, S38 – development triggers for impact assessment)</li> <li>• Respond appropriately to applications for demolitions, alterations and development</li> </ul>

	<ul style="list-style-type: none"> <li>• A Heritage Overlay is being developed and will become part of the new Cape Town Zoning Scheme. Compliance to the CTZS will be required when it is in place</li> </ul> <p><b>Best Practice</b></p> <ul style="list-style-type: none"> <li>• Investigate heritage protections and heritage triggers applicable in terms of the National Heritage Resources Act</li> <li>• Confirm the heritage processes required with the relevant heritage authorities and the City of Cape Town's district Heritage Resources Section office</li> <li>• Investigate if any heritage surveys have taken place, whether there any heritage policies or guidelines for the area of the proposed development or the type of proposed development, and whether the site has been identified on the City's inventory of heritage resources</li> <li>• Consult relevant heritage brochures and guidelines for the area and type of work proposed</li> <li>• Undertaking of an appropriate level of heritage assessment is recommended for proposed developments, and in some cases may be a requirement of the relevant authority</li> </ul>
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ENVIRONMENTAL IMPACT MANAGEMENT TABLE: CULTURAL & RECREATIONAL RESOURCES (HERITAGE): Refer to Figure 17

Table5.4a): Cultural and Heritage Areas

Environmental attributes <sup>2</sup>	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Durbanville Hills Cultural Landscape</b></p> <p><i>This is characterised by vineyards and classic Cape Dutch architectural style farm houses.</i></p>	<ul style="list-style-type: none"> <li>• Unsympathetic additions and alterations to structures or farmscapes.</li> <li>• Inappropriate urbanisation.</li> <li>• Sub-division of land.</li> <li>• Development outside of the urban edge.</li> <li>• Any alterations, additions or new structures unsympathetic to protected buildings or the general character of area.</li> </ul>	<ul style="list-style-type: none"> <li>• *Mining related activities and infrastructure.</li> <li>• Engineering and utility services.</li> <li>• Essential road, rail, pipelines and cables.</li> <li>• Public open space.</li> <li>• Agri-industrial activities.</li> <li>• Agri-tourism activities.</li> <li>• Hiking and horse trails.</li> <li>• Transmission towers and base</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural activities, excluding abattoirs and feedlots (in cultural landscape).</li> <li>• Residential units as permitted in terms of the applicable zoning scheme and agricultural legislation.</li> <li>• Restoration of historical sites, facilities and buildings.</li> <li>• Appropriate landscaping.</li> <li>• Conservation activities.</li> <li>• Tourism facilities for day visitors.</li> </ul>	<ul style="list-style-type: none"> <li>• D:EA&amp;DP's Guideline for Involving Heritage Specialists in EIA Processes (2005)</li> <li>• D:EAD&amp;DP's Guideline for Involving Visual Specialists in EIA Processes (2005)</li> <li>• D:EA&amp;DP's EIA Guideline Series: Guideline for the</li> </ul>

<sup>2</sup> Please note that cultural landscapes, potential archeological areas and other heritage areas have been mapped based on the best available data and have not been refined, peer-reviewed or ground-truthed.

Environmental attributes <sup>2</sup>	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Voortrekker Road Urban Corridor</b></p> <p><i>This zone has isolated conservation worthy buildings, mostly Grade 3.</i></p>	<ul style="list-style-type: none"> <li>Any alterations, additions or new structures unsympathetic to protected buildings or the general character of area.</li> <li>Mining related activities and infrastructure.</li> </ul>	<p>stations.</p> <ul style="list-style-type: none"> <li>Dependent on specific area. Suitable activities should be congruent and sympathetic to landscape / townscape.</li> <li>Transmission towers and base stations.</li> <li>Tourism and hospitality facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Residential and commercial activities that are in keeping with the character of the area.</li> <li>Sub-division and densification that is not materially changing the character of the area.</li> <li>Institutional facilities (education, museums).</li> <li>Engineering and utility services.</li> <li>Essential road, rail, pipelines and cables.</li> <li>Restoration and conservation of historical buildings and infrastructure.</li> <li>Public open space.</li> </ul>	<p>Management of Development on Mountains, Hills and Ridges of the Western Cape (2002)</p> <ul style="list-style-type: none"> <li>City Of Cape Town Scenic Routes Management Plan</li> <li>City Of Cape Town Heritage Resources Strategy</li> <li>National Heritage Resources Act (1999)</li> </ul>
<p><b>Hardekraaltjie camp site</b></p> <p><i>This camp site was a major outspan and entrance point to Cape Town from Tygerberg farms.</i></p>	<ul style="list-style-type: none"> <li>Any alterations, additions or new structures unsympathetic to character and historic significance of the site*.</li> <li>Mining related activities and infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Engineering and utility services.</li> <li>Essential road, rail, pipelines and cables.</li> <li>Tourism and hospitality facilities.</li> <li>Transmission towers and base stations.</li> <li>Urban agriculture.</li> <li>Institutional facilities (education, museums).</li> </ul>	<ul style="list-style-type: none"> <li>Camping site.</li> <li>Public open space.</li> </ul>	
<p><b>Scenic Routes</b></p> <p><i>This zone includes the N1</i></p>	<ul style="list-style-type: none"> <li>Activities which compromise or restrict views.</li> <li>Activities inconsistent with the landscape / townscape.</li> <li>Outdoor advertising.</li> </ul>	<ul style="list-style-type: none"> <li>Dependent on section of road. Suitable activities should be congruent and sympathetic to landscape / townscape.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	

**Table 5.4b): Public Open Spaces**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Structuring Open Spaces</b></p> <p><i>This zone includes structuring public open spaces (which are significant at a district scale and play a role in structuring the area)</i></p>	<ul style="list-style-type: none"> <li>• Waste disposal activities (including WWTW).</li> <li>• Mining activities.</li> <li>• Industrial activities.</li> <li>• Residential development.</li> </ul>	<ul style="list-style-type: none"> <li>• * Limited commercial activities.</li> <li>• Institutional activities (museums, churches etc.).</li> <li>• Tourism facilities.</li> <li>• Establishment of cemeteries.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Transmission towers and rooftop base stations.</li> <li>• Outdoor advertising.</li> <li>• Small-scale urban agricultural activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation related facilities or infrastructure.</li> <li>• Public open space areas with appropriate recreation activities.</li> <li>• Essential engineering services relating to outfall sewers and storm water systems.</li> <li>• Road, rail, pipeline and cable crossings and bridges.</li> <li>• Landscaping.</li> </ul>	<ul style="list-style-type: none"> <li>• City of Cape Town's CMOSS Strategy</li> <li>• City of Cape Town's Management of Urban Stormwater Impacts Policy (2009)</li> <li>• City of Cape Town's Floodplain and River Corridor Management Policy (2009)</li> </ul>

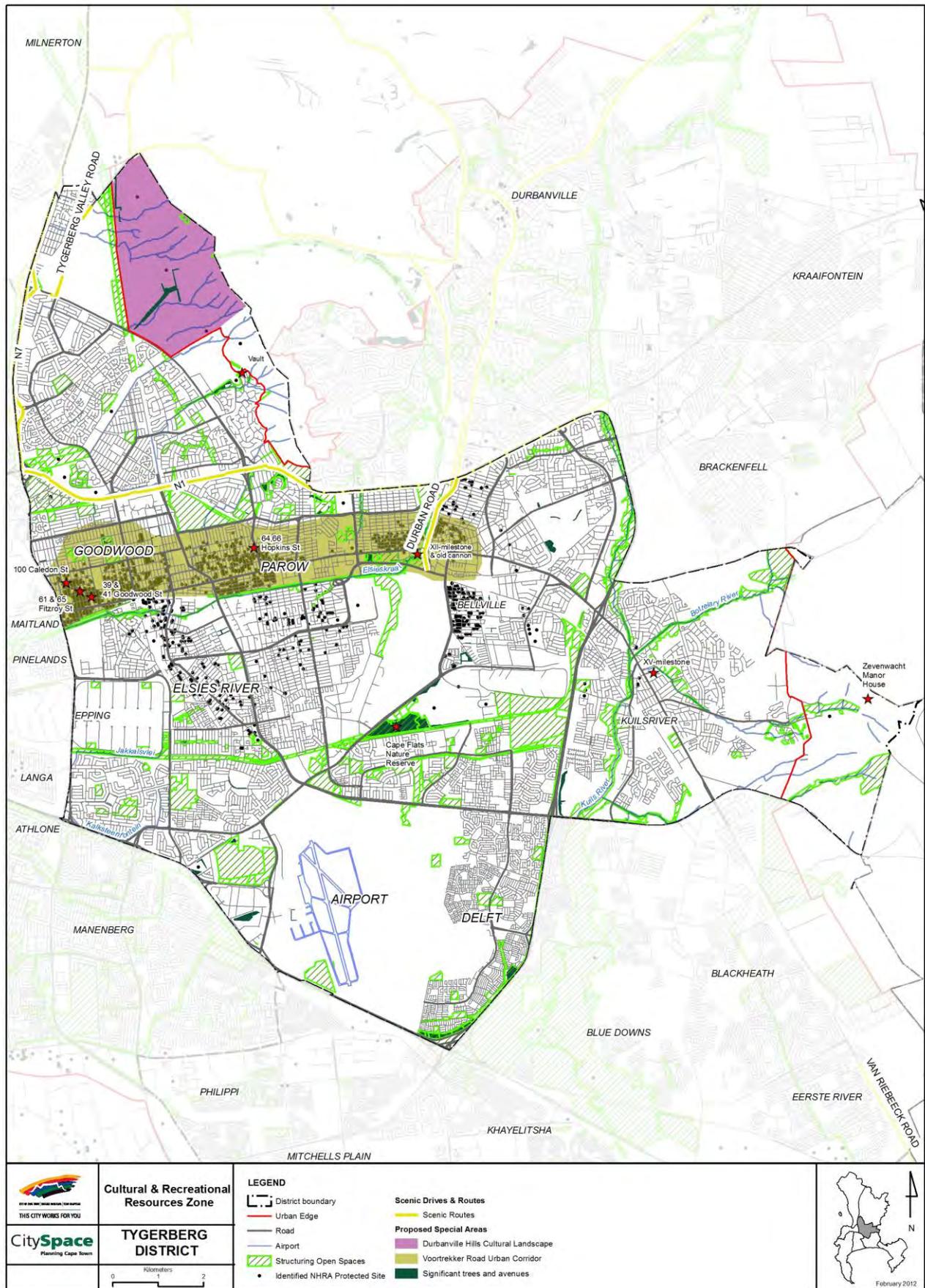


Figure 16: Cultural and recreational resources zone

## 5.2.5 Natural Economic Resources Zone

### SUMMARY OF STATUS

The Tygerberg district provides many important economic opportunities for the City of Cape Town, but formal retail and industrial sites are largely restricted to the central and south-western part of the district, with a noticeable lack of opportunities particularly in the low-income areas to the south-east. The district has a burgeoning informal economy clustered around transport routes and interchanges.

Sand and gravel are used for building material and are considered limited economic resources. There are concerns regarding the limited availability of unexploited sand and gravel resources and this creates conflict between demands to exploit remaining resources and maintaining the integrity of the environment in which these resources occur.

Agricultural land contributes significantly to the Western Province's and South Africa's Gross Domestic Product. The Tygerberg District, however, only contains a relatively small area of land with high agricultural potential in the northern most part of the district, which is under threat from residential development north of Plattekloof.

### ENVIRONMENTAL MANAGEMENT PRIORITIES

<b>Management Priority</b>	<b>Priority area of focus</b>
1. Retain and protect	<ul style="list-style-type: none"> <li>• Preserve and utilise high potential agricultural land and areas currently being used of agricultural purposes</li> <li>• Retain areas with lower agricultural potential on the lower slopes of the Tygerberg Hill as part of an interface/buffer area between urban and agricultural/conservation uses.</li> <li>• Encourage urban agricultural activities where feasible.</li> </ul>
2. EIA Requirements	<ul style="list-style-type: none"> <li>• Issues to be considered: Soil potential; water pollution; biodiversity; social and economic issues; slope; heritage issues.</li> <li>• Where feasible, extract mineral resources (gravel), particularly near Plattekloof, prior to development</li> <li>• Develop job creation and skills development strategies, particularly in the southern more isolated urban settlements (e.g. Delft)</li> <li>• Facilitate informal trading by providing secure spaces and basic services</li> <li>• Increase access to job opportunities through improved transport connectivity, particularly the south eastern areas of Delft and Belhar</li> </ul>

	<ul style="list-style-type: none"> <li>• Mining activities should not be authorised without the required EMPs and rehabilitation plans.</li> <li>• Mining companies must commit sufficient financial resources to rehabilitation, prior to approval.</li> <li>• Where high priority mineral resources conflict with areas of biodiversity importance, specialist input from the Biodiversity Management Branch is to be obtained, prior to the authorisation of mining activities.</li> <li>• Where high priority mineral resources conflict with areas of archaeological and heritage importance, an assessment of these impacts must be undertaken and appropriate mitigation measures approved by Heritage Western Cape, prior to authorisation.</li> <li>• Where high priority mineral resources conflict with areas of high agricultural potential, input must be obtained from the Department of Agriculture, prior to authorisation.</li> <li>• Sand mining can be considered in areas of high potential agricultural soil provided sufficient measures are implemented to stock-pile and return top-soil. In addition, the depth of mining should not exceed a minimum level above the water table (<math>\pm 500\text{mm}</math>).</li> <li>• Sand mining of dunes can only be considered outside of the Coastal Protection Zone, and subject to specialist input and the implementation of appropriate mitigation measures.</li> <li>• Mineral resource close to visually sensitive areas, scenic routes and residential areas must consider the visual, health and safety impacts and adequate mitigation measures must be determined, prior to approval.</li> <li>• Extraction of mineral resources should be considered prior to the authorisation of urban or other development on mineral resources.</li> </ul>
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ENVIRONMENTAL IMPACT MANAGEMENT TABLE: ECONOMIC RESOURCES: Refer to Figure 18

Table 5.5a): High Potential Agricultural Areas

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<b>High potential and unique agricultural land</b> <i>This encompasses areas that are deemed worthy of statutory or long-term protection.<sup>3</sup></i>	<ul style="list-style-type: none"> <li>• Residential and commercial development.</li> <li>• Manufacturing, storage, treatment, transportation or handling of hazardous substances.</li> </ul>	<ul style="list-style-type: none"> <li>• Dams and weirs.</li> <li>• Water abstraction.</li> <li>• Road, rail, pipelines and cables.</li> <li>• Engineering and utility services and</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture (excluding abattoirs and feedlots).</li> <li>• Horticultural activities.</li> <li>• Handling and storage of agricultural product.</li> </ul>	<ul style="list-style-type: none"> <li>• National Policy on the Protection of High Potential and Unique Agricultural Land (2006)</li> </ul>

<sup>3</sup> The areas were assessed in terms of a broad range of informants, including agricultural potential and economic, land use, landscape and environmental significance (CoCT, 2008a).

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
	<ul style="list-style-type: none"> <li>Industrial activities.</li> <li>Activities that can pollute water or soil resources (which are required for agricultural activities).</li> <li>Other non-agricultural land use (except those permitted in zoning schemes).</li> <li>Mining activities.</li> </ul>	<p>infrastructure.</p> <ul style="list-style-type: none"> <li>Agri-tourism (including farm shops/stalls).</li> <li>Animal care facilities.</li> <li>Sustainable harvesting of natural resources.</li> <li>Transmission towers and rooftop base stations.</li> <li>Riding stables.</li> </ul>	<ul style="list-style-type: none"> <li>Hiking trails and paths.</li> <li>Residential units (as allowed in zoning schemes).</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Plan for South African Agriculture (2001)</li> <li>Land Redistribution Policy for Agricultural Development</li> <li>DEAD&amp;DP's Guideline for Involving Economists in EIA Processes (2005)</li> <li>Urban Agricultural Policy for the City of Cape Town (2007)</li> </ul>
<p><b>Other agricultural areas</b></p> <p><i>This constitutes areas of lower agricultural potential or value, but which function as the rural hinterland.</i></p>	<ul style="list-style-type: none"> <li>Urban development <i>outside</i> of the urban edge.</li> <li>Industrial activities.</li> <li>Storage of hazardous substances.</li> <li>Activities that can pollute water and soil resources (which are required for agricultural activities).</li> <li>Institutional facilities.</li> <li>Mining activities.</li> </ul>	<ul style="list-style-type: none"> <li>Dams and weirs.</li> <li>Water abstraction.</li> <li>Road, rail, pipelines and cables.</li> <li>Agri-industrial activities.</li> <li>Cellars and storage facilities.</li> <li>Offices for agricultural related activities.</li> <li>Tourism and hospitality related facilities.</li> <li>Transmission towers and rooftop base stations.</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture (excluding abattoirs and feedlots).</li> <li>Agri-tourism (including farm shops/stalls).</li> <li>Animal care facilities.</li> <li>Engineering and utility services and infrastructure.</li> <li>Hiking trails and paths.</li> <li>Residential units (as allowed in zoning scheme).</li> <li>Conservation activities.</li> <li>Riding stables.</li> <li>Sustainable harvesting of natural resources.</li> </ul>	
<p><b>Smallholdings and agricultural areas</b></p> <p><i>This constitutes areas currently being used for agricultural purposes, regardless of soil potential.</i></p>	<ul style="list-style-type: none"> <li>Urban development.</li> <li>Industrial activities.</li> <li>Storage of hazardous substances.</li> <li>Activities that can pollute water and soil resources (which are required for agricultural activities).</li> </ul>	<ul style="list-style-type: none"> <li>Dams and weirs.</li> <li>Water abstraction.</li> <li>Road, rail, pipelines and cables.</li> <li>Agri-industrial activities.</li> <li>Residential and institutional facilities for rural community.</li> <li>Retail and commercial activity for the rural community.</li> <li>Cellars and storage facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture (excluding abattoirs and feedlots).</li> <li>Agri-tourism (including farm shops/stalls).</li> <li>Animal care facilities.</li> <li>Engineering and utility services and infrastructure.</li> <li>Hiking trails and paths.</li> <li>Residential units (as allowed in zoning scheme).</li> </ul>	

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
		<ul style="list-style-type: none"> <li>• Offices for agricultural related activities.</li> <li>• Tourism and hospitality related facilities.</li> <li>• Sustainable harvesting of natural resources.</li> <li>• Transmission towers and rooftop base stations.</li> <li>• *Mining activities</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation activities.</li> <li>• Riding Stables.</li> </ul>	

**Table 5.5b): Mineral Resource Areas**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Priority Mineral Resource areas</b></p> <p><i>These are areas that have been identified in the Mining Structure Plan (2002) as high priority mineral deposits.</i></p>	<ul style="list-style-type: none"> <li>• Mining activities extending below the water table.</li> <li>• Mining activities that do not effectively implement the required EMP and rehabilitation plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Urban and infrastructure development prior to mineral extraction.</li> <li>• Mining activities which have the relevant approved environmental procedures and documents.</li> <li>• Related infrastructure and facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Post mining and rehabilitation land uses.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resources Structure Plan 2002.</li> </ul>



## 5.2.6 Urban Uses and Utilities Zone

### SUMMARY OF STATUS

The urban structure in Tygerberg is highly divided. Higher-income areas, with more services and better-managed amenities, are predominantly located north of the Cape Town – Bellville railway line. Lower income areas, with fewer social services and more degraded facilities, are predominantly located south of the railway line. The transport network in the northern part of the district is well developed and includes the railway line, major transport interchanges and a number of major roads. The residential areas in the southern part of the district, however, are less well connected to the City's transport network and are often located along routes that are also being used by heavy industrial traffic. The district experiences significant development pressure from residential, commercial and (mostly light) industrial development but experiences a shortage of well-located developable land.

The Tygerberg district, and rest of the City, is confronted with waste management challenges driven by increasing waste generation and limited suitable space for disposal and treatment. One of the three operational waste disposal sites in the CoCT is located in this District at Bellville South, and the district has an additional six waste drop-off sites and two composting facilities. Despite the proposed new regional landfill site, the CoCT is rapidly running out of solid waste disposal sites and Bellville South waste disposal site is expected to reach capacity in 2010/11.

In addition, several of the WWTWs receiving sewage from the Tygerberg District are at or close to capacity. These include the Parow, Bellville and Borchard's Quarry WWTWs. Pollution and degradation of rivers in Tygerberg is a critical issue. The rivers have lost much of their natural riparian habitat and their environmental functioning has been seriously compromised. Air pollution is also a problem in the district with a number of industrial areas and the Cape Town International Airport located here. Residential areas near Bellville South and the airport have been identified as PM<sub>10</sub> air pollution 'hot spots'.

### ENVIRONMENTAL MANAGEMENT PRIORITIES

This SDP sets out a variety of strategies to address the socio-economic and infrastructural needs of the district relating to settlements, transport, open space and upgrading of urban areas. They are not repeated here. The priorities below are related largely to management of waste and pollution

Management Priority	Priority area of focus
1. EIA Requirements	<ul style="list-style-type: none"> <li>• Control and manage activities within the controlled noise areas (airport noise cones)</li> <li>• Consider the capacity of natural environments to receive waste before expanding WWTWs.</li> <li>• Air quality risk assessment and /or Health &amp; Odour impact assessments should be used to determine appropriate buffer zones.</li> </ul>
2. Monitor and manage impacts	<ul style="list-style-type: none"> <li>• Improve effluent quality from WWTW by upgrading the Bellville WWTW as soon as possible and the Borchard's Quarry WWTW as soon as required</li> <li>• Monitor air pollution, particularly in Bellville South and the Cape Town International Airport, against guidelines</li> <li>• Monitor and enforce industry's compliance with air pollution standards</li> </ul>

	<ul style="list-style-type: none"> <li>• Control illegal dumping and monitor and enforce land sites' compliance with relevant environmental requirements</li> <li>• Do not permit groundwater abstraction and residential land use in landfill buffer zones, or any other activities where people are required to remain permanently on site.</li> <li>• Activities in controlled noise areas (65dBA zone) must comply with the Noise Control Regulations for the Western Cape (1998), promulgated in terms of the Environmental Conservation Act 73 of 1989.</li> <li>• Use and extent of landfill buffer zones, must be addressed in closure plans and approved by the relevant authorities.</li> <li>• Freshwater and/or groundwater specialist input must be obtained, and appropriate mitigation measures implemented, for industrial activities proposed on highly productive aquifers or close to river and wetland buffers.</li> </ul>
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ENVIRONMENTAL IMPACT MANAGEMENT TABLE: URBAN USES AND UTILITIES: Refer to Figure 19

Table 5.6a): Landfill and Noise Exclusion Areas

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<b>Landfill sites and buffer zones</b> <i>This includes the Bellville South landfill buffer<sup>4</sup>.</i>	<ul style="list-style-type: none"> <li>• Residential development**.</li> <li>• Educational facilities.</li> <li>• Health and social facilities.</li> <li>• Groundwater abstraction.</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial activities.</li> <li>• Industrial activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Other activities, subject to conditions and approvals of the relevant authorities and specifications of the relevant closure plans.</li> </ul>	<ul style="list-style-type: none"> <li>• DWAF, Second Edition, 1998 Waste Management Series.</li> <li>• DWAF, <i>Draft</i> Third Edition, 2005 Draft Waste Management Series.</li> </ul>
<b>Caltex buffer zone</b> <i>This includes the buffer around the Caltex refinery</i>	<ul style="list-style-type: none"> <li>• Residential development.</li> <li>• Educational facilities.</li> <li>• Health, social and community facilities, including hospitals and churches.</li> <li>• Any additional activities which exceed air emission standards or will contribute to ambient pollution exceedences.</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial activities and offices.</li> <li>• Light industrial activities / warehouses.</li> <li>• Sub-stations and electrical infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• Cemetery<sup>#</sup>.</li> <li>• Conservation activities.</li> <li>• Engineering and utility services and infrastructure.</li> </ul>	
<b>Airport noise buffer zones</b> <i>This includes the 65dB noise cone around the Cape Town International Airport</i> <b>Note that the noise buffer will</b>	Within the 65 decibel zone (controlled area)*: <ul style="list-style-type: none"> <li>• Educational facilities.</li> <li>• Institutional and community facilities, including hospitals and</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial activities (excluding offices).</li> <li>• Light industrial activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy (scheduled) industrial.</li> <li>• Major roads.</li> <li>• Air fields.</li> </ul>	

<sup>4</sup> The precise boundaries of the buffer need to be confirmed.

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><i>change if there are any changes in the number or alignment of runways</i></p>	<p>churches.</p> <ul style="list-style-type: none"> <li>• Commercial - offices.</li> <li>• Residential development.</li> </ul>		<ul style="list-style-type: none"> <li>• Incinerators.</li> <li>• Engineering and utility services and infrastructure.</li> <li>• Sub-stations and electrical infrastructure.</li> <li>• Conservation activities.</li> <li>• Public open space.</li> <li>• Landscaping.</li> <li>• Roads and rail.</li> <li>• Transmission towers and rooftop base stations.</li> </ul>	

**Table 5.6b): Industrial and Commercial Areas**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Industrial areas</b> <i>This includes areas currently zoned for industrial use.</i></p>	<ul style="list-style-type: none"> <li>Any upgrades or additional industrial activities which exceed air emission standards or will contribute to ambient pollution exceedences.</li> </ul>	<ul style="list-style-type: none"> <li>Heavy (Scheduled) Industrial activities.</li> <li>Incinerators.</li> <li>Major roads.</li> <li>Air fields.</li> </ul>	<ul style="list-style-type: none"> <li>Light industrial.</li> <li>Commercial.</li> <li>Infill development.</li> <li>Engineering and utility services and infrastructure.</li> <li>Sub-stations and electrical infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>A Guide to Reporting and Estimating Emissions for the Integrated Pollutant and Waste Information System (IPWIS) 2005.</li> <li>City of Cape Town's Air Pollution Control By-Law (2001).</li> <li>Air Quality Management Plan for the City of Cape Town (Sept, 2005).</li> </ul>
<p><b>Commercial areas</b> <i>This includes areas currently zoned for commercial use.</i></p>	<ul style="list-style-type: none"> <li>Heavy (scheduled) industrial activity.</li> </ul>	<ul style="list-style-type: none"> <li>Light industrial.</li> <li>Incinerators.</li> <li>Major roads.</li> <li>Air fields.</li> </ul>	<ul style="list-style-type: none"> <li>Commercial.</li> <li>Infill development.</li> <li>Engineering and utility services and infrastructure.</li> <li>Sub-stations and electrical infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Air Quality Management Plan for the City of Cape Town (Sept, 2005).</li> </ul>

**Table 5.6c): Infrastructure and Utilities Servitudes**

Environmental attributes	Kinds of developments, land uses or activities that would be undesirable	Kinds of developments, land uses or activities that may have a significant impact	Kinds of developments, land uses or activities that may not have a significant impact	Relevant policy and guideline documents for environmental management
<p><b>Infrastructure Servitudes</b>  <i>This includes power cables and underground pipelines and infrastructure</i></p>	<ul style="list-style-type: none"> <li>Permanent structures and buildings other than those related to service provision.</li> </ul>	<ul style="list-style-type: none"> <li>Roads and rail.</li> <li>Transmission towers and rooftop base stations.</li> <li>Agricultural activities (including urban agriculture).</li> </ul>	<ul style="list-style-type: none"> <li>Conservation activities.</li> <li>Public open space.</li> <li>Landscaping.</li> <li>Stormwater management.</li> <li>Pipelines and cables.</li> <li>Engineering and utility services and infrastructure.</li> <li>Power generation activities and power lines.</li> <li>Pedestrian walkways.</li> <li>Sub-stations</li> </ul>	<p>City of Cape Town's Management of Urban Stormwater Impacts Policy (2009)</p> <p>City of Cape Town's Floodplain and River Corridor Management Policy (2009)</p>

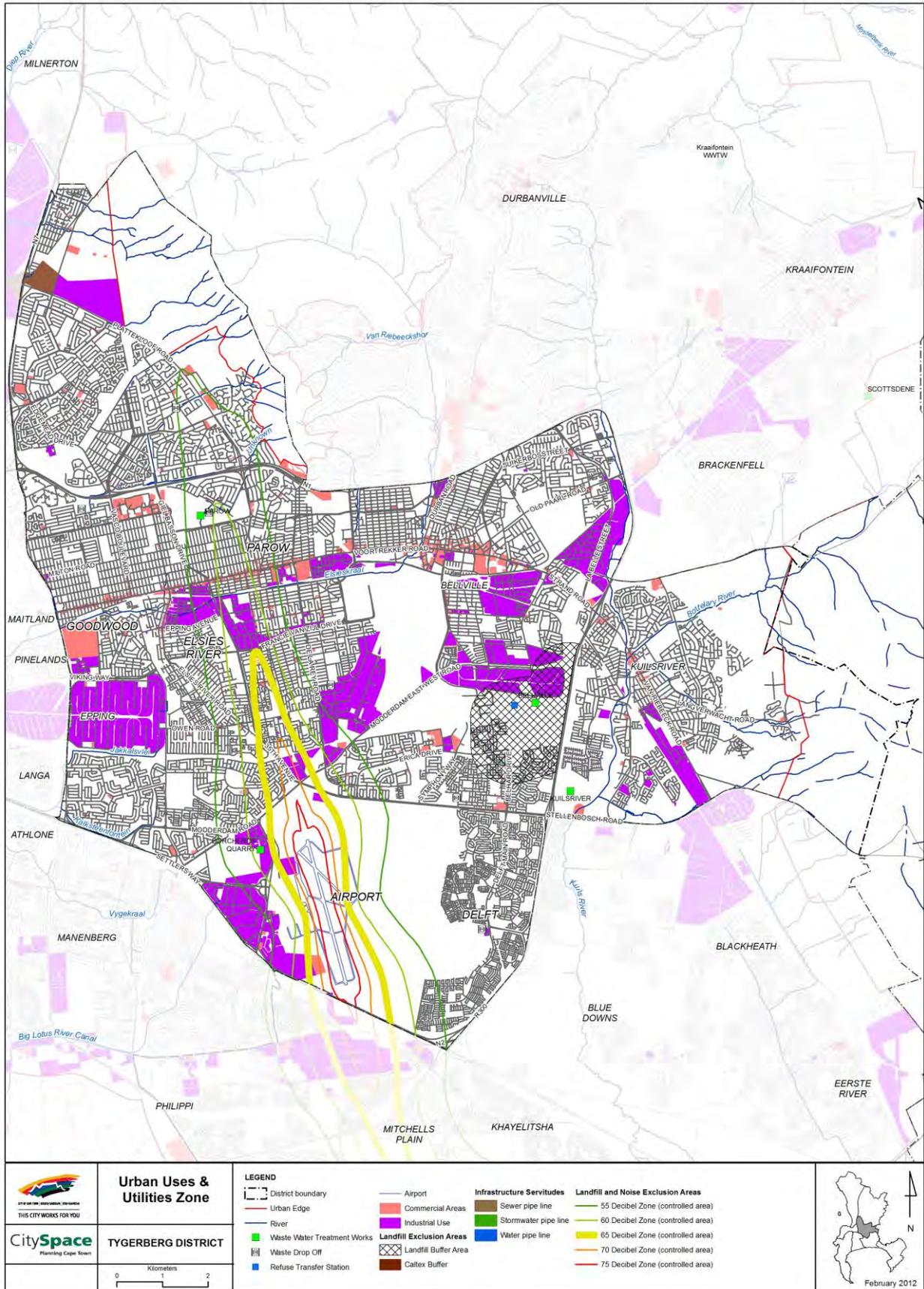


Figure 18: Urban uses & utilities zone

### 5.3 Areas of potential impact on selected natural environmental attributes

In the context of the Environmental Impact Management (EIM) zones, **areas of potential impact** are identified where new development is proposed on areas which have natural environmental attributes that are sensitive or have ecological value. These potential impact areas are shown in figure 20. The purpose of identifying these areas is to 'flag' the potential impacts that will need to be assessed in detail as part of an application for Environmental Authorisation, should this not already have occurred.

There are several important considerations in terms of the assessment of these potential impacts as part of the application for environmental authorisation:

- The development proposals in the SDP reflect the desired future spatial development pattern in area, provide a strategic context and act as an informant to the project level assessment of impacts.
- The assessment of the potential impacts related to areas identified in figure 17 should occur within a broader assessment of the sustainability of any particular development proposal. This would include consideration of social justice / equity and economic development / prosperity in addition to ecological integrity factors.
- No relative significance has been assigned in the SDP/EMF to the potential impacts relating to the selected environmental attributes – this will need to be assessed as part of the EIA process.
- Figure 17 identifies areas of potential impact on wetlands and conservation and biodiversity areas only. The assessment of other environmental factors including the features identified within other EIM zones is required as part of the project specific EIA process.

Annexure B provides principles for assessing development proposals in the identified areas of potential impact.

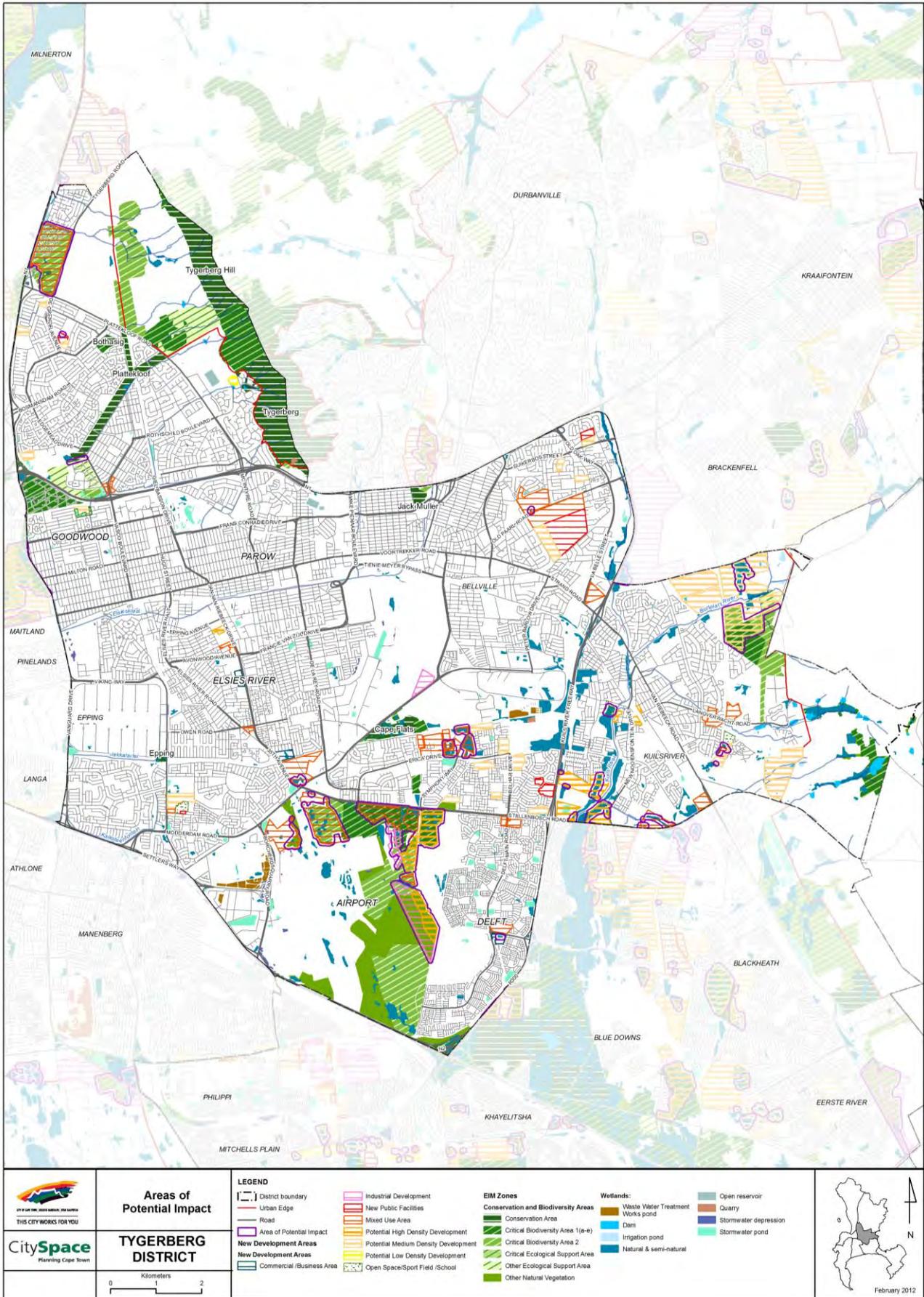


Figure 19: Areas of potential impact

## **6. IMPLEMENTATION**

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### **6.1 Urban restructuring and upgrading: framework for public investment**

Urban restructuring and major upgrading deals with:

- Changes that need to occur within the existing urban footprint to reinforce the SDP, which require sector specific capital investment.
- Informing planning around the capital investment requirements (public and in some cases private) associated new development areas and areas where major intensification is proposed (introduced in the box below).

## ALIGNING SERVICE AND INFRASTRUCTURE PLANNING WITH THE SPATIAL DEVELOPMENT PLAN

Two considerations are important in terms of planning for services (public facilities, parks) and infrastructure (transport, bulk infrastructure / utility services). Firstly, there is a need to address backlogs based on the existing demands and secondly a need to plan for new demand. In terms of the latter the SDP attempts to inform by:

- locating new development areas (focused on significant green field development) as well as areas for intensification of urban use (e.g. areas where redevelopment is being promoted); and
- Providing some indication, where possible of the quantum of development and likely phasing of development.

This planning approach will be supplemented by more detailed modelling exercises conducted on a sectoral basis.

*Table 6.1: New Development Areas (see figure 21)*

Area	Likely land uses	Possible yield
1. Richwood	Mixed use	500 000m <sup>2</sup> GLA (60%)
2. Bothasig vacant sites	Medium density residential	471 du
3. Bellville east vacant sites	Medium density residential	500 du
4. Stikland Triangle	Mixed use	58 200m <sup>2</sup> GLA (60%)
5. Valhalla Park	Mixed use residential infill	777 du
6. Nooitgedacht	Medium density residential	300 du
7. 35 <sup>th</sup> Avenue vacant sites	Mixed use	48 000m <sup>2</sup> GLA (40%)
8. Modderdam Triangle	Mixed use	89090m <sup>2</sup> GLA (25%)
9. Airport North precinct	Mixed use	452 097m <sup>2</sup> GLA (40%)
10. Airport North-east precinct	Mixed use residential	760 du 180 000m <sup>2</sup> GLA (39%)
11. Airport East precinct	Industrial	566 090m <sup>2</sup> GLA (40%)
12. Unibell Station precinct	Mixed use residential	570 du 142 470m <sup>2</sup> GLA (30%)
13. Belhar Self-Help vacant sites	Medium-high density residential	1400 du
14. Stellenbosch Arterial	Mixed use	330 du 36 900m <sup>2</sup> GLA (45%)
15. Erf 24019, Delft	High density residential	1 200 du
16. Delft CBD	Mixed use	32 800m <sup>2</sup> GLA (40%)
17. Kalkfontein Smallholdings	High density residential	2500 du
18. Highbury	Medium density residential	300 du
19. Polkadraai Smallholdings	Medium density residential	600 du
20. Bottelary Smallholdings	Medium density residential	3 500 du

From this estimate a total residential yield of approximately **13 000 units** (of varying densities and forms) is possible.

Major intensification areas:

- Bellville CBD and Durban Road mixed use precinct
- Voortrekker Road Activity & Densification Corridor
- Elsies River industrial area at Riverton Node between the Bellville railway line and the Elsieskraal River canal
- Kuils River CBD (including Kuils River Station)
- Modderdam North Road (Belcon Site)

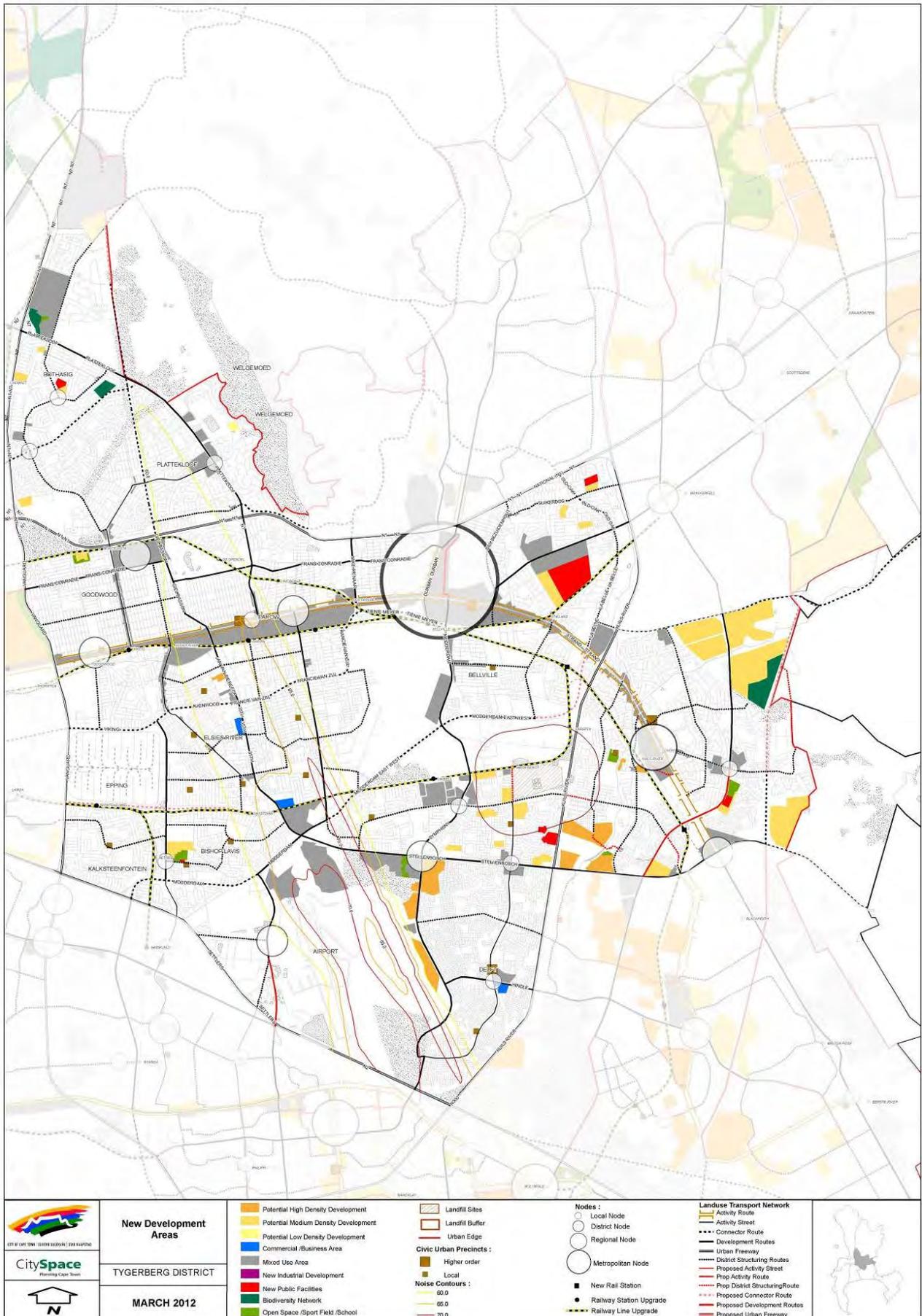


Figure 20: New Development Areas & Intensification Areas

## 6.1.1 Transport Infrastructure

The prioritisation of interventions in relation to transport infrastructure requires a fundamental shift from the historical approach to movement infrastructure development in the district. Key principles informing intervention around transport infrastructure include:

- Prioritisation of interventions to support non motorised transport above mobility;
- Prioritisation of public transport over private mobility;
- Prioritising interventions that will release economic development associated with the accessibility and opportunity grid

### a) New road links

There are several new road extensions required to facilitate more efficient movement and integration throughout the district. The proposed priority new road links are:

- Connector routes:
  - The completion of the M12 to connect with Tygerberg / Contermanskloof Road and the realignment of Tygerberg Road in the Richwood area;
  - Extension of La Belle Road to link with Modderdam Road (east) in the Sacks Circle area;
  - The proposed construction of a new half diamond interchange where Bottelary Road crosses the R300 – the completion of this interchange will alleviate congestion along Strand Road between the R300 and La Belle Road intersections;
  - Okavango Bypass Route – The completion of the road to link with Spine Road will increase accessibility between the Mitchell's Plain/ Khayelitsha environment, and the suburbs to the north, such as Kraaifontein/ Brackenfell and Durbanville. The completion of the Okavango Bypass and Brackenfell Boulevard/ Saxdowns Road, is also likely to alleviate congestion on the R300, especially during peak periods;
  - The realignment of Borchard's Quarry Road interchange onto the N2 Freeway from Ntlangano Road to New Eisleben Road to the south of the district. This will facilitate greater inter-district continuity throughout the city.
- Development routes:
  - It is also important to recognise the extension of Frans Conradie Drive to Sable Road across Wingfield in the Table Bay District. This will facilitate the strong movement desire line between Century City and areas south of the N1 where previously, people were limited to using the Koeberg Interchange or Vanguard Drive (N7) Interchange;
  - Durban Road realignment to link with Modderdam Road – the realisation of this road link will provide higher levels of mobility in a north-south direction, while alleviating traffic congestion along Voortrekker Road in the Bellville CBD area, thereby improving the pedestrian environment.
  - Saxdowns Road to link with Brackenfell Boulevard.– The completion of the road link will increase not only accessibility to and from Khayelitsha in the south, but will also create better integration between areas in Blue Downs with the surrounding urban environment. Although mobility should be the primary focus of the road, its role as a development route should also be optimised where the applicable access policy allows for infill developments, which could be of a mixed use nature. Such potential may exist at intersections with Stellenbosch Arterial, Range Road / Belhar Drive Extension, and Van Riebeeck Road.
- Other structuring routes
  - The construction of the Kuils River Bypass Road through Kuilsrivier CBD;
  - Connection of Range Road, Belhar Road and Erica Drive across the R300 Freeway through Sarepta and Belhar. Range Road, which is an extension of Eersriv Way proposed activity route, is proposed as a structuring route, but is envisaged to fulfil the function of an activity street in the long term. The linking of these roads is encouraged, as

the increased level of continuity provided will increase integration and accessibility, as well as the opportunity for development in this part of the district.

- The extension of Langverwacht Road along the eastern boundary of Klein Zevenwacht, linking with the planned Okavango Bypass Road,
- The construction of a new access route from Nooiensfontein Road at the Highbury Road intersection across the Kuils River canal to link with Reuter Street in Kalkfontein. This will increase local accessibility to what is currently a very isolated area and not pedestrian friendly due to the R300, Stellenbosch Arterial and the Kuils River canal serving as substantial barriers to local movement and access.

#### **b) Public transport infrastructure**

- New rail links:
  - The Blue Downs rail link between the Khayelitsha/Mitchells Plain and Strand-Bellville railway lines and stations along its length (Mfuleni, Blue Downs CBD, Blackheath). Although this long term proposal is reflected on the plan, it is unlikely that it will be implemented within the 10-year lifespan of this document.
- The proposed priority station upgrades envisaged to increase the quality of the rail transport service includes:
  - Parow, Tygerberg and Bellville Stations on the Bellville rail line
  - Bonteheuwel, Unibell and PenTech Stations on the Sarepta rail line
- Existing transport interchanges at stations throughout the district should be upgraded where necessary;

#### **c) Non-motorised transport infrastructure**

Investment in NMT infrastructure is a priority. A clear conflict exists between the dominant mobility functions along high order movement routes and pedestrian/NMT movement routes, thus resulting in numerous hazardous NMT conflict areas throughout the district. This is especially concerning in areas where vehicle ownership is low. Intervention should occur as part of a programme to develop a broader NMT network throughout the district.

The proposed priority NMT interventions are focused around:

- Significant pedestrian movement generators such as stations / public transport interchanges/future IRT station locations, public destination places, urban civic precincts, economic focal points, and other movement generators;
- The system of structuring routes (activity routes and streets) proposed as part of the SDP – the dominant mobility function of most higher order routes can no longer prevail and the prioritisation of NMT across the existing route network is critical;
- Promoting formalising / upgrading of critical public links, which connect destination places and movement generators;
- Destination places, public facilities and other movement generators; and
- Linked internal open space systems.

#### **d) Rationalising the functioning of routes**

Changes to the movement system provides possibilities for adjusting the dominant role of a number of routes in the district, enabling intensification of land use, improving accessibility for all modes of transport, supporting the infrastructural needs of improved public transport services (including Integrated Rapid Transport) and higher levels of ridership.

## 6.1.2 Open space system

Open space upgrading, enhancement and development (associated with the natural environment and higher order sports and recreation facilities), is critical to achieving the vision for the district. In this regard, several interventions relating to the open space system are proposed.

### (a) Sports complexes

Investment in sport and recreation facilities focuses on new facilities as well as upgrades within existing sports complexes. Efforts should be made to broaden the diversity of activity available within existing complexes to include activities beyond formal sport to passive recreational activity. The erection of walls around sports fields requires reviewing. The use of solid walls such as vibracrete walls around sports fields, which are space extensive uses, severely affects streetscapes that are sterilised by these blank facades.

Areas having a strong need for provision of sports complexes include the areas of Delft, Belhar and Kalkfontein. Opportunities for sports field development exist particularly along the Kuils River corridor as complementary uses along river corridors.

The upgrading of existing sports fields include:

- The footprint of the Valhalla Park sports complex is to be rationalised to a more functional size, with the surplus land being released for development. These areas will be recommended for inclusion in the Department of Sports, Recreation and Amenities 5-year master plan.
- The Jagtershof Sports Complex is planned to be extended from 2 rugby pitches to 4 pitches. The design of the new pitches is affected by the proposed extension of Jagters Road to connect with the proposed Brackenfell Boulevard once it has been constructed. The remainder of farm ST253-0 is earmarked for educational purposes. However, should the site not be fully used for education, the remainder would be available for residential infill development.
- The proposals made in the Bellville (Hardekraaltjie) Mixed Use Node Framework, which includes the Bellville sports complex, should be reviewed and, where appropriate, implemented. Of particular importance is the interface with Voortrekker Road Activity Route where permeable fencing should be used to create a positive interface along this frontage, where possible.
- Other sports facilities proposed to be investigated for upgrading include Bishop Lavis and Bonteheuwel Sports Complexes.

### (b) Rationalising the distribution of the public open space network

In the context of impoverished areas within the district, the oversupply of public spaces has been compounded by poor and ineffective maintenance, including vacant school sites. Smaller, maintained, safer public open spaces are more appropriate, specifically in the southern area of the district. There should be a focus on *rationalising the distribution of the public space network* into the provision of fewer but better maintained quality public spaces that are linked into a structured and continuous network.

It should be emphasized that the development of quality public open spaces should occur simultaneously with densification as these spaces become more significant to a large amount of residents within the same area. In addition to the reduction of surplus open spaces, there should also be a focus on addressing service gaps in relation to those communities that are unserved by developed public open space amongst other public facilities.

In terms of service gaps related to the provision of community parks (CSIR Accessibility Analysis), several unserved areas have emerged within the district. These include Leonsdale, Cravenby, Adriaanse, Ravensmead, Belhar Extension 13, Delft South, and Freedom Farm. These areas constitute areas where populations of more than 10 000 persons are unserved by developed community parks. Although Freedom Farm informal settlement is an area where significant intervention is required in the way of open space provision, the settlement is not considered appropriate for formalisation. Therefore the current demand for open space provision needs to be provided for during the process of relocation of the Freedom Farm residents. Undeveloped open space in the above areas needs to be retained and enhanced to address the current service gaps in open space provision which exist in these areas.

**(c) Linear open space system**

It is proposed that open space upgrading in the form of local parks seek opportunities within the local linear open space system. Upgrading and development of the linear spaces should focus on areas where there is potential to cluster uses (e.g. development of a park in the system adjacent to an existing primary school).

The provision of active and passive recreation space is also recommended in locations along the major Metropolitan Open Space System, such as the Kuils River, Bottelary River and Elsiekraal River systems. The river course and associated parks along these river courses is recommended to be upgraded to improve its amenity level, as well as to enhance the environmental character of the river corridor. This can be achieved by the introduction of landscaping features such as continuous walkways, cycle tracks, focused tree planting, etc. By introducing adequate lighting and positive interfaces onto the river course, safety along the corridor may also be improved.

**(d) Detention ponds and other open space**

The existing storm water detention ponds have a role to play in the open space system. Their multi-functional use, including for recreational activity and public amenity, should be promoted and these spaces should be prioritised for investigation in the provision of a new district / community parks, perhaps as more permanent wetland features where viable.

**(e) Biodiversity network**

The following areas are prioritised in terms of formalising biodiversity management status:

- De Grendel Farm and the grounds of Wingfield Military Base linked by the Monte Vista power line servitude, which serves as an ecological corridor;
- Bothasig, Erf 8354 – to be managed as part of the Tygerberg Nature Reserve;
- Portions of Haasendal Farm affected by critical biodiversity; and
- Critical biodiversity linkages – including river corridors such as the Kuils River and Bottelary River corridors.

**(f) Cemeteries**

A shortage of suitable land dictates the continued reservation and development of Phase 2 of Delft cemetery (9,0ha). Environmental and geotechnical studies conducted in parts of the airport east precinct where airport noise contours limit residential development, have indicated the possibility of accommodating cemeteries as a potential activity where residential activity is unsuitable.

Existing demand from the northern areas of the District, together with additional demand anticipated from the development of the Stikland Hospital “infill site” (i.e. up to 2 500 households), needs to be accommodated in the new cemeteries to be developed in Blaauwberg and the Northern Districts in the short-medium term (5-15 years).

### **(g) District parks**

The identification of new district parks is focused on the reinforcement of structured open space within the district, responding to high levels of accessibility for the largest possible population thresholds, and increasing public amenity within the urban environment. Most of the proposals within the Tygerberg District focus on the upgrading/enhancement of existing district parks, with the addition of one new district park to the district.

- *Jack Muller Park (Bellville)*

It is proposed that the Jack Muller Park be redeveloped into a District Park, to serve not only the surrounding community, but to also have the functionality to serve the wider area. The significance of the park should be recognized in conjunction with the greater Tyger Valley/Tyger Waterfront Precinct (being part of the Elsieskraal open space system) to the north of the N1, forming an inter-district critical public link all the way down to Bellville CBD (including the Hardekraaltjie Precinct). In this regard, it is recommended that the redevelopment should also accommodate uses such as restaurant facilities, which may include small shops, and recreation facilities, in order to optimize utilization, as well as providing an income stream for the maintenance thereof.

- *Monte Vista Park (Monte Vista)*

Another park, which provides the opportunity to be developed as a District Park, is the open space (erven 676-678) located along Monte Vista Boulevard in Monte Vista. The site is highly accessible, and ample space is available for the further development thereof in order to improve its functionality. The site is considered to be an ideal location for the development of a district park since there are few alternative sites identified within this part of the city. However, should a portion of the site still be found desirable for development, such development should be determined through more detailed site planning. A development footprint should be determined from land not required for open space provision, while development should contribute to the overall quality and functionality of the remainder to be retained for open space purposes.

- *Riverton Road Park (Ruyterwacht)*

For the area to the south of Voortrekker Road, it is recommended that the open space system along the stormwater channel, located to the south of Riverton Road in Riverton be developed as a District Park to serve the wider area of Elsies River. The motivation for this scale of park in this particular area is the close proximity to Halt Road, Elsies River Station and Goodwood Station, as well as the fact that the greater Elsies River area is characterized as a harsh urban environment with little or no quality public spaces.

- *Nelson Mandela Peace Park (Delft, The Hague)*

Nelson Mandela Peace Park (NMPP) is an existing district park, which requires upgrading to increase levels of usage. Funding has been allocated to upgrade the resource centre located at the park. Additional activities are required to attract local residents to the park (e.g. a skateboard and bicycle course, such as that which was built at the Delft Multi-purpose hall).

- *Sarepta Park (new district park)*

It is proposed that the entire Kuils River corridor, running along Nooiensfontein Road to Stellenbosch Arterial be identified as a new district park. The most important sections to be developed are Portion 524 of Erf 79, Erf 12132, and Erf 12751, Sarepta, along the Kuils River Channel to serve the wider area of Sarepta, Kalkfontein, Highbury, the eastern portion of Belhar, and Kuils River CBD. Developing the grounds around the Rietvlei Civic Precinct as a regional park offers a functional and complementary interface with the Kuils River Corridor. In addition, the location offers the potential to cluster a district park with several public facilities (a community library, hall and clinic) to reinforce an existing urban civic precinct as a place of recreational amenity. This precinct is highly accessible as it is located along Rietvlei Road, running off Nooiensfontein Road towards Kuilsrivier Station (approximately 500m<sup>2</sup> from the site).

## (h) Landscaping and district greening

Landscaping and greening projects are of vital importance given the harsh and highly urbanised nature of development in parts of the district, particularly in low-income areas. Landscaping and greening projects should be incorporated together with other forms of public investment, such as public housing projects, public facilities developments and upgrades, as well as road infrastructure projects. In addition, these projects should target areas where high volumes of pedestrian/NMT movement exist. Priority areas for landscaping and greening projects include:

- **Angela Street in Valhalla Park:** this route accommodates substantial pedestrian movement between the areas of Valhalla Park and Bishop Lavis to Netreg Station. The development of the Valhalla Park Sports field presents key opportunities for public investment in NMT facilities, landscaping and greening initiatives along the length of Angela Street to enhance local business development that responds to local through-movement.
- **Elsies River Business Node (south of Elsie's River Station):** Elsie's River Business Node (Upper Halt Road and Elsie's River Interchange) is a major destination place for local business and retail as well as public transport. This precinct, although intensely used, is quite a harsh environment due to the lack of landscaping and noise pollution from traffic. Furthermore, the industrial area is quite derelict with some of the buildings in a state of disrepair and abandoned in some cases. However, recent private commercial, office and residential development interest has indicated a revival in this area. This should be reinforced with public investment to increase the desirability of the area for investment.
- **Leonsdale critical public link between from Cravenby to Elsie's River Station:** This pedestrian route is important as it provides local pedestrian access to various local destinations along its length (the Leonsdale civic precinct, Cravenby Sports Complex, Elsie's River Industrial Area, and Elsie's River Station). In addition, this area experiences an overall lack of quality open space provision. Landscaping and general greening is envisaged to uplift this densely populated area, creating quality places of amenity.
- **Station Road Pedestrian Mall in Parow:** This pedestrian mall is intensely utilised by pedestrians, which has resulted in a hugely positive response from small businesses. Alternative paving materials have been used to emphasise the priority of pedestrians over vehicles. However, the environment is harsh and uncomfortable due to the lack of greenery and high volumes of people moving through the mall at peak flow periods.

### 6.1.3 Publicly assisted housing

Publicly assisted housing, in the context of the SDP, relates to the realisation of a range of housing opportunities, formal or informal, that the public sector plays a role in providing or supporting through its housing programmes.

This section aims to identify areas within the district where various forms of publicly assisted housing can be investigated. Particular forms of public housing provision focused on within the District include incremental upgrade/formalisation of informal settlements, small-to-medium scale housing infill, social housing, inclusionary housing, and GAP housing.

*Table 6.2: Criteria to be used to guide the identification of land for subsidised and gap housing*

<b>Principle</b>	<b>Subcomponents</b>
<b>Contain urban sprawl and protect the urban edge</b>	The land identified should: <ul style="list-style-type: none"><li>• contribute to the development of a more compact city;</li><li>• maximise the use of existing infrastructure and service capacity; and</li><li>• Not be located adjacent to the urban edge (where possible).</li></ul>

<b>Principle</b>	<b>Subcomponents</b>
<b>Facilitate urban integration, and promote the establishment of viable communities</b>	<p>The land identified should:</p> <ul style="list-style-type: none"> <li>• be in close proximity to existing economic, social and public transport opportunities; and</li> <li>• Support a mutually beneficial mix of social, residential, recreational, and commercial opportunities.</li> </ul>
<b>Facilitate a range of housing options and delivery approaches</b>	<p>The land identified should:</p> <ul style="list-style-type: none"> <li>• be suited to the development of new settlements, the upgrade and de-densification of existing informal settlements, high-density housing, rental accommodation, and the release of land to the homeless; and</li> <li>• Note that the size of the housing project and type of delivery agent influence its economic viability.</li> </ul>
<b>Be suited to housing development</b>	<p>The identified land should:</p> <ul style="list-style-type: none"> <li>• encourage environmentally sustainable land development practices and processes;</li> <li>• not lead to the loss/have a damaging impact on natural and built assets that merit longer-term protection; and</li> <li>• Ensure healthy, safe living conditions.</li> </ul>
<b>Take the beneficiaries' economic and social well-being into account</b>	<ul style="list-style-type: none"> <li>• When identifying land, and providing infrastructure and shelter for the homeless and poorly housed, it is important to take their livelihood strategies and social support networks into account.</li> </ul>

#### **a) New housing opportunities**

Several infill sites are identified for subsidised housing infill projects within the district in the short to medium term. These are reflected in the urban restructuring plan (figure 25).

##### Planned subsidised housing projects

It is important that these sites be developed in an integrated manner, where a concurrency in planning, budgeting and roll out of required social and service infrastructure related to the development of these sites can occur.

- Valhalla Park infill housing project: The grounds of the Valhalla Park Sports fields are considered as strategic to the provision of sustainable housing opportunities within regions in the south-east of the district. It is proposed that under-utilised portions of the sports field be developed for medium to higher density residential purposes, with a small mixed use precinct at the intersection of Valhalla Drive and Angela Street extending towards the Valhalla Park library. The remaining actively used sports fields are to be upgraded with additional sport related facilities to increase the quality of the space.
- Delft The Hague: This is one of the few sites remaining in Delft, which are able to accommodate infill housing development. The possibility of accommodating local business activities on portions of the site abutting Delft Main Road should be investigated.
- Belhar-Pentech Infill Project: This is a planned project on the City Housing Department's 5-year housing plan. Services have already been installed and construction is to go underway shortly.

##### Proposed subsidised housing projects

Further land has been identified specifically for investigation for publicly assisted housing. This is limited to publicly owned land and will be updated over time based on new information. This includes various portions of undeveloped or underutilised land.

- **Kalkfontein Phase 3:** This is the next phase of development to take place in the Kalkfontein Smallholdings area, a proposed new housing project on the Department of Housing projects list. It is recommended that the settlement be upgraded with the required public investment in infrastructure, landscaping and community facilities.
- **Nooitgedacht informal settlement upgrade:** It is proposed that the land parcels affected by the Nooitgedacht informal settlement be earmarked on the Department of Housing 5-year plan for subsidised housing. The estimated total amount of developable land available from the affected erven (2999, 3366, 3460, 1209, 1210) is approximately 8,93 hectares (including the footprint of the existing informal settlement). It is highly probable that a component of the existing residents would need to be relocated as the settlement would need to be de-densified to accommodate formal development. Therefore, an alternative site needs to be identified during the process of upgrading.
- **Airport North-east Precinct (Precinct 3):** Portions of this precinct, comprising land owned by ACSA and the National Housing Board, are currently being investigated for the possible relocation of the Freedom Farm residents. Portions of City-owned erven located north of Precinct 3 should also be investigated for subsidised housing.
- **Blikkiesdorp formalisation:** Blikkiesdorp TRA is earmarked for formalisation. However, a significant portion of the settlement is situated within the 65db noise zone of the planned second airport runway. This portion is to be relocated north of the existing settlement along Symphony Way.

### Social housing

In accordance with the City of Cape Town’s Interim Social Housing Policy, available social rental housing subsidies may only be accessed if rental housing stock is provided within restructuring zones. In terms of the Interim Social Housing Policy, an area must meet the following criteria in order to qualify as a restructuring Zone:

*Table 6.3: 3-dimensional Criteria for determination of social housing restructuring zones*

<i>Economic dimension:</i>	Economic dimension is the primary requirement. It refers to economic opportunities / access. It should be used strategically both to open up areas which have economic opportunities and from which poor people have been excluded.
<i>Social dimension:</i>	Social dimension refers to the promotion of a mix of race and class.
<i>Spatial dimension:</i>	Spatial dimension refers to bringing lower income people into areas where there are major economic opportunities and from which they would otherwise be excluded.

Ideally a restructuring zone should be motivated on the basis that it contributes to all three dimensions. The Tygerberg District accommodates several existing restructuring zones, including the Bellville, Bothasig and Goodwood and surrounds. In addition to these the Kuils River spatial area is proposed to be considered as a restructuring area.

### Partnerships / Inclusionary Housing

The provision of new affordable housing opportunities in the district cannot be addressed through the development of public land alone nor should all publicly owned land be developed solely for public housing purposes. In this regard, the role of partnerships in line with the inclusionary housing provisions of the PSDF should be pursued. Areas which should be a particular focus of these efforts are those where their location can contribute to restructuring through the provision of affordable housing close to socio-economic opportunities.

The following new development areas within the Tygerberg District are considered suitable for inclusionary housing:

- Belhar: Unibell Station precinct
- Stikland Hospital Grounds
- Kuilsrivier Station
- Bottelary Smallholdings – Haasendal; Communicare
- Polkadraai Smallholdings

- **GAP Housing**

Gap Housing is an important City strategy which is aimed at alleviating Cape Town's housing shortage. These projects usually cater for households earning between R7 000 and R10 000 per month, which is too much to qualify for state subsidised housing and not enough to enter the private housing market.

Several bank-assisted housing initiatives targeting the "Gap" market have been planned and developed in some cases within Cape Town, including the Leo Mews development in Leonsdale, Elsies River (the first of six throughout the city). These initiatives are arranged around a co-operational agreement between the City of Cape Town and major banking institutions and developers to keep the selling price of houses as low as possible. Leo Mews is a medium density apartment complex comprising 125 two-bedroom units ranging in price between R237 000 and R254 000, and built according to sustainable energy and resource standards. There are several areas within the Tygerberg District where undeveloped City-owned land holdings exist, which can be targeted for bank-assisted housing initiatives.



Figure 21: A 3-dimensional graphic of Leo Mews bank-assisted housing project currently being constructed

### Further land identification for publicly assisted housing projects

Further land has been identified specifically for investigation for publicly assisted housing projects (see Figure 25) and includes approximately 148ha of land. This is limited to publicly owned land and will be updated over time based on new information. These include various portions of undeveloped or underutilised land. In addition to these sites other smaller infill opportunities should be explored as identified. These could include:

- The development of new buildings as part of existing housing estates, especially where these can contribute to a safer well defined public environment and improved safety;
- Development of over-scaled road reserves and buffer strips.
- Rationalising underutilised open space.

The intention is that those sites that are found to be developable should be pursued as new public housing projects or if not feasible for development by the public sector alone, should be the subject of partnership efforts where the provision of inclusionary housing should be a priority. Selected sites for further investigation should be subject to further consultations with other line departments (e.g. City Parks). Table 6.4 indicated other potential sites for investigation for publicly assisted housing.

Table 6.4: Other potential sites for investigation for publicly assisted housing (also see figure 22)

Site location	Erf No.	Extent (Ha)	Ownership
• Adriaanse	25547	2.54	City of Cape Town
	25592	2.39	City of Cape Town
• Belhar	17030	2.56	RSA: Public Works
	26944; 26946	1.88	City of Cape Town
	22118	5.69	City of Cape Town
	30080	6.5	City of Cape Town
	25044	2.68	PGWC
	23218	3.62	City of Cape Town
	28981	6.73	City of Cape Town
	23781 28655; 28652	1.05 6.97	City of Cape Town City of Cape Town
• Bellville	14012; 13988	4.52	City of Cape Town; RSA: Public Works
	26364	2.9	City of Cape Town
• Bishop Lavis	23-843	2.29	RSA: Public Works
	8184	0.77	City of Cape Town
• Bonteheuwel	135314	2.39	City of Cape Town
• Bothasig	31013	5.23	Public Works
• Charlesville	109533	2.49	RSA: Public Works
• Delft	4092	2.49	City of Cape Town
	20292	3.48	City of Cape Town
	2790 & 3190	4.09	City of Cape Town
	7756 & surrounds	0.92	City of Cape Town
• Edgemead	31013	5.22	Public Works
• Elsies River	30186 & surrounds	2.05	City of Cape Town
• Goodwood	3365 & surrounds	1.58	City of Cape Town; PGWC: Housing Board
• Leonsdale	11074-11108	1.76	RSA: Public Works
	10597-10632;	2.99	RSA: Public Works
	10639-10662		
• Monte Vista	35575; 35613; 35610	89.05	RSA: Dept. Correctional Services
• Ruyterwacht	21023	1.83	National Housing Board
• Sarepta	CA1410-0	1.87	City of Cape Town
	CA512-11	1.91	City of Cape Town

## b) Informal settlement upgrade

Informal settlement upgrading is a priority in terms of the City's obligation to provide basic services in terms of its constitutional mandate, as well as more broadly, improving the quality of life of its citizens through improving the urban environment. The City of Cape Town's incremental approach to upgrading is illustrated in Figure 23 below.

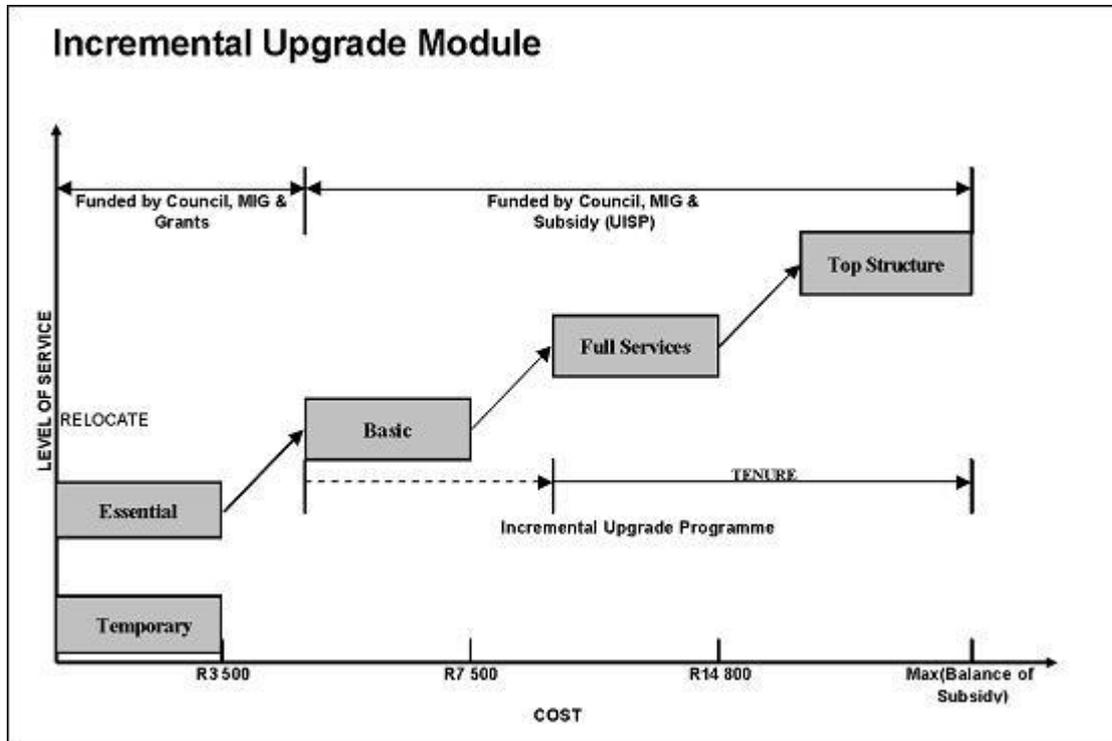


Figure 22: City of Cape Town - Incremental upgrade module (informal settlements master plan, 2007)

The Tygerberg District reflects areas of informal settlement ranging from backyard shacks, informal dwellings on their own stand, and broader areas of informal settlement, with varying levels of access to basic services. Some informally settled areas are located on private land, servitudes or uninhabitable land. A differentiated approach is required.

In terms of accommodating the demand for housing in relation to informal settlements, the focus in the Tygerberg district will be on in situ upgrading due mainly to constraints around land availability in the district as well as the general desire to ensure minimal social disruption to communities. There is, however, also a need to plan for new housing opportunities, which may, at least initially, accommodate residents on an incremental basis.

### In-situ upgrading

One of the key issues facing informal settlement upgrade is the issue of which settlements should be regarded as permanent and thus becoming the focus of upgrading beyond access to basic services (e.g. in situ upgrading) and which settlements or areas within settlements should be considered temporary and suited to relocation. In this regard the City of Cape Town's Informal Settlements Department has initiated a process of 'categorisation of informal settlements' in terms of three types of settlement in order to inform the nature of intervention for each settlement (or portions thereof), including:

- A – Occupation is permitted.

- B – Occupation is only temporarily allowed because it is either demonstrably to the disadvantage of existing rights holders or it is very difficult or costly for services to be supplied.
- C – Occupation is prohibited because it is hazardous to the residents or the wider community.

The categorisation is proposed on the basis of a number of circumstances/features and each has associated proposals regarding possible intervention in light of those circumstances, as indicated in the table below.

*Table 6.5: Categorisation of circumstances/features for in-situ upgrading intervention*

Category	Circumstances		Intervention
<b>C</b>	1	Occupation poses a direct threat to the safety of the wider urban community (e.g. under power lines)	Registration of addresses and their occupants, Essential Services to the periphery only, no electricity connections and an arrangement between the City and residents (and any other party that is involved with the community) which will organise the vacating of the area and securing it from re-occupation
	2	Occupation poses a <u>real</u> danger to the resident community because of hazardous soil conditions (e.g. flooding, methane)	
<b>B</b>	3	Occupation prevents a higher use for which the land is intended to be used within 5 years	Registration of addresses and their occupants, Essential Services, individual electricity connections and the potential for a partnership-based programme that will create socio-economic improvements for the residents, facilitate the vacating of the area and secure it from re-occupation.
	4	Occupation reduces the value of neighbouring property	
	5	Occupation contravenes the rights of servitude holders, but is not necessarily dangerous	
	6	The settlement cannot be serviced without great difficulty or inordinate expense	
<b>A</b>		None of the above	Registration of addresses and their occupants, at least full Essential Services (communal water standpipes and toilets to prescribed ratios, solid waste removal and area lighting), individual electricity connections and the potential for a comprehensive partnership-based improvement programme that could include access to greater security of tenure.

In the light of these criteria, some informal settlements within the district are regarded as permanent settlement areas. In this regard, it is critical that apart from addressing requirements for basic services as is constitutionally mandated, these areas are upgraded into dignified neighbourhoods with associated social and economic opportunities as informed by a clear plan and programme for these settlements.

#### Emergency housing and new incremental development areas

The identification process for land for new incremental development areas should reflect on the land for investigation for publicly assisted housing (see section 6.1.3a). It is critical that land identified and planned in this regard is developed in a manner that supports the future development of integrated human settlements i.e. the development of these areas requires comprehensive planning taking into account needs for public facilities, engineering services, open space and principles of good urban form.

One of the key issues facing informal settlement upgrade is the issue of which settlements should be regarded as permanent and thus becoming the focus of upgrading beyond access to basic services (e.g. in situ upgrading) and which settlements or areas within settlements should be

considered temporary and suited to relocation. In this regard, the following criteria are proposed regarding making a decision on whether a settlement area should be regarded as temporary and some form of relocation and/or de-densification is required:

- Informal settlements located in uninhabitable areas (e.g. flood prone areas, hazardous landfill sites, below power lines) where public safety is at risk.
- Informal settlements in road reserves particularly where the reserve space is required for infrastructural improvements
- Informal settlements in strategic public land which is required to unlock latent economic opportunities or for the development of critical public facilities.

*Informal settlements proposed for upgrade or relocation:*

Tygerberg District accommodates several areas of informal settlement, less formal township areas (informal structures on formalised erven) as well as vast areas where backyard shacks are prevalent. The following informal settlements are proposed for informal settlement upgrade within Tygerberg District:

- Nooitgedacht is an informal settlement located on several public open spaces and the exposed grounds of the Beauvallon Secondary School, immediately south of Bishop Lavis adjacent to Modderdam Road. Nooitgedacht is favourably located within the district and it is recommended that the informal settlement be formalised with the required public investment in infrastructure, landscaping and community facilities.
- Kalkfontein Smallholdings informal settlement, located south of the suburb of Sarepta between the R300 freeway and the Kuils River corridor, is located south of Kalkfontein Phase 1 and 2. Residents of the informal settlement are to be accommodated in the Kalkfontein Phase 3 subsidised housing project.
- Belhar Self Help informal settlement, located on City-owned land (Erf 22118) abutting Heerengracht Road in Belhar Extension 13, has grown rapidly over recent years. Since the site has been earmarked for residential infill, it is proposed that the site be used for informal settlement upgrade.

According to the above mentioned criteria on informal settlement upgrade, the following informal settlements are considered as being located on uninhabitable land, and are identified as temporary and suited for relocation:

- Malawi Camp is an illegally occupied informal settlement located on a portion of Modderdam Triangle. In addition to stormwater and access constraints, the settlement is located in the 60 dBa noise contour and flight path of Cape Town International Airport (CTIA), while parts of the site abutting 35th Avenue are located within the 65 decibel noise contour. It is recommended the settlement should be considered for relocation to a more suitable area.
- Freedom Farm is an illegally occupied informal settlement located immediately south of Modderdam Triangle on ACSA-owned land. The settlement is located in the 65 dBa noise contour and flight path of Cape Town International Airport (CTIA), and is an immediate constraint to the proposed airport runway realignment. It is therefore recommended that the settlement be considered for relocation to a more suitable area. Initial planning proceedings have been entered into to identify suitable land for resettlement of the Freedom Farm residents to the North-eastern section of the airport precinct.
- The Blikkiesdorp Temporary Relocation Area (TRA), established as an extension to the Delft South area, is located to the west of Symphony Way. The settlement is being considered for formalisation. However, it is partially situated within the 65dBA noise contour zone of the planned second runway on the CTIA grounds. Therefore, decisions around the potential formalisation of Blikkiesdorp should take into consideration the need for the portions of the settlement affected by the 65dBA noise contour to be relocated.
- Similar to the Blikkiesdorp TRA, Portion of Remainder Farm Driftsands 544 and Portion 12 of Farm Belhar 508/12 in Delft, which is currently being constructed, is not recommended for formalisation.

## 6.1.4 Infrastructure upgrading

It is anticipated that the proposed densification, intensification of land uses, urban upgrade, upgrading of informal settlements, and impact of areas identified for new development will place increasing strain on the infrastructure which serves the district. The potential infrastructural deficit is compounded by the fact that the district is highly urbanised, with older infrastructure than many other areas in the city.

The intensification of land uses and the development of strategic sites are dependent on the infrastructural capacity of the existing network. Therefore, new infrastructure upgrades must be carefully planned in conjunction with the land use proposals specific to the district and adjacent areas. The timing/ phasing of implementation is therefore critical.

### (a) General

#### Bulk Electricity priorities

Planning for increased electricity supply is largely reactive to the demands of development. Numerous areas are plagued by serious supply capacity problems caused primarily by numerous small Eskom supply points. Electricity capital projects of highest priority within the district identified as a result of having a high risk of failure include:

- Substations:
  - Existing substation upgrades are required for the Consol Glass and Stikland Main Substations, and the Oakdale Substation (Phase 2 upgrade);
  - The construction of a new substation within the Bellville CBD node. The purpose of this is to increase electricity supply for high consumer enterprises within the Bellville CBD node as well as to cater for future intensification needs. Sites are currently being investigated as potential alternatives to be submitted in a basic assessment report.
  - A new main step-down substation is required to increase capacity to serve the electricity requirements of the future Bottelary Smallholdings developments south of Bottelary Road, as well as for the development of the Crammix Site and future Botfontein Smallholdings developments.
- Several future 132kV underground cables are planned within the areas of Bellville CBD, Bellville East, Stikland, and Bellville South, in accordance with the upgrade of the Oakdale Substation. Most notably is the replacement of the 66kV overhead cables with 132kV underground cables between Oakdale and Stikland Substations.
- N1 City upgrade: the existing infrastructure is operating over design capacity and is in poor condition. The risk of an extended loss of supply to Goodwood, Vasco, Elsie's River and Tiervlei areas also exists. The replacement of electrical infrastructure in Parow South is also needed.
- Eskom capital projects:
  - Acacia area within the next 5 years: Eskom is investigating the possible relocation of the 3 Acacia Power Station peaking generation gas turbines to the Open-Cycle-Gas-Turbine plant in Atlantis. This is so that Eskom Transmission division can expand the Acacia transmission substation.

#### Bulk Sanitation/Sewer priorities

Authority to improve and extend the capacity of the Bellville WWTW has been granted and will take place over the next 3–5 years. Borchard's Quarry WWTW is approaching capacity and a decision as to whether to extend the facility will need to be taken over the next few years. Bulk sewer capital projects of highest priority within the district include:

- The reinforcement of the sewerage network in Delft by installing new sewers or by replacing existing sewers with larger diameter pipes.
- Projects to remove midblock sewers in Ravensmead, Uitsig, Ruyterwacht, Bonteheuwel and Belhar, to allow full utilisation of the small plots existing in these areas. These projects have

been proposed for a number of years, but have not materialised due to Capital budget constraints.

#### Bulk water priorities

Preliminary analyses indicate that water network reinforcement will be required in Belhar and Delft and that reinforcement of small (75mm dia.) water pipe networks in Delft should be investigated.

The new bulk connection to the 1500 Ø bulk Faure/Blackheath pipeline at the Borchard's Quarry intersection, with a 500Ø – 450Ø – 300 Ø supply main will serve as a “new” supply main to the Airport and industrial area.

#### Bulk Stormwater priorities

Possible upgrading of stormwater infrastructure is to be conducted along sections of Tygerberg Valley Road in order to accommodate additional stormwater run-off from development of parts of the Richwood Mixed Use area.

Stormwater management considerations for the full extent of the CTIA precinct are included in the CTIA Master Plan 2007.

Stormwater management in the Kuilsrivier area takes place mostly through the channelling of outflow via the Kuils River and Bottelary River. Upgrading and extension of the Langverwacht stormwater system, situated in the Zevenwacht Development Area, is being undertaken as development occurs and funding becomes available.

#### Solid waste priorities

Bellville South, which is located at Sacks Circle, adjacent to Cape Peninsula University of Technology, is approximately 60 hectares in size. Thirty hectares are already filled to capacity and the remaining airspace is filling up rapidly. Its current height is about 35m above ground level. The landfill buffer area affects several abutting land parcels earmarked for development. Therefore, the anticipated decommission of the Bellville Landfill Site is an important informant to the realisation of the development of these land parcels.

Tygerberg district has 6 solid waste drop-off facilities. The largest of these is the Monte Vista drop-off facility, which accepts garden waste, scrap metal, paper, cardboard, glass, plastic, polystyrene, and clean builder's rubble. Other facilities of smaller scale in the district include Belhar, De Grendel, Delft, Ravensmead and Welgelegen.

The Monte Vista drop-off facility is considered a non-conforming use in terms of the zoning of the site for Public Open Space (POS), as well as a non-complementary use due its location surrounded by residential properties. Furthermore, several other City departments operate from this precinct, but do not make efficient use of the site. Other drop-off facilities located on land zoned for POS include the De Grendel and Ravensmead facilities. However, the land uses surrounding these facilities are more complementary uses, which act as suitable buffers.

To this end, the City of Cape Town: Property Management Department should take the lead in regularizing this use if the current activities are to be continued in the current location. Alternatively, the drop-off facility should be relocated to a more suitable location. With regards to the Mote Vista drop-off facility, this facility should be consolidated with the De Grendel facility as this location is more appropriate for this use and there is sufficient space for expansion operations.

#### **(b) Major new/infill development areas (refer to table 1 in section 6.1)**

Infrastructure capacity information is provided for proposed new development areas where available. The Richwood and Bothasig areas are serviced by ESKOM. However, the City of Cape Town has first option to provide additional capacity to service large developments in this area.

#### Richmond Park, Richwood

- **Stormwater**  
Stormwater management is to be provided according to overall master planning for the study area. A section of the 1350mm diameter (dia.) stormwater line falls within Erf 6273 – servitudes are to be registered. Retention ponds are to be constructed as part of the proposed development for on-site stormwater attenuation. It is proposed that the stormwater system would consist of open channels, swales, ponds and formal underground pipe systems located within the conservation area. Additional stormwater culverts crossing the N7 may also be required.
- **Roads**  
A TIA needs to be completed to determine traffic impacts related to the proposed development.
- **Future sewer disposal**  
Services are to connect with existing municipal sewer connections. All sewers have sufficient capacity, except for the portion of the sewer from Koeberg Road to the Potsdam WWTW, which would need to be upgraded as part of the bulk infrastructure upgrade for the proposed development.
- **Potable water supply**  
Water supply is adequate for this development.
- **Electricity**  
The area currently falls within the service area of ESKOM. At present, sufficient medium voltage (11kV) bulk capacity is available for this proposed development and further upgrades are planned by ESKOM to cater for further growth potential in the next 15 to 20 years for the area.

#### Valhalla Park Sports Field

Infrastructure upgrade priorities are based on detailed draft layout options for the redevelopment of the Valhalla Park Sports Field.

- **Stormwater**  
No stormwater constraints are anticipated.
- **Road network improvements**  
Access to the site via Valhalla Drive is limited. Therefore, access to the site will be gained primarily off Angela Street and Tafelberg Road. The design of streetscapes is important as a large proportion of residents are pedestrians.
- **Future Sewer disposal**  
There is adequate sewer capacity to accommodate development of the site as an 800mm bulk sewer line runs parallel with the western boundary of the proposed development along Valhalla Drive towards the Borchard's Quarry WWTW. However, timing of this development is crucial as the Borchard's Quarry WWTW is approaching capacity, resulting in remaining capacity potentially being taken up by other new developments within its catchment area.
- **Potable water supply**  
Water supply is adequate for this development.
- **Bulk electricity supply**  
The main step down substations supplying this area are operating at more than 100% load capacity. The upgrading of the Vanguard Substation (which is overdue) will increase capacity to supply the development

#### Nooitgedacht informal settlement upgrade

- **Stormwater**  
A stormwater detention pond exists with supporting infrastructure extending across the site (Erf 1209).
- **Road network improvements**  
Access is possible of Agnes Road, Eleanor Road and Tuna Road. Road access across the Kuils River canal to Nooiensfontein Road is also proposed to integrate the Kalkfontein Area, which is isolated in its current location, with the surrounding area. A TIA is to be completed if required.
- **Future Sewer disposal**  
Services to connect with municipal services.
- **Potable water supply**  
Services to connect with municipal services.
- **Bulk electricity supply**  
The site is serviced by electricity.

#### Cape Town International Airport (CTIA) Precinct

Infrastructure upgrade priorities for the CTIA precinct are sourced from the Cape Town International Airport Master Plan (2007).

- **Stormwater**  
The major system of the proposed drainage infrastructure will be able to cope with storms up to the 1:50 year event. All water from the catchment areas will enter a series of detention ponds, and the attenuated flow will be discharged via a system of channels, pipes and culverts. This will provide a formal system ensuring that extreme storm events (up to 1:50 years) can be properly accommodated.

The stormwater system for Catchment-B drains to the corner of Borchard's Quarry Road and Modderdam Road into an existing pond (Pond B5) where it enters the Modderdam Road Corridor

Catchment-C drains to Delft through the outlets of four detention ponds, i.e. ponds C1, C2, C3 and C4.

- **Road network improvements**  
The following improvements to the strategic road network are part of the Integrated Transport Plan for the City of Cape Town and will have an impact on the traffic flow to and from CTIA:
  - R300 - extension of R300 Freeway westwards through the Philippi Horticultural area, connecting with the M5 in Southern Suburbs;
  - R300 - extension of R300 Northwards to connect with the R27 in Melkbos/Koeberg Area;
  - R300 - upgrading of the R300 to 3 lanes per direction;
  - Upgrading of the recently constructed Symphony Way to a 4-lane dual carriageway facility.
  - Proposed re-alignment of Borchard's Quarry Road and the provision of a new interchange between Borchard's Quarry Road and the N2;
  - Upgrading of the N2 Freeway from the N7 to the R300 Freeways to 3 lanes per direction;
  - The upgrading of the interchange between airport approach road.

Internal road access to the airport will not only be from the N2, although the majority of the traffic will use the airport approach road. Access to the cargo area will be directly from the Borchard's Borchard's Quarry Road. Symphony Way will serve as access to the remote parking area and the commercial developments in the eastern part of the airport. Access to

the terminal area ground level road system is also available from the Borcherd's Quarry Road.

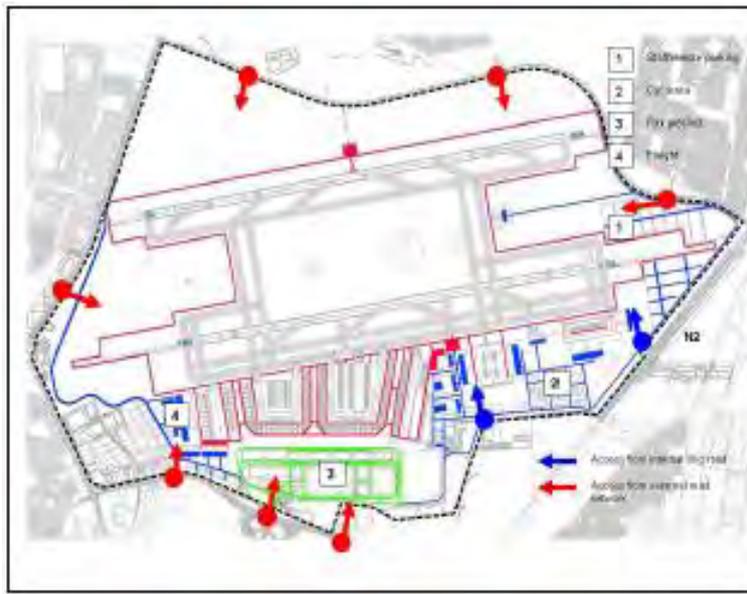


Figure 23: Possible access points to the CTIA precinct to be investigated

- Future Sewer disposal**  
 Additional connections to the existing system will be required to realize development of all precincts earmarked for development on the CTIA grounds. Preliminary discussions held with ACSA consultants responsible for the bulk sewer system in the Delft area indicated that these connection proposals need to be submitted to the City of Cape Town for investigation. CoCT will have to conduct an investigation before a decision can be made as to whether the Borcherd's Quarry treatment works can handle the flows. The flow in the Delft area needs to be submitted to CoCT.
- Potable water supply**  
 Adequate water is available in the bulk mains adjacent to the N2 National Road, but that supplies from the other existing mains are restricted. The long term future proposal is the supply of water to the entire CTIA property from a new ring 300mm bulk mains with two additional 250mm diameter connections to the 300mm diameter water main running along Stellenbosch Arterial Road and a 250mm water main connection from the Delft area which connects to water main adjacent to the N2.

Ultimate development will require an estimated Annual Average Daily Demand (AADD) of 13 007 kl/day and additional connections with the bulk external water mains along the Stellenbosch Arterial and a connection in the south-western corner from the Delft area.
- Bulk electricity supply**  
 The current notified maximum demand of CTIA is 9 MVA, and there is a 14 MVA firm supply to CTIA from Eskom's Airports Substation. A new ACSA substation, which will also receive supply from Eskom, is under construction on the eastern side of the airport to provide an alternative source of supply, also limited to 14 MVA firm. As the demand increases beyond the supply capacity from each substation the load will be shared by the two substations. Although the supply is currently limited to 14 MVA firm, Eskom is planning to upgrade their supply infrastructure in the near future. The results of this master plan study should be conveyed to Eskom to be taken into account with their long-term planning.

Infrastructure upgrade priorities for the Stikland Hospital Site are sourced from the assessment of bulk services infrastructure provision for Erf 6300, conducted by BKS Engineers and Managers (2004). The full bulk infrastructure contribution levy (BICL) costs of implementing bulk infrastructure upgrades, calculated according to 2004 rates, are included in this assessment. This would need revision based on the most up-to-date BICL rates.

- **Stormwater**  
Redevelopment of the site can be accommodated in the existing stormwater system, provided that the principle of on-site attenuation of the difference between pre- post-development stormwater run-off is adhered to. Retention dams as well as a link culvert towards the Kuils River outlet to the east of the site along Cilmore Street will have to be provided at the developer's cost.
- **Road network improvements**  
The proposed extension of Cilmore Road over the Kraaifontein Railway Line into the Hospital Site, will link the site with La Belle Road and Amandel Road through the Morgan Trust Grounds. The existing Cilmore Road requires upgrading for higher mobility functioning.

Old Paarl Road between La Belle Road and De La Haye Road will need to be upgraded to a dual carriageway with dedicated storage lanes at intersections.

Intersections requiring upgrading in the vicinity of the site include La Belle/Old Paarl Road, Old Paarl Road/Bill Bezuidenhout, and Old Paarl Road/R300 ramp terminal intersections.

- **Future Sewer disposal**  
In terms of bulk sewage disposal, sewage from the site redevelopment will flow towards the Bellville WWTW. Surplus capacity at the Bellville WWTW will only be made available once the Fisantekraal WWTW becomes operational, where after major sewage flow will be diverted from Bellville to Fisantekraal. This is likely to take place towards the end of 2010, thus enabling development of Erf 6300 thereafter.

Redevelopment of the site can be accommodated in the existing sewage conveyance system provided that a link sewer is provided at the developer's cost. The sewer will link the internal bulk network to the main municipal sewer in La Belle Road via. Cilmore Street.

- **Potable water supply**  
Redevelopment of the site can be accommodated in the existing water supply network, provided that certain elements of the network are upgraded at the cost of the developer. The main connection to the system will be on the 300mm. dia. Main along Old Paarl Road.
- **Bulk electricity supply**  
A new 66 to 11kV 2x20MVA step-down substation would need to be provided to meet the maximum electricity demand for the redevelopment of the Hospital Site. Cognisance must be taken of the 66kV power line servitudes in finalizing any planning designs for the site.

### Kalkfontein Smallholdings

- **Stormwater**  
Stormwater management takes place mostly via the Kuils River. Increased river management is required due to infill development along the river corridor. Any new developments in this area should respect the Kuils River 1:50year flood line. Apart from minor localized problems, the stormwater management system for this area is adequate.
- **Road network improvements**  
The following bulk road network improvements are imposed as conditions of approval relating to the development of the Kalkfontein Smallholdings:
  - Reuter Road and Isabel Road are to be extended southwards in accordance with with each of the 4 phases of development, including mini-bus taxi emayments.

- The upgrading of the New Nooiensfontein/Stellenbosch Arterial intersection according to detail specified in the associated TIA and to the satisfaction of the Dept: Roads and Stormwater.
- The construction of the Northern Farm 553/3 Road between Reuter Street and Isabel Street
- The construction of a future bridge over the Kuils River to link the Kalkfontein development as well as the area to the south to Nooiensfontein Road via Highbury Road extension, to be accessed via Northern Farm 553/3 Road.
  
- Future Sewer disposal  
This is a high risk waste water catchment area in terms of bulk sewer capacity. The area is a medium priority for sewer drainage capital budgeting.
  
- Potable water supply  
Water network reinforcement required for small (75mm diam.) water pipe networks in the Kalkfontein area.
  
- Bulk electricity supply  
The area is a high risk substation load area requiring capital investment over the 2011-2014 period.

## 6.1.5 Public facilities and destination places

The district plan provides an input to guiding the provision and distribution of public facilities, which should be supplemented by local development plans and community services directorate's master plans. The distribution of public facilities (such as clinics, libraries and community halls) is informed by the location of the proposed hierarchy of civic precincts (see section 4) proposed as clusters of social facilities and public institutions and proximity to the accessibility grid.

### (a) Urban and civic upgrade

Urban upgrades are proposed in a number of precincts throughout the district. These are focussed on reinforcing the structuring routes and public investment nodes and supporting their civic and commercial roles.

#### High order civic precincts

- **Bellville CBD:** The Bellville CBD has emerged as the dominant node of highest significance within the Tygerberg District as a result of the extensive public and private investment that has occurred. The area should continue to perform an anchor role for economic investment along the Voortrekker Road Activity Corridor. With regard to public investment, the following interventions are possible:
  - The Voortrekker Road pedestrianized area should be upgraded with additional traffic calming measures to reduce conflict between pedestrians and vehicles.
  - Reinforcing the Hardekraaltjie public facilities and recreation precinct as a place of public amenity. This part of the Bellville CBD is characterised by less intense activities. Public investment should focus on the integration of the public facilities precinct with the Hardekraaltjie sports precinct to the west by providing better access and landscaping. Furthermore, a pedestrian link between the public facilities precinct and the Tygerberg Station should be formalised.
- **Goodwood CBD:** Goodwood CBD is composed of a cluster of public facilities reinforced by commercial shopping centre and other economic generators within its vicinity. In general, this node is of a high standard and should be maintained as such.
- **Parow CBD:** The Parow CBD is located along Voortrekker Road, between Giel Basson Drive and McIntyre Road. The Parow Civic Centre, located on this alignment, is a major generator of movement. The Voortrekker Road streetscape, which is in need of improvement, should be a priority for urban upgrade in order to reinforce the significance of this precinct as an administrative hub. Pedestrian routes and public spaces leading to the civic centre should also be upgraded. To this end, the implementation of the capital projects proposed in the Parow Public Transport Interchange: Conceptual Planning and Preliminary Design Report should be prioritised.
- **Kuilsrivier CBD:** The Kuilsrivier civic precinct is the only node to provide public services to the broader Kuilsrivier Area, which is identified as an urban growth area within Tygerberg District. Furthermore, the Kuilsrivier CBD represents an area of significant development potential in the form of densification. Therefore, public investment in this node should be evaluated in terms of future demand for public facilities. This high order node also requires general urban upgrade to improve the public environment.
- **Elsies River (Salberau node) CBD:** Salberau Node is the primary civic precinct within Elsie's River, but is currently in a derelict state. In addition, a fair amount of vacant land still remains around the existing civic precinct. To this extent, existing public facilities should be upgraded to a level that is appropriate with the primary role that the civic precinct plays. A mix of

complementary land uses inclusive of business, informal trade areas, community facilities and active recreational space associated with the civic precinct, should be encouraged.

- *Delft CBD*: The Delft CBD is a high order civic node, with public amenities serving the wider area of Delft, Wesbank, Green Park and Sikumbule (Driftsands). The regional importance of this precinct should be reinforced through high density residential infill and commercial development. Furthermore, additional upgrading and development of hard space for informal trading in demarcated areas is needed. The public square in front of Delft Civic Hall has been fenced off from the general public, thus leaving informal traders to do business on the narrow road reserves.

#### Low order civic precincts:

- *Leonsdale local node*: Vacant land around Leonsdale local node should be used for limited expansion of existing businesses and existing public facilities, as well as hard and soft landscaping aligned with pedestrian movement routes. Reinforce and enhance its present role as a civic node through developing a new police facility and re-opening the local clinic.
- *Bonteheuwel CBD*: The Bonteheuwel CBD is the primary business centre within the Bonteheuwel Area. To date there has been little investment in the CBD as a result of its unfavourable location and lack of access. Therefore, the Bonteheuwel CBD is envisaged to continue to serve as a local neighbourhood business node given that other areas such as Gatesville CBD and Vangate Mall are used more frequently and are more successful because of higher levels of accessibility and exposure.
- *Valhalla Park local node*: The node is located within the proposed Valhalla Park new development area along Angela Road, which forms a critical public link as it leads directly to Netreg Station. It is proposed that during the reduction of the footprint of the Valhalla Park sports field primary access to the sports field should be taken off Angela Street where the library is located so as to reinforce the current location of the Valhalla Park local node. It is further recommended that hard and soft landscaping is undertaken along Angela Street between Netreg Station and Valhalla Park local node.
- *Adriaanse local node*: The Adriaanse local node is the southern gateway to the Halt Road activity street. Upgrade of the node should include: The establishment of hard and soft landscaping orientated around pedestrian movement routes (critical public links) leading to the node as well as the node itself; clustering upgrading of public facilities where necessary, allowing for mixed use development to extend from Halt Road along Adriaanse Avenue towards Lavistown Station.
- *Uitsig local node*: Vacant land around Uitsig local node should be used for limited expansion of existing businesses and existing public facilities, as well as hard and soft landscaping aligned with pedestrian movement routes. This has already been undertaken around the Uitsig Community Centre.
- *Belhar local node*: Belhar local node on Belhar Drive represents a significant opportunity to build on an existing public facilities cluster to form a high quality local civic precinct. The front of the Belhar Community Hall is currently being landscaped into a quality public space. The possibility of developing high density rental housing projects on vacant land surrounding the existing public facilities precinct should be explored.
- *Delft South local node*: Delft South local node is more linear in nature, composed of a community library and hall, an informal trade square, a tertiary training college, a sports complex, and a clinic. Although located in close proximity to Delft CBD, the prominence of Delft South local node cannot be undermined as the largest proportion of the Delft population resides in Delft South. Public investment is required at the informal trade market as it has

been neglected for some time and is in need of maintenance. It is hoped that the maintenance/upgrade of this facility will stimulate increased informal trade in this location.

- *Bellville South local node*: The Bellville South local node is located in Kasselsvlei Road, which is identified as a structuring route around which a mix of uses is encouraged. The public facilities precinct has been landscaped into a quality public space, which is hoped to increase the quality of the public realm. Additional public facilities should be located within this precinct should the demand exist.
- *Sarepta local node*: Encourage the upgrade of the Sarepta local civic node along Rietvlei Road. This precinct is plagued by vandalism and requires adequate fencing (palisade fencing). The Sarepta local node is an important and well-used precinct within the wider area of Sarepta and Kalkfontein. Its strategic location along the Kuils River Corridor and within 500m of the Kuilsrivier Station makes it an ideal location for further public investment in the form of a district park on Portions 524 and 525 of Erf 79.
- *Kalkfontein future local node*: The Kalkfontein Smallholdings Area is envisaged to see extensive development in the short-to-medium term. Residents of this area currently gain access to public facilities either at Sarepta and Belhar Local Nodes. However, with increased development and population densities, a new local node may be necessary to provide for future needs of the Kalkfontein community.
- *Delft-Symphony future local node*: This future local node at the intersection of Symphony Way and Silversands Road is required to accommodate the public facilities existing needs of the newly developed Delft-Symphony Way Area (Phases 1-6), as well as future development on the airport-side of Symphony Way, which will accommodate the residents of the Freedom Farm and Malawi Camp informal settlements.

### Urban Upgrade

In addition to the upgrade of high and low order civic precincts, the focused upgrade of City of Cape Town rental stock, public space and other public infrastructure in social housing precincts (3/4 storey walk-ups) throughout the district should remain a priority. Priority social housing precincts within the Tygerberg District requiring urban upgrade include:

- Upper Halt Road and Elsie's River Interchange
- Leonsdale and Cravenby
- Salberau
- Matroosfontein
- Adriaanse
- Connaught/Eureka
- Uitsig
- Delft CBD
- Belhar Flats
- Bellville CBD
- Bellville South

### Areas in special need of new public facilities or upgrade to existing public facilities

- The areas of Bishop Lavis, Belhar and Sarepta are unserved with swimming pools. Possible locations for new swimming pools include:
  - Belhar: Erf 21470 – the Belhar indoor sports facility is located on this site. The location of a district swimming facility in this location would reinforce this location as a sports precinct, given the University of Western Cape sports grounds are located north of the Sarepta railway line and the Belhar sports grounds less than 1km away. However, development of a swimming pool at this location would be dependent on the development

of the Unibell Station Mixed Use precinct to ensure safe usage by local children. An alternative location would be at the Belhar Extension 13 civic precinct in Belhar Main Road.

- Valhalla Park community library requires upgrade. The development of the Valhalla Park Sports Field integrated housing project presents an ideal opportunity for upgrading and possibly extending this facility in the short term.
- Belhar Extension 13 and Bonteheuwel emerging as areas in need of a primary school.
- Belhar Extension 13 and Kalkfontein emerging as areas in need of a secondary school.

#### **(b) Critical public links**

An integrated City-wide and district network of non-motorised transport routes is proposed. As part of this network, a number of public links are highlighted for upgrading and development, with a particular focus on access to transport interchanges, places of employment, destination places (Tygerberg Hills Nature Reserve) and movement along open space corridors. Although there are numerous public linkages across the entire district, the following are considered to be the most critical public links:

- The Riverton link runs along an important linear open space link through the proposed Riverton District Park. It links Elsie's River Interchange at Halt Road with the Grand West Casino precinct and Goodwood Station. This link should be reinforced during future development of the Riverton District Park.
- The extension of Belhar Drive to provide direct road access to Pentech Station to the north is encouraged as a means to formalise the existing critical public link created by local railway commuters and residents of Belhar employed in the Sacks Circle Industrial Area. Providing direct road access will increase public safety for pedestrians, as well as more efficient public transport by enabling road-based public transport operating along Belhar Drive to transfer passengers in closer proximity to Pentech Station.
- The link between Tygervalley precinct (Northern District) along the Elsie'skraal River corridor, through to the Bellville CBD and Hardekraaltjie civic precinct. The regional connectivity provided along this alignment between major movement generators makes this a critical public link.
- The link between Bonteheuwel CBD and Valhalla Park local node through Netreg Station. This link should be reinforced as part of the development of the Valhalla Park Sports Field.
- The north-south pedestrian link between Valhalla Park, Matroosfontein and Salberau local nodes accommodates numerous education facilities and other institutions which generate pedestrian movement along its length, without the necessary non-motorized transport infrastructure to facilitate this movement. This link should be developed with NMT facilities appropriate for its level of use.
- Matroosfontein pedestrian link between Matroosfontein and Adriaanse local nodes – landscaping and street lighting is required to upgrade this link.
- The Pedestrian link across the R300 freeway and Kuils River corridor links the Belhar Main Road civic precinct with the Kalkfontein Informal Settlement to the east. This link also provides more direct connectivity for workers to the Blackheath Industrial Area to the south-east of the Kalkfontein area. This link should be formalised as part of the Kalkfontein Phase 3 Housing Project.
- The Vredenburg link is an informal path which runs along the banks of the Kuils River. It extends from Old Paarl Road across Frans Conradie Drive, passing under the N1 freeway, continuing along Eversdal Road all the way into Durbanville CBD. This link should be formalised with focused landscaping and lighting for security.
- The Delft South link across the R300 freeway is an important pedestrian for residents of the Green Park and Los Angeles informal settlements to access essential public facilities in Delft.

#### **(c) Public facilities**

Several urban civic precincts are identified in section 6.1.5 (a) and should form the basis for the clustering of facilities in the district. Detailed investigation is required at each of these civic precincts to identify the key needs in the precinct and to inform the most appropriate interventions in each civic precinct.

The CSIR public facilities accessibility analysis project has indicated the need for several new public facilities within the district. The Tygerberg district is relatively well catered for in terms of public facilities. However, there are gaps in service provision which exist in certain parts of the district. The main focus areas for public facilities provision include:

- The area of Valhalla Park/Bishop Lavis/Bonteheuwel – This area requires a community park, a local library, a primary school and a secondary school.
- Kalkfontein Smallholdings Area – This area requires a swimming pool and a local library. Given the expected future growth of this area, it may be practical to develop a cluster of facilities such as a library, clinic, and community hall. This area is also identified as being unserved by a swimming pool. However, it may be more practical to locate such a facility in a more accessible location such as in Belhar Main Road.
- Delft-Symphony Precinct 3 – The subdivision of Precinct 3 makes provision for sites for a future police station, a clinic, a sports field and a school. This future local node is important for public facilities provision in this part of Delft since the planned development on the airport side of Symphony Way that will accommodate the residents of Freedom Farm and Malawi Camp will most likely not be able to accommodate public facilities due to noise restrictions related to the planned airport runways.
- Other areas requiring public facilities include the Stikland area (regional library) and Belhar (primary school).

#### **(d) Destination places**

A number of destination places are proposed as places where the residents of Tygerberg can experience and enjoy the district's most prized assets. More than 50 percent of the district, predominantly south of Voortrekker Road, suffers from a significant lack of areas where people are able to spend much needed recreation and relaxation time. Whilst the district is largely urbanised, significant recreational promise lies in a few of its natural and urban assets. Formal opportunities for such experience should be enhanced in a manner that offers spectacular, safe and affordable recreation spaces. A number of locations within the district are identified as places that, with the necessary enhancement could play that role. They include:

- **Tygerberg Hills, including De Grendel Farm**

The Tygerberg Hills is a significant natural asset and serves as an environmental recreation amenity, providing scenic views of the entire Cape Metropolitan Area from its summit. In addition, the high potential agricultural lands around the Tygerberg Hills has resulted in a strong agricultural character (predominantly viticulture), De Grendel Farm most notable within the Tygerberg District for its heritage significance and landscape value.

The scenic character of the Tygerberg Hills holds excellent potential as a local and international eco/agri-tourism destination place, which should be reinforced.

- **University of Western Cape (UWC) / Pentech (CPUT) and Cape Flats Nature Reserve precinct**

The UWC/CPUT tertiary education precinct is a destination place of citywide significance attracting a substantial number of people to it on a daily basis. The institution is a valued asset for its rich history, having transformed itself from an institution built on Apartheid ideology to an autonomous non-racial institution. The area enjoys a high degree of metropolitan and regional accessibility due to several high order transport routes around the area. However, the quality of the access points around the area, such as Unibell Station precinct and Modderdam Road, is poor.

The Cape Flats Nature Reserve is a significant natural asset and a proclaimed Provincial Heritage Site, which is used by the UWC and learners from other impoverished education institutions for various environmental education and research programmes.

The purpose of this institution as a destination place should be to continue to contribute to the environmental, social and economic development of Cape Town and its residents. Investment should be recycled into the precinct to improve public access, especially across the Sarepta railway line to Belhar.

- **The Kuilsrivier farmlands and cultural landscape**

The Kuilsrivier farmlands represent the gateway to the Stellenbosch Wine Route along Polkadraai Road. Several historical farms, including the more popular Zevenwacht Farm and manor house, contribute to the tourist and economic attractiveness of this particular part of Cape Town. For these reasons the area is considered to be an important destination place within the Tygerberg District and the City of Cape Town. It is critical for the urban edge in the Kuilsrivier area to be applied strictly so as to prevent further development pressure on the farmlands outside of the urban edge.

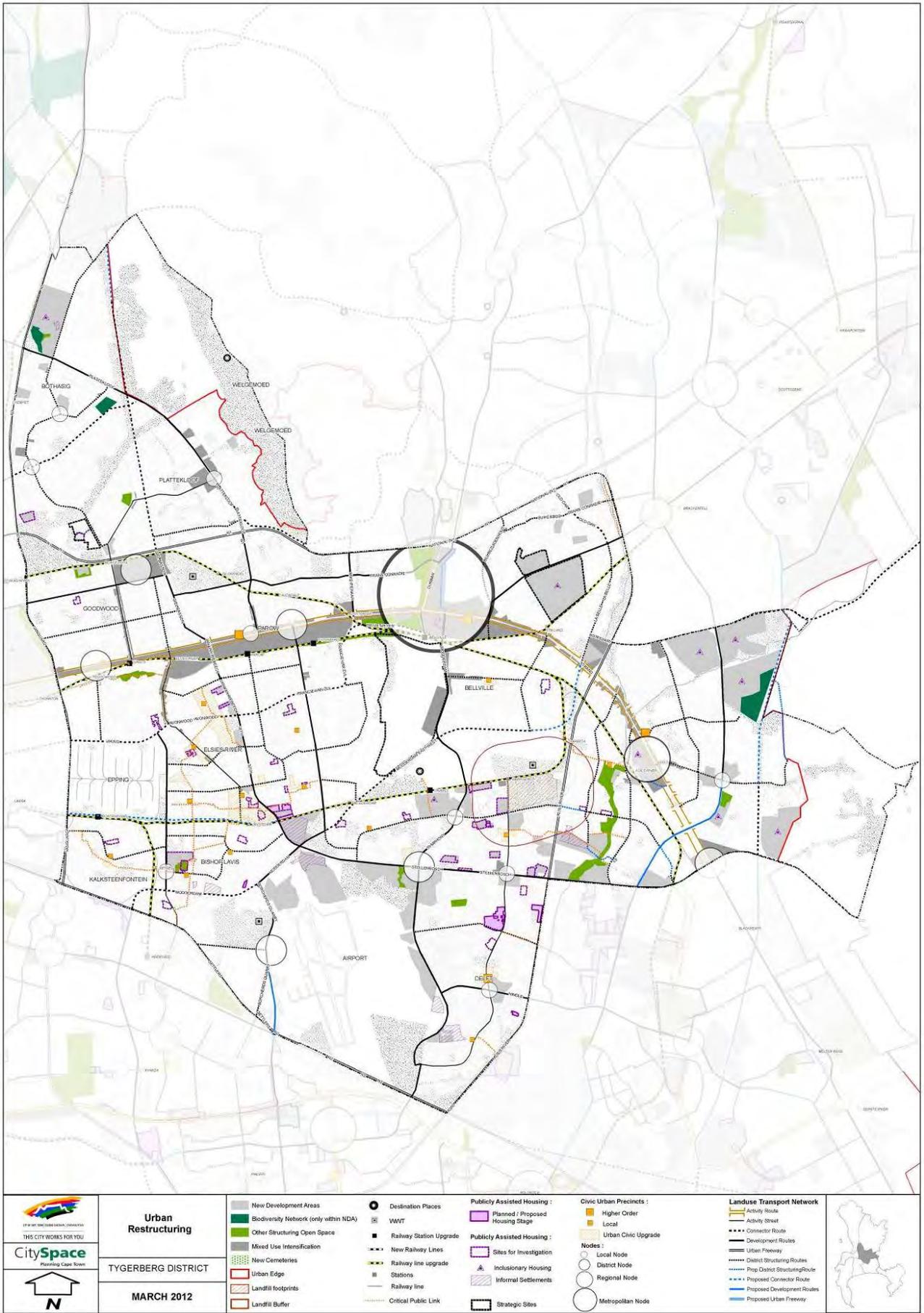


Figure 24: Urban restructuring plan

## 6.2 Sub-district development guidelines

As indicated in section 1.1 the purpose of the district plan is to provide broad guidance for land use, and environmental, decision-making across the district. However, the desired spatial vision may vary in relation to the particular needs across the district. Thus, land use guidance in support of achieving this variable vision needs to be reflective of local area character, and development capacity and desirability.

Therefore the purpose of this section is to provide land use decision-making on a more localised scale, hereafter referred to as "sub-districts". The various sub-districts within the district have been demarcated according to several criteria:

- Spatial demarcation based on clear management boundaries
- Urban form and character
- Pressure for land use change

The Tygerberg District comprises 9 sub-districts (see figure 26). These are:

1. Greater Monte Vista, Richwood and Platteklouf
2. Goodwood, Parow and Stikland
3. The Corridor (Voortrekker, Durban and Jan Riebeeck Roads)
4. Greater Elsies River
5. Greater Bellville South
6. Belhar/Delft
7. Cape Town International Airport precinct
8. Greater Kuils River
9. Sarepta/Kalkfontein area

Apart from local sub-district land-use guidelines, this section identifies future policy work to be conducted as well as new development areas within these respective sub-districts.

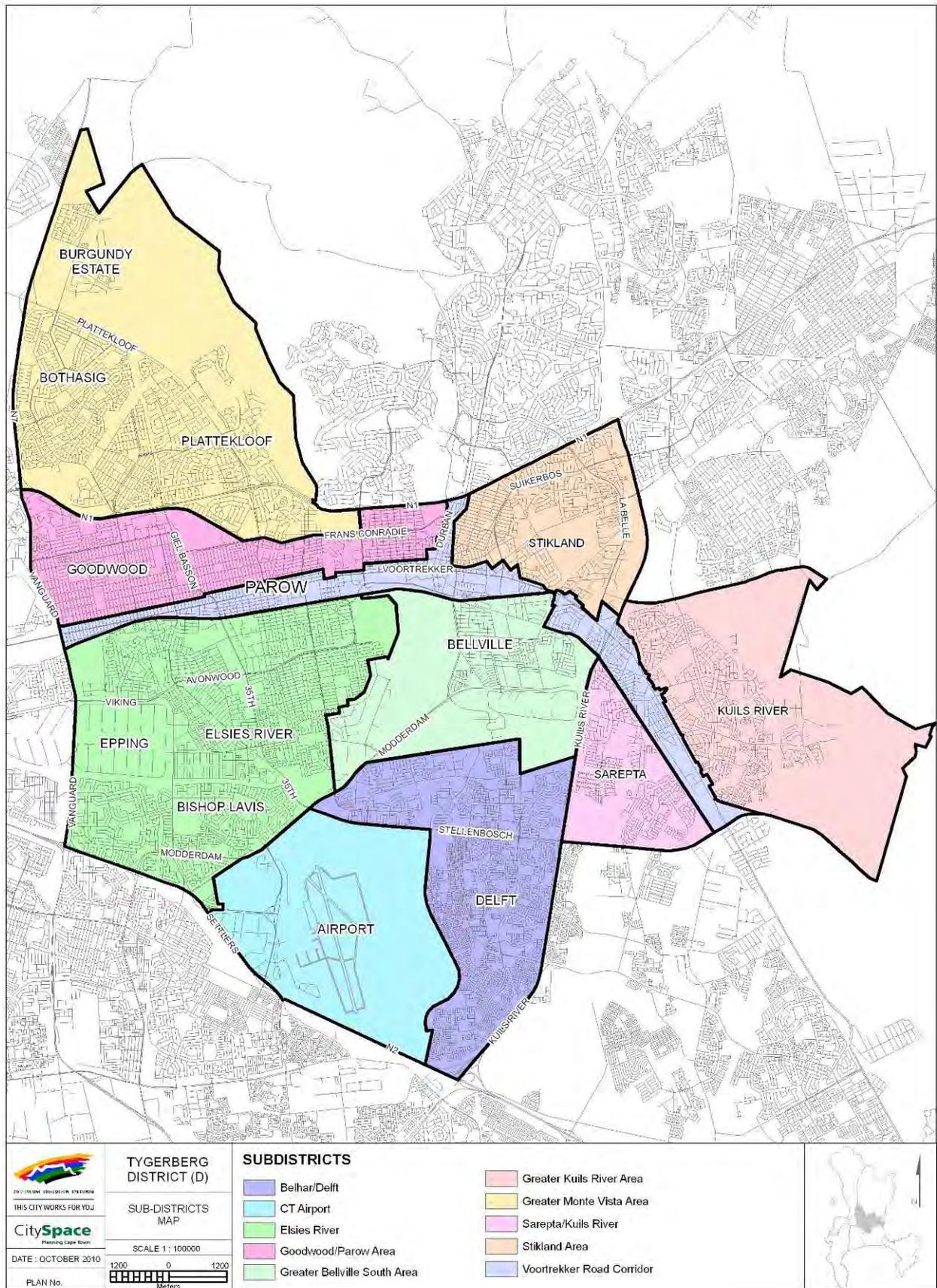


Figure 25: Tygerberg sub-districts key map

## 6.2.1 Sub-district 1: Annandale, Richwood, Platteklouf, Bothasig, Edgemoed, Monte Vista, Parow North, De Grendel

Sub-district 1 is bounded by the N7 freeway to the West; the N1 freeway, the Monte Vista rail line and Frans Conradie Drive to the South; Mike Pienaar Boulevard and The Tygerberg Hills ridgeline to the East; and Tygerberg Road to the North. The Durban Road activity corridor is excluded from the sub-district.

The sub-district is characterised by established suburban areas, predominantly of single residential character with local business clusters including neighbourhood shopping centres at various locations of high accessibility (such as Shoprite Centre, Edgemoed Centre, Centurion Centre, Bothasig Centre, De Grendel Centre, The village Centre, and Panorama mixed use node) Little pressure for land use change exists apart from home-based activities along residential structuring routes of high accessibility.

SUB-DISTRICT 1: GREATER MONTE VISTA, RICHWOOD AND PLATTEKLOOF		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>(a) Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Facilitate opportunities for densification in a manner that will not detract from the character of the area.</li> <li>Ensure retention of the residential character and prevent sprawl of business activities into core residential areas by assigning and maintaining more exposed local areas where business activity can occur. Ensure that design guidelines applicable to these areas protect the character of the unique built environments.</li> <li>Encourage creation / provision of tourist attractions / facilities that are appropriate with regard to the character, scale and nature of the rural area.</li> </ul>	<p>i. Promote densification and mixed uses along local activity streets and structuring routes where feasible, such as De Grendel Road, Vryburger Road, Edgemoed Road, Monte Vista Blvd., Rothschild Blvd., Hendrik Verwoerd Drive and Platteklouf Road. Where subdivision of individual properties is not appropriate, the construction of duet-houses or second dwelling units may be considered.</p> <p>ii. Land use change should be complementary to the receiving residential environment. Street interfaces should be treated sensitively so as not to impact negatively on the character of the streetscape. To this end, where the use of the entire dwelling changes from residential to another use, or where the primary use of the dwelling is no longer residential, landscaping plans should be submitted with future land use applications to illustrate the proposed treatment of the street interface. Furthermore, any changes to the street façades of buildings should not detract from the character of the area.</p> <p>iii. Local business precincts that exist along these routes should be reinforced. The promotion of densification and establishment of mixed uses in these areas should furthermore be undertaken within the context of local area policies and plans that are required for each of these identified structuring routes and that furthermore take cognisance of Traffic Engineering and Road Safety considerations.</p> <p>iv. The vacant City-owned land zoned for Hotel Purposes in Platteklouf presents opportunity for medium density in-fill development.</p> <p>v. Encourage and facilitate the establishment of home-occupation / guest accommodation in a manner that does not impact on the character of the residential area. In this regard, applications must at all times adhere to the relevant policies for</p>	<ul style="list-style-type: none"> <li>Height Restrictions for Platteklouf II &amp; III contained in the Parow Zoning Scheme and Baronetcy Estate design guidelines.</li> <li>Cape Town Zoning Scheme provisions for home occupation and guest accommodation.</li> </ul>

	<ul style="list-style-type: none"> <li>vi. home occupation and guest accommodation. Create appropriate transition areas between commercial and residential development, and preserve the integrity of core residential areas.</li> <li>vii. Development along Tygerberg Valley Road (e.g. Richmond Park) should avoid the creation of sterile interfaces onto the streetscape.</li> </ul>	
<p>(b) Managing urban development</p> <ul style="list-style-type: none"> <li>• Promote an appropriate interface with the Tygerberg Nature Reserve.</li> <li>• Ensure and consider protection of views in Platteklouf II and III and Baronetcy Estate where possible.</li> <li>• Ensure retention of rural / agricultural character on farmlands.</li> </ul>	<ul style="list-style-type: none"> <li>i. Ensure adherence with the regulations on height restrictions for Platteklouf II and III as well as Baronetcy Estate.</li> <li>ii. Create an appropriate interface with the Tygerberg Nature Reserve by ensuring that new development (potential opportunities within Baronetcy Estates) is undertaken in a manner that encourages features such as roads to act as a buffer between development and the nature reserve as opposed to the rear of residential properties. Ensure that vehicular access for fire fighting and maintenance purposes is available.</li> <li>iii. Any departures from especially rear building lines within the established area of Platteklouf must be considered with caution to minimize the risk to properties with regards to veld fires.</li> <li>iv. Ensure maintenance of green streetscapes and corridors that link from the Tygerberg Nature Reserve through the urban context of the sub-district.</li> <li>v. Ensure adherence to design guidelines, EIA's and TIA's for approved development applications where applicable and ensure management of basket of rights.</li> </ul>	
<p>(c) Access</p> <ul style="list-style-type: none"> <li>• Provide for alternative/improved road links between Baronetcy Estate and Platteklouf II and III to ensure availability of alternative access/egress to Platteklouf Road.</li> </ul>	<ul style="list-style-type: none"> <li>i. Facilitate the construction of the Silverboom Avenue link road between Baronetcy Estate and Platteklouf. Investigate potential additional access to Platteklouf from Platteklouf Road.</li> </ul>	

## Sub-district 1: New Development Areas

### Richwood – Richmond Park

New mixed use development is proposed on the undeveloped land located south of Richwood and between the N7 to the west, Tygervalley Road to the east and Platteklouf Road to the south (**map ref 1**). This land parcel provides an opportunity for mixed use development in the form of service industrial / commercial / office / residential development. Development in the south is restricted to non-residential uses due to the safety buffer areas of the Caltex oil refinery and Strategic Fuel Fund (SFF) oil storage area, located along Platteklouf Road. The portion of the site abutting the Platteklouf/N7 interchange is affected by biodiversity and stormwater constraints, which would require resolution during detailed planning.

### Bothasig / Edgemean residential infill sites

New medium density residential development is proposed for the undeveloped properties described below. These properties provide an opportunity for medium density infill development. It is important that new developments are designed to have a positive interface with the existing urban fabric, the existing residential developments and public open space.

**Erf 8350 (map ref 2)** is zoned General Residential, and is ideally located for medium density infill development. The portion of the site fronting onto De Grendel Avenue is zoned as Public Open Space and is developed as a community park, and should be retained.

**Erf 8353 (Map ref 3)** is owned by the City Of Cape Town and was earmarked for Sports Fields development. However, a portion of the site can be utilised for medium density residential infill development, with a portion of the site retained to accommodate public open space provision.

**Erf 8347 (map ref 4)**, located behind the Centurion Local shopping centre, is identified for medium density residential infill development. The adjacent property, i.e. erf 7195, is also undeveloped, but is owned by the Provincial Government Western Cape (PGWC). It is proposed that the site remain for educational purposes to cater for future schools demand in the area, thereby forming an education precinct with the new high school that has recently been built to the north of the site.

**Erf 31013 (map ref 5)**, located north of the Acacia ESKOM electricity transfer station, is a vacant school site owned by the PGWC educational trustees. Given that a new high school has been constructed at Swellengrebel Avenue with additional land for a primary school, this site should be considered for medium density residential infill development.

### Plattekloof

**Erf 20907, (map ref 6)** located between Meyboom and Olienhout Streets, which is vacant and zoned for hotel purposes, is proposed for group housing purposes. However, other uses including hotel development and medical tourism accommodation associated with the Panorama Medical Node can also be considered. Any development of the site should be sensitive towards the open space system which is located to the south, thus a positive interface with the open space system should be established.

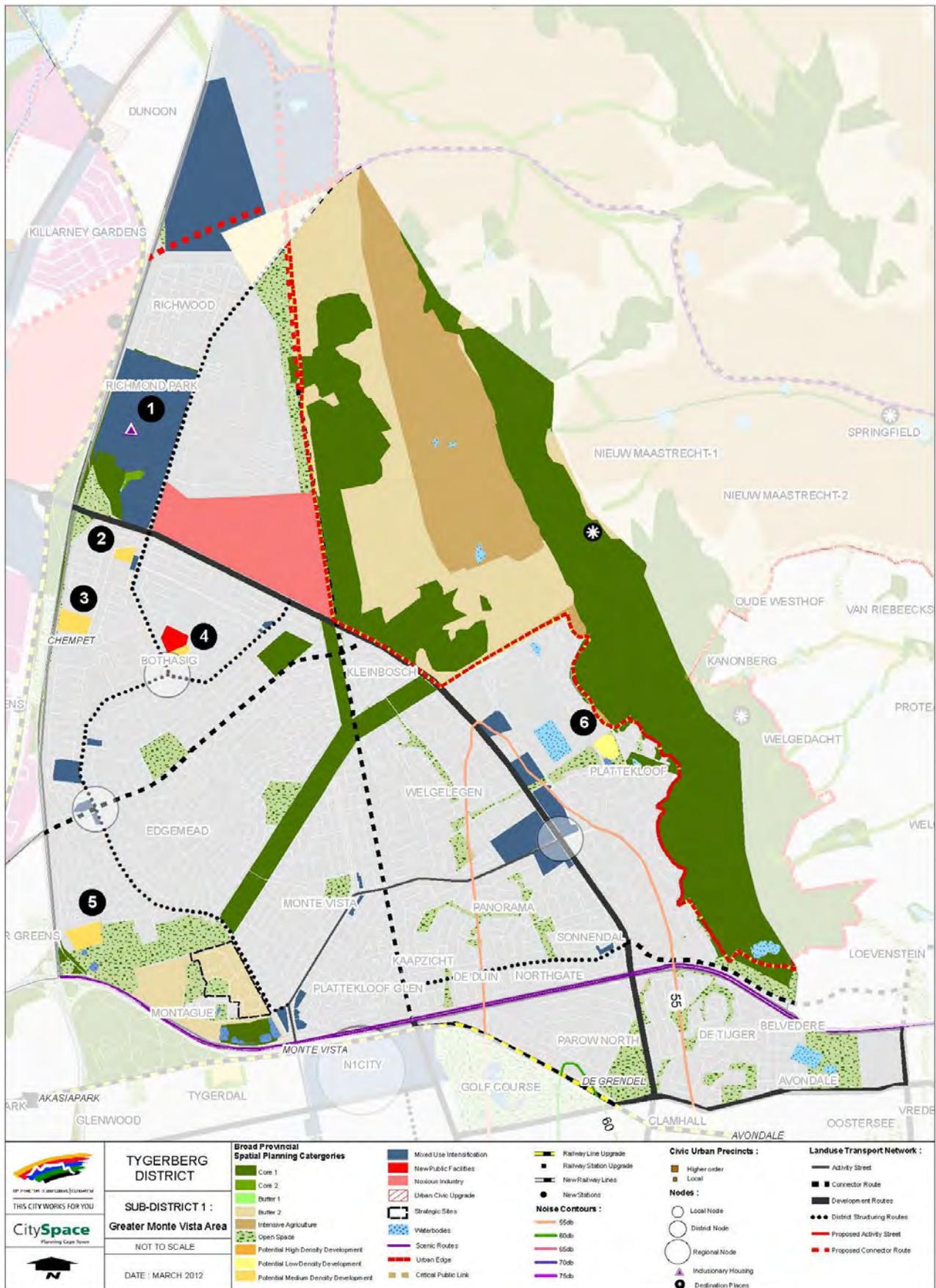


Figure 26: Sub-district 1

## 6.2.2 Sub-district 2: Goodwood, Parow, Bellville Central and East, Stikland

Sub-district 2 is bounded by the N7 to the West, Monte Vista rail line, Frans Conradie Drive, Mike Pienaar Boulevard, and the N1 to the North; the R300 to the East; and the transitional area between Voortrekker Road activity corridor and residential areas immediately north.

The sub-district is characterised by transition areas between Voortrekker Road activity corridor and suburban areas, predominantly residential development with greater diversity of residential typologies, and pressure for land use intensification along Voortrekker Road.

Sub-district 2: Goodwood, Parow, Bellville Central and East, Stikland		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>(a) Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Facilitate opportunities for densification in a manner that will not detract from the character of the area.</li> <li>Ensure retention of the residential character and prevent sprawl of business activities into embedded residential areas.</li> <li>Assign and maintain areas where business activity can occur.</li> </ul>	<p>i. The re-development of high density residential development should be restricted to the area between Voortrekker Rd and 2nd Avenue / Williams Street within the Parow Area and between Voortrekker Rd and Dingle Street as well as along Vasco Blv and Hugo Street in the Goodwood Area. In the Bellville Area, this re-development should be restricted to the Belgravia Area (portion between Voortrekker Rd, Old Paarl Rd and Link Street) as well as properties situated on Vermeer Street and De La Haye Street in the De La Haye Area (portion between Old Paarl Rd and Vermeer Street, outskirts of the De La Haye Area in close proximity to the railway line and the Stikland Hospital grounds). Such developments should however be undertaken in a manner that considers appropriate interfaces especially with adjoining single residential development. The redevelopment of properties outside of the above mentioned areas for general residential purposes should be selectively considered. The form and structure of such developments must also blend in with the character of the surrounding area.</p> <p>ii. Densification of the area in general can furthermore be promoted through subdivision of larger properties and construction of second dwelling units on properties.</p> <p>iii. Encourage and facilitate the establishment of home-occupation / guest accommodation in a manner that does not impact on the character of the residential area. In this regard, applications must at all times adhere to the relevant policies for home occupation.</p> <p>iv. Re-development of properties along Vasco Blvd., Hugo Road, McIntyre Road, De La Hey Road and Old Paarl Road for mixed use purposes should be encouraged over the long term. However, this needs to be done within a framework that provides sufficient guidance to deal with appropriate access and parking. Until such a framework is in place, any application for rezoning must be treated with caution as the viability of the re-development of other properties can be negatively affected.</p> <p>v. Land uses along local structuring routes such as Milton Road in Goodwood and Maree and Barnard</p>	<ul style="list-style-type: none"> <li>Cape Town Zoning Scheme Policies for home occupation and guest accommodation.</li> <li>Policy for Educare facilities.</li> <li>Wingfield Triangle Place Policy Plan.</li> <li>Vasco Boulevard / Hugo Street Policy Plan</li> <li>Boston Policy Plan (currently in draft form)</li> </ul>

	<p>Streets in Oakdale, should remain predominantly residential in nature, except at certain nodal intersections. Any applications for land use change can be considered on the basis of neighbourhood scale activities and should be addressed with temporary departures.</p> <p>vi. Other local structuring routes where business conversions have already taken place (e.g. Boston and Lincoln Streets in Boston) should be actively managed so that these land use changes do not adversely impact on the residential character of the area (refer to the Boston Policy Plan as an information source).</p>	
<p>(b) Managing urban development</p> <ul style="list-style-type: none"> <li>Maintain and improve the quality of existing public open space and the public realm in general in conjunction with densification projects.</li> </ul>	<p>i. A cautious approach to new development between the R300 and existing development to the west should be taken, so that such development takes place in a manner which is sensitive to and does not undermine the integrity of the Kuils River Corridor.</p> <p>ii. The Elsiekraal River system to the west of Durban Road is to be reinforced as a high quality public recreation area, providing relief from the urbanised environment of the Bellville CBD.</p> <p>iii. The Jack Muller/Danie Uys District Park should be activated around its edges with low intensity complementary land uses in order to stimulate additional recreational activity within the park. The precinct at the corner of Carl Cronje Drive and Frans Conradie Drive, containing existing buildings related to park operations could possibly accommodate additional activities, such as restaurants, children's play equipment and other amenity facilities.</p>	

## Sub-district 2: New Development Areas

### Goodwood (Tygerdal utilities and refuse drop-off site)

The Tygerdal utilities and refuse drop-off site (**map ref 7**), situated directly adjacent to the Monte Vista railway station, measures approximately 7,14Ha in extent. It is proposed that the site be redeveloped to accommodate medium-to-high density residential development. A minimum gross density of 35du/ha is applicable to maximise the transit-oriented development potential of the site in relation to its proximity to the station precinct.

### Bellville residential infill development sites

Residential infill development (medium density) is proposed for a number of unused school sites, located in older, established residential areas in the Bellville East area.

Erf 8194 (**map ref 8**) is located east of Meerlust Street in Oakglen, Erf 2751 (**map ref 9**) is located east of Silvertree Street in Bellair, and Erven 17656 and 17662 (**map ref 10**) is located north of Frans Conradie Drive in Vredenberg. In the latter case, the 2 properties measure about 14ha in extent, and are ideally located for medium to high density residential infill development along a development route such as Frans Conradie Drive. It needs to be noted that all of the school sites are still owned by the Western Cape Education Department (WCED), and the availability of the sites should be clarified with the department.

### Stikland

The Stikland Psychiatric Hospital is situated on a ±140 ha precinct under the ownership and management of the Provincial Government Western Cape (PGWC: Health Department). The precinct comprises of two distinct land portions, separated by Old Paarl Road (**map ref 11**).

The Stikland Psychiatric Hospital precinct provides an opportunity for extensive urban restructuring and development, and is therefore regarded as being a “strategic site”. The built form of the hospital is seen as inefficient in terms of the distribution of the existing buildings throughout the site, thus sterilising large portions of land, which could otherwise be used for other activities. This land provides an opportunity for mixed use development in the form of commercial / office / residential development. It is important that new developments are designed to integrate and have a positive interface with the existing urban fabric, i.e. the existing residential developments and public open space.

The following factors impact on the development potential of the Hospital precinct:

- The precinct of ±140ha provides a significant opportunity for redevelopment and infill through the rationalisation of the existing footprint of hospital buildings.
- The precinct is considered to be under-utilised due to the highly dispersed pattern of existing hospital buildings.
- Many buildings require renovation and utility services require substantial upgrading.
- Stikland Hospital abuts Old Paarl Road, which connects directly with Voortrekker Road, La Belle Road and the R300 Freeway. Stikland Station is situated within walking distance.
- Development will require extensive investment in utility services and road access.

As a strategic site within the district, the future of the Stikland Hospital is not certain and would require substantial development facilitation, planning and project packaging. PGWC has indicated intent to develop the site and has conducted an assessment of bulk service infrastructure provision with regard to various development proposals. The following is proposed as appropriate for the site should development be realised in future:

- Consolidation and redevelopment of the psychiatric hospital into a smaller, more manageable and less extensive area. Redevelopment/consolidation of current hospital buildings may occur in vacant portions of the precinct north of Old Paarl Road and/or in parts of the precinct south of Old Paarl Road (preferably the area along the Kraaifontein railway line);
- Mixed use development in the form of commercial / office / residential development along portions abutting Old Paarl Road;
- Medium to high density residential development on portions of the precinct which are available for development. Portions of land which front onto De La Haye Road should be considered for residential development, thereby creating a development link from Old Paarl Road to Stikland Station.

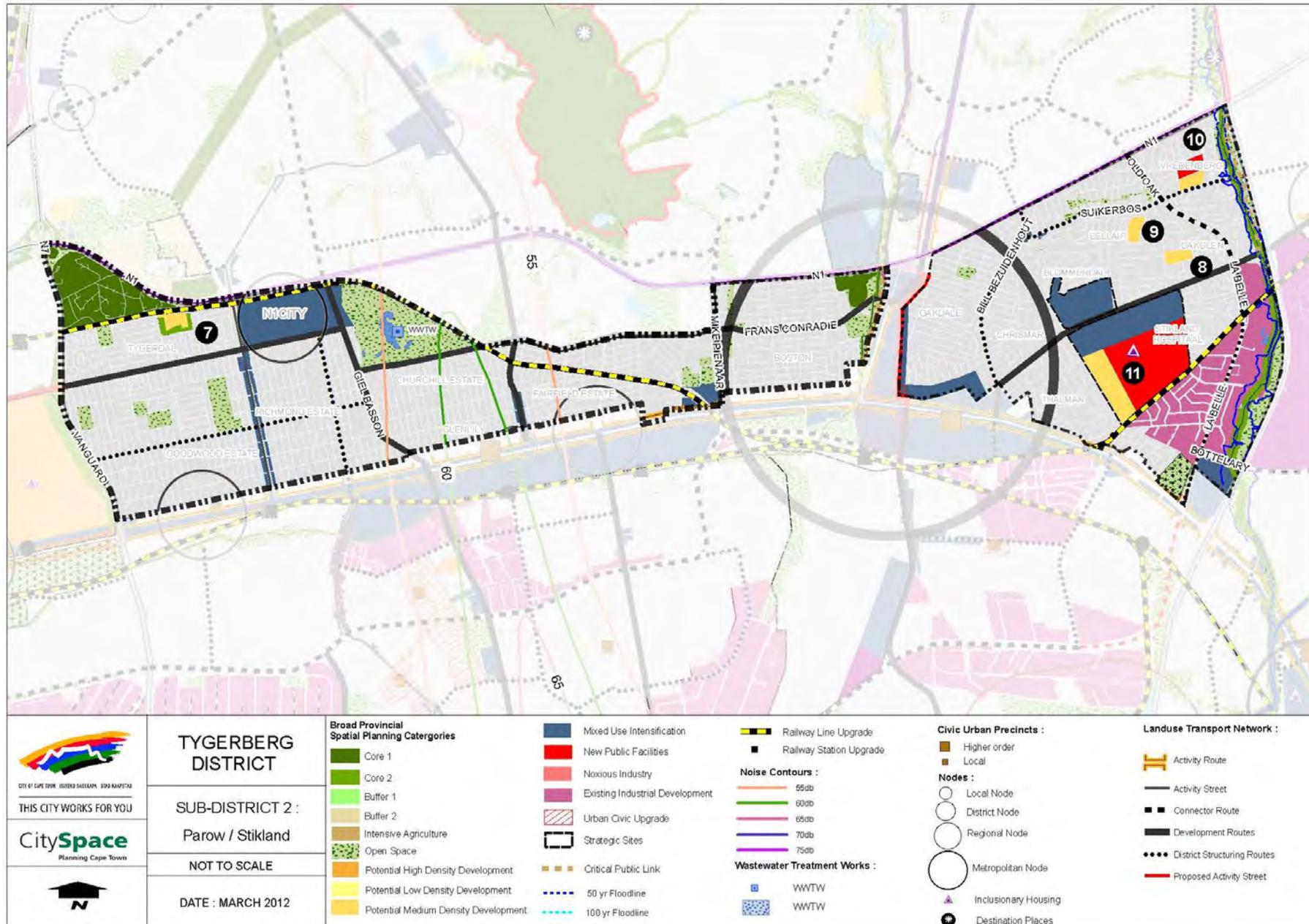


Figure 27: Sub-district 2

### 6.2.3 Sub-district 3: Voortrekker Road / Van Riebeeck Road / Durban Road (south of the N1) Activity Corridors

Sub-district 3 is bounded by the transitional edge between Voortrekker corridor and suburban areas to the north, and the Bellville-Cape Town and Bellville-Strand rail lines to the south. The Durban Road activity corridor south of the N1 is included and is bound by the Elsieskraal River system to the west and the Durban Road re-alignment servitude to the east.

The sub-district is characterised by areas of high density, high intensity mixed use activity to be reinforced as the economic 'backbone' of the city. General issues experienced within the sub-district include a general lack of architectural, urban design and land use guidance regarding development along Voortrekker Road, and conflict between commercial and residential land uses abutting the corridor area.

Sub-district 3: Voortrekker Road, Van Riebeeck Road, Durban Road Activity Corridors (Including Bellville CBD)		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>(a) Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Enhance the development potential of the activity corridor by promoting re-development of land for high density mixed-use development.</li> <li>Ensure the establishment of a mix of uses including residential, commercial and community uses within the corridor area.</li> <li>Support the upliftment and renewal of the area with public sector investment where possible.</li> <li>Facilitate the development of a mix of high density uses that can support public transport.</li> </ul>	<p>i. Encourage the development of high density mixed-use development in the form of residential and commercial activities within the first development block to the north and south of Voortrekker Road and Van Riebeeck Road. A bulk of 3.0 with a building height of between 7 to 8 storeys can be achieved.</p> <p>ii. Promote the provision of consolidated, accessible public parking areas in close proximity to the activity spine to support the waiving of parking requirements for developments fronting directly onto the activity spine. Consolidated parking areas would be preferably be located behind buildings fronting onto Voortrekker Road/Van Riebeeck Road</p> <p>iii. Promote the establishment of high density, general residential development up to the second development block to the north of the activity spine to act as a buffer between the high density, mixed-use development directly adjacent to the spine and single residential development. A bulk of 1.5 with a building height of 3 storeys can be achieved, however, higher densities can be considered where appropriate.</p> <p>iv. Where general residential development abuts single residential development, the design and layout of the general residential development should ensure a maximum of 2 storey interface with such single residential properties. In this area, low impact commercial activities such as offices can also be accommodated.</p> <p>v. Promote the establishment of high density, general residential development, mixed with low-impact commercial uses such as offices in the area between the zone directly adjacent to the activity spine and the railway line up to a bulk of 1.5 with a height of 3 storeys.</p> <p>vi. Within the immediate areas around railway stations, the development of a mix of high density commercial and residential uses can be accommodated with a bulk of 3 and a maximum</p>	<ul style="list-style-type: none"> <li>Voortrekker Road Triangle Study</li> <li>Voortrekker Road Corridor Study</li> <li>Bellville CBD Development Framework</li> <li>Oakdale Nodal Integration Study</li> <li>Oakdale Land Use and Traffic Management Plan</li> </ul>

	<p>height of 7 storeys. These parameters should be applied with a radius of <math>\pm 400\text{m}</math> from stations along the Bellville Railway, the distance between most stations and Voortrekker Road.</p> <p>vii. Support and initiate opportunities for general upgrading and renewal of the corridor area, especially in semi-industrial areas north of the railway, such as in Elsie's River, Parow East and Kuilsrivier.</p> <p>viii. Promote an appropriate mix and density of development within the corridor area, including Durban Road and Van Riebeeck Road.</p> <p>ix. The Belrail Residential Estate to the east of Modderdam Road represents a strategic redevelopment opportunity for residential densification (high density) within close proximity to the Bellville CBD and transport interchange. Limited mixed use activity should be permitted on the ground floors of residential buildings in more accessible locations, such as along Reed Street.</p> <p>x. Potential development initiatives should include investigating levels of use of the parking area located on Erven 6507 – 6521, and the feasibility of high density public housing on portions thereof found to be redundant. Alternatively, more intense residential develop should be encouraged around these communal parking areas, with relaxed parking provisions required for on-site parking.</p> <p>xi. The realignment of Durban Road south of the N1 is likely to have a major impact on land uses along this part of the corridor. The area between the existing Durban Road and the proposed realignment is proposed as a mixed use intensification area. The intensity and scale of redevelopment is envisaged to be similar to that which is located along Durban Road north of the N1 freeway (Edward Street).</p> <p>xii. Goodwood Station: Erf 8433 (Map ref.4), located south of Station Street, as well as a strip of land between the rail line and the Stormwater channel (Goodrail 435), all owned by the rail authority, can be considered for infill development. The latter site is ideal for higher density housing development, whilst erf 8433 can be considered for mixed use, which may include smaller commercial opportunities. Access to the site located to the south of the rail line, will need to be from Sakabula Road.</p> <p>xiii. Elsie's River Station: Erven 8563, 36048 and 9356, located to the north of the rail line, and abutting Halt Road, are all owned by the rail authority. Portions of the sites offer opportunity for mixed use infill development, which may include high density housing development.</p> <p>xiv. Bellville Station: Erf 10854, Bellville, located to the south of the station (Map ref. 6), also offers limited infill development. Portions of the site located directly adjacent to the rail lines, offers the opportunity for high density infill housing development. Vehicular access to the portion of site should be investigated, but it is believed that some of the rail tracks are not utilised anymore and may present an opportunity. Furthermore, it is also reasoned that the end-users would be solely dependent on rail transport, and limited vehicular</p>	
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	<p>access should therefore be required. The opportunity to provide public rental housing opportunities within the Bellville CBD should be investigated on Erf 26364 (c/o Charl Malan Road and Belrail Road).          Kuilsrivier Station: Proposals for densification and land use intensification within the area located between Kuilsrivier Station and Strand/Van Riebeeck Road should be supported.          Several vacant land parcels owned by the City of Cape Town as well as other institutions exist within proximity of Kuilsrivier Station on either side of the rail line. Therefore, the development potential of these land parcels should be investigated in more detailed local area planning for the Kuilsrivier CBD and environs. Densification boundaries for Durban Road south of the N1 freeway should be determined in local area planning.</p>	
(b) Managing urban development	<p>xv. The Hardekraaltjie site should retain its current function as a camping site. However, should development be pursued, the cluster of mature trees on the site should be retained.</p> <p>xvi. Ensure that Elizabeth Park in Bellville CBD is safe and well-maintained.</p>	

### Sub-district 3: New development areas

#### Stikland Area - La Belle Triangle Mixed Use Precinct

The La Belle Triangle precinct (erf 13601) is located at the intersection of La Belle Road and Voortrekker Street / Strand Road (**map ref 12**). New mixed use development is proposed for the undeveloped land located east of La Belle Road. This land provides an opportunity for mixed use development in the form of service industrial, commercial and office development. Although the site can potentially accommodate residential development, this would not be an ideal location given the locational benefits available for business intensification. It should be noted that the existing access road from La Belle Road is not a formalised access road. With the redevelopment of the site, a new access road will need to be constructed at the mid-point between the Bottelary intersection onto La Belle Road, and the Voortrekker Street / Strand Road intersection. Existing access at Ampere Street into the adjacent industrial area, will need to be closed, and access be taken from the new access road.

#### Kuils River Mixed Use Precinct

The Kuils River precinct (Portions 1, 3 and 4 of Farm ST426) (**map ref 13**) is located at the intersection of Van Riebeeck Road and Stellenbosch Arterial and measures 9.6Ha in extent. The site forms part of the Zevenwacht/Blackheath urban node, and provides an opportunity for mixed use development in the form of service industrial or commercial development. Residential and office development is not viewed as appropriate as the CISCO iron and steelworks located immediately north of the site, is considered as a nuisance activity.

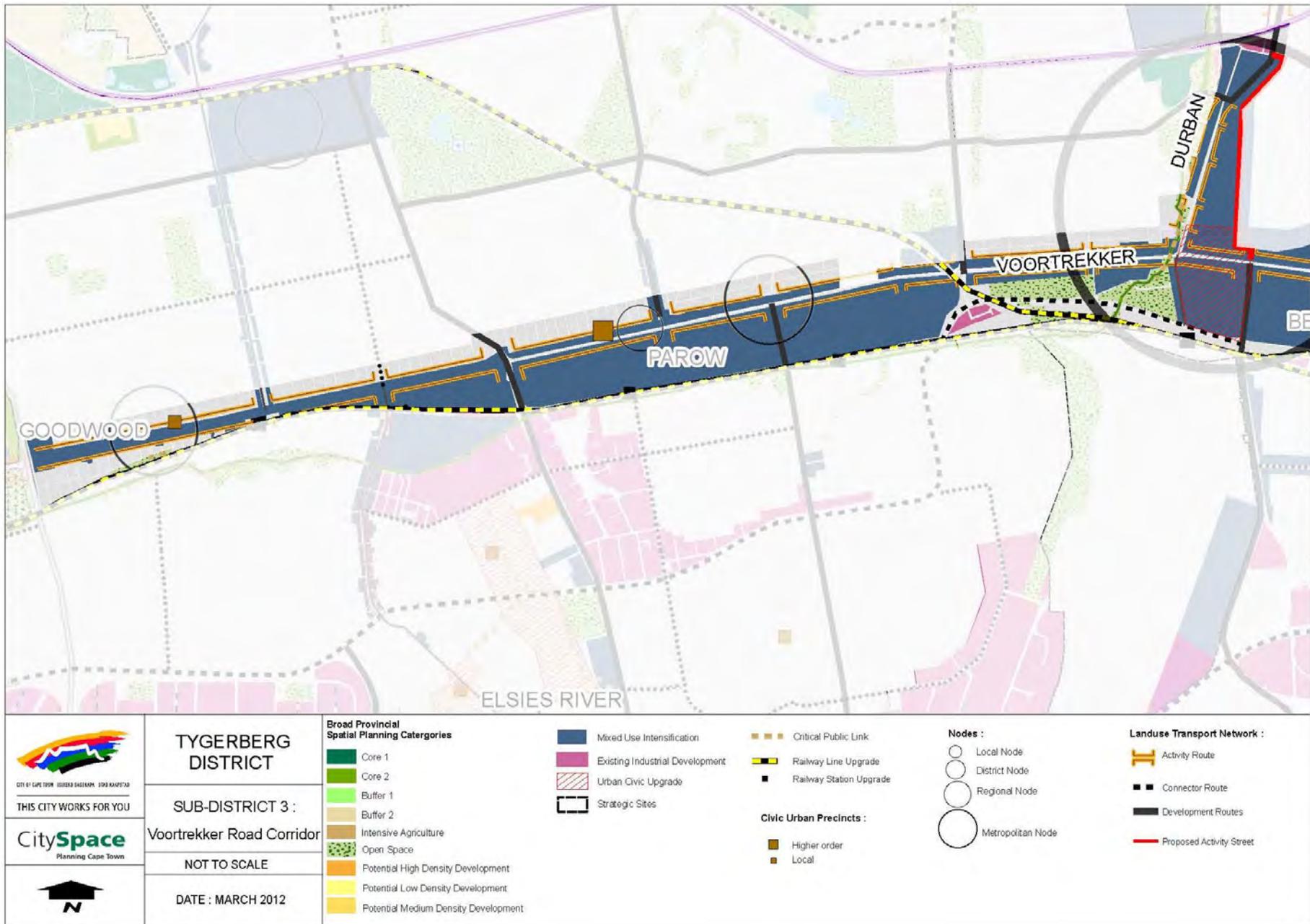


Figure 28: Sub-district 3 – West of Bellville CBD



Figure 29: Sub-district 3 - East of Bellville CBD

## 6.2.4 Sub-district 4: Greater Elsies River, Ruyterwacht, Parow Valley, Ravensmead, Tygerberg Hospital, Epping 2, Bonteheuwel, Bishop Lavis, Uitsig, Monte Video, Malawi Camp

Sub-district 4 is bounded by the N7 to the west, the Bellville railway line to the north, the eastern boundary of the Tygerberg Hospital, Ravensmead and De La Rey Road to the east, and Modderdam Road and the N2 freeway to the south (and includes the suburb if Monte Video).

The sub-district comprises a mix of residential suburbs, industrial areas and high intensity mixed use areas; medium to high density residential areas with greater diversity of residential typologies, a large proportion of Council rental housing stock, and a significant amount of backyard second dwellings. Most of the sub-district experiences a poor quality urban environment.

Sub-district 4: Greater Elsies River, Parow Valley, Ruyterwacht, Epping 2, Bonteheuwel, Bishop Lavis		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>(a) Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Facilitate opportunities for In-fill housing and densification in a manner that will contribute to the upliftment of the area.</li> <li>Encourage land use transformation where appropriate and feasible in derelict industrial areas that will catalyze urban regeneration (e.g. in proximity of Elsies River Station).</li> </ul>	<p>i. Development of appropriately located vacant land for higher density residential development should be promoted. Such development must take into consideration the maintenance of an appropriate interface between the development and especially single residential uses within the area.</p> <p>ii. Undeveloped city-owned land should be investigated for infill housing projects within the area.</p> <p>iii. An investigation of vacant school sites located within this sub-district is required to determine the existing and future need for schools in the area. The CSIR public facilities accessibility analysis study has identified the need for one primary school and one secondary school within this sub-district.</p> <p>iv. Support initiatives for medium to high residential densification where appropriate, and support the subdivision of larger plots and approval of second dwelling units.</p> <p>v. Promote opportunities for establishment of second dwellings in a manner that uplifts the area.</p>	<ul style="list-style-type: none"> <li>Cape Town Zoning Scheme Policies for home occupation and guest accommodation.</li> <li>Policy for establishment of Educare Facilities.</li> <li>Bonteheuwel CBD Framework</li> <li>Bonteheuwel landscaping and urban design Framework.</li> <li>Leonsdale Neighbourhood Recovery Strategy.</li> <li>Upper Halt Road Revitalisation Programme</li> <li>Upper Halt Road Urban Design Framework</li> <li>Cape Town Zoning Scheme Policies for home occupation and house shops.</li> <li>Policy for establishment of educare facilities.</li> </ul>
<p>(b) Economic opportunities</p> <ul style="list-style-type: none"> <li>Promote opportunities for business activities in close proximity to public transport routes, transport interchange precincts and services.</li> <li>Ensure the development of sustainable communities with access to appropriately located economic opportunities</li> <li>Identify opportunities for establishment and support of SMMEs.</li> <li>Reinforce industrial activities in industrial areas to promote employment within the district.</li> </ul>	<p>i. Facilitate opportunities for commercial development along high order routes and public transport routes (e.g. Along Jan Van Riebeeck Road/35th Avenue at Leonsdale and Cravenby, and Upper and Lower Halt Road).</p> <p>ii. The opportunity for local business development at the corner of Valhalla Drive and Angela Street should be pursued. Any prospective developments would benefit from pedestrian movement to and from Netreg Station.</p> <p>iii. Encourage local business development along local streets displaying existing local business energy or the potential to accommodate local business development, where business activity can be reinforced, such as Fountain Road in Matroosfontein, Owen Road, Halt Road, Connaught Road, and Market Street. This type of activity usually occurs where access and direct erf frontages are allowed.</p> <p>iv. Ensure appropriate interfaces of commercial</p>	

	<p>activities with residential areas.</p> <p>v. Promote building activities that conform to the National Building Regulations and discourage unauthorized building work.</p> <p>vi. Assist with the identification of solutions for accommodation of the horse and cart industry.</p> <p>vii. The development potential of smaller properties should be promoted through facilitating applications for regulation departures in a manner that does not negatively affect adjoining land owners.</p> <p>viii. Applications for legal taverns and shebeens should be considered along local activity streets and other structuring routes. Where embedded in residential areas, careful consideration should be given to whether the use is appropriate especially with regard to impacts on surrounding uses (e.g. crèches and other education facilities, churches, etc.) as well as on site considerations.</p>	
<p>(c) Managing urban development</p> <ul style="list-style-type: none"> <li>• Ensure the upliftment of the urban environment by providing quality areas of amenity.</li> <li>• Maintain and improve the quality of existing public open space and the public realm in general in conjunction with densification projects.</li> <li>• Optimise the use of existing services and facilities available</li> </ul>	<p>i. Facilitate upgrade of public facilities in local civic precincts such as Salberau (Lower Halt Road), Bonteheuwel CBD, Leonsdale local node, Adriaanse, Bishop Lavis and Uitsig local nodes. Mixed use development is encouraged around these local civic precincts.</p> <p>ii. Ensure appropriate interfaces with places of amenity such as the proposed Riverton Road district park in Ruyterwacht.</p> <p>iii. Investigate opportunities for increased usage of the Epping 2 railway sidings. This is dependent on the future of rail-based freight transport at a citywide scale. However, the drive to improve freight rail operations seems to be gaining momentum. Until such time as a more clear direction is resolved in this regard, applications for closure of rail sidings should be considered with caution, and short term leases should be considered rather than the sale of portions of the rail sidings.</p> <p>iv. Nooitgedacht informal settlement should be formalised as part of a greater planning intervention in the Valhalla Park/Bishop Lavis area</p>	
<p>(d) Access</p> <ul style="list-style-type: none"> <li>• Facilitating the resolution of traffic issues within parts of the sub-district.</li> <li>• Facilitate safer pedestrian access across railway lines and high order mobility routes</li> </ul>	<p>i. Enhance pedestrian movement routes between the park precinct and Voortrekker Road through Vasco Station.</p> <p>ii. Resolve traffic conflict within the Riverton Urban Node at the Elsie's River Interchange.</p> <p>iii. Lobby for formalised pedestrian access across the Sarepta railway line between Matroosfontein and Bishop Lavis.</p>	

#### Sub-district 4: New development areas

##### Jan Van Riebeeck Drive / 35th Avenue, Elsie'srivier (Mixed Use Development)

New mixed use development is proposed for the undeveloped properties described below, located along Jan Van Riebeeck Drive / 35<sup>th</sup> Avenue. The high level of continuity along this route offers significant locational benefits for mixed use development and is aligned with the identification of Jan Van Riebeeck / 35<sup>th</sup> Avenue as a development route.

The vacant site located at the intersection of Jan Van Riebeeck Drive (comprising Erven 11074-11108, 11217, and 11218) (**map ref 14**) is proposed for mixed use development for portions

abutting Jan Van Riebeeck Drive. Portions located closer to 26<sup>th</sup> Street may be considered for medium to high density residential development.

The sites identified below provide an opportunity for mixed use development in the form of service industrial / commercial / office development. Development is restricted to non-residential uses due to the noise regulations (land within the 65dba noise contour).

Erf 19787 (**map ref 15**), is zoned for Public Open Space, but is undeveloped and offers little amenity value as it abuts 35<sup>th</sup> Avenue, which is a high order mobility route. The site is therefore proposed for mixed use development in the form of service industrial / commercial / office development. Development is restricted to non-residential uses due to airport noise regulations (land within the 65dba noise contour). It is important that with any development of the site, that adequate open space be developed to serve the high density residential properties on the western edge. Pedestrian desire lines should also be retained as far as is possible.

Portion 6 of Erf 12792 (**map ref 16**), is an undeveloped Open Space site, and is proposed for mixed use development. Although residential development is discouraged due to the site being located within the 65bda airport noise contour, the site is listed as being a public housing site on the City of Cape Town: Housing Department's 5-year Housing Plan. However, non-residential mixed uses would be preferable given this constraint. The vacant land parcels immediately north of the site are earmarked as potential sites for further investigation for publicly assisted housing, since these sites are more integrated with the existing urban fabric. Parts of the site are also prone to seasonal stormwater inundation. Access to the site from 35<sup>th</sup> Avenue is a constraint, except for the possibility of a left-in-left-out access. Access will therefore need to be taken from Connaught Road. Erf 113724 abutting Portion 6 of Erf 12792 to the south, is earmarked for an east- west link road, which, when constructed, may also potentially provide access to Erf 12792.

#### Modderdam Triangle (Mixed Use Development)

It should be noted that a large portion of the site (comprising of inter alia Cape Farms 477/1-3, 475/2, 479/1, erven 113419- 113420, Cape Town) (**map ref 17**) comprises of an old solid waste dump site as well as some wetland areas. A detailed geo- technical study will be required to determine the extent of land available for development.

Mixed use development is proposed on the developable land located south of the rail line and between 35<sup>th</sup> Avenue and Modderdam Road. This land provides an opportunity for mixed use development in the form of service industrial / warehousing / commercial / office development. Development is restricted to non-residential uses due to the noise regulations (land within the 65dba noise contour of the existing airport runway).

#### Valhalla Park Sports Field (Mixed Use Development / Residential Development)

The Valhalla Park Sports Field (**map ref 18**) is proposed to be reduced in size, with the remaining land being the location of an "integrated housing development" project. This land provides an opportunity for medium density residential development on the remainder of the site that is not required for sports field development, with some mixed use activity at the intersection of Valhalla Drive and Angela Street. It is important that new developments are designed to have a positive interface with the existing urban fabric, the existing residential developments and the sports complex.

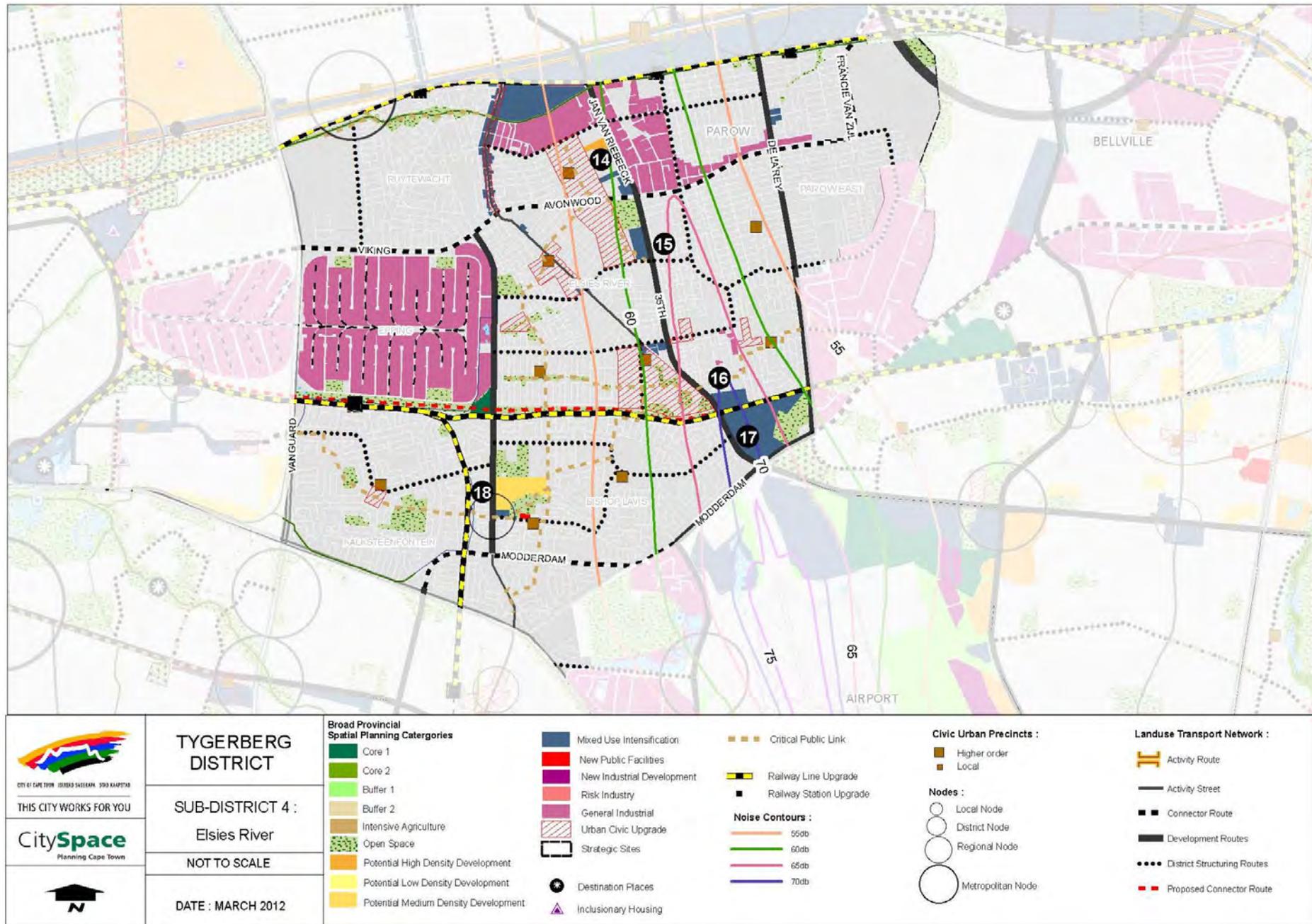


Figure 30: Sub-district 4

## 6.2.5 Sub-district 5: Bellville South, Greenlands, Transnet Marshalling Yard, Parow Industria, UWC / CPUT, Sacks Circle, Bellville Landfill

Sub-district 5 is bound by the Bellville railway line to the north; Peter Barlow Drive, Strand railway line and the R300 freeway to the east; Bellville landfill, the Sarepta railway line and Modderdam Road to the south; and De La Ray Road, Parow Industria and the Transnet Marshalling Yard to the west.

The sub-district comprises of predominantly industrial areas with significant freight movement oriented around the Transnet marshalling yard. A small established contingent of single residential households exists. The UWC and CPUT tertiary education hub is located within this sub-district and is a major generator of movement within the Tygerberg District. Typical issues within the sub-district include conflict between residential and industrial uses, decay of industrial areas and the establishment of non-industrial uses within industrial areas.

Sub-district 5: Bellville South, Transnet Marshalling Yard, Parow Industria, UWC/CPUT, Sacks Circle		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
Intensification & urban form/character <ul style="list-style-type: none"> <li>Ensure development of quality environments. Ensure maintenance of appropriate interfaces with residential and other developments.</li> </ul>	<ol style="list-style-type: none"> <li>Ensure that, where possible, the development of portions of the Transnet Marshalling Yard produces a positive interface along appropriate sections abutting Modderdam Road.</li> <li>Support the development of in-fill high to medium density residential development where appropriate.</li> <li>Support densification initiatives along Modderdam and Kasselsvlei Roads as well as more moderate densification within embedded residential areas such as subdivision of larger plots and approval of second dwelling units.</li> </ol>	<ul style="list-style-type: none"> <li>Cape Town Zoning Scheme Policies for home occupation and house shops.</li> <li>Policy for establishment of educare facilities.</li> </ul>
Economic opportunities <ul style="list-style-type: none"> <li>Ensure preservation of Industrial Areas.</li> <li>Recognise need for some non-industrial activities to establish within industrial areas to ensure availability of services to workers and industrialists (take-aways, banks etc.) and adjust the applicable scheme regulations to incorporate such activities where necessary.</li> </ul>	<ol style="list-style-type: none"> <li>Ensure an appropriate interface of commercial activities with residential areas. Kasselsvlei Road is a local activity street, where mixed uses and appropriate levels of land use intensification should be encouraged along its length. Commercial development should be encouraged on properties fronting onto Modderdam Service Road between the Bellville-Strand line and Modderdam Road (east-west road).</li> <li>Facilitate the selective establishment of non-industrial related opportunities within these areas that are necessary to ensure availability of services to workers and industrialists without compromising the functioning of the area as an industrial estate.</li> <li>Facilitate development of industries, taking care not to negatively impact on abutting residential communities. Ensure appropriate interfaces with residential areas by considering lower impact uses on the fringes between industrial and residential areas.</li> <li>Ensure the provision of sufficient on-site parking for industrial activities.</li> </ol>	
Managing urban development <ul style="list-style-type: none"> <li>Optimise the use of existing services and facilities available</li> </ul>	<ol style="list-style-type: none"> <li>Investigate opportunities for increased usage of the Sacks Circle railway sidings. This is dependent on the future of rail-based freight transport at a citywide scale (especially the Transnet Marshalling Yard). However, the drive to improve freight rail operations seems to be gaining momentum. Until such time as</li> </ol>	

	<p>a more clear direction is resolved in this regard, applications for closure of rail sidings should be considered with caution, and short term leases should be considered rather than the sale of portions of the rail sidings.</p>	
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**Sub-district 5: New development areas**

Transnet Marshalling Yard (The Belcon Site)

The following contextual information is provided in relation to the Belcon Site:

- The precinct has a position of high accessibility at the convergence of a number of significant routes, including the Voortrekker Road corridor, Modderdam Road, Symphony Way and the Cape Town-Bellville and Monte Vista rail lines. The Belcon site derives considerable exposure and accessibility from its location. However, increasing competition for road space between freight transport vehicles and commuter traffic in the vicinity of the Belcon Site is increasing the danger of choking access to and from the site for freight movement.
- Currently the precinct acts as a substantial ‘mono-functional’ buffer. The precinct forms a constraint to the southern extension of the Bellville CBD and spatially reinforces the barrier effect of the rail line by preventing access to and from the south of Bellville Station as well as east-west between Ravensmead and Bellville South.
- The surrounding local and regional context includes important regional community facilities such as Tygerberg Hospital, the University of the Western Cape (UWC) and the Cape Peninsula University of Technology (CPUT).
- The UWC propose / envisage the development of a science park on the precinct, thus forging a development link towards Bellville Station and Tygerberg Hospital.
- The Elsieskraal River drains along the northern portion of the site.

Although land is currently leased for industrial purposes on the eastern extent of the property adjacent to Modderdam Road (**map ref 19**), the area is largely underutilised given its location adjacent to Voortrekker Road, Modderdam Road and the Bellville CBD. Previous policy documents have identified the site as having significant potential for redevelopment. However, Transnet has exhibited reluctance to relinquish control / ownership of the property.

Recent on-site activities have related strongly to linkage with the Port of Cape Town via a port shuttle, and Transnet has indicated the possibility / intention to utilise the bulk of the land for container stacking / storage as part of the port container terminal operations.

In view of the above, Transnet will not be relocating the Marshalling Yard as the area is regarded as having long term strategic significance / potential as a break-bulk of industrial goods / materials over a 20 year horizon. The sustainability of the Belcon site post-2030 has been called into question due to increasing access constraints brought about by intensification of surrounding uses. Should it be established that the relocation of Transnet’s Belcon freight operations is a viable option in the long term, the site would provide significant opportunity for redevelopment and restructuring of the built environment in the Bellville South Area. However, the possibility exists for limited portions of the precinct to be released for development within the short to medium term. It is anticipated that development opportunities would be limited to the areas abutting Modderdam Road, and various development options are being explored.

As the long-term future use of the Belcon Site is currently undecided, any development proposals, should take a long term approach. Should portions of the precinct become available for (re)development, suitable development opportunities can be regarded as a combination of the below mentioned proposals:

- Transit oriented development which supports the proposed IRT system, structurally reinforces the Symphony Way-Modderdam Road as a development route, and enhances the functionality of the Bellville CBD metropolitan node;

- Establishing mixed use affordable medium to high density residential and commercial development incorporating service industrial / commercial / office uses and regional public facilities;
- Investing in institutional development to support the UWC. Complimentary land uses to UWC include the development of a precinct for student accommodation, sports facilities, environmental conservation and education;
- The development of a science park;
- Maintain structured open space, supporting a continuous link from the Elsiekraal River system to the Cape Flats Nature Reserve at UWC.

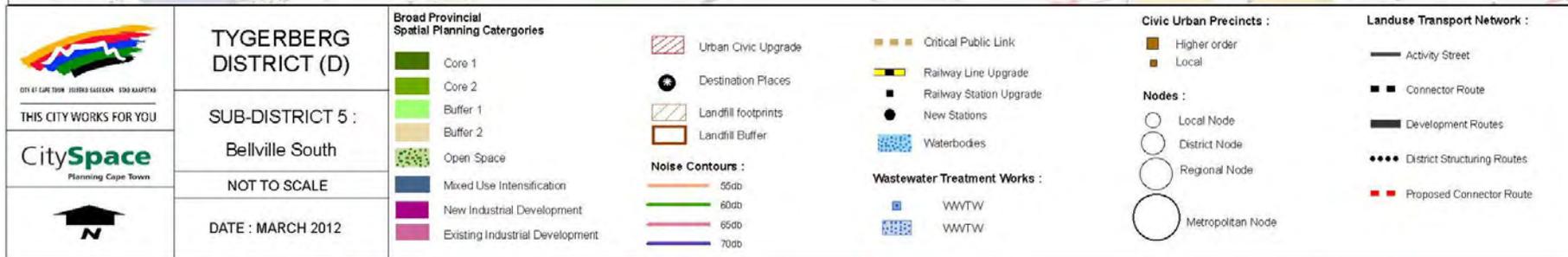
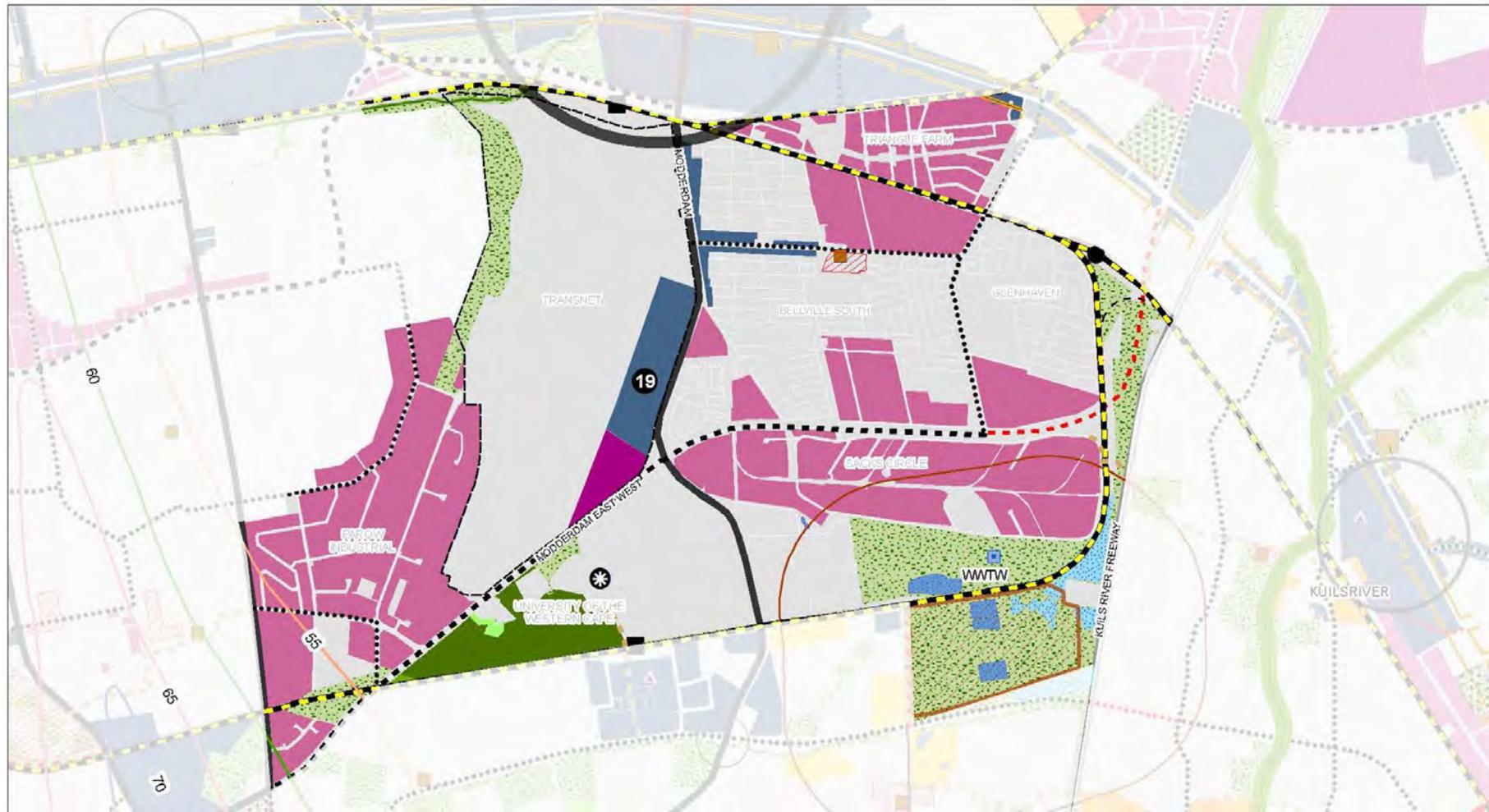


Figure 31: Sub-district 5

## 6.2.6 Sub-district 6: Greater Belhar and Delft

Sub-district 6 is bounded by Modderdam Road, the Sarepta railway line and the Bellville Landfill Site to the north; the R300 freeway to the east; the N2 freeway to the south; and Symphony Way, Stellenbosch Arterial to the west.

The sub-district comprises predominantly residential development including medium density development in the original part of Belhar, increasing in density moving towards Delft South with growing accommodation of 'backyard' structures. Increased business activity has occurred along Belhar Drive between Stellenbosch Arterial and Erica Drive, with the potential for additional commercial activity to be developed around the Unibell Station precinct.

Sub-district 6: Greater Belhar and Delft		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Facilitate opportunities for densification in a manner that will benefit and uplift the area.</li> <li>Facilitate specifically the provision of in-fill housing opportunities in a manner that will contribute to the upliftment of the area.</li> <li>Promote the general upliftment of the area with appropriate development and clearly demarcated areas of use.</li> </ul>	<ol style="list-style-type: none"> <li>Densification of the area in general can be considered through subdivision of larger properties and construction of second dwelling units on properties.</li> <li>Facilitate opportunities for densification development especially around Unibell Station as well as along routes of public transport, such as Erica Drive, Symphony Way (between Stellenbosch Arterial and the Sarepta Railway), Belhar Drive, Delft Main Road and Hindle Road where access is possible.</li> <li>Promote opportunities for in-fill housing on developable land. Promote opportunities for establishment of second dwellings in a manner that uplifts the area.</li> <li>Undeveloped city-owned land within the sub-district should be investigated for infill housing projects within the area.</li> <li>Rationalise the number of vacant school sites within the area, which are currently in over-supply.</li> </ol>	<ul style="list-style-type: none"> <li>Cape Town Zoning Scheme Policies for home occupation and guest accommodation</li> <li>Policy for establishment of Educare Facilities.</li> </ul>
<p>Economic opportunities</p> <ul style="list-style-type: none"> <li>Identify opportunities for establishment of SMMEs.</li> <li>Assign and maintain areas where business activity can occur.</li> </ul>	<ol style="list-style-type: none"> <li>Encourage and facilitate the establishment of home-occupation / guest accommodation in a manner that does not impact on the character of the residential area. In this regard, applications must at all times adhere to the relevant policies for home occupation.</li> <li>Facilitate opportunities for commercial development around station precincts (Unibell and Pentech Stations), local civic precincts (Belhar Main Road and Delft CBD civic precincts), as well as along structuring routes where access is possible.</li> <li>The development potential of smaller properties should be promoted through facilitating applications for regulation departures in a manner that does not negatively affect adjoining land owners.</li> <li>Create and promote opportunities for establishment of SMMEs within appropriate areas that will uplift the area. Where feasible, Council-owned vacant land located along Delft Main Road should be investigated for development of informal trade areas such as markets and related trade uses.</li> <li>Assist with the identification of solutions for accommodation of the horse and cart industry.</li> <li>Informal trade activity located along the sidewalks of</li> </ol>	

	<p>Delft Main Road should not encroach upon pedestrian movement.</p> <p>12. Applications for legal taverns and shebeens should be considered along local activity streets and other structuring routes rather than in embedded residential areas. Taverns and shebeens should also not be located in close proximity residential uses which are non-complementary (i.e. crèches, churches, etc.)</p>	
<p>Access</p> <ul style="list-style-type: none"> <li>Increasing the development and economic potential of the area by facilitating increased connectivity and integration with surrounding areas.</li> </ul>	<p>13. Promote the extension of Belhar Drive to provide direct vehicular access to Pentech Station to increase local connectivity, and increase local accessibility to public transport, thereby facilitating local land use intensification and mixed use development along Belhar Drive and Delft Main Road.</p> <p>14. Promote the extension of Erica Drive across the R300 Freeway into Sarepta to facilitate integration between communities.</p>	

## Sub-district 6: New development areas

### Unibell Station Mixed Use Node

Mixed use development is proposed on the undeveloped land located south and east of Unibell Station (**map ref 20**). This precinct offers significant opportunity for transit-oriented development in close proximity to a Unibell Station, thus presenting additional opportunities to revive previous proposals for a local transport interchange to be developed around the station precinct. Mixed use development in the form of commercial / office / residential (medium and high density) development is encouraged. The sites also provide opportunities for student accommodation for those students attending the UWC and CPUT universities.

Available state-owned land should be investigated for GAP and social housing. Care should be taken that provision is being made for adequate movement to and from the station. Adequate provision for public facilities should be made and open space should also be incorporated where large portions of the sites are proposed for high density housing development. The department of Sports, Recreation and amenities has indicated that the portion of vacant land located adjacent to the Belhar Indoor Sports Complex is an ideal location for a new swimming pool.

### Belhar Area residential infill sites

Erf 28981 (**map ref 21**) is identified on the Department of Housing: 5-year plan. It is earmarked for medium density housing development and is already serviced.

Erf 30080 (**map ref 22**) is an undeveloped surplus school site. Due to its location at the intersection of Belhar Drive (to be extended across the R300 freeway) and Belhar Main Road (to be extended towards Pentech Station), the site offers higher value with higher intensity urban development. Medium to high density residential development with mixed use considered in more exposed portions of the site is proposed.

Erf 27040 (**map ref 23**) is public open space, which hasn't been developed. The site was identified for sports field development. However, the Symphony Way Sports Complex is considered sufficient to accommodate the sporting demands of the area and surrounds. To this end, the development of medium to high density housing with a mixed use edge fronting onto Belhar Main Road is proposed for the site. The possible future extension of Belhar Main Road to facilitate a direct road linkage with Pentech Station will increase movement desire lines. The proposal for a mixed use edge is envisaged to reinforce activity street development along Belhar Main Road.

Erven 22118, 22161 and 30933 (**map ref 24**) makes up an undeveloped open space site, which due to its location, is not regarded as a safe space. The site was also previously invaded by squatters, who were subsequently removed. It is thus important to reserve this site for development. It is proposed for medium to high density housing development, which could partially address the housing need within the Belhar community for different forms of housing provision.

Erf 23218 (**map ref 25**) is a retention pond which has been reduced in size in the past. The northern portion is available for medium density infill housing development. Access will need to be taken off Drosdy Road.

Erf 27661 (**map ref 26**) is a vacant school site, which should be developed as a secondary school should the demand arise for this education facility in the future. The development of other vacant land parcels within the surrounding area and surrounds is likely to increase such demand. The reservation of a secondary school in this location assists in promotion of resource sharing between neighbourhoods/communities, since the pedestrian bridge over the R300 freeway is less than 300m away from the site and will provide direct pedestrian access for learners residing in the Kalkfontein area. The reservation of erf 27916 for a future primary school provides the opportunity to cluster education facilities.

Erf 28652 is a vacant surplus school site, while Erf 28655 abutting Erf 28652, is an undeveloped public open space (**map ref 27**). A stormwater retention dam is located on the southern portion of Erf 28655. The site is proposed for development of medium density infill housing.

#### Delft Area

Mixed use development is proposed on the undeveloped land located south of Stellenbosch Arterial and adjacent to Delft Main Road (**map ref 28**). This land provides an opportunity for mixed use development in the form of service industrial / commercial / office / residential development. Erven 3493 and 3494, located to the east of Delft Main Road, comprise of a commercial site and a school site. Erf 4465, located to the west of Delft Main Road, is zoned as Undetermined, and is still vacant. The above properties represent the main access point and gateway into Delft. Any form of appropriate development, accentuating this location, should be supported.

Mixed use development is proposed at Delft CBD on the undeveloped land located east of Delft Main Road and adjacent to Hindle Road (**map ref 29**). This land provides an opportunity for mixed use development in the form of service industrial / commercial / office / residential development. Erven 21599-3188 located to the north of Hindle Road represents the developable area of the Delft CBD. The eastern portion of the site is proposed for high density housing development, whilst the remainder of the site could be utilised for commercial and service industrial purposes. The establishment of a public transport facility on the site should also be supported, as it is argued that it will optimise access to the site and other proximate non-residential uses, such as the health facility, library, community hall, swimming pool facility and police station.

Erf 7045, located to the south of Hindle Road, is a vacant commercial facility. The development of the site should be supported in order to strengthen the business node to the north, however existing electrical service infrastructure and stormwater retention dams will need to be considered as they may limit development potential of the site.

Erf 24019 (**map ref 30**) is located in a position of high regional accessibility and strategic significance at the intersection of Stellenbosch Arterial and Symphony Way (both major development routes within the Tygerberg District). A record of decision (ROD) was issued in support of the proclamation of the site as a protected area. The ROD was issued with the proviso that the City of Cape Town was to proclaim the area as a protected area and determine a management mechanism for the protection of the site. However, this has not happened to date, resulting in the site losing biodiversity integrity due to illegal dumping and squatting, among other things. Discussions with the City of Cape Town: Biodiversity Management Branch, have enabled the site to once again be considered for investigation for development. To this end the site is

identified for high density residential development. Some commercial development may also be considered in more exposed and accessible locations on the site.

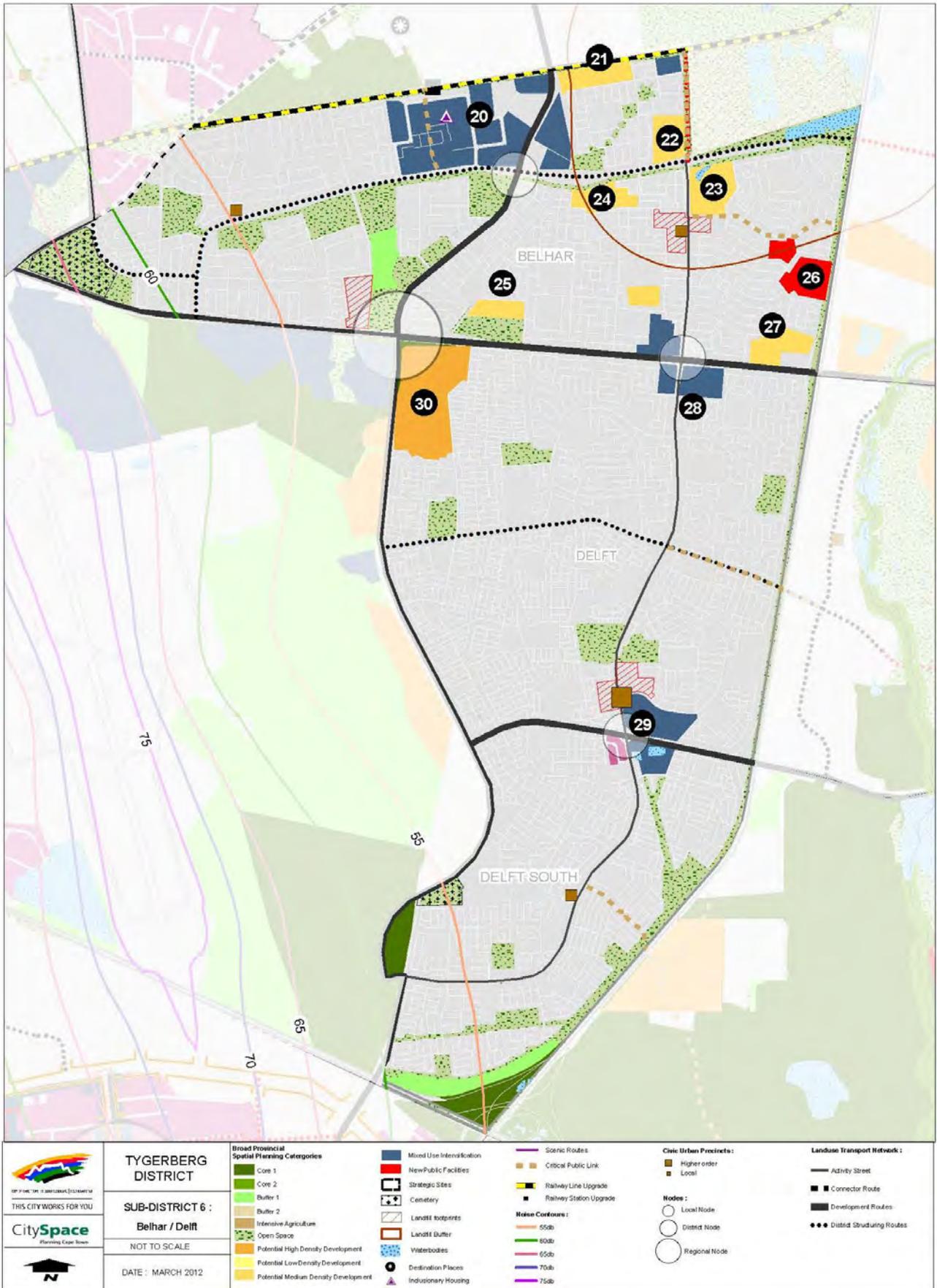


Figure 32: Sub-district 6

## 6.2.7 Sub-district 7: Cape Town International Airport Precinct and Boquinar Industria

Sub-district 7 is bounded by Modderdam Road and Stellenbosch Arterial to the north; Symphony Way to the east; the N2 freeway to the south; and the Airport Approach Road and the western boundary of King David Country Club to the west.

Large scale investment in Airport infrastructure has resulted in increased desirability to locate industrial activity within this precinct. Demand for land for housing to resettle inhabitants of informal settlements within the 65 decibel airport noise contour of the existing airport runway is an immediate issue.

Sub-district 7: Cape Town International Airport and Boquinar Industria		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Identify alternative housing opportunities for Informal Settlements and support initiatives to improve access of communities to basic services including engineering services, health services and education.</li> </ul>	<ol style="list-style-type: none"> <li>Consider relocation of residents of the Freedom Farm informal settlement to an area suitable for human habitation. The proposed location in the north east airport precinct should be of sufficient size to accommodate all of the residents of Freedom Farm, and should be developed with all necessary public facilities and infrastructure.</li> <li>Consider relocation of the Blikkiesdorp Temporary Residential Area (TRA) as a substantial portion of the settlement is located within the 65 decibel noise contour of the planned second airport runway.</li> </ol>	
<p>Economic opportunities</p> <ul style="list-style-type: none"> <li>Reinforce the location of the airport as a major economic generator within the city.</li> <li>Ensure the long term sustainability of the Cape Town International Airport in terms of impact on surrounding community and infrastructure.</li> <li>Promote economic development around exposed locations on the accessibility grid.</li> </ul>	<ol style="list-style-type: none"> <li>Encourage proposals for industrial development on portions of the airport not required for aviation purposes.</li> <li>Stellenbosch/Symphony Way intersection is a strategic nodal intersection with a significant amount of publicly owned land surrounding it. High intensity mixed use development should be encouraged around this location to optimise available access and exposure provided.</li> <li>Ensure that the impact of development proposals on the surrounding transportation network capacity can be accommodated.</li> </ol>	
<p>Managing urban development</p> <ul style="list-style-type: none"> <li>Ensure the retention of unique environmental assets that exist on land around the airport.</li> </ul>	<ol style="list-style-type: none"> <li>Ensure adherence of development to the noise restrictions applicable to the airport and that future extensions to the airport recognize potential impact on the surrounding residential community.</li> <li>Ensure that development proposals take cognisance of unique environmental assets that exist within the area, taking care to provide open space linkages through portions earmarked for development.</li> </ol>	
<p>Access</p> <ul style="list-style-type: none"> <li>Increasing the development and economic potential of the area by facilitating increased connectivity and integration with surrounding areas.</li> </ul>	<ol style="list-style-type: none"> <li>Prioritise the realignment of Borchard's Quarry Road with New Eisleben Road over the N2 freeway.</li> <li>Road access proposals for the Symphony Way Corridor area (airport side) should be in accordance with access points agreed to by the Transport, Roads and Stormwater departments.</li> </ol>	

## **Sub-district 7: New development areas**

Development is proposed on the undeveloped land surrounding the CTIA owned by the Airports Company of South Africa (ACSA). ACSA is pursuing commercial development on land not required for aviation purposes.

### CTIA Northern Mixed Use node

New mixed use development is proposed on the undeveloped land located east of the Borchard's Quarry / Modderdam Road intersection and the undeveloped land located south of Stellenbosch Arterial (**map ref 31**). This land provides an opportunity for mixed use development in the form of service industrial / warehousing / commercial development. ACSA proposes this site as a cargo and logistics node, making use of its central location within the city. Pick n' Pay and Massmart have located their Western Cape distribution centres within this node. Development rights are in place to provide approximately 80 000m<sup>2</sup> of GLA within this node, some of which has already been taken up.

### Airport North-east Precinct

The Airport north-east precinct (**map ref 32**) is proposed to accommodate substantial mixed use and industrial development on ACSA-owned land (precinct 2) together with land set aside for residential development to accommodate the relocation of the residents of Freedom Farm. In addition, various City-owned land parcels located along Stellenbosch Arterial and Symphony Way are also available to accommodate mixed use development (potentially some residential development). The development of this precinct will reinforce the development route nature of these routes, which in its current state, sterilises a large section of Stellenbosch Arterial.

### Symphony Way Corridor

This linear strip of land provides an opportunity for high density residential development and industrial development in the form of service industrial/warehousing/commercial development or aviation related development on the undeveloped land located on the eastern airport extent and west of Symphony Way (**map ref 33**). According the DEA&DP: Noise Pollution Department, the 65bda airport noise contour is the limit where residential use can be permitted (SANS code 10103:2003).

Furthermore, it is understood that the subject properties, are/were owned by the National Housing Board, and is/was to be transferred to ACSA on condition that the land be utilised for aviation and related purposes. Therefore, should land be developed for industrial or other uses that are not related to the aviation function, the issue regarding the mentioned condition will need to be resolved, if not resolved to date. Furthermore, any new development should have a positive interface with Symphony Way (and not backing onto it), should provide for pedestrian access, and should also strive to incorporate opportunities for smaller enterprises.

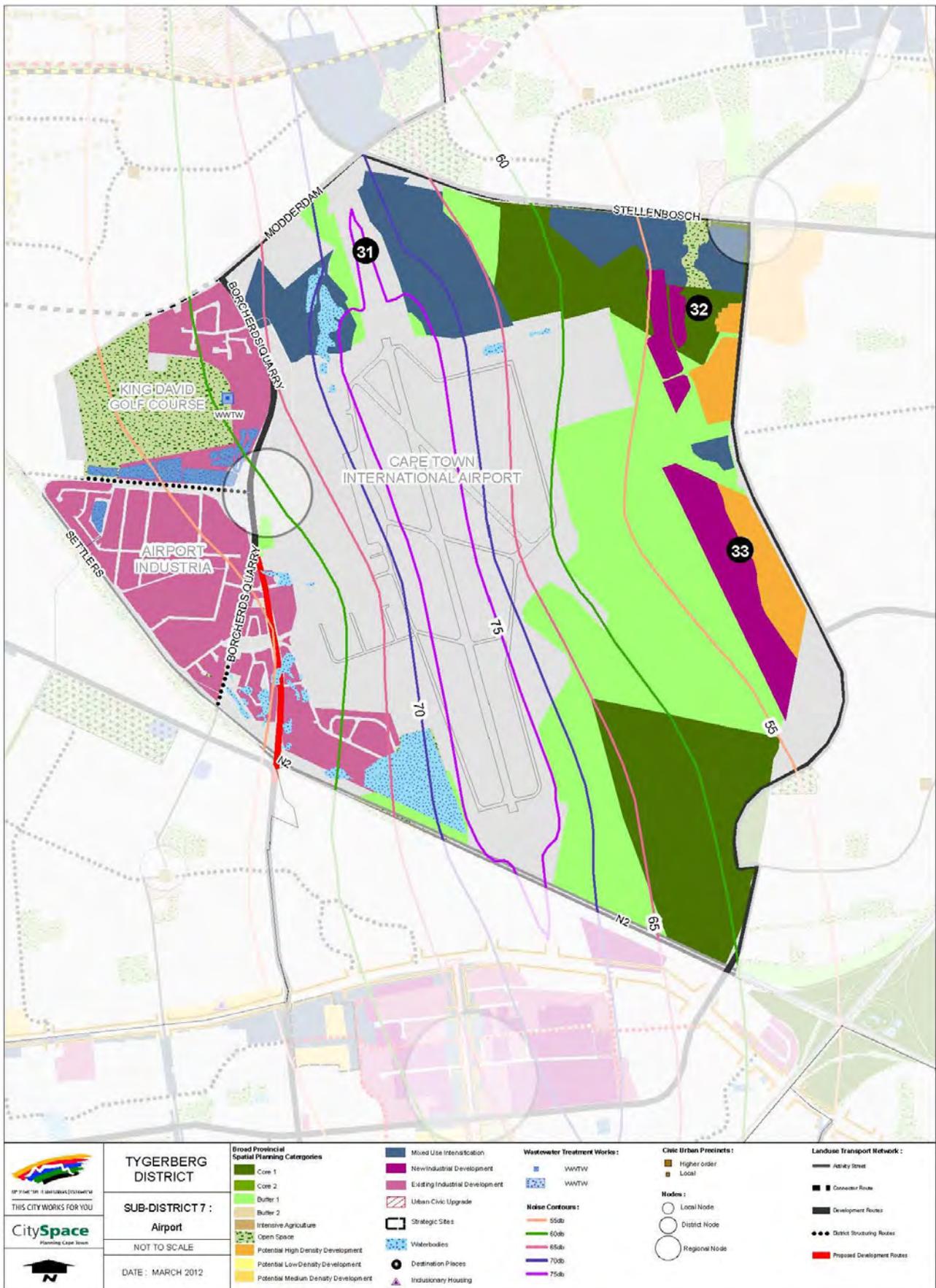


Figure 33: Sub-district 7

## 6.2.8 Sub-district 8: Greater Kuils River, Bottelary Smallholdings, Polkadraai Smallholdings, Zevenwacht, Stellenbosch Farms

Sub-district 8 is bound by Bottelary Road to the north; the City of Cape Town jurisdictional boundary to the east; Polkadraai Road to the south; and the Jan Riebeeck Road activity corridor transitional boundary and the R300 freeway to the west.

The area is largely suburban in character, abutting the Stellenbosch Farms, but increasing in density and diversity in residential typology in certain areas towards Van Riebeeck Road. Large scale new development is envisaged in this area. Issues typically experienced within the area include lack of integrated planning and development leading to cellular/internalised development, as well as inappropriate development interfaces with open spaces.

<b>Sub-district 8: Greater Kuilsrivier, Bottelary Smallholdings, Polkadraai Smallholdings, Zevenwacht, Stellenbosch Farms</b>		
<b>Local objectives</b>	<b>Suggested response / Guidelines / Policy statements</b>	<b>Applicable (existing) local policies</b>
<p>Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Facilitate opportunities for densification in a manner that will not detract from the character of the area.</li> <li>Promote integrated planning and development wherever possible.</li> </ul>	<ol style="list-style-type: none"> <li>Promote integrated planning and development for areas such as the Bottelary and Polkadraai Smallholdings as opposed to fragmented planning and decision-making.</li> <li>Promote densification in an appropriate manner that respects the character of the existing area. Higher density residential typologies should be developed in closer proximity to Van Riebeeck Road and other high order routes (e.g. Langverwacht Road). Where subdivision of individual properties is not appropriate, the construction of duet-houses or second dwelling units may be considered.</li> <li>Create appropriate transition areas between commercial and residential development.</li> <li>Although located in relative proximity to the economic activity around Van Riebeeck/Stellenbosch Arterial Intersection, limited access is available along Okavango Link Road. Therefore, limited mixed use (of lower business intensity) should be encouraged.</li> <li>Mixed use intensification is supported along Land Street, as well as the portion of Langverwacht Road that provides direct access to abutting properties. However, uses should be of lower intensity than that which is encouraged along Jan Riebeeck Road activity corridor, such as offices and medical surgeries.</li> <li>Mixed use development of scale appropriate to the urban character of the area is encouraged along points of access along Saxdownes Road (Brackenfell Boulevard extension). The future intersection where the proposed Saxdownes. alignment meets Langverwacht Road is a potential location for a local mixed use node.</li> <li>Development interface guidelines are to be determined for the development of areas abutting Saxdownes Road.</li> </ol>	<ul style="list-style-type: none"> <li>Floodplain and River Corridor Management Policy (2009)</li> <li>Management of Urban Storm water Impacts Policy (2009)</li> </ul>
<p>Economic opportunities</p> <ul style="list-style-type: none"> <li>Encourage creation / provision of tourist attractions</li> </ul>	<ol style="list-style-type: none"> <li>Develop locally appropriate guidelines to encourage and accommodate tourism activity and to evaluate such applications.</li> </ol>	

<p>/ facilities that are appropriate with regard to the character, scale and nature of the rural areas within the bounds of the district</p> <ul style="list-style-type: none"> <li>• Ensure retention of rural / agricultural character of the Stellenbosch Farms</li> <li>• Restrict and discourage intrusion of urban development into agricultural areas.</li> </ul>	<p>9. Develop Guidelines to ensure appropriate interface between urban development and agricultural and rural land / natural “veld” in order to discourage further urban invasion, to ensure appropriate architectural character and to improve fire maintenance and safety.</p> <p>10. The urban edge at the Stellenbosch / Kuilsrivier farmlands should remain a restrictive edge to strongly discourage intrusion of urban development into high &amp; medium potential agricultural areas.</p>	
<p>Managing urban development</p> <ul style="list-style-type: none"> <li>• Ensure appropriate interface with rural areas, river areas, golf course and other public open spaces.</li> <li>• Ensure integration of unique environmental qualities and resources into development proposals.</li> <li>• Ensure and consider protection of views where possible.</li> </ul>	<p>11. Develop locally appropriate interface guidelines with regard to the functional and visual inclusion of river reserves (Kuils and Bottelary Rivers) and overhead power lines and servitudes into new developments as well as interface of new developments with rural areas (urban edge) as well as the Kuilsrivier Golf Course.</p> <p>12. Develop guidelines for the appropriate treatment of public space interfaces, to ensure that development does not back onto these spaces but rather create active interfaces.</p> <p>13. Ensure general maintenance of green streetscapes.</p>	
<p>Access</p> <ul style="list-style-type: none"> <li>• Facilitate opportunities to increase local accessibility and openness within the urban fabric of Kuilsrivier.</li> </ul>	<p>14. The development of Kuilsrivier Bypass Road will reduce congestion on Van Riebeeck Road, allowing for a greater pedestrian-oriented environment to be created, together with higher activity around the Kuilsrivier Station precinct.</p> <p>15. Prioritise the completion of Saxdownes Road link through Kuilsrivier to alleviate traffic constraints along Amandel Road.</p> <p>16. A link road from Langverwacht Road along the eastern side of Klein Zevenwacht into the Bottelary Smallholdings is planned to provide additional access to areas east of the planned Okavango Bypass Road alignment.</p> <p>17. The area of Jagtershof, situated behind the Zevenwacht Mall experiences severe access constraints as the area currently only has one access point off Langverwacht Road. Further developments of smallholdings in the south and east of Jagtershof will see access provided onto Link and Skilpaddam Roads. Furthermore, additional access to the area should be prioritised by linking Jagters Road with Saxdownes Road once it has been constructed.</p>	

## Sub-district 8: New development areas

### Bottelary smallholdings area/ Horticultural smallholdings

The undeveloped Bottelary smallholdings, the remainder of Annandale, as well as the existing chicken farm located to the south offers opportunity for medium density residential development (**map ref 34**). The area to the north of the Bottelary Road, will reflect medium to higher density residential development. Care should be taken that the flood plain area of the Bottelary River is preserved, enhanced in quality, and incorporated into any detailed planning of the area as a feature of development. Affordable housing opportunities should also be pursued in this area to promote mixing of income groups.

### Jagtershof Sports Club and surrounds

The remainder of Farm 235 is located south of the Jagtershof Sports Complex in Kuilsrivier (**map ref 35**). The site is owned by the City of Cape Town and measures 18,23Ha in extent, including the sports club grounds and the Saxdownes Road reserve. The site was originally earmarked as a possible school site to accommodate the rapid increase in urban development in the Kuilsrivier area. Formal agreement has yet to be reached with the PGWC: Department of Public Works regarding the use of the site for educational purposes. However, PGWC has expressed renewed intent to purchase a portion of the site within a short-to-medium timeframe.

The Jagtershof Sports Complex is also looking to expand with additional rugby fields onto Remainder Farm 235. However, the planned Jagters Road reserve, which will connect with Saxdownes Road in future, poses a challenge to the layout of the sports field. This should be resolved with the Department of Transport, Roads & Stormwater before the planning of the expansion of the sports fields. The possibility of including a residential component on the site should also be investigated.

### Polkadraai Smallholdings Area/ Horticultural smallholdings

The smallholdings (c/o Polkadraai Road and Okavango Bypass) accommodating some vegetable and other farming activities, may in future be considered for medium density residential development (**map ref 36**). It is essential that broad local planning of the area be undertaken to prevent the area, which consists of multiple owners, from developing on a cellular basis.

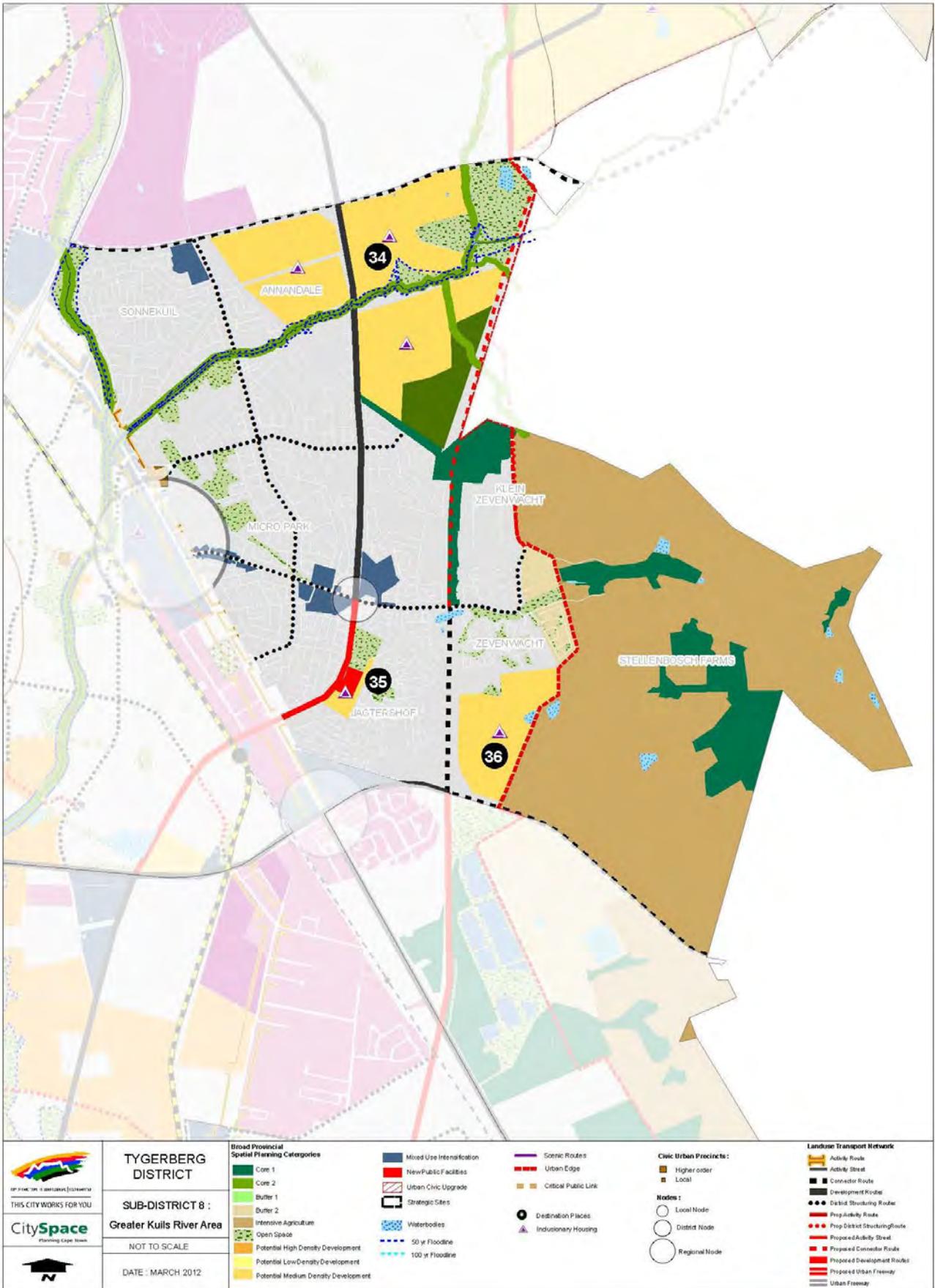


Figure 34: Sub-district 8

## 6.2.9 Sub-district 9: Sarepta, Stellendale, Highbury, Kalkfontein Smallholdings, Kuils River system

Sub-district 9 is bounded by the Strand railway line to the east, Stellenbosch Arterial to the south, and the R300 freeway to the west.

The area is largely suburban in character, but contains a diverse range of housing typologies and comprises a range of income groups in older established areas, newly developed/developing areas, as well as publicly assisted housing areas and informal settlements. Typical issues experienced within the area include a lack of appropriate integration with surrounding areas due to the barrier effects of mobility routes and railways, as well as service delivery and quality public open space.

Sub-district 9: Sarepta, Kalkfontein Smallholdings, Stellendale, Highbury		
Local objectives	Suggested response / Guidelines / Policy statements	Applicable (existing) local policies
<p>Intensification &amp; urban form/character</p> <ul style="list-style-type: none"> <li>Ensure retention of the residential character and prevent sprawl of business activities into the residential area.</li> <li>Facilitate opportunities for densification in a manner that will benefit and uplift the area.</li> <li>Promote the general upliftment of the area with appropriate development and clearly demarcated areas of use.</li> <li>Facilitate specifically the provision of in-fill housing opportunities in a manner that will contribute to the upliftment of the area.</li> </ul>	<ol style="list-style-type: none"> <li>Development of appropriately located vacant land for higher density residential development should be promoted. Such development should be undertaken in a manner that does not detract from the character of the area and that will consider the maintenance of an appropriate interface between the development and especially single residential uses within the area.</li> <li>Densification of the area in general can furthermore be promoted through subdivision of larger properties and construction of second dwelling units on properties.</li> <li>The development potential of smaller properties should be promoted through facilitating applications for regulation departures in a manner that does not negatively affect adjoining land owners.</li> <li></li> </ol>	<ul style="list-style-type: none"> <li>Cape Town Zoning Scheme Policies for home occupation and guest accommodation</li> <li>Policy for establishment of Educare Facilities.</li> <li>Floodplain and River Corridor Management Policy (2009)</li> <li>Management of Urban Storm water Impacts Policy (2009)</li> </ul>
<p>Economic opportunities</p> <ul style="list-style-type: none"> <li>Promote opportunities for business activities in close proximity to public transport routes and services.</li> <li>Identify opportunities for establishment and support of SMMEs.</li> </ul>	<ol style="list-style-type: none"> <li>Facilitate commercial development in demarcated areas where commercial activities can be established (i.e. Kuilsrivier Station, sections of Reuter Road through Kalkfontein, intersections along New Nooiensfontein Road and Belhar/Range Road Extension, Nooiensfontein Road where access is possible) and ensure appropriate interface of commercial activities with residential areas.</li> <li>Create and promote opportunities for establishment of SMMEs within appropriate areas (e.g. around Kuilsrivier Station).</li> <li>Assist with the identification of solutions for accommodation of the horse and cart industry.</li> </ol>	
<p>Managing urban development</p> <ul style="list-style-type: none"> <li>Opportunity to enhance the quality of the urban environment by improving the quality of open space and natural structuring elements.</li> </ul>	<ol style="list-style-type: none"> <li>Support and initiate opportunities for general upgrading and renewal of the Kuils River corridor area to serve as a high quality natural amenity for surrounding communities.</li> <li>In general, there is wide support for the Kuils River Corridor to be identified as a district park. Key focal points for public investment can be identified along</li> </ol>	

	<p>its course, such as the area around the Sarepta local civic precinct, the western river bank at Kalkfontein, and the 1:100 yr floodplain at Highbury.</p> <p>10. Facilitate measures to proactively manage livestock, which are put out to pasture along the banks of the Kuils River.</p> <p>11. Encourage complementary uses that will promote a more active edge along the Kuils River. The existing informal soccer fields in the Kalkfontein area should be formalised and upgraded as part of the Kalkfontein Phase 3 housing project.</p> <p>12. Encourage the development of a district park around the Sarepta local civic precinct to reinforce the public amenity value of this location.</p>	
<p>Access</p> <ul style="list-style-type: none"> <li>Promote the appropriate integration of the area with surrounding areas to facilitate accessibility</li> </ul>	<p>13. Encourage the completion of road segments for the extension of Belhar Drive to connect with Erica Drive in Belhar. Business development is encouraged at intersections along Belhar Drive/Range Road extension.</p> <p>14. Encourage the extension of Reuter Road in Kalkfontein across the Kuils River to link up with Highbury Road intersection.</p> <p>15. The completion of Saxdownes Road through the Highbury Area should be encouraged.</p>	

## Sub-district 9: New development areas

### Kuilsrivier Station Precinct and surrounds

Portion of Remainder Farm 429 (**map ref 37**), located on the Sarepta side of Kuilsrivier Station, is owned by the rail authority (PRASA) and is proposed for high density residential development, thereby making more efficient use of the locational benefits offered in proximity to a rail station.

Erven 533 and 541 (**map ref 38**), also located less than 500m from Kuilsrivier Station, is owned by the Provincial Housing Board. It is proposed that these sites also be developed for medium to high density residential development.

### Kalkfontein Smallholdings and Highbury

The remainder of the Kalkfontein smallholdings (**Map ref 39**) offer the opportunity for higher density residential development, as most of these smallholdings no longer operate for the as smallholdings. This site is identified on the City of Cape Town: Housing department's 5-year housing plan as phase 3 of the Kalkfontein housing project. The Department of Sports, Recreation and Amenities also requires a portion of the site to provide sports fields to accommodate the demand of the Kalkfontein Community. This should be considered on portions abutting the Kuils River canal to promote a more active river interface.

The disused waste water treatment works area (Stellenbosch Farms 530, 533) (**map ref 40**), offers further opportunity for redevelopment for higher density housing. Consideration should be given to access onto Stellenbosch Arterial opposite the existing access to Wesbank. Otherwise, access is possible via the adjacent school grounds access. The adjacent school grounds further offer opportunities for future infill development.

The area bound by the Kuils River to the west, Stellenbosch Arterial to the south, and Nooiensfontein Road to the east (**map ref 41**), is proposed for medium density residential development as an extension to Highbury Park. Development proposals for the area should be

sensitive to stormwater outflow from the open stormwater canal, which opens up onto the northern section of the site.

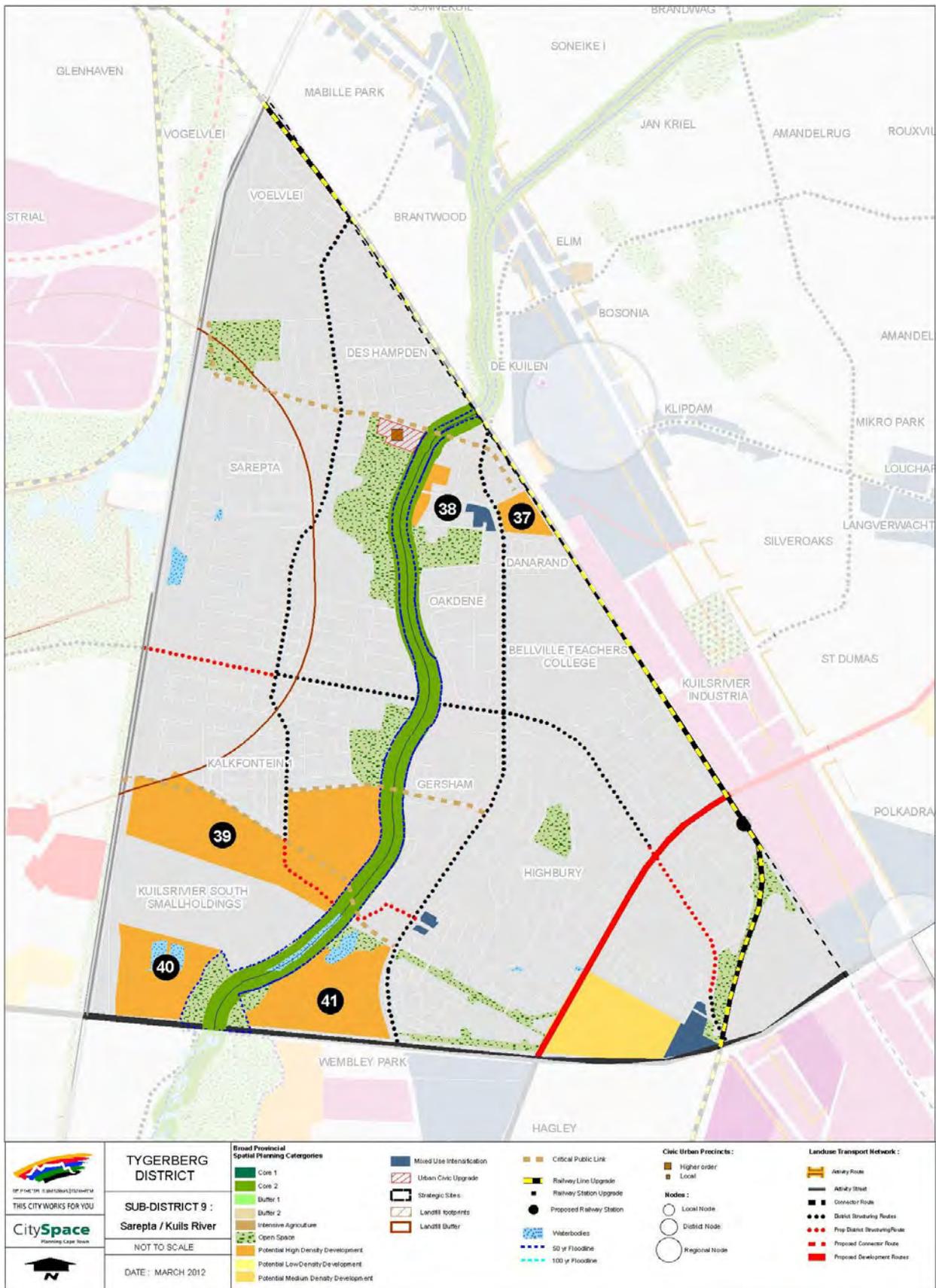


Figure 35: Sub-district 9

## 6.3 Local area planning priorities

While the district plan gives direction at a district scale, local area plans are required to provide a greater level of planning direction in strategic locations, aimed at implementing the plan. Several priority local planning and investment areas are identified in order to implement the plan. Inputs from the public engagement process have been an essential part of this process. These inputs have been balanced with the need to be strategic in focussing on projects with maximum impact and highest alignment with the spatial strategies of the CTSDP (2011) and the District SDP, and programmed with due regard for resources available to undertake projects..

Based on technical review and inputs to date, several planning and investment focus areas have been identified including (see section 6.3.1):

- Preliminary local planning areas where further planning is required to guide local land use change or define capital investment interventions.
- Capital investment action areas both in the short, medium and longer term.

It should be noted that capital investment will occur across the district on a range of public facilities, infrastructure and services (roads, bulk services etc). The focus on action areas is thus not comprehensive, but strategic, focusing on areas where multi-sectoral intervention is needed to ensure high impact restructuring and upgrading within the district.

### 6.3.1 Local area planning interventions

LOCAL AREA PLANNING INITIATIVES			
PLAN/PROJECT	DESCRIPTION	WHAT NEEDS TO HAPPEN?	TIMEFRAME (S: 1-2yr; M: 2-5yr; M/L: +5yr)
Sarepta-Kalkfontein spatial development framework	A local area spatial development framework is needed to guide the overall spatial development of the area, changes in land use, and manage urban development interfaces along the Kuils River.	<ul style="list-style-type: none"> <li>Prepare a new spatial development framework indicating public investments around capital infrastructure projects.</li> <li>Motivation for Municipal Infrastructure Grant (MIG) funding to implement capital infrastructure projects.</li> <li>Facilitating several partnership agreements between the City and other state departments (e.g. PGWC, PRASA, etc.) regarding development of public land holdings</li> <li>Obtain buy-in from essential departments with vested interests in the area (e.g. Housing, Sports and Recreation, City Parks, Roads and Stormwater)</li> </ul>	M: 2-5yr
Belhar Main Road	Belhar Main Road represents significant potential for local economic development and public facilities development linked with infrastructure projects (e.g. transport and housing development). Several City landholdings exist in proximity of Belhar local civic precinct.	<ul style="list-style-type: none"> <li>Commitment and alignment of budgets of various line departments</li> </ul>	M/L: +5yr
Valhalla Park/Bishop Lavis	<p>The Valhalla Park Sports Field is a largely underutilised site and is thus earmarked for integrated housing development. As part of the housing project, a 5,3Ha portion of the existing sports field will be retained, while a site at the intersection of Valhalla Drive and Angela Street is to be reserved for a local 'business hive'. The existing local civic precinct in Angela Street is to be reinforced by upgrading of the library building and additional infrastructure. In principle the project should be treated as a best-practice project, which should have the buy-in and financial backing from all line departments to ensure its success.</p> <p>This project should not be carried out in isolation, but rather the broader area should be investigate to determine prospects for further capital implementation projects in order to maximise the impacts of public investment.</p>	<ul style="list-style-type: none"> <li>Placement of the project within a wider planning framework, using the project as a catalytic project for additional public investment and/or partnerships within the broader Valhalla Park/Bishop Lavis area.</li> <li>Development facilitation: The broader area should be motivated for possible NDPG funding (Neighbourhood Development Partnership Grant) with the aim of stimulating private investment in the area.</li> <li>Finalisation of a layout plan.</li> <li>Liaise with Dept. Economic Development to determine whether a budget is available to develop the site as a business hive. Alternatively, this</li> </ul>	S: 1-2yr M: 2-5yr
Tygerberg District Plan - Technical Report 2012			

		<p>site should be put out on tender for private development.</p> <ul style="list-style-type: none"> <li>Investigate greening and urban upgrade initiatives – capital implementation projects such as landscaping and pedestrian streetscape upgrading (especially along Angela Street)</li> <li>Operational funding required to develop a precinct plan for the Adriaanse Northern Gateway Precinct. This is the next precinct priority following on from the Angela Street Western Gateway and 8ste Laan informal settlement upgrade. Implementation is targeted on a 2-5 year timeframe.</li> </ul>	
Riverton Urban Node Development Strategy	A land use policy and urban design framework is required to guide changes in land use from the presently derelict industrial area to a vibrant mixed use area. Related urban projects such as Elsie's River Station upgrade, Halt Road urban civic upgrade and Riverton Road district park upgrade should be incorporated into the spatial development of the area.	<ul style="list-style-type: none"> <li>Review and incorporate proposals made in the Upper Halt Road Urban Design Framework where relevant</li> <li>Develop a policy plan for the appropriate development of the area.</li> </ul>	S: 1-2yr
The Tygerberg Public Transport Corridor: Durban Road/Modderdam North Road/Symphony Way (DMS) Development Route	The DMS corridor area reflects a diversity of development challenges, whilst also holding one of the key opportunities in terms of the potential for restructuring the City. Key challenges relating to its functioning as a development corridor relate to, inter alia, its poor functioning as a public transport connection and unrealised economic opportunities within the corridor. However, major opportunities are presented by investment in the corridor, such as improvement of city-wide linkages to opportunities, the ability to unlock catalytic economic generators along the corridor, and the availability of high population thresholds to support high order public transport intervention.	<ul style="list-style-type: none"> <li>A conceptual spatial perspective is required to build a common vision and a set of arguments for the prioritization of this corridor as the next major investment project within the City of Cape Town. This argument should be developed within the framework established by the Cape Town SDF, the affected district plans and the integrated transport plan for the city.</li> <li>An integrated transport network plan should be developed for the corridor to guide transport decision-making and budgets.</li> </ul>	<p>S: 1-2yr</p> <ul style="list-style-type: none"> <li>High level conceptual planning (vision and argument) and transport impact analysis to be conducted in the short term in motivation of political and budgetary support</li> </ul> <p>M: 2-5yr</p> <ul style="list-style-type: none"> <li>More detailed transport network planning to be conducted</li> <li>A land use response to be developed in relation to planned public transport investment.</li> </ul>
Airport North-East Precinct Conceptual Framework Plan	This former biodiversity hotspot has lost its integrity and is a low conservation priority. Considering the planning which ACSA has undertaken for Precinct 2 of the airport grounds, and the vast amount of City-owned land available, a local area precinct plan is required to guide the overall spatial development of the area.	<ul style="list-style-type: none"> <li>Prepare new spatial development framework</li> <li>Conduct further detailed engagement with essential departments and stakeholders to facilitate the resolution of development issues which exist (e.g. resolving biodiversity issues on site).</li> </ul>	S: 1-2yr

### **6.3.2 Development facilitation: Local area policy work to be conducted**

The following is a list of local area policy priorities, which are required to guide development along structuring routes or local precincts where development pressure exists, either for business conversions or land use intensification, in the most appropriate way.

- Develop land use and access management strategies for Vryburger Avenue/De Grendel Road in Bothasig, Hendrik Verwoerd Drive in Panorama/Platteklouf, and Monte Vista Boulevard, to guide mixed use intensification along these routes.
- Develop land use guidelines for mixed land use intensification along Langverwacht Road.
- Boston Policy Plan (planning currently underway to be approved by council)
- Identification of appropriate opportunities for establishment of SMMEs and demarcation of appropriate areas for informal trading.
- Promote and facilitate the development of a local planning framework to guide the incremental development of the Bottelary and Polkadraai Smallholding areas.

## 8. REFERENCES

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- ACSA (no date). *Cape Town International Airport: Property Development Opportunities*.
- City of Cape Town (CoCT) (2005). *Air Quality Management Plan for the City of Cape Town*. City Health Department Report AQM 20050823-001.
- City of Cape Town (CoCT) (2006). *State of Cape Town Report 2006: Development Issues in Cape Town*.
- City of Cape Town (CoCT) (2007) *Planning Districts Socio-Economic Analysis 2007*, City of Cape Town: Strategic Development Information and GIS Department.
- City of Cape Town (2007a) *Strategic Development Information and GIS Department; Planning District Profiles*; Janet Gie, Karen Small and Craig Haskins.
- City of Cape Town (CoCT) (2008). *Catchment, Stormwater and River Management: Coastal and Inland Water Quality Report for the 12 Month Period Ending March 2008*.
- City of Cape Town (CoCT) (2008a). *Agricultural Land Review. Report 1498/2*.
- Compton (2004). *The Rocks and Mountains of Cape Town*. Double Double Storey Books/JUTA & Co, Cape Town.
- Department of Minerals and Energy (DME) (2000), *Mining Structure Plan Summary*.
- Department of Water Affairs and Forestry (DWAf) (2000). *Hydrogeological Map, Cape Town, 3317*. Pretoria.
- Dorse, C. (2008). Personal communication.
- Driver A. (in prep): Threatened ecosystems for listing under NEM:BA 2008, South African Biodiversity Institute, Pretoria.
- Geological Survey (1990) 3318 Cape Town 1:250 000 Geological Series. Chief Director Surveys and Mapping, Mowbray.
- GRID Arenal. <http://www.ngo.grida.no/soesa/nsoer/Data/vegrsa/thicbiom.htm>, accessed August 2008.
- IUCN. 2008. *2008 IUCN Red List of Threatened Species*. [www.iucnredlist.org](http://www.iucnredlist.org) downloaded on 20 January 2009.
- Low, A.B. & Rebelo, A.G. (eds) (1998) *Vegetation of South Africa, Lesotho and Swaziland 2<sup>nd</sup> Edition*. Department of Environmental Affairs and Tourism, Pretoria
- Mucina, L. & Rutherford, M.C. (eds) (2006) *The vegetation of South Africa, Lesotho and Swaziland*. SANBI, Pretoria.
- Rebelo A.G., Boucher C., Helme N., Mucina L. and Rutherford M. (2006). Fynbos Biome. In: Mucina, L. & Rutherford, M.C. (eds) (2006) *The vegetation of South Africa, Lesotho and Swaziland*. SANBI, Pretoria.
- Republic of South Africa (1998) *National Environmental Management Act 107 of 1998* Government Gazette No. 19519.
- Republic of South Africa (2004) *National Environmental Management Act 8 of 2004* Government Gazette No. 26570.
- River Health Programme (2005). *State of Rivers Report: Greater Cape Town's Rivers*. [http://www.csir.co.za/rhp/state\\_of\\_rivers/greatercapetown05/greatercapetown05.pdf](http://www.csir.co.za/rhp/state_of_rivers/greatercapetown05/greatercapetown05.pdf), accessed December 2008.

UCT Department of Geological Sciences. <http://web.uct.ac.za/depts/geolsci/cape.htm> Accessed January 2009.

## 9. ANNEXURES

### A. Planning Policy Rationalisation

#### Approved structure plans

Plans promulgated in terms of section 4(10) of the Land Use Planning Ordinance, and that impact on the Tygerberg District, which are withdrawn include:

- Belhar Local Structure Plan
- De Grendel Structure Plan
- Goodwood Structure Plan
- Tygerberg Spatial Development Framework
- Tygerberg Central Spatial Development Framework
- Tygerberg Eastern Spatial Development Framework
- Tygerberg Southern Service Area Spatial Development Framework
- Tygerberg West Spatial Development Framework

#### Council approved policy plans

Policy plans approved by Council, and that impacted on the Tygerberg District, which are withdrawn include:

- None

	Spatial Policy	Study Area	Status	Date	Purpose	Main Proposals	Proposed Action ito District SDP	Reason	Proposed Future Status of Plan
D	Belhar Local Structure Plan	Local	Approved 4(10)	1991	Spatial	Identification of economic opportunities	Withdraw	Outdated	Local Structure Plan
D	De Grendel Structure Plan	Local	Approved 4(6)	1989	Spatial	To provide a basis for decision making with regard to land use management and the initiation of capital projects.	Withdraw	Incorporated into District Plan	Local Structure Plan
D	Goodwood Structure Plan	Local	Approved 4(6)	1992	Spatial	To provide a basis for decision making with regard to land use management and the initiation of capital projects.	Withdraw	Incorporated into District Plan	Local Structure Plan
D	Tygerberg Spatial Development Framework	Local	Approved 4(10)	1998	Spatial	<ul style="list-style-type: none"> <li>• Give spatial definition to C.O.T's vision and strategic priorities at local level;</li> <li>• Identify intervention processes &amp; priority precincts;</li> <li>• Formulate spatial proposals to direct and manage</li> </ul>	Withdraw	Incorporated into District Plan	Local Structure Plan
D	Tygerberg Central Spatial	Local	Approved 4(10)	2000	Spatial		Withdraw	Incorporated into District	Local Structure Plan

	Development Framework					<ul style="list-style-type: none"> <li>change;</li> <li>Evaluation of development applications.</li> <li>Formulate spatial proposals which will facilitate optimal development of area</li> </ul>		Plan	
D	Tygerberg Eastern Spatial Development Framework	Local	Approved 4(10)	2000	Spatial		Withdraw	Incorporated into District Plan	Local Structure Plan
D	Tygerberg Southern Service Area Spatial Development Framework	Local	Approved 4(10)	/2000	Spatial		Withdraw	Incorporated into District Plan	Local Structure Plan
D	Tygerberg West Spatial Development Framework	Local	Approved 4(10)	2000	Spatial		Withdraw	Incorporated into District Plan	Local Structure Plan

## **B. Principles for dealing with development proposals in “areas of potential impact” on significant natural resources**

Principles for dealing with development proposals in “areas of potential impact” on significant natural resources (flora, fauna, wetlands, rivers, coast etc)

1. *Areas of potential impact should be dealt with as soon as possible and before significant resources have been allocated to a project.* This requires a cooperative and transparent approach to these areas from all players including but not limited to the District Environment & Heritage Management Branch, Biodiversity Management Branch, Spatial Planning, Catchment Stormwater and River Management Branch, and other key stakeholders such as Cape Nature.
2. *Proactively and timeously search for the best practicable alternative:* Development in highly sensitive or significant natural environments is usually undesirable and it is generally advisable to seek alternatives. The Biodiversity Management Branch in the Environmental Resource Management Department should be consulted to provide advice.
3. *If an environmentally sensitive area has to be used, investigate means to:*
  - *Maximise retention of intact natural habitat and ecosystem connectivity*
  - *Avoid fragmentation of natural habitat and aim to maintain spatial components of ecological processes (e.g. ecological corridors and vegetation boundaries)*
  - *Minimise unavoidable impacts by reducing the project footprint and determining the least damaging layouts of the proposed development and its accompanying infrastructure (e.g. by concentrating disturbance in degraded areas)*
  - *Remedy habitat degradation and fragmentation through rehabilitation.*<sup>5</sup>
4. *In key areas (particularly where on site mitigation is limited or not possible) investigate the use of biodiversity offsets<sup>6</sup> as a mitigation measure.* This may involve making resources available to secure and manage an alternative piece of land of the same ecosystem type or conservation of a proportion of the property *in situ*. The Biodiversity Management Branch may provide advice in this regard, but DEA&DP are the decision-making authority.
5. *Notwithstanding the above, areas of potential impact that may be identified in the district plan, but where environmental authorisation (or record of decision) exists in terms of applicable legislation, should not form grounds for review of such approvals.*

Although most areas of potential impact on natural resources occur due to the presence of ecosystems which need conservation in terms of national targets, consideration also has to be given to the potential loss or sterilisation of resources which currently – or in future – will have value as economic resources (e.g. plants which have an economic value that can be harvested, sand or minerals which could be mined or aquifer water to supplement the City’s supply), or which provide an ecosystem service (e.g. water filtration and control). *The principle to apply is that where there are potential impacts of development/land use proposals on key resources – efficiency, equity and sustainability criteria must be used to determine the best use for the greater good of the City’s people and environment. The assessment of impacts in terms of these criteria should include assessment of cumulative impacts at local, regional and national levels.*

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<sup>5</sup> More information on the above may be obtained from the Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape – from which the above points were extracted. Other useful sources of information include the principles included in the National Environmental Management Act and the National Environmental Management: Biodiversity Act, the Provincial Spatial Development Framework (promoting densification), the Coastal Edge Policy, the Catchment Management policies on river buffers and developments in flood prone areas and the Department of Environmental Affairs and Development Planning’s (DEADP) offset guideline. The DEADP guideline for involving biodiversity specialists in EA processes also provides useful information.

<sup>6</sup> Provincial Guideline on Biodiversity Offsets (revised draft, March 2007). Department of Environmental Affairs and Development Planning, Provincial Government of the Western Cape

## C. RELEVANT LEGISLATION AND POLICIES PER ENVIRONMENTAL IMPACT MANAGEMENT (EIM) ZONE

EIM ZONE	ENVIRONMENTAL ATTRIBUTES	POTENTIALLY APPLICABLE LEGISLATION / POLICY (note: list not exhaustive and should not preclude review)
<i>Hydrological Zone</i>	<p><b>Flood Risk Areas</b></p> <ul style="list-style-type: none"> <li>Flood risk area 1 (1:50 flood line)</li> <li>Flood risk area 2 (1:100 flood line)</li> <li>Flood risk area 3</li> </ul> <p><b>Rivers, Estuaries and Wetlands</b></p> <ul style="list-style-type: none"> <li>Rivers, wetlands and associated buffers</li> </ul> <p><b>Aquifers</b></p> <ul style="list-style-type: none"> <li>Highly productive aquifers</li> <li>Moderately productive aquifers</li> </ul>	<ul style="list-style-type: none"> <li>National Water Act 36 of 1998.</li> <li>CoCT's Floodplain and River Corridor Management Policy (May 2009).</li> <li>Agricultural activities close to water bodies: conditions contained within the Care of Agricultural Resources Act 43 of 1983 pertaining to rivers and wetlands.</li> <li>Rivers, wetlands and within estuaries: Chapter 4 of the National Environmental Management Integrated Coastal Management Act 24 of 2008 and the associated National Estuarine Management Protocol and Estuarine Management Plans.</li> </ul>
<i>Coastal Protection and Dune Zone</i>	<p><b>Coastal Protection Areas</b></p> <ul style="list-style-type: none"> <li>Coastal Protection Zone</li> <li>Coastal risk areas</li> </ul> <p><b>Dune Areas</b></p> <ul style="list-style-type: none"> <li>Sensitive dune fields</li> </ul>	<ul style="list-style-type: none"> <li>National Environmental Management: Integrated Coastal Management Act 24 of 2008.</li> <li>Draft Integrated Coastal Management Bill, or Act as promulgated</li> <li>Draft Delineation of the Proposed Coastal Protection Zone for the City of Cape Town: Draft Report 2009</li> <li>City of Cape Town Coastal Protection Zone Bylaw (in preparation 2010).</li> </ul>
<i>Conservation and Biodiversity Priority Zone</i>	<p><b>Conservation and Biodiversity Areas</b></p> <ul style="list-style-type: none"> <li>Protected areas</li> <li>Critical Biodiversity Area 1</li> <li>Critical Biodiversity Area 2</li> <li>Critical Ecological Support Areas</li> <li>Other Ecological Support Areas</li> <li>Other Natural Vegetation</li> </ul>	<ul style="list-style-type: none"> <li>National Environmental Management Protected Areas Act 57 of 2003.</li> <li>National Environmental Management Act 107 of 1998.</li> </ul>
<i>Cultural and Recreational Resources Zone</i>	<p><b>Cultural and Heritage Areas</b></p> <ul style="list-style-type: none"> <li>Cultural landscapes</li> <li>Potential archaeological sites</li> <li>Other significant heritage resource areas</li> <li>Grade 3 heritage sites</li> <li>Scenic Routes</li> </ul> <p><b>Public Open Spaces</b></p> <ul style="list-style-type: none"> <li>Structuring Open Spaces</li> </ul>	<ul style="list-style-type: none"> <li>National Heritage Resources Act 25 of 1999.</li> <li>A Heritage Overlay is being developed and will become part of the Cape Town Zoning Scheme. Reference to the zoning schemes / CTZS is required.</li> </ul> <p><b>Public open spaces:</b></p> <ul style="list-style-type: none"> <li>Outdoor Advertising and Signage By-Law, 2001.</li> <li>Authorisation of the activities in these zones must be in compliance with the City of Cape Town By-Law Related to Streets, Public Places and the Prevention of Nuisances, 2004</li> </ul>
<i>Natural Economic Resources Zone</i>	<p><b>High Potential Agricultural Areas</b></p> <ul style="list-style-type: none"> <li>High potential and unique agricultural land worthy of statutory and long-term protection</li> <li>Agricultural area of significant value given existing, potential and emerging use</li> <li>Other Agricultural areas</li> <li>Smallholdings and agricultural areas</li> </ul>	<p><b>High Potential Agricultural Areas</b></p> <ul style="list-style-type: none"> <li>Care of Agricultural Resources Act 43 of 1983.</li> <li>Subdivision of Agricultural Land Act 70 of 1970.</li> <li>Draft Sustainable Utilisation of Agricultural Resources Bill, 2003.</li> </ul> <p><b>Mineral extraction areas</b></p>

EIM ZONE	ENVIRONMENTAL ATTRIBUTES	POTENTIALLY APPLICABLE LEGISLATION / POLCY (note: list not exhaustive and should not preclude review)
	<b>Mineral Extraction Areas</b> <ul style="list-style-type: none"> <li>• Priority mineral resources</li> </ul>	<ul style="list-style-type: none"> <li>• Mineral and Petroleum Resources Development Act 28 of 2002.</li> <li>• Land Use Planning Ordinance (LUPO).</li> </ul>
<i>Urban Uses and Utilities Zone</i>	<b>Nuclear and Landfill Exclusion Areas</b> <ul style="list-style-type: none"> <li>• Nuclear Exclusion zones</li> <li>• Landfill sites and buffer zones</li> </ul> <b>Industrial and Commercial Areas</b> <ul style="list-style-type: none"> <li>• Industrial areas</li> <li>• Commercial areas</li> </ul> <b>Infrastructure and Utilities Areas</b> <ul style="list-style-type: none"> <li>• Infrastructure servitudes, including WWTWs</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant air pollution guidelines, including the City of Cape Town's Air Pollution Control By-Law (2001).</li> <li>• National Environmental Management Air Quality Act 39 of 2004.</li> <li>• CCT Zoning Scheme Regulations</li> </ul>

**ANNEXURE D: RELATIONSHIP BETWEEN CTSDF & DISTRICT PLAN SPATIAL PLANNING CATEGORIES AND THE BIODIVERSITY NETWORK CLASSIFICATION**

Biodiversity network: critical biodiversity area mapping categories  CTSDF / District Plan Spatial Planning Category	Formal protected	Critical biodiversity areas (CBA 1 a-e and CBA 2)	CESA	Other natural vegetation	OESA
Core 1	■	■			
Core 2			■		
Buffer 1				■	
Buffer 2					■

**ANNEXURE E: RELATIONSHIP BETWEEN THE CTSDF AND DISTRICT PLAN ROUTE DESIGNATION, PSDF AND CITY ROAD NETWORK HIERARCHICAL CLASSIFICATION SYSTEM**

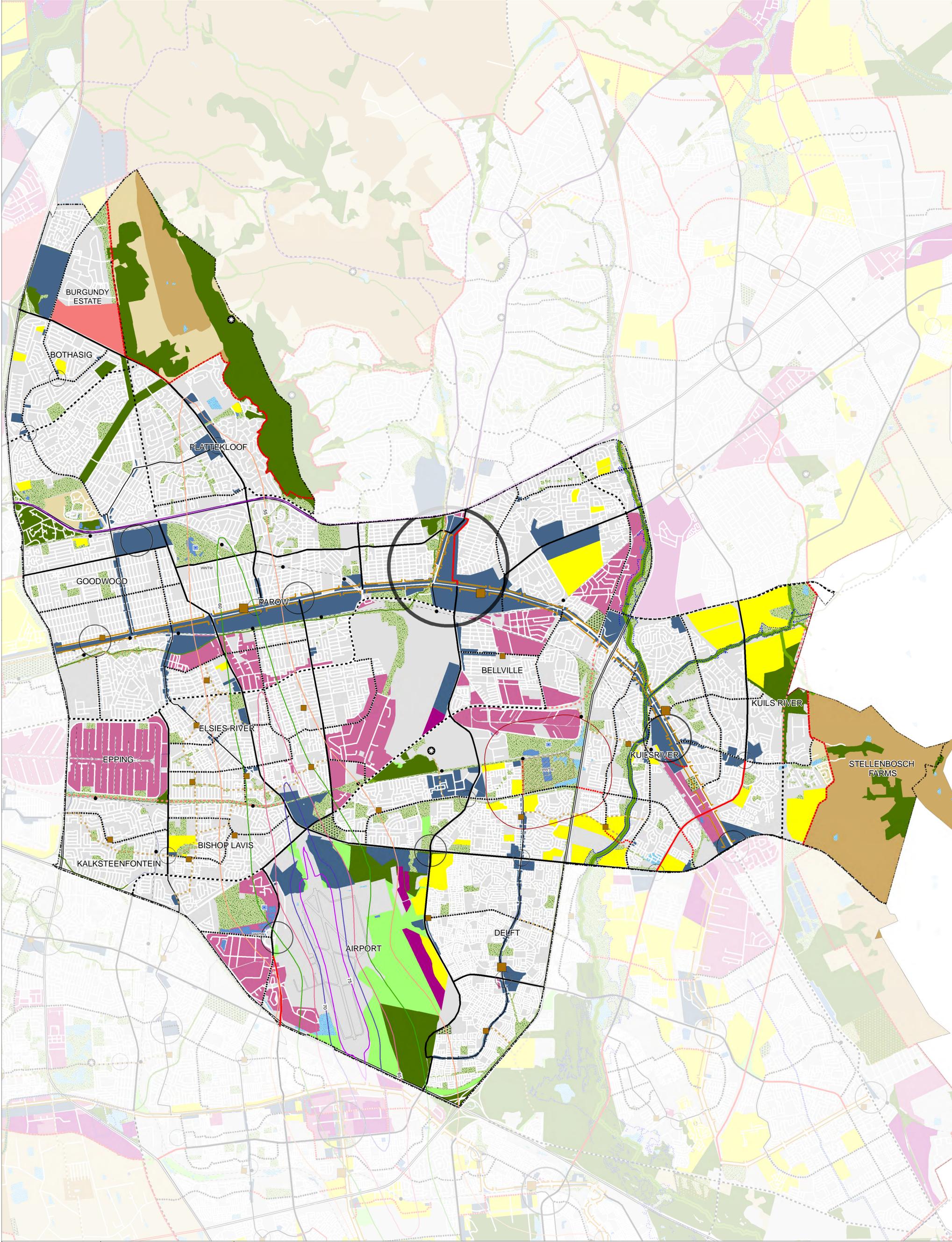
ROUTE DESIGNATION	ROAD CLASSIFICATION			
	South African National Agency Ltd.	African Roads	Provincial Development Framework (2009)	Spatial City of Cape Town Road Network Hierarchical Classification System
ACTIVITY ROUTE	Class 2 – 4 Transport Route		Main Road	Secondary arterial
DEVELOPMENT ROUTE	Class 2/3 Transport Route		Trunk Road	Primary Arterial
URBAN FREEWAY	Class 1 Transport Route		National Road	Freeway
CONNECTOR ROUTE	Class 2 - 4 Transport Route		National Road, Divisional Road,	Expressways, primary and secondary arterials

The relationship between the CTSDF (and District Plan) route designation, PSDF Spatial Planning Categories and City Road Network Hierarchical Classification System is indicated above. Whilst the alignment between the various systems of road classification is not seamless, it does provide an indication of the types of relationships existing between road classification systems and land use functionality.

The route designation provided by the CTSDF (and District Plan) is not intended for use as a classification system. Instead, the route designation provided by the CTSDF (and District Plan) creates an opportunity to reinforce desirable route functionality by encouraging / facilitating an appropriate land use response. It is anticipated that route designation indicating land use functionality will encourage an appropriate level of development and more intense mixed land uses to locate on the grid. The intensification of land uses along the multidirectional accessibility grid will contribute towards establish the thresholds required for sustainable and cost effective public transport.

The City's Road Network Hierarchical Classification system will continue to guide road network planning, classification and the mobility / accessibility function. Land use intensification along designated routes must consider the nature of access roads, additional traffic impacts and parking requirements.

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**CitySpace**  
Planning Cape Town

**Spatial Development Plan**

TYGERBERG DISTRICT

**JULY 2012**

- Broad Provincial Spatial Planning Categories**
- Core 1
  - Core 2
  - Buffer 1
  - Buffer 2
  - Intensive Agriculture
  - Open Space

- Mixed Use Intensification
- New Urban Infill
- Urban Development
- New General Industrial Development
- Existing General Industrial Development
- Waterbodies

- Landfill Sites
- Landfill Buffer Areas
- New Cemetery
- Cemetery
- 100 yr Floodline
- 50 yr Floodline
- Urban Edge
- Destination Places

- Civic Precincts :**
- Higher Order
  - Local
- Wastewater Treatment Works :**
- WWTW
  - WWTW
  - Critical Public Link
  - Scenic Routes

- Noise Contours :**
- 55db
  - 60db
  - 65db
  - 70db
  - 75db
- Nodes :**
- Local Node
  - District Node
  - Regional Node
  - Metropolitan Node

- Landuse Transport Network :**
- Activity Route
  - Activity Street
  - Connector Route
  - Development Routes
  - Urban Freeway
  - District Structuring Routes
  - Prop District Structuring Route
  - Proposed Activity Street
  - Proposed Connector Route
  - Proposed Development Routes
  - Proposed Urban Freeway