

SECTION FI: SPATIAL PLANNING AND ENVIRONMENT RATIONALE

Spatial Rationale and Strategies

SDF Informants

Spatial strategies for future development of Kouga are based on a number of informants which were used to prepare the various Spatial Development Framework maps:

- Spatial needs and priorities as identified in the Integrated Development Plan
- Existing land use rights and existing land use patterns
- Environmental sensitivity and biodiversity
- National, Provincial and Local policy guidelines and legislation
- The Land Use Management System guidelines
- Services and services availability
- Land ownership patterns
- Physical features and terrain characteristics
- Government Departmental input

A number of different data sets exist for biodiversity features within the Eastern Cape Province, namely information from the STEP programme, the Baviaanskloof Mega Reserve Project, the Greater Elephant National Park, the Eastern Cape Provincial Biodiversity Conservation Plan and the National Spatial Biodiversity Plan, the latest version of the South African vegetation map and a National assessment of river eco-system integrity undertaken by the CSIR. All of this information are said to have been developed at different scales, but all share some degree of integration with at least one of the data sets listed above. For the Cacadu District Municipality and the Department of Land Affairs Area Based Plan & Land Availability Audit, service providers were commissioned to combine and refine these various data sets to provide guidelines for future urban and rural development in the Cacadu District. The development of the Kouga SDF is based on these guidelines and principles, with specific reference to critical biodiversity areas and no-go areas and is used as the environmental guiding principles for the Kouga Spatial Development Framework.

Service infrastructure and the provision of bulk services in most of the urban areas in Kouga are under strain and do not have spare capacity to deal with the estimated population growth rate. The Spatial Development Framework for Kouga proposes the future urban landscape or desired spatial form. All development is subject to service availability and subject to service level agreements and financial contributions. The Spatial Development Strategies should therefore be implemented based on services availability and capacities.

The urban edges for the alignment of the urban edges for the various urban areas were determined in close co-operation with the National Department of Agriculture. The Department of Agriculture acknowledge the demand for future growth, but at the same time needs to implement its mandate to protect scarce agricultural resources and high potential agricultural land. The urban edge alignment is therefore based on support by the Department of Agriculture and their input.

During the normal process of development and growth, a number of specialised non-residential uses and activities need to be implemented. Specific reference is made to cemeteries, solid waste sites, sewer treatment works, construction of new roads, etc. These are specialised uses and individual detailed studies need to be conducted prior to the implementation of specific land uses. Given the nature of the Spatial Development Framework, these detailed studies were not conducted and should be done based on the demand and specific location criteria for the implementation of these uses.

1.1. Desired Spatial Form Key

Individual maps for the major urban areas and settlements have been prepared, indicating the future desired spatial form. These maps are frameworks for future development and are based on the criteria as outlined in Chapters 2, 3, 4 and 5 of the SDF. The maps indicate a number of categories for land use and land use management. These are defined as follows:

Existing Land Uses

Existing land uses are based on current zoning as updated and reflect broad categories of current land use rights.

Urban Edge

The urban edge depicts a line / border to promote compact urban areas and prevent medium to high density residential development outside the specific urban edge line, refer to the Urban Edge Policy. Development adjacent to the urban edge and in the rural area should be based on the Rural Development Policy and Density guidelines as per the SDF.

New Business Nodes (Mixed Use)

These reflect strong potential growth areas for centralised business and mixed uses. Mixed use can include high density residential and commercial with business and commercial being the prominent use.

Mixed Use (Business, Residential & Community)

A mixture of uses to be permitted with the residential component as a prerequisite for development.

Low Density Residential (up to 5 units per hectare)

Low density, open space based residential development not exceeding 5 units per hectare. Remaining of land to be zoned for private open space or nature reserve purposes, where possible.

Medium Density Residential (up to 20 units per hectare)

This reflects normal residential single stand development for future expansion and a density of 20 units per hectare should not be exceeded. Normal non-residential uses generally associated with medium density residential developments, based on the scale of the specific development, should be included. Reference is made to social facilities, open space, etc.

High Density Residential (up to 40 units per hectare)

Areas identified for high density residential purposes up to a density of 40 residential units per hectare, generally for the middle to low income population and can include subsidised housing developments. Design standard to be done in accordance with the “Red Book” and all non-residential social facilities to be provided as part of the detailed design.

Rural Residential (minimum 5 hectare land portions)

Rural residential refers to areas identified by the Department of Agriculture for smallholding purposes with a minimum property size after subdivision of 5 hectares.

Open Space System

Proposals with respect to expansion of open spaces and recreational areas. Expansion of existing industrial or establishment of future industrial areas, development in these zones should be subject to all relevant legislation requirements.

□ **Protected Areas**

Reflect existing National Parks Provincial, Local and Private Nature Reserves outside the urban edge and should be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate in some cases, based on an environmental evaluation.

□ **Critical Biodiversity Areas**

To be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate at some sites. Any form of development in these areas should be carefully considered based on environmental impact and the conservation status of the area.

□ **Existing and Potential Agriculture**

Reflect areas which are currently cultivated, under plantations, degraded land or impacted areas. Development outside the urban edge, based on the density of 1 unit per 10 hectares to a maximum of 200 units per land unit, can generally be accommodated in this zone. The boundaries indicated on the desired spatial form maps are as accurate as possible, but in some cases, minor adjustments will be necessary based on final assessments and detailed planning. Critical biodiversity areas and areas of existing agricultural potential are based on a combination of a number of data sets and appear “blocky”. These areas graphically indicated / identify specific uses in the rural area and should be used as a guideline.

1.2 Spatial Key Focus Areas

A number of key focus areas have been identified based on planning and development initiatives within Kouga. A number of these focus areas have conducted detailed studies and the Kouga Spatial Development Framework acknowledges these inputs.

Kouga Development Agency Mandate Area

The Kouga Development Agency (KDA) is a Multi-Jurisdictional Service Utility (MJSU) established by the Cacadu District Municipality and Kouga Local Municipality in terms of Section 87 of the Local Government: Municipal Systems Act 2000 (Act 32 of 2000). The KDA was given the responsibility to manage the development of the Mandate Area. The Mandate Area has great potential for the development of eco-tourism projects utilising the comparative advantage offered by attractive beaches, natural environment, and rich cultural and historical heritage. The Site also enjoys panoramic views of the attractive coastal dune system, the Sea, the Kabeljauws River and Estuary, and contains valuable and indigenous vegetation, a pristine wet land system, and an attractive coastline, all of which can be used as major attractions for eco-tourism based development in the area. The Mandate Area is well located adjacent to the N2, close to the Gamtoos Off-Ramp and along the Provincial Main Road, the R102. It is visible on the N2 from Cape Town towards Port Elizabeth. It is thus capable of attracting traffic along the N2 and R102 and in general the Garden Route. It is also accessible to areas west of the N2 via the existing road over the N2. It is possible to construct another interchange at this point which is even closer to the site than the Gamtoos Off-Ramp. The Master Plan for the Mandate Area for the Kouga Development Agency has been approved by the Kouga Council and is acknowledged and should form part of the Kouga Spatial Development Framework. The Master Plan identifies 8 nodes for development and is generally based on a low impact development scenario.

Gamkap SDF

The Kouga Development Agency further prepared a Spatial Development Framework for the area between the Gamtoos and Kabeljauws Rivers (Gamkap). The Gamkap SDF has been approved by the Kouga Municipality and therefore forms part of this SDF. The Gamkap SDF planning area is located between the Gamtoos River, Kabeljauws River, coastline and the R102. Preparation of the Gamkap SDF by the Kouga Development Agency flows from the Development Agency’s Master Plan projects and makes certain recommendations for development along this specific coastline. Key development parameters as per the Gamkap SDF are the following (but not limited to):

Development restricted to low density residential and resort type developments with associated uses. Resorts / residential densities should not exceed 1.5 opportunity per 1 hectare.

- Clustering should be promoted.
- Linear or dispersed development and placing of units should be discouraged.
- As part of the Kouga SDF implementation, developments within the Gamkap area should be evaluated based on the approved Gamkap SDF.

Thuyspunt

The Thuyspunt site, west of Cape St Francis has been acquired by ESKOM for possible future power generation purposes. As a result, the Kouga Coast Sub-Regional Structure Plan was prepared based on the need to maintain the viability of the Thuyspunt site for possible future nuclear power generation. Subsequently, with the preparation of the St Francis Bay Spatial Development Framework and approval of same by the Kouga Council, the Kouga Coast Sub-Regional Structure Plan was replaced by the recommendations of the Greater St Francis Bay Spatial Development Plan. With respect to the Thuyspunt site, the following land use principles apply : To ensure the viability if the Thuyspunt site for future possible power generation, development of the surrounding areas must be carefully managed. Any proposed changes to current land uses, in terms of standard rezoning procedures within the 16km monitoring and emergency zone, must be brought to the attention of Eskom Nuclear Sites Department at Koeberg Nuclear Power Station, for their consideration and comment. Urban expansion of Oyster Bay and Umzamowethu, which falls within the 0-5km zone should not be permitted. The provision of a small school (without a hostel) to cater for local children may be supported in Oyster Bay. Institutional land uses such as prisons, old age homes and hospitals that may result in the concentration of a resident population should not be developed within 16km of the Thuyspunt site, because of potential evacuation difficulties. No new food processing plants to be allowed to be developed within the 16km. Agricultural activities to be monitored within 16km. With respect to the future development of the Thuyspunt site for power generating purposes, all National, Provincial and Local Legislative processes should be followed, with specific reference to relevant permits, environmental approval, implementation, design, development parameters and management of this site should be subject to all required approvals and international protocol associated with the land use type. Future development of the Thuyspunt site should take cognisance of bulk infrastructure and development of supporting land uses, with specific reference to housing, social facilities, etc.

Kromme River Estuary

Increased development along the Kromme River is resulting in environmental and aesthetic degradation of the river and adjoining land. The CAPE project has identified the lower Kromme River Valley as a priority corridor for the movement of plants and animals between the Kareedouw and Tsitsikamma Mountain ranges and the coast. Consequently, every effort should be made to restrict future development within this environmentally sensitive area. The following development guidelines apply to the Kromme River : That no additional development rights be granted / permitted on land that falls within the development setback line as reflected on the attached maps. Additional development rights include inter-alia: (- New dwelling units ; Rezoning ; Subdivisions ; Additional dwelling units Consent uses; Boathouses ; Jetties ; Roads Agricultural activities; Resorts . A Strategic Environmental Assessment should be commissioned of the Lower Kromme River Valley and Estuary and subsequently, a River Management Strategy be implemented by the Kouga Municipality. The Strategic Environmental Assessment should outline detailed land use parameters for the Kromme River Valley and Estuary.

Jeffreys Bay Golf Course

- A strategic decision was taken to make portions of the existing Jeffreys Bay Golf Course (Erven 873, 5478, 5479, 5480 and 5481, Jeffreys Bay) available for redevelopment. The main objectives of the redevelopment proposal for the Jeffreys Bay Golf Course are :
- To retain the existing Golf Course, Driving Range and Bowling Club facilities.
- To utilise the vacant land in a effective and well managed way in order to generate income and promote redevelopment of the area.

Providing a wide range of land uses to allow for a mixed use density with various development topologies and densities. Strong emphasis on protecting the character of surrounding single residential land uses in especially the Wavecrest area. Acknowledging major transport routes with specific reference to St Francis Drive, Dogwood Extension and linkages of the possible coastal road. Acknowledging existing sport and recreational facilities on site (club house, bowling club and golf course) and accommodating these uses wherever possible. Acknowledging terrain characteristics and drainage patterns and providing for an open space network linking to existing open spaces within the Greater Jeffreys Bay area. Providing functional road hierarchy linking Wavecrest, C-Place, Jeffreys Bay Central and the New Fountains development. Accommodating higher densities along St Francis Drive with decreased densities towards the existing single residential character in Wavecrest. Providing "*functional blocks*" which would allow the greater site to be developed in phases by different developers on a block-by-block basis. (*Refer to SDF document*).

Coastal Road

Creating an access linkage between Jeffreys Bay and St Francis Bay have been prioritised as one of the key economic development priorities in the greater Kouga area. The purpose of the coastal road would be to directly link St Francis Bay with Jeffreys Bay, cutting down on travelling time and providing improved accessibility for the future development of the greater St Francis Bay area, including the Thuyspunt site. Detailed design, alignment and funding of this project should be prioritised.

1.3 Land of Strategic Importance

Kouga Municipality has identified municipal land which is not being used to its optimal advantage to attract investment and to promote development of the Kouga Region, as envisaged in the corporate vision. The following objectives should be achieved: To facilitate the participation of local communities to actively participate in the economy of Kouga; to wage the fight against poverty more effectively through local economic development strategies and actions and to harness the assets of the Kouga Municipality for attracting and securing private-sector investment and finances for the development of our local area . Development proposals from bidders have been requested in terms of the Municipal Finance Management Act. The following land portions have been identified as land of strategic importance.

Land of Strategic Importance

	PROPOSED USAGE	AREA	ERF NO.
1	Game Reserves	Hankey	187/0, 184/1, 184/2, 184/5, 184/6
		Humansdorp	North of the N2: Swartenbosch Farm: 347/1, 347/7, 2
2	Agricultural and Environmental Development	Hankey	17, 18, 240, 187/0
		Humansdorp	South of N2: 182/1, 182/6, 184/1, 184/2, 184/5 347/1, 347/4, 347/7, 347/8, 2
3	Family / Youth / Empowerment / Business Centre	Humansdorp	South of N2, 2
4	Sports Academy & Business Development	Humansdorp	353, 755, 599, 756, 1269
5	Caravan Park Upgrade	Hankey	Yellow Woods: Portion of erf 17
6	Jeffreys Bay: Upgrade of Old Town Corridor	Jeffreys Bay	Demarcated by the ocean on the east, St Francis Rd on the west, Daggeraad, Duine and Pell Streets on the south with Beverland and Goedehoop on the North. Plus 164,1389, 380, 170, 5478,4579, 5480, 4581
7	Hospital	Jeffreys Bay	5478, 5479, 5480, 5481
8	Golf Course	Jeffreys Bay	873
9	Children's Foster Home and Social Development	Kwanomzamo	2599
10	Pre- and Primary School	Ocean View	Erf 335 portion 125
11	Patensie, Ramaphosa and Andrieskraal Development Initiative	Patensie	Patensie: 259, 389, 388, 387, 386, 55 portion 1, 128, 300, part of Stuurmanskop, Integrated township Development, Business, Game Farming and Agriculture
		Ramaphosa	
		Andrieskraal	Andrieskraal: Municipal land available. To plan an integrated development initiative for the area.
12	Kouga Cultural Centre Tea Room	Humansdorp	Rental of tea room.
13	Sarah Bartmann Development	Hankey	184/5: Transfer of land to DAC

Development proposals and the proposed use of individual land portions are subject to the Municipal Finance Management Act procedures and all related and applicable legislative process, prior to development. These include, but are not limited to, the National Environmental Management Act and the Land Use Planning Ordinance procedures for rezoning and obtaining the necessary development rights. Key considerations in the development of these land portions should include :

- The character of the immediate surrounding area
- Impact of the proposed development on the surrounding properties
- Future public accessibility
- Environmental sustainability
- Acknowledgement of principles for development as contained in the Spatial Development Framework

Sarah Bartmann Heritage Site

Detailed proposals for the holistic redevelopment of the Sarah Bartmann Heritage Site are in the process of being compiled. Development on this site should be contributing to local economic development, improving the tourist potential of the Sarah Bartmann Site and contributing towards the improvement of heritage on a regional basis.

1.4 Rural Development

Rural development refers to all development taking place outside the urban edges of the main towns and settlements and development within small rural nodes.

Rural Nodes : Based on the settlement hierarchy and rural development guidelines as per the SDF, these are applicable to the rural nodes in the Kouga Municipal area.

Andrieskraal

The Andrieskraal node serves the “Bo-Gamtoos” area with no formal housing components. As a point of departure, further development and expansion of the Andrieskraal node should be investigated with respect to land availability and service provision viability. The short term expansion of service delivery

functions in the area is supported and formal establishment of a residential component should only be done once a feasibility study for development this area has been completed.

□ **Gamtoos River Mouth**

The Gamtoos River Mouth settlement is the only node on the coastal strip between the Kabeljauws River and the Van Stadens River Mouth. Future development and expansion of this node should be limited and should only be supported based on strict environmental impact assessment procedures and studies. The environmental sensitivity of the area and accessibility of the facilities for day visitors should be preserved. Residential development should be restricted to the eastern side of the river mouth.

□ **Maaitjiesfontein**

The Maaitjiesfontein informal settlement accommodates approximately 50 families in the rural areas south of Thornhill. Little or no merit exists for formalisation of this node and the affected families should be accommodated within the Thornhill node as part of a formal housing development process. Relocation of the Maaitjiesfontein residents to Thornhill will have significant service provision and cost advantages to the Municipality. A programme and strategy to accommodate the Maaitjiesfontein residents on the Thornhill housing delivery programme should be implemented.

□ **Longmore Forest Reserve Village**

Although the Longmore Forest Reserve Village is “state owned” and managed by the Department of Water Affairs and Forestry, it falls within the study area and is therefore included in the Gamtoos SDF. Expansion and further development of the node is not envisaged by DWAF as a short term option however, transfer to and management of the settlement by the Kouga Municipality has been indicated but the process has no formal status. Future development of this node should be revised once management status has changed or further clarified, i.e. DWAF vs Kouga Municipality.

□ **Sunnyside / Thornhill Rural Development Zone**

The area between Sunnyside and Thornhill, west of the Van Stadens River Gorge, north of the R102 and south of the railway line is strategically situated with possible future tourism, residential and service delivery functions. Development between these 2 nodes should be encouraged and aim to :

- Strengthen the existing nodes and promote low density type developments (1.5 units / ha)
- Development should be agriculture and eco-tourism based with a strong conservation and/or conservation rehabilitation component
- Strengthening of the Thornhill / Sunnyside Villages should contribute to job creation and possible land reform initiatives

Rural Development Guidelines

All development outside the urban edges or development within the rural area within Kouga should be based on the biodiversity guidelines, the land use management policies of the SDF and rural development guidelines as per the SDF. The key principles for rural development (to be read in conjunction with all policies and guidelines as per this SDF) are: Medium to high density residential development should be accommodated within the urban edges; The expansion of existing small rural nodes should not be permitted, with the exception of the rural nodes ; Low density residential developments outside identified rural nodes and urban edges are permissible / can be permitted, subject to a density of 1 unit per 10 hectares, to a maximum of 200 units per land unit (all subject to DEDEA and Department of Agriculture approvals). Development in the rural area should avoid biodiversity sensitive areas.

The provision of services should be self-sustainable and based on an agreement with the Kouga Municipality. Rural development is desired to be resource orientated and aimed at strengthening the tourism and rural sustainability principles.

1.5 Urban Development

The urban development proposals for desired land use form are depicted on the various maps and should be read in conjunction with the key and key descriptions.

6.1 Humansdorp

Humansdorp is one of the biggest urban nodes in the Kouga area with a population of approximately 23 991. Humansdorp has a strong administrative, commercial, agricultural and industrial central place function. These functions are complemented by a large residential component. The residential component is stretched in a east-west corridor from the Jeugkamp in the west to KwaNomzamo in the east, over a distance of 8km. The Central Business District (CBD) is well defined and is situated along Voortrekker Road, Main Road and the block between Saffrey and Queen Street. The industrial node towards the north of the CBD is also well defined with available land to expand. Humansdorp do have the ability to expand and play a more dominant role in the greater Kouga area. Opportunities for future development are mainly based on its strong administrative, commercial, industrial and residential function.

□ **Spatial Development Principles**

Promote and encourage, administrative, commercial and industrial development.; Promote integration of previously segregated areas and residential densification. ; Upgrade informal residential areas. ; Promote utilisation of vacant, derelict, degraded and under-utilised land to accommodate new development. ;Provision of infrastructure that will meet internal and external need of Humansdorp. ; The existing built environment is ideally suited for a policy of infill and densification.

□ **Social Services**

The short term needs can be accommodated within existing boundaries of Humansdorp as the provision of land for social services is regarded as adequate. Future detail residential planning should include land as per national norms and standards for social services.

□ **Recreation and Tourism**

Recreational and tourism facilities and especially the upgrading of recreational facilities should be prioritised. The option of privatising recreational facilities that are not fully utilised or fully maintained should be investigated. This can serve as a form of income to Council. Maintenance and provision of open spaces and open space systems should be encouraged and strengthened. Tourism development of Humansdorp will have to be addressed as part of the Kouga tourism sector plan. The Kouga Cultural Centre must be the main focus point for tourism and recreation.

□ **Transport**

Main access roads through Humansdorp are the R102, Main Road 391 and 381. These roads play an important function with respect to accessibility and transport of goods and services to and from Humansdorp and surrounding areas

These roads should be upgraded and maintained on a regular basis as part of the Council's infrastructure upgrading programme. The narrow gauge railway line do not play such a major role with regard to transport anymore. The establishment of a passenger train or tourist train service between Port Elizabeth and Humansdorp could however contribute to the tourist sector. It is essential that strong road links and access be created and established between Kruisfontein and the Humansdorp business area. The application of urban edges contributes towards shaping urban development at a sub-regional scale and assist to ensure that development occurs in suitable locations. Properly applied and managed, the urban edge is an effective long term urban development strategy to create a sustainable pattern of development. The urban edge policy and guidelines as outlined in Chapter 4 of this Spatial Development Framework report should be implemented and used to demarcate the urban edge for Humansdorp. The urban edge boundary for Humansdorp is depicted on the relevant maps. Demarcation of the urban edge is based on the urban edge policy, guidelines and current demand for expansion. The SDF urban edge accommodates anticipated development and growth for the next five years.

Jeffreys Bay

Jeffreys Bay is the biggest node in the Kouga area with a population of approximately 40 203. The character of the town has changed drastically since the beginning of the 20th century with a strong holiday, tourism character aimed at the coastal area, which is regarded as the most important asset of the town. The commercial, administrative and industrial function is not that strong, however these functions are complemented by a large residential component. The residential component stretches in a north-south corridor along the coast for ±15km, not more than 5km inland. The residential component does have a dual character, namely permanent and temporary inhabitants. The Central Business District (CBD) is well defined but is complimented with other business nodes throughout the town and a strong business / office orientated development along the Da Gama Road the main north-south corridor. Jeffreys Bay do have a small industrial area more aimed at service industries accommodating light industries. Heavy and noxious industries are promoted to establish in Humansdorp

□ **Spatial Development Principles**

Promote integration of previously segregated areas and residential densification; Upgrade informal residential areas ; Recognised the dual character of population (permanent & temporary inhabitants) ; Promote utilisation of vacant, derelict, degraded and under-utilised land to accommodate new development ; Private land infill and densification of land ; Create a balance between the fulfilment of needs of the local community and visitor community
Transport routes must be viewed with the purpose of creating an integrated road network ; No linear business development along Da Gama Road outside earmarked business areas ; Strengthen CBD area ; Promote densification of identified densification nodes

□ **Transport**

Main access roads to Jeffreys Bay are the R102 and Main Road 389. The proposed coastal road linking Jeffreys Bay with St. Francis Bay is also accepted as a given. The planning and construction of this road is regarded as an extremely important issue to ensure that the proposed road hierarchy for Jeffreys Bay

can be implemented. Road arterials distributing traffic between principle residential, industrial and business nodes need to be either constructed or upgraded. New developments need to accommodate these linkages and arterials. One of the most important road linkages that need to be finalised is the link of Dogwood Road extension with St. Francis Drive and Koraal Street. This will automatically create another north-south arterial through Jeffreys Bay. All roads should be upgraded and maintained on a regular basis as part of the Council's infrastructure upgrading programme and Transport Development Plan.

The Urban Edge

The application of urban edges contribute towards shaping urban development at the sub-regional level and assist to ensure that development occurs in suitable locations. Properly applied and managed, the urban edge is an effective long term urban development strategy to create a sustainable pattern for development. The urban edge policy and guidelines as outlined in Chapter 4 of this Spatial Development Framework report should be implemented and used to demarcate the urban edge for Jeffreys Bay. The urban edge boundary for Humansdorp is depicted on the relevant maps. Demarcation of the urban edge is based on the urban edge policy, guidelines and current demand for expansion. The SDF urban edge accommodates anticipated development and growth for the next five years

Urban Renewal

Initiatives are currently underway to implement urban renewal projects within the Jeffreys Bay CBD. These are based on proposals made as part of the De Gama Road upgrading and beautification initiative driven by the NMMU. The Kouga Development Agency can play an important role as part of this initiative through project implementation, management and co-ordination. Urban renewal in the Jeffreys Bay CBD should be aligned with the residential densification initiative, economic development strategy for redevelopment of strategic land and alignment with Integrated Development Plan objectives.

St Francis Bay / Cape St Francis

The St Francis Bay / Cape St Francis coastal towns are characterised by low density, upmarket residential developments with strict architectural and aesthetic control. The area has a small and limited commercial and industrial component and largely depends on the biggest centra like Humansdorp and Jeffreys Bay for this purpose. The higher density, low income residential area of Sea Vista is experiencing high population growth rates and influx with a need for additional and future land.

□ Spatial Development Principles

Encourage environmentally sensitive developments that is in line with the existing character and urban fabric of the St Francis Bay / Cape St Francis area . Development along the Kromme River should be based on the guidelines as per this SDF, with specific reference to the setback line
Make land available for the current and future demand for the expansion of Sea Vista, in a holistic and integrated manner.

□ Spatial Development Principles (St Francis Bay)

Residential developments strictly adhere to architectural and aesthetics control ; Low density residential developments ; Environmentally sensitive developments ; Transport corridors to receive special attention ; New developments in line with existing character and urban fabric of St Francis Bay
Commercial activities to be concentrated in identified nodes. ;No commercial development East of St Francis Drive except existing bottle store and hotel
Prevent intrusion of business into residential fabric ; Present industrial node not to be expanded in near future ; Pedestrian and cycle routes to business nodes
nsure effective vehicular movement and parking provision ;Provision for church sites; Development of St Francis Bay CBD and future development of Erven 400 and 554 to be restricted and in line with SDF proposal

□ Spatial Development Principles (Cape St Francis)

The motto of Cape St Francis is "Keep it green, keep it clean and keep it small".; *No large* new developments next to or inside Cape St Francis.
No direct link road between St Francis Bay and Cape St Francis. ;Low density is the norm for development and 750 square meter plot sizes are the minimum allowed when subdivisions are requested. ;No industries.; Existing Commercial nodes should not be expanded ; All building additions should be of the same finish as the original building *and the height restriction is 8.5 m.*

□ Social Services

The Kouga Integrated Development Plan identified a number of areas for key intervention with respect to social service. As a result of the land swap, a school site has been secured east of Sea Vista and the industrial area. The expansion of Sea Vista to the south should further investigate the possibility of providing additional school sites as part of the detailed planning exercise.

Open Space

The aesthetic quality of the St Francis Bay area may be considered as the primary component of its character, having a direct influence of the quality of the recreational and tourism experience offered and potentially offered by the area.

The policies and actions of the Municipality should aim to preserve and enhance the natural and semi-natural areas as well as the open space within the urban landscape. The SDF acknowledges these open space systems and all new Greenfields development should make provision for open space and natural areas. The Municipality should prioritise the preparation of an open space management plan for the Greater St Francis Bay / Cape St Francis area.

Transport

The proposals as per the St Francis Bay Spatial Development Framework with respect to transport, linkages are adopted in the Kouga SDF. Specific reference is made to the high traffic entrance at the Sand River and preventing direct road access between Cape St Francis and Santorin. Implementation of the high traffic entrance to St Francis Bay should be carefully investigated and researched before implementation, with specific reference to the environmentally sensitive nature of the Sand River.

The Urban Edge

The urban edge for St Francis Bay / Cape St Francis includes the Golf Course Development and land west of the R330. This makes provision for an alternative business node to alleviate pressure on the existing CBD. The Department of Agriculture supported the subdivision of smallholdings to a minimum of 5 hectares north-east of St Francis Bay and south of the Kromme River. The setback line as identified through the St Francis Bay SDF is maintained along the Kromme River.

Building Regulations for St Francis Bay : Village & Canal Area

No person shall develop any vacant property in St Francis Bay Village and canal area, nor extend or alter any existing development thereon in a manner or style inconsistent with the general prevailing St Francis Bay style of the area. Maximum permissible height of building measured from natural ground level shall be two storeys (Maximum height 8.5 m) The finishes to outbuildings shall match the main building in all respects

Building Regulations in St Francis Bay: Santareme

No person shall develop any vacant property in Santareme, extend or alter any existing development thereon in a manner or style inconsistent with the general prevailing Mediterranean / Sardinian style.

Oyster Bay

The small settlement of Oyster Bay is situated west of Thuyspunt and includes the small residential area of Umzamowethu. The town has limited commercial and non-residential activity and a number of residential erven are still undeveloped.

Spatial Development Principles

Limited development within the urban edge ;Discourage future expansion of the Oyster Bay / Umzamowethu area, subject to ESKOM comment and support
Densification of existing residential erven can be supported on a limited scale

Hankey

Hankey is by far the biggest urban node in the Gamtoos River Valley, with a population of approximately 11 721 people. Hankey has a strong administrative and commercial central place function. These commercial and administrative functions are complimented by a large residential component and strong

surrounding farming community. Industries and warehousing are more limited than in Patensie but the services sector is strongly defined. The central business district is well defined and situated along the main road in Hankey town, this is relatively separated from the residential components of Phillipsville and Centerton. The residential area of Weston is situated approximately 3km west of Hankey on the Humansdorp road. Like Patensie, Hankey is mostly surrounded by high potential agricultural land which is intensively developed and farmed. Difficult terrain characteristics which includes steep gradients and areas below the 1 in 100 year flood line contain and restrict future development and expansion. Opportunities for future development of Hankey is mainly based on its strong administrative and commercial function. Future expansion directions are severely limited by surrounding agricultural land uses and terrain characteristics. Opportunities for development do exist with respect to improvement of housing, service delivery and social well-being. Potential to improve existing poorly developed tourist attractions exist, with specific reference to Sarah Bartmann's grave, Dr Phillip's grave and tunnel and Yellowwoods.

Urban densification should be promoted in the Hankey town and old Hankey area. Subdivision of these large residential sites is feasible and can provide and accommodate middle income families.

□ **Social Services**

The provision of land for social services in Rosedale, Phillipsville, Weston, Centerton and Hankey town is regarded as adequate. The Kouga IDP identified a number of priority projects for upgrading of these social service facilities, which are outlined as part of the Spatial Development Framework medium terms expenditure framework. Future detailed residential planning should include land as per national norms and standards for social services.

□ **Open Space / Recreation / Tourism**

An effective and well functioning open space system should be maintained and implemented as part of future development initiatives in Hankey. The provision of open space and developed play areas should be in accordance with the Red Book standards. Upgrading and maintenance of sport and recreation facilities and open space system should be prioritised. Specific reference is made to the golf course draining system, servitude area between Centerton and Rosedale and surrounding vacant undeveloped land portions. Tourism development of the Hankey and ultimately the Greater Gamtoos River Valley area will have to be addressed as part of the Kouga tourism sector plan. Reservation and development of the Sarah Bartmann burial site are included in Council's priority spending programme.

Patensie

Patensie is the second biggest urban node in the Gamtoos River Valley, with a population of approximately 4867 people. The town represents a strong industrial and warehouse function directly related to the agriculture industry in the valley. A well established but fragmented business node provide services to the residents of the town and the surrounding valley. The residential component is again fragmented with Cyril Ramaphosa Village to the north-west of the CBD and higher income low density residential developments north-west of Du Plessis Street and along Viljoen Street. The town is generally surrounded and boarded by high potential agricultural land which is intensively developed for citrus and irrigation purposes. Opportunities for future expansion of Patensie is severely limited by existing agriculture development and terrain characteristics. Opportunities do exist for improvement of the urban structure and possible land for expansion of Cyril Ramaphosa Village.

□ **Spatial Development Principles**

- Conserve developed and high potential agriculture land for agricultural purposes
- Promote development of a strong business node north of the R331 or Fred Ferreira Road in the vicinity of the police station
- Promote and encourage expansion of industrial and warehouse facilities
- Encourage residential densification

□ **Social Services**

The Kouga IDP identified a number of key intervention projects with respect to upgrading of social services. These include upgrading of sport facilities and clinic facilities in the Cyril Ramaphosa Village and the provision of a secondary school. The provision of land for social services in Patensie town and Ramaphosa Village are regarded as adequate, however future detailed planning for expansion of the Ramaphosa Village residential area should make provision for required land uses as per the National norms and standards. The acquisition of land for a secondary school site in the Cyril Ramaphosa Village area should be accommodated on the identified land for expansion, i.e. Portion 1 of the Farm 55. Expansion of the Ramaphosa Village cemetery site to the north on Erf 224 is currently under investigation with respect to geotechnical suitability and environmental impact.

□ **Open Space / Recreation / Tourism**

Maintenance and implementation of affective and well functioning open space system should be promoted throughout Patensie, including Cyril Ramaphosa Village. The provision of open space and developed play areas should be in accordance with “Red Book Standard”. Development of existing open spaces should be promoted where possible. The existing open space system in Ramaphosa Village accommodates the difficult terrain and steep gradient. These areas are mostly covered by natural vegetation, which should be conserved where possible. Upgrading of the sports field and clinic facilities in the Ramaphosa Village have been prioritised as part of the IDP Review process. Tourist related projects and areas for key intervention should be identified as part of the Kouga tourism sector plan.

□ **Transport**

The main access road through Patensie, providing access to the Baviaans Kloof conservation area (R331) should be upgraded and maintained. This road provides access to the farming community and transportation of produce is dependent on quality of the road infrastructure.

□ **Communal Farming and Grazing**

Communal grazing and farming, as a form of job creation and social upliftment, have been identified as a development project by the relevant community. Acquisition of Stuurmanskop will, to some extent, address communal farming land needs. The detailed feasibility study with respect to carrying capacity and viability will be conducted through the Department of Land Affairs and the Department of Agriculture as part of the land acquisition process. A detailed and comprehensive land management and grazing agreement should be compiled.

□ **The Urban Edge**

The urban edge policy and guidelines as outlined in Chapter 4 of this Spatial Development Framework report should be implemented and used to demarcate the urban edge of Patensie. It is noted that the urban edge makes little provision for future expansion into already developed high potential agricultural land. Demarcation of the urban edge should be carefully considered based on growth needs and demands with specific reference to the Patensie CBD area. Extension of the urban edge should only be considered once all options for densification within the Patensie CBD have been investigated.

Loerie

Loerie is the third biggest urban node in the Gamtoos River Valley, with a population of approximately 2 428 people. The town is mainly a residential node with limited or no employment and commercial opportunities. Loerie can fulfil an important central place function to the lower Gamtoos Valley area. Land for future expansion is more readily available with easy accessibility from the R331. Opportunities for future development in Loerie include land availability, accessibility and a possible future central place function.

□ **Spatial Development Principles**

Encourage urban integration of Loerie-Heuwel and Loerie Town; Promote the expansion of the existing commercial area north of the Melon Road and south of the railway station ; Strengthen the Business / Commercial function of Loerie ; Promote residential growth east of Loerie-Heuwel and south of Melon Road

□ **Social Services**

The Kouga IDP identified a number of key intervention projects with respect to upgrading of social services. These include upgrading of sports facilities, utilisation of the existing school facilities in Loerie for Loerie-Heuwel residents and various infrastructure projects. The provision of land for social services within the existing urban structure is regarded as adequate however, future detailed planning for expansion of the residential area should make provision for required land uses as per national norms and standards.

□ **Open Space / Recreation / Tourism**

An effective and well functioning open space system should be maintained and implemented as part of future development initiatives in Loerie. The provision of open space and developed play areas should be in accordance with the “Red Book Standard”. Upgrading of sport and

recreation facilities are prioritised in the Kouga IDP and future tourist related activities and land uses should be identified in conjunction with the Kouga tourism sector plan. Specific reference is made to facilities associated with the annual train race, the existing station facilities and now unused cable waste system.

Transport

Main access roads to Loerie to be maintained and upgraded on a regular basis. These include the R331 Valley access road and the Loerie Melon Road. It is anticipated that the Loerie Melon Road will become the future “main street” of the Loerie node as expansion of Loerie-Heuwel moves in an easterly direction. Pedestrian access along this road should be prioritised and investigated for further development and upgrading. The proposed commercial / business node would further accommodate transportation uses or taxi stop.

Communal Farming and Grazing

Communal farming and grazing, as a form of job creation and social upliftment, should be developed in close proximity to the Loerie urban area (preferably within walking distance). It is noted that final identification of land for this purpose should comprise a detailed study with respect to availability and suitability for the relevant agricultural use. However, for the purposes of the Spatial Development Framework, the land north of the Melon access road opposite the Loerie-Heuwel residential area is earmarked for this purpose. Land acquisition can be initiated through the Department of Land Affairs land redistribution programme.

The Urban Edge

The urban edge policy and the guidelines as outlined in Chapter 4 of this Spatial Development Framework report should be implemented and used to illuminate and demarcate the urban edge for Loerie. The urban edge boundary for Loerie is depicted on relevant maps. Demarcation of the urban edge “lines” is based on an subject to the urban edge policy and guidelines and should be read in conjunction with the relevant graphic presentations.

Thornhill

Thornhill is the fourth biggest urban node within the study area, with a population of approximately 2 250 people. The village is geographically situated outside the Gamtoos Valley and its residents are mainly employed in the surrounding agriculture and forestry related trade. Thornhill fulfil an important nodal function with respect to the southern section of the study area with specific reference to “outside valley activities”. Opportunities for future development include strengthening of the existing Thornhill node, service centre to the surrounding rural area and possible expansion of the tourist facilities and trade.

Spatial Development Principles

- Promote urban integration ;Expansion of the existing business node and industrial/job creation component ; Upgrade informal residential areas within the urban edge ;Promote phased residential development and expansion to the east and west of the existing town ;Promote low density residential development between Thornhill and Sunnyside

Social Services

The Kouga IDP identified a number of key intervention projects with respect to upgrading of social services. These include upgrading of the sports facilities, provision of church sites and a secondary school. The provision of land for social services within the existing urban structure is regarded as adequate however, future detail planning for expansion of the residential areas as identified, should make provision for required land uses as per national norms and standards. This include the provision of a site for a secondary school and physical development of vacant social service land portions.

Open Space / Recreation / Tourism

A number of open spaces are provided in the current Greenfields housing project. The effectiveness of these open space areas will only be achieved once these sites are properly developed and maintained. Provision of open space spaces and recreation facilities should be provided in accordance with national norms and standards, with specific reference to future residential expansion

The dam and stormwater accumulation area opposite the hotel has open space and recreation potential and effort should be made to develop it as such. The Kloof area east of the timber yard and south of the existing informal residential area should be maintained and retained as an open space system or green belt. Pedestrian access along main routes should be promoted for accessibility and mobility. The existing tourism trade related to the station, rail and hotel should be maintained and expanded if possible. Expansion of the tourism potential of the station/hotel area should be complemented by development and expansion of the business area. This can include arts and craft marketing and informal flea-market areas.

Transport

Main access to Thornhill is obtained through the R102, branching off into the Thornhill main road and rural access road to the north (National road subway). Pedestrian crossing over the National road should be avoided and development is contained to the south of the N2 as a result. Access to the area north of the N2 should be promoted via the subway.

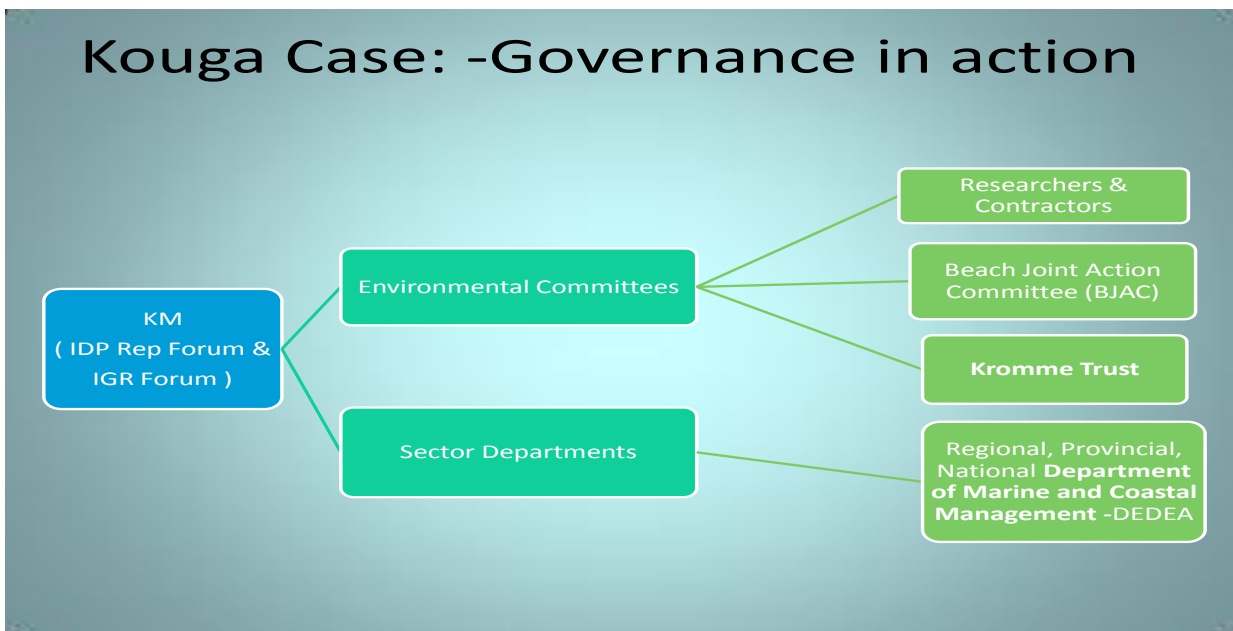
2. Environmental Rational and strategies

The Kouga Case

Institutional Arrangement: Internal



Kouga Case: -Governance in action



1. Environmental Rationale

National policy is underpinned by the principle of sustainable development which aims to ensure that all development serves both present and future generations. Key to achieving this is the safeguarding of critical natural services such as clean and adequate water supplies, nutritious veld for grazing livestock, and stable healthy soils which are resilient to flood damage and erosion. It follows then, that the prerequisite for sustainability is the safeguarding of biodiversity. Spatial planning and land-use management decisions must, by law, take into account the biodiversity of an area. To enable this, scientists have researched the regions biodiversity to determine the spatial arrangement of plants, animals, rivers, wetlands and their interactions and functioning. Based on this information, areas have been categorised and prioritised according to their biodiversity value and requirement for safeguarding.

Biodiversity Sector Plan handbook adopted by council in May 2010 as a guide for safeguarding of biodiversity was prepared by the Garden Route Initiative (SANParks) and the C.A.P.E. Fine-Scale Biodiversity Planning Project (Cape Nature) funded by the Global Environmental Facility through the Cape Action for People and the Environment (C.A.P.E) programme. The plan was prepared to accompany and further explain the Critical Biodiversity Areas (CBA) Map for the southern regions of the Kouga and Koukamma municipalities. The CBA map seeks to ensure sustainable development through the protection of biodiversity (i.e. the natural environment) and its ecosystem services (e.g. water, food, clean air, fuel, grazing lands etc).

The Kouga Critical Biodiversity Plan and Areas map was produced through a systematic biodiversity planning process conducted February 2009 at a Garden Route Fine -Scale Systematic Biodiversity Plan of (1:10 000), which is compatible with the guidelines for publishing bioregional plans in terms of Chapter 3 of the National Environmental Management: Biodiversity Act (NEMBA) 10 of 2004 for the areas covered by the CBA map.

The Biodiversity Sector Plan provides a synthesis of prioritised information to planners and land-use managers, enabling the integration of biodiversity into land-use planning and decision making. It identifies those sites that are critical for conserving biodiversity and in this way, facilitates the integration of biodiversity into decision making (i.e. mainstreaming biodiversity). Mainstreaming is crucial to overcoming the "conservation versus development" mindset, and for ensuring sustainable development (*National Biodiversity Framework, 2009*). The overall aim is to minimise the loss of natural habitat in Critical Biodiversity Areas (CBAs) and prevent the degradation of Ecological Support Areas (ESAs), while encouraging sustainable development in other natural areas. The broad objective is to ensure appropriate land-use for the best possible sustainable benefits and to promote integrated management of natural resources.

The CBA map should be the common reference of biodiversity priority areas for supporting municipalities and other sectors in multi-sectoral planning procedures at a more accurate and detailed scale. All organs of state are obliged to consider biodiversity in their decision making and to make use of the most up to date information (National Environment Management Act (NEMA) 107 of 1998). Furthermore, all spheres of government and all organs of state must co-operate with, consult and support one another. The Biodiversity Sector Plan, comprising the CBA map and guidelines, provides a framework for the compilation of a bioregional plan in terms of Chapter 3 of the NEMBA and, in so doing, supports the National Biodiversity Framework (2009). (*The biodiversity sector plan for the Southern regions, 2009*)

Biodiversity profile for the Kouga and neighbouring Municipalities Koukamma

The CBA map divides the landscape into five categories: Protected Areas, Critical Biodiversity Areas, Ecological Support Areas, Other Natural Areas and No Natural Areas Remaining. The first three mentioned categories represent the biodiversity priority areas which should be maintained in a natural to near natural state. The last two mentioned categories are not considered biodiversity priority areas, and can be targeted for sustainable development. Biodiversity-compatible land-use guidelines are provided for the biodiversity priority areas and a set of land and water resource use management guidelines for Critical Biodiversity Areas, Ecological Support Areas and Other Natural Areas. The network of CBAs reflected on the CBA map represents the most efficient (least land hungry) pattern that attempts to avoid conflict with other land-uses, and which is required to meet national biodiversity thresholds.



(The biodiversity sector plan for the Southern regions ,2009)

Central to the BSP is the CBA map and land-use guidelines. The BSP is intended to support land-use planning and decision making for sustainable development. As the primary source of information on biodiversity for land and water resource use decision making and forward planning processes and help inform the planning and management tools that municipalities are required to develop, such as the Integrated Development Plans (IDP) and Spatial Development Frameworks (SDFs), including Environmental Management Frameworks (EMFs), environmental assessments and land-use decisions. The Biodiversity Sector Plan (BSP) represents the biodiversity informant for various multi-sectoral planning procedures. Following is a criteria used to define the CBP map categories

CBA MAP CATEGORY	CRITERIA DEFINING THE CATEGORY
Protected Areas	Formal Protected Areas <u>a) Terrestrial</u> < Nature Reserves & National Parks (protected by the National Environment Management: Protected Areas Act 57 of 2003). < Forest Nature Reserves (declared in terms of the National Forest Act 84 of 1998). < Ramsar Sites (protected by the Ramsar Convention). < Mountain Catchment Areas (declared in terms of the Mountain Catchment Area Act 63 of 1970). < World Heritage Sites (declared in terms of the World Heritage Convention Act 49 of 1999). <u>b) Marine</u> < a) Marine Protected Areas (protected by the National Environment Management: Protected Areas Act (57 of 2003) or Marine Living Resources Act (107 of 1998).
Critical Biodiversity Areas	Any terrestrial, freshwater aquatic or marine area required to meet biodiversity pattern and/or process thresholds a) Any area that is required for meeting biodiversity pattern thresholds, namely: < Remaining areas of Critically Endangered habitat types. < Special habitats (areas required to protect special species and habitats). < Listed Threatened Ecosystems in terms of the National Biodiversity Act (10 of 2004). < Remaining areas protected by the National Forest Act (84 of 1998). b) Any area that is required for meeting ecological process thresholds including: Ecological or landscape corridors (comprising upland-lowland, river, coastal and sand-movement corridors) c) Hydrological process areas (estuaries, wetlands, important catchment areas). d) All 'best design' sites (largest, most intact, least disturbed, connected and/or adjacent) in terms of meeting pattern and process thresholds. 'Best design' refers to an identified network of natural sites that meet pattern and process thresholds in all vegetation types in a spatially efficient and ecologically robust way, and aim to avoid conflict with other activities (e.g. economic activity) where it is possible to achieve biodiversity thresholds elsewhere.
Ecological Support Areas	Supporting zone required to prevent degradation of Critical Biodiversity Areas and Protected Areas. a) Areas required to prevent degradation of Critical Biodiversity Areas and formal Protected Areas . b) Remaining catchment and other process areas (river, fire, etc) that are required to prevent degradation of Critical Biodiversity Areas and formal Protected Areas. c) Areas that are already transformed or degraded ^f , but which are currently or potentially still important for supporting ecological processes e.g. transformed or alien plant infested areas that have transformed or degraded the natural buffer area of a wetland or river. These areas are a focus for rehabilitation, and the intensification of land-use should be avoided.
Other Natural Areas	Natural areas not included in the above categories.
No Natural Areas Remaining	These areas include cultivated areas (intensive agriculture), afforested areas (plantation forestry), mined areas, urban areas, infrastructure, dams and areas under coastal development.

Numerous environmental and planning laws require municipalities to consider the environment and protect biodiversity in planning and decision making, in support of sustainable development. Critical Biodiversity Areas and Ecological Support Areas should inform decision making by all spheres of government, especially municipalities, as required by National Environmental Management: Biodiversity Act (NEMBA) 10 of 2004. The CBA map provides a newly available reference for land-use decisions at a more accurate and detailed scale for informed decision making, as required by the National Environment Management Act (NEMA) 107 of 1998. It therefore supersedes all other biodiversity maps, namely the ECBP, NSBA and STEP. The Biodiversity Sector Plan simply provides information on biodiversity (i.e. provides only one information layer of the many layers required in land-use planning); and must be used in conjunction with other land-use or town and regional planning application procedures.

The Biodiversity Sector Plan handbook aims to provide a common point of reference for municipal officials, environmental and planning professionals, the Department of Environmental Affairs (DEA&DP), the Department of Water and Environmental Affairs (DWEA), the Department of Agriculture, Forestry and Fisheries (DAFF), various other government and non-government agencies, landowners, developers, estate agents and the general public. The loss of biodiversity through disturbance or development has impacts on ecosystem functioning and reduces the delivery of ecosystem services; and as a result economic growth. For example, the destruction of vegetation leads to erosion, and heavy silt loads which then necessitate increased municipal spending on chemicals used for water treatment. Water becomes more costly to supply, reducing finances for other service delivery. Furthermore, after the removal of plant cover, heavy rainfall results in flooding, and homes and roads are washed away, with the rural poor often being the most severely affected. The loss of natural veld can impact on nearby agricultural crops as a reduction in insect pollinators leads to smaller harvests, with fewer jobs leading to greater poverty. Despite great progress, scientists do not know enough to predict the full impacts of human activities on natural systems. However, it is known that natural systems can bear increasing burdens without revealing any decline in their own functioning before they reach a critical point, after which they then collapse.

Table: Recommended biodiversity-compatible land-use guidelines (CBA handbook, 2009)

KEY: Biodiversity sector land-use recommendations					
☑ Yes = Encouraged;					
☒ No = Discouraged;					
☒ Restricted = Land-use possible under strict controls in order to avoid impacts on biodiversity.					
CBA MAP CATEGORY: ?	Formal Protected Areas	Critical Biodiversity Areas	Ecological Support Areas	Other Natural Areas	No Natural Areas Remaining
DESIRED MANAGEMENT OBJECTIVE: ?	Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation.	Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation.	Maintain ecological processes	Sustainable Management within general rural land-use principles	Sustainable Management within general rural land-use principles. Favoured areas for development.
LAND-USE ACTIVITY: ?					
1) CONSERVATION		Yes	Yes	UNTIL GUIDELINES HAVE BEEN DEVELOPED FOR THE EASTERN CAPE ¹⁷ THE RECOMMENDATIONS OFFERED BY THE WESTERN CAPE PROVINCIAL RURAL LAND-USE PLANNING AND MANAGEMENT GUIDELINES ¹⁸ CAN BE CONSULTED FOR GUIDANCE IN IDENTIFYING APPROPRIATE LAND-USE ACTIVITIES ALWAYS MANAGE FOR SUSTAINABLE DEVELOPMENT WHEN CONSIDERING LAND & WATER RESOURCE USE APPLICATIONS IN NATURAL AREAS	
2a) AGRICULTURE -HIGH IMPACT : Intensive Agriculture (includes forestry plantation and space extensive agricultural enterprises)		Nb	Nb		
2b) AGRICULTURE - LOW IMPACT: Extensive Agriculture		Restricted	Yes		
3) HOLIDAY ACCOMMODATION		Restricted	Restricted		
4a) RURAL RESIDENTIAL (RR): Low Density RR (Consolidation of ruralerven for conservation)		Restricted	Restricted		
4b) RURAL RESIDENTIAL: On-Farm workers Settlement		Nb	Restricted		
5a) TOURIST & RECREATIONAL FACILITIES - LOW IMPACT: Lecture rooms, restrooms, restaurants, gift shops & outdoor recreation		Restricted	Restricted		
5b) TOURIST & RECREATIONAL FACILITIES -HIGH IMPACT: Golf , polo, & housing eco-estates		Nb	Nb		
6a) RURAL BUSINESS: Place Bound		Restricted	Restricted		
6b) RURAL BUSINESS: Non Place Bound		Nb	Nb		
7) RURAL INDUSTRY		Nb	Nb		
8) SMALL HOLDINGS		Nb	Nb		
9) COMMUNITY FACILITIES & INSTITUTIONS		Nb	Nb		
10) INFRASTRUCTURE INSTALLATIONS		Restricted	Restricted		
11a) SETTLEMENT: Existing Settlements (Urban Expansion)		Nb	Nb		
11b) SETTLEMENT: New Settlements		Nb	Nb		

In South Africa, the total value of ecosystems is conservatively estimated at R27 billion per annum. This estimate includes the production of biological resources as well as the final consumption of ecosystem services. The calculated value of biodiversity-dependent industries in the greater Cape region amounts to approximately R9,4 billion. In 2000 it was estimated that the pollinating services of bees to the fruit industry and for honey production amounted to R594 million, while in 2003, bird-watching tourism generated R16 million.

Safeguarding biodiversity includes activities such as removing invasive alien plants from natural areas. Such initiatives not only provide employment and training opportunities, but It is estimated that alien clearance in the Cape could ‘earn’ about R700 million per year through enhanced cut-flower production for the wildflower industry, improved water supply through enhanced runoff and increased tourism . All social and economic sectors are entirely dependent on biodiversity because it delivers **ecosystem services**, which are vital for our survival. These services include a regular supply of clean water, flood control, prevention of erosion, insect pollination (vital for the

fruit industry), carbon storage (to counteract climate change) and clean air. The Eastern Cape's biodiversity contributes significantly to the province's economic growth and development through the provision of services such as food, fuel, fibre, and medicines. It is the basis for our nature-based tourism, sustainable harvesting and film industries, and a location for traditional and modern rituals and ceremonies. Biodiversity is also the mainstay of our agricultural economy, providing services such as grazing for livestock and insect pollination for food crops. Every aspect of our livelihoods depends on these services. The fruit industry in the Cape is entirely dependent on bees for its crop production. Outside of the fruiting season, as much as 80% of bee colonies survive on nectar and pollen provided by the natural veld. Safeguarding natural bee habitat is critical to the success of the fruit industry which employs significant numbers of people in rural areas.

The Biodiversity Sector Plan is the forerunner to any future bioregional plan in terms of Chapter 3 of the NEMBA. It must undergo further legal, administrative and public consultation procedures in order to qualify as a formally published bioregional plan. The BSP serves as the framework for the compilation of a bioregional plan in terms of Chapter 3 of the NEMBA for the southern regions of the Kouga and Koukamma municipalities. The Kouga and Koukamma municipalities fall within the Cape Floristic Region (CFR), designated as a global biodiversity hotspots areas of high species diversity, which are also under serious threat. The CFR, which extends from Nieuwoudtville south to Cape Town and then eastwards to Grahamstown, comprises about 9000 plant species, of which over 6000 are endemic to the region, meaning that they are found nowhere else in the world. Along with its floral diversity, the CFR also has a high animal diversity (more than 560 vertebrate species) in both its terrestrial and aquatic environments, and high levels of unique invertebrates (insects etc). Over half of the 44 frog species recorded in the CFR are endemic. There are 142 indigenous reptile species, 27 of which are endemic to the CFR. Two species of tortoise occur almost exclusively within the region. It is also a priority endemic bird area. All of the freshwater fishes are endemic to South Africa, of which the majority is endemic to the CFR. The St Francis Strandveld, classified as Critically Endangered, contains endemic and near-endemic species, namely *Rapanea gilliana*, *Brunsvigia litoralis*, *Cyrtanthus spiralis* and *Gymnosporia elliptica*

The Kouga and Koukamma municipalities contain Forest of national importance and have a high diversity of plant species per unit area (DWAF, 2007). They are commonly known as the Southern Cape Forests and represent the largest complex of high natural forests in the country. When grouped as warm temperate forests they have the highest species diversity in comparison with cool temperate forests elsewhere in the world, therefore comprising biodiversity of global significance. South African temperate forests are between 3 and 7 times richer in tree species than other forested areas of the Southern Hemisphere, even though the latter forests cover a much larger area (Cowling, unknown). Although they are considered climatically as warm temperate forests they are functionally more like tropical forests. This, in fact, is probably the basis for their higher diversity relative to temperate forests. True forest animals, such as the vulnerable and nationally protected blue duiker and leopard, still occur within the forest. This is in contrast to non-forest animal species in the surrounding fynbos where most of the larger animals have been displaced. Other red data or protected species occur within forests such as the Crowned Eagle and the Honey Badger. The localized endemic *Strelitzia Alba* grows in the Kouga region.

The vegetation types in the Kouga are the coastal corridor, where it includes the shifting sand dunes located between Oyster Bay and St Francis Bay; The middle Seekoei River contains the Endangered Eastern Cape Redfin considered to be a distinct lineage or population and is endemic to South Africa. Kouga has the critically Endangered Oyster Bay Thicket- Grassy Fynbos. Much of this vegetation has been transformed by grazing for dairy farming. The Grysbok (*Raphicerus melanotis*) is found in the coastal area of Kouga Municipality. It is an Endangered buck that inhabits thick scrub and bush, as well as fynbos. It is endemic to South Africa. The gladiolus species, *Gladiolus fourcadei*, which is Critically Endangered and grows in Renosterveld.

Key vegetation types of the Kouga and Koukamma region

Included in Critical Biodiversity Areas (CBAs) are all those vegetation types classified as Critically Endangered, as well as the best and most efficient areas to meet the thresholds for other vegetation types (e.g. a Least Threatened vegetation type will be classified as a CBA if it is located in a landscape corridor).

All the vegetation types that are dependant on the presence of either fresh or brackish surface water are important in terms of their conservation value. For example, the Garden Route Estuary, Garden Route Wetlands, Humansdorp Perennial Stream, Mellville Perennial Stream, Sand River Pans, Soutvlei Inland Pans, St Francis Dune Stream, St Francis Riverine Saltmarsh and the Tsitsikamma River &

Floodplain. The Coastal Forests are also regarded as having high biodiversity significance. The only coastal forest that grows in the Kouga region is the Tsitsikamma Riverine Forest. A total of 3 vegetation types are classified as Critically Endangered in the Kouga Municipality, namely the Oyster Bay Thicket-Grassy Fynbos, St Francis Strandveld and Tsitsikamma Plateau Proteoid Fynbos .

Key wetlands/estuaries of the Kouga region

The Klipdrift Estuary located just east of Oyster Bay enters the Indian Ocean at Slangbaai. The Krom, a temporary open/closed estuary, lies just north of St Francis Bay. It is ranked number 17 in South Africa in terms of conservation importance. The Seekoei Estuary lies between Paradise Beach and Aston Bay and is a recreationally-valuable closed estuary impounded behind a sand bar. A relatively large wetland known as Soutvlei lies between the Krom and Seekoei River Estuary. A number of wetlands occur either along the non-perennial Huisclip River or are scattered between the Krom and Seekoei rivers near the coastal area, just inland of Paradise Beach.

Key Rivers of the Kouga

Key rivers, from west to east, include the Klipdrift, Slang, Krom and Seekoei Rivers. The Krom is the largest perennial river, originating in the Tsitsikamma Mountains and flowing through the Kareedouw Mountains. One endemic red fin fish, namely the Eastern Cape Redfin (*Pseudobarbus afer*) inhabits the Seekoei River within the Kouga Municipality. It is potentially a single population (lineage) distinct to this system, known commonly as the Krom Redfin, and is Endangered. A unique Forest Redfin is supported by the lower Tsitsikamma River, which overlaps the western boundary of the Kouga Municipality. It represents the only population internationally. These fish are the highest ranking fish on the red data species list in the National Parks along the GR and are all endemic to South Africa. In the Kouga region much of the rainfall is drained from the steeper valley slopes towards the coast, whilst flatter areas are found between the valleys. The Klipdrift, Krom, Kabeljauws, Seekoei Swart River and Gamtoos River Valleys are the most prominent catchments of the municipality (around Humansdorp and Jeffreys Bay). Elands Mountains to the north of the Gamtoos River rise from the river valley to a height of over a 1000 m above main sea level. The Elands Mountains comprise a number of valleys and drainage occurs generally towards the south into the Gamtoos River Valley.

Key Catchments of the Kouga and Koukamma Region

This section describes river catchments that deliver water supplies, which place pressure on aquatic ecosystems, as well as those that are of significant importance for biodiversity. The Churchill Dam, which is situated downstream from Kareedouw , is a major dam in the boundaries of the Kouga municipality that provides water to Nelson Mandela Metro, including the Kouga LM (see below), but not the Koukamma LM; and (3) The Gamtoos Sub-area (to the East): Major dams include the Kouga on the Kouga River in the Koukamma Municipality (DPLG & DWAF, 2008). However, the last mentioned is not located in the CBA map planning domain.

Groundwater is also significant water source. The Table Mountain (TMG) Group aquifer in the Tsitsikamma Coast sub-area may have significant storage potential. Several communities make use of groundwater for potable purposes. In Kouga Municipality, St Francis and Cape St Francis are both served through the Churchill pipeline and 8 operational boreholes. Humansdorp receives its water from several fountains in a vlei situated to the north of the town, including from the Churchill pipeline. Jeffreys Bay obtains its potable water from the Churchill pipeline and a borehole cluster to the northeast of the town. Oyster Bay receives water from two sources, namely boreholes and a fountain (DWAF 2007).

The Krom River has a catchment size of 1125km² and has its origins in the Tsitsikamma Mountains, flowing parallel and south of the Suuranys Mountains. The Seekoei River has a catchment area of 250 km², is approximately 36 km in length and has its source inland of Humansdorp north of the N2. The Seekoei River catchment is obstructed by many farm dams which reduce run-off, particularly in dry years (Jeffreys Bay/Humansdorp SDF, 2004); whilst several farm dams and the Klipdrift Dam are located on the Klipdrifts River. The key catchments are associated with the key rivers of the Kouga region

Coastal and Marine Ecosystems

The coast of the Garden Route, which includes the Kouga and Koukamma region, is characterised by a rocky shoreline interspersed with bays, sandy beaches, dunes, rivers, estuaries and lakes. It experiences strong wave action owing to its exposure to the south-westerly ocean swells. A relatively shallow bank extends almost 250 km out to sea, known as the Agulhas Bank. As part of the continental shelf, this bank is of key biological importance, influenced by warm water plumes from the Agulhas current, as well as cold, nutrient-rich ‘bottom’ water upwelling in places. As a consequence, sea temperatures and productivity on the Agulhas Bank are intermediate between those of the west and east coast marine systems. It is the centre of the South African fishing industry. The area supports a variety of marine mammals, seabirds, deep water and open ocean fish, as well as shellfish.

Well-located, marine protected areas can play a substantial role in ensuring sustainable use of marine resources. They serve in protecting habitats, breeding stocks and nursery grounds which in turn, assist in replenishing fish resources in adjacent, exploited areas. Key priority areas or Special Habitats for extension of the existing Marine Protected Areas (MPAs) are proposed to provide better protection of inter-tidal habitats, areas of high reef fish abundance, coastal dunes, and sub tidal geology types.

Just west of Wreck Point to include Klippepunt, Slangbaai and Thysbaai to de Hoek; 3 from Cape St Francis, just west of Seal Point, to Port St Francis, just east of the Cape St Francis Nature Reserve just east and west of the Krom Estuary mouth at Krombaai; colleague just east and west of the Seekoei Estuary mouth at Aston Bay.

Special Habitats	Description & location in the region
Forests	The forests are very rich in plant species and are highly conservation worthy. They are protected by the National Forest Act.
Aquatic dependent	These habitats depend on the presence of either fresh or brackish surface water, associated with aquatic ecosystems.
Special Habitats	Description & location in the Kouga Municipality
St Francis Riverine Saltmarsh	This is an important habitat for estuarine species living in the Kouga region.
Zeekoei Limes tone Strandveld	This habitat is unique to the Kouga Municipality, containing a high concentration of rare plants and limestone ridges.
Lower Tsitsikamma River	The Endangered slender redbfin (<i>Pseudobarbus tenuis</i>), which is considered to be a distinct lineage or population inhabits this river.
Krom River and Estuary	The Krom River contains valley floor fen peat but sadly approximately 50% of it has been lost.
Middle Seekoei River & Estuary	The Endangered Eastern Cape Redfin (<i>Pseudobarbus afer</i>) which is considered to be a distinct lineage or population inhabits this river and is endemic to South Africa.
St Francis faunal habitat	The Gysbok (<i>Raphicerus melanotis</i>) inhabits west of St Francis bay.

SPECIAL HABITATS AND SPECIES OF SPECIAL CONCERN

Special habitats include areas that are rare within the region, or which support important species, ecosystems or ecological processes. They include those Listed Threatened Ecosystems in terms of the NEMBA. Species of Special Concern refers to red data species, some of which are listed within the NEMBA Threatened or Protected Species (TOPS); and known locations where these species occur. Special biodiversity features were identified via expert workshops and from data collected by the Custodians of Rare and Endangered Wildlife (CREW). Some of the Special Habitats and key Species of Special Concern of the Garden Route region are presented

Table: Special Habitats within Kouga

Special Habitats	Description and location in the region
Forests	The forests are very rich in plant species and are highly conservation worthy. They are protected by the National Forest Act.
Aquatic dependent habitats	These habitats depend on the presence of either fresh or brackish surface water, associated with aquatic ecosystems.
Special Habitats	Description and location in the Kouga Municipality
St Francis Riverine Saltmarsh	This is an important habitat for estuarine species living in the Kouga region.
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Lower Tsitsikamma River	The Endangered slender reedfin (<i>Pseudobarbus tenuis</i>), which is considered to be a distinct lineage or population inhabits this river.
Krom River and Estuary	The Krom River contains valley floor fen peat but sadly approximately 50% of it has been lost.
Middle Seekoei River and Estuary	The Endangered Eastern Cape Redfin (<i>Pseudobarbus afer</i>) which is considered to be a distinct lineage or population inhabits this river and is endemic to South Africa.
St Francis faunal habitat	The Grysbok (<i>Raphicerus melanotis</i>) inhabits an area west of St Francis Bay.

Plants of the many red data plants that occur in the Garden Route domain, *Gladiolus fourcadei* and *Protea cynaroides* are Critically Endangered species that grow in the Kouga and Koukamma region. The former occurs within Renosterveld (transitional Fynbos), from George to Humansdorp, whilst the latter occurs within the Roodefontein Grassy Fynbos, whose range extends from George to Port Elizabeth. Refer to the Garden Route Botanical Report (Vlok and Euston Brown, 2008) and the Garden Route SSC User Guide for more information regarding plant SSC.

Animal Species of Special Concern within the Kouga region include the Grysbok (*Raphicerus melanotis*), an Endangered and endemic buck that inhabit thick scrub and bush, as well as fynbos. This buck can be subject to local extinctions as habitat is destroyed. The Vulnerable blue duiker (*Philantomba monticola*), which enjoys dense coastal bush, thicket and forest habitats, the Honey badger or Ratel (*Mellivora capensis*), which is 15 i.e. the 1km coastal buffer zone in terms of the Integrated Coastal Management Act (24 of 2009). Near Threatened and protected in terms of the NEMBA and the Leopard (*Panthera pardus*), which is Vulnerable and can tolerate a wide range of habitat, usually with forests or broken rocky country, all inhabit the Koukamma and Kouga region. Another noteworthy mammal is the Cape clawless otter (*Aonyx capensis*), a NEMBA protected species that inhabits fresh water, estuaries, lagoons and the sea within both regions. One reptile species, namely the blue spotted girdled lizard (*Cordylus coeruleopunctatus*), is endangered. It enjoys shallow wetlands where abundant emerging vegetation occurs, inhabiting both the Kouga Koukamma regions.

The coastal region of the Kouga and Koukamma Municipality with its combination of forest, fynbos, estuarine and marine habitats has a diverse assemblage of bird species. These include several species of special concern such as Red Data seabird species breeding in the Tsitsikamma National Park and within the various habitats of the Kouga region. Some examples include the Cape cormorant (*Phalacrocorax capensis*), the African black oystercatcher (*Haematopus moquini*). The endemic African black oystercatcher inhabits the coastal areas and is protected; the Cape cormorant (endemic), is a marine cormorant that enters estuaries and harbours; the Denhams bustard inhabits grassland, agricultural land and recently burnt fynbos; the African crowned eagle abides in evergreen riverine forest; whilst the Knysna woodpecker (endemic) occurs in forest and thicket and the Knysna warbler (endemic) in thicket vegetation.

Key Landscape Corridors in the Kouga and Koukamma region

Landscape corridors in the Garden Route are interlinked with formal Protected Areas that are managed by SANParks, Eastern Cape Parks Board, or the Department of Water and Environmental Affairs (DWEA), and many of which are located in the mountainous areas. These key landscapes corridors are either CBAs or ESAs. The region's coastal corridor is a band (a minimum of 1 km wide outside of urban areas) which broadly accommodates the coastal zone and dynamic/mobile ecosystems, as well as intact coastal vegetation where it occurs. It incorporates shifting sand dunes, river mouths, estuaries, lagoons and is important in enabling the persistence of ecological and evolutionary processes. Rivers and their associated riparian or riverbank habitats provide the core for many large-scale ecological corridors, linking the coastline to inland mountains, as well as upland to lowland habitats. The river corridors are along the major perennial rivers in the region.

Ecological or landscape corridors provide valuable ecosystem services that are often impossible or very costly to replicate or offset. They support the long-term persistence of plant and animal species and their ecological processes (e.g. fire, pollination, seed dispersal) and enable migration of species which is of increasing importance with the threat of global climate change. Landscape corridors, including mountain catchments, absorb rainfall over immense areas, and act as vast sponges storing the water and then releasing it slowly through the dry season. In this way, corridors serve to protect the source of rivers and ensure water yield from mountain catchments. The quality and quantity of water supplies are maintained, providing for human consumption and ensuring the survival of downstream estuaries, wetlands (vleis) and streams, which in turn deliver other ecosystem services.

Corridors contribute to the protection and preservation of Critical Biodiversity Areas, or support rare or threatened species. Their scenic value contributes significantly towards tourism and recreation, and provides a region's 'sense of place'. Developing within frontal dune systems or within close proximity to the high water mark of the sea can have significant negative impacts for society. Sand bank erosion in St Francis Bay is a major problem where costly measures are being implemented to prevent property damage. This is especially important given the predicted sea level rise as climate change takes effect. [To locate the landscape corridors, see the Garden Route CBA map book, wall map & GIS maps].

Land Cover in the Kouga

The term land cover describes the level of change or transformation of natural ecosystems, which can range from natural land, to degraded and overgrazed areas, to areas which have been irreversibly transformed (e.g. urban development). Thus, land cover has implications for the maintenance and persistence of biodiversity. These measures of land cover were used by biodiversity (conservation) planners to identify Critical Biodiversity Areas, basing their assessments on the extent of an existing ecosystem (e.g. a particular vegetation type) relative to its original extent, prior to modern human activities. Land cover areas for the Garden Route were mapped at a scale of 1:10 000, and infestations of invasive alien plants was mapped at 1:15 000. Refer to Figure 2.4 and Table 2.4 for broad land cover categories in the Kouga and region.

The dominant land- or water resource-use activities in the Garden Route that cause transformation (damage/destruction) or degradation (deterioration) of the natural environment are listed below

Terrestrial ecosystems (on land)	Aquatic ecosystems (associated with water)
- urbanization	- water abstraction and modification of water flow (e.g. dams, hard surfaces)
- intensive agriculture (cultivation and dairy farming)	- development within the 1 in 20 year floodline (e.g. housing, sand-mining, cultivation)
- plantation forestry	- development and infilling (particularly in urban areas or expanding urban areas)
- sand mining	- cultivation of wetland areas
- groundwater abstraction	- groundwater abstraction
- invasion by alien plant species	- invasion by alien plant species
- inappropriate fire management	- invasion by alien fish species
- over-harvesting	- waste water discharge or effluent of poor quality
- over-grazing	- eutrophication as a result of fertilizer runoff from cultivated lands
- Species loss through climate change (caused by air pollution)	- artificial breaching of estuary mouths
	- species loss through climate change (caused by air pollution)

The eastern portion around the Greater St Francis Area, provides significant agricultural opportunities, particularly within the dairy industry. High rainfall and fertile soils ensure that the agricultural sector provides economic livelihoods. The agricultural sector contributes significantly to the area's economy and relatively low unemployment figures (Great St Francis SDP, 2003). The western portion, namely the Gamtoos River Valley is also characterized by agriculture in the form of mainly citrus, potatoes, kukuyu -rye grass, carrots, maize and wheat. It is predicted that there will be a shift towards the cultivation and production of chicory based on national and international demand. Forestry is limited to the Longmore Forest Reserve producing exotic species, i.e. Pine and Blue-Gum (Gamtoos SDF, 2004). The landscape between these two areas, namely around Humansdorp and Jeffreys Bay, has agriculture and mining as its dominant land-use activities (Jeffreys Bay/Humansdorp SDF, 2005). Following is the guide to incorporating the Kouga and Koukamma Biodiversity Sector

IDP Phases	Basic elements in developing the SDF	Use of the Kouga and Koukamma Biodiversity Sector Plan (CBA map & guidelines)
Phase 1: Analysis		
Gather all information. Analyse information for - i) trends; and ii) issues that can be shown on a map. Identify needs, including normalisation after apartheid, transport etc. Draft report for public comment.	Biodiversity importance of land (or category on the CBA map), current land-use, agriculture, the built environment, infrastructure, transport routes, watersheds, geology etc., heritage sites, State of Environment Reporting, Strategic Environmental Assessment. i) trends (e.g. the direction in which the town is growing, land suitable for development); ii) issues (e.g. a need for housing, schools or a clinic in a certain area; protecting ecosystem services).	Planners and decision-makers use the Kouga and Koukamma Biodiversity Sector Plan (Critical Biodiversity Areas Map and guidelines) to identify which areas to develop and which to leave undeveloped and conserved.
Phase 2: Strategy		
Identify vision, mission, objectives, strategies for dealing with needs, problems and issues, such as Local Economic Development (LED), poverty alleviation, the natural environment, possible projects. Draft reports for public comment.	Critical Biodiversity Areas Map indicates: Priority areas for conservation, opportunities and constraints on developments. Draft report(s) for public comment.	Plan which areas to develop and which to leave undeveloped and conserved.
Phase 3: Projects		
Identify priorities, refine projects. Prioritise projects and finances, which together influence the SDF. Assess environmental impacts of projects.	Critical Biodiversity Areas Map indicates areas where restoration projects or other biodiversity related projects for poverty alleviation can take place e.g. SANParks People and Conservation, Working for Water etc.	Identify areas for restoration projects, or other biodiversity related projects.
Phase 4: Integration		
5-yr financial plan and programmes for capital investment, integrated LED, environment (including biodiversity), poverty alleviation, gender equity etc. Draft IDP report for public comment.	Draft report and map based on the Critical Biodiversity Areas Map with overlying infrastructure and land-uses, sites for integrated projects (e.g. large scale housing development, poverty alleviation projects e.g. restoration), open spaces, urban edge, development nodes, corridors, cemeteries, waste sites, social and emergency services. Draft SDF report and map for public comment.	Provincial officials, NGOs & public to ensure that the Biodiversity Sector Plan is upheld.
Phase 5: Approval		
Final IDP report approved based on the Critical Biodiversity Areas map and other BSP information.	Final SDF report and map approved based on the Critical Biodiversity Areas map and other BSP information.	Councilors, municipal officials, provincial officials, NGOs & public to ensure that the Biodiversity Sector Plan is upheld.

In summary, in order to ensure sustainable development, scientists have identified priority areas requiring special safeguarding. They have also identified areas of lesser biodiversity importance, as well as those sites which have insignificant biodiversity remaining after intensive development (e.g. housing), plantation forestry or ploughing for the cultivation of agricultural crops.

Environmental Management

Environmental conservation, for the purposes of the Kouga Spatial Development Framework, entail issues relating to general conservation principles, management and protection of various landscapes including the coast, estuaries, river valleys, hinterland, urban areas and marine resources. Diversity and conservation initiatives, with specific reference to the STEP initiatives (Sub-Tropical Thicket Eco-System Planning) and the Provincial Biodiversity Plan are further included in the Kouga SDF.

Apply the “precautionary” principles in cases where uncertainty surrounds the full impact of proposed development. This implies that if the impact of a proposed development is not fully known and cannot be established, the development should be put on hold until further clarity and decisions have been obtained from the relevant Department of Environmental Development and Environmental Affairs (DEDEA). Strictly enforce the environmental conservation regulations with respect to listed activities and EIA procedures. Habitats and/or natural features deemed to be of importance or significant should be protected from in appropriate development, conserved and enhanced.

As a general rule, development should make a positive contribution towards environmental conservation and management. Development in sensitive areas should therefore only be granted on the basis that environmental management and conservation are promoted and enhanced for the long term sustainability of the area. This applies to urban and rural developments.

Development is inherently linked to the use (or misuse) of natural resources. The obligation to ensure sustainable development implies that development planning needs to deal with design requirements relating to sound environmental practices. The inclusion of environmental

management in the IDP planning is supported by Agenda 21 (Earth Summit 1992) that identifies local government as a key agent for sustainable development. “Because many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and co-operation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish environmental policies and regulations, and assist in implementing national and sub-national policies. As the level of government closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development”. (Local Agenda 21 Planning Guide, Department of Environmental Affairs and Tourism, 1999).

1) Integration of environmental issues into municipal dialogue, thought processes and decision making

- ❖ Environmental issues are sidelined within the Municipality and are not adequately incorporated into decision making processes. This is especially true for developments which have a potential negative impact on the environment.
- ❖ There is a lack of awareness of environmental conservation issues and legislation.
- ❖ No environmental conservation unit/department (lack of funds and staff, low priority ascribed to environmental matters).
- ❖ No clear functions and responsibilities are ascribed to conservation staff.
- ❖ Environmental policy & guidelines contained in SDP/SDFs are not generally adhered to.

2) Well managed, sustainably utilized natural resources

- ❖ Natural resources are not being managed in a coordinated and integrated manner.
- ❖ Environmental legislation not adhered to and mandatory management plans not in place.
- ❖ Estuaries are under tremendous pressure from development and over-exploitation of resources and are not adequately managed.
- ❖ Inadequate capacity within the Municipality to fulfil environmental conservation function adequately.
- ❖ The Kouga Environmental Committee (KEC), established by Council to bring environmental issues to the attention of the Municipality and act as an advisory and watchdog body, is poorly attended by municipal officials.
- ❖ Bio-regional programmes not used in a practical sense in development and planning issues.
- ❖ Poor attendance of officials at capacity building and information sessions.
- ❖ Non conformance to prescribed processes, action plans etc. relating to environmental conservation and sustainability.
- ❖ Illegal and non-sustainable development practices, and illegal dumping and bush clearing are common place and apparently unstoppable.

3) Well managed, well maintained and optimally utilized nature reserves

- ❖ Nature reserves have no management plans in place and are not being managed adequately.
- ❖ Infrastructure on many reserves is in a state of disrepair and trails are not maintained and kept open.
- ❖ There is no dedicated reserve staff, particularly in terms of ranger, educational and caretaker duties.
- ❖ The potential of reserves to provide services (tourism, education, recreation) as well as generate revenue is not being realized.
- ❖ Links between local nature reserves and other tourism and conservation initiatives are not strong.
- ❖ General lack of recreational facilities in Kouga.

4) Well managed and maintained public boat launch sites (beach and estuarine) and strict enforcement of off road vehicle regulations

- ❖ Boat launch sites are not adequately managed (management plan only implemented for one launch site to date).
- ❖ There is little control over illegal use of vehicles in the coastal zone.
- ❖ Permission is often granted by municipal officials for vehicle use on beaches contrary to national legislation.

- ❖ Lack of adherence to off road vehicle regulations by some officials.
- ❖ The safety of all users of the coast is threatened by uncoordinated and uncontrolled activities at launch sites (particularly regarding the massive influx of jet ski users during holidays and Council approved commercial activities on launch sites).

5) Control, monitoring and eradication plans are in place for priority areas in terms of alien invasive plants species

- ❖ Uncontrolled spread of alien invasive vegetation affecting water supply and quality, posing a fire hazard and posing a threat in terms of biodiversity conservation.
- ❖ No coordinated plans or efforts to control/eradicate.
- ❖ Lack of priority ascribed to the alien vegetation problem.

The following table provides a summary of the legislative framework that guides the work of the Municipality within the Key Performance Area of Socio and Economic development as well as the compliance of the Municipality in terms of it.

LEGAL REQUIREMENTS	DOCUMENTS IN PLACE	IMPLEMENTATION/ APPLICATION		REASON FOR NON-APPLICATION
		YES	NO	
PGDP	Yes	X		
ASGISA	Yes		X	Concept not fully known. Info needed to execute at municipal level on how to deal with accelerated and shared growth initiatives.
JIPSA	Yes		X	Concept not fully known. Info needed to execute at municipal level on how to deal with joint initiative on priority skills acquisition.
LED Plan	Yes	X		
Tourism Sector Plan	Yes	X		
STEP	Yes	X		
Coastal Policy Green Paper	Yes	X		
SCM Policy	Yes	X		
Marine Living Resources Act	Commercial Fishing Rights Policy		X	Environmental officers to visit subsistence fishermen in Kouga to discuss projects.
National Heritage Resources Act			X	
National Health Act Regulation 918	Certificate of acceptability for food premises	X		
National Tobacco Act				
Nat. Water Act				
Early Childhood Development Policy			X	Education, through ignorance perhaps, is no longer regarded as a Development Priority of the Municipality, although it is a service delivery point.
National Building Regulations	NBR,SABS 0400 Design Specifications		X	No funding available
National Spatial Development Framework	Three SDFs accommodating future development in Kouga; Nodal Development Plan		X	To incorporate SDFs into a by-law for the Municipality; Johan to establish a Steering Committee for additional inputs by Kouga Municipality and other stakeholders.
Physical Planning Act	SDF for integrated land usage		X	Business Plan submitted to DEAET for approval
Foreign Relations Policy				
Development Facilitation Act	Policy framework		X	Policy not in place.
Land Use Planning Ordinance	Land Use Management Guidelines (SDF for integrated & aligned land usage)		X	Not in line with SDF.
NEMBA	Environmental Management Plan		X	Funding on hold by DBSA.
By-law: Beaches, Roads & Streets	Municipal by-laws		X	Very little law enforcement capacity to monitor the implementation of the by-laws.

Disaster Management Act	Disaster Management Plan			
Environmental Conservation Act, s.20 s.19	Permits on the design, construction, monitoring & closure of waste sites By-laws on solid waste		X	Awaiting ROD on regional waste sites, closure of Papiessfontein Waste Site Awaiting proclamation through the office of the MEC.
Bio-Diversity Act, 2000 i.t.o. Regulations on EIA	EIA on waste sites		X	Awaiting results from DWAF and DEAET i.t.o. integrated ecological analysis.
White Paper on Integrated Pollution and Waste Management	Integrated Waste Management Plan	X		Not implemented due to lack of funds.

Based on the above information and analysis, the table that follows provides an overview of the prioritization that influenced the strategies and projects within the Key Performance Areas.

The following STEP Handbook and EC Biodiversity Plan are identified for consultation in all development proposals and initiatives.

Coast and marine resources.

- All development along the coastline should be subjected to the environmental impact procedure.
- Development should enhance conservation with minimal or no visual impact from the beach.
- As a general policy, development should not take in the place primary dune zone and unstable dune areas.
- Ensure access to resources for local communities.
- The utilisation of marine resources should always be based on the principle of sustainability and long-term economic viability.

Estuaries or river mouths.

- Further and future development adjacent to estuaries/river mouths, including subdivision, should as a general policy not be permitted.
- In exceptional cases where the development of and along river mouths can be implemented in a sustainable manner, a detailed environmental impact assessment should be carried out.
- General activity in and around river mouths should be carefully monitored and based on environmental management strategies and plans.

River Valleys

- New developments, as a general rule, should not be permitted below the 1 in 100 year flood line in exceptional cases where development do take place, permanent structure should not be erected.
- New developments along the rivers should be limited to existing development and/or recreation nodes.
- All new developments along the rivers should be subject to a detailed environmental impact assessment with specific input from the Department of Water Affairs and Forestry.

Hinterland

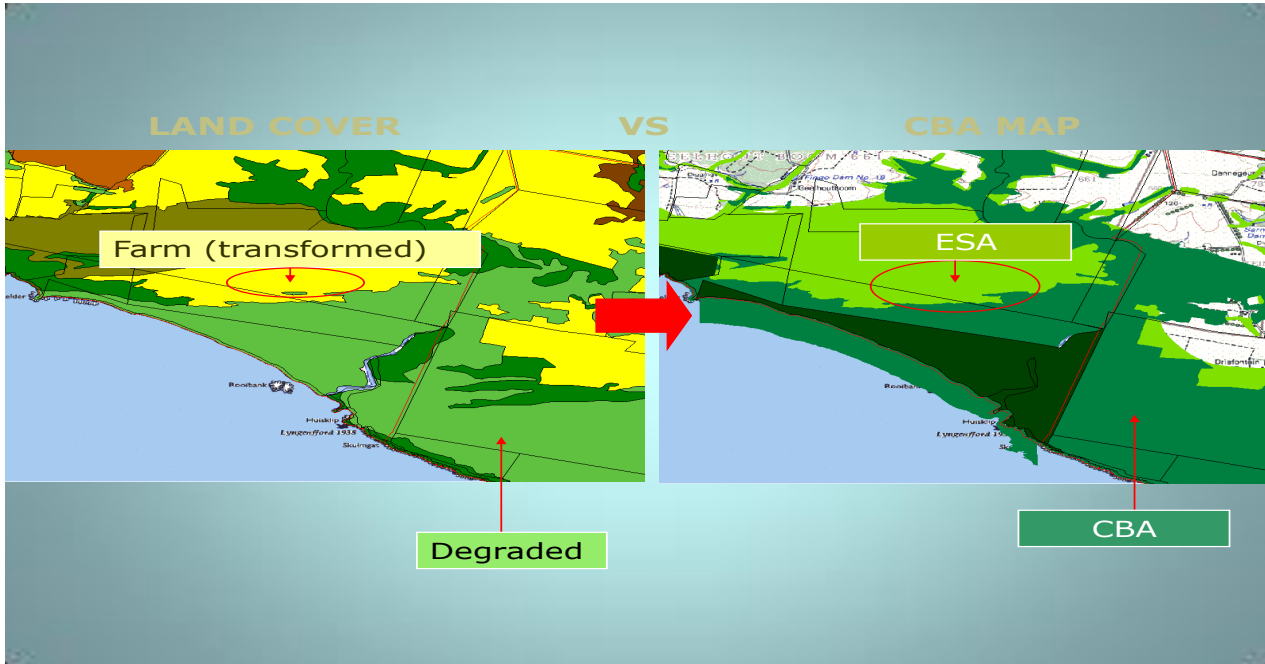
- General conservation principles and conservation legislation should apply to all developments.
- Conservation of prime and unique agricultural soils policy should be implemented in all places.
- Tourism, resort and estate developments within the rural area and hinterland should always have a positive spin off towards environmental conservation.

Urban

- Protect existing open space and conservation worth areas within all urban settlements.
- New urban development should as a minimum requirement adhere to the principles of the red book with respect to the provision of open space.

- Environmental and visual impact of all urban development should be carefully considered and evaluated against impact on the surrounding area and character.

Impact of People on Space and Environment Analysis of the St Francis Bay Beach Disaster Case



KOUGA LAND-USE RECOMMENDATIONS

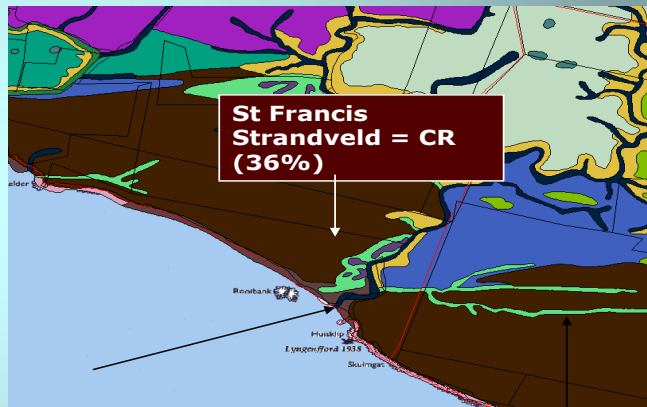
KEY: Biodiversity sector land-use recommendations

- Yes = Encouraged;
- No = Discouraged;
- Restricted = Land-use possible under strict controls in order to avoid impacts on biodiversity.

CBA MAP CATEGORY: →	Formal Protected Areas	Critical Biodiversity Areas	Ecological Support Areas	Other Natural Areas	No Natural Areas Remaining
DESIRED MANAGEMENT OBJECTIVE: → LAND-USE ACTIVITY: ↓	Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation.		Maintain ecological processes	Sustainable Management within general rural land-use principles	Sustainable Management within general rural land-use principles. Favoured areas for development.
1) CONSERVATION	as per pre-defined Town & Regional planning terms LAND-USE GOVERNED BY THE NATIONAL ENVIRONMENTAL MANAGEMENT PROTECTED AREAS ACT (NEMPAA) AND A PROTECTED AREA MANAGEMENT PLAN	Yes	Yes	THE RECOMMENDATIONS OFFERED BY THE WESTERN CAPE PROVINCIAL RURAL LAND-USE PLANNING AND MANAGEMENT GUIDELINES[1] CAN BE CONSULTED FOR GUIDANCE IN IDENTIFYING APPROPRIATE LAND-USE ACTIVITIES ALWAYS MANAGE FOR SUSTAINABLE DEVELOPMENT WHEN CONSIDERING LAND & WATER RESOURCE USE APPLICATIONS IN NATURAL AREAS	
2a) AGRICULTURE: INTENSIVE AGRICULTURE OR HIGH IMPACT (includes forestry plantation and space extensive agricultural enterprises)		No	No		
2b) AGRICULTURE: EXTENSIVE AGRICULTURE OR LOW IMPACT		Restricted	Yes		
3) HOLIDAY ACCOMMODATION		Restricted	Restricted		
4a) RURAL RESIDENTIAL (RR) Low Density RR: Consolidation of rural erven for conservation		Restricted	Restricted		
4b) RURAL RESIDENTIAL On-Farm workers Settlement		No	Restricted		
5a) TOURIST & RECREATIONAL FACILITIES - LOW IMPACT: Lecture rooms, restrooms, restaurants, gift shops & outdoor recreation)		Restricted	Restricted		
5b) TOURIST & RECREATIONAL FACILITIES - HIGH IMPACT: golf, polo, & housing eco-estates		No	No		
6a) RURAL BUSINESS- Place Bound		Restricted	Restricted		
9) COMMUNITY FACILITIES & INSTITUTIONS		No	No		
10) INFRASTRUCTURE INSTALLATIONS		Restricted	Restricted		
11a) EXISTING SETTLEMENTS (URBAN EXPANSION)	No	No			

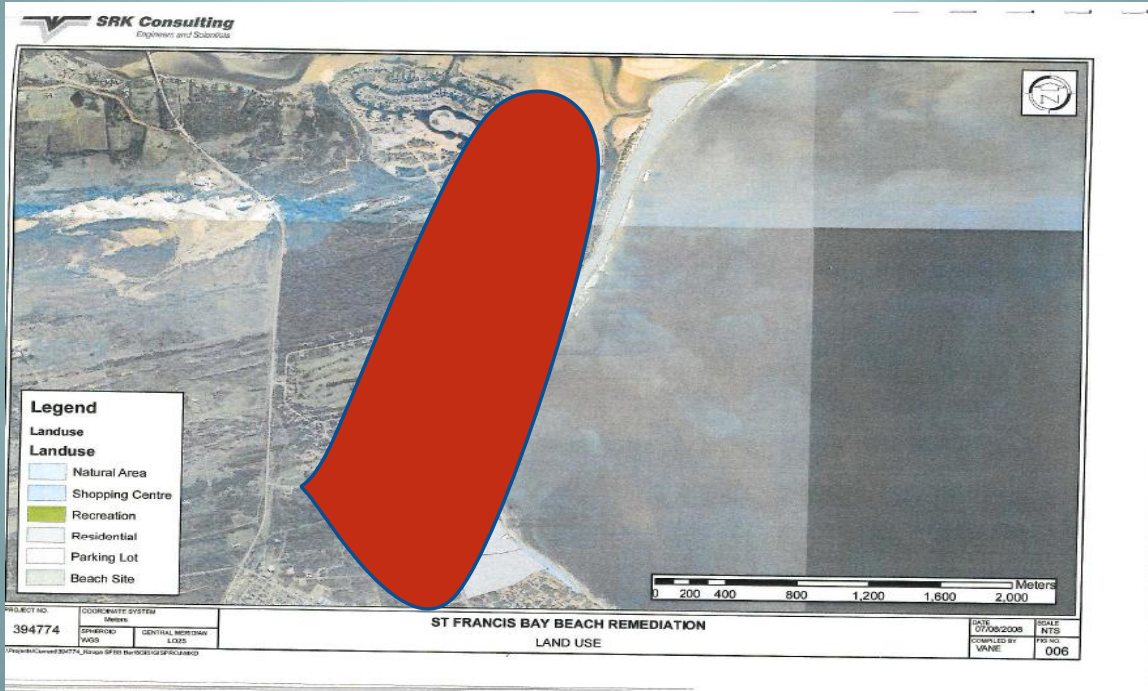
biodiversity features on the property

e.g. wetland, vegetation type, special habitats and ecosystem status.



Appendix A of handbook GIS

Danger area next to the Settlement



Analysis: The situation- Settlement

Situation The movement of sand is from the SW to NE towards the mouth of the Estuary. Wave storm 1 September 2008 removed all sand built up during summer period eroded into a spit/dune with some wave wash over. The northern end is eroding the fastest shortening the spit and tip broken into an island with wave wash over, The St Francis Bay Beach has been receding at a rate of between 2 to 3 meters /2 especial winter . Predicted : 7yrs Collapse of canal system >Santarem dune field being stabilised by developers in order to build houses.

Costs each year *escalates particularly on the dredger, pipeline (including pumps) and reef bags.*

Replenish/rehabilitation of the beach from the Main Beach towards the mouth of the Estuary by pump sand from the Estuary to renourish the beach on an ongoing basis. This renourishment will include resculpting and revegaltating the dunes as part of this process

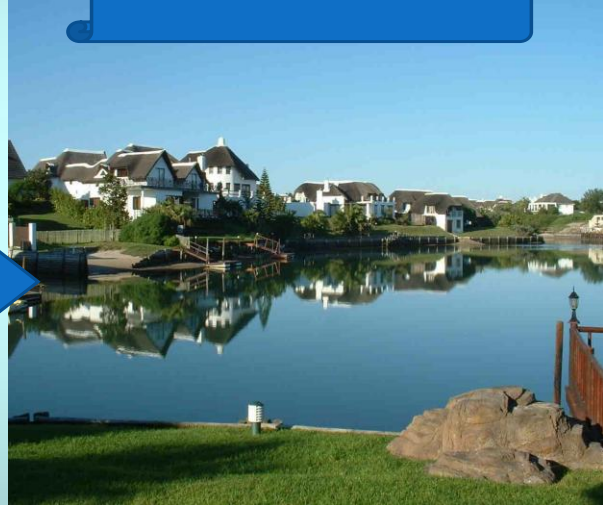


If nothing proper is done to the Beach there is a chance that the mouth of the Kromme River will silt up in 7yrs time This will depend on whether the barrier dune is breached as it will change the hydrodynamics of the whole Estuarv system

Our Challenge
Beach erosion & effects on property



Our Vision
To sustain this development



Current Strategy:

Integrated Development Programmes

Coast and marine resources.

- All development along the coastline will be subjected to the environmental impact procedure.
- Development should enhance conservation with minimal or no visual impact from the beach.
- As a general policy, development should not take in the place primary dune zone and unstable dune areas.
- Ensure access to resources for local communities.
- The utilisation of marine resources should always be based on the principle of sustainability and long-term economic viability.

Estuaries or river mouths or valleys

- Further and future development adjacent to estuaries/river mouths, including subdivision, should as a general policy not be permitted.
 - In exceptional cases where the development of and along river mouths can be implemented in a sustainable manner, a detailed environmental impact assessment should be carried out.
 - General activity in and around river mouths should be carefully monitored and based on environmental Impact Assessment, management strategies and plans.
- New developments, as a general rule, should not be permitted below the 1 in 100 year flood line in exceptional cases where development do take place, permanent structure should not be erected.

Current Projects

Rock revetment & Danish Project installation of a 1.75 m long and 6.5 cm in diameter 150 polyethylene tube, with 0.2 mm slots for permeability and weighting 2 kg on a 2.4 km beach is a series of rows (6 PEMs per row)