

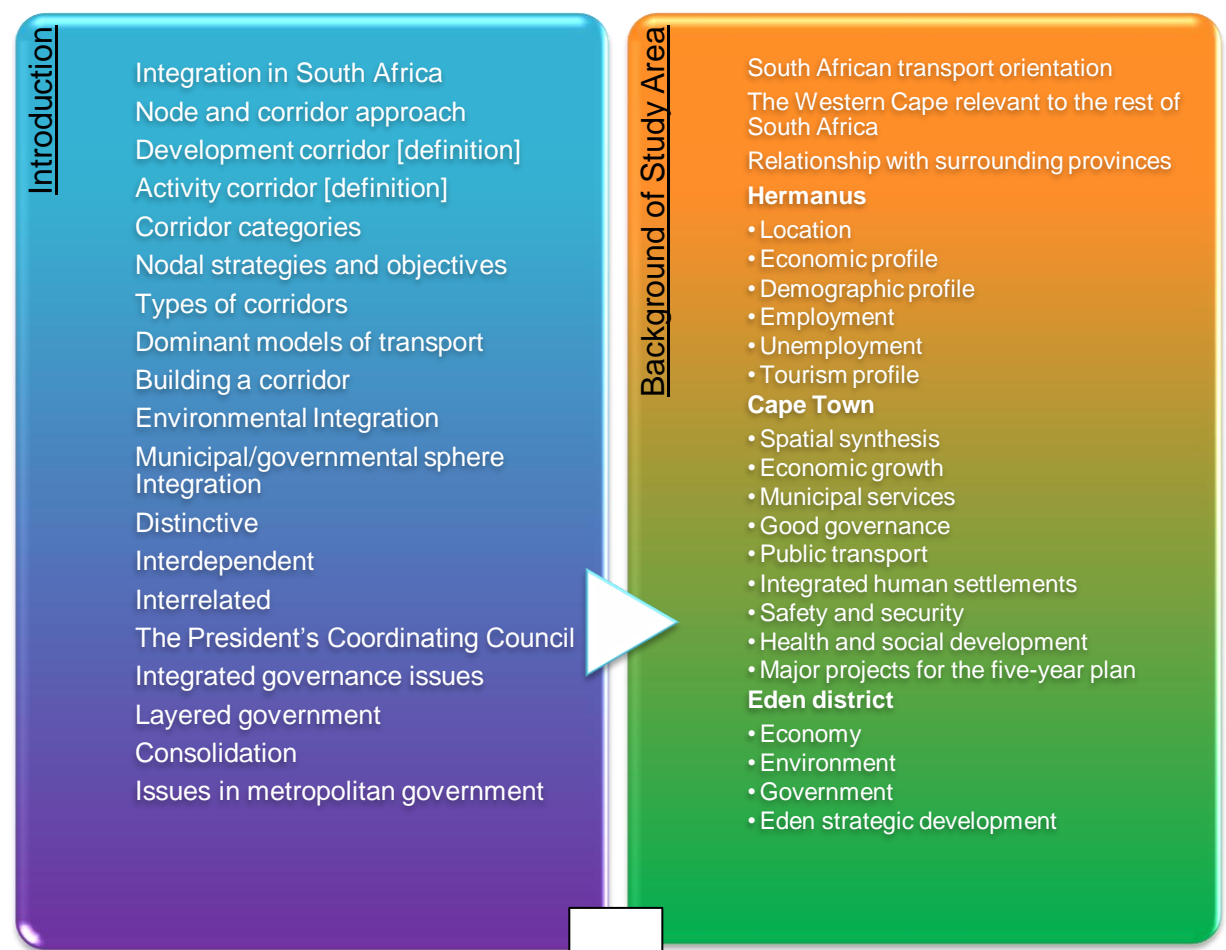
4. Empirical study

4.1 Introduction

Having discussed the background to, definitions of the ITP and SDF in light of the relevant literature (Chapter 2) and providing a framework of South African legislation and policies applicable to the study (Chapter 3), the focus now shifts towards the empirical section which entails a study of the respective municipalities' ITPs and SDFs.

The interviews conducted with the key role-players regarding each of the plans and frameworks of the municipalities are included in this part of the study.

Figure 27 below provides a chapter outline. This chapter sets off with an overview of the South African context of certain points of departure that were not discussed in the literature study in Chapter 2 in order to provide a South African perspective on each and serve as an introduction, after which the empirical study of the integrated transport plans and spatial development frameworks of each of the study areas follows.



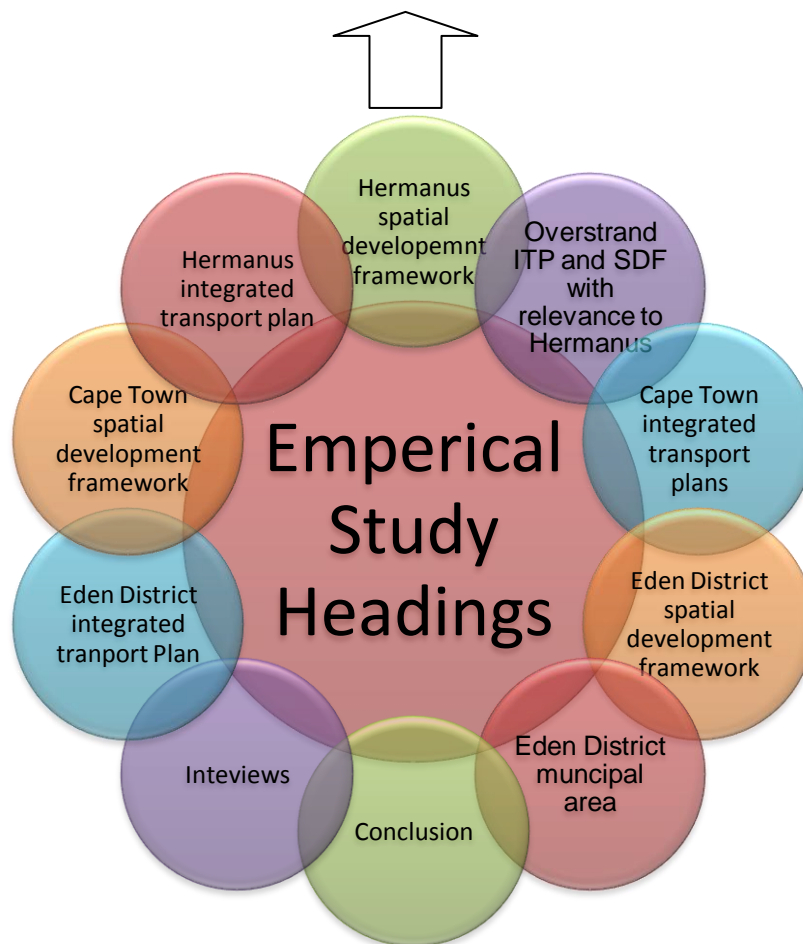


Figure 27: Graphic outline of the empirical study chapter

Source: Own construction, 2011

4.1.1 Integration in South Africa

In South Africa, as elsewhere, the concept of ‘integration’ has become a central theme of contemporary planning discourse. Beyond the obvious reference in this context to integration of the formerly rigidly segregated population zones of the cities, the notion of integration is generally accepted to refer to three possible forms or dimensions of integration: integration between different spheres or levels of government; integration between different sectors of service delivery or planning; and integration between the often organisationally separate functions of planning and budgeting.

“Conceptions of space - which are central to any ontology - are part and parcel of notions of reality. Much more than simply a world view, this sense of space, one’s ‘spatiality’, is a fundamental component of one’s relationship to the world”

(Jensen & Richardson, 2000:1).

In South Africa, the current legislative and regulatory frameworks governing development planning and transportation planning at the municipal level have introduced expectations that local IDPs and ITPs will – or should – be essentially aligned or compatible with one another, if not fully and directly integrated (Wilkinson 2002:8).

➤ Spatial development planning

South Africa still uses fragmented, unequal and incoherent spatial planning and land use management systems, which often stifle land and economic development and hinder the transformation of apartheid-based settlement patterns (NATMAP Land use perspective, 2008:3).

This regulatory framework has a direct impact on the country in the following ways:

- Economically: it impedes investment in land development and fails to establish sufficient certainty in the land market;
- Spatially: it fails to address the segregated and unequal spatial patterns inherited from apartheid; and
- Environmentally: it does not balance the country's socio socio-economic needs with those of environmental conservation.

Current planning poses a number of problems.

Legislative problems:

- Too many legislative requirements;
- Tension between these pieces of legislation;
- There are many gaps between them; and
- Authority over these legislations resides in different places.

Institutional problems:

- Too many institutions that seem to have the same authority over similar issues;
- Overlaps between these institutions and levels of governance; and
- Lack of capacity in these institutions and are not being addressed

(NATMAP Land use perspective 2008: 6, 7, 8).

Symptoms of the above include the following:

- Long approval processes with too many objections and, concurrently, the slow pace of development application approvals.
- Lack of shared vision and coordinated initiative in respect of what is needed to modernise and rationalise planning and land use management in South Africa and in respect of the interconnections between different kinds of planning in South Africa.
- Poor linkages between sectoral policies (from all policies spheres) and spatial planning (by all spheres) on the one hand and land use management mechanisms and processes on the other.
- Several approvals are required from different spheres of government (e.g. land use –municipality; environment -province; agriculture-national).
- Delegations (of authority to make decisions) between spheres is often insufficient and unclear.
- Regulatory processes have too few “filtering” mechanisms which allow for the early identification of those applications that may require “high intensity regulation” and which not.
- Serious capacity problems in all spheres but particularly at municipal level (land use management) and at provincial level (environment).
- There is often opposition, particularly from municipalities, to legal and procedural mechanisms which could speed up development approval processes (e.g. the DFA tribunals)
- Concerns that slow development approvals are linked to the growth of corrupt processes
- A high degree of legal and procedural complexity characterise the many land use management processes in South Africa.
- Too many objections tend to be tabled and there are no mechanisms to deal with them expediently them expediently.

Several parallel approval processes involve substantial duplication and complexity (in terms of land use, environment, heritage, agriculture, transportation and the like)(Land use perspective, 2008: 9, 10, 11, 12).

The failure to achieve such integration – or, perhaps more accurately, to re-integrate land use and transportation planning systems on the basis of significantly transformed discursive foundations following penetrating critiques of ‘high modernist’ planning practices in both sectors – is problematic because urban activity systems and land use patterns remain locked in a recursive relationship with transportation systems in contemporary cities

Fundamentally, travel needs and thus also the demands for transportation provision are derived from the geographical separation of primary activities in urban areas, particularly those that are home-based and those that are work-based. Urban transportation systems are therefore generally developed, whether by public or private sector agencies, with a view to provide or improve access between the nodes or zones in which such activities are concentrated: their essential purpose is to facilitate the movement of people or goods, or both, between these origins and destinations.

Urban land use patterns are, furthermore, defined by relatively homogeneous concentrations of specific activities or activity mixes. ‘Residential’ land use zones reflect primarily home-based and associated activities, while ‘business’ and ‘industrial’ land use zones reflect office-based and factory or workshop-based and related activities, respectively. Particular land uses – or, to be more precise, the human actors or agencies engaged in the activities represented by those land use categories – seek out locations within an urban area primarily on the basis of established or potential future patterns of accessibility defined by the spatial and operational characteristics of the transportation system (Wilkinson 2002:1, 2).

Despite advances in telecommunications technology, the need to physically transport people and goods between origin and destination locations that are defined by established and emerging land use patterns remains a central concern in the routine daily functioning of urban systems. The provision of transportation infrastructure aimed at meeting this need will accommodate, to a greater or lesser degree, travel behaviour derived from the spatial and temporal routines of households, firms and other urban actors, as well opportunities afforded by new transportation technologies.

The spatial configuration of such a transportation infrastructure defines the patterns of accessibility within urban systems which, in turn, shape the locational decisions of urban actors and hence land use patterns in an interlocking and ongoing process of change and response.

It is this recursive interaction between the land use and transportation ‘components’ of urban systems that provides the warrant for seeking to integrate their planning within coherent frameworks.

The land use or spatial planning aspects of an integrated development plan are governed primarily by the requirements of its spatial development framework (SDF) component (Wilkinson 2002: 2, 3, 4).

➤ Implications

In June 2012 the Constitutional court will make final a ruling on the DFA – perhaps to lapse and become void, which means that this Act would be repealed. This could mean that development tribunals would no longer be able to make decisions on land development applications. In the absence of the DFA, appropriate spatial planning instruments together with the Land Use Management Act would have to be put in place. The need for integration between the transportation and spatial planning instruments will increase as the need for integration between the different spheres of Government increases, to prevent defragmentation of development planning.

4.1.2 Node and corridor approach

The South African settlement structure was created by two forces, i.e. apartheid and modernist planning (Integrated Urban Corridor Assessment and Strategy Development, 2001:ch2:3).

The typical South African settlement structure consists of a variety of discreet areas with marked differences in access and amenity. It is characterised by low residential densities, vast open spaces in between developments and no correlation between transportation and land use. It can be described as a dual city, because of the vast differences between the different areas, or a 'doughnut' city because of the relatively high residential development on the periphery and a multi nodal city, due to of the variety of nodes that have developed, especially in high-income suburban areas (Integrated Urban Corridor Assessment and Strategy Development, 2001, ch2:4).

Figure 28 below presents a diagram of the ideal corridor development. In the rest of this section the practical application of this in the South African context will be investigated.

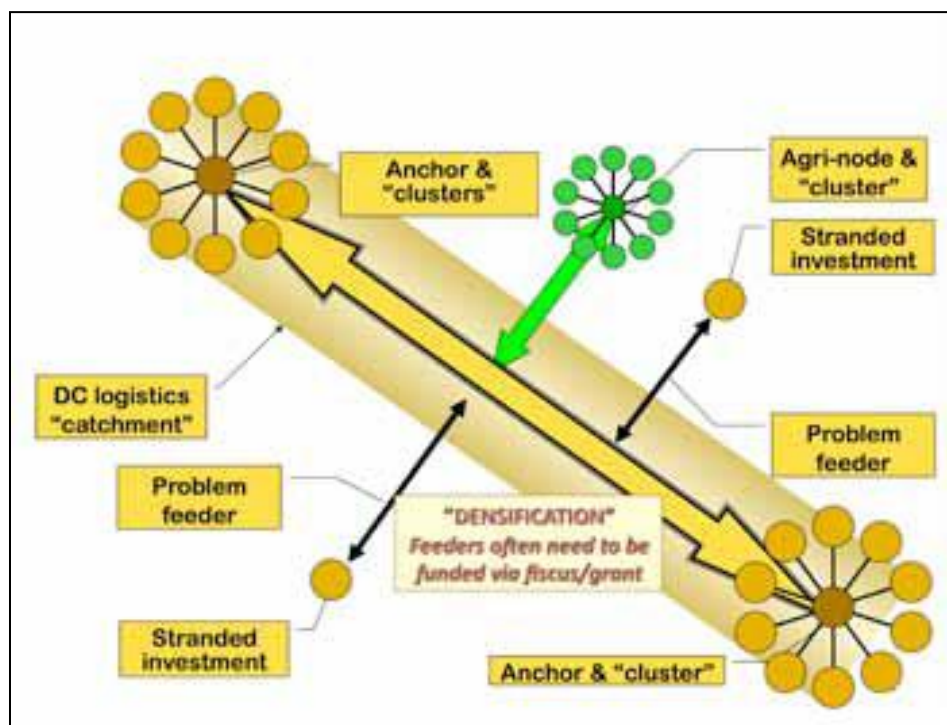


Figure 28: Ideal development corridor figuration

Source: Thomas, 2009:3

Corridors can achieve a wide range of highly desirable long and short-term objectives, as they can be used to integrate the existing fragmented urban structure. The advantages have an impact on many spheres ranging from the economic to the social to the spatial to the environmental (Reiss, Gordon, Neudorff, & Harding 2006:1).

In South Africa, the concept of using land-use corridors as a 'tool' for spatial economic and social restructuring emerged during the late 1980s. The concept gained support over the years and culminated in the former Central Councils' integrated development plan (IDP). This plan proposed a spatial system of development corridors and activity spines as a means of addressing a host of urban, economic, social and land-use distortions and spatial inefficiencies.

The principal economic objectives of corridors are intended to bring about:

- the integration of the economic activities of adjacent communities at a sub-regional level with a view to create the necessary thresholds and greater level of economic activity; and
- the establishment of better metropolitan-wide economic linkages.

Not all corridors have a similar density, land-use mix, scale and nature once they mature. Thus, a flexible land-use policy is needed in conjunction with the channelling of flows, especially of public transportation. It is also important that the movement infrastructure and the access policy in the corridor must be appropriate to the local environment. Figure 29 illustrates the road options that may be used for different types of corridors.

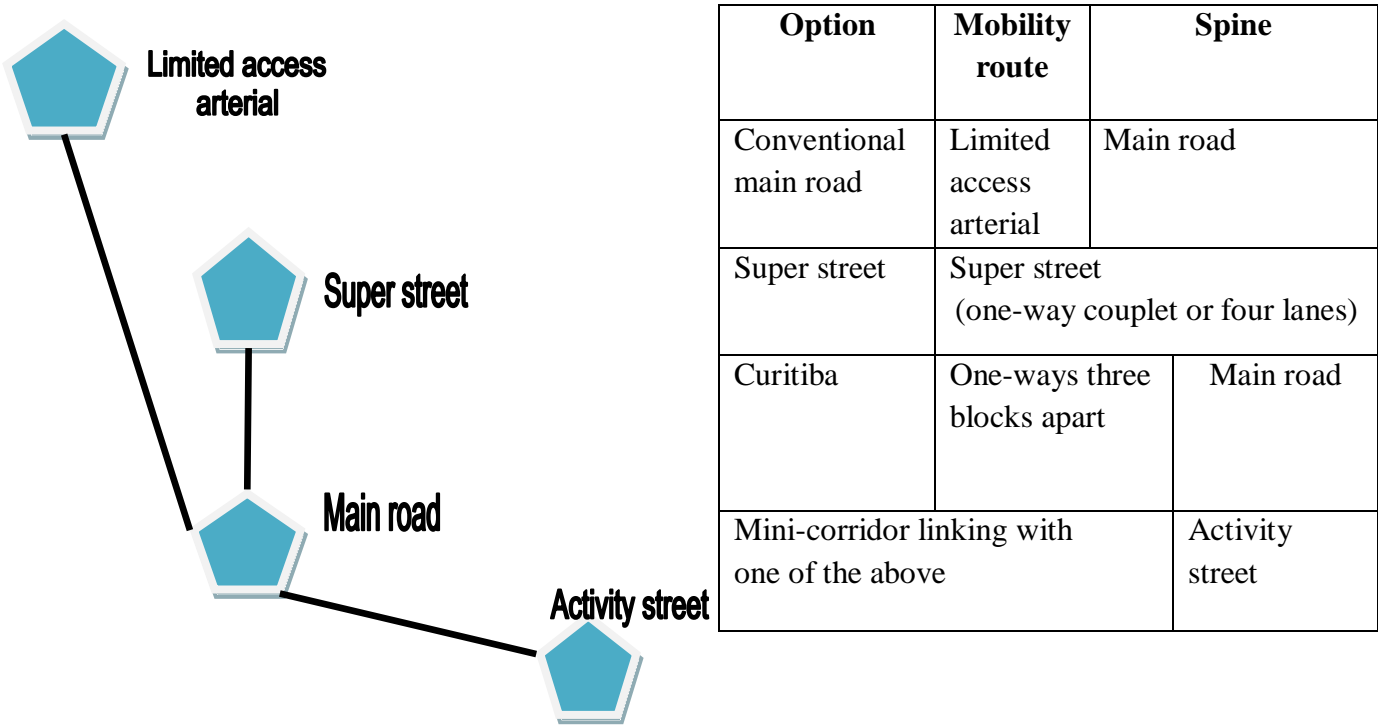


Figure 29: Corridor road options
 Source: Green, Aberman & Dominik 2002:2

Also, corridors evolve at different rates and in different manners, and their nature is often dictated by historical factors such as time of inception and prevailing social and economic growth of the city. Figure 30 illustrates the various evolutionary paths corridors follow.

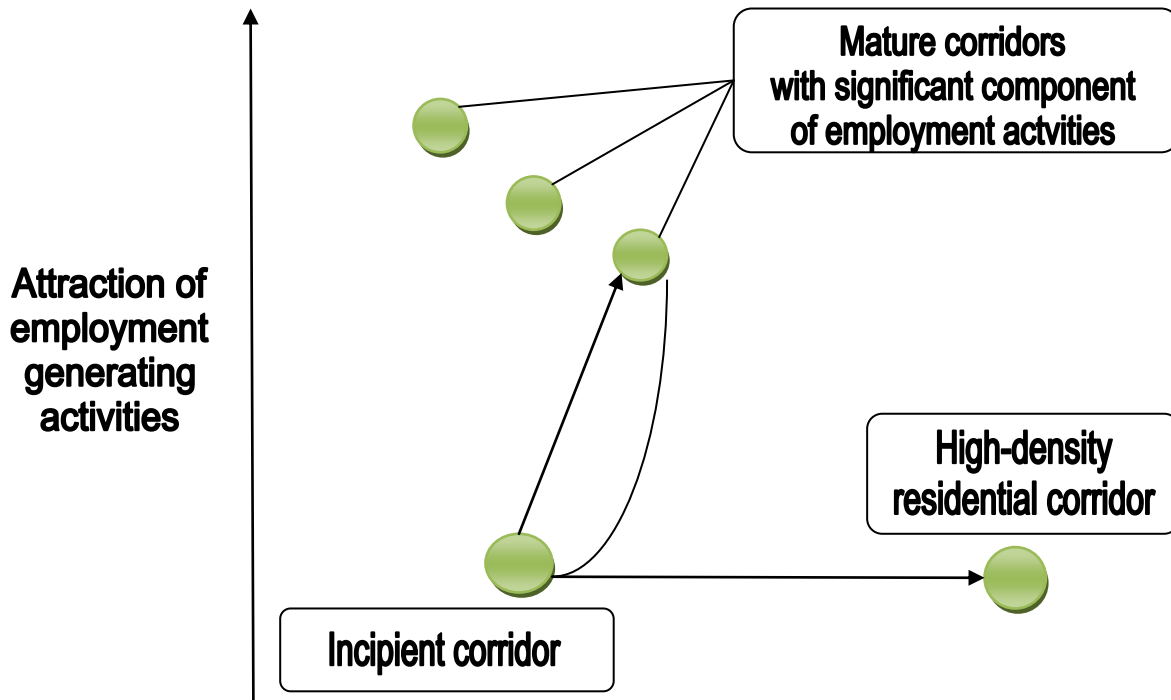


Figure 30: Possible evolution of corridors

Source: Green, Aberman & Dominik 2002:3

The performance of sectors has implications for corridor and node planning. The relatively high growth of decentralised offices is important for the planning of corridors and nodes as they serve as important centres of employment for all income groups (Green, Aberman, & Dominik, 2002: 1, 2, 3).

Table 15 illustrates the different types of corridors related to retail, office/service, industrial and motorcar use. This table also illustrates the dominant land use, modes of transportation, shape, function and the like of these corridors that can be implemented within a corridor development strategy.

Table 15 : Summary table of typologies and types

Typology	Types			
Dominant land use	Retail corridor	Office/services corridor	Industrial corridor	Motorcar-related corridor
Dominant mode/s of transportation	Private motorcar dominant corridor	Public transportation dominant corridor	Mixed private/public transportation corridor	
Shape/physical form	Pearls/beads on a string	Thick bracelets/strips/ribbons		
Function	Mobility/movement/Transportation corridor	Access/activity corridor: · Development corridor · Activity spine · Activity strip/street		

Scale	Provincial	Metropolitan/city-wide	Local	
	Large	Medium	Small	
Underlying dynamics or "forces of attraction"	Single attractor	Dual attractor	Multiple attractors: • Multi-nodal attractor • Strip attractor	Total area attractor
Linkages	"Township" to CBD, industrial area, retail node and/or suburbia	Suburbia to suburbia	Suburbia to CBD	
Level of corridor maturity	Mature activity corridors	Incipient activity corridors	Proposed activity corridors	
Socio-economic class of corridor inhabitants	Up-market high rise	Up, market low to medium density	Emerging low-middle class	High-density, low Income

Source: Integrated Urban Corridor Assessment and Strategy Development, 2001, ch2:84

In order to promote regional economic development, the Southern Africa Developing Community (SADC) must be seen as one entity consisting of a number of broad developmental regions that may extend beyond the boundaries of various independent states. Here, a development corridor can be seen as a means used to elevate an area to a certain level of development. The area must have the potential to develop, on the condition that the entire area must take part in the process.

The fact that development takes place within a corridor implies that we are referring to a specific spatial area in this regard. The delimitation of such an area depends on the type of development planned. However, certain conditions apply, since the development of a corridor is aimed firstly at developing the region from the inside, and then making contact and developing further extensions with adjoining regions from there. A development corridor is therefore a multi-dimensional strategy that further strengthens and supports the chosen area's internal development networks (Campbell, Maritz & Hauptfleisch 2009:5).

➤ Implications of this view:

In the study area, corridor development typically occurs within the city centres. Such a strategy can be applied to the Eden District municipality to help adjoin the service areas of each local municipality. In the case of Hermanus, the entire town must develop within the context of a corridor development strategy because of the topographical location. The metropolitan development of Cape Town, on the other hand, is based on both a nodal and corridor development strategy radiating out from the city centre and through a multi-dimensional strategy that sets out to adjoin the different regions close to the city.

➤ **Development guidelines applicable to all corridor types**

The following objectives can be identified as fairly universal in applicability:

Physical

- Higher standard of roads and utilities than other areas
- Focus bulk services in corridors
- Improve sidewalks and street environment
- Ensure well-maintained, visible public transportation stops
- Identify and upgrade informal trading nodes
- Create identity for each corridor, including visual gateways, etc.
- Encourage high-density housing at transportation nodes
- Identify uses for vacant land
- Locate essential services at interchanges

Institutional

- Appoint corridor managers to co-ordinate development
- Communicate efforts to private sector
- Steer major origins and destinations into public transportation corridors
- Implement fast-track approvals for corridor developments
- Create a safe and secure environment
- Provide incentives for upgrading buildings if affordable

(Green, Aberman, & Dominik, 2002:9)

Urban sprawl occurs when urban growth expands out from an urban centre into the adjacent agricultural and rural hinterland. Small towns grow over long periods of time and become cities; cities grow to become metropolitan areas; metropolitan areas are now growing to become what some call city regions. For example, some metropolitan areas in Gauteng are growing and there is no space left between these areas for further development; consequently, it is becoming one outsized Gauteng 'city region'.

It is also expensive to provide a viable public transportation system to a scattered population. The extra travel required from a spread out settlement pattern increases greenhouse gas emissions from fossil fuels that contribute to climate change; households also have to pay more for travel as fuel prices rise due to the effects of peak oil.

Settlement planning theory currently emphasises the development of a network of settlement nodes and corridors. These nodes relate to areas where urban activities occur and corridors relate to movement and transportation routes, and especially public transportation routes such as rail and bus. In such a case settlement activity would be concentrated in these corridors – which helps to preserve agricultural and wilderness areas.

On a larger scale, the size of these corridors may be fairly wide and expansive, with distances between separate corridors from tens to hundreds of kilometres. On a smaller scale, the size of these corridors may just be the width of one road with houses on each side; creating what Christopher Alexander (in *A Pattern Language*, 1977) calls a 'lace of country streets.' The distance between parts of this 'lace of country streets' could be from tens to thousands of meters.

The scale of wilderness corridors and agricultural areas within such a settlement pattern would similarly vary from kilometres to meters as one moves down in scale. In effect, what is found is a self-repeating wilderness—agricultural—settlement pattern at all scales. This network pattern would self-replicate in a nested manner at different scales, or in what mathematicians call a fractal pattern. It should be structured in such a way that one can still find wilderness and agriculture areas nested within settlement areas, as well as nodal and linear settlements nested within wilderness and agricultural areas.

Such a nested and networked system would ensure that the wilderness, agricultural and settlement realms are kept apart. Also, settlements would not encroach onto agricultural and wilderness areas. And if they were to, this will be within the spatial logic of the wilderness—agricultural—settlement network at a lower scale. Such a situation does, however, imply that within the settlement zones and corridors, as new homesteads, schools, shops, and the like, are built in future; these areas will become denser and more compact. The size of plots on which housing structures can be built becomes smaller. If this type of situation is dealt with by means of the networked approach, such homestead plot compaction would occur along this ‘lace of country streets.’ These households will nonetheless still have access to agricultural and wilderness areas in their vicinity (Eglin 2010:1, 2, 3).

While development corridors are strongly influenced by access and key roads, they can be defined as areas of greatest activity that should be managed in a particular way so that they can produce a broad beneficial impact in the adjoining areas. The development corridor(s) have major implications in terms of zones of activity. These implications are based on the impact of passing traffic in terms:

- Hazards and risk factors;
- Potential revenue;
- Potential business; and
- Potential development.

There are two levels of development corridors that have been defined, namely:

- Primary development corridor; and
- Secondary development corridor

(Integrated Development Plan (IDP) Review Process, 2003:1).

Primary development corridor can be defined as that which results in maximum impact and where most types of land use are likely to be encouraged. The secondary development corridor, on the other hand, presents limitations in that it encourages land use for a defined purpose, such as tourism.

Inevitably, development nodes are the main centres which are being fed by development corridors in terms of people and physical thresholds. Nodes are important points in that they provide a concentration of different activities. Again, nodal points have the potential to expand in size based on different uses.

Furthermore, nodal points can be used to concentrate specific activities, which could have a multiplier effect to a broader municipal area. Apart from this, it can be quite cost effective to put certain land uses together for both supplier and user in the sense that other associated services can then be found in a small radius. Indeed, higher-order services such as hospitals, large shopping centres, and key government departments are generally found at these points (Integrated Development Plan (IDP) Review Process, 2003:2).

In order to achieve the required objectives for a particular corridor an intervention, or rather, a set of interventions will be required.

In this report a range of internal and external interventions, together with the objectives that they could achieve. While these interventions may prove to be useful in a wide range of situations, issues of scale and unique local conditions should not be ignored. A standardised, one-size-fits-all approach to corridors in different parts of metropolitan areas and different metropolitan areas in the country will not work. One sure way of avoiding this is to enter into " ... *real dialogue with those who most need and depend on public transportation* (Integrated Urban Corridor Assessment and Strategy Development, 2001, ch4:2).

4.1.2.1 Advantages of corridors

There are a number of reasons why development corridors are good for urban areas, namely to:

- stimulate economic development;
- contribute to the restructuring of the city;
- improve access to urban opportunities;
- reduce trip making (the number of motorised and non-motorised trips and their length);
- improve the quality of public transportation services;
- stimulate the use of public transportation;
- reduce the cost of public transportation;
- optimise the use of transportation infrastructure;
- reduce the amount of bulk infrastructure required and maximise its use; and
- reduce the environmental impact of transportation

(Integrated Urban Corridor Assessment and Strategy Development, 2001, ch5, Annexure A:12).

➤ Specific advantages of corridor development

Transportation-related advantages:

- *Integrate land-use and transportation.* It is generally acknowledged that a key characteristic of successful towns or cities is that land use and transportation in such localities are integrated. Corridors have the potential to ensure that this integration is achieved.
- *Increase the use, efficiency and quality of public transportation.* Through the concentrated mixing of non-residential land-uses with higher density housing in a corridor, the thresholds for viable, high frequency and better quality public transportation are lowered.
- *Increase/maximise accessibility.* A wide variety of land uses at higher densities on public transportation routes increases the accessibility of the urban poor to such land uses.
- *Increase/maximise mobility.* Corridors can facilitate high-volume, efficient movement between major nodes within a municipal area, thus lowering congestion levels and leading to shorter travelling times.
- *Increase modal choice.* By means of creating a larger and more diversified demand for public transportation in corridors, the feasibility of a far greater range of public transportation modes becomes possible in these corridors.
- *Increase modal integration.* Corridors can facilitate a better integration of public transportation modes at nodal points in a corridor as the volumes required to develop an inter-modal facility are potentially achieved.
- *Shorter and fewer.* As corridors are able to provide a wide array of goods and services in a concentrated area, they can ensure shorter trip lengths and reduce the need for travel.
- *Reduce peak travel times.* By reducing the need for travel and increasing the use of public transportation, corridors can reduce peak travel times.

Economic and financial advantages:

- *Reduce transportation subsidies.* One of the key objectives of corridor development in South Africa is to reduce the government's annual public transportation subsidy by making public transportation more viable and by opening up new public transportation possibilities.
- *Reduce the use of non-renewable resources.* By means of a concentrated merging of high-density residential and high-intensity non-residential land uses in a corridor, a wide range of goods and services can be located in close proximity to each other. This reduces the length of freight and passenger trips, which lead to an overall reduction in the use of fossil fuel.

- *Reduce transportation costs for the poor.* By means of the development of corridors in which public transportation trips are reduced, or made shorter, more efficient and economically viable, the cost of public transportation can be reduced, which benefits the poor.
- *Attract new investment to a municipal area.* Through the provision of infrastructure, coupled with a range of incentives, investors can be enticed to invest in a corridor, which could benefit the municipal area as a whole.
- *Increase economic opportunities.* The high accessibility and exposure of corridors provide opportunities for a wide range of economic activities. Because these opportunities are concentrated along corridors, the potential for land uses complementing each other is improved.
- *Improve the efficiency of infrastructure.* The intensification, diversification and concentration of land uses and economic activity within corridors will ensure the most efficient use of bulk infrastructure investment within corridors.
- *Linking to the global economy.* Corridors that are the focus of high-quality infrastructural investment, such as the N4 Platinum Corridor, are often able to draw direct international investment.

Social advantages:

- *Alleviate poverty and reduce inequality and social exclusion.* Through economic development in corridors, social disparities can be reduced. Corridors can link and integrate the more and the less affluent parts of towns and cities, hence assisting in the reduction of social exclusion.
- *Improve access to social services.* Through the location of major educational and health facilities in corridors served by public transportation, disadvantaged groups can gain access to such social services.

Environmental advantages:

- *Reduce the need for transportation and ensure more sustainable urban development.* Mixed land use in a corridor can lead to a reduced need for travel and reduced trip lengths, in turn giving rise to more sustainable urban development.
- *Reduce pollution.* Due to the increased use of public transportation within corridors, the emission of harmful gasses by private vehicles is decreased, which in turn helps to alleviate the greenhouse effect and global warming.
- *Contain urban development/ sprawl.* Because land uses are concentrated in corridors, the environmental impact is smaller than in the case of low-density urban sprawl.

(Rustenburg Spatial Development Framework, 2010, ch11:76-80).

Although the advantages of a corridor development discussed above were derived from the Rustenburg SDF, they are also applicable to the current study areas with specific reference to the implementation of nodal and corridor development.

4.1.3 Environmental integration

Since the 1994 general elections, planning in South Africa has been undergone a comprehensive and radical reform process. What emerged was a shift away from highly centralised, technocratic, rules-based mechanistic approaches, to decentralised, participative and co-operative governance frameworks (Retief, 2008:11).

The integration of planning and environmental management policy has been quite successful by means of the inclusion of common principles relating to, amongst others, sustainability and participation. However, institutional and methodological integration remains problematic and only initial steps have been taken in this regard (Retief, 2008:11).

The evolution of integrated environmental management (IEM) in South Africa was based on international experience and development in environmental policy, the application of environmental assessment techniques and the application of environmental assessment and management tools. IEM provided a “new way” of thinking from an environmental perspective in that it-

“provides a holistic framework that can be embraced by all sectors of society for the assessment and management of environmental impacts and aspect associated with each stage of the activity life cycle, taking into consideration a broad definition of environment and with the overall aim of promoting sustainable development” (DEAT, 2005: 5)

The publication of the National Environmental Management Act (NEMA) (Act 107 of 1998) introduced new approach to and role of environment in development. NEMA provides a framework for co-operative environmental governance in South Africa and promotes the application of environmental assessment and management tools with a view to ensure the integrated environmental management of activities (DEAT, 2004). The intention of NEMA was formalised through the publication of the EIA Regulations (2006). On 3 August, 2010 the revised NEMA EIA Regulations (Government Notices R.543 to R. 547, June, 2010) were promulgated; these include changes in the process, procedure and listing of activities.

Transportation planning in South Africa became a statutory planning activity with the enactment of the Urban Transportation Act (Act 78 of 1977). Transportation planning, development and management were guided by the National Land Transportation Transition Act (Act 22 of 2000) up to 2009, when the National Land Transportation Act (Act 5 of 2009) and its Regulations (2009) were promulgated. In this context, various policy documents underpinned this transformation process:

The White Paper on National Transportation Policy (1996); Moving South Africa (Vision 2020) (1999); the Rural Transportation Strategy for South Africa (2003); and the National Transportation Master Plan 2050 (NATMAP 2050) (2006 -2010) (Schoeman 2010:4, 5).

Coastal development brings with it a number of associated impacts that tend to affect the ecological functioning of the particular system through increased susceptibility to natural hazards and extreme weather events, which in turn result in substantial costs to and impacts on communities.

This state of affairs has led to the realisation that something needs to be done in order to better manage and ‘control’ the rapid coastal development in South Africa. To this end, the Integrated Coastal Management (ICM) Act (Act No. 24 of 2008) was developed and promulgated. This Act aims to ensure sustainable coastal development in the country. The ICM Act defines the inland boundary of the coastal zone as the area comprising coastal public property, the coastal buffer zone, coastal access land, special protected areas and coastal waters. The ICM Act’s definition of coastal buffer zone in rural areas (1 km) was used as a guideline for determining the coastal zone (Hill, McGregor, Palmer, & Paterson, , 2010:118-120).

The ICM Act marks a landmark change in coastal management in South Africa. It also requires radical action to some degree. Of key importance in terms of development is the determination of set-back lines, seaward of which development is prohibited without authorisation. A setback line aims to ensure the protection of coastal functioning areas and protects resources and infrastructure from the effects of sea-level rise and coastal erosion. The ICM Act also requires that coastal management programmes must be drawn up and coastal committees be established at the national, provincial and local levels, which should ensure the integrated management of the coastal environment. It is also believed that decision-makers will be forced to look at the system holistically before authorising individual developments.

In terms of coastal development, it is essential to take note of links with other existing legislation. The ICM Act requires that environmental authorisation must be obtained for areas below the setback line; this is done through NEMA, which requires that an environmental impact assessment must be undertaken.

The development of the ICM Act highlights what each sphere of government should be doing to contribute towards the long-term management of the coastal zone. While sound, the ICM Act poses a number of challenges. The most salient concern in this regard is that the Act designates authority and responsibility to municipalities, which means that they are required to undertake a range of planning, monitoring and management responsibilities. A key concern here is, clearly, the designation of authority and implementation to municipalities, who largely lack the capacity to do this and could result in a persistence of unsustainable developments in the coastal zone (Hill, McGregor, Palmer, & Paterson, 2010: 125-126).

The vision for South African transportation is of a system which will:

“Provide safe, reliable, effective, efficient, and fully integrated transportation operations and infrastructure which will best meet the needs of freight and passenger customers at improving levels of service and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable.”

The state of public transportation in South Africa is in a dismal state and definitely does not support the above transportation vision. Public transportation in South Africa is expensive, unreliable and ineffective. These are some of the challenges faced by commuters, many of whom are from the poorest of the poor.

Partly due to the current state of the public transportation system, there has been a rapid increase in private vehicle ownership in South Africa over the last few years, resulting in our roads and transportation systems being overloaded at the same time every day and in turn affecting our natural environment with an increase of pollution.

The new democratic South Africa changed the face of planning and development forever. The new approach contains the elements necessary to do away with the legacy of inherited fragmented spatial planning and development influence. In light of the direct and indirect involvement of the planning profession in South Africa in the implementation of racially based, disintegrated spatial development system during previous political dispensations, the question may justifiably be asked how the profession should be transformed and positioned to the professions of environmental management and transportation planning in order to turn this perception around. (Shoeman, 2010: 35)

The protection of the natural environment in each of the three study areas is of paramount within the spatial development frameworks and within the integrated transportation plans. Because of the increased negative impact on the environment that accompanies the increase in private vehicle ownership, the integration between spatial development and transportation is important with a view to ensure that in the future travel times and distances can be shorter. Also, the aim is to reduce private vehicle ownership by promoting more multi-modal transportation. The application of this statement will be investigated within the discussion of the ITPs and SDFs of each study area.

4.2 Background to study areas

4.2.1 South African transportation orientation

In South Africa, and specifically the Western Cape, a change in travel patterns is currently taking place. Increasingly, there is a move away from traditional public transportation modes such as buses and trains to taxis. The Western Cape has the highest rate of car access in the country, with an approximate ±40-45% of households having access to cars. It appears as if there is something of a disjuncture within government policy between the objectives of government in relation to the promotion of public transportation and the requirements for traffic impact assessments.

A private vehicle dominant planning approach is being enforced by developments that ensure that the current trip generation rates and modal split, with associated low dependence on public transportation, is maintained. The problem is exacerbated by the over-design of road infrastructure.

On the other extreme, government policy calls for an increase in public transportation usage and a prioritisation of public transportation over private vehicle usage, with the aim of shifting to a multi-modal usage.

Clearly, traffic impact assessment policy is at odds with the government’s stated public transportation policy. It will be impossible to shift the modal split in favour of public transportation if future transportation planning must cater for private transportation demand at the current level of growth. Such planning will produce an environment that is dedicated to providing for private car usage and not for the needs of public and non-motorised transportation users.

The integration of transportation and land use planning offers the potential to produce positive environments that are at a human scale while at the same time providing high levels of mobility. Fundamental to this process is the shift in transportation planning away from a focus on providing for car users to balancing the needs of all transportation users instead (Frieslaar, & Marks, 2007: 26).

4.2.2 The Western Cape in context of the rest of South Africa

This section on the Western Cape Province and all three municipalities must be read background context to the empirical study that follows.

The global city of Cape Town with its backdrop of Table Mountain is an internationally renowned tourist icon. The Western Cape occupies a unique and different position with regard to the rest of South Africa. Its demographic structure is markedly different, both ethnically and socio-economically. Unskilled labour in the province generally enjoys higher wage rates and lower unemployment rates than their counterparts in other provinces. The Western Cape’s context with reference to the larger South Africa is shown in Figure 31.

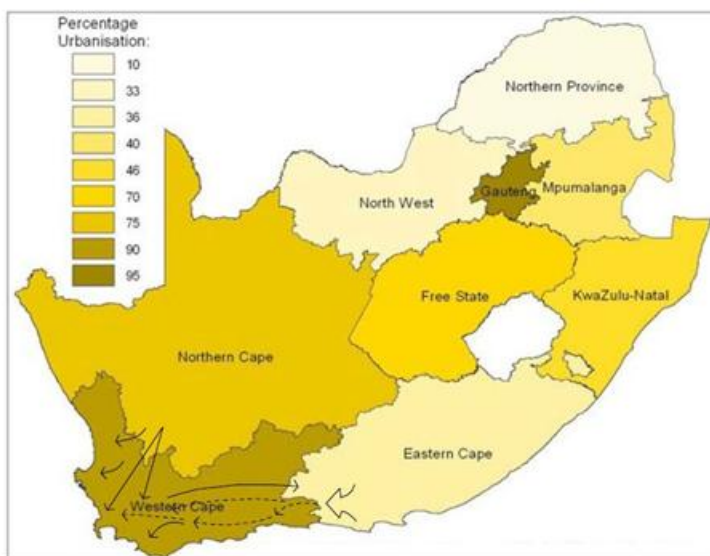


Figure 31: The Western Cape within of South Africa

Source: Western Cape Provincial SDF, 2005, ch8:7

The Western Cape lacks the strong mining component that dominates the economies of many other South African provinces. The provincial economy has four main productive sectors, namely agriculture, manufacturing, financial services and tourism. It is consequently not as vulnerable to international commodity price movements as provincial economies based on mining.

Although the Province is highly urbanised (>90%), the positive attributes outlined above resulted in this province having shown the second fastest provincial population increase over the period 1996-2001 after Gauteng. This is due in part to the province's proximity to the Eastern Cape, which is only about ±40% urbanised and which has close kinship ties particularly among the African population.

The province receives national migrants from across the income spectrum as well as a significant number from overseas visitors that are attracted by the climate and natural beauty, particularly in the coastal regions.

The city of Cape Town is the main destination of most migrants, but there are also significant flows to the Southern Cape region of Eden and Overberg District Municipalities and from Saldanha-Vredenburg.

These pressures highlight a number of constraints faced by the province at the national level. Particularly in the west, the province has been identified as the most susceptible region in the country to global climate change and is likely to experience an average decline in rainfall, more frequent droughts and greater volatility of climate-related events such as storms and flooding.

The major catchments area in this part of the province, the Berg River, has also reached capacity in terms of its yield. These factors point to the need for a provincial urbanisation strategy that highlights opportunities for population and economic growth in the parts of the province that have potential in this regard. One also needs to highlight the need to ensure that settlements in the province are structured in such a manner that they function as efficiently as possible, ideally with a decrease in the demand for resources (Western Cape Provincial SDF 2005, ch8:6).

4.2.3 Relationship with surrounding provinces

The Western Cape abuts two other Provinces, the Northern Cape and the Eastern Cape. (see figure 34)

These three provinces have close ties, particularly since they were part of the former Cape Province that had been in existence since 1910 and were all administered from Cape Town. In this sense, these provinces also have similar institutional and legal histories, particularly with regard to spatial planning, since they were all administered by the Land Use Planning Ordinance (LUPO).

The two adjoining provinces are quite diverse and also differ significantly from the Western Cape. The Northern Cape is for the most part an arid area with the exception of highly productive irrigation schemes along the Garriep River. Produce from this area is exported to Europe and elsewhere via the international airport in Upington. Kimberley used to be a major diamond producing area, but this industry is now in severe decline. Cape Town provides an attraction for migrants from this province which was the only one to experience a net population decrease over the period 1996 to 2001 however, these projections were relatively small; the Northern Cape's total population is only 800 000.

The Eastern Cape, in contrast, has a population of approximately 6 500 000. A large percentage of these people have been relocated during the forced removals era of the 1960s to 1980s. Although the Eastern Cape has experienced considerable investment, especially with the new port at Coega, its low urbanisation rate (only ±40%) coupled with low wages and a lack of formal sector jobs contribute to major population outflows to Gauteng and the Western Cape. There is a particularly strong relationship with the Western Cape – especially along language lines since Xhosa is widely spoken in both provinces and many Western Cape people have their ancestral homes in the Eastern Cape. The city of Cape Town has recently signed co-operation agreements with the city of Umtata and the Eastern Cape government in acknowledgement of this relationship (Western Cape Provincial SDF 2005, ch8:6).

The Western Cape is a province of considerable contrasts in terms of its natural, social and built environments. Starting with the natural environment and land form, the province's topography consists of a series of massive steps rising from:

- a long, rugged and scenically impressive coastline;
- to fertile coastal plains (the West Coast, Agulhas and the Southern Cape);
- to a spine of mountains, Franschhoekberg, Witzenberg and Cederberg to the north, and Riviersonderend, Outeniqua and the Swartberg mountains to the west (also containing narrow river valleys - Bitou, Hex, Breede, Gamkaskloof, Little Karoo and Longkloof) ;
- to a series of inland plains, Tankwa Karoo and the Great Karoo;
- to a second range of mountains; Bokkeveld, Roggeveld and Nuweveld;
- before flattening out to the great plains of the Northern Cape Province.

This series of mountain ranges, valleys and plains provides a backdrop for considerable variations in the pattern of economic and social activity in the province (Western Cape Provincial SDF 2005, ch7:32).

4.2.4 Hermanus

The town of Hermanus falls under the jurisdiction of the Overstrand Local Municipality (see figure 34) with its head office in the town of Hermanus. Over the past decade, Hermanus has established itself as the business and cultural heart of the Overstrand. Although it may have shed its sleepy holiday town image and currently boasts modern infrastructure, sophisticated specialty shops, shopping centres and restaurants to rival the best in the world, Hermanus has managed to retain the charm of its fishing village heritage (Overstrand Municipality, 2010:1). Hermanus is situated between sweeping mountains and the sparkling Atlantic Ocean and is only a short scenic 1½ hrs (140 km) drive from Cape Town.

The Overstrand Municipality accelerated the Hermanus CBD renewal project which included 12 areas that had been identified for development. This massive investment in infrastructure was projected to sustain the growth that Hermanus is experiencing for the future.

Hermanus has a provincial hospital which is rated as one of the best in the country, a world-class Medi-Clinic and six primary health-care clinics. Also, the Greater Hermanus area has four libraries situated in Hermanus at the Civic Centre, Mount Pleasant, Zwelihle and Hawston. The Hawston library also has a Library Business Corner as part of the Provincial Government's initiative to empower local communities to acquire basic skills. In addition, Hermanus has seven government schools of which three are high schools. There are also seven smaller private schools as well as numerous Educare Centres and preschools to choose from for the educational needs of the community. Finally, organisations like Hermanus Learn to Earn, Overstrand Training Institute and the Enlighten Education Trust offer a range of excellent training courses and skills development programmes for school leavers and adults wishing to improve their skills and employment opportunities (Overstrand Municipality 2010:1, 2).

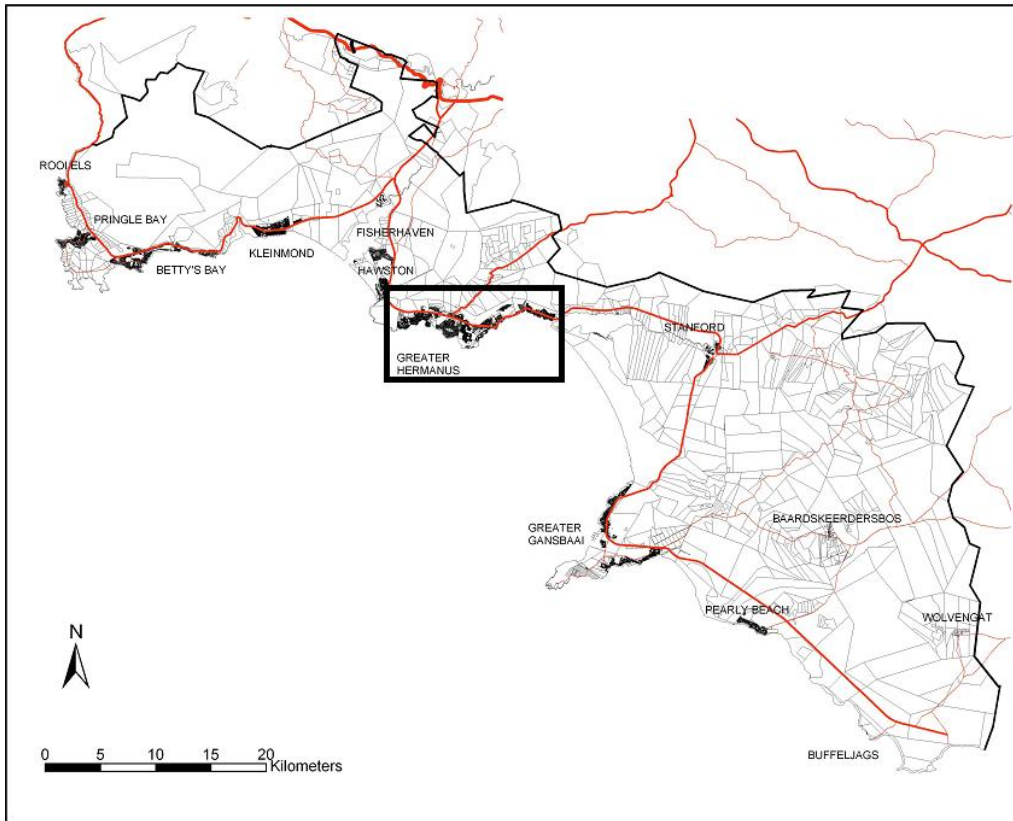


Figure 332: Indication of Greater Hermanus within the Overstrand Local Municipality

Source: Overstrand Municipality SDF 2006, Plan 2

4.2.4.1 Location

As illustrated in Figure 32, the Greater Hermanus lies along the shores of Walker Bay near the southernmost tip of Africa. The magnificent mountains of the Overberg towers over the town - home of the Southern Right Whale. The Brydes Whales can be found all year round. Whale enthusiasts and nature lovers from all over the world visit Hermanus to enjoy these magnificent creatures playing and frolicking from the best land based whale watching destination in the world.

Hermanus is known as the heart of the whale route. The popular cliff path stretches from the one side of the town to the other, about 12 km. An excellent walk and place for whale watchers to study and enjoy these amazing gigantic mammals and get within closer range than one can dream of.

Telescopes situated alongside the Old Harbour Museum makes it possible to survey the entire Walker Bay and the whales and dolphins at close range (Hermanus High 2011:1).

4.2.4.2 Economic profile

The Greater Hermanus area forms part of one of the Overberg local municipalities. This sub-region has an estimated population of 178 000 and a GRP of R2, 2bn (1997 estimates). Its economic base is reliant on the rich agricultural land of Caledon, Swellendam and Bredasdorp; tourism and related activities of the coastal zone (including Hermanus); and increased traffic along the N2 national road. Hermanus' GGP was R135 million in 1998 with the trade, catering, finance and real estate sectors being the main contributors.

The following growth forces were identified for the area:

- The economic base should be diversified from mainly a retirement, to a popular tourism destination.
- The area should act as a regional service town as it is located along a popular coastal route linking the smaller coastal towns.
- The property market is strong and growing with fast-appreciating property prices in the higher income categories (1997 estimates average between R100 000 and R800 000).
- The construction sector is healthy and prospering.
- Approximately 75 000 visitors are attracted by popular festivals such as the Whale Festival.

4.2.4.3 Demographic profile

With regard to the population, the area has an estimated population of around 30 000 (2000) living in the string of villages along the R43-road. The approximate growth rate for the population increased steadily from 3, 1% (1985-1992) to 7, 2% (1991 - 1996). The expected growth rate between 2000 and 2010 is 11%, as a result of the anticipated population increases in Zwelihle1 (Young, 2001:34)

. The key reason for this growth is the influx of people from rural areas after the 1994 elections.

4.2.4.4 Employment

It has been estimated that about 30 000 people live in the Greater Hermanus region. Building and construction is the largest employment provider, and fish processing plants and the local authority are also significant employers. The construction sector is fast-growing, thereby providing increased employment, although the market can be unstable. For example after the (2008-2009) recession. The construction sector took a great blow through the drastic decrease in property sales.

The fishing industry provides excellent opportunities owing to the export of abalone and kelp farming. The future of small-scale subsistence fisherman might become more secure because of quota allocations to development orientated organisations. This objective has, however, not materialised in Hermanus because unemployment has increased because of the quota system (Basson, 2003:41).

4.2.4.5 Unemployment

In 2001, unemployment in the Greater Hermanus area was estimated at 36%; with 25% Africans, 9% Coloureds and 2% of Whites being unemployed. The key reason for the unemployment figures in Hermanus can be found in the skills and education levels of the workforce. For example, a household survey in 1994 indicated that 64,4% of Africans and 42% of Coloured's in Hermanus have an education up to standard five (grade 7). This obviously exacerbates unemployment as low education levels mean one lacks the skills necessary to be gainfully employed (Basson, 2003: 44).

4.2.4.6 Tourism profile

The tourism sector is perceived as the fastest growing sector with the most important event being the annual Whale Festival, in the latter part of September. Tourist attractions in the Greater Hermanus area such as beaches and water sports ensure that Hermanus is a popular holiday destination. Furthermore, eco-tourism plays a part in the area's popularity as Hermanus forms part of the Fynbos Route and boasts a variety of coastal and mountain fynbos. This sustains a lucrative fresh-cut and dried flowers industry. The "Hemel-en-Aarde" Valley provides vineyards, flowers, fruit and wines in a sought-after setting.

Hermanus offers a concentration of tourist facilities and attracts large numbers of people during weekends and peak seasons. The town has an international profile which is strengthened by luxury developments such as the Arabella Estate (Basson, 2003:44-45).

To achieve the best possible goals Hermanus needs to:

- Prepare a sectoral plan (spatial development plan (SDP)) for urban development as part of the urban development strategy;
- Determine the unique characteristics of each settlement;
- Determine site-specific guidelines for each settlement;
- Conduct an urban edge study;
- Identify areas that need special attention;
- Formulate sustainable development objectives; and,
- Institute educational programmes to increase awareness.

(Western Cape Provincial SDF 2005, ch5:4).

4.2.4.7 Analysis and discussion

In conclusion, this background section has provided a profile of the Hermanus municipal area in order to provide a context for the study of this area.

The location of the municipality indicates that the town is situated on the coast along a popular route that links a number of smaller towns; it is also topographically located between the Overberg Mountains and the Atlantic Ocean. This topography compels the Town to develop in a linear fashion. The current research explores the way in which this development pattern is indicative of the need for transportation and development integration with a view to ensure the best possible development.

As can be seen in section that dealt with employment in the town, the main employers are in the construction and fish processing sector. It is proposed that directed development and integrated transportation aimed at improving economic growth can assist the tourism sector during the great influx of tourists during the whale season and also help to increase levels of employment.

4.2.5 Cape Town

The land area of Cape Town has almost doubled in size since the mid-1980s. In addition, the number of people in Cape Town is growing; in the next 15 years the city's population – already at 3.2 million – could reach 4.2 million people. Figure 33 shows the Cape Town metropolitan area.

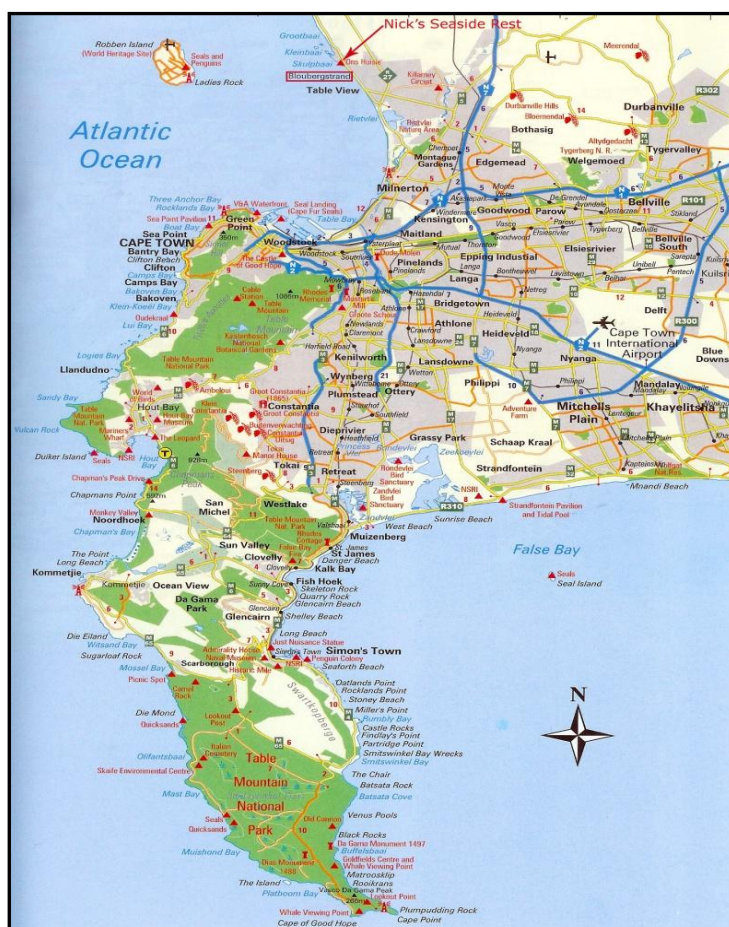


Figure 34: Cape Town metropolitan area

Source: Mappery, 2009:1

It is believed to be vital that economic growth continues, and that it does so in a way that creates and sustains jobs. However, this same vital growth means increased, and ongoing, demand for land, water, transportation and energy resources. It also means pressure on Cape Town's already threatened indigenous plant and animal life. Already the city is experiencing the effects of growth. Roads are congested, landfill sites are filling up, and the coastal water and air are polluted.

These changes affect the quality of life of everyone who lives here, and threaten many people's livelihoods. Add to this the fact that the Western Cape will probably be more affected by climate change than anywhere else in South Africa, and it is clear that the city needs to improve at planning for the future (City of Cape Town^a, 2009:1).

The city thus requires a safe and sustainable transportation system that promotes economic development whilst catering for all people and goods through universal design principles. This requires appropriate planning and management of the city's transportation system – these aspects are key themes of an integrated transportation plan (ITP)

Transportation is a vital element of any functional city because it allows people, goods and services to come together when and where needed. Transportation is often referred to as the lifeblood of any city and the various organs within the city cannot function without a transportation system that works. Transportation connects people with other people, and people with opportunities. However, transportation brings with it a number of undesirable side-effects regarding the economy, environment and society, such as:

- Congestion – This has significant social, financial and economic implications, resulting in two peak periods of nearly three hours each every weekday.
- Pollution – amongst which, according to the 2004 State of Cities report, is a 52.3% contribution to undesirable atmospheric pollutants.
- Accidents – That which have a severe social impact.

(City of Cape Town¹, 2009:1).

4.2.5.1 Spatial synthesis (see figure 34)

The City of Cape Town acts as a knuckle between the western and southern coastal plains. Originally a series of villages hugging the transition between the Cape Flats and the Peninsula mountains to the west (Simon's Town, Muizenberg, Wynberg, Claremont, Rondebosch, Mowbray, Woodstock and Cape Town itself), across to Paarl touching the Tygerberg to the north (Maitland, Goodwood, Bellville), and the Bottelary Hills and Helderberg to the east; (Kraaifontein, Somerset West, Strand) the city is now a sprawling low-density metropolis of almost 3 000 000 people who occupy most of the land between western and eastern mountains. The city is rapidly growing northwards up the West Coast.

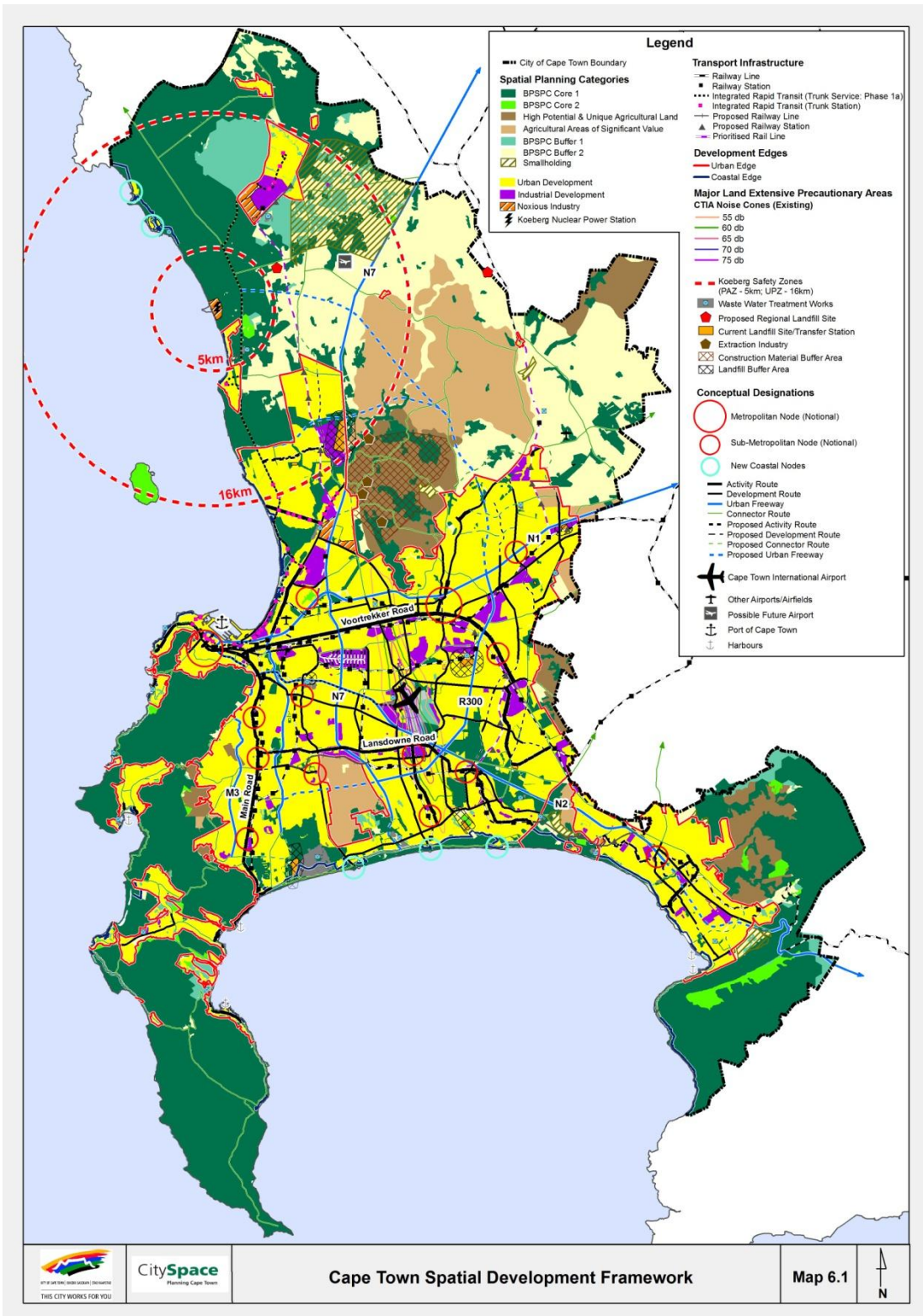


Figure 35: Spatial Synthesis of Cape Town

Source: Cape Town SDF, 2009: Map 6.1

It has been noted that the city is in danger of exceeding its water resources in particular, due to the inefficiencies created by large plot developments that require large amounts of water, and the use of treated water as a medium for carrying sewage to the treatment works. Water resources within the Berg river catchments are being used to full capacity and inter basin transfer is occurring from the Theewaterskloof catchments in the Overberg. Water restrictions have been placed on the City several times in the last few years.

Once the Berg Water project is completed, further opportunities to provide water by conventional means appear limited and desalination and water demand management at all scales will become unavoidable.

The situation is made worse by the South Western Cape’s vulnerability to global climate change which will see the region becoming drier than it already is. Due to its inefficient urban structure, the city consumes high levels of energy, particularly fuel for private motor vehicle and freight transportation. The need for transportation is further exacerbated by the conversion of agricultural land to urban use and the need to source agricultural produce further and further away.

While some aspects of the city’s social and economic development are less critical than others (for example, its Gini coefficient (see figure 35) is 0.5 indicating that it is less unequal than other districts with coefficients over 0.6; TB rates almost half as low), it also has one of the highest unemployment rates in the province, namely 29% and a similar level of absolute poverty, namely 27%.

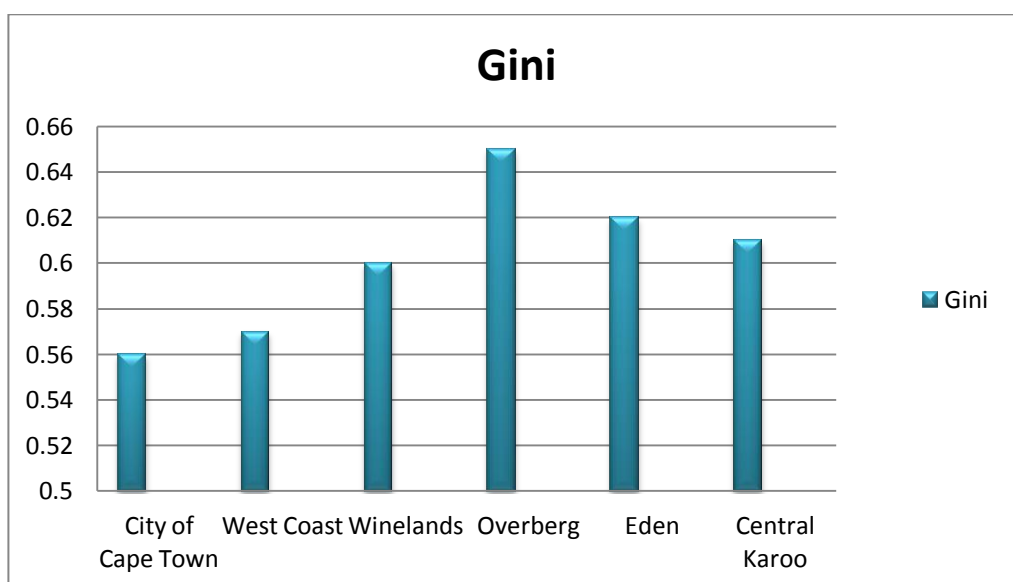


Figure 35: Income distribution

Source: Western Cape Provincial SDF2005, ch7:34

However, the unemployment rate may not be as bad as it seems if informal sector activities are included under this category. Other surveys (not Census) suggest there are approximately 100 000 domestic workers and 161 000 people in the informal sector in the province. Most of the province’ tertiary and secondary employment occurs in the city of Cape Town and trends in these sectors have a direct bearing on the city (see Figure 36 for the unemployment, dependency ratio and ultra poverty level comparisons between Cape Town and the other regions within the Western Cape). Generally there was a -3.2% average decline over the period 1999-2003 in secondary sector employment, particularly in wood products and manufacturing, clothing and textiles and food and beverages. There was also a 1.2 % growth in the tertiary sector, particularly in personal services (including domestic workers), 3.8%, business services (5.8%) and retail and wholesale trade (3.2%) (Western Cape Provincial SDF 2005, ch7:35-36).

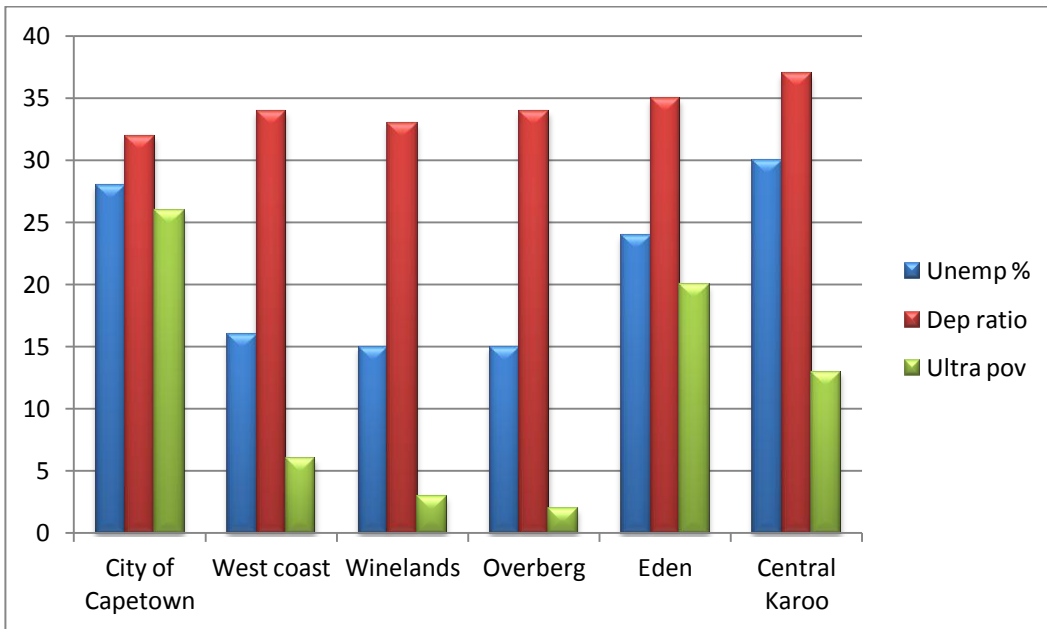


Figure 36: Unemployment, dependency ratio and ultra poverty levels

Source: Western Cape Provincial SDF2005, ch7:34

The map (Figure 37) of the economic geography of the city from a city planning document shows the economic patterns of the city. The area shaded light yellow the planners have labeled “market avoidance.” Here, joblessness and drug use are high, and many residents are living in substandard conditions (Goodspeed, 2007:1).

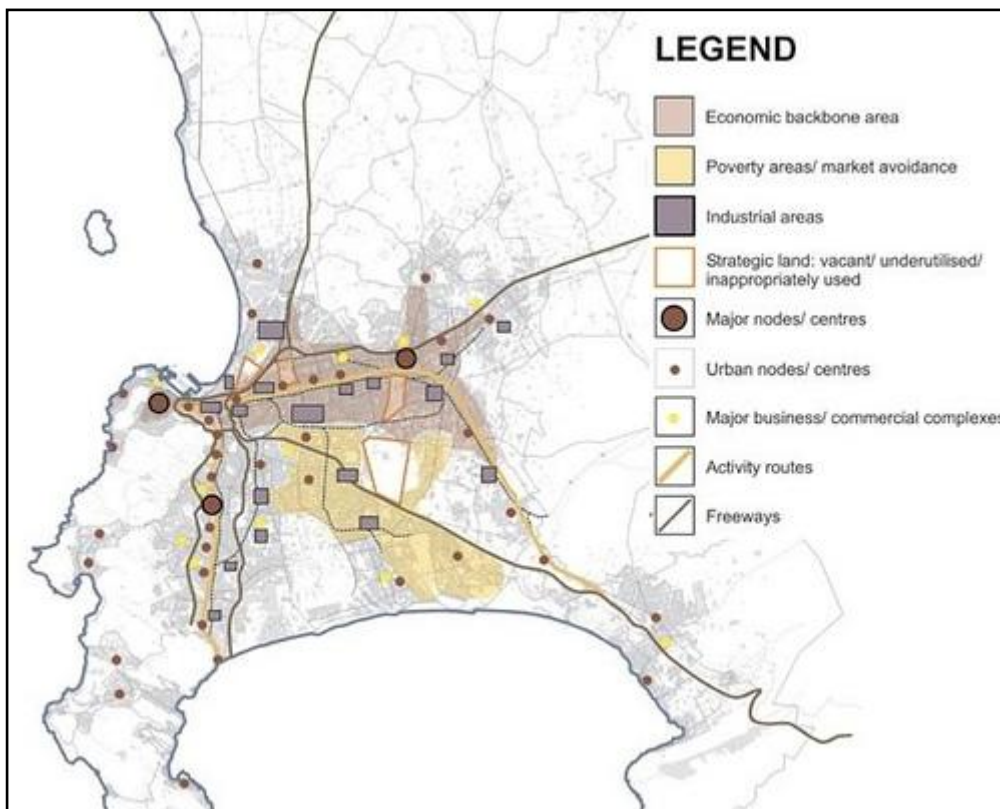


Figure 37: Economic patterns of the city of Cape Town

Source: Goodspeed, 2007:1

With the exception of domestic workers, most of these domestic occupations require high levels of skills and education. The informal sector employment grew 3.5% during this period.

Furthermore, although the City of Cape Town is predominantly urban it also contains significant agricultural and biodiversity resources within its boundaries. These should be retained and the city has identified an urban edge aimed at protecting these resources. Although not statutory, this urban edge is currently having a major policy impact (Western Cape Provincial SDF 2005, ch7:35-36).

➤ Locational analysis

In this section of the spatial synthesis, the spatial context of Cape Town was discussed with a view to provide a measure of perspective regarding empirical study of Cape Town. From the graphs illustrating the Gini and the unemployment, dependency ration and ultra poverty levels, one can gain a measure of insight regarding how Cape Town compares with other regions in the Western Cape. The economical and social development levels are not at critical levels, and this points to good economic growth and may indicate a good level of integration between development and transportation.

From the graph (Figure 36) that outlines of the unemployment, dependency ration and ultra poverty levels there seems to be high rates of unemployment in the city of Cape Town. By means of an improvement in transportation through multi-modal transportation as well as improved integration of development and transportation, one could imagine sound economic growth in Cape Town. This will lead to more sustainable development that will, in turn, cause a decrease in unemployment.

4.2.5.2 Economic growth

Economic growth and the creation of jobs are what the people of Cape Town need most. The city strives to provide the best environment for the economy to grow. This means making it cheaper and easier to do business by facilitating easy and regular interaction between business and the city; promoting new partnerships with the private sector, especially in tourism; and assisting small and medium enterprises. A vital part of improving the business environment will be the investments that the city intends to make in transportation (particularly public transportation) and municipal infrastructure. The city is also aiming towards free and low-cost internet supported by the development of a metropolitan wide area network, which could be wireless enabled.

4.2.5.3 Municipal services

It is the city's prime responsibility to provide services to residents, including water, sewerage, waste disposal and electricity. A small percentage of the city's growing population does not have access to basic services. While the city has almost doubled in size over the past 20 years, the provision of new infrastructure has not kept up with growth. Much of the city's older infrastructure is also in need of urgent replacement. Furthermore, increased emphasis on maintenance is a priority. However, not all the infrastructure requirements can be met at once and the city plans to introduce various ways of promoting the sparing use of scarce resources such as water and electricity.

4.2.5.4 Good governance

One of the most important aims of the five-year planning period is to improve the efficiency of the city's administration. This means getting the right people – particularly engineers and project managers – to the right place in the organisation and improving the service culture and work ethic. It also means reforming the way a number of things are done.

The city is, for example, exploring alternative ways of delivering municipal services. It is also exploring ways to improve management of key financial areas such as income control, cash flow, asset and risk management and support for the indigent (Cape Town Five Year Plan, 2011:2).

4.2.5.5 Public transportation

Improving public transportation is one of the city's priorities in its five-year plan. However, the ultimate aim is much larger: to create a transportation legacy that will serve Cape Town into the future.

In order to improve and promote public transportation, the city plans large-scale investment in public transportation infrastructure; also, a plan for the city is in the final stages of production.

With a view to reduce congestion, existing public transportation priority lanes will be enforced and new ones introduced.

4.2.5.6 Integrated human settlements

The city faces many housing challenges. Some 350 000 families do not have adequate shelter and the housing backlog is growing annually. Over the next five years, the city aims to steadily step up access to shelter by providing incremental housing, starting with the provision of adequate services. A programme aimed at providing basic services to informal settlements will be implemented. The development of an integrated human settlement plan includes not just houses, but all community facilities such as cemeteries, sports facilities and libraries.

4.2.5.7 Safety and security

Crime threatens the well-being of citizens and the city's ability to attract and retain investment. The city aims to make its contribution to preventing crime by improving its performance in traffic policing, by-law enforcement and general law enforcement. High prominence is given to the upgrade of fire services. The city also plans to expand the CCTV network covering key shopping, business and transportation locations and crime hotspots.

4.2.5.8 Health and social development

Large parts of Cape Town are witness to chronic social problems from drug abuse and gangsterism to high infection rates of HIV/Aids, sexually transmitted infections and Tuberculosis. The city collaborates with other spheres of government in promoting health and social development. Also, the city is responsible for air quality management and pollution control, including noise pollution (Cape Town Five Year Plan, 2011:3).

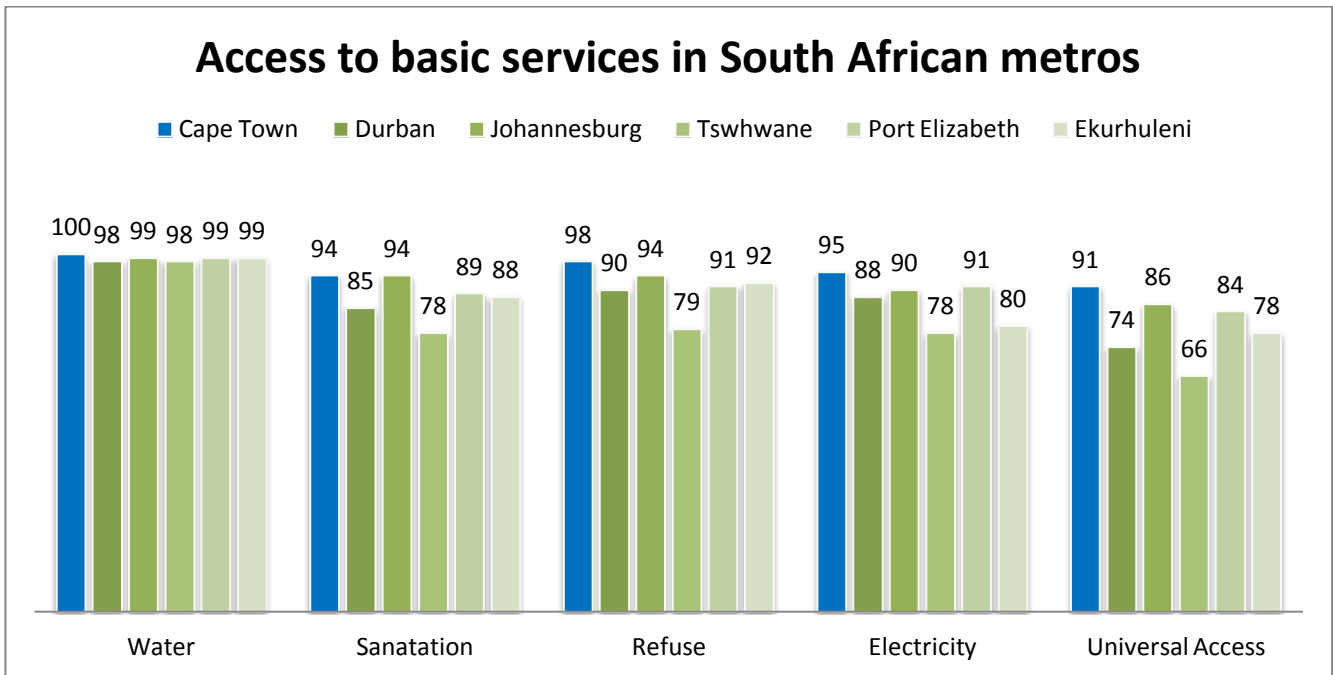


Figure38: Access to basic services in South Africa metros

Source: Department of Cooperative Governance 2009, (adapted)

4.2.5.9 Major projects for the five-year plan

- Roads

Spending on roads is a priority in the Cape Town municipal budget and a large number of projects pertaining to this priority are planned to spread over several years. These include more maintenance on roads as well as the construction or large-scale upgrading of certain key roads.

For example, the Strandfontein road is to be upgraded at a cost of R70 million to facilitate access in and out of the new housing development at Pelican Park.

- Sewerage or wastewater treatment

Cape Town’s sewerage infrastructure has not been expanded despite the large growth of the city over the past 20 years. The city’s waste-water treatment works are consequently under stress and this, in turn, threatens its greatest asset – the natural environment. It also constrains development and economic growth. A sum of R285 million over three years has been budgeted for upgrading six of the city’s sewerage works (Cape Town Five Year Plan, 2011:7).

- Electrical infrastructure

There is an urgent need to upgrade facilities that are involved in the distribution of electricity, such as sub-stations, transmission lines and switching stations. Three areas have been prioritised for the first cycle: the city business district, Roggebaai and Green Point. Other areas will follow according to the infrastructure upgrade programme.

- Transportation

The upgrading of public transportation facilities feature prominently in the five-year plan. Apart from the large investment (R1.9bn) by all three spheres of government in transportation, the City also plans to invest money in some of the busiest “corridors” or routes to promote frequent public transportation, even during non-peak periods such as weekends. The dedication of certain lanes as public transportation lanes will be enforced to promote the use of public transportation and to improve its efficiency (Cape Town Five Year Plan, 2011:7).

- **Emergency services**

Cape Town's emergency services, especially its fire-fighters, play a critical role in protecting both lives and the natural environment. The city needs to almost double its fire-fighting capacity – from 700 to 1300 staff – in order to provide a proper service. Emergency services are also to receive an additional R22 million for staffing and R44 million for operational expenditure (Cape Town Five Year Plan, 2011:7).

- **Staffing**

In order to meet all the requirements set out in the five-year plan, Cape Town needs more skilled staff, especially more engineers and project managers. Without them, the city will find it difficult to meet its targets in housing and in the maintenance and building of infrastructure. Additional funding has been set aside for staffing.

- **Infrastructure asset management**

This year, the city plans to put in place a planned maintenance program for infrastructure like roads, electricity and water. Preventative maintenance will save the city costs in the long term.

This is because when maintenance is neglected, infrastructure like pipes, pumps and sub-stations end up having to be completely replaced. The city wants to avoid this happening in the future.

- **Metropolitan police plan**

The City is developing an operational plan so that together with other law enforcement agencies, the police can co-ordinate with enforcement and build a safer city (Cape Town Five Year Plan, 2011:7).

This SWOT analysis (Figure 39) shows the strengths, weaknesses, opportunities and threats of the major projects of the Cape Town five year development plans. This analysis was performed with reference to the research question of the current study. The strengths and weaknesses are applicable to the internal factors of these plans and the opportunities and threats are applicable to the external factors from outside of the plans.

From this analysis it can be seen that the projects will encourage the integration of transportation planning and spatial planning instruments in order to greatly improve the chance of success.

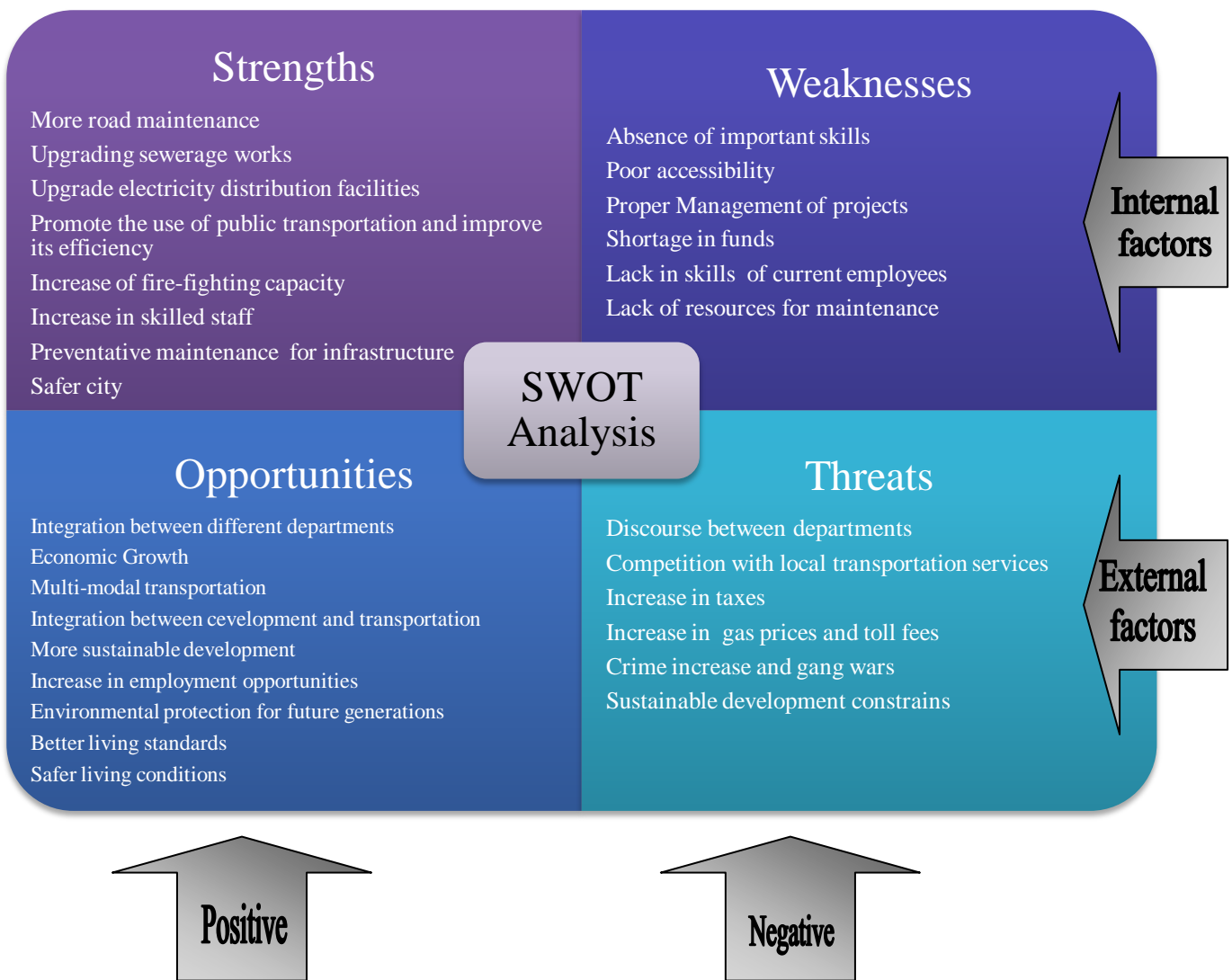


Figure 39: Swot analysis of the Cape Town five-year plan projects

Source: Own construction adapted from Cape Town five-year plan projects, 2012

4.2.6 Eden District

The Eden district municipality is situated on the south–eastern coast of the Western Cape Province (see figure 41). It is the third largest district in the Western Cape and shares borders with four other district municipalities: Cape Wine-lands, Overberg, Central Karoo in the Western Cape and Cacadu District Municipality situated in the Eastern Cape (Eden District Municipality IDP, 2011:39).

The Eden District Municipality is undoubtedly one of the most scenic and relatively well-resourced regions in South Africa. The Eden District includes seven other local municipalities, as well as the District Management Area, which includes towns such as Uniondale.

The Eden District is situated on of the Garden Route and Klein Karoo regions of the Western Cape Province (Eden District Municipality, 2007:1).

The Eden DM contains the following seven local municipalities (shown in Figure 40 and illustrated in Figure 41):



Figure 40: Spider representation of the Eden District Municipality and its local municipalities

Source: Own construction, 2011

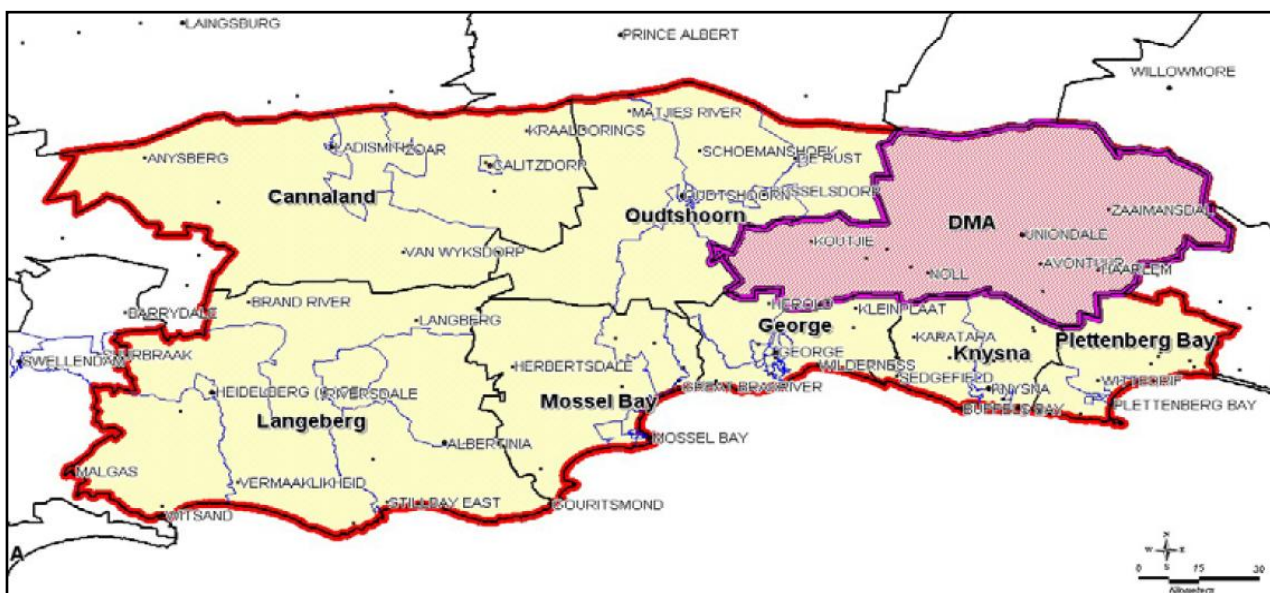


Figure 41: Boundaries of the seven local municipalities in EDM

Source: Eden District Municipality IDP, 2011:85

The Eden District Municipality (EDM) has important and clearly circumscribed roles, which can be captured through the following three statements:

- The EDM has to look after the overall social and economic development of the district, in competition as well as interaction with other districts, and it has to initiate ways in which this regional development can be accelerated.
- In doing this, the EDM has to help the different local municipalities to achieve their goals in the broader context of the region.
- The EDM has to facilitate the mobilisation of resources needed to develop and maintain the region's infrastructure and any catalytic projects or larger development initiatives

(Eden District Municipality, 2007:40).

High rainfall and dense indigenous forest areas characterise the coastal area of the region, while the Klein Karoo offers the typical succulent vegetation of dry Karoo landscapes. Geographically speaking, the Outeniqua mountain range creates a physical divide between the Klein Karoo and the Southern Cape. This not only results in different climates, but also different economic activities, tourism opportunities, demographic trends and service delivery challenges in the local municipalities. On both sides of the mountain range, however, the environment is rich in unique ecosystems, making conservation and sustainable development imperative.

As is the case with most municipalities in South Africa, Eden is faced with the challenge of addressing issues of unemployment and poverty. So far, the district is marred with uncoordinated economic strategies, which cause further marginalisation of those in the so-called second economy. Linked to the issue of unemployment is the lack of a workable poverty eradication and job creation strategy.

In the Eden area, local municipalities find it difficult to provide bulk infrastructure. This is caused by a lack of financial resources at local level as well as a lack of strategic and meaningful support from the provincial and national government. Furthermore, there is no holistic and/or clear-cut approach to environmental issues. Given the sensitivity of the environment, one would expect the district to have a strategic approach to the environment.

According to the Census 2001 (Statistics South Africa) the population for Eden District Municipality was approximately 455 000. When compared with the 1996 results, an increase of 19.39% is evident. The district is predominantly urban with increased urbanisation having taken place between the above-mentioned two census periods (Eden District Municipality integrated development plan, 2007-2011:7- 11)

4.2.6.1 Economy

From the employment breakdown, it is clear that agriculture and tourism are the two largest sectors (excluding the category "social, personal and community services" which includes a wide range of subsectors). The contribution of agriculture is even higher if one were to take into account the processing of agricultural products (which falls within the sphere of manufacturing), the trade in agricultural commodities and even aspects such as agri-tourism (falling under the sphere of tourism). This accounts for the relatively high share of agriculture-related economic activities in the Southern Cape economy (up to 25%).

Eden is described as one of the province's two "growth motors" in the Draft Western Cape Provincial Growth and Development Strategy (PGDS) published as a Green Paper for comments in Provincial *Gazette* 6385 dated 4 October 2006 (PN 306/2006). The Southern Cape growth node has a relatively well-diversified economy with some significant industrial activity in George and strong tourism and construction sectors. The latter's growth is driven by the construction of golf estates and other large projects related to tourism (Eden District Municipality integrated development plan, 2007-2011:12).

4.2.6.2 Environment

The EDM State of the Environment Report (2007) that was drafted during the preparation of the 2006/2007 IDP, together with the spatial development framework for Eden and the IDPs of the Eden District Municipality and the various local municipalities confirm the following (Figure 42):

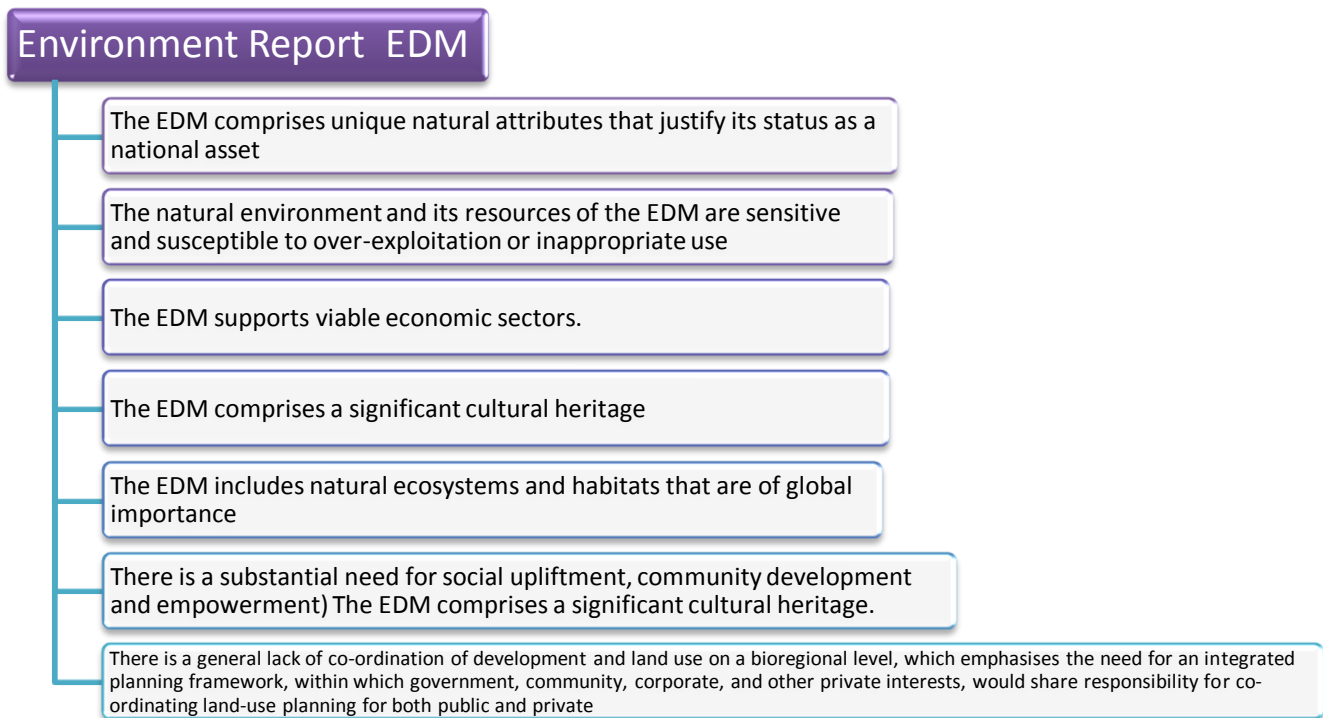


Figure 42: Environmental concerns for EDM

Source: Eden District Municipality IDP 2007-2011:19

In order to address these and many other environmental concerns, the adoption and implementation of bio-regional planning principles, sustainable development planning principles (in lieu of the impending adoption of a sustainable development implementation plan for the Western Cape) and Local Agenda 21 programmes are and should be incorporated into this region's development strategies (Eden District Municipality Integrated Development Plan, 2007-2011:19-20).

The concerns regarding environmental management within the Eden District Municipality (EDM) gave rise to the proposed implementation of a more comprehensive and integrated planning system with a view to ensure a more sustainable development implementation plan. This proposal incorporates the integration between transportation planning and sustainability planning instruments.

4.2.6.3 Government

The Inter-Governmental Relations Act (Act of 2005) was promulgated on 15 October 2005 by Parliament. On 6 September 2005, the Eden District Municipality was the first district municipality in the Western Cape to respond to the directives of the Act by bringing its district inter-governmental forum (DIF) together.

Some of the key challenges identified during the first two DIF meetings include, amongst others the need for Eden DM to fulfil its role as district coordinator; the need to strengthen and develop participation and social dialogue forums; the need to address participation gaps amongst government partners; the need to ensure that integrated development planning becomes mainstreamed in all municipalities; the formulation of delivery-focused programmes and projects to ensure a link to the municipal budget (MTEF); the need to strengthen "Inter-

Governmental” relations and alignment between the district and local municipalities, province as well as national government departments (Eden District Municipality Integrated Development Plan, 2007-2011:23).

4.2.6.4 Strategic development in Eden

There are six strategic objectives to guide Eden in the shift towards its new responsibilities. Each strategic objective is explicitly linked to “development clusters”, which are clusters of the municipality’s departments or sub-units of departments. The “focus areas” and “strategic initiatives” which are the strategic actions and interventions of the municipality are then defined for each development cluster.

Table 16 illustrates the strategic objectives of good governance, economy, social environment, human and social capital, service and infrastructure and environment and their relevant focuses and development clusters.

It is proposed that the objectives must be linked to the following key performance areas:

- Basic services and infrastructure
- Financial viability and management
- Institutional transformation and management
- Local economic development, and
- Good governance and public participation

(Eden District Municipality 2007/2011:31).

Table 16: Strategic objectives, development and focus areas

STRATEGIC OBJECTIVES	DEVELOPMENT CLUSTER	FOCUS AREAS, STRATEGIC INITIATIVES (ACTIVITIES)
Good governance through institutional transformation, inter governmental co-operation and public consultation to ensure accountability	Governance and institutional development	HRD strategy implementation, local government skills development, institutionalization of participation structures, development of a customer care strategy, implementation of transformation management strategy, IDP reviews
	Finance and resource mobilisation	Implementation of financial management and planning reforms, performance management system, IT system integration, land asset system (property management), indigent policy implementation
Develop appropriate regional economy that ensures shared prosperity and sustainability	Economic and tourism development	Tourism help desk and marketing, tourism route development, resorts Regional LED strategy development, land reform program, small business development. Other sector development: agriculture, cultural industries Skills development (aimed at citizens)
Create an enabling social environment , that ensures safe, healthy and vibrant communities that participate actively in Eden	Community, social and human capital development	HIV/AIDS forum establishment and development of plan. Formulation of inter-governmental poverty eradication strategy. Development of early childhood facilities

Develop human and social capital by investing in women and youth development		Development of disaster management Plan Development of environmental health strategy; “clean-up” projects Running of the DMA
Ensure effective and affordable service and infrastructure delivery in Eden to meet the needs of the people	Infrastructure, public works and transportation	Formulation of regional bulk infrastructure audit and planning including water and storm water treatment. Infrastructure projects in municipalities and VIP toilets on farms. Upgrading of resorts Development of integrated waste management system EPWP strategy Development of a regional integrated public transportation plan Maintenance of roads (planning)
Sustain Eden’s environment through resource conservation, good land use practices and people centred planning	Environmental management and spatial development and planning	Integrated environmental management – includes development control, and environmental health services. Spatial development and planning: including a land audit, growth potential study, SDF, town planning in DMA Land reform, rural development and integrated settlement: rural skills development, greening in towns, rural development strategy formulation

Source: Eden District Municipality integrated development plan 2007-2011: 32

This SWOT analysis (Figure 43) shows the strengths, weaknesses, opportunities and threats of Eden’s strategic development strategies and focus areas. This analysis was conducted with reference to the research question of the study. The strengths and weaknesses are applicable to the internal factors of these strategic objectives and the opportunities and threats are applicable to the external factors from outside of the strategic objectives.

From this analysis, it can be seen that implementing strategies and objectives of the development clusters will encourage the integration of transportation planning and spatial planning/development instruments. This improved integration will lead to many employment opportunities being created and the integration will also improve economic growth and the living standards of the communities.

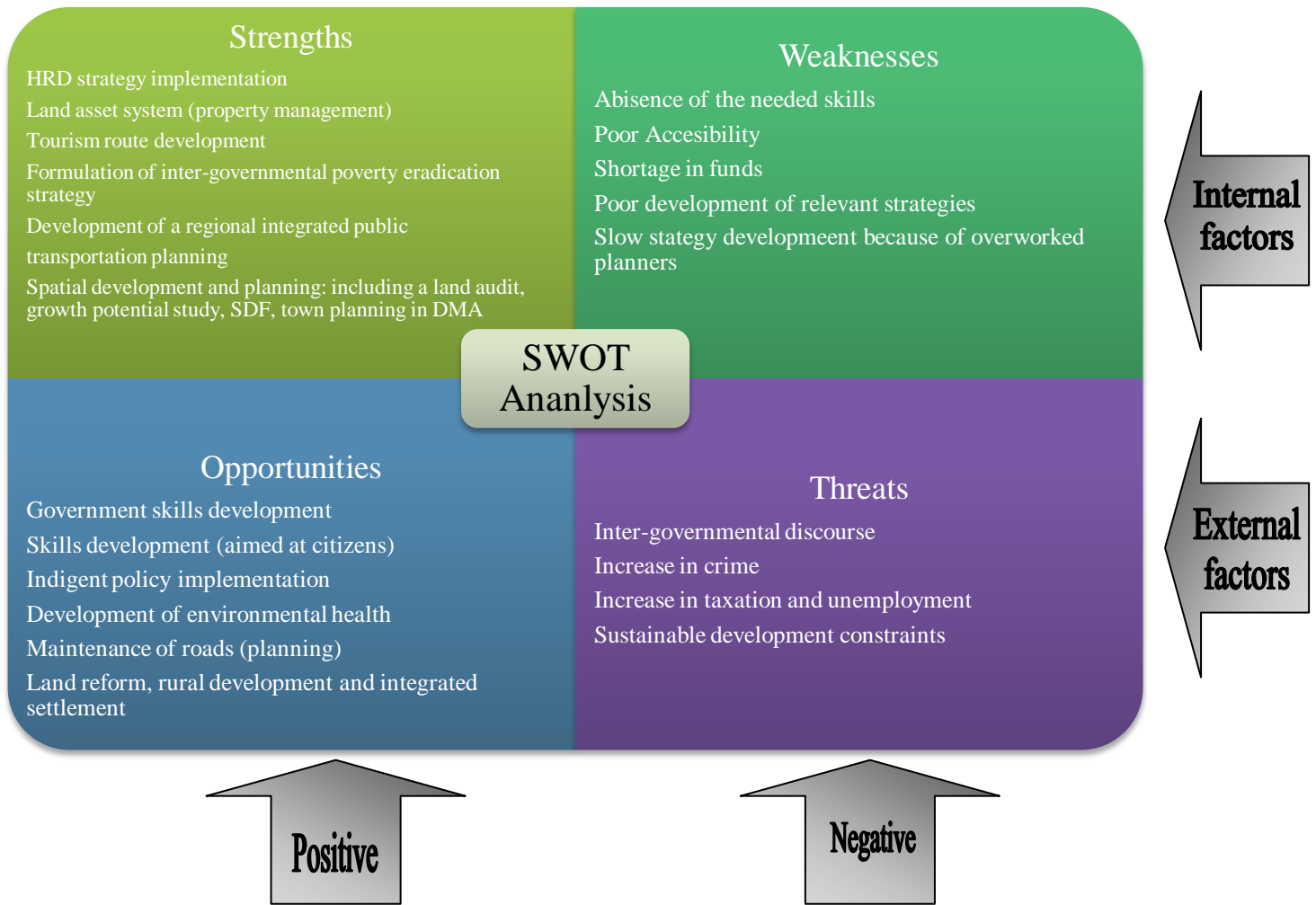


Figure 36: SWOT analysis of the EDM strategic development

Source: Own construction adapted from Table 16, 2012

4.3 Overstrand ITP and SDF with relevance to Hermanus

Because Hermanus is part of the Overstrand Local Municipality, which is a subsection of the greater Overberg District Municipality, there is no specific ITP for the town of Hermanus.

For purposes of the current research regarding the integration of the ITP and SDF, Overstrand documents will be used with reference to Hermanus

It should be noted that the Hermanus area, for the purpose of this research, include the urban area from Fisherhaven in the west to the Kleinrivier mouth in the east. The greater Hermanus is illustrated in Figure 44 below.



Figure 37: Greater Hermanus

Source: OLM, integrated transportation plan, 2010:28

4.3.6 Sub-sections or suburbs of Hermanus

- Chanteclair - above Onrus, between the mountain and the main road and Glen Fruin at the foot of the Hemel en Aarde Valley are new developments.
- Sandbaai - situated on the coast at the entrance to the Hemel-en-Aarde Valley. It is the most recently developed residential area of Greater Hermanus. Most of the roads are gravel lined with an eclectic range of homes. There is a pretty even mix of holiday homes and permanent residences with permanent residents being, in the main, families with young children. The Sandbaai beach provides safe swimming at low tide and is dotted with rock pools and coves. It is a popular snorkelling spot and there are cloakrooms and showers.
- The Hemel-en-Aarde Village - is situated behind Sandbaai and has a variety of shops - farm stalls with delectable home-made items, restaurants, ceramic studios, galleries, jewellers, wineries, nurseries and more. It is the first stop on the Hermanus Wine Wander up the serene Hemel-en-Aarde valley. This valley between the Babilonstoring Mountains and the Kleinriviersberg was not always the propitious place it is today. In 1817 Moravian missionaries established South Africa's first leper colony in the valley. It was also the country's first specialised public health institution and operated until 1845 when all the lepers were sent to Robben Island. The Hemel-en-Aarde development with its high wall all around has already earned the nickname of "Small China".
- Zwelihle - designated a 'black' area by the former government is a residential area that consists of shacks in the main. Slowly, proper housing is being built to accommodate the residents and residents are empowering themselves by starting their own small businesses.

- Mount Pleasant, another area formerly classified as "coloured", is located at the western entrance to Hermanus. One of the smaller suburbs of Hermanus, it has recently been infused with colour by Operation Preen, a community collaboration to clean and paint the houses in the area.
- Sprawled around the central business district are the older, tree-lined suburbs of Northcliff (close to the schools), Westcliff (a sunny part of town) and Eastcliff (close to golf course) with the more recent developments of Hermanus Heights behind the golf course and prestigious Fernkloof below the Nature Reserve.
- The easternmost part of Hermanus, at the foot of the Kleinriviersberg which stretches to Stanford, is the residential area of Voëlklip. This is where beaches are dotted in coves along the shoreline culminating in the long Grotto beach, which stretches out to meet the magnificent lagoon at the mouth of the Klein Rivier. On the opposite bank lies of the lagoon lies Die Plaat, part of the Walker Bay Nature Reserve, 12 km of unspoilt beach that goes all the way to De Kelders.

(Hermanus Riviera of the South, 2011:1, 2).

The development patterns (or the distribution of urban nodes) are located in a linear development pattern along the coastline. The town presents mostly in a nodal and corridor development pattern.

Some of the key issues in terms of policies pertain to the promotion a of a sustainable development pattern which could promote the comparative growth potential of the urban nodes within a well-defined hierarchy and recognise the need for limited development in areas outside the current core urban development. In line with the policy statements, it is of paramount importance that special land use management guidelines and regulations should be compiled for the protection of the environment and rural character of the Greater Hermanus.

Some of these proposed guidelines include the promotion of public investment that focus on local properties that are linked to the town's advantages. Such an investment should entail that properties are upgraded with a view to improve the quality of life of low-income residents. In general, a balanced development approach should be followed to ensure that some of the urban nodes do not develop at the expense of other nodes; this may cause a uneven development pattern.

These development guidelines are applicable to the need for integration with transportation planning to ensure the best possible sustainable development. Because of the corridor and nodal structure development pattern of the town, a transport-orientated development is recommended. The integration of transportation planning with development of a more flowing movement system can be implemented.

Below is an overview of Hermanus' ITP and SDF and a discussion of these with reference to the research question, literature and the policy and legislation.

4.4 Hermanus' integrated transportation plans

One of the most outstanding features of this area is its breathtaking natural beauty. The area includes the Kogelberg Biosphere Reserve, which is one of only two such areas currently in South Africa. This region is regarded as the heart of the Cape floral kingdom as approximately one fifth of all known fynbos species occur here. Hermanus is the administrative and economic centre of the area. The rest of the municipal area is rural with some fishing and service industries (OLM integrated transportation plan 2010, ch1:1).

Figure 45 shows the location of the Overstrand Local Municipality in relation to the District Municipality as well as the location of Hermanus within the Overstrand Municipality.



Figure 45: Location of Overstrand Municipality in Relation to the District Municipality

Source: OLM, integrated transportation plan, 2010, ch1: 2

➤ Vision

The vision of the Overstrand Local Municipality is:

“To be a centre of excellence for the community”

(OLM, integrated transportation plan, 2010, ch1, p. 4)

4.4.6 Transportation

Roads problems in Hermanus include the following:

- The Hermanus CBD Relief Road construction works have started;
- The R43 between Sandbaai and Hermanus;
- The R320 between Hermanus and Caledon – surfacing of the gravel portion of the road and rehabilitating the rest of the road;
- Hermanus Parallel Road. This proposed route will allow the communities of Vermont, Onrus, Sandbaai, Zwelihle and Mount Pleasant access to the Hermanus CDB without using the provincial road;
- Hermanus by-pass road. This a long-term provincial project to create a by-pass road around Hermanus.

Parking is a major problem in the Hermanus area. A five-year programme has been developed to address this situation. The distribution of traffic on surfaced and un-surfaced roads is such that the majority of vehicle kilometres are travelled on surfaced roads. Congestion often occurs along the R43 provincial road in Greater Hermanus. This causes major problems during the morning and evening peak periods and all day during the tourist periods. Furthermore, because of the many narrow roads in the urban areas, the movement of freight contributes significantly to the congestion in the area.

In addition, the Overstrand Municipality has no subsidised public transportation services; public transportation is provided by privately operated minibus taxis. A number of school bus contracts are in operation in the region. Details of the operations are presented in the 2009 Current Public Transportation Record, which forms part of the Overberg District Municipality integrated transportation plan (OLM, integrated transportation plan, 2010, ch2: 8-11).

There is a railway station in Hermanus, but there are no railway lines in the area. Although there is not a public airport, helicopters land in the Hermanus area for law enforcement purposes, medical emergencies, fire-fighting and sea rescue services. It is proposed that in the future these services must be consolidated into a single landing facility. There are two large harbours at Hermanus and Gansbaai. These are the responsibility of the National Department of Transportation and Public Works.

There is a cycle lane in both directions along R43 (Main Road) from Voëlklip to Eastcliff and also along the Onrus Main Road from Kidbrooke to Onrus CBD. There are no facilities on rural roads for non-motorised transportation. People mainly use the road shoulders; this poses a danger as many motorists travel at high speeds on these roads (OLM, integrated transportation plan, 2010, ch2:14).

4.4.7 Needs assessment

An overview of the transportation available within the Greater Hermanus area suggests that there seems to be a need for the assessment of the community transportation needs. This assessment gave rise to the local integrated transportation plan update process.

The outcomes of the local integrated transportation plan update process, which included a public consultation process, are to these guidelines for development of projects, programmes and priorities. A summary of the needs and strategies are reflected in Table 17.

Table 17: Analysis of *status quo*

Needs	Strategy	Project
Road improvement and maintenance	Development and proper maintenance of the road network	Rehabilitation and maintenance of urban streets
Need to provide non-motorised transportation facilities	Effective and efficient planning for and management of funding for infrastructure development in the Overstrand Area	
Need to provide adequate parking facilities		
Provision of economical, safe and affordable public transportation facilities	Promotion of public transportation	Rehabilitation and maintenance of public transportation facilities
Management of public and tourist transportation services	Planning and co-ordination of public transportation service with Overberg Tourism: tourism development strategy and Overstrand destination marketing organisation	None
Provision of transportation to basic facilities like police, hospital and schools	Effective and efficient planning for and management of funding for infrastructure development in the Overstrand Area	None

Source: OLM, integrated transportation plan, 2010, ch3:21

This assessment of the needs of the community and the generation of strategies for implementation may ensure that the community's needs are addressed, but the lack of integration with other departments and with the spatial planning/development instruments points to the need for the comprehensive generation of strategies.

4.4.8 Improvement proposals

The focus of the municipality has been on road maintenance and improvement matters, with attention also directed towards non-motorised transportation interventions within the towns. However, the local municipality is not in a position to significantly influence public transportation operations or freight movement within the municipality. These matters are dealt with at the district municipality level. Overstrand Municipality has identified the following projects (shown in Table 18) as being of most benefit to the Hermanus community (OLM, integrated transportation plan, 2010, ch4:17).

Table 18: Overstrand Local Municipality transportation projects

Project description	Progress
Road signs and markings by Traffic Department and operational managers	Ongoing
Roads surfacing programme	Ongoing
R43/Vermont Ave. For safety reasons. Provincial project. Planning/environmental study under way.	Construct 2011
R43/Kidbrooke. For safety and capacity reasons. Provincial project. Planning/environmental study under way	Construct 2011

Project description	Progress
Hermanus Station site phase I, 650 parking bays	Under construction
Hermanus Station site phase II, 300 parking bays	2011/12
Hermanus CBD, 300 bays in multi storey parking garage	Planning
Ensure that all road traffic signs along routes have a minimum clearance height of 2.1 meters	Ongoing
Reserve adequate disabled parking bays in areas with high economic or tourist activity	Ongoing
Disabled-friendly access to transportation infrastructure	Ongoing
Redevelop Zwelihle Public Transportation Facility	Under construction
Redevelop Hermanus CBD public transportation facility	Planned for 2011/12
Shelters on Sandbaai/Hermanus link road	To be done with the road upgrade
Expansion of cycle lanes	Planning
As per road maintenance programme	Ongoing
Hermanus CBD relief road	Under construction
Mimosa and Mountain Drive Link	2010
Hermanus Parallel Road	2010 to 2016
Hermanus to Caledon (R320). Provincial project. Upgrade and safety improvements (Hemel en Aarde Road)	2010
Doubling of R43 Sandbaai to Hermanus. Provincial project.	2011/2012
Hermanus by-pass. Provincial project.	Long Term

Source: Amended by author OLM, *Integrated Transportation Plan, 2010*, ch4, pp. 17-19

These projects show the steps that the municipality is taking with a view to ensure the best possible transportation for the community. However, as can be concluded from the out of the information above, there remains a lack of integration between spatial planning/ development and the ITP necessary for a more comprehensive decision-making solutions and strategy.

4.5 Hermanus spatial development framework

The spatial development framework (SDF) planning process was initiated by the Overstrand Municipality as a result of statutory requirements and the need for an overall strategic plan to manage growth and conservation issues within the Municipal area.

The objective of the spatial development framework (SDF) is to formulate strategic spatially based policy guidelines and proposals by means of which changes, needs and growth in the area can be managed to the benefit of the environment and its inhabitants (Overstrand Municipal Wide SDF, 2006, ch1:1).

“Sustainable development” is generally defined as ‘development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs’. In this context, sustainable development relates to balancing three interlinked factors, namely human well-being, economic efficiency and environmental integrity (Overstrand Municipal Wide SDF, 2006, ch2:5).

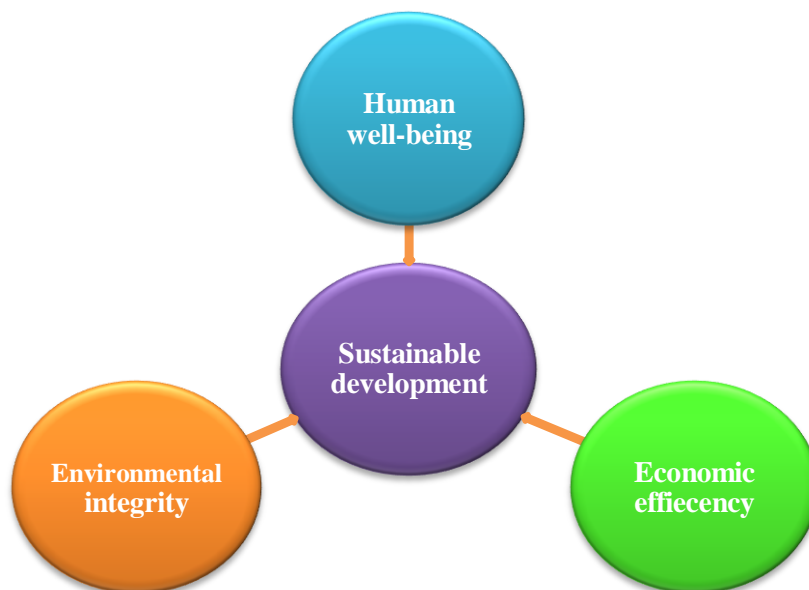


Figure 386: Three global imperatives towards achieving development

Source: Overstrand Municipal Wide SDF, 2006, ch2, p. 5

➤ The conceptual framework

The key challenge facing the communities of the region is to achieve a collective vision for the area that results in a set of coordinated strategic interventions to meet the challenges and opportunities of the area (Overstrand Municipal Wide SDF, 2006, ch3:11).

Planning should always be a creative discipline that has an obligation to future generations to ensure that their future needs are not compromised. Planning cannot therefore simply be concerned with extending existing trends, in terms of one generation’s desire for gratification (Overstrand Municipal Wide SDF, 2006, ch3:11).

By means of an appraisal of the identified issues and opportunities, a vision statement has been formulated which will underpin the formulation of goals, objectives and policy. This policy will ultimately inform the spatial management of the municipality.

4.5.1 Vision

The vision for the Overstrand municipality is underpinned by the core values that underpin the vision for the Overberg, SDF. It entails the following:

- To establish a safe, secure and clean environment;
- To protect the natural beauty and habitat diversity; and


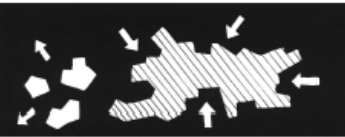


- Harnessing the unique cultural diversity of the people together with the healthy natural and social climate.

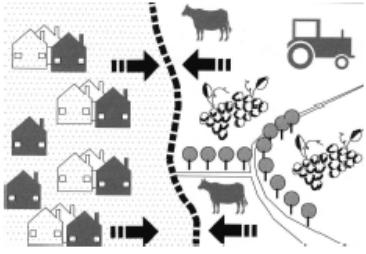
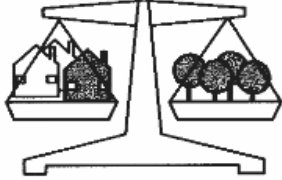

(Overstrand Municipal Wide SDF, 2006, ch3:12).

The Greater Hermanus vision statement is the basis from which the SDF functions and from which the development principles are formulated. It will also determine how the SDF will ensure the best possible development of the community. The greater Hermanus planning principles are shown in Table 19 below.

4.5.2 Planning principles

Table 19: Planning principles

<i>Development Principles</i>		
Land use integration	Promote the integration of the built and non-built environment, its uses and activities to maximise convenience, vitality and the efficient use of urban and natural resources.	
Efficient and integrated planning	<p>Promote efficient and integrated planning and development through:</p> <ul style="list-style-type: none"> ▪ Integrated development and planning in rural and urban areas with a view to mutual support; ▪ Optimal utilisation of existing developed resources including bulk infrastructure; ▪ Promotion of compaction and densification as opposed to low-density sprawl; ▪ Protection of the agricultural resource base; ▪ Spatially co-ordinating sectoral activities; and ▪ Addressing historically distorted spatial patterns. 	
<i>Environmental Protection Principles</i>		
Ecological characteristics	Facilitate development (nature and scale) consistent with the bioregional and ecological characteristics of that environment. Protect and consolidate remaining natural habitat of high conservation importance to facilitate development in less sensitive areas.	
Duty of care	All people and organisations should act with duty of care to conserve and avoid negative impacts on the natural environment, biodiversity and use natural biological resources in a sustainable manner, equitably and efficiently.	

<p>Carrying capacities</p>	<p>Restrict development within the carrying capacity limitations of the natural resources (i.e. water, grazing, etc.).</p>	
<p>Natural processes</p>	<p>Restrict development impacting on those natural processes on which biodiversity, and the provision of essential ecological goods and services (e.g. water production, soil conservation, etc) depend.</p>	
<p>Aesthetic properties</p>	<p>Development to accommodate the aesthetic and respect the Overstrand heritage properties of the landscape and environment.</p>	

Source: Overstrand Municipal Wide SDF, 2006, ch3, pp. 13-15)

These planning principles are indicative of a comprehensive planning approach towards development.

4.5.3 Goals and objectives

In order to strategically address the specific related aspects of the challenges facing the Overstrand municipality area, the following goals and objectives for the spatial planning initiative have been identified:

Table 20: Overstrand goals and objectives

1) Goal	To implement an effective management system for the protection of biological diversity and ecosystems through the co-operation of all concerned.
Objective	<ul style="list-style-type: none"> ● Irreplaceable, threatened highly dynamic and sensitive elements of the environment shall be protected. ● Adequate and effective measures shall be implemented to ensure the co-ordination of environmental responsibilities by key role-players and monitoring of usage in sensitive areas.
2) Goal	To develop and maintain a strong local base in rural areas, through the promotions of non-consumptive tourism and the role of agriculture in the municipal economy.
Objective	<ul style="list-style-type: none"> ● To develop and stimulate economic activity in a responsible and appropriate manner; ● To market the area more effectively; ● To promote tourism as a community-based and community-driven industry with substantial potential for providing direct and indirect economic benefits to the community.
3) Goal	To provide an environmentally and economically sustainable bulk service infrastructure and road transportation network.
Objective	<ul style="list-style-type: none"> ● To determine the overall carrying capacity of existing bulk service related to existing and future growth, and where appropriate, determine flood lines; ● To identify critical problem areas relating to bulk water supply, groundwater abstraction and quality; ● To improve and maintain the standard of bulk service with particular reference to bulk water supply, sewerage and solid waste and sewage

	<p>management;</p> <ul style="list-style-type: none"> ● To create an efficient, well defined hierarchy of roads.
4) Goal	To address the social needs and expectations of all sections of the community
Objective	<ul style="list-style-type: none"> ● To provide access to a full spectrum of social services and facilities; ● To ensure the provision of basic housing and services; ● To encourage public participation in all issues of public concern; ● To co-ordinate the joint management of certain functions on a sub-regional level, e.g. sporting facilities, educational and health facilities.
5) Goal	To promote the conservation and sustainable use of the natural resources in the Overberg municipal area
Objective	<ul style="list-style-type: none"> ● To ensure that the impact of existing and proposed development is adequately evaluated from an holistic environmental perspective, taking current and future generations into account; ● To limit and control development and activities within environmental sensitive and/or conservation-worthy areas with a view to ensure their sustainability taking into account affects on biodiversity.
6) Goal	To ensure that ongoing development pressure and its spatial implications are managed in a sustainable manner that protects the unique character of the existing cultural landscape and the place-specific character and of the existing settlement pattern
Objective	<ul style="list-style-type: none"> ● To promote a spatial development pattern that addresses urban sprawl/urban development and promotes compact, well-defined settlements; ● To retain and strengthen the unique identity of the municipal areas and its districts; ● To determine clear limits to urban development and define the urban edge/limits of existing settlements.

Source: Overstrand Municipal Wide SDF, 2006, ch3:15-19

In conclusion, the goals and objectives set out above indicate how the SDF have isolated the most important needs of the community and have formulated the objectives to ensure the best sustainable development for the future of the community. From a planning point of view, there seems to be a good measure of integration of the SDF with other sectors, including that of transportation planning. This proves that some effort is made to integrate transportation planning with spatial planning/development.

However, from the section below it becomes clear that the SDF does take transportation into account.

4.5.4 Transportation policy

The consistent growth in population and economic development of the Hermanus municipal area means that pressures on the municipal road network will increase. Commuter and tourist-related traffic is therefore likely to increase, and needs to be accommodated through the continued maintenance and upgrading of existing roads. Furthermore, one should envisage the construction of new transportation services in especially the rural areas, where appropriate strategies are required to meet the specific demands of the areas.

A summary of key policy concerns and issues

- ◆ Road budgets have been subject to severe cutbacks by provincial authorities in the past; these resulted in a deterioration of quality of roads and pavements. In turn, this has led to a shift that can be allocated to the increase in requirements for routine maintenance, at the expense of new road infrastructure expansion projects.
- ◆ The current lack of integration and co-ordination between the different spheres of government in IDP formulation is a source of concern and there is a threat that scarce funding may be inappropriately directed.
- ◆ Investigations into the devolution of certain classes of roads to local authorities are underway – the implications for commensurate local financial planning autonomy are not clear.
- ◆ The public transportation system in the greater Hermanus area is well-organised and established. In the rest of the municipality, in particular in the rural areas, public transportation is lacking and facilities are poor in some areas. The transportation problem in rural communities can be characterised as remoteness, dependency and un-affordability.
- ◆ Capacity constraints along the R43 between Onrus and Hermanus, during recreational peak periods, will need to be addressed in order to sustain the growth of the region's tourism potential.
- ◆ There is an opportunity to redress the lack of integrated planning and transportation infrastructure through the Municipal Infrastructure Grant (MIG) policy. The Overstrand SDF provides the municipality with a context and a set of priorities for such infrastructure funding applications.

(Overstrand Municipal Wide SDF, 2006, ch5: 83, 84).

4.5.5 Objectives of transportation

These objectives are contained in the Overstrand SDF and are of paramount importance to the transportation planning of the greater Hermanus;

- i. To meet the transportation needs of all the sectors community.
- ii. To develop transportation infrastructure that supports economic growth.
- iii. To ensure that the quality of the road network is maintained and improved through regular maintenance and upgrading interventions.
- iv. To minimise total transportation cost, i.e. to optimise infrastructure and road cost in order to minimise total cost to economy, while maintaining minimum infrastructure standards.
- v. To expand the range of available transportation modes by promoting viable transportation services.

(Overstrand Municipal Wide SDF, 2006, ch5: 83, 84).

Policies:

No.	Policy statement
P23.1	Ensure that the road system continues to meet the movement demands of all the inhabitants in the Overstrand.
P23.2	Ensure that upgrading of critical components of the Overstrand transport network is prioritised for implementation.
P23.3	Explore all possible sources of funding to assist maintenance, upgrading and expansion of the Overstrand road network.
P23.4	Address localised traffic, non-motorised transportation and road safety problems.
P23.5	Improve mobility and access for rural communities dependent on public transportation services.

In conclusion, this section explored the relevant policies and objectives aimed at addressing key concerns and issues in the region. These objectives and policies set out to meet the needs of all the sectors of the community, but the only way to achieve this is through better integration of transportation planning and spatial planning and development. In contrast to with the ITP, the SDF looks at transportation more comprehensively and with a more integrated decision-making process in mind.

4.5.6 Greater Hermanus

The Greater Hermanus area shown in Figure 47 functions as the primary civic, administrative and tourist centre within its sub-regional and municipal context. The Greater Hermanus is renowned for the quality of its natural environment, including sandy beaches, rocky coastline, fynbos and whales. These attributes, as well as the temperate climate, have made this area a popular retirement, holiday and tourism destination.

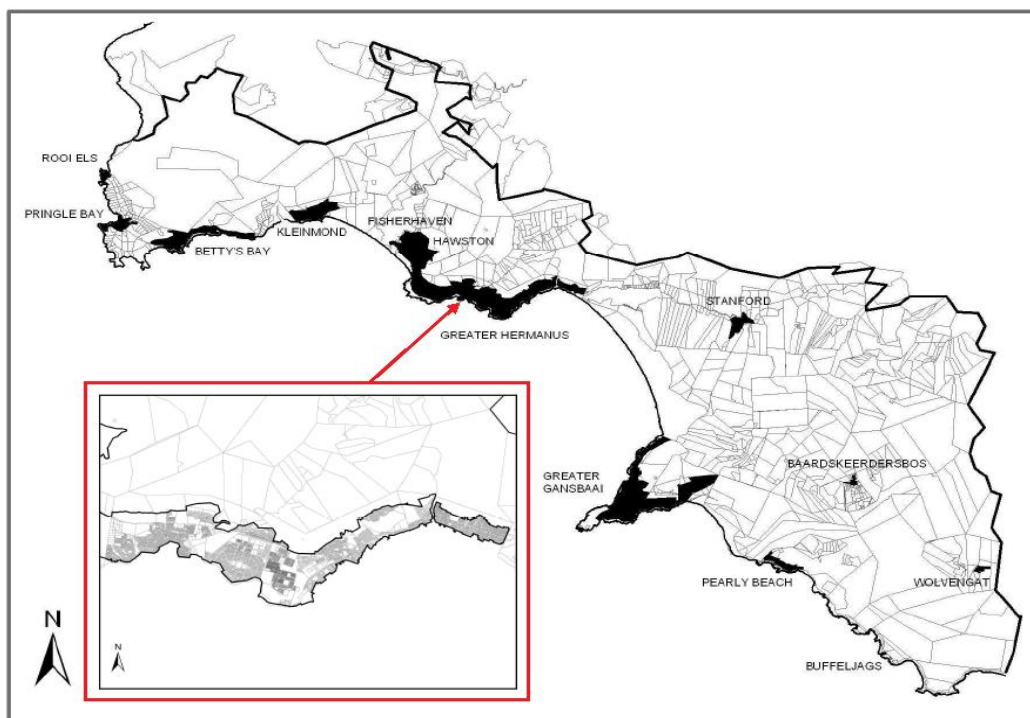


Figure 39: Greater Hermanus shown in the SDF

Source: Overstrand Municipal Wide SDF, 2006, ch7: 149

The protection and maintenance of the character of the areas within the greater Hermanus, as well as the substantial management growth in the area, formed the basis of the land use and development proposals of the approved current Greater Hermanus sub-regional spatial development framework.

The challenge will be to retain this unique character and its attractiveness by balancing the need for urban growth with the conservation of the areas biophysical and cultural heritage assets (Overstrand Municipal Wide SDF, 2006, ch7:149).

4.5.7 Local spatial development principles

The following spatial development principles focus on the promotion, restriction, maintenance and containment of important principles concerning the greater Hermanus area development.

To promote:	<ul style="list-style-type: none"> • Conservation of sensitive natural resources, including the mountain backdrop and associated fynbos, a varied coastal strip and associated marine reserves and a series of river and estuarine systems; • Conservation of cultural heritage resources, including the character of the historical fishing/holiday settlement areas of Hermanus and Onrust, the number of buildings of historical, architectural and social value, as well as the scenic beauty of the rural landscape of Hemel-en-Aarde Valley; • The equitable distribution of community facilities throughout the Greater Hermanus area; • The provision of a range a residential housing types and appropriate densification strategies in order to retain the character of the Greater Hermanus, while ensuring appropriate growth to address the housing needs of the growing population; • Greater Hermanus as a tourism destination.
Restrict:	<ul style="list-style-type: none"> • Industrial development to service industries an clean light industry.
Maintain:	<ul style="list-style-type: none"> • The network of primary, secondary and linkages scenic routes, e.g. the costal footpath along the cliffs of Hermanus, Marine Drive, Rotary Way, the route though the Hemel-en-Aarde Valley and the R43; • The open space corridors created by Onrus River and other drainage channels; • The unique village of Greater Hermanus.
Contain:	<ul style="list-style-type: none"> • The urban footprint if the Greater Hermanus within a well-defined urban edge.

➤ Land use proposal : local planning level (LPL)

The following spatial development proposals shown in Table 21 have been formulated for the Greater Hermanus area (excluding Fisherhaven / Hawston area) with a view to address the land use needs that have been identified for the area:

Table 21: Land use proposal for the Greater Hermanus

LPL 3:	<p>Densification</p> <ul style="list-style-type: none"> ➤ Residential land use is the primary consumer/user of land. The strategic need to reduce urban sprawl by increasing residential densities is an accepted urban growth management principle. In this regard, it is recommended that an area-specific densification policy be formulated for the Greater Hermanus with a view to ensure that appropriate area densification is promoted in a sustainable manner.
LPL 6:	CBD Node

	<ul style="list-style-type: none"> ➤ Business uses, commercial, retail and offices should be concentrated within the central district, as well as within the existing areas in accordance with the Greater Hermanus sub-regional spatial development framework. ➤ High density residential uses should be promoted within the CBD.
LPL 8:	<p>Conservation</p> <ul style="list-style-type: none"> ➤ Hemel-en-Aarde Valley: Its intact, coherent and representative rural pattern of settlement evident in its land use, cultivation, farm structures, roads, and tree alignments. This area should be guarded against pressure for subdivision and a resultant suburban pattern of settlement. ➤ Its sense of containment and seclusion provided by its linear valley from and surrounding mountains should be conserved.
LPL9:	<p>Conservation of sensitive biophysical environment</p> <ul style="list-style-type: none"> ➤ The sensitive area of the biophysical environment should be managed with conservation objectives in mind, and should be protected from urban development.
LPL 10:	<p>Corridors of linear open spaces</p> <ul style="list-style-type: none"> ➤ The functioning of the Onrus and Mossel Rivers and their estuaries as ecological corridors and linear open space areas should be protected and managed with conservation objectives in mind. ➤ The existing coastal setback line, which is, in effect, the demarcated urban edge, should be maintained. No development should be permitted in this setback area, thereby ensuring that a continuous coastal corridor is maintained.

Source: Amended from Overstrand Municipal Wide SDF, 2006, ch7:151-156

➤ Local growth management strategy

In reviewing the existing edge of the Greater Hermanus, careful consideration was given to the approved Greater Hermanus spatial development framework (2000) and the current and projected population growth rates in terms of the relatively high growth potential of the Greater Hermanus area, the existing subsidised housing backlog, and the area's projected future housing and related growth needs.

It is therefore considered critical to strategically ensure that the Greater Hermanus area has the capacity to accommodate this growth. In regard, it is of primary importance that bulk service and traffic infrastructure are geared towards addressing growth in the form of appropriate residential densification in the established well-located central urban areas while facilitating large scale integrate Greenfield's development in the Hawston-Fisherhaven area (Overstrand Municipal Wide SDF, 2006, ch7:150).

In conclusion, as seen from the ITP, the Greater Hermanus spatial development mostly takes place in a linear fashion because of the topographical location of the town between a mountain and the Atlantic Ocean. This makes it difficult for the town to accommodate the rapid growth that stretches along its coastline. Through the integration of transportation planning and spatial development planning, this growth capacity issue can be better addressed and a nodal and corridor development approach becomes emerges as a solution in this regard. Because of the importance of the natural environment of Hermanus that gives the town its uniqueness and lures many tourists, it is also important to integrate environmental management with development and transportation planning.

4.5.8 Rural development areas

➤ Hemel-en-Aarde Valley Area (figure 48)

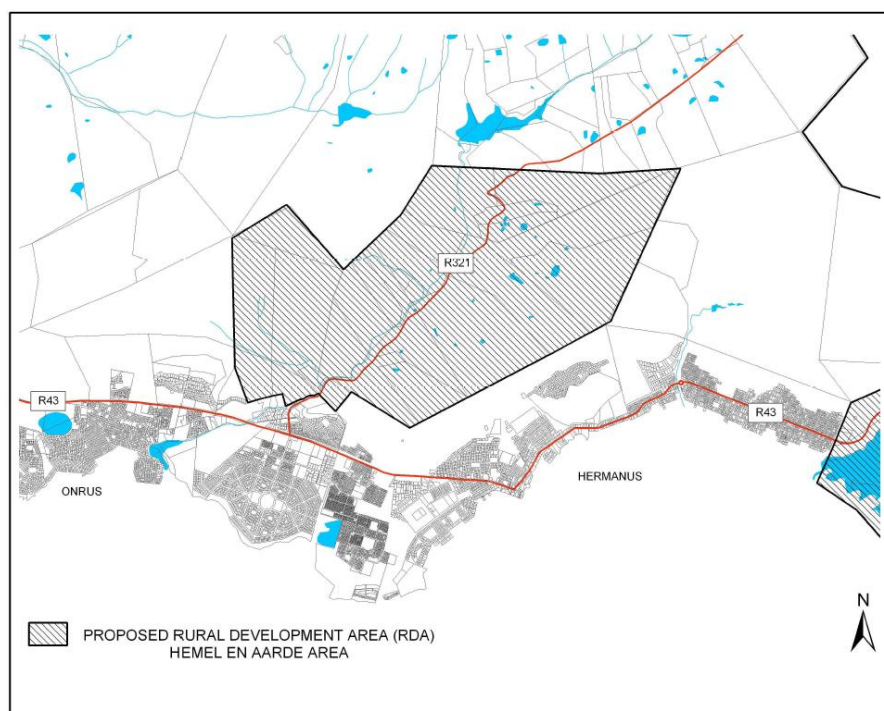


Figure 40: Hemel-en-Aarde Valley

Source: Overstrand Municipal Wide SDF, 2006, ch7:194

The important role of this area in terms of its unique scenic route and the need to maximise its potential in terms of agriculture, heritage and tourism is regarded as cannot be overstated (Overstrand Municipal Wide SDF, 2006, ch7:194).

4.5.9 Nodal pattern

The development pattern of Hermanus, meaning the distribution of nodes and their location characteristics, falls in the category of a urban node because of its pattern of stretching along the coast and mountain range (Overstrand Municipal Wide SDF, 2006, ch5:67)

➤ Motivation as stipulated within the Overstrand SDF:

The positive effects of a well-managed development pattern are varied, and include, amongst others:

- ◆ Ensuring a well balanced functional development pattern based on growth potential and comparative advantages;
- ◆ The distribution of infrastructure and resources in a manner that promotes the sustainability and development potential of the municipal area;
- ◆ Increasing employment by maximising development and economic growth opportunities within the city;
- ◆ Protecting sensitive environmental areas of the coastline, such as the green corridor over the Mossel River and the Fernkloof Nature Reserve; and
- ◆ Reducing unnecessary duplication and gaps in the provision of community facilities and services (Overstrand Municipal Wide SDF, 2006, ch5:68).

4.5.10 Nodal development in Hermanus

➤ Central Hermanus

Nodal development:

The proposed northern district will create a range of development opportunities which will require urban design guidelines to ensure a positive contribution to the public realm. Intensification related to these nodes could thus be considered. See Figure 51 below for the nodal development opportunities.

The possibility of an integrated development spine along Swartdam Road will require similar planning and design guidelines with a view to ensure that its public and private benefits are properly developed. Intensification related to a possible activity spine could achieve these ends. (Overstrand Municipality, Growth Management Strategy, 2010:63vii)

➤ Western Hermanus

Nodal quality:

- The node at the intersection of the Sandbaai and Hemel-en-Aarde Road could be expanded to accommodate a range of more public and civic-orientated facilities such as the successful market that occurs on Saturday mornings.
- The development of a series of nodes at major intersections along this stretch of the R45 could relieve some of the commercial pressures on the historic core area of Hermanus and thus contribute to the conservation of its historic fabric.
- At present, the village of Onrus lacks a centre. The existing dispersed pattern of small-scale retail activity could be consolidated at as a major access point to the village on the old main road.
- Limited intensification opportunities could thus be considered around this intersection.

(Overstrand Municipality, Growth Management Strategy, 2010: 56 vii).

➤ Eastern Hermanus

The commonage has a great deal of potential for development as a local civic and retail node serving this section of Hermanus. (Overstrand Municipality, Growth Management Strategy, 2010: 68 vii).

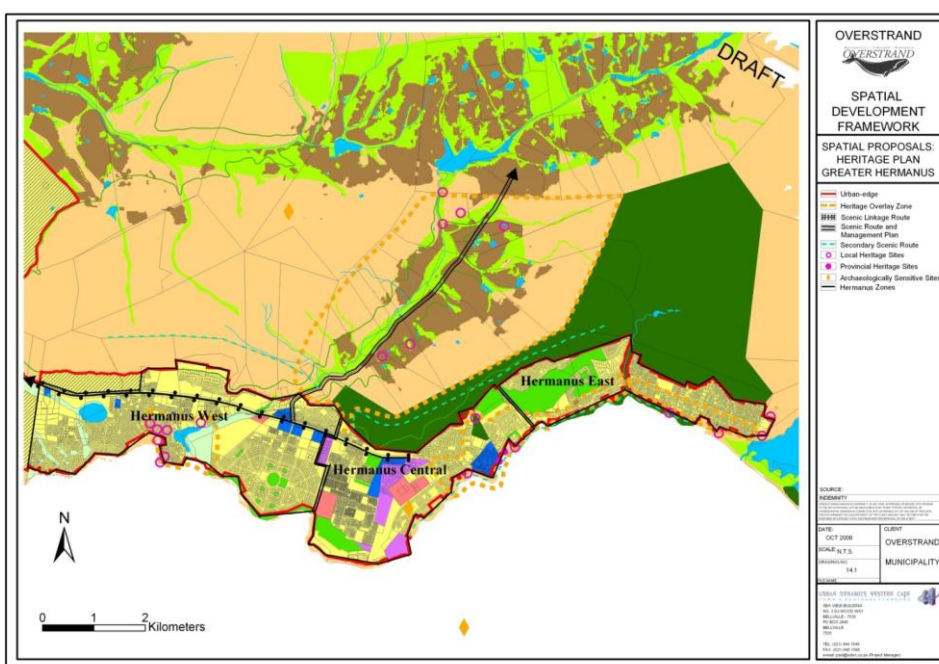


Figure 41: Nodal and settlement development patterns in Hermanus

Source: Overstrand municipality spatial development framework: 2008

In conclusion the corridor and nodal development pattern for Hermanus in total will contribute towards a more sustainable spatial development which, in turn, will lead to economic growth which will require better integration with transportation. In many cases, densification will have to be considered in order to ensure that urban sprawl is curbed. Densification will, in turn, highlight the need for integration of transportation and spatial development. This conclusion is illustrated in Table 22 below in a comparison matrix.

Table 22: Comparison Matrix for Hermanus

		Concepts			
		TP	LUP	Corridor	Nodes
Frameworks and plans	ITP	X		X	
	SDF	X	X		X
	LUMS		X		X
Integration					

Source: Own construction, 2012

Illustrated in the matrix it can be seen that the Greater Hermanus Municipality focuses more on a spatial development perspective and is lacking to an extent in the focus on transportation planning and the integration thereof with spatial development.

4.6 Cape Town integrated transportation plans

4.6.1 Transportation vision for Cape Town

This vision has been formulated as follows:

“To provide a world-class sustainable transportation system that moves all its people and goods effectively, efficiently, safely and affordably.”

(Cape Town ITP Review, 2009: 4)

4.6.2 Goals

Sustainability: The ITP strives towards a complete and balanced transportation system that encapsulates economic, social and environmental sustainability.

- to promote public transportation over the private car;
- to promote travel demand management measures to reduce total vehicle travel kilometres, especially during the commuter peak periods; and
- to improve air quality.

Universal design: The transportation system will be useable by all people, to the greatest extent possible, without the need for adaptation or specialised design. It aims at:

- improving urban design and spatial development;
- increasing accessibility and mobility; and
- ensuring that the transportation system can be accessed by all, including the mobility challenged.

Economic development: the transportation plan supports the city's vision as set out in the integrated development plan, i.e. that there should be shared growth and economic development. This means that it aims to:

- align transportation and land use planning to positively influence, support and facilitate economic development.

Safety: The goal of improving safety is non-negotiable. In terms of the relevance of this goal to the transportation system, the first and most important issue is the reduction of transportation-related deaths and serious injury due to road and rail accidents. To this end, the aim is:

- To promote and encourage walking, cycling and people places;
- To provide a safe and efficient road and rail network that enhances the efficiency of the public transportation system

(Cape Town ITP Review, 2009: 4, 5).

4.6.3 Sustainable transportation

Transportation connects people to each other and provides access to work, services and recreational opportunities. No city can function without a good transportation system that works well for everyone.

The City of Cape Town has undertaken a major mid-term review of the integrated transportation plan (ITP 2006-2011) which resulted in a renewed attempt to address the challenges that face transportation in the metropolitan area towards achieving its vision to:

“provide a world-class sustainable transportation system that moves all its people and goods effectively, efficiently, safely and affordably”.

(Cape Town ITP Review, 2009:6)

The review has established that Cape Town's reliance on private vehicles continues to grow dramatically the local economy expands. Vehicle ownership and usage are steadily increasing as people migrate from public transportation to the less sustainable private car.

The demand to travel in this manner places increasing pressure on the current transportation infrastructure, resulting in longer peak hours and increased congestion on most roadways.

Cape Town is a steadily growing city and the consequence of this growth has been a combination of urban sprawl and traffic congestion. It is vital to propose ways to change this direction - these can include densification of development rather than expansion into new areas. Such a strategy will simultaneously reduce the impacts of trips. Public transportation will be the key to effecting such a change and must become a driving force in future sustainability (see figure 50 for sustainability) (Cape Town ITP Review, 2009:6).

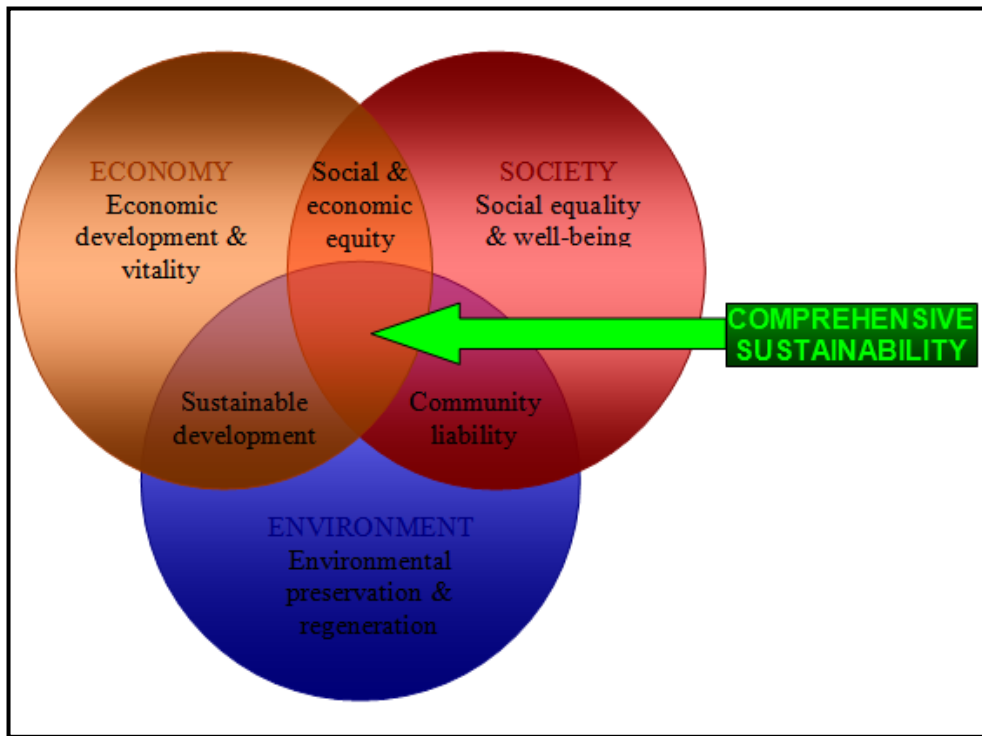


Figure 50: Comprehensive sustainability

Source: Cape Town ITP Review, 2009: 6

The impacts of transportation are too critical to simply ignore them and proceed with business as usual. The framework of the proposed integrated transportation plan is sustainable transportation, which ensures that the city will have minimal negative impacts on society, its precious environment and its vibrant economy (Cape Town ITP Review, 2009:6).

4.6.4 Transportation strategies

➤ Congestion management

There are five major issues that need to be addressed in congestion management strategies. These are:

Public transportation: This is *the* major aspect in managing congestion. Increasing the number of people travelling by public transportation is the primary method of reducing congestion.

Freight transportation: Freight transportation is essential for providing the population with food, clothing and shelter. Managing the movement of this type of transportation by appropriate design and operational management strategies as well as proper time management will help to alleviate congestion associated with this type of transportation.

Non-motorised transportation: The focus of this type of transportation should be centred on relevant activities such as shifting to other types of transportation, movement for local shopping purposes and movements to educational or sporting activities.

Promotion of land use diversity: This issue is fundamental in order to bring about congestion management changes to present land uses. It can be a very long-term project, but changes can be brought about if a coordinated plan is formulated.

Travel demand management: The management of travel demand, such as parking, will reinforce the overall approach to congestion management.

➤ Metropolitan growth

The city of Cape Town experiences an annual growth to its population of 3, 5 million of 2, 5% per annum; this means an extra 87 500 people per year. These people will need access to all the amenities, including transportation. Such requirements will have a major effect on public transportation, land use management and travel demand management (Cape Town ITP Review, 2009:12).

➤ Public transportation

Improving public transportation is a major way in which one can deal with the need for personal movement due to economic growth that is, in turn, related to metropolitan growth.

➤ Travel demand management

In support of the promotion of public transportation, metropolitan growth will further be managed by means of improved travel demand management techniques. Key amongst these will be parking management in all new development through a revised parking policy for the city.

➤ Land use management

In support of the programme aimed at the densification of the city, transportation plans have been closely aligned with the city's integrated development plans with a view to promote mixed land use and also to reduce motorised travel which would encourage the use of public transportation.

The illustration below (Figure 51) shows the 'fact files' on Cape Town concerning transportation; this information adds further context to the present discussion.



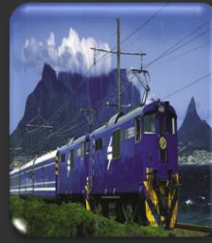
Private vehicle

- Over 1 million vehicles registered in Cape Town (2009).
- Car ownership is about 200 cars per 1000 people.
- Car ownership and use are growing significantly.
- Current public/private transport split varies: AM peak 50:50 (private : public) Inter-Peak 83:17; PM peak 59:41 and average all day 69:31.



Bus

- Operator is Golden Arrows Bus Services (GBS); currently on interim contract.
- Bus facilities are owned and managed by the city of Cape Town.
- 1530 routes on 113 time-tables.
- Operators do 5295 trips per day with up to 270000 passengers /day.
- Subsidised by national government and in 2008/2009 financial year derived subsidy of 59:41 and average all day 69:31



Rail

- Operator and infrastructure ownership is by SARCC Metrorail.
- The consumer rail network is operating at below its technical capacity due to a shortage of rolling stock. The system needs about 20 train sets at present.
- Total daily passenger boardings – 634 837.



Mini bus

- Operators are various private owners of single or multiple vehicles.
- 15 seat minibus vehicles are used.
- Estimated fleet size of licensed and unlicensed vehicles is 7 467.
- 565 routes operated all day with 55 998 trips and 332 497 daily passengers.
- 120 922 passengers carried during the peak period.



Road maintenance operations management

- The area traffic control system comprises 1265 signalised traffic intersections and pedestrian crossings.
- Of these, 600 are linked to a centralised computer system situated at N1 city house network operators centre.
- The CIR presently has a traffic law enforcement team of 264 officers.



Freight

- Highest annual average daily truck traffic is 5 424 on N7-Goodwood followed by N1-Kraaifontein with 4 392 .
- The highest volume of cargo transportation by road is on the R27 at the container terminal with over 6 million tons p.a.
- Over 3 million tons p.a. of fuel is used for transportation on the M14.
- Rail freight is limited compared to both capacity and amount moved by road .
- Air freight accounts for about 30 000 tons of cargo pa from Cape Town International Airport.
- Cape Town Port handles over 4 million tons pa of sea cargo which translates to 2.2% of country's sea freight movement.
- Two strategic pipelines 126km and 11km long are used for transportation of crude oil and petroleum products in and around Cape Town.



Metered taxi

- On a typical day, metered taxis carry about 4 000 passenger trips.
- There are 189 operators who own approximately 453 vehicles (excluding pre-arranged collections). 37 official facilities accommodate 123 taxis.
- A variety of vehicle types: sedan taxis are most common, but station wagons and minivans are also used.
- Fares are fixed and variable rates are charged per distance travelled, with additional waiting and luggage rates.

Figure 51: Transportation fact file of Cape Town Metropolitan Municipality

Source: Amended from Cape Town ITP review, 2009:11-12

4.7 Cape Town spatial development framework

4.7.1 Purpose of the SDF

The SDF is a long-term plan aimed at managing growth and change, because it:

- aligns the City of Cape Town's ('the City's') spatial development goals, strategies and policies with relevant national and provincial spatial principles, strategies and policies;
- provides a long-term vision of the desired spatial form and structure of Cape Town;
- provides the spatial component of a cross-sectoral medium to long-term city development strategy;
- guides the proposals contained in the more detailed district;
- entails the spatial development plans (SDP's), which cover a shorter planning time frame (+10 years), and the preparation of local spatial plans;
- helps to spatially coordinate, prioritise and align public investment in the City's five-year integrated development plan (IDP);
- identifies the areas not suited for development (especially residential development), and areas where the impacts of development need to be managed; and
- provides policy guidance to direct decision-making on the nature, form, scale and location of urban development, land use change, infrastructure development, disaster mitigation, and environmental resource protection.

(Cape Town SDF 2009:3)

4.7.2 Goal

The goal of the SDF is to achieve sustainable, equitable and managed growth. Sustainability refers to the capacity to sustain or support indefinitely. In the city's context, it means offering a future to our children and our children's children, and the continued existence of the city's unique biodiversity and cultural heritage, while at the same time meeting the sustenance needs of its current residents. Sustainability must address service and infrastructure provision as much as it needs to address biodiversity protection. In the SDF, equity refers to life equality, where the public good prevails over private, sectional interests, and where people have access to a broadly similar range of opportunities, resources and amenities. A city that works for children, the disabled and the elderly is more likely to be a city that is equitable (Cape Town SDF 2009:3).

4.7.3 Principles

The SDF is based on four interrelated spatial starting points, which together provide overall direction to the future spatial form and development of Cape Town. These starting points are:

- a) A city that is resilient and adaptive;
- b) A city within a region;
- c) A city anchored by its natural assets; and
- c) A city that is organised around development corridors

(Cape Town SDF 2009:4).

With the ever-increasing resource constraints and insecurities, it follows that the public and private sector should collectively focus and coordinate their efforts to build a city that has these vital attributes. For this reason, the SDF proposes that development in Cape Town should be focused on a series of metropolitan development corridors. These corridors are systems of mutually reinforcing elements, supported by coordinated infrastructure investments (Cape Town SDF 2009:5).

In conclusion, the principles goals outlined above, as well as the purpose of the SDF, indicates that there is a level of integration between the spatial planning/development and the transpiration planning in the metropolitan municipality of Cape Town. At the end of the present discussion, a comparison matrix will further illustrate the level of integration between the ITP and the SDF.

4.7.4 Metropolitan development corridors

These are desirable because they:

- offer easy access to goods, services and people;
- are well-served by facilities for pedestrians, cyclists, road-based and rail-based public transportation facilities;
- offer a vibrant mix of land uses (residential, commercial, industrial and/or recreational);
- are reinforced by a road network that ranges from freeways to local roads, to facilitate ease of movement; and
- are 15 minutes from most people's homes.

These development corridors already exist in Cape Town, although some are more prominent than others. Logical extensions to these corridors are proposed as the focus for the managed growth of the city (Cape Town SDF 2009:5).

4.7.5 Strategies and policies contained in the Cape Town SDF

Five key spatial strategies have been proposed with a view to help Cape Town achieve its vision for a sustainable future Cape Town, and to realise the spatial goals associated with this vision. These are:

- Enhance the value of the natural and rural environment and green spaces for the people of Cape Town

For social, economic and environmental reasons, it is critical that Cape Town's valuable natural resources and green spaces are defined, protected and enhanced, and made more accessible to the people of Cape Town. The sustainability of these natural resources also depends on the protection and enhancement of natural ecosystems.

- Establish a integrated grid-based movement system

Cape Town must have a movement system that works for all, and provides access to the city's resources and amenities. The movement system connects people with each other, and also connects people and opportunities. Its infrastructural components (pedestrian routes, bicycle lanes, roads and rail) and the patterns of interconnection have a profound impact on spatial patterns and accessibility, and hence on economic and social opportunities.

- Consolidate and intensify development on the accessibility grid

The powers that be should ensure that Cape Town's growth and land use management strategies and policies enhance should its position in the global and regional economy. To this end, economic, social and higher intensity development should be steered towards the locations that offer the greatest opportunity to the entrepreneur, and have the best possible impact on people's quality of life, especially that of the poor. These locations are situated on the accessibility grid.

- Direct urban growth and promote compact, integrated development.

A compact form of development with settlement growth directed towards areas suitable for development and away from important resource areas and hazards, will be actively pursued. The future spatial development of Cape Town also needs to be informed by the infrastructure capacity and maintenance challenges facing the city.

- Develop more great people's places

What makes Cape Town special and unique - and more importantly, what will continue to give it the edge as an attractive place to live in and visit in the decades ahead - are its high-quality destinations.

Some of the destinations are of high cultural and heritage importance, such as Robben Island and Groot Constantia; some capitalise on the city's natural assets, for example the Kirstenbosch Botanical Gardens and Cape Point; while others are attractive public places where people can relax and meet - like the V&A Waterfront and Sea Point Promenade. These destinations need to be consolidated into a citywide destination network, and have to be made even more accessible (Cape Town, SDF, 2009:7).

In conclusion, the discussion above has indicated that there a measure of integration has been achieved between the spatial development frameworks and the integrated transportation planning through the promotion of an integrated movement system within the SDF. The SDF also focuses on the implementation of the goals and strategies that have been formulated in the policies and legislation with a view to ensure that the community's future needs in terms of integration are anticipated. Environmental management and conservation as well as the implementation of a corridor also feature in the SDF.

The Cape Town ITP seems to promote the integration of land use management and comprehensive sustainability that leads to the integrated implementation of spatial development/planning and transportation planning.

Metropolitan growth integration is promoted as well.

This conclusion is illustrated in the Table 23 below; this table presents a comparative reading of Cape Town's plans and frameworks and planning concepts within a matrix to show the integration.

Table 23: Comparison matrix of Cape Town

		Concepts			
		TP	LUP	Corridor	Nodes
Frameworks and plans	ITP	X	X		
	SDF	X	X	X	
	LUMS		X	X	X
Integration					

Source: Own Construction, 2012

The above illustrated matrix shows that there is a level of balance between transportation planning and spatial development instruments within the Cape Town plans and frameworks. The municipality still tends to lean a little more towards a land use development focus.

4.8 Eden District municipality integrated transportation plan (ITP)

4.8.1 Transportation vision

The following transportation vision has been defined for the Eden DITP:

“The vision for 2015 is a demand-responsive, sustainable, balanced and equitable rural transportation system that allows the basic access needs of individuals to be met, is affordable, operates efficiently, offers choice of transportation modes, and supports a vibrant economy.”

(EDM District Integrated Transport Plan Final, 2010, ch2, p. 13)

Table 23 illustrates the goals and objectives of Eden’s Municipal ITP in a comparative manner.

Table 24: Eden District municipality ITP Goals and Objectives

Eden District TIP	Goal	Objective
<p style="text-align: center;">Transportation infrastructure</p> <p>Improve and provide transportation infrastructure based on identified needs.</p>	<p>The purpose of this goal is to improve the overall accessibility and mobility of the transportation system, especially for communities located far from established public transportation routes and amenities.</p>	<ul style="list-style-type: none"> - Plan, design and implement transportation infrastructure based on demand, with input from the local community. - Ensure the acquisition and allocation of funds for the implementation of transportation projects over at least a three-year planning period.
<p style="text-align: center;">Maintenance</p> <p>Upgrade and maintain all existing Transportation infrastructure.</p>	<p>Existing transportation infrastructure needs consistent upgrading and maintenance to maintain acceptable standards.</p>	<ul style="list-style-type: none"> - Maintain all transportation infrastructures to an acceptable level of services. - Develop an asset management system to maintain transportation infrastructure and facilities to levels acceptable to users.
<p style="text-align: center;">Transportation planning</p> <p>Improve and integrate transportation planning</p>	<p>Transportation structures should be streamlined with a view to ensure integration among national, provincial and local municipalities, in order to provide uniform standards, regulations and integrated transportation planning for the area.</p>	<ul style="list-style-type: none"> - Co-ordinate and include recommendations from the DITP and LITP’s in the municipal IDPs. - Ensure that spatial development plans contain information on existing and future transportation planning. - Appoint a transportation planner/traffic engineer for the EDM who should ensure that Transportation planning is coordinated and integrated in the area.

		<ul style="list-style-type: none"> - Investigate and plan for new transportation corridors and integrate with future land use planning for the area. - Investigate subsidised services and policies, and improve the level of service for public transportation in EDM.
<p>Regulate and control Regulate and control public transportation</p>	<p>Public transportation should be controlled through the planning for subsidised and unsubsidised public transportation, the issuing of operating licenses according to the operating license strategy and through effective law enforcement.</p>	<ul style="list-style-type: none"> - Ensure that public transportation services comply with operating licenses through monitoring and law enforcement. - Improve road safety by means of more visible patrolling of high accident “black spots” and road blocks to check for unroadworthy vehicles.
<p>Non-motorised and public transportation Promote non-motorised and public transportation</p>	<p>The purpose of this goal is to provide safe, reliable and cost-effective public transportation as an alternative to private transportation. The provision of non-motorised and bicycle transportation should be promoted and investigated as part of traffic impact studies.</p>	<ul style="list-style-type: none"> - Investigate the provision of alternative public transportation, e.g. scheduled bus service as an alternative to mini-bus taxis and private transportation. - Improve public transportation routes and provide facilities in urban and rural areas. - Provide sidewalks and bicycle lanes along highly utilised pedestrian/bicycle routes and near schools. - Include in all traffic impact studies a chapter on public transportation, non-motorised transportation and special needs transportation.

4.8.2 Current modal split of local municipalities within the district municipality

Since the information that was gathered through the Eden Municipality throughout the entire Eden District Municipality with a sample of 13 083 persons interviewed, it is regarded as reflective of the district management area situation. It shows that 34.3% of the moving public use non-motorised means of transportation. Furthermore, 45.9% make use of private transportation and 19% use public transportation. IN summary, ±54% of the moving public the Eden District Municipal area make use of non-motorised and public transportation. This state of affairs provides a clear mission for provision of services as more than half of the population do not make use of private transportation. A considerable amount of available resources should therefore be directed towards promoting and providing non-motorised public transportation (EDM District integrated transportation plan final, 2010, ch3:4)

The population distribution by mode interview statistics of the entire Eden District Municipality is shown in Table 25 below.

Table 25: Population distribution by mode in the Eden District Municipality Area

Mode of Transportation to Work/School	
On foot	32.63%
By bicycle	1.66%
By motorcycle	0.32%
By car as a driver	22.44%
By car as a passenger	23.21%
By minibus/taxi	17.01%
By bus	2.71%
By train	0.03%
Total	100%

Source: EDM district integrated transportation plan final, 2010, ch3:4

4.8.3 Public transportation supply

The minibus-taxi is the only source of public transportation in most of the towns within the Eden district. From the data gathered it can be seen that there is an oversupply of minibus-taxis in the municipal areas of Bitou, Knysna, Mossel Bay, Hessequa, Kannaland and Oudtshoorn . The number of trips made by the average operator is not sufficient sustain the vehicle's running cost and to make a decent profit.

Hessequa and Kannaland do not show such gross over-supply; these areas seem to have a better balance. On the other hand, the Eden DMA is poorly serviced and more operators are needed (EDM District Integrated Transportation Plan Final, 2010, ch3:44).

Problems that have been identified during the facility surveys of public transportation infrastructure include:

- lack of space at the some ranks;
- absence of shelter and ablution facilities;
- lack of land for formal facilities; and
- lack of embayment's and shelters along routes

(EDM district integrated transportation plan final, 2010:5).

➤ Long-distance taxi services

Various long-distance taxi services have permits to operate in the Eden District. Their operations differ from the local service in that they offer a door-to-door service. Formal ranks do not exist, with the exception in Mossel Bay. Normally, a telephone booking is required to book a seat on the long-distance taxi service. Telephonic interviews done by the Eden Municipality suggest that the Cape Town to Port Elizabeth destinations are serviced daily, with destinations further north and in the Eastern Cape only serviced on weekends

(EDM district integrated transportation plan final, 2010, ch3: 25).

➤ Description of bus service

- Local commuter buses

Local commuter bus services are not available in the Eden District, except in the Hessequa municipal area. The buses present in the towns are used exclusively for the transportation of scholars and groups.

In the Hessequa municipal area, commuter buses serve the Riversdale-Still Bay route. This service is provided by Suid-Kaap Karweiers and is predominantly used by commuters who are employed in Still Bay. The departure point in Riversdale is at Havenga Brothers and the destination is at the OK Grocer. Still Bay and Melkhoutfontein are serviced by the same bus that travels the Riversdale-Still Bay route.

- o Regional long-distance buses

A regular long-distance bus service is in operation in the region. This service connects the municipal towns in the Eden District with destinations en route to Cape Town, Port Elizabeth, Johannesburg and Durban. With the exception of some local operators, the more popular services are Inter Cape, City Liner, Translux and Greyhound. Figure 52 below shows the routes covered by long-distance buses in the area (EDM district integrated transportation plan final, 2010:6).

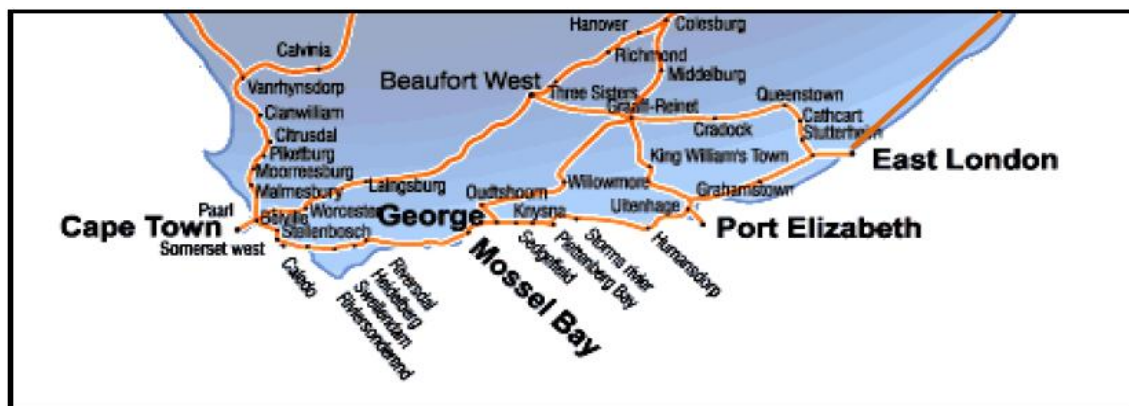


Figure 52: Western Cape bus service routes

Source: EDM district integrated transportation plan final, 2010, ch3:29

The scheduled bus service operations normally do not rely on municipal infrastructure to support them and make their own arrangements in terms of stopping venues and ablution facilities.

Issues that require attention is:

- The somewhat chaotic situation in Riversdale where long-distance buses compete with long-distance trucks for parking;
- A parking service is required at Uniondale where these busses currently pass without stopping (EDM District Integrated Transportation Plan Final, 2010, ch3:29).

- o Transportation of scholars

A network of subsidised buses and a number of minibus-taxis provide transportation scholars to and from schools on a daily basis within the Eden District. Short to medium-term contracts are put out on tender by the Western Cape Education Department (WCED) on a regular basis. A summary of the scholar transportation in the Eden District is provided in Table 24 below (EDM district integrated transportation plan final, 2010, ch3:35).

Table 26: Scholar transportation information in Eden District Municipality

Operators	Schools served	Total distance per day	Total scholars: primary schools	Total scholars: secondary schools
38	101	4 724	5 475	2 882

Source: EDM District Integrated Transportation Plan Final, 2010, ch3, p. 35

The Transportation of scholars from The Crags in Bitou local municipality and from Gouritsmond in the Hessequa local municipal area were mentioned as problematic at the time of writing the Eden district ITP report because of a lack of transportation service supply.

➤ Rail

The Outeniqua Tjoo-Choe that used to operate as a tourism service between Knysna and George has been terminated when floods in September 2007 damaged the track. Since then, the service was implemented from George to Mossel Bay and back, but the focus is on tourism and the train is not used as a commuter service.

A semi-luxury passenger train operates once a week from Cape Town to Port Elizabeth, with its only stop at Hartenbos station in Mossel Bay. It departs from Cape Town on Fridays and leaves Port Elizabeth on Sundays. The fare is ± R1700-00 in one direction. Due to the limited stopping and high fare, this train does not cater for the commuter market (EDM district integrated transportation plan final, 2010, ch3:35).

Two goods trains run from Mossel Bay to Port Elizabeth and back during the week. The load from Mossel Bay is mainly LPG from Petro SA. On the return trip, mainly cement and maize are off-loaded in George. A second goods train runs daily between Mossel Bay and Worcester. From Mossel Bay, LPG and diesel from Petro SA are the main commodities. Cement and animal feed are mainly received from Cape Town. This service complements the two long-distance services as set out above.

Goods trains pass through Riversdale and Oudtshoorn stations on a regular basis without stopping. These two stations are also in a much neglected state and maintenance is needed here. Furthermore, many of the railway crossings in Riversdale were found not to be properly signed to warn traffic and pedestrians of oncoming trains (EDM district integrated transportation plan final, 2010, ch3:36).

Figure 53 below presents an illustration of the Eden District rail routes.

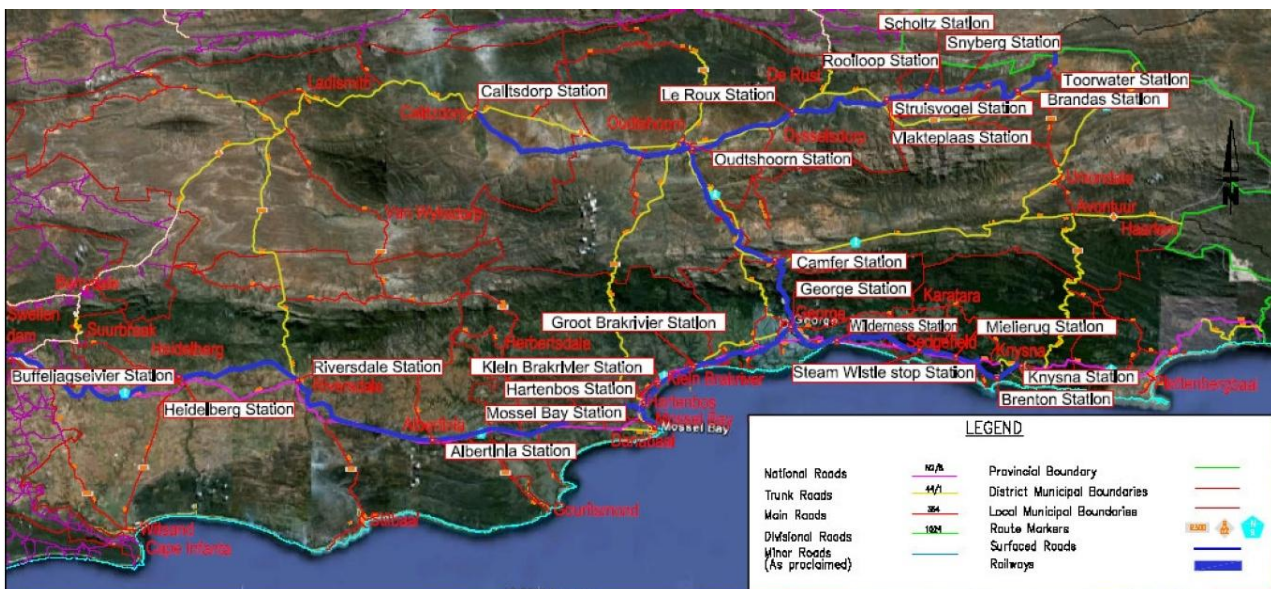


Figure 53: The location of train stations in the Eden district

Source: EDM district integrated transportation plan final, 2010, ch3:39

➤ Freight

The problem below defines the key (though not all) challenges within the freight system as it currently exists as follows:

“The freight system in South Africa is fraught with inefficiencies at system and form levels. There are infrastructure shortfalls and mismatches; the institutional structure of the freight sector is inappropriate, and there is a lack of integrated planning. Information gaps and asymmetries abound; the skills base is deficient, and the regulatory frameworks are incapable of resolving problems in the industry.”

(EDM district integrated transportation plan final, 2010, ch3:40)

The vision of the freight logistics system is to respond to *problems in institutional and regulatory frameworks; infrastructure; ownership; management; skills, financing structures; and methodologies for the freight system* (EDM district integrated transportation plan final, 2010, ch3:40).

This vision requires that Government needs to take a more interventionist approach to regulating the freight system, in order to ensure that the incidental costs of externalities and inefficiencies are not merely passed on to cargo owners, but are correctly allocated

(EDM district integrated transportation plan final, 2010, ch3:40).

Proposed freight projects, according to the provincial freight transportation and logistics plan are:

- ◆ At least one weighbridge needs to be constructed at a suitable position next to the N2 and, if possible, in the vicinity of George, where most activity is currently taking place;
- ◆ A register of hazardous chemical operators must be initiated in the Eden District Municipal area; and
- ◆ Certain routes need to be designated for the transportation of hazardous materials

(EDM District Integrated Transportation Plan Final, 2010, ch3:42-43).

There is a need for first and second economy integration with the development of rural freight transportation systems from a freight system perspective, as well as a need for corridor development along a number of defined critical freight corridors. The freight corridor implementation will focus on localised and specific implementation initiatives that target operational and tactical responses to the challenges facing each corridor (and the nodes along such a corridor) while system-level responses are dealt with holistically on a national level. Such a corridor approach will be integrated across the public sector and at all spheres of Government with private sector involvement in planning and implementation (EDM district integrated transportation plan final, 2010, ch3:41-42).

4.8.4 Roads and traffic

The provincial road network is in good order within the Eden DM, with maintenance usually being done timeously. The same can, however, not be said for the municipal road network. Indeed, there are serious maintenance backlogs for municipal roads, with concomitant poor service provided to the user. Congestion and operational data on roads is not readily available. However, the Louis Fourie Road corridor in Mossel Bay was highlighted as requiring urgent upgrading.

4.8.5 Non-motorised transportation

No formal management system – similar to the pavement management system for roads – exists at any of the local municipalities in Eden for non-motorised transportation facilities. No recording of these facilities for the entire Eden District was covered under this appointment.

Mossel Bay has a layout of pedestrian walkway dated 2005 that was completed as part of the town’s mobility strategy projects. Oudtshoorn has an implementation plan for walkway which is used to steer the small contractor’s programme of this town. Information sets like these are very helpful, but it should be kept in mind that initiatives like these are often steered by political pressure than scientific or factual information. No other tangible information is available on the *status quo* of non-motorised transportation for the other local municipalities in Eden. This lack of information can be noted as a need within the Eden district.

4.8.6 Operating Licensing Strategy implementation strategies

An operating license strategy will only be successfully implemented if it is backed by a vigorous and dedicated law-enforcement process. The following implementation strategies (Table 27) that have been identified for each specific area of the district municipality will result in the creation of a public transportation environment in line with the National Land Transpiration Act, 2009 (EDM district integrated transportation plan final, 2010:8, 9).

Table 27: Summary of OLS implementations strategies

Local municipality	Recommendations/strategies
Eden DMA	<ul style="list-style-type: none"> • Process any new applications received for operating licenses in this area favourably (this is applicable to all existing and future new routes in the area).
Knysna	<ul style="list-style-type: none"> • Legalise all existing operator vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area). • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks, as specified. • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the number of illegal operators has dropped below 10%. • Withdraw all permits that are inactive after the recapitalisation process
Bitou (Plettenberg Bay)	<ul style="list-style-type: none"> • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks as specified. • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the number of illegal operators has dropped below 10%. • Withdraw all permits that are inactive after the recapitalisation process. • Legalise all existing vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area).

Mossel Bay	<ul style="list-style-type: none"> • Legalise all existing operator vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area). • Withdraw all permits that are inactive after the recapitalisation process • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks, as specified. • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the number of illegal operators has dropped below 10%.
Hessequa	<ul style="list-style-type: none"> • Legalise all existing operator vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area). • Withdraw all permits that are inactive after the recapitalisation process • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks, as specified. • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the number of illegal operators has dropped below 10%.
Oudtshoorn	<ul style="list-style-type: none"> • Legalise all existing operator vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area.) • Withdraw all permits that are inactive after the recapitalisation process • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks, as specified. • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the numbers of illegal operators has dropped below 10%.
Kannaland	<ul style="list-style-type: none"> • Legalise all existing operator vehicles that lodge such an application with the Operating Licensing Board (this instruction is applicable to all of the routes in the area). • Withdraw all permits that are inactive after the recapitalisation process • Implement a rigorous public transportation law enforcement campaign on all routes throughout the area, until such a time that the number of illegal operators has dropped below 10%. • No new applications for operating licenses on any route in this area should be processed, unless the operator in question can prove a 10 minute waiting time in the peaks, as specified.

Source: Amended by author, EDM district integrated transportation plan final, 2010:9-11

From a more quantitative point of view, the following sections present key issues and concerns as well as a summary of the local integrated transportation plans in the case of the Eden district municipality; relevant statistics will be included.

4.8.7 Key issues and concerns related to transportation

The following key issues with regard to transportation have emerged from previous studies conducted for the Eden area and reference within the Eden ITP:

- The total population for EDM has been estimated in 2006 at 543 130 (Eden growth and development strategy, 2007) with an average growth rate of 3,5%
- Approximately 18% of the labour force is unemployed and 24% is employed in the informal business sector.
- More emphasis needs to be placed on the development of public and non-motorised transportation.
- The transportation sector contributes 8, 2% towards the gross regional product of the area (GRP estimate for Eden is R15, 5 billion in 2005).
- Little provision is made for disabled people residing in EDM.
- Non-motorised transportation (e.g. walkways and bicycles) is limited and the safe use of these modes must be supported and implemented.
- Farm workers rely, for the most part, on farmers for transportation to and from towns, which means they have limited freedom and choice of transportation.
- Taxi and bus infrastructure is insufficient and the EDM needs upgrading and the provision of proper public transportation.

Learner transportation in the rural areas is unreliable, irregular and unsafe. This service needs urgent attention and should be transferred from the Department of Education to the Department of Transportation (EDM district integrated transportation plan final, 2010, ch2:12).

4.8.8 Summary of local integrated transportation plans in the case of DM

- Eden DMA

Approximately 33% of the population in the Eden DMA travel by foot. The minibus-taxi service is insufficient for serving the public and there is scope for more operating licensing permits to be issued. No ranks exist, but bays with shelters are available. Long-distance buses do not stop in Uniondale – these buses bypass the town on the provincial road. There is a need for NMT facilities and a pavement management system.

- Bitou LM

The population is more prone to travel by car, with \pm 18% using minibus-taxi and \pm 21% travelling on foot. The Plettenberg Bay rank and the Kwa-Nokuthula rank need more space to accommodate the minibus-taxi fleet. The major minibus-taxi routes are over capacity and do not provide proper returns to taxi owners. The OLS suggests that one should process existing operations that are in the system, but not accept new applications. Long-distance buses provide a service to the east and west. NMT facilities need to be addressed; furthermore, a backlog exists in terms of the maintenance of municipal roads.

- Knysna LM

Travel by car is \pm 43%, with travel by minibus-taxi at \pm 36%. Only one formal rank exists in Knysna in the centre of town, with numerous other informal/semi-formal ranks in the residential areas. The town rank urgently needs more space, as it is a holding area at the bottom of town that is still informal. The major minibus-taxi routes are over capacity and do not provide proper returns to owners. The OLS suggests that one should process existing applications that are in the system, but that one should not accept new applications. Various long-distance buses provide a service to the east and west. NMT-facilities need to be addressed; also, a backlog exists in terms of the maintenance of municipal roads. The tourist rail system to George is no longer in service (EDM district integrated transportation plan final, 2010:13).

- Mossel Bay LM

Travel by car is preferred by $\pm 71\%$, with travel by minibus-taxi at $\pm 18\%$. A formal rank exists in the CBD. At Langeberg Mall, minibus-taxis use some of the mall's parking space to queue – proper facilities must still be provided. In the residential areas, various semi-formal and informal ranks exist. The major ranks are located to the east and west. NMT facilities need to be addressed and there is a backlog in terms of the maintenance of municipal roads. The existing Louis Fourie Road that forms a corridor through Mossel Bay experiences capacity problems; more lanes must be added. This road is currently under the authority of the PGWC. A tourist rail service runs between Mossel Bay and George. The goods train servicing the west and east from the Voorbaai depot is operated under its current capacity and could be used to transfer goods currently being transported by road.

- Hessequa LM

$\pm 46\%$ of people in the Hessequa region travel by foot. This number can be ascribed to the short distances between the residential areas and the town centres. Formal ranks exist in Riversdale and Heidelberg. A very large number of illegal minibus-taxis operate in this area. The OLS suggests processing existing applications that are in the system, but not accepting any new applications. Various long-distance buses provide a service to the east and west. A commuter bus service operates between Riversdale, Melkhoutfontein and Still Bay.

Although a parallel service is provided between Melkhoutfontein and Still Bay, both services should be retained due to a “better service” offered to the commuters. NMT facilities need to be addressed; also, a backlog exists in terms of the maintenance of municipal roads. Operational analysis on the major intersection in Riversdale has found that congestion levels were still acceptable. Freight travel through the town and heavy vehicles stopping in front of the business area along the N2 causes friction with business owners.

- Oudtshoorn LM

The bulk of the population ($\pm 44\%$) travel by foot, $\pm 34\%$ by car and $\pm 18\%$ by minibus-taxi. A formal rank is situated in the Oudtshoorn CBD. The rank is experiencing capacity problems and a holding area needs to be investigated. Due to the large number of many minibus-taxis on the routes, the service is not feasible for the owners –vehicles average only about two trips per day.

The OLS suggests processing existing applications that are in the system, but not accepting new applications. Long-distance buses provide a service to the coast and northwards. NMT facilities are progressing well, but more still needs to be done in order to provide a better service. A backlog exists regarding the maintenance of the municipal roads (EDM District integrated transportation plan final, 2010:14).

- Kannaland LM

Most of Kannaland's population ($\pm 81\%$) travel by foot and less than 2% make use of minibus taxis. A formal rank exists in Ladismith, serving the surrounding outlying areas. An informal rank operates in the CBD. The OLS suggests processing existing applications that are in the system, but not accepting new applications. No pavement management system is in place in Kannaland. This is needed as a matter of urgency. Estimates regarding the local roads suggest that the backlog is sizable, and will not be erased with internal funds. NMT facilities are needed in all centres due to the high percentage of people who travel by foot (EDM district integrated transportation plan final, 2010:18).

In summary, these LITPs all show a range of needs regarding the local municipalities in the Eden District Municipality. By means of the implementation of qualitative planning strategies and projects, many of these issues can be addressed. These strategies and projects are shown in Table 26.

Table 28: Generic transportation strategy and projects matrix

Transportation goal	Strategy	Projects
Improve and provide transportation infrastructure	Planning implementation	<ul style="list-style-type: none"> • Prepare business plans and investigate feasibility • Plan, design and construct
Upgrade and maintain all existing Transportation infrastructure	Maintenance	<ul style="list-style-type: none"> • Develop maintenance plans.
Improve and integrate transportation planning	Planning integration	<ul style="list-style-type: none"> • Produce and keep master plans updated. • Have community input in planning documents
Regulate and control public transportation	Planning effective law enforcement	<ul style="list-style-type: none"> • Revise CPTR constantly • Increase law enforcement by improving manpower and equipment and by giving training.
Promote non-motorised and public transportation	Planning implementation	<ul style="list-style-type: none"> • Prepare business plans and investigate feasibility • Plan, design and construct

Source: Amended by author, EDM district integrated transportation plan final, 2010

In summary, this section on the integrated transportation plans of the Eden District Municipality shows that there integrated decision-making does take place, but only until a particular level. This integrated decision-making will lead to an improvement in sustainable development, but as a whole the ITP does not seem to be properly integrated with spatial planning and development. The focus of the ITP is mostly on the statistics of the transportation distribution within the entire district and the relevant transportation issues.

4.8.9 The ITP concerning the SDF

The section below presents a discussion of the spatial development instruments that are integrated with the integrated transport plans of Eden District Municipality within each of the local municipalities. Most of the spatial planning instruments include the spatial development plan; in the case of Bitou, the urban renewal strategies will also receive attention.

4.8.9.1 Bitou local municipality

The Bitou municipality spatial development framework, 2005, has been written on a very strategic level but has very little reference to the hands-on aspects of the future direction of planning. It briefly explains the new node along the N2 national road which would be closer to the medium to low-income residential areas. This would rectify the skew nature of apartheid planning and bring the services closer to the communities which are more reliant on non-motorised and public transportation (EDM district integrated transportation plan final, 2010, ch6:58-59).

The Bitou local municipality urban renewal, February 2006 document identifies various development nodes with renewal strategies. The main strategies are:

- Ring road system to decongest the CBD;
- Create a pedestrian priority zone within the CBD;
- Set up a strategic network of continuous pedestrian surfaces;
- Upgrade taxi rank / market area; and
- Upgrade the Beacon Way corridor.

The “Coming together” urban renewal plan involves the creation of a new town centre closer to the epicentre of the more densely populated and lower-income areas of Kwa- Nokuthula and New Horizons and envisaged social housing areas. This node will complement the existing CBD. The node will include the Bitou municipal offices, Government institutions and so forth.

4.8.9.2 Knysna local municipality

The spatial development framework (SDF) that has been finalised in November 2008 by MCA urban and environmental planners was used as reference for this section.

The Knysna spatial development framework describes Knysna as the primary regional node, with Sedgefield as a secondary node. Rheenendal is seen as a third-order settlement. This section presents an overview of the development proposals pertaining to these nodes and the demands these will make on the transportation or roads systems.

Developable land is one of the main challenges facing the Knysna municipality, since the area has a growing backlog of homeless people. The spatial development framework is the tool that guides planning up to a certain timeframe. The latest SDF was influenced by the provincial spatial development framework which promotes the tightening of the existing urban edges, filling of vacant land and the densification of development. Fourteen action areas are mentioned in the SDF; these could be explored as development options.

Aside from the projects proposed in each action area, a number of projects are highlighted as critical with a view to unlock the desired spatial relationships proposed in the SDF. The purpose of these projects is to give immediate effect to some of the proposals emerging from the SDF.

These projects are very similar to some of the action plans, but are explained in greater detail. These catalytic projects will therefore not be given a higher preference than the action plans and it is proposed that outside funding should be sourced to implement these projects as a whole (EDM district integrated transportation plan final, 2010, ch6:59, 60, 61).

4.8.9.3 Mossel Bay municipality

A number of proposed road linkages have been identified from a range of existing planning documentation relating to the Mossel Bay/Hartenbos urban node in the Mossel bay spatial development framework. It should be accepted the proposed alignments are only conceptual but they do serve to identify a number of future linkages that will most likely be required in order to accommodate the future spatial growth of the Mossel Bay/Hartenbos urban node.

The Mayixhale extension links the area south of the N2 with the potential urban expansion area north of the N2. This extension could possibly include the provision of an access interchange at the N2. The following road infrastructure related proposals have been identified by VELAVKE Engineers as comment to the SDF to be considered in the future planning:

- Access to Hartenbos via Swellendam Road;
- Provision of an access interchange opposite Mayixhale Road; and
- Widening of the Louis Fourie Road from the Marsh Road interchange up to Hartenbos need to be investigated.

- **Proposed traffic modelling study**

In order to assess the impact of the spatial proposals as contained in the SDF, as well as the potential impact of future densification strategies to be implemented, it has been proposed that a traffic modelling study should be undertaken with a view to determine the capacities of the main and collector road system. Given the current rate of development, this is regarded essential so that one can proactively determine potential upgrades or adjustments/extensions that may be required.

Most of the above proposals are contained in a future road master planning for Mossel Bay. This planning has not been workshopped or approved by any stakeholders, but could be regarded as long-term requirements for Mossel Bay.

4.8.9.4 Hessequa municipality

The “Hessequa munisipaliteit ruimtelike ontwikkelingsraamwerk, volume 2” (Hessequa Municipality spatial development framework, volume 2) has been consulted to obtain the relevant development strategies relating to the transportation infrastructure.

As in every planning document, a vision has been formulated in which the underlying goals, policies and a number of strategies are identified. (EDM district integrated transportation plan final, 2010, ch6:62, 63).

4.8.9.5 Oudtshoorn Municipality

The spatial development framework is contained in the Oudtshoorn SDF of 2008. In this document, the future development potential of vacant and underutilised land larger than 1 Ha has been identified. The land is currently in private, state or municipal ownership.

Many Areas in were counted, some having a small impact with others that will have a large impact on the transportation patterns and infrastructure in the town.

4.8.9.6 Kannaland municipality

Very little is said in the EDM SDF about any new development in the near future. No mention is made about public transportation in the preliminary spatial development framework.

The only transportation-related issue mentioned is the access road and internal roads for Vanwyksdorp. In Calitzdorp, heavy vehicles are felt to be a nuisance when they park in the Main Street (EDM district integrated transportation plan final, 2010, ch6:65, 66).

4.9 Spatial development framework of the Eden district municipality

4.9.1 Spatial vision

The Eden IDP 2007 – 2011 has established a long-term vision for the District:

“Creating Eden: Sustainability, health and shared prosperity through partnerships.”

(Eden District Municipality SDF 2009, ch5:33).

District level planning is believed to be a *guide* to decision-making and therefore it should focus on *facilitating* and *coordinating* district-wide development and conservation processes. A district SDF must identify and direct positive energies and opportunities. In short, the role of a district SDF is to provide guidance regarding public and private investment spending around strategic elements, and should facilitate co-ordination between district role-players over the short and medium term in order to achieve long-term goals. The Eden District Municipality is illustrated within figure 54 below.

The primary concern of planning at a district level is sustainable development. At a district scale, sustainable development is underpinned by four primary concerns. These primary concerns are:

- Growth management (achieving a balance between urban development and the environment);
- Economic development (both growth and distribution, poverty alleviation and job creation)
- The provision of social facilities and services (in an equitable manner), and
- Settlement pattern (how these elements play out in space).

(Eden district municipality SDF review 2009:3)

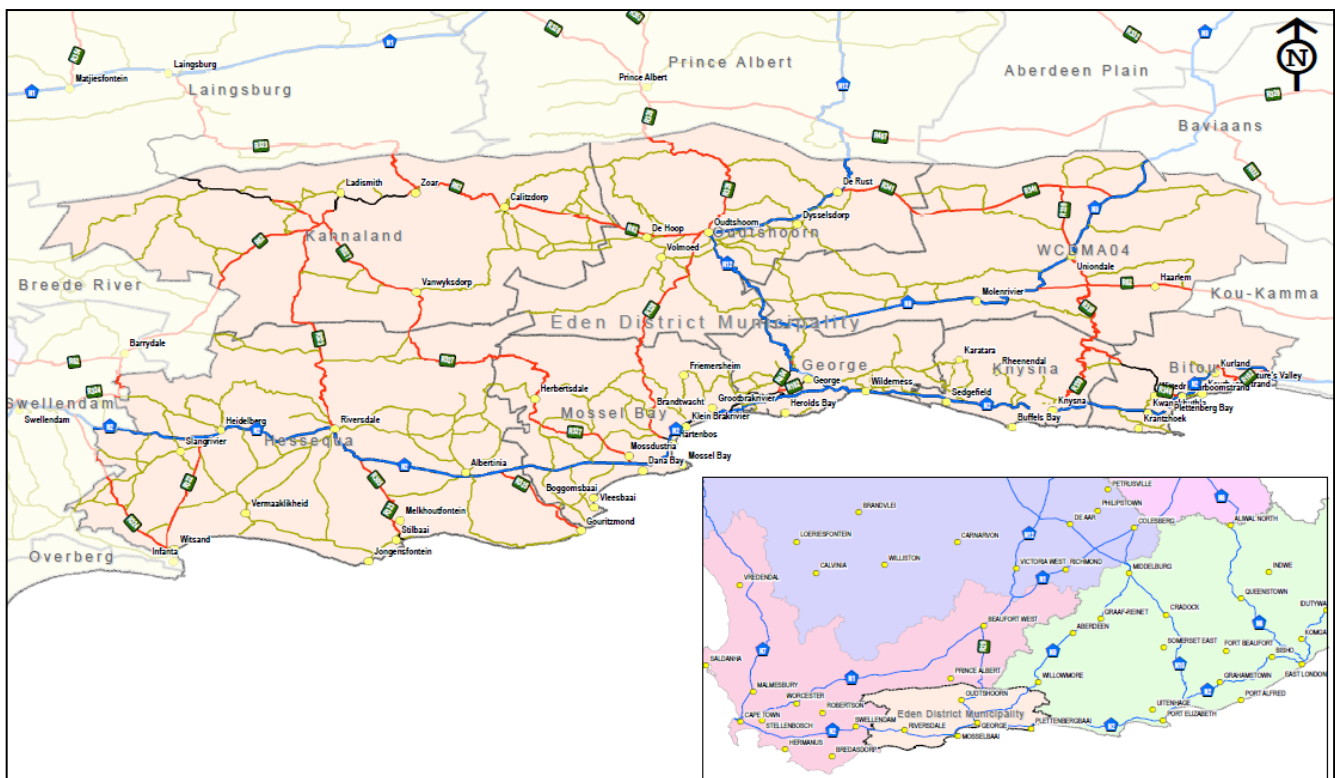


Figure 54: Eden district municipality

Source: EDM mobility strategy, 2011

4.9.2 Objectives

The Eden district municipal integrated development plan 2007 – 2011 has established a set of objectives for the Eden district municipality. These are:

- Conservation of natural resources and assets;
 - Sustainable resource management;
 - Promotion of sustainable agricultural practices;
 - Good rural and urban design and land use practices; and
 - Supporting and developing projects to enable people-centered development
- (EDM Spatial development framework, 2009, ch5:34).

4.9.3 Policy for development along river corridors

River corridors consist of flood risk areas, susceptible to inundation by the 1:100 year recurrence flood, and the ecological buffer area. Determining an ecological buffer for a watercourse is based on an assessment of the ecological status and importance of the water course. Buffers typically vary in width between 10m and 60m. Development and hardening of surfaces within river corridors should be actively discouraged (EDM Spatial development framework, 2009, ch5:40).

General guidelines for development along river corridors

Generally, erecting formal permanent buildings below the 1:100 year flood line are discouraged. New developments within the 1:100 year flood line should be subject to formal acknowledgement by the owner of the flood risk. All buildings should be orientated in such a way so as to allow for surveillance of the water course in order to improve the safety of these areas.

Furthermore, all developments, including fencing and landscaping undertaken within flood risk areas should not impede the natural flooding of the river, and should minimise erosion and pollution of the river. Impermeable structures (such as fences or parking areas) are strongly discouraged.

Potentially suitable activities primary uses

Development within the river corridors should be limited and appropriate. Low-impact activities such as trails and soft landscaping incorporating the natural vegetation should be allowed as primary uses.

Secondary uses

Point-based tourist facilities such as environmental education centres and eco-adventure centres should be allowed, but only subject to strict conditions in order to ensure that the ecological integrity of the river corridor is not negatively impacted upon. Large-scale privatisation of the river front land is not desirable and this notion should be considered when assessing applications

(EDM Spatial development framework, 2009, ch5:40).

4.9.4 SDF conceptual framework

The conceptual framework represents a desired end state and long term and spatial vision for the Eden district municipality

- A network of cities and towns

The concept of a network of cities and towns provides guidance to the Eden SDF since it outlines the role that each settlement has to play in the district so that this role can be enhanced. This, in turn, should promote economic growth. This concept supports the idea that the settlements work together in order to create a whole - in other words, the district itself can be viewed as consisting of an integrated system of regional urban centres, towns, villages and hamlets.

- Networked settlements

The concept of networked settlement involves creating stronger links within the district, in order to facilitate ease of access to markets, services and facilities through a wide range of transportation modes (EDM spatial development framework, 2009, ch3:6).

4.9.5 Settlements and citizens framework

The intention of this framework is to suggest a broad view of how the district should manage the driving forces of settlement change. The following four key driving forces are salient in this regard:

1. Growth areas: where are people going to settle?
2. Economic areas: Where are they going to be employed?
3. Infrastructure: What infrastructure (bulk and transportation) will be necessary to support population and economic growth?
4. Public facilities: where are the services and facilities to support the development of people?

The following two key objectives characterise the settlement and citizen's framework:

Objective 1: Enabling people-centred development

This objective entails focusing population growth in areas that have the ability to meet the social and economic needs if the district addresses the first two driving forces - where settlements will grow and where people will be employed.

Objective 2: Increasing public transportation infrastructure

Increasing the modes of transportation (public transportation, walking, and cycling) available to Eden residents will have a range of positive impacts in terms of access to the economy, improved environments and improved health.

Investment in transportation is costly but it may be effective if the perceived benefits were to match or exceed the cost. Investment in transportation infrastructure needs to be supported by, and should in its turn support economic development and appropriate uses. For example, higher residential densities in an area are important for public transportation to have the number of passengers it needs to be cost-effective. However, environments with high residential densities will likely be congested if varied modes of transportation are not made available (EDM spatial development framework, 2009, ch3:11).

4.9.6 Summary of policies and strategies related to the settlement and citizens framework

- **Densification and integration policy**

The intention of this policy is to promote higher numbers of dwelling units in strategic areas in the district. This is in line with the Western Cape provincial spatial development framework (2009) which promotes average settlement densities of 25 dwelling units per hectare. At present, densities are on average between 9-12 dwellings/ha in formal settlements. These numbers are regarded as low.

There are benefits associated with higher densities, including:

- Viability of and access to social facilities, economic opportunities and public transportation;
- Increased opportunities for social interaction and integration;
- Savings in land and infrastructure costs; and
- Conservation of the regional landscape and scenic beauty.

The initial focus of achieving higher densities and increased development should be directed towards areas of high economic potential. In the case of the Eden district, these are in the regional and major urban centres as seen Figure 55. At the town level, higher densities should be concentrated in specific areas so that these can benefit from and contribute towards the settlements' functioning. Key considerations include access to transportation, open spaces and economic activity. It is recommended within the Eden District Municipality that the provision of higher densities within settlements should be accompanied by revisions in terms the planning for infrastructure services in local municipalities. (Eden District Municipality SDF 2009, ch3:13).

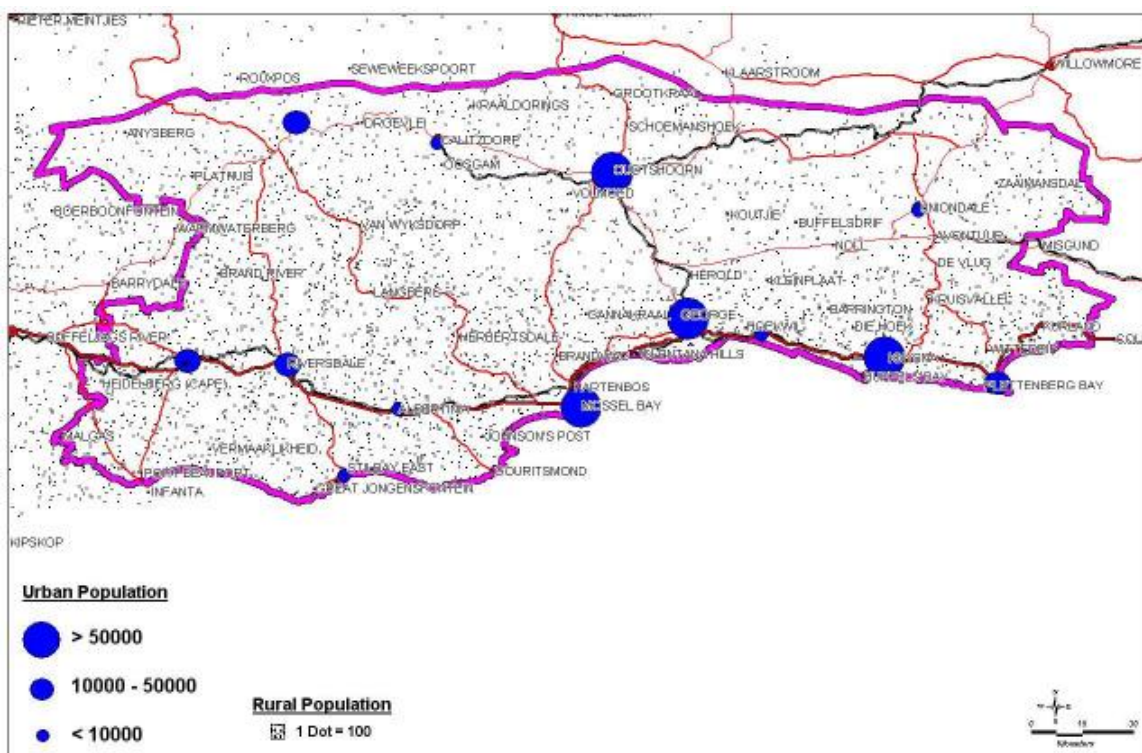


Figure 55: Settlement of the Eden district municipality

Source: EDM spatial development framework, 2003, ch1:58

- Focus population growth in regional urban centres and major urban centres.

The bulk of government spending on fixed infrastructure should occur within five towns in order to meet the needs of the majority of the residents of the Eden district. The five focus settlements are:

- Oudtshoorn,
- Mossel Bay,
- George,
- Knysna, and
- Riversdale

These settlements are the economic drivers of the region and as such offer the best access to the widest range of social and economic opportunities.

- Develop a secondary road network.

The Eden district should prioritise the development of a secondary road network in order to:

- Provide an alternative transportation route when the primary route is unavailable/undesirable, and
- Improve access across the district.

- Promotion of non-motorised transportation.

The development of an inter-settlement rural non-motorised transportation system should be investigated as part of the vision to create connected networked settlements. The development or revival of cycle routes, pedestrian walks and rail transportation should be explored (Eden district municipality SDF 2009, ch3:13, 14, 15).

4.9.7 Transportation

The transportation industry is a relatively small economic contributor to the GGP, but it does employ a significant number of people. The total number of people working in this industry is 4 424.

Regional public transportation is mainly provided by the taxi industry and a limited number of subsidised bus routes exist. The bus network is also widely dispersed throughout the region, resulting in very low levels of service.

Approximately 800 individual taxis operate in the region with the majority of vehicles operating in the larger centres of George, Oudtshoorn, Plettenberg Bay and Knysna. Facilities are generally in short supply or of a low standard and ranks need to be upgraded.

The bus operations in the region can be classified as coach operators and commuter/learner operators. Coach operators cater for mass organised as well as individual tourists. Commuter/learner operators work on specific routes according to time-tables and operate on a contract or private hire basis (EDM spatial development framework, 2003, ch1:52).

Spoornet is the main railway operator in the region with tourist services like the Outeniqua Choo-Tjoe, Rovos Rail and Union Limited Steam Rail Tours also providing a service along the Garden Route. There is, however, no rail service between Knysna and Plettenberg Bay.

The Choo-Tjoe is a recreational and tourist attraction, and transports on average 9 200 tourists per month. There is also a diesel tourist train, which operates between Oudtshoorn and George.

George Airport is regarded as the fastest growing airport in South Africa with more than 133 000 passengers departing from this airport during 2000. This figure grew to 137 000 during 2001. The airport provides services to both passengers and freight to and from the region. The airport at Plettenberg Bay also forms part of the national airways network.

Sabena Nationwide, South African Airways, S.A. Airlink and South African Express are the major operators using the above airport facilities. The George Airport handles more than 900 000 tons of airfreight per year (Outeniqua SDF, 2000). Oudtshoorn and Riversdale both have good landing strips (EDM spatial development framework, 2003, ch1:52).

Below in figure 56 is illustrated the Eden District Road network to show the above mentioned information.



Figure 56: Eden district municipality road network

Source: Eden district municipality SDF 2009, ch3:5

4.10 Results of interviews

4.10.1 Introduction

The previous section provided an overview of the study areas of the three municipalities of Hermanus local municipality, Cape Town Metropolitan municipality and the Eden district municipality. This section sets out to discuss and illustrate the results of the in-depth interviews conducted with the various role-players (see Appendix B for the questions asked during the interviews). In total six in-depth interviews were conducted with key role-players

from Hermanus, Cape Town and Eden District Municipality. The interviewees were sampled through the fact that they were the leading and most qualified role players concerning each integrated transportation plan (ITP) and spatial development framework (SDF).

4.10.2 Results

The results/outcomes of the in-depth interviews and the interpretations of these are shown in Table 29 and Table 30 below.

Table 29: Results of the interviews

	Results of interviews
Integration between transportation planning and spatial development/ planning	<p>Most of the respondents were of opinion that there is integration between transportation, although this is not at 100%. Mostly, integration is seen in reality but does not feature in the plans and frameworks. One of the causes that prevent full integration is the fact that each document has to be upgraded on a regular basis. Other problems are that in some cases (for example Cape Town metropolitan) it is hard to achieve full integration because of the size of the area that the municipality must service.</p> <p>In terms of vertical and horizontal integration, most of the respondents felt that there is a measure vertical integration; however, they felt that the approach of the municipalities lends itself increasingly to horizontal integration.</p> <p>Regarding the extent to which planning instruments relevant to transportation and development live up to their stated goals and objectives, respondents agreed that the instruments mostly do not measure up. However, respondents indicated that these are better than they used to be and that the future plans and frameworks will help to attain the goals and objectives in future.</p>
Public transportation and its orientated development	<p>The level of service regarding the supply of public transportation to the communities is according to the respondents, very poor (except in the larger cities). Minibus taxis constitute the largest sector of public transportation.</p> <p>In terms of the rapid bus system, the respondents agreed that this system has many advantages; however, some felt that the system needs better integration with the connecting development and movement routes where it operates in order to provide a better service to the community. The respondents from Eden and Hermanus agreed that a similar transportation system would be advantageous in their areas.</p> <p>With regard to rapid bus transit, respondents agreed that an international integrated multimodal transportation system can be incorporated with a view to improve transportation in communities where it is relevant.</p> <p>Other salient points regarding transportation were mentioned. One of these is that the railway network needs to be upgraded; this would promote the use of this mode of transport. Secondly, the point was made that transportation should integrate more with the existing developments; such an approach will help to improve transportation.</p>
Environmental management integration	<p>In terms of environmental legislation, the respondents said that the legislation and policies were strictly observed. However, in most cases the environmental legislation is felt to be a constraint to sustainable spatial development and transportation plans because of the environmental management structures working outside of their mandates.</p> <p>Environmental management is important for each of the study areas, but the feeling was that it should not overwhelm the importance of sustainable</p>

	development.
Nodal and corridor development	<p>Most of the respondents were of opinion that a nodal and corridor approach would be very beneficial for their regions. In most of the areas, this approach is already being implemented.</p> <p>According to some of the respondents, such an approach would lead to a better public transportation system that can, in turn, lead to better investment in parallel corridors this would then also give rise to better opportunities for development</p>
Governmental sphere integration (Institutional Integration)	<p>The respondents were divided on the point of governmental sphere integration. Half of the respondents agreed that there is integration (but that it only occurs in a 'bottom-up' fashion) while the other half believed that there is no integration although there have been attempts from the municipalities towards integration.</p> <p>The largest issues on which the responders agreed are the shortage in funds and the notion that the provincial sphere does not take the local conditions and context into account when it comes to planning instruments, frameworks, policies and legislation.</p>
Other	<p>The respondents felt that the time it would take for a transportation or development project to be approved varies according to the concerning factors. These factors include the scale of the project, the time it takes for the EIA to be done, and whether the project is urban or rural.</p> <p>Funding was felt to be in short supply by all the respondents. They felt that often the prioritisation of other projects caused funds to not be allocated for use in transportation and spatial development planning.</p> <p>In most of the municipalities, the respondents felt that the majority of funds came from the community/tax payers. Some of the respondents said that another source of funds is the national sector but this source was felt to be lacking.</p> <p>The respondents believed that more involvement from the private sector would benefit spatial development and transpiration planning. For example, investment in corridors was mentioned; but it was felt that this involvement should be regulated by the municipality in order to ensure that the private sector does not abuse this level of involvement; furthermore, it was felt that municipalities are better acquainted with the planning processes that proceed through the municipal system.</p>

Source: Own construction, 2012

Table 29: Interpretation of interview results

	Interpretation
Integration between transportation planning and spatial development/ planning	<p>According to the respondents, there is integration in reality but not on the level of planning: there is still a lack of integration between transportation plans and the spatial development instruments.</p> <p>One of the most pressing issues that prevent the desired level of integration is the size of some of the study areas. Here, a solution could be to divide the large areas into smaller service areas and work from the 'bottom-up' and from the 'top-down' towards integration.</p>

Public transportation and its orientated development	<p>From the interviews it was found that in the study areas a great need exists for improvements to public transportation. The implementation of a multi-modal transportation system is a option towards a solution. The transportation movement system should integrate better with the existing infrastructure/development; this would help to fulfil the need of the communities for transportation.</p> <p>There is a need for an upgrade of the rail network as an additional and very useful mode of transportation. This mode of transportation could take a great deal of traffic off of the roads to alleviate congestion and decrease environmental pollution.</p>
Environmental management integration	<p>From the comments of the respondents one can deduce that too much emphasis is placed on observing and enforcing environmental legislation and the management thereof.</p> <p>This often leads to the unnecessary impediment of development and transportation planning; a solution would be to clarify the extent to which environmental management may impede on development.</p>
Nodal and corridor development	<p>A nodal and corridor development approach would be beneficial to all three study areas. This approach promotes integration of transportation and spatial development/planning; it would also improve the movement systems of the municipalities.</p> <p>Most of the municipalities are already implementing this nodal and corridor development approach.</p>
Governmental sphere integration	<p>The integration of governmental spheres is an issue in the municipalities. It is apparent that there is an attempt to achieve an ‘bottom-up’ integration from the side of the municipality, but there is a lack of a ‘top-down’ integration from the national side.</p> <p>The most pressing issue is that the national sphere/level and the provincial sphere/level does not always integrate. Also, it is felt that government does not take local conditions and contexts into account. This issue could be improved by a ‘top-down’ approach from the provincial and national levels.</p>
Other	<p>The lack of funding is a salient issue as it is felt that insufficient funds impede sustainable development and transportation.</p> <p>The sources of funding should prioritise development and transportation, because the improvement of these sectors can lead to many benefits including the increased involvement of the private sector and an increase in economic growth for all municipalities.</p>

Source: Own construction, 2012

4.11 Conclusion

The empirical research findings and the accompanying interviews of each of the role-players in the ITPs and SDFs of each municipality have led to the final stage of this chapter which presents a review of the findings as well as the final conclusions and recommendations.

4.11.1 Main results of empirical review process

This assessment is based on the above empirical study and the accompanying interviews with each role-player. The assessment has indicated a number of challenges concerning spatial development and transportation within the South African context.

In a negative sense, South African planning can be characterised by:

- Fragmented, unequal and incoherent spatial planning and land use management systems;
- Impediments in investment in land or corridor development;

- Failure to spatially address the segregated and unequal spatial patterns inherited from apartheid;
- Failure to balance the country's socio-economic needs with those of environmental conservation;
- Lack of coordination, especially across sectors and municipal borders;
- Very little implementation of rural public transportation;
- Failure to properly implement local political structures;
- Poor alignment of policies between local, regional and national level;
- Failure to reduce the dependency on motor cars/ private transportation; and
- Increase in unchecked urban sprawl (and thus a move away from densification).

After looking at the negative points arising from the empirical study, the matrix Table 29 below illustrates the summary of the ITP and SDF of each of the study areas in relation to the relevant departure points that were discussed in the literature study.

Table 30: Matrix summary of ITPs and SDFs relating to departure points

Name of framework/ planning instrument and point of departure	Relevance for integration			
	Proposes and/or supports integration of frameworks	Promotes public transportation	Proposes the use of a node & corridor approach	Prioritises environmental conservation and integration with planning instruments
Hermanus local municipality				
Overstrand municipality integrated transportation plans		X		X
Overstrand municipality spatial development framework	X		X	X
Cape Town metropolitan municipality				
Cape Town metropolitan municipality integrated transportation plan		X	X	X
Cape Town metropolitan municipality spatial development framework	X		X	X
Eden district municipality				
Eden district municipality integrated transportation plan		X	X	X
Eden district municipality spatial	X		X	X

development framework				
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Source: Own construction, 2011

4.11.2 Discussion of the empirical review process

In view of the above matrix, a number of correlations can be drawn between the departure points, the integrated transportation plans and the spatial development frameworks. This should take place by means of vertical and horizontal alignment processes and practices (see Figure 55). Overlays of the SDF and ITP maps should be used to show the spatial and development conflicts.

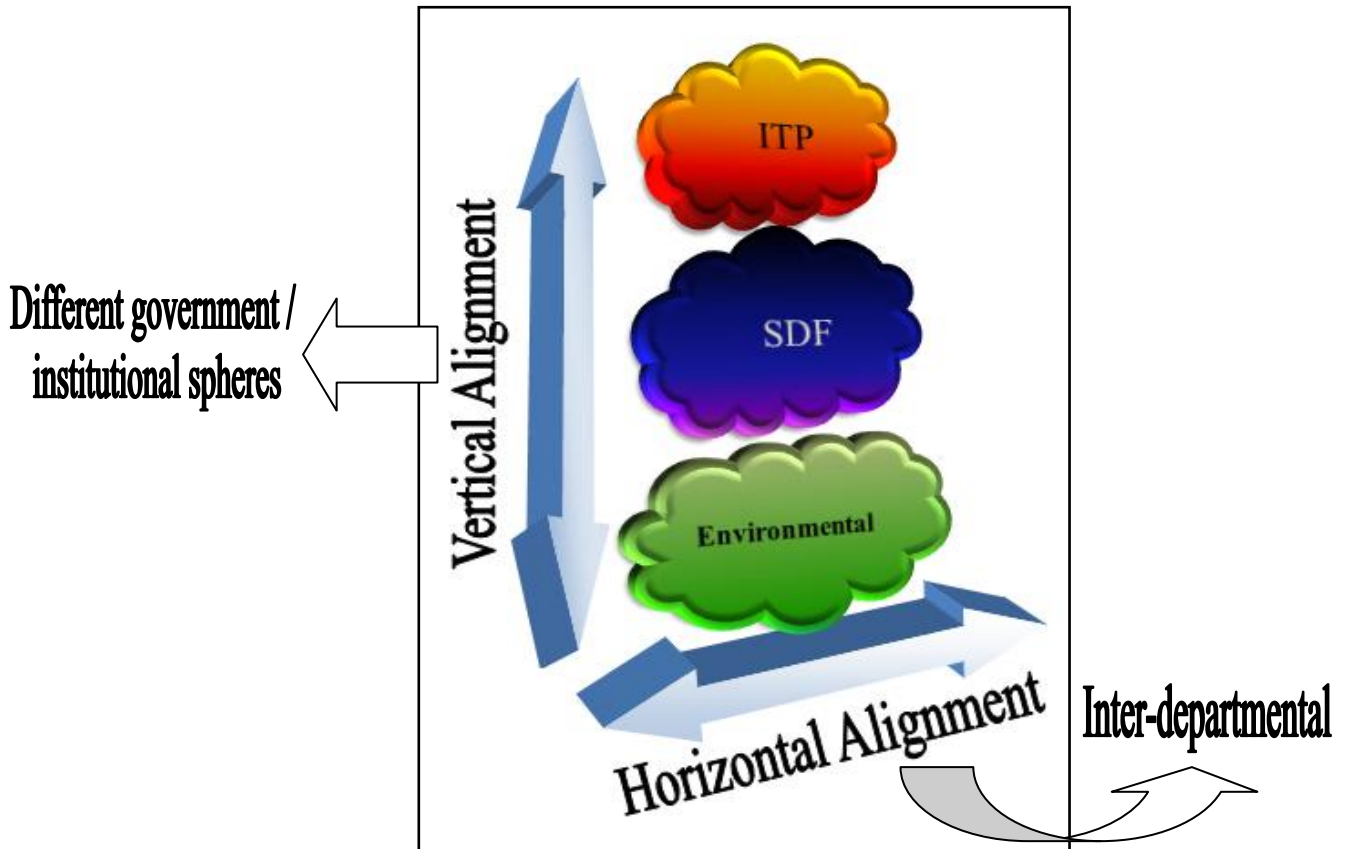


Figure 55: Vertical and horizontal alignment processes

Source: Own construction, 2012

As can be seen from the table/matrix above all the integrated transportation plans lack proper integration of transportation and development instruments. From the interviews it could be seen that this state of affairs can mainly be ascribed to the lack of integrated decision-making between the transportation and development departments. There also seems to be insufficient integration of the different spheres of Government within the local, provincial and national plans and frameworks.

In terms of the SDFs of Eden and Cape Town, very little is done to promote a public transportation system that could render a service to low-income groups. In reality, public transportation in the rural areas is sorely lacking.

The implementation of nodal and corridor development also seems to be absent from the integrated transportation plans in the Hermanus municipality. This could be the case because the town is forced to develop within a corridor situated between a mountain and the coastline. A measure of densification could be used in this area in an attempt to prevent urban sprawl, but this could not take place on a large scale, since such densification would have a negative impact on the ‘old-town’ sense of heritage of this tourism-based town.

The conservation of the natural environment is, in all the municipalities it has been stated in the ITP’s and SDF’s that it is of paramount importance because this aspect is felt to be part and parcel of the rich heritage of each area. Examples are the iconic Table Mountain in Cape Town, the special local ‘fynbos’ of Eden district and the whale breeding ground heritage of Hermanus.

From the discussion of the interviews the sentiment emerged that over-emphasis on environmental preservation may go too far and impede development; this can happen if the planning powers lack proper understanding of the benefits of development and transportation projects to the whole of the community.

A number of planning suggestions/recommendations have been developed by myself in order to address negative points that emerged from this study in terms of planning in the South African context:

Table 31: Positive argument, issues/guidelines

South African context	
Spatial planning and land use management systems	<ul style="list-style-type: none"> • Promote investment in land: development • Establish sufficient certainty in the land market • Address the segregated and: unequal spatial patterns inherited from apartheid
Environmental integration	<ul style="list-style-type: none"> • Balance the country’s socio-economic needs with those of environmental conservation • Reduce pollution through shorter travel trips • Improve the containment of urban development/sprawl
Node and corridor approach	<ul style="list-style-type: none"> • Integrate land use and transportation • Increase the use, efficiency and quality of public transportation • Increase/maximise accessibility • Increase/maximise mobility • Increase modal choice • Increase modal integration • Reduce peak travel times • Reduce transportation costs for the poor • Attract new investment to a municipal area • Improve the efficiency of infrastructure.

	<ul style="list-style-type: none"> • Link to the global economy through international investment • Alleviate poverty and reduce inequality and social exclusion • Improve access to social services • Reduce the need for transportation and ensure more sustainable urban development
Intergovernmental sphere integration	<ul style="list-style-type: none"> • Promotion of the role of the local political structures • Improve coordination across sectors and municipal borders • Creating overarching co-ordination structures • Political structures maintain grassroots contact • Equip governance structures with appropriate powers • Aligning, rationalising or reconciling spatial policies at the regional level with those of the national level
South African transportation orientation	<ul style="list-style-type: none"> • Government policy calls for an increase in public transportation usage • Producing positive environments that are at a human scale • Providing high levels of mobility • Balancing the needs of all transportation users • Improving the implementation of a public transportation system

Source: Own construction, 2012