



COASTAL ACTION PLAN 1: SPATIAL PLANNING & DEVELOPMENT

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Prepared for:
Buffalo City Municipality
Integrated Environmental Management Unit

Prepared by:
Coastal & Environmental Services

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DEFINITIONS & ACRONYMS

PLEASE ADD IN WORDS AS REQUIRED

Admiralty Reserve - Narrow strips of State land that are dispersed along the coastline above the high water mark. Includes land demarcated as admiralty reserve, government reserve, beach reserve, coastal forest reserve or other similar reserve, regardless of who owns the land;

Biodiversity - The number and variety of species of plants and animals, the genetic variability within species, and diversity of *habitats and ecosystems*

Coastal access land – land adjacent to coastal public property designated as coastal access land in order to secure public access to the coastal public property

Coastal buffer zone – the area of land 1km inland from the high water mark or from the inland boundary of the coastal public property in non-urban areas; and 100m from the high water mark in urban areas in which development and activities are strictly controlled. Purpose is to protect the ecological integrity & the economic, social and aesthetic value of the coastal public property.

Coastal Forest –

Coastal protected area - a proclaimed protected area that is situated wholly or partially within the coastal buffer zone

Coastal set-back lines – a prescribed coastal boundary adjacent to a sensitive coastal area in which no development may occur on the seaward side. Serves to the protect coastal public property; the coastal buffer zone and to preserve the aesthetic values of the coastal zone.

Coastal Thicket – a unistratal community of multiple-stemmed dwarf trees and shrubs with a compact canopy (Tinley 1985)

Coastal waters – the marine territorial waters including estuaries, rivers and lagoons which are periodically connected to the sea and subject to tidal influences.

High water mark – The highest point reached by the sea during ordinary storms occurring during the stormiest period of the year, excluding exceptional or abnormal sea-surges.

Integrated coastal management – A holistic, continuous and dynamic process of sustainable use, development and protection of coastal resources.

Limited Development Area – The land within the coastal buffer zone not designated as a development node or a No Development area in which development may be considered subject to certain criteria and conditions.

Littoral active zone - unstable and dynamic area of the coastline as a result of natural processes; characterised by dunes, beaches, sand bars and other landforms composed of unconsolidated sand, pebbles or other such material which is either unvegetated or only partially vegetated.

Node (Urban Node) or Nodal development area - Describes an area of land which has been designated for development in terms of a Spatial Development Framework Plan.



No development areas – Coastal areas comprised of proclaimed reserves, conservation areas or state forests; or areas deemed to be environmentally sensitive in which no future development should be permitted in order to maintain the ecological integrity and aesthetic value of the coastal zone.

Ribbon development - Describes the spatial pattern of human settlement and infrastructure that is spread out along the coastline.

Seashore - The water and the land between the low and high water marks.

Sensitive coastal ecosystems - Ecosystems that are particularly vulnerable to disturbances by virtue of their inherent characteristics, or proximity or exposure to potential human or natural hazards.

Special management areas - An area in which the environmental or socio-economic conditions require special management interventions in order to attain the objectives of any coastal management programme in the area; facilitate the management of coastal resources by a local community; promote sustainable livelihoods for a local community; or conserve, protect or enhance coastal ecosystems and biodiversity in the area.

Urban edge – The prescribed boundary surrounding an urban node which demarcates the limit for urban growth



1. INTRODUCTION

The South African coastal zone provides numerous opportunities for investment and economic development due to its aesthetic appeal. Along the BCM coastline there is a fine balance between natural conserved coastal areas and nodal development areas. The declared Coastal State Forests have prevented ribbon development and ensured the maintenance of a coastal green belt which serves to protect both the flora and faunal species within the area. However, increasing demand for coastal property as well as the associated infrastructure poses a threat to the protection of coastal biodiversity as well as future sustainable economic use through tourism ventures. In order to ensure that the integrity of the BCM coastal zone is maintained appropriate protection of the resources and zonation of the coastal zone is required.

There are currently three Spatial Development Framework (SDF) Plans within the BCM area, namely the Buffalo City SDF, West Bank SDF and the Quenera SDF. In terms of the Municipal Systems Act these SDF's become statutory plans once approved by Council, and are used to guide and inform all spatial development decisions. These SDF's outline the proposed areas for different types of development and for public and private sector investment. However, due to the wide nature of the study area within these SDF's the coastal area of BCM has not received any dedicated and detailed environmental input into the coastal spatial planning component. The recent increase in demand for coastal property and influx of applications for development to the authorities has highlighted the need for a dedicated coastal spatial development plan. The aim of this document is to provide guidance on spatial planning in the coastal zone through the demarcation of highly sensitive ecological areas as well as possible development areas.

It should be noted that this document forms a sub-component of the BCM Integrated Coastal Zone Management Plan and should be read in conjunction with the supporting documentation.

1.1 LAYOUT OF THIS REPORT

Chapter 1 sets out the objectives of the coastal spatial planning and the development action plan. Chapter 2 indicates the institutional authorities and provides the legislation, policies and frameworks for the planning of this project. The definition of the BCM coastal zone and the criteria for its development can be found in Chapter 3 and 4 respectively. The guidelines for development of urban nodes (Chapter 5) and Limited Development Areas (Chapter 6) are discussed. The definition of sensitive areas is characterised in Chapter 7 as No Development Areas along with guidelines for use. The spatial analysis of the BCM coastal zone is discussed in Chapter 8 including a description of the natural environment along the BCM coastline. Finally, key performance indicators are outlined in Chapter 9.



1.2 OBJECTIVES OF THE COASTAL SPATIAL PLANNING AND DEVELOPMENT ACTION PLAN

In order to ensure sustainable coastal development within the BCM area the following strategic objectives have been identified for spatial planning and development within the coastal zone of the BCM:

- 1. Create mechanisms that facilitate shared views on what developments are desirable for the BCM coastline.**
- 2. To provide guidelines for appropriate types of development.**
- 3. To eliminate inappropriate development & fragmentation of ecosystems along the coastline.**
- 4. To zone the coast for different levels of development.**
- 5. To establish planning approval guidelines for development proposals within the coastal zone.**
- 6. To develop guidelines for municipal infrastructure development**
- 7. To generate baseline information and develop indicators that can be used to monitoring coastal development**



2. CURRENT INSTITUTIONAL AND LEGAL FRAMEWORK

2.1 INSTITUTIONAL AUTHORITIES

2.1.1 BCM

Any Spatial Planning and Development in Buffalo City Municipality (BCM) requires a review of all relevant environmental legislation, policies and guidelines that could apply to BCM. This section summaries the relevant legislation pertaining to coastal spatial planning.

Numerous and varied activities occur in the coastal environment with the result that a multiplicity of legislation is applicable in the area. The following pieces of legislation are the most important statutes in the coastal environment; namely: Constitution Act (108 of 1996) and a wide range of other national Acts, including the National Environmental Management Act (107 of 1998), the Sea-Shore Act (21 of 1935), the Environment Conservation Act (73 of 1989), the Marine Living Resources Act (18 of 1998) and the Development Facilitation Act (67 of 1995). Furthermore, a range of other national and provincial legislation and regulations are relevant to the coast, for example, legislation relating to local government restructuring, development planning, heritage, disaster management, natural resource management, water, biodiversity, mining, transport, energy and pollution control. Subsequent paragraphs endeavour to give brief summaries of all the above listed statutes.

2.1.2 STATUS OF SDF

An SDF is one of the core components of the IDP (see section 26(e)) of the Municipal Systems Act 32 of 2000). The Act requires that the SDF must include the provision of basic guidelines for a land use management system for the municipality. Therefore, SDF is a legally binding statutory document which serves to guide and inform all decisions made by the Municipal Council on spatial development and land use management in the area to which it applies. Simply put, SDF as a component of the IDP binds the municipality in the exercise of its executive authority, except to the extent of any inconsistency between a municipality's integrated development plan and national or provincial legislation, in which case such legislation prevails (see section 35(1)(b) of the Municipal Systems Act). Legal potency of the SDF is further strengthened by the Municipal Systems Act where it provides that 'a spatial development framework contained in an integrated development plan prevails over a plan as defined in [section 1](#) of the Physical Planning Act 125 of 1991' (see section 35(2) of the Municipal Systems Act). Because the CZMP and the IEMP have serious implications for spatial development and land use management, they form part and parcel of the SDF which forms part of the IDP. For these documents (CZMP and IEMP) to have a legal muscle, all the pertinent recommendations contained in them may be incorporated in the SDF or attached to the SDF as annexures. Secondly, the SDF will have to be incorporated into the IDP and subjected to the adoption process which is clearly outlined in the Municipal Systems Act (see sections 27 – 36 of the Act).



2.2 LEGISLATION, POLICIES AND BILLS

THE CONSTITUTION ACT 108 OF 1996

The Constitution is the supreme law of the Republic and any law or conduct or act inconsistent with the Constitution is invalid and has no force of law.¹ The importance of the Constitution in the coastal management sphere is that it provides the framework for legislation affecting coastal management. It emphasises the need for co-operative government, and the need to devolve management functions to the lowest sphere of government able to undertake them.

In dealing with the coastal environment it will be important to bear in mind the provisions of section 24 of the Constitution. The said provision states that everyone has the right to an environment that is not harmful to their health or well-being and the right to have the environment protected for the benefit of present and future generations is also very important in BCM's coastal management activities. This is because State is *inter alia* required through reasonable legislative and the other measures to secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. Simply put, BCM is obliged to ensure that its coastal activities do not infringe the provisions of section 24 of the Constitution; i.e. BCM's decisions and plans must take into account people's right to environment and the need to protect the environment for the benefit of present and future generation.

SEA-SHORE ACT 21 OF 1935

The Sea-Shore Act, although dated, is fundamental in determining existing or proposed institutional arrangements for coastal management because it is still the law of force. The Act was enacted and provides for the following; namely:

- declare the State President to be the owner of the sea-shore and the sea within the territorial waters of the Republic (public trust doctrine);
- grant of rights in respect of the sea-shore and the sea; and
- alienation of portions of the sea-shore and sea²

In principle, the Act prohibits the alienation of the sea and sea-shore area. However, the Minister is empowered to lease the area for various uses, which include the erection of bathing boxes, beach shelters, tea rooms and so forth.

Even though the administrative functions of the Act have been largely assigned to the coastal provinces, the coastal municipalities like BCM remain obliged to give effect to the above principles.

NATIONAL WATER ACT 36 OF 1998

The National Water Act (NWA) replaces and repeals all previous legislation pertaining to water, and should be seen against the legislative background of the Water Services Act (Act 108 of 1997). It is concerned with the overall management, equitable allocation and conservation of water resources in South Africa. To this end, it requires registration of water users and licenses to be obtained for water use except for certain limited instances set out in the Act. These instances include domestic use, certain recreational use, where the use occurs in terms of an existing lawful use or where the Department of Water Affairs and Forestry (DWAF) has issued a general authorisation that obviates the need for a permit. The Act further provides for the establishment of catchment management agencies for the integrated management of all aspects of water use in South Africa.

¹ Section 2.

² Long Title of the Act.



NATIONAL FORESTS ACT 84 OF 1998

Important features of the National Forests Act are that it recognised the need to balance the protection of the environment through sustainable land use with the economic needs of the country, the need to redefine the role of government, the need to address the unfair distribution of forests and their benefit to society, and the need to distinguish between natural forests and plantations (although both fall within the definition 'forest'). The Act will be an important component of the management of coastal forests and plantations.

In the Eastern Cape, indigenous forests occur along the coast and on the Amatole and Transkei mountain ranges where they have been significantly depleted. The heavy exploitation of South African indigenous forests in the past has led to the 'administration of indigenous forests' being recognised in the Constitution as being a matter for concurrent national and provincial jurisdiction. The National Forest Act deals with these concerns by providing a conservation and management framework which rests on a foundation of sustainable forestry management.

Development Facilitation Act (DFA)

The DFA is a national act which was promulgated as an interim measure to bridge the gap between the old apartheid era planning laws and a new planning system reflecting the needs and priorities of the new South Africa, with the primary purpose of "facilitating development" (Tshani Consulting 2003). It operates parallel to existing legislation promulgated prior to 1994 (specifically the Land Use Planning Ordinance LUPO) and sets out the guidelines and principles of managing development and planning in accordance with national objectives.

Municipal Systems Act (32 of 2000)

The Municipal Systems Act was promulgated to ensure financially and economically viable municipalities through the preparation of IDPs and strategic plans for the development of the municipality. The act outlines the need for a spatial development framework in which guidelines are presented for a land use management system to be implemented by the municipality. As a component of the IDP the Spatial Development Framework becomes the principle planning instrument for decision making regarding planning, management and development within the municipality once adopted by the Council.

Land Use Management Bill

This Bill is intended to replace the Physical Planning and Development Facilitation Act and will enable government to formulate policies and strategies for land-use and land development which will resolve spatial, economic, social and environmental problems experienced in the country.

Provincial Spatial Development Plan

The Eastern Cape has approved a Provincial Spatial Development Plan, which supports the view that the focus of development should be on developing nodes and areas where economic opportunities can be stimulated. The plan focuses on various areas of the province and highlights the approach most suitable for that area. For the coast in general, the plan discourages linear development and places emphasis on the establishment of nodal developments to build on existing strengths and promote development, which has minimal environmental impacts.



White Paper on Sustainable Coastal Development

This is a national policy document, which aims to achieve sustainable coastal development through a dedicated and integrated coastal management approach. Spatial planning within the policy aims to promote coastal tourism, leisure and recreational development and improve public access to the coast and coastal resources. It further requires that coastal planning must promote distinctively coastal development opportunities and non-coast dependent developments be relocated inland. It encourages nodal development and densification of existing nodal areas and the design and location of new structures in the coastal zone must not impair the natural visual beauty of the coast. The policy also states that physical development in high risk coastal areas must be avoided.

Eastern Cape Coastal Management Programme

The provincial coastal management programme is a provincial interpretation of the National White Paper for Sustainable Coastal Development and as such has similar goals and objectives. The programme sets out a vision to optimize the benefits which can be derived from the coastal zone while eliminating the threats of unsustainable utilization. Co-management and tourism development are key actions which have been identified in the coastal management programme and fall within this vision, as it allows optimal use of coastal resources in a non-consumptive manner.

National Environmental Management: Coastal Zone Bill

The National Environmental Management: Coastal Zone Bill, defines the coastal zone more definitively. This Bill defines the coastal zone as an area of land comprised of;

1. *coastal public property*
2. *coastal buffer zone*
3. *coastal access land*
4. *coastal waters*
5. *coastal protected areas*

and includes any aspect of the environment within the five areas mentioned above (DEAT Draft 9, 20 October 2004).

1. **Coastal Public Property** is the area of the coast which is held in trust by the state for all the citizens of South Africa by whom it is owned. This area of the coast defined as coastal public property consists of the following subcomponents:
 - *Coastal waters (and land under the coastal waters)* – the marine waters within the territorial area (consisting of 12 nautical miles offshore) including the inland tidal waters of estuaries, lagoons, harbours etc. which are either permanently or periodically connected to the sea.
 - *Seashore* – all land and water between the high and low water marks, including coastal cliffs and reclaimed land
 - *Admiralty reserve* – land adjacent to the high water mark, which in the past has been designated as admiralty, government, beach or coastal forest reserve.
 - *Harbours or installation* owned by an organ of state.
 - *Islands* within the coastal waters
 - *Natural resources* on or in coastal public property, the exclusive economic zone (EEZ) or the continental shelf.

The Minister may declare any state owned land as coastal public property in order to improve public access, protect sensitive coastal ecosystems, and secure the natural functioning of dynamic coastal processes.



2. **The Coastal Buffer Zone** is situated inland of the coastal public property and is set aside to assist in the management of the adjacent coastal areas, thereby ensuring that the natural ecological processes as well as social, cultural and aesthetic attributes of the coast are protected. The buffer zone also serves to protect people and property from the risks associated with the dynamic coastal processes and to minimize the incidence or severity of natural hazards. The coastal buffer zone is defined spatially as consisting of:
 - *Sensitive coastal areas* as defined by the ECA
 - *Littoral active zone* consisting of unconsolidated material and dune systems
 - *Coastal protected areas, Admiralty reserves* and any section of the *seashore* which are not coastal public property
 - Any piece of land which was zoned for residential, commercial, industrial or multiple-use purposes which falls wholly or partially within 100m of the high water mark
 - Any area of land not zoned as residential, commercial, industrial or multiple-use which falls within 1km inland of the inland boundary of the coastal public property
 - Any wetlands, lake, lagoon or dam which falls within the 2 areas above.
 - Any part of the sea shore or admiralty reserve which is not coastal public property

3. **Coastal Access land** consists of land designated as a public servitude via which citizens may gain access and utilize coastal public property. The Bill stipulates that public access land must be designated adjacent to coastal public property by local municipalities within a stipulated timeframe once the Act is passed. Areas previously designated as public access points or areas utilized by the public for a period of 10 years or longer are regarded as having being designated as coastal access land.

4. **Coastal Waters** consist of the marine waters which constitute the territorial and internal waters of the Republic as defined in the Maritime Zones Act (15 of 1994) and includes any part of an estuary, river, lagoon that is permanently or periodically connected to the sea and which is subject to measurable tidal rise and fall during spring tides.

5. **Coastal protected areas** consist of any protected area that is situated wholly or partially within the coastal zone but excludes any part of such a protected area that has been excised from the coastal zone.

The Coastal Management Bill also allows for the declaration of certain areas as *Special Management Areas* if it is deemed that the environmental or socio-economic conditions require special measures to achieve the objectives of a coastal management programme, facilitate management by a local community, promote sustainable livelihoods or to conserve, protect or enhance coastal ecosystems or biodiversity. Declaration of a SMA requires that an inclusive consultative process be undertaken and that a manager must be appointed.

Coastal Set-back lines may be established by a coastal management programme, coastal zoning scheme or by a municipalities land use scheme in order to protect the coastal public property and buffer zones or preserve the aesthetic values of the coastline. In terms of the Coastal Management Bill no person may construct, alter or extend any structure on the seaward side of a coastal setback line unless permission is obtained.



Regulatory control over activities within Sensitive Coastal Areas (SCA) in terms of the Environmental Conservation Act

The primary function of the Sensitive Coastal Areas regulations is not to limit development, but to ensure that the potential negative impacts of the identified activities are minimized and that the appropriate mitigation measures are taken within the sensitive coastal areas. Local authorities and communities are important role players in identifying sensitive coastal areas with overall guidance being provided by DEAT. DEAT does not have the manpower to administer the SCA regulations and as a result these have been delegated to the local authorities, although this has not been prescribed but rather offered to them as they may not have the required expertise and finances.

The following areas should be included within an SCA

- Estuaries, lagoons, streams, river channels, wetlands and their banks
- Beaches & Dunes
- Areas which have the potential to become geotechnically unstable
- Conservation worthy vegetation
- Archaeological and cultural resources
- Aesthetically sensitive areas
- Coastal and riverine islands

SCA regulations state that a permit is required for undertaking any of the following activities:

- Disturbance of vegetation
- Earthworks
- Dredging
- Dune stabilization

Generally the SCA is considered to be that area between the high water mark and the nearest inland cadastral boundary.

2.3 LOCAL SPATIAL DEVELOPMENT FRAMEWORKS

Buffalo City Municipality Spatial Development Framework (2003)

The BCM SDF has been compiled to support the development vision, objectives and strategies identified in the BCM IDP (2002). This SDF sets out an expanded approach to spatial planning for development in more detail than the IDP. It also serves to guide and inform all decisions made by the Municipal Council on spatial development and land use management. The overall aim is to develop a set of policies and principles, and an approach to management of spatial development in the BCM, which is clear enough to guide decision-makers in dealing with land development applications. Five priority spatial development issues were identified, namely:

1. Spatial fragmentation
2. Rapid and unmanaged urbanization
3. Low density settlements/urban sprawl
4. Uncoordinated spatial development
5. Depletion of natural resources and valuable agricultural land

The BCM SDF outlines a land use management system which is based on the following core elements:



1. **Special Management Areas (SMA):** Identify SMA's to allow the BCM to be divided into smaller more manageable geographic areas in which there is a higher degree of detail.
2. **Precincts:** The SMAs would be divided further into precincts for which preferred outcomes are identified which provide guidelines to the level and range of involvement required in the management on land use.
3. **Preferred outcomes:** The preferred outcomes describe broadly BCMs policy positions on issues such as:
 1. Maintenance of urban edge
 2. Densification within an identified sub-area
 3. Resource management and subdivision of agricultural land.
 4. Land use change from residential to non-residential uses.
 5. Identification of areas falling within the urban services core and those falling outside the core area.
 6. Identification of special areas requiring particular land use management input.

In order to implement the SDF four spatial development programmes were developed, namely:

- i. Urban and rural forward planning programme
- ii. Settlement Planning programme
- iii. Land use management programme
- iv. Urban renewal planning programme

Quenera Framework Plan and Land Development Objectives

The East London Draft Framework Plan (1996) identified the Quenera area, situated to the east of the CBD and between Gonubie and Beacon Bay as a special development area. The Quenera Framework Plan is intended as a broad scale plan for the area which will coordinate development in accordance with the needs of the community. The study area includes the land between the Nahoon and Gonubie rivers, the N2 and the Indian Ocean. The eastern coastal resort area, the eastern banks for the Gonubie River, north of the N2 and around Ducats settlement on the Macleantown Road are also considered in the planning area. The land situated in the Quenera valley is considered to be of high development potential. The following opportunities and constraints were identified for the planning area:

Opportunities:

- High development potential for high value residential properties overlooking the Quenera and Gonubie rivers
- Opportunities presented by the main roads, N2 and junctions, involving accessibility and business linkages
- Opportunities offered by the dune zone and river mouths for tourism/holiday resort developments
- Broad opportunities exist for residential development on the underutilized land which has a relatively easy slope adjacent to Gonubie Main Road
- There is a bulk sewer with spare capacity passing through the Quenera area
- There is generally spare capacity in the bulk water supply (with the exception of the bulk treatment works capacity) and electrical system.

Constraints:

- Environmental sensitivity of the rivers and coastal zones
- Insufficient infrastructure capacity along the Gonubie main Road, Maise's halt and Macleantown Road



- Existing servitudes and reserves for electricity and Beaconhurst Drive Extension are to be respected in future design
- Informal settlements of Mzamamhle, Ducats and Nompumelelo are constrained by insufficient infrastructure investment, lack of capacity and shortage of suitable land for expansion.
- The informal settlements are a constraint to higher income developments in the Quenera Area
- The area is traversed by numerous small, well vegetated water courses which makes planning more complex than normal.
- There is a lack of consensus on areas where development should not be permitted for environmental reasons
- Development below the gravity sewer will require pump stations and pumping mains

West Bank Local Spatial Development Framework

In terms of the Buffalo City Municipality IDP (2002) and the Buffalo City Municipality SDF (2003) the West Bank Local Spatial Development Framework (WBLSDF) is deemed to be of strategic importance. The study area for this framework includes the south western portion of the BCM area bounded by the Keiskamma River in the west, East London in the east and Buffalo River to the north and the Indian Ocean to the south. It therefore concentrates on land development along the important district route linking East London to Port Elizabeth and Mount Coke and King Williams Town. The preferred scenario for land development in the study area is as follows:

- Coastal node and tourism resort growth
- Settlement upgrading
- Creation of jobs in tourism and agriculture
- Community agricultural enterprises
- Well managed land uses

The WBLSDF identifies the following zones for development and presents detailed spatial proposals for each:

1. **Rural Settlement Zone:** Includes the rural settlements of Tyolomnqa and Ncera
2. **West Bank Zone:** Includes the Industrial Development Zone, airport, Gerydell, Orange Grove and Cove Ridge
3. **Kidds Beach Zone:** Includes the coastal town of Kidds Beach and along the Kidds Beach main road towards the junction with the R72 and the coastal town of Palm Springs
4. **Needs Camp Zone:** Includes the rural villages surrounding Needs Camp along the R346 up until Sunny South.

The document further contains land use management guidelines which are definitive policies to assist with future management of land use change and development initiatives in the region.

These three Spatial Development Frameworks apply to the BCM coastal zone and the principles and guidelines outlined in them have been incorporated, and adapted where necessary, into this Coastal Action Plan: Spatial Planning and Development. In addition, a strong focus has been placed on identifying areas of high environmental sensitivity in order to prevent future development in these areas and provide development guidelines for areas of lower environmental sensitivity. This is to ensure the maintenance of an ecologically



functional coastal corridor, which can be used as a natural asset to generate tourism interest in the BCM, thereby facilitating job creation.

2.4 SUBTROPICAL THICKET ECOSYSTEM PLANNING (STEP) PROJECT

The STEP Project covers the south-eastern Cape region, which extends from the Kei River to Riversdale. The project area covers the unique, indigenous vegetation type known as thicket, with the aim being to assess the region's biodiversity. The assessment measured how much of the thicket vegetation had been damaged or destroyed through anthropogenic impacts and determined the degree to which biodiversity is endangered in different areas. The project aims to guide the necessary but destructive development away from areas of endangered biodiversity and promote sustainable land use.

The outputs from the STEP Project include a STEP handbook and STEP Mapbook as well as a range of STEP reports, which can be used by municipal decision-makers for spatial planning. STEP Mapbooks have been produced for all local and district municipalities falling within the STEP Region. Each Mapbook provides 1:100 000 conservation priority maps with a key, which outlines restrictions and opportunities for appropriate land use planning according to the respective zonation. Table 2.1 indicates the respective conservation priorities and classifications.

The STEP priority ratings were used to assess the BCM coastline and assist in the zonation process. Refer to section 4.1.

**Table 2.1:** Summary of the STEP Project conservation priorities, classifications and general rules (Pierce, 2003)

Conservation priority	Classification	Brief Description	General Rule
IV	Currently not vulnerable area	Ecosystems which cover most of their original extent and which are mostly intact, healthy and functioning	Depending on other factors, this land can withstand loss of natural area through disturbance or development
III	Vulnerable area	Ecosystems which cover much of their original extent but where further disturbance or destruction could harm their health and functioning	This land can withstand limited loss of area through disturbance or development
II	Endangered area	Ecosystems whose original extent has been severely reduced, and whose health, functioning and existence is endangered	This land can withstand minimal loss of natural area through disturbance or development
I Highest Priority	Critically endangered area	Ecosystems whose original extent has been so reduced that they are under threat of collapse or disappearance. Included here are special ecosystems such as wetlands and natural forests	This land can NOT withstand loss of natural area through disturbance or development
High Priority	Network Area	A system of natural pathways e.g. for plants and animals, which if safeguarded, will ensure not only their existence, but also their future survival.	Land in Network can only withstand minimal loss of natural area through disturbance and developments
Highest Priority	Process Area	Area where selected natural processes function e.g. river courses, including their streams and riverbanks, interfaces between solid thicket and other vegetation types and sand corridors	Process area can NOT withstand loss of natural area through disturbance and developments
	Municipal reserve, nature reserve, national parks	Protected areas managed for nature conservation by local authorities, province or SA National Parks	No loss of natural areas and no further impacts allowed
Dependant on degree on existing impacts	Impacted Area	Areas severely disturbed or destroyed by human activities, including cultivation, urban development and rural settlements, mines and quarries, forestry plantations and severe overgrazing in solid thicket.	Ability for this land to endure further disturbance of loss of natural area will depend on the land's classification before impacts, and the position, type and severity of the impacts

2.5 RECOMMENDED MECHANISM FOR LEGAL ADOPTION OF THIS REPORT

2.5.1 LEGAL CONNECTION BETWEEN SDF AND A ZONING SCHEME: WHICH ONE IS THE STRONGEST?

Both deal with land use management and have implications for spatial development. It would be dangerous to view the two plans in hierarchal structure, because they serve to inform each other. For example, zoning schemes are older than the SDFs, SDFs may be used to amend the zoning scheme. If one has to be hierarchal, it can be submitted that SDF is the strongest as it is somehow giving effect to the provisions of Chapter 7 of the Constitution. Moreover section 35(2) of Municipal Systems Act 32 of 2000 put SDF higher than other plans defined in the definition section of Physical Planning Act 125 of 1991.



2.5.2 ROUTE TO TAKE FOR THE STRONGEST AND MOST BINDING LAND USE ZONING AND REGULATIONS

This may depend on the circumstances on the ground, for example, political will to implement land use zoning regulations; municipality's capacity to implement those regulations, etc. Be that as it may, the first step would be to have these regulations/schemes incorporated into the IDP because of its legal potency. Secondly, the IDP is a very inclusive document and political buy-in may easily be obtained through the IDP process. The municipality should be warned against heavily relying on the IDP because it is a policy document. Therefore, it may be necessary to pass a by-law regulating land use. If this route is taken, a whole lot of considerations will have to be taken into account, e.g. provisions of section 33 of the Constitution and Promotion of Administrative Justice Act 3 of 2000; whether the municipality will have capacity to enforce those by-laws and so forth.



3. DEFINITION OF THE BCM COASTAL ZONE

The BCM coastal zone was defined in the baseline report as follows (Figure 3.1):

The coastal zone is considered to extend from the edge of the territorial waters (12 nautical miles) on the seaward side, including the seashore (coastal public property), stretching between the high and low water spring tide marks, and extending inland for 1km from the inland boundary of the coastal public property in areas not zoned as residential, commercial, industrial or multiple-use or within 100m of the high water mark within these zoned areas. The coastal zone includes estuaries which are defined as that part of a river near the mouth which is influenced by tides and in which marine and mixing of marine and freshwaters occur, extending up to the uppermost region of the system which is influenced by the tidal cycle, and includes the terrestrial/riparian area of the estuary up to the 10m contour for wide valleys or the crest of the ridge in deeply incised river valleys. It should be noted that this definition defines the “core coastal area” in which activities and actions will have a direct impact on the coastline and the coastal zone. This is relevant as it is in this zone that coast-dependant activities should receive priority from a planning perspective.

In several instances activities occurring several kilometres inland may have an influence on the coastal environment and it is therefore important to realize that the boundaries defined above are theoretical in nature and where deemed inappropriate for certain issues they should be adapted as required, to ensure the appropriate management interventions are implemented. This is often required when secondary and/or cumulative effects require management intervention. For example, closing of estuary mouths as a result of siltation of rivers due to vegetation clearing within a catchment.

Figure 3.1: Graphical representation of the definition of the coastal zone.



4. CRITERIA AND CONCEPTS TO GUIDE COASTAL SPATIAL DEVELOPMENT AND PLANNING

4.1 CATEGORIES OF ZONATION

The BCM coastline currently has several nodal developments interspersed by natural and protected areas. In order to ensure the future protection of biodiversity and coastal resources, as well as the tourism and economic benefits derived from and dependent on these coastal resources, it is proposed that the coastal zone be zoned into three macro-zones:

1. *No Development areas;*
2. *Limited Development areas and*
3. *Urban Nodes.*

Definitions and ecological systems falling within these three zones are elucidated in the table below.

Table 4.1: Macro-zoning categories for the BCM coastal zone

No Development Areas	Limited Development Areas	Urban Nodes
<ul style="list-style-type: none"> • Proclaimed nature reserves • STEP Protected, Process and Critically Endangered areas • Rivers, estuaries and undisturbed riparian zones of rivers • Diverse coastal grasslands and coastal thicket vegetation types • Dynamic coastal areas including primary and mobile dunes and areas within 50m of the high water mark, including coastal cliffs. 	<ul style="list-style-type: none"> • All land within the coastal zone not classified as “No Development or Urban Node”. • Existing areas of degraded/modified agricultural land. • Areas where development could ensure future environmental benefits. 	<ul style="list-style-type: none"> • Existing urban areas within the urban edge. • Identified coastal and tourism nodes.



5. URBAN NODES

5.1 INTRODUCTION

Nodal development areas within the BCM coastal zone range from the large city of East London to the smaller development areas such as Kwelela Town and Palm Springs Resort. The current land zonation of these areas varies considerably from industrial and commercial to resort status (Appendix 1) and the level of development varies accordingly. These nodal areas should have visually hard edges to give the settlement a sense of entry and exit and assist in defining the urban boundary more definitively. The following coastal areas have been identified for future nodal development in the various SDF's prepared for the BCM coastline.

First order Coastal Nodes

Sunrise-on-Sea
Kidds Beach

Second Order Coastal Nodes

Kaysers Beach
Seavale
Winterstrand
Kiwane Tourism Nodes
Tyolomnqa Tourism Nodes
Gulu Tourism Nodes
Igodla Tourism Nodes

Within these nodal areas consolidated development and densification will be encouraged through the provision of bulk infrastructure and services. The guidelines below for development within the urban edge will apply.

5.2 GUIDELINES FOR DEVELOPMENT IN URBAN NODES

5.2.1 ENVIRONMENT

- No new housing developments on slopes greater than 1:6
- No development to occur within the buffer zone along estuaries, defined as the following:
 - i. No development within the 1:100 year flood line or within 100m of the high flood level.
 - ii. No development within 50m of river/estuary bank; with 100m being the preferred distance.
 - iii. No fences or walls to be constructed across this area.
 - iv. No artificial landscaping within 1:20 flood line or within 30m of water courses; including reclamation of land from rivers/estuaries; and bank stabilization unless evidence of significant erosion if available.
- No development to occur within:
 - i. 50m of coastal cliffs.
 - ii. 50m of the high water mark with the preferred distance being 100m.
 - iii. within dynamic coastal areas such as mobile dune systems.
- No development within virgin coastal thicket, coastal grassland or potential areas of conservation significance within the nodal boundary.



- No development on declared Municipal Open Space Systems; STEP critically endangered and process areas.
- No development to disturb declared cultural/heritage areas within nodes.
- No development to be permitted in nodes if water is required to be abstracted from pristine or near pristine surface waters or stressed surface and groundwater sources.
- No development to affect traditional access to resources or public access to the coast.
- No development to be visually obtrusive or break the primary skyline unduly (see aesthetic building guidelines).

5.2.2 BULK INFRASTRUCTURE

- Densification within nodes should be encouraged provided that the water demand is in accordance with the municipality water services plan
- In the event that the water demand is likely to stress the municipal water supply densification should only be encouraged within nodes provided:
 - i. Plans exist and funding is available to upgrade the water services infrastructure in the near future
 - ii. Abstraction of water from natural sources (surface and ground) will not occur from stressed or pristine or near pristine (surface) sources
- New development centrally located in close proximity to existing service infrastructure should be promoted and encouraged to facilitate service provision, while areas within nodes situated further away from points of service delivery should only be developed once the infrastructure plans have been completed. In other words the principle of densification within nodes must be adhered to.
- The provision of roads and infrastructure servitudes within the coastal zone must take into consideration the environmental and aesthetic guidelines (particularly visual guidelines)

5.2.3 AESTHETIC & BUILDING GUIDELINES

All building plans for construction within nodes submitted to the Architectural Department of the Directorate of Development Planning should comply with the following guidelines to facilitate processing the applications. Plans which do not comply with these guidelines will require written motivation and may be subject to additional environmental requirements (viz visual study) and/or review/evaluation by BCM environmental departments. Generally development within these nodal areas should be designed in such a way as to respond to the scale and form of development appropriate with the type of urban area i.e. first & second order nodes; commercial etc. The following guidelines apply to all nodes, and are followed by specific guidelines for primary, secondary and tourism nodes:

1. Although certain types of development may be dependent on a coastal/estuarine location those that are not should be set back to minimize risks from sea level rise and coastal erosion, as well as protect the visual quality of the landscape from hard architectural settings.
2. Only public facilities/amenities should be permitted along the shoreline, subject to specialist evaluation and authorization from the relevant departments
3. Structures should not restrict or disrupt public access to the coastline
4. Public facilities and access should be provided for disabled persons
5. Nodal development areas should provide planned and controlled public access to the coastline in appropriate locations with the appropriate amenities



6. Public car parks should not be situated in dynamic coastal areas and should be setback from the coastline
7. Public access points and facilities should be designed and located in such a way as to direct people away from sensitive coastal areas to facilitate management of coastal resources
8. Development should not be allowed to block the views of the coastline from key public viewing points

Primary Nodes (Sunrise on Sea & Kidds Beach) (Note development within East London; Bonza Bay; Gonubie & Nahoon to conform to the City of East London Zoning Scheme Regulations (June 2000) due to the developed nature of these areas See Appendix 2 for details)

- Larger types of housing developments permitted
- Maximum of three storey's (front and second row erf's 2 storeys maximum)
- Hard surface areas to have maximum coverage of 50%
- Architectural style to be in harmony with the setting & design to minimise visual intrusion and disruption to the natural and/or semi-built setting.
- Only paints which blend in with the natural setting must be used for roofing and walls

Secondary Nodes

- Maximum of two storey houses permitted
- Design should compliment the landscape character rather than compete against it
- Designs should maintain a vegetation zone between the coastline and the development to act as a buffer from winds and salt spray while assisting with visual screening
- Hard surface areas to have a maximum coverage of 50%
- Only paints which blend in with the natural setting must be used for roofing and walls
- Architectural style to be in harmony with the setting & design to minimise visual intrusion and disruption to the natural and/or semi-built setting.
- Visual obtrusion of infrastructure (e.g. bulk water supply reservoirs) should be minimized by appropriate design and where possible should be sited underground (e.g. power lines).

Tourism Nodes

- Single storey accommodation units
- Double storey public facilities may be constructed provided they are carefully sited and are not visually obtrusive
- Development should be clustered in groups with minimal disturbance to vegetation through careful layout planning
- Footprints should be minimized as far as possible
- All buildings to blend in with the surrounding environment as far as possible with minimal removal/disturbance of vegetation for construction
- Visual obtrusion of infrastructure (electricity and telephone lines) should be minimized by appropriate siting and design and where possible should be placed underground.
- Plans and layouts to be accompanied by an architect report on nter-alia, design specifications. Colour and form, height etc., as well as a site-specific environmental report which demonstrates how environmental considerations will/have been incorporated into the layout and design of the units and facilities. Depending on the sensitivity of the site, an environmental management plan may be required by the BCM IEM Unit.



5.3 DEVELOPMENT APPLICATION AND AUTHORIZATION PROCESS FOR DEVELOPMENT WITHIN URBAN NODES

Task	Applicant	BCM	DEAET
Step 1: Initial Assessment			
Task 1.1: Determine requirements for development	Determine current zonation of property from BCM Planning Department	Assist applicant in determining zonation and building requirements	Assist in providing rezoning requirements
	Obtain building and planning regulations/guidelines from directorate Development Planning	Advise applicant on building and siting guidelines	
	Ensure project design conforms to building guidelines/regulations	Inform applicant of additional requirements outside of BCM jurisdiction eg Environmental Impact Assessment regulations	
Step 2: Application & assessment			
Task 1.2: Submit building plans and application	Submit building plans to BCM building department	Building department to assess proposed plans in terms of building guidelines/regulations	
	Obtain building plan approval	Ensure proposal falls within existing defined urban nodes in terms of the ICZMP	
		Refer plans to other relevant departments – IEMU/CMU; Sanitation etc	
		Confirm infrastructure provision with planning department	
		Request additional information from applicant if required	
		Advise applicant on additional requirements or approvals required	
		Authorize building permit	



6. LIMITED DEVELOPMENT AREAS

6.1 INTRODUCTION

The area within the coastal zone (see definition; section 3) not falling within No Development Areas (see section 7) or the Urban nodes is generally considered to be of moderate ecological sensitivity³ and as such are considered to be a Limited Development Area (LDA). One of the primary focuses of recent national legislation as well as the BCM ICZMP Vision is to ensure that ribbon development along the coastline is prevented. This includes development along the immediate coastline and directly behind the coastal state forest network. The focus is therefore on consolidating new development within the existing urban nodes. Although the Limited Development Areas may be degraded or transformed areas of previous agricultural lands in which little natural vegetation remains, future development within these areas will require strong motivation and must clearly indicate the socio-economic and environmental costs and benefits to the surrounding area in order to be considered. A large portion of the coastal area of the BCM was classified in the STEP project as a Network Area, and as such the general recommendations of the STEP project can be applied in this study as described below.

Network areas are a system of natural pathways for plants and animals, which if safeguarded will ensure not only their current existence but also their future survival. The following basic rules for spatial planning within Network areas apply:

- Only minimal loss of natural areas and minimal impacts should be allowed on condition that there are **net overall gains** for the environment (i.e. restoration of land or proclamation as reserve)
- Development applications should be evaluated relative to the proposed sites current condition and impacts
- Should the site be severely degraded/impacted then the developer should be responsible for restoration of the area to remain undeveloped and this should be proclaimed as nature reserve
- If the site is relatively undisturbed then an Environmental Impact Assessment should be requested
- The vegetation conservation priority classification outlined in STEP for the different vegetation types should be used when making an assessment.

The following environmental guidelines should also be followed:

1. *STEP:*

All applications for development (including subdivisions) within the STEP Network areas and outside of the urban edge require a full EIA as contemplated in NEMA/ECA.

2. *NEMA and/or ECA:*

The National Environmental Management Act sets out the principles for environmental management and decision making as well as making provision for the promulgation of EIA regulations. Any application must therefore comply with the NEMA principles as all organs of state must take these principles into account when making decisions that could affect the environment. The BCM must therefore take cognizance of these principles when making land use or environmental decisions. The following principles are of particular relevance:

³ Certain site specific areas may be of high environmental sensitivity, however, this will be determined during the EIA process as required for development proposals



- Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably
- Development must be socially, environmentally and economically sustainable.
- Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
- Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.
- The social, economic and environmental impacts of activities, including disadvantages and benefits must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
- The environment is held in public trust for the people. the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.
- Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

The Environmental Conservation Act provides for the effective protection and controlled utilization of the environment. NEMA has repealed a number of provisions in the ECA, however, those pertaining to the EIA regulations remain in place until the repeal takes effect when the new EIA regulations in terms of section 24 of NEMA will come into effect.

3. *Coastal Zone Management Principles:*

All developments are to comply with Coastal Zone Management Principles and sensitive coastal ecosystems need to be protected from further degradation. The Eastern Cape provincial spatial framework prescribes that development must not be permitted in environmentally sensitive areas such as:

- State forests;
- Dunes and estuaries;
- Within 30 m of water courses;
- Along major rivers;
- Game reserves and nature sanctuaries;
- Slopes steeper than 1:6;
- Heritage sites with tourism potential; and
- Wetland areas.

4. *Aesthetic and Environmental Controls:*

The purpose of these controls is to ensure that new development within the coastal zone does not affect the landscape quality negatively or result in fragmentation of the eco-system



- The architectural style should reflect the architecture of the region and take into account sustainable development measures.
- Mass clearing of indigenous vegetation is not permitted during construction, and for the construction of dwelling units an area the size of the building footprint must only be cleared.
- Indigenous plants should be retained and/or rehabilitated back into the area if necessary.
- Private gardens should be limited.
- The colour of walls and roofs should be sensitive to the environment and views onto the site.
- The height of buildings should be appropriate, with double storey units being an exception.
- Onsite environmentally friendly sanitation options are to be used.
- Spaces between units should be greater than in an urban environment.
- Where possible units must be spaced so that each unit has a view without additional height having to be added to structures.
- Solar power systems are to be encouraged.
- The number of units allowed in a development must be based on the carrying capacity of the environment as defined here and/or as assessed in the EIA.
- Visual intrusion from servitudes (electricity, roads, pipelines etc.) must be taken into consideration and minimized.

6.1.1 DEVELOPMENT PRINCIPLES

In addition the following principles should be taken into consideration when assessing development applications:

Slope and topography: Development of housing on slopes of 1:6 or greater must not be permitted due to the ecological impacts which may result (e.g. soil erosion; slope failure etc).

Landscape quality: All development proposals must be evaluated in terms of their affects on the landscape quality of the surrounding area. This must consider the visual absorption capacity of the surrounding land and the visual intrusion which will result from the development.

Urban sprawl: The development should not contribute to urban sprawl as a result of “leap frogging” thereby promoting secondary development

Heritage and cultural resources: The development site must not be situated on a designated cultural/heritage area.

Carrying capacity: New tourism developments outside of the urban fringes must evaluate the impacts of the proposed influx of tourists on the immediate natural surrounding areas as well as neighbouring natural and urban areas, a value judgement may be required to determine if the development will exceed the ecological carrying capacity of the surrounding area. They should not promote secondary development (service station; shopping centres etc.) thus creating the need for new a development node.



Storm water management: Increases in hard surfaces as a result of residential developments have the potential to create storm water run-off issues. Any significant developments outside of the urban fringes must demonstrate how they will accommodate and mitigate storm water run-off in a manner that minimises ecological impacts.

Water provision: Water resources required for the development should be readily available from the municipal water services supply, or surface and ground water sources; However, developments cannot be situated outside of urban nodes where the municipal water supply is stressed; or water is required to be abstracted from rivers/estuaries which are in pristine or near pristine condition; or the surface and ground waters which are considered to be stressed. Should the municipal water supply scheme be unable to provide sufficient water for the development (both potable and for irrigation purposes) the proponent will need to provide details on how water will be provided. The environmental impacts associated with any such scheme will need to form part of the project EIA, and the developer must determine whether he will need to register as a water services provider. Any such supply scheme will also need to comply with DWAF requirements outlined in the National Water Act.

Waste disposal and sanitation: Any developments outside the urban fringe must be self sufficient and have a detailed plan for waste disposal and package treatment sanitation systems. Developments outside of nodes must not be reliant on the municipal sewage systems as these are planned and designed to accommodate treatment volumes from the defined nodal development areas and may not have sufficient capacity to accommodate additional volumes. In all cases the environmental impacts associated with the waste disposal and sanitation systems will need to be assessed as part of the project EIA.

Infrastructure requirements: The impacts on the natural environment from additional infrastructure requirements must be carefully considered and must be assessed as part of the project EIA.

Agriculture: The development must not take place on high value agriculture lands or reduce the area of high or medium value agriculture lands significantly, thereby reducing the potential productivity of these areas

Buffer zones: The development is not to be situated in a coastal buffer zone or a river/estuarine buffer zone as defined in Definitions and Acronyms (1:100 flood line; 50m from water courses; high-water mark or coastal cliffs; or on primary or mobile dunes) or as defined on the GIS.

Biodiversity corridors: The development will not impact significantly on biodiversity corridors including STEP network areas and the “coastal green corridor”

Pristine habitats: Developments will not be situated adjacent to rivers designated as being pristine, near pristine or stressed.

Traditional & public access: the development must not prohibit or alter traditional access to resources or restrict public access to the coast unduly. Formal access points to rivers/estuaries & beaches are only to be constructed after specialist evaluation and authorization by authorities



6.2 SUBDIVISION AND REZONING GUIDELINES

Two types of development are possible outside of designated nodes and the Urban Edge within Limited Development Areas of the coastal zone, namely;

- 1) Non Urban Development, (situated away from the urban nodes) and
- 2) Urban development requiring an extension of the Urban Edge. (Situated adjacent but outside the existing urban edge)

6.2.1 GUIDELINES FOR NON URBAN DEVELOPMENT AWAY FROM URBAN NODES

Non urban development within LDA's is subject to specific legislative & environmental requirements such as subdivision, rezoning and EIA requirements, and all development proposals outside of the urban edge should be assessed in terms of the following guidelines, in addition to those already outlined in section 6.1.1 above.

Subdivision of Agricultural Land

The subdivision of farms into multiple individual farms to avoid the rezoning process and/or the density requirements below are not considered desirable, as it negates the intention of the density and coverage policy and will not be supported. Such subdivision shall be in accordance with the stipulations defined in (relating to viable farm units/sizes) the Agricultural Act.

The Land Use Planning Ordinance 25 of 1985, Scheme 8 regulations indicate that the minimum subdivision of agricultural land is 0, 8 ha. Where no subdivision is involved a density of 1 dwelling unit for every 10 ha up to a maximum of five dwelling units is permitted.

It is proposed that the Scheme 8 regulations be applied within BCM, but with a recommended minimum *subdivision size of 10ha*.

Business and Commercial developments

The rezoning of Business / Commercial/ Industrial uses must only occur in conjunction with identified rural nodes and should not be permitted within the coastal zone (See definition section 3) unless motivation can be given to prove that they are coast dependent.

Residential / Accommodation type developments

a) Residential Development

All development outside of the Urban Edge is subject to the following limitations:

- Intensity of uses (ie coverage and density)
- Environmental requirements
- Restrictions on ownership
- Golf Estates are specifically classified as Urban Development and are not permitted outside the Urban Edge

b) Permitted Coverage

All development is to be situated on one portion of the site (i.e. clustered) and must be located on portions of the land that will result in the least amount of environmental impact. The remainder of the property should be zoned as private open space (the use of the private open space must be indicated) or agricultural.



A Site Development Plan for the whole farm will be required as well as for any Resort 1 and Resort 2 developments (the area for development and the remainder should be shown) The Site Development Plan must also incorporate an ecological sensitivity analysis to identify areas of low sensitivity on which developments could be situated (See Appendix 3 for information requirements for submission of applications). Future applications will take the original Site Development Plan into account and in certain cases no sectional title schemes, further subdivision or rezoning for resort/residential uses of the remaining area will be permitted, and this will be included as a Condition of Title.

c) Permitted Density

Guidelines for the maximum permissible densities for tourism and residential development are presented in tables 6.1 and 6.2 below. Should the EIA/ Scoping Report indicate lower densities than those prescribed in Tables 6.1 and 6.2 below, the lower densities shall be applicable.

The following principle applies to the rezoning of land for Resort uses:

Additional resort uses and ownership outside the urban edge are permitted at low densities provided that there is a net gain to the environment; this is considered desirable as it will assist in management of the coastal zone by populating rural land with residents who will act as custodians of the natural environment. The intention is to allow rezoning to resort uses where the owners will actively manage and upgrade, were necessary, the surrounding natural environments of the land being rezoned.

Table 6.1: Development of Land for Tourism Purposes (Non ownership of units) outside of the Urban Edge e.g. Resorts

Land Area (ha)	Combined Coverage	Maximum number of units ¹⁾ permitted	Number of units per ha
1-10	10 %	2-20	2
11-25	10 %	40	1.6
26-50	10 %	60	1.2
51-100	10 %	80	0.8
101-150	10 %	100	0.7
151-200	10 %	120	0.6
201 +		120 (for all farms larger than 200ha)	<0.6

Note: 1.) A unit for purposes of Table 6.1 includes a dwelling unit as well as interleading or separate units within a dwelling unit or other buildings that can be used/sold/rented/leased separately.

In Table 6.1 the number of dwelling units permitted in the definition of dwelling units excludes second dwelling units and bono fide servants quarters or labourers cottages. If there are servant's quarters or labourers cottages on the farm no additional such units will be permitted. In addition no separate title will be granted to any servants quarters or labourers cottages unless these are linked to legitimate Land Reform process.

A dwelling unit shall not have a footprint surface area of greater than 300m², and shall not be more than 2 storeys high (ground level and one floor).

**Table 6.2:** Development of Land for Residential Purposes outside of the Urban Edge (Full ownership of units)

Land Area (ha)	Combined Coverage	Number of units ¹⁾ permitted for ownership ²⁾
1-10	10 %	3
11-25	10 %	4
26-50	10 %	6
51-100	10 %	8
101-150	10 %	10
151-200	10 %	12
201 +		12

Note: 1.) A unit for purposes of Table 6.1 includes a dwelling unit as well as interleading or separate units within a dwelling unit or other buildings that can be used/sold/rented/leased separately.
2.) In Table 6.1 the number of dwelling units permitted in the definition of dwelling units excludes second dwelling units and bono fide servants' quarters or labourers cottages. If there are servant's quarters or labourers cottages on the farm no additional such units will be permitted. In addition no separate title will be granted to any servants quarters or labourers cottages unless these are linked to legitimate Land Reform process.

The intention of the densities permitted in Table 6.1 and 6.2 is to allow development of holiday / tourism accommodation such as hotels, resorts and game farms, but to discourage the development of urban type densities and in particular private ownership of units outside of the Urban Edge. The type of development to be permitted outside of the Urban Edge should promote tourism and the creation of sustainable job opportunities (long term), whereas developments within the urban edge are residential in nature.

No further units, subdivisions, developments or schemes that permit ownership of any sort (such as lease hold, shareblock, sectional title, closed corporations, trusts etc.) will be permitted.

6.2.2 GUIDELINES FOR URBAN DEVELOPMENT ADJACENT TO THE URBAN EDGE

Extension of the Urban Edge to accommodate new urban development will be approved in a sequential manner according to the following guidelines

- a) *Applications for extension to the urban edge can only be considered once:-*
- i. The area within the BCM Urban Edge has been developed substantially and the remaining area available for high income residential areas is limited
 - a. A report indicating the unavailability of suitable land within the urban edge, including market projections and other evidence that an expansion of the urban edge is required to meet property demands
 - b. Golf estates will only be considered in areas adjacent to the urban edge of primary, secondary and tourism nodes and then subject to the following conditions
 - i. All the requirements in section 6 of this report are met
 - ii. National & provincial policies and guidelines for the development of golf estates are followed (if available)
 - ii. Limited expansion of the Urban Edge at second order coastal nodes (also in a sequential manner) will only be considered once the Urban Edges of the first order coastal nodes have been substantially developed.

b) *Planning Considerations*

Extensions to the urban edge will only be considered if

- The built environment portion of any development is situated adjacent to the existing Urban Edge;



- The proximity of existing urban development and/or the center of the original node is to be considered to ensure adequate service provision
- Leapfrogging” development will only be permitted if the proposed development consists of upgrading existing development and no new developments will take place

c) Environmental Considerations

The Coastal Zone Management principles will apply;

A full EIA will be required as per NEMA/ECA which must consider secondary impacts such as:

- (i) The sustainability of water supply;
- (ii) Other infrastructural requirements
- (iii) Aspects of long-term sustainability;
- (iv) Social impacts such as the location and extent of worker housing and associated facilities.

d) Granting of Additional units

For developments adjacent to the Urban Edge that have considered the environmental sensitivity of the site, are considered to be eco-friendly, involve the restoration of previously degraded environments and also comply with the proposed aesthetic and environmental guidelines; additional units for ownership may be considered over and above those indicated in Table 6.1a and 6.1b in section 6.2.1. Such development will be considered to be *outside* of the Urban Edge and will not be considered as creating a precedent for further development. This will require strong motivation and careful consideration of environmental aspects including plans for managing the natural environment/open space (e.g. alien control etc.). It is most likely that a full Environmental Impact Assessment would be required in order to meet these requirements.

e) Review of the Urban Edge

Review of the extension of all Urban Edges at the coastal nodes will become necessary once extensions to the Urban Edge, approved on an ad hoc basis, total 50% of the original size of the Urban Edge. Extensions to the Urban Edge will be considered on a ‘first come first served’ basis. Such a review must consider:

- The Spatial Objectives and Strategies of the BCM SDF/IDP;
- Approved but not built developments that have resulted in the extension of the Urban Edge.

6.2.3 DEVELOPMENT CONTRIBUTIONS

Apart from any other contributions required for services, the cost of upgrading and maintaining the portion of the land (required to fulfil the net gain to the environment in terms of these guidelines) to remain as undeveloped is considered to be the applicants “development contribution” in return for the additional zoning rights applied for.

6.2.4 PUBLIC PARTICIPATION

The applicant/developer is required to fully inform the affected communities by means of advertisements in the press and public meetings where any development type as described in section 6.



6.2.5 DEVELOPMENT APPLICATION AND AUTHORIZATION PROCESS FOR PROPOSED DEVELOPMENTS WITHIN LIMITED DEVELOPMENT AREAS & NO DEVELOPMENT AREAS

TASK	APPLICANT	BCM	DEAET
Step 1: Initial Assessment			
Task 1.1: Determine requirements for development	Determine current zonation of land from BCM Planning Department	Assist applicant in determining zonation and requirements	
	Determine recommended types of development/infrastructure for land	Advise applicant on restrictions to development within these areas	
	Consult with authorities (BCM IEMU/CMU; Planning etc; DEAET) regarding desirability of proposed development	Inform applicant of additional requirements outside of BCM jurisdiction eg ECA,	
	Determine application requirements in terms of LUPO & ECA	Provide guidance on LUPO requirements	Provide guidance on ECA requirements
Step 2: Information requirements for application for project			
Task 2.1: Identify information required for applications	Undertake consultation with relevant BCM departments and DEAET	Assist applicant by providing relevant guidelines for siting and design	Assist applicant by providing relevant guidelines for scoping
		Emphasise need for appropriate design and location	Emphasise need for appropriate design and location
			Inform applicant of other requirements e.g. DWAF; Department of Agriculture etc.
Task 2.2: Preparation of Project motivation and description document	Undertake site analysis Refer to appendix 3 for information requirements for project		
	Prepare preliminary design concepts		
Task 2.3: Appoint professional team	Appoint specialist consultants as required (engineering; architectural; planning environmental etc.)		
Step 3: Preparation & submission of application			
Task 3.1: Obtain	Obtain applications for		Provide forms and



relevant application forms	Scoping from DEAT		assistance where required
	Obtain required applications from BCM	Prove forms and assistance where required	
Task 3.2: Complete application forms & submit	Provide the required information on the application forms		
	Submit applications together with project motivation and description document		
Task 3.3: Prepare relevant documents	Planning specialist to prepare scoping report and project motivation for LUPO		
Task 3.4: Submission	Submit relevant documents to departments	Acknowledge receipt	Acknowledge receipt
Step 4: Assessment of Application			
Task 4.1: Assess application		Register application	Register application for authorization
		Refer application to relevant departments for comment	Review scoping report & process
		Request additional information if required	Request additional information if required
Task 4.2: Issue ROD	Undertake full EIA if required		Issue ROD
Step 5: Development implementation			
Task 5.1: construction	Confirm all permits/licenses obtained for development	Monitor construction and development	
	Comply with EMP and ROD requirements		



7. NO DEVELOPMENT AREAS

7.1 INTRODUCTION

No Development Areas (NDAs) consist of all areas which are officially proclaimed local, provincial or national nature reserves and protected areas or state forests. However, they also include additional areas, which are deemed to be ecologically and environmentally sensitive to disturbance. This will ensure the protection of sensitive and dynamic coastal habitats along the BCM coastline and the maintenance of a “Coastal Green Network” which will allow for maintenance of biodiversity and movement of fauna along the BCM coastal zone.

7.1.1 SENSITIVE AREAS

In order to identify sensitive areas an ecological sensitivity analysis was undertaken using aerial photography, STEP GIS data, field surveys and expert knowledge within the BCM coastal zone. Using this information areas of high ecological and environmental sensitivity were identified. These areas were used to define the boundaries of No Development Areas within the BCM coastal zone in conjunction with the proclaimed conservation areas. This was done in order to ensure the maintenance of sufficient areas of natural coastal capital within the BCM. The maintenance of these areas is of strategic importance to the BCM for the following reasons:

1. Ensures the maintenance of a scenic landscape for promotion of tourism
2. Allows for local tourism development due to the scenic landscape
3. Tourism will create local employment opportunities and economic development of local communities
4. Ensures protection of the dynamic coastal areas
5. Ensures conservation of the biodiversity through the formation of a coastal corridor for the maintenance of ecosystem functioning and animal movement

7.1.2 CRITERIA FOR DEFINING SENSITIVE AREAS

The following criteria were used for the identification and demarcation of areas of high environmental sensitivity outside of existing proclaimed reserves. These criteria are considered to be exclusionary criteria for any future development and as a result any part of the coastline which had attributes meeting these criteria were considered to be of HIGH SENSITIVITY and are therefore NO DEVELOPMENT areas.

Criteria for NO Development Areas:

- STEP Critically endangered
- STEP Process Area
- Officially Proclaimed nature reserves, conservation areas or forests
- Areas of pristine coastal forest/thicket
- Areas of pristine and diverse coastal grasslands
- Riparian and buffer areas along watercourses (rivers and estuaries) including
 - 1:100 flood line or
 - within 50m of watercourses
- Dynamic and coastal buffer areas including:
 - Primary of mobile dune systems
 - Within 50m of coastal cliffs
 - Within 50m of the high water mark

Table 7.1 below outlines the descriptions for each of these criteria as well as opportunities and constraints associated with them.



Table 7.1: Criteria used for identifying coastal areas No Development Areas (high environmental/ecological sensitivity)

Criteria	Description	Spatial planning Restrictions	Spatial Planning Opportunities
STEP Process Area*	Area where selected natural processes function e.g. river courses including their streams and riverbanks, interfaces between solid thicket and other vegetation types and sand corridors	No loss of process area and no further impacts should be allowed	Although no further disturbance is permitted surrounding land may be suitable for eco-friendly activities and tourism. Severely degraded areas should be restored and managed/proclaimed as nature reserves
STEP Nature Reserve*	Existing protected areas – local, provincial, national	Area to be managed and maintained solely for nature conservation purposes	
STEP Critically Endangered*	Ecosystems whose original extent has been severely reduced, and whose health, functioning and existence is endangered	No further loss of natural areas and no further impacts should be allowed. Any disturbance should only be allowed on condition that there is a net overall gain for the natural environment i.e. restoration of remaining land and management/proclamation as nature reserve	May be suitable for eco-friendly activities which have minimal impacts such as hiking trails. Degraded areas present opportunities for IDP projects for restoration
Coastal thicket & Forest	Area of coastal dunes dominated by trees and shrubs. Thicket vegetation consists of a dense array of woody shrubs and trees forming an impenetrable community. Coastal forests consist of similar species but larger trees are more common and undergrowth is less dense.	No further loss of coastal forest and thicket may be permitted.	
Coastal Grasslands	Unique assemblage of herbaceous species (grasses & herbs) of high biodiversity and restricted to the coastal zone	No further loss of natural coastal grasslands may be permitted. Eco-friendly activities such as trails may be permitted	Degraded areas adjacent to natural grasslands may present development opportunities and allow access to these areas for eco-friendly activities
Estuaries, rivers,	These areas will largely be covered by	No new development must be permitted	Suitable public access to these areas



Criteria	Description	Spatial planning Restrictions	Spatial Planning Opportunities
wetlands & floodplains (1:100 flood line) and the riparian zones within 30m of water courses	STEP process areas. Any additional estuarine, river, wetland or floodplain areas and their riparian zones are in urgent need of protection from further development in order to prevent further degradation to the aquatic environments	within a reasonable distance from the waters edge or within pristine riparian vegetation.	can be provided as well as amenities to facilitate public use.
Dynamic and coastal buffer zones including primary and mobile dunes, 50m from cliffs and the high water mark	These areas are largely protected by the coastal state forests and fall within the STEP categories	No development to be permitted within these areas with the exception of coastal public access infrastructure	Access for the public should be provided to enhance the recreational and tourism value of the area

- Definitions and descriptions taken from the STEP project.



7.1.3 MECHANISMS FOR ADOPTION

No development should be located within these areas and they should be protected from future development by being adopted into the BCM Spatial Development Framework as NDAs by rezoning to Private Open Space or Reserve where possible depending on the nature of the land tenure. Incentive schemes need to be developed to encourage private land owners who currently have areas of land worthy of protection to maintain it in its natural state.

7.1.4 COASTAL SETBACK LINES

NDAs should also be used to determine and demarcate the coastal set back line (when the Coastal Bill is promulgated) for the BCM coastline. Coastal set-back lines can be demarcated by any coastal management programme, coastal zoning scheme or a municipal zoning scheme and should assist in:

- The protection of coastal public property;
- The protection of the coastal buffer zone;
- The maintenance and preservation of the aesthetic values of the coastal zone;

In terms of the Draft Coastal Management Bill (Draft 9 20 October 2004) no person may erect, place, alter or extend a structure that is wholly or partially seaward of a coastal set-back line unless the prescribed permission has been obtained. Demarcation of coastal setback lines will therefore assist in management and regulatory control within these areas.

7.2 GUIDELINES FOR UTILIZATION OF NDAs

Although these areas are considered to be NO DEVELOPMENT areas the provision of access and educational facilities may be considered in order to increase the value of these areas provided the impacts are minimal and the proposed infrastructure is carefully sited and planned in accordance with the conservation goals. In addition infrastructure servitudes may require to pass through these areas in order to provide services to the coastal nodes. However, this should be minimized where possible through the realignment of servitudes where feasible. No commercial or freehold development may be permitted within these areas.

Types of development/infrastructure which may be permitted includes those which will enhance the nature conservation value of the resource and create opportunities for community involvement. Activities such as coastal hiking trails and nature walks within the coastal forests, with appropriate boardwalk infrastructure are suitable. Huts for overnight accommodation may be considered in certain instances but it is most likely that suitable land outside of the sensitive areas may be available for the construction of accommodation units. Day walks, information boards and additional educational aids should be provided to increase the educational and tourism value while assisting in the awareness training of the public.

The establishment of an education centre either within one of these areas (careful site selection must be ensured) or on adjacent land would also add value to the conservation and educational potential of these areas. No other developments with large footprints and requiring clearing of vegetation or additional infrastructure may be considered within these NO Development areas (Table 7.2).



Table 7.2: Opportunities & constraints for the use of areas identified as No Development Areas

Opportunities	Constraints
<ul style="list-style-type: none"> • Passive nature based recreational activities • Educational activities and facilities • Public access & education/information facilities • Community involvement in tourism guiding tourist curios • Tourism promotion through provision of access and advertising • Use of natural materials for infrastructure (boardwalks etc) 	<ul style="list-style-type: none"> • No further loss of natural areas or degradation to be permitted • Any land not already within nature reserve must be demarcated as private open space or nature reserve • Minimal disturbance to natural vegetation - no large infrastructure footprints • No private or commercial development of land • No development within 50m of water courses or within the 10m contour.

Development guidelines for public infrastructure and amenities in No Development Area (area of high environmental/ecological sensitivity)

- self sufficient (package sewage systems, waste disposal off site etc)
- sensitively designed for minimal impacts e.g. stilted wooden structures with minimal footprints
- Infrastructure to be sited to avoid damage to existing woody vegetation
- Infrastructure should be ‘temporary’ in nature and should be able to be removed and the site rehabilitated should this be required
- Architectural theme and construction materials to blend in with natural settings
- Infrastructure must not break the primary skyline, services (electricity etc.) to be provided underground
- Carrying capacity of each site to be carefully determined and regulated through controlled access points
- Guest/tourism activities to be carefully regulated
- No development must be permitted within 1:100 flood line or 50m of watercourses (preferably 100m) or the high water mark



8. SPATIAL ANALYSIS OF THE BCM COASTAL ZONE

The ecological sensitivity analysis of the coastline identified several No Development areas which have been mapped over aerial photography of the coastline. This section relates to the GIS database system which graphically illustrates all the concepts described in this report as well as the ICZMP and additional Coastal Action Plans. The criteria as set out in section 7.1.2 were used to identify and demarcate No Development Areas using polygons⁴. The GIS database system can be used to identify the reasons why each area was demarcated as a No Development Area. Appendix 1 provides the environmental reasons for each polygon in the GIS.

A brief description of the natural environment along the BCM coastline is provided below:

Keiskamma to Kiwane

This area of the coastline represents a relatively undisturbed section of the coastline with limited access. The coastal belt is well protected by Coastal State Forest which extends from the Keiskamma river up to Kaysers Beach. As for all estuaries the steep valley and river slopes along the Keiskamma must be protected from future development. A generic minimum setback line of at least 50m, but preferable 100m has been advocated for all estuaries in the BCM to ensure protection of these process areas. Polygon one in this tile visually represents the sensitive habitats along this estuary in which development must not be permitted. It is recommended that the area of land bordering the coastal state forest either be incorporated in the forest reserve or demarcated as a coastal set-back line as this area is in a relatively natural condition. Preventing development in this area will ensure the maintenance of a coastal conservation corridor for movement of fauna. An opportunity exists to redevelop the currently dilapidated Kiwane resort area and a proposed development boundary has been demarcated.

Kiwane to Kaysers Beach

Similarly the riparian areas of the Kiwane and Tyolomnqa estuaries are considered to be sensitive and small expansions to the current state forest boundaries are proposed to ensure protection and no development should be permitted along the reserve boundary. The Buffalo City SDF has proposed to include the area of land between the Kiwane and Tyolomnqa rivers (including portion of the eastern bank) into a community conservation project. This will ensure protection of this area and create opportunities for tourism development. Although situated in a sensitive area, the western bank of the Tyolomnqa mouth area would be suitable for an enviro-friendly tourism project. This should be linked in with the proposed Pozi Community conservation project. The frontal dune cordon within Kaysers beach should be incorporated into the public open space system within the town and no further development should be allowed here.

Kaysers Beach to Ncera Estuary

This stretch of coastline is also well conserved with a band of proclaimed coastal state forest. A few additional areas up the drainage lines and along the border of the state forests have been identified as sensitive and should be protected from future development.

Umlele Estuary to Gulu Estuary

This area contains the Palm Springs resort area and includes the Kidds Beach and Gulu development areas. It is recommended that a large area of land be incorporated into the Kidds

⁴ Number polygons occur on the maps in appendix xxx and are used to demarcate No Development Areas. The remaining area within the coastal buffer zone, not included within a designated urban edge, is considered to be Limited Development Areas.



Beach public open space system and protected from further development. Additional sensitive areas include the inland areas around the Gulu river which have coastal valley thicket, and steep slopes are a further constraint to development.

Gulu to Winterstrand

This area has a wide band of coastal state forest near Gulu which extends up the Igoda river. The Igoda river has several sensitive areas surrounding it, consisting of coastal & valley thicket as well as grassy ridges. A small resort development is situated on the bank of the Igoda and future resort development must be consolidated around this area. An area of land bordering the inland boundary of the state forest should be incorporated into the Open Space of Winterstrand as it contains coastal grasslands and thicket vegetation worthy of protection. A small development area is situated to the east of Winterstrand, and an opportunity exists to expand and develop this area further within the confines of the demarcated boundary suggested.

Cove Rock to West Bank

The Cove Rock area is an important heritage site and is awarded protection through the coastal state forest. The inland boundary of the forest has been cultivated intensely and there is no possibility of expanding it. The western end of the West Bank has some steep river valleys and dense thicket vegetation in good condition, which is in need of protection from development. A wide area of coastal grassland is present which is rich in species diversity, which must be demarcated as public open space. Several municipal amenities and facilities are present along this stretch of coastline and further tourism facilities should be consolidated around these areas, and the existing facilities upgraded and advertised in order to attract people to the coast.

Inland Tyolomnqa estuary

This area represents the riparian zones of the Tyolomnqa estuary as well as sensitive steep slopes of valley thicket.

Inland Ncera estuary

This area covers the Ncera estuary inland and identifies sensitive riparian and valley thicket vegetation which need protection. A few small development areas exist on the farmlands. No further development should be allowed within the riparian zones of this estuary.

Buffalo River and East London

This tile consists of the urban, industrial and commercial area surrounding the Buffalo River. The area is highly developed with only a few small patches within the urban green space being identified as no development areas. Additionally the riparian zones along the Buffalo River above the rail and road bridge are environmentally sensitive.

Inland Buffalo River

This tile consists of the buffer zone along the Buffalo River and includes the Umtiza Nature reserve. The riparian areas were identified as being ecologically sensitive and no development should be permitted within these areas.

Nahoon Point

A large portion of the area in this tile is incorporated into the Nahoon Point and Nahoon River reserves. Additional areas along the Nahoon river were identified as environmentally sensitive.



Quinera to Gonubie Rivers

The Gonubie area is highly developed, however, the coastal dune cordon between the Quinera and Gonubie rivers is in a good ecological condition and no further development must be permitted within this area. Ecologically degrading sand winning activities are occur just behind the primary dunes and these activities need to be controlled and an environmental/rehabilitation plan implemented. The riparian areas along both rivers are also ecologically sensitive.

Kwelera

A large portion of this area is protected by the Kwelera reserve with agricultural practices occurring on the inland boundary. The riparian area on the Kwelera river is considered to be ecologically sensitive.



9. KEY PERFORMANCE INDICATORS

The following key performance indicators are recommended for monitoring the implementation of this Coastal Action Plan.

Adoption and implementation

- Incorporation of this CAP into the BCM and other relevant SDF's
- Acceptance and formal adoption of the development guidelines in this CAP into the BCM SDF and zoning scheme

Land use applications

- Number of subdivision/rezoning applications received for properties within the coastal zone/year
- Number of applications approved/year

Development

- Number of applications for development in the coastal zone received/year
- Number of development applications approved/year



10. REFERENCES

BCM IDP 2002

Buffalo City Municipality IDP 2002

Buffalo City Municipality SDF 2003

East London Draft Framework Plan 1996

Pierce 2003

Tinley 1985

Tshani Consulting 2003



APPENDIX 1: NUMERICAL KEY TO MAP REFERENCES PROVIDING EXPLANATION FOR DEMARCATION OF A NO DEVELOPMENT AREA. NUMBERS HIGHLIGHTED IN BOLD INDICATING EXISTING DEVELOPMENT AREAS

Map Reference	Explanation
1	Area of subtropical thicket, steep slope and wetland area along Keiskamma Estuary. Important ecological process area
2	Area of valley thicket along drainage lines of Shwele-Shwele and potential erosion problems
3	Recommended expansion of landward boundary of Kiwane/Hamburg reserve to incorporate additional thicket vegetation
4	Drainage area and riparian zone/valley thicket along Ngqinisa River. Important undisturbed ecological process area. Opportunity exists for the development of a small eco-friendly resort on the Ngqinisa within the reserve as a community development project. Site specific sensitivity analysis will be required
5	Previously disturbed area of the old Kiwane Resort. Recommended redevelopment and expansion within defined boundaries as community development project
6	Recommended expansion of Hamburg Reserve up to inland cadastral boundary. Current zonation and inland boundary of reserve unclear as DEAET entrance gate outside of demarcated reserve boundary.
7	Drainage area and riparian zone/valley thicket along Ngqinisa River. Important undisturbed ecological process area
8	Steep slopes showing signs of existing erosion. Valley thicket on steep slopes and cliffs which are no development areas. Any site specific plans must take into account slope as this is a potential risk to development. Possible opportunity for a small eco-friendly tourism development on the open grassland areas on the upper reaches of the Kiwane estuary. Site specific sensitivity analysis is required and cumulative impacts of development and tourism of possible site on Ngqinisa, old Kiwane site and this site must be taken into consideration.
9	No development area along edge of existing reserve. Coastal Dune Thicket vegetation forming part of the frontal dune cordon acting as buffer zone to reserve
10	Relatively steep slopes dominated by valley thicket within riparian zone of river and includes salt marsh and wetlands. River flood plains and salt marshes form part of STEP Critically Endangered areas. Important to protect the ecologically functional areas to maintain process areas. Possible opportunity to develop an eco-friendly tourism resort on the western bank of the Tyolomnqa mouth.
11	Valley areas of catchment as well as salt marsh and floodplain areas of Tyolomnqa river susceptible to erosion and flooding.



Map Reference	Explanation
12	Steep slopes within riparian zone and possible low lying floodplain areas of predominantly valley thicket vegetation
13	Eastern Bank of Tyolomnqa estuary. Drainage features extend inland, predominantly valley thicket although fairly open in places possibly due to grazing pressure. Some uncertainty around constraints as a result of slope.
14	Inappropriately sited development area along estuary. Further expansion of the node undesirable.
15	Predominantly low lying areas consisting of floodplain and wetland habitat
16	Coastal dune thicket and reserve buffer area, component of the frontal dune cordon
17	Sensitive dune vegetation providing protection from strong winds and Aeolian sand movements. Should be demarcated Public open space to protect coastal frontal dune system of Kaysers Beach.
18	Riparian zone consisting of thicket vegetation along Shelbertsboom in drainage lines with steep slopes in many places
19	Coastal dune thicket degraded in places but important no development area to protect against ribbon development
20	Coastal dune thicket in pristine condition, recommended inclusion into coastal state forest reserve
21	Fairly degraded coastal dune thick but component of frontal dune cordon recommended public open space and should be excluded from development unless site specific studies indicate otherwise.
22	Coastal dune thicket to be maintained as buffer to existing reserve & riparian zone of Ross's Creek. Important ecological process area.
23	Coastal dune thick of frontal dune cordon forming buffer zone to coastal state forest reserve
24	Valley thicket along riparian zone on Ncera river and drainage lines
25	Developed area along banks of the Ncera including sand mining operation. No further development should be permitted without detailed studies
26	Palm Springs Resort Area, cumulative impacts need to be assessed for any further development
27	Riparian thicket around the Umlele River needs to be maintained to prevent bank erosion
28	Coastal thicket vegetation buffer area adjacent to reserve recommended inclusion into Kidds Beach Public Open Space
29	Coastal thicket on frontal dune at Kidds Beach and riparian vegetation and wetlands along Mcantsi Estuary. Important process areas
30	Coastal thicket vegetation buffer on edge of state forest reserve
31	Riparian zone and wetland vegetation in tributary of Gulu. Surrounding area is fairly disturbed but further disturbance needs to be restricted. Steep slope further constraint
32	Coastal dune thicket, riparian forest and coastal grasslands around Igoda river. Steep slopes and important drainage area for the river
33	Riparian vegetation, steep slope, elevated position and coastal grasslands. Any development will be visually intrusive
34	Coastal grassland and small drainage area behind frontal dune system needs protection from expansion of footprint



Map Reference	Explanation
35	Important drainage area and riparian zone should be demarcated as public open space
36	Existing node at Hlozi River possible expansion inland
37	Sensitive coastal dune thicket which provides important ecological corridor across the river
38	Coastal dune thicket as part of frontal dune cordon and valley thicket in the riparian areas and drainage lines. Steep slopes
39	Coastal grasslands, a rare vegetation type and riparian vegetation in the drainage areas. Should be form part of public open space and used for public open space only.
40	Coastal thicket vegetation on primary dune cordon. Sensitive to wind erosion.
41	Coastal/riverine thicket vegetation along drainage lines
42	Thicket vegetation on the West bank and important drainage lines for storm water runoff from the city center, possible erosion problems as a result of uncontrolled discharges
43	Riparian zone and valley thicket vegetation along Buffalo system. Additionally steep slopes leading to possible erosion threats.
44	Valley thicket in good condition buffering Umiza reserve. Important process area which needs to be maintained
45	Thick vegetation within City center an important ecological area and refuge for fauna. Includes riparian area up to the Nahoon Point Nature Reserve (no shape file?). Opportunity exists to encourage active management of the Eastern beach area through the creation of a tourism craft market for the informal traders as well as upgrading the existing facilities.
46	Small patch of riverine/valley thicket on Nahoon river, steep slopes and erosion potential
47	Riparian valley thicket along the Quenera estuary acts as a buffer to the Quenera bird sanctuary. Coastal dune cordon with coastal thicket vegetation stretching towards Gonubie. Dynamic area, which requires protection, possible incorporation and extension of nature reserve.
48	Coastal dune vegetation along Gonubie seafront. Important buffer zone for erosion.
49	Riparian vegetation along Gonubie estuary acts as important buffer zone.
50	Coastal thicket on eastern Bank of Gonubie acts as buffer zone to reserve. Also steep slopes with potential for erosion
51	Riparian zone of Kwelera. Valley thicket and steep slopes.



APPENDIX 2: ZONING STATUS OF EXISTING DEVELOPMENT AREAS ALONG THE BCM COASTLINE

Nodal area/settlement Name	Zoning status	Size	Number of erven
Kwelera town	Residential Zone 1	2.35ha	55
Sunrise-on-Sea	Residential Zone 1 & 2; Institutional Zone 1 & 2; Transport Zone 2; Open Space Zone 1; Authority zone	36.57ha	359
Pebble Cove Haven (Rainbow Valley)	Resort Zone 2	1.1ha	14
Gonubie	Agriculture Zone 1; Authority Zone 1&2; Business Zone 1-5; Industrial Zone ; Institutional Zone 1-3; Open Space Zone 1-3; Residential Zone 3A, 3B, 3C, 4,5; Resort Zone 1; Special Zone; Sub divisional area; transport zone 2	1225.17ha	3 246
Nahoon (Nahoon, Bonnie Doon, Stirling, Nahoon Beach)	Authority Zone 1&2; Business Zone 1, 2, 4&5; Institutional Zone 1, 2&3; Open Space Zone 1&2; Residential Zone 3b, 3c, 4&5; Resort Zone 1; Transport Zone 2	520.81ha	1 763
Beacon Bay	Agricultural Zone 1; Authority Zone 1&2; Business Zone 1, 2, 4&5; Industrial Zone 1; Institutional Zone 1, 2&3; Open Space Zone 1,2&3; Residential Zone 3a, 3b, 3c, 4&5; Resort Zone 2; Transport Zone 2	1001.34ha	3 311
East London ⁵	Agricultural Zone 1; Residential Zone 1, 2, 3, 4, 5&6; Business Zone 1, 2, 3, 4&5; Industrial Zone 1, 2&3; Institutional Zone 1, 2&3; Resort Zone 1&2; Open Space Zone 1, 2, 3&4; Transport Zone 1, 2, 3&4; Authority Zone 1&2; Special Zone	13 667ha	35 889
Lagoon Valley (Same as Hickmans campsite)	Resort 2 (Farm 1245/4)	9.7ha	
Cove Rock estate	Dwelling Houses; Mixed Land Use/Special; Vacant; Public Road; Private Open Space	63ha	242
Winterstrand	Residential Zone 1; Business Zone 2; Authority Zone; Institutional Zone 1; Transport Zone 2; Open Space Zone 1&2	23.28ha	149
Christian village	Same as Igoda		
Igoda Resort/Roeberts Resort	Resort 2 (Also Lekkerood)	3ha	
Aqualee Park homes & caravan park / Gulu Resort	Resort 2	11.84ha	
Kidds Beach	Residential Zone 1, 2, 3&4; Business Zone 1&2; Authority Zone; Institutional Zone 1&2; Transport Zone 2; Open Space Zone 1&2	67.55ha	334
Palm Springs	Resort 1	10.46ha	±36
Cosy Corner (Drummore)	Resort 2	±5.45ha	±50
Christams Rock	Resort 2	6.2ha	±100
Seavale	Resort 2	16.8ha	228
Kaysers Beach	Residential Zone 1; Business Zone 1&5; Authority Zone; Institutional Zone 1; Resort Zone 2; Transport Zone 2; Open Space Zone 1; Agricultural Zone 1	89.57ha	434

⁵ Areas included in East London are the following: Buffalo Flats Ext 2-7; East London Airport; Harbour; Orange Grove; Greenfields; Race Track; Rosemount; Siyakha; Sunnyridge; Sunnyridge Ext 3; Willow Park; Fullers Bay; Graceland; Cove Ridge East; Cove Ridge East; Fort Grey; Gately; Woodbrook; Fort Glamorgan; West Bank Village; Brookville; Southernwood; Milner; Lennox Estate & Panmure; Belgravia; Arcadia; North End; Quigney, Beach & Sleeper Site; CBD; Parkside; Buffalo Flats; Selborne; Berea; Baysville; Bunkers Hill; Vincent; Nahoon Valley; Vincent Heights; Cambridge West; Cambridge; Morningside; Chiselhurst; Amalinda; Stoney Drift; Braelynn; Haven Hills; Braelyn 10; Duncan Village Proper; C Section Extension; C Section; Pefferville; Gompo; B Hostel; Bebelele; CC Lloyd; Eluxolweni; Ford & Msimango; D Hostel; Parkridge; Gesini; Diphini; Buffalo Flats Ext 1; New Rest; Reeston North, Scenary Park & Haven Hills South; Quenera North; Dorchester Heights; Cambridge Village; Abbotsford; Nahoon Valley Park; Amalinda Nature Reserve & Summer Pride North; Summer Pride; Dawn; Wilsonia; Reeston; Cove Ridge East; Eureka



Nodal area/settlement Name	Zoning status	Size	Number of erven
Stone Cottages	Resort 1 (Erf 47 Kaysers Beach)	13.36ha	±12
Kiwane Resort	Holiday Resort (Farm Number Erf 1168 (Was a Government owned resort but it is not in use any more))	1.06ha	



APPENDIX 3: CITY OF EAST LONDON ZONING SCHEME REGULATIONS



APPENDIX 4: PROJECT INFORMATION REQUIRED FOR DEVELOPMENT WITHIN LIMITED DEVELOPMENT AREAS AND NO DEVELOPMENT AREAS

This information will be required with any application in terms of LUPO and can form the basis for a scoping study required in terms of the ECA.

Motivation

This section should provide a brief project description and outline the need for and purpose of the proposed development. The proposed design and design options should be discussed as well as potential environmental impacts and mitigatory measures which can be implemented to reduce these impacts. Details regarding the proposed management, such as seasonal (holiday accommodation) or permanent occupation of dwelling units, must be included.

The motivation for any application for development outside of defined nodes must show how the application complies with the principles of the Development Facilitation Act (as more fully detailed in the BCM SDF), especially with regard to limiting 'urban sprawl' (as defined in the BCM SDF). It should also provide insight as to the sustainable development measures adopted in the project design.

Site Development Plan

All applications for development (including subdivisions) outside of the Urban Edge require a detailed Site Development Plan compiled to a suitable scale. The site development plan must include the following site information;

- Contour map indication contours at a relevant scale
- Vegetation type and cover
- Visual absorption capacity of the area
- Existing land uses
- Demarcation of buffer zones as defined in section 7.1.2
- Demarcation of flood lines where appropriate
- Access roads to the site
- Photographs of the site and vegetation

And the following development information:

- Current zonation of the land to be accompanied with the appropriate documentation
- Building design including location & height of all structures (including fencing)
- Elevation of all buildings and structures as well as materials and finishes to be used
- Building lines and all existing and proposed servitudes
- Density of development
- Layout & position of all structures
- Landscaping including position of all trees indicating those which are to be retained, and any areas to be landscaped
- Proposed subdivision lines is applicable
- Storm water infrastructure and management
- Roads – within site and providing access to site indicating vehicular and pedestrian flow
- Any proposed phasing of the development
- Position of structures on adjacent land



The site development plan must allow for appropriate conclusions to be made such as:

- Sensitive areas
- Areas appropriate for development
- Approximate carrying capacity of site
- Visual absorption capacity of site to screen development

Cost-Benefit Analysis Report

Any application for development deemed significant (i.e. number of units, densities, height, visual or environmental impact, consumption of resources etc) outside of the Urban Edge must provide a fully substantiated Cost-Benefit Analysis Report with such an application. The Cost-Benefit Analysis (CBA) is to include all the current and future costs to society in general as well as the affected community; environmental costs; financial costs to the City Council from an operating and Capital point of view.

- Such a CBA Report must clearly indicate that the current and future benefits clearly outweigh the costs.
- Council reserves the right to request an independent review of the CBA at the expense of the applicant.
- The CBA Report must deal comprehensively with claims of job creation and distinguish between sustainable permanent jobs; casual jobs; non-permanent jobs (such as construction jobs). The level of skills required for jobs must be indicated, including a proposed skills development programme.

Environmental Impact Assessment / Scoping Reports

A Scoping study or full EIA will be needed as required by the ECA and associated regulations. The Scoping study or EIA must as a minimum :

- Indicate which sanitation system is to be used and discuss the impacts;
- Deal with the impact of the development on ground water and water supply;
- Provide insight as to the visual impacts of the development
- Indicate how the development will improve the natural environment.
- Consider the objectives of STEP and the BCM MOSS and Conservation Priority Map
- Provide information on the economic, social and environmental impacts and benefits of the project as outlined in section xxxx
- Include an Environmental Management Plan (EMP);