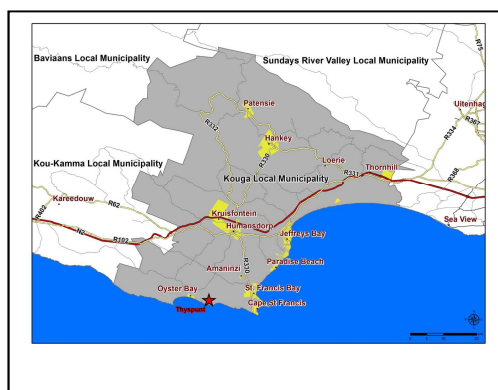
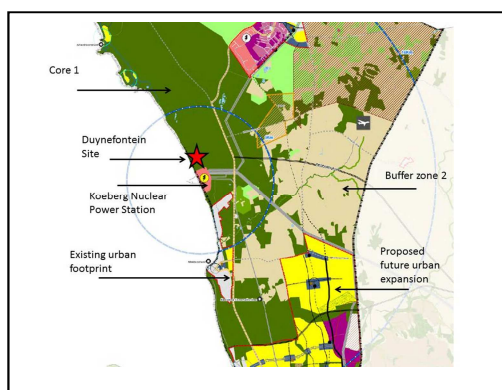


ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED NUCLEAR POWER STATION ('NUCLEAR-1') AND ASSOCIATED INFRASTRUCTURE

TOWN PLANNING ASSESSMENT



Town Planning and Development Perspective Report

Prepared for: GIBB Pty Ltd



On behalf of: Eskom Holdings Ltd



DECLARATION OF INDEPENDENCE

I, Carl Erasmus as duly authorised representative of GIBB (Pty) Ltd, hereby confirm my independence as a specialist and declare that neither I nor GIBB have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which GIBB was appointed as environmental assessment practitioner in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), other than fair remuneration for work performed, specifically in connection with the Town Planning Assessment for the proposed conventional nuclear power station ('Nuclear-1'). I further declare that I am confident in the results of the studies undertaken and conclusions drawn as a result of it – as is described in my attached report.



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Registration(s): Pr Pln A/1823/2014

DOCUMENT SUMMARY

GIBB Urban and Rural Planning was appointed by Eskom Holdings (SOC) Limited (Eskom) to investigate the potential impacts of the proposed Nuclear-1 power station on town planning related matters at each of the three alternative sites (Duynefontein, Bantamsklip and Thyspunt) in response to comments received from the Department of Environmental Affairs (DEA) received on 25 January 2013. The comments confirmed the need for a town planning specialist study to undertake consultation with the Kouga Local Municipality, Overberg Local Municipality and Cape Town Metropolitan Municipalities and to compile a town planning specialist report. The aim of the report is the assessment of externalities associated with any possible direct or indirect restriction on land use.

This report is as such divided into two sections. The first section of the report is a documentation of information gathered from desktop investigations and meetings with the relevant municipalities. The first section therefore discusses the following:

- Confirmation of site locations, property descriptions and all relevant information of properties owned by Eskom;
- Description of the proposed sites and surrounds in terms of its physical location; and
- Relating the site and the proposed development to relevant policy that guides the future development of the region that could impact on the proposed sites.

The second section of the report focuses on the site evaluation. Information received from desktop sources and interviews was analysed to determine the impact of the proposed development on the future planning of the area in which the sites are located. The analysis of the site includes a SWOT analysis and a site evaluation matrix.

SWOT Analysis and Site Evaluation

The aim of this section of the report was to evaluate the sites with respect to their regional and local context, property information and the applicable policy environment by completing a SWOT analysis and developing criteria against which the sites will be analysed. The aim of the analysis is to assist in the decision making process for identifying the site with the least constraints from an urban planning perspective.

Subsequent to the SWOT analysis is the evaluation of the sites in terms of development criteria in order to assist in determining the least constrained site (from a land use perspective) for the placement of the Nuclear-1 facility. The approach taken was to evaluate and measure the sites by making use of the development criteria in order to systematically determine a preferred site.

The SWOT analysis and evaluation of the sites were therefore informed by the regional and local context, property information and the applicable policy environment as described in the report and also by the larger body of work produced as part of the Nuclear-1 Application for Environmental Authorisation. This body of work includes not only the main Environmental Impact Assessment Report and accompanying records of public participation, including submissions received from Interested and Affected parties, Stakeholders and the public at large, but also reports prepared by the Nuclear-1 appointed team of specialists. Of particular importance to the author and to the current study are the findings and recommendations from the following reports:

- Transportation Specialist Study (Appendix E25 of the Final EIR); and
- Social Impact Assessment Study (Appendix E18 of the Final EIR).

The SWOT analysis was further informed by the comments received from Local and District Municipalities such as the City of Cape Town.

The intention of the SWOT analysis was therefore **in summary** to identify strengths, weaknesses, opportunities and threats of each site (see the table below). The analysis gave an indication of the critical issues that needed to be addressed as well as identified the positive aspects of each site should the proposed Nuclear 1 facility be located at any of the three sites.

Duynefontein

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> Located adjacent to the existing Koeberg power station (existing infrastructure available such as civil services, within an existing conservation/protected area, etc.). Good road/ vehicular access. The possibility exists to construct an alternative access to the proposed Duynefontein site, if required. The site is located in close proximity to urban amenities such as housing, social facilities and a potential workforce. Existing Emergency Plan with infrastructure. 	<ul style="list-style-type: none"> The site is located in the direction of future growth direction of the city. Locating the facility at the Duynefontein site may impact on the existing transport model/ evacuation model put in place for the Koeberg power station. Amending the approved plan to accommodate the proposed Nuclear 1 will take a lot of time. Located adjacent to the existing Koeberg Power Station (national perspective – wanting to spread the generation to more than one area around South Africa).
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> Infrastructure present in close proximity to the proposed Duynefontein site. Cost of upgrading may be more cost and time effective than to construct new facilities required. The area around the nuclear facility will be used for conservation purposes. It may be utilized for recreational purposes such as hiking and mountain biking trails and may accommodate game. 	<ul style="list-style-type: none"> Future urban development around or in close proximity to the proposed Nuclear 1 site is a risk that will need to be managed. The current trends indicate that urban development will only increase in the area. Cost of upgrading services to comply with National Nuclear Regulators regulations may be costly, especially when the facility is located in close proximity to the urban development.

Bantamsklip

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> Upgrade of water infrastructure in the area may be beneficial for the proposed nuclear facility. The proposed Bantamsklip site is located in a rural part of the country and the expansion of existing towns is limited according to the applicable SDF. Gansbaai and Pearly beach are small towns and is located to the northwest of the site and along the coast. Development to the south-west is limited, which may be beneficial from a risk management point of view. 	<ul style="list-style-type: none"> The site is a somewhat isolated and far from urban amenities. The site is located approximately 2 hours from the Cape Town CBD and 1 hour from Hermanus. Gansbaai (30 minutes' drive) and Pearly beach (10 minutes' drive) are the closest towns to the site. The site can only be accessed via the R43 and from Bredasdorp in the east. Therefore limited opportunities exist for alternative accesses to the site. Presence of an existing workforce not located within close proximity to the site.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> The construction of the facility at the proposed Bantamsklip site will generate economic opportunities in the area as a result of an increase in population of a skilled workforce. The area around the nuclear facility will be used for conservation purposes. It may be utilized for recreational purposes such as hiking and mountain biking trails and may accommodate game. 	<ul style="list-style-type: none"> Second or alternative access to the site is problematic at this stage and may be expensive to implement. The resulting increased population will put added pressure on service delivery in the towns that will house the project's workers, which may prove to be unfeasible.

Thyspunt

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • The site is situated on undeveloped land which therefore presents limited urban restructuring. • The site is within 10km of Oyster Bay, Cape St Francis and St Francis Bay, and within 20km of Humansdorp which is one of the largest activity centres within the region. • It is therefore in the vicinity of social services and infrastructure, as well as a labour force. • There is proper access to the site. • The adjacent land uses are compatible with a nuclear facility. 	<ul style="list-style-type: none"> • The Kouga region is already functioning at full capacity regarding engineering services, including power, water and sanitation. • There is currently only one access route to the site which makes it a lengthy trip to reach the site.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • The site presents the opportunity for additional access routes. • The site is suitably situated for the proposed nuclear plant to have a minimal visual impact on the surrounding environment. • The adjacent areas can be developed as game farms or uses as such, which will support the region's economy. • Additional jobs may be created as spin-offs from training personnel and facilitating social development. 	<ul style="list-style-type: none"> • The resulting increased population will put added pressure on service delivery in the towns that will house the project's workers, which may prove to be problematic.

Evaluation Matrix

Subsequent to the SWOT analysis an evaluation of the sites in terms of development criteria was conducted in order to assist in determining the preferred site for the placement of the Nuclear 1 facility (see the table below). The approach taken was to evaluate and measure the sites by making use of the development criteria in order to systematically determine a preferred site.

The three pillars of sustainability, according to the Brundtland Commission, are the social environment, economic environment and natural environment. The concept of sustainability has evolved to now acknowledge the role of underlying governance structures. According to a study by the United Nations in 2013, "achieving sustainability in cities can be conceived by the integration of four pillars: social development, economic development, environmental management, and urban governance. In the town planning profession the notion of sustainability is taken another step further by recognising the provision of services (roads, water sewer, etc.) as well as institutional infrastructure such as schools and health facilities. Recognising the dynamic nature of sustainability is critical to development. Therefore the above-mentioned development pillars were used in evaluating the potential project sites. These pillars are used in the preparation of spatial development frameworks or development strategies informing the future growth of cities. To summarise, the town planning report took the following into consideration:

- The social environment;
- The economic environment;
- The physical environment:
 - Natural environment;
 - Built environment (provision of services); and
- The Institutional environment (governance, schools, health facilities, etc.)

The development pillars are therefore the departure point for the establishment of evaluation criteria applicable to the specific context of the project. As a result, evaluation criteria applied to the Nuclear-1 project were centred on ensuring an evaluation in terms of both sustainability principles as well as the attributes of the sites and their surrounding socio-economic and biophysical environments. The choice of specific criteria used within each pillar is in line with criteria for a project of this nature and is determined by the experience of the specialist within his field of study. This enabled a thorough analysis of the possible land use impacts of the proposed Nuclear 1 development on the surrounding areas. This methodology was followed for each of the potential sites. **It must be noted that the purpose of this analysis was to determine a physical land development footprint impact and not to consider the potential technology impacts.**

Evaluation Criteria		Scoring		
Institutional				
Availability of institutional (municipal) infrastructure		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt		3	
Economic				
Proximity of existing labour force ***		10km (5)	20km (3)	30km (1)
	Duynefontein		3	
	Bantamsklip		3	
	Thyspunt	5		
Social				
Proximity of resident population		5km (0)	10km (3)	20km (5)
	Duynefontein		3	
	Bantamsklip			5
	Thyspunt		3	
Distance to urban services		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt	5		
Physical				
Presence of bulk services		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt	5		
Within the expected growth path of the region		Y (0)	N (5)	
	Duynefontein	0		
	Bantamsklip		5	
	Thyspunt		5	
Compatible surrounding land use		Comp (5)	Non comp (0)	
	Duynefontein	5		
	Bantamsklip	5		
	Thyspunt	5		
Accessibility by quality road		5km (5)	10km (3)	20km (0)
	Duynefontein	5		
	Bantamsklip	5		
	Thyspunt	5		
Complexity of transport route upgrades		Not Complicated (5)	Moderate (3)	Very Complicated (0)
	Duynefontein	5		
	Bantamsklip			0
	Thyspunt		3	
Potential for additional access*		Y (5)	N (0)	

Duynefontein	5		
Bantamsklip		0	
Thyspunt	5		
Potential for seamless integration of facility (visual, noise/ smell impact)	Y (5)	N (0)	
Duynefontein	5		
Bantamsklip	5		
Thyspunt	5		
Total			
Duynefontein			46
Bantamsklip			37
Thyspunt			49

* Note: Potential for additional access refers to ease of access to site from existing road infrastructure, furthermore it refers to additional access roads to cater for traffic require for the Nuclear Power Station.

** Please note that the numbers in the table above are indicative numbers and not statistical."

*** Please note that labour force refers to unskilled and semi-skilled individuals.

The above table of criteria indicates Thyspunt as the site with the highest score, therefore being the site with the least constraints from an urban planning perspective for the proposed Nuclear-1 facility.

Conclusion and Recommendation

This study therefore aimed to undertake consultation with the Kouga Local Municipality, Overberg Local Municipality and Cape Town Metropolitan Municipalities, to compile a town planning specialist report and assess externalities associated with any possible direct or indirect restriction on land use as result of the possible location of Nuclear-1 at any of the three identified sites.

The table below summarises the land use impact of Nuclear-1 on the various sites in terms of:

- the direct impact on land use;
- indirect impact on land use;
- compatibility with local planning instruments as polices; and
- the impact of the facility in case of emergency.

In terms of the outcomes of this analysis, the context provided by the SWOT analysis and the evaluation provided by the Matrix it is clear that the Thyspunt site with the highest score, is therefore the site with the least constraints and is recommended from an urban planning perspective for the proposed Nuclear-1 facility

Land Use Impact

	Duynefontein	Bantamsklip	Thyspunt
Direct impact on land use E.g. the impact of the nuclear site as well as the emergency planning zones on urban expansion.	<ul style="list-style-type: none"> The proposed development may have an impact on future development of the region i.t.o. land that can be utilised for future development. Areas around the site will need to be protected, densities may need to be lower than if the development was not there and infrastructure upgrades will be required, especially roads. 	<ul style="list-style-type: none"> The proposed site is not in the growth path of future urban development. The impact of urban expansion will be limited due to the rural character of the towns. Growth of towns as a result of the Nuclear 1 facility being located at the proposed Bantamsklip site will need to be managed and directed to areas where development and expansion can be accommodated. 	<ul style="list-style-type: none"> The proposed site is not in the growth path of future urban development. Growth and developments of nearby towns will have to be managed to comply with the restrictions and regulations concerning a nuclear facility in the vicinity.
Indirect impact on land use	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will not have a dramatic impact on services and facilities (indirect land uses) required to sustain them as will be the case with the Bantamsklip and Thyspunt sites. This only take into account the increase in population and not the impact of on existing policies as result of the existing Koeberg Power Station. 	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will have a dramatic impact on services and facilities required to sustain them. Especially in an area such as Gansbaai and Pearly Beach that has an existing population of approximately 11 000 and 1500 people respectively. 	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will have a dramatic impact on services and facilities required to sustain them in areas such as Humansdorp.
Compatibility with local planning instruments and policies	<ul style="list-style-type: none"> The Nuclear 1 facility is not specifically mentioned in the Municipal SDF, but existing surrounding land uses are compatible with proposed Nuclear-1 land use. 	<ul style="list-style-type: none"> The Nuclear 1 facility is not specifically mentioned in the Municipal SDF Surrounding land use is compatible with the proposed Nuclear 1. 	<ul style="list-style-type: none"> The Nuclear 1 facility is only briefly mentioned in the Kouga SDF. Surrounding land use is compatible with the proposed Nuclear 1.

	<ul style="list-style-type: none"> • There are some conflicts with future land use as the site is located within the growth path of the city. If the proposed development is implemented, this may have an impact on the future growth of the city i.t.o. urban form (densities allowed, etc.) and the existing risk management/ evacuation model. • There are legislative processes in place that will require for the submission of an application to the Municipality to obtain the rights for the proposed land use. 	<ul style="list-style-type: none"> • The future planning suggests that the proposed use could be accommodated on the proposed site. • There are legislative processes in place that will require for the submission of an application to the Municipality to obtain the rights for the proposed land use. 	<ul style="list-style-type: none"> • The future planning suggests that the proposed use could be accommodated on the proposed site. • There are legislative processes in place that will allow for the submission of an application to the Municipality to obtain the rights for the proposed land use.
Impact in case of emergency	<ul style="list-style-type: none"> • There is existing urban development around the proposed site that will be impacted upon, especially to the south and east of the site. • The site is located adjacent to an existing operational nuclear power plant. 	<ul style="list-style-type: none"> • Limited development exists around the site and the impact will be less than in Duynefontein due to the rural character of the Bantamsklip site. • The time it will take to evacuate people around the site will be less than in the case of Duynefontein. There is not a high population concentration around the site. Closest urban areas are Buffeljagsbaai, Pearly Beach and Gansbaai. 	<ul style="list-style-type: none"> • Limited development exists around the site. • The rural character of the area will be supportive of emergency procedures associated with the proposed nuclear facility.

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED NUCLEAR POWER STATION (‘NUCLEAR-1’) AND ASSOCIATED INFRASTRUCTURE TOWN PLANNING ASSESSMENT

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ABBREVIATIONS

CoCT	City of Cape Town Metropolitan Municipality
DEA	Department of Environmental Affairs
ECSDP	Eastern Cape Spatial Development Plan
EPZ	Emergency Planning Zones
GLA	Gross Leasable Area
IDP	Integrated Development Plan
KNPS	Koeberg Nuclear Power Station
PAZ	Precautionary Action Zone
PSDF	Provincial Spatial Development Framework
PGDP	Provincial Growth and Development Plan
SDF	Spatial Development Framework
UPZ	Urgent Protective Action Planning Zone

1 INTRODUCTION

1.1 Background

The Urban and Rural section of GIBB (Pty) Ltd (GIBB) was appointed by Eskom Holdings (SOC) Limited (Eskom) to investigate the potential impacts of the proposed Nuclear-1 power station on town planning related matters at each of the three alternative sites (Duynefontein, Bantamsklip and Thyspunt) in response to comments received from the Department of Environmental Affairs (DEA) received on 25 January 2013. The comments confirmed the need for a town planning specialist study with a specialist undertaking consultation with the Kouga Local Municipality, Overberg Local Municipality and Cape Town Metropolitan Municipalities and to compile a town planning specialist report. The aim of the report ultimately being the assessment of externalities associated with any possible direct or indirect restriction on land use.

1.2 Study Approach

It is the intention of this study to holistically analyse the sites by:

- understanding the town planning context in which the sites are located;
- considering the future planning of the area; and
- evaluating the potential impact of the proposed Nuclear-1 facility from a town planning perspective.

This study was approached in two phases. The first phase represented an information gathering exercise that included:

1. Confirming site locations, property descriptions and all relevant information of properties owned by Eskom,
2. Describing the proposed sites and surrounds in terms of its physical location; and
3. Relating the site and the proposed development to relevant policy that guides the future development of the region and that could impact on the proposed sites.

The second phase of the project comprised the site evaluation. Information received was analysed to determine the impact of the proposed development on the future planning of the area in which the sites are located. Criteria were determined against which to evaluate the various sites.

Meetings with the Town Planning Departments of the various Municipalities within which the sites are located formed part of this phase. The purpose of these meetings was to gather information, to ensure that the latest information is received and to obtain input from the various town planning departments on possible issues that may need to be taken into consideration as part of this project. Meetings were held as follows:

Date	Municipality	Contact Person
25 March 2014	<ul style="list-style-type: none"> Kouga Local Municipality 	Mr Danie Rautenbach
28 March 2014	<ul style="list-style-type: none"> City of Cape Town 	Mr. Colin Lovember
28 March 2014	<ul style="list-style-type: none"> Overberg District Municipality 	Mr Riaan Kuchar

1.3 Assumptions and considerations

- An integration meeting was held on Monday 27 July 2015 between the following specialists:
 - Town Planning Specialist;
 - Agricultural Specialist;
 - Economic Specialist;
 - Social Impact Specialist; and
 - Transportation Specialist (telephonic conversation).

Each individual specialist will make reference to the integration meeting and whether the findings of the current report have any material impact on the findings of their individual reports.

- It is important to note that the following Emergency Planning Zones (EPZ) are applicable to the various nuclear facilities.
 - Koeberg EPZ
 - PAZ = 0-5km
 - UPZ = 5-16km
 - Nuclear 1 EPZ
 - PAZ = 0
 - EZ = 0 – 0.8km
 - UPZ = 0.8 km – 3m

For more information about the Emergency Planning Zones, please refer to Chapter 3 of the Revised Draft Environmental Impact Report Version 2.

- Information received and interviews held with the relevant Municipalities occurred prior to the promulgation of the Spatial and Land Use Management Act, 2013.

2 SITE INFORMATION

This section will describe each of the identified sites in terms of its regional and local context, property information and the applicable policy environment.

2.1 Duynefontein

2.1.1 Regional Context

The proposed Duynefontein site is situated in the Western Cape Province and located within the Blaauwberg District of the City of Cape Town Metropolitan Municipality (CoCT). The CoCT is divided into eight planning districts of which the Blaauwberg District has a smaller percentage of inhabitants compared to the other districts. However it is one of the fastest growing districts. The Blaauwberg district is bordered by the Atlantic Ocean to the west, N7 freeway to the east, Swartland Municipality (part of the West Coast District Municipality) to the north and Table Bay to the south, as indicated in Figure 1.



Figure 1: City of Cape Town

2.1.2 Local Context

The proposed Duynefontein site is located to the north of Melkbostrand and to the west of West Coast Road.

The closest developments to the proposed Duynefontein site are the Duynefontein residential area approximately 3 km to the south-east and the Koeberg Nuclear Power Station directly adjacent to the south as indicated in Figure 2.

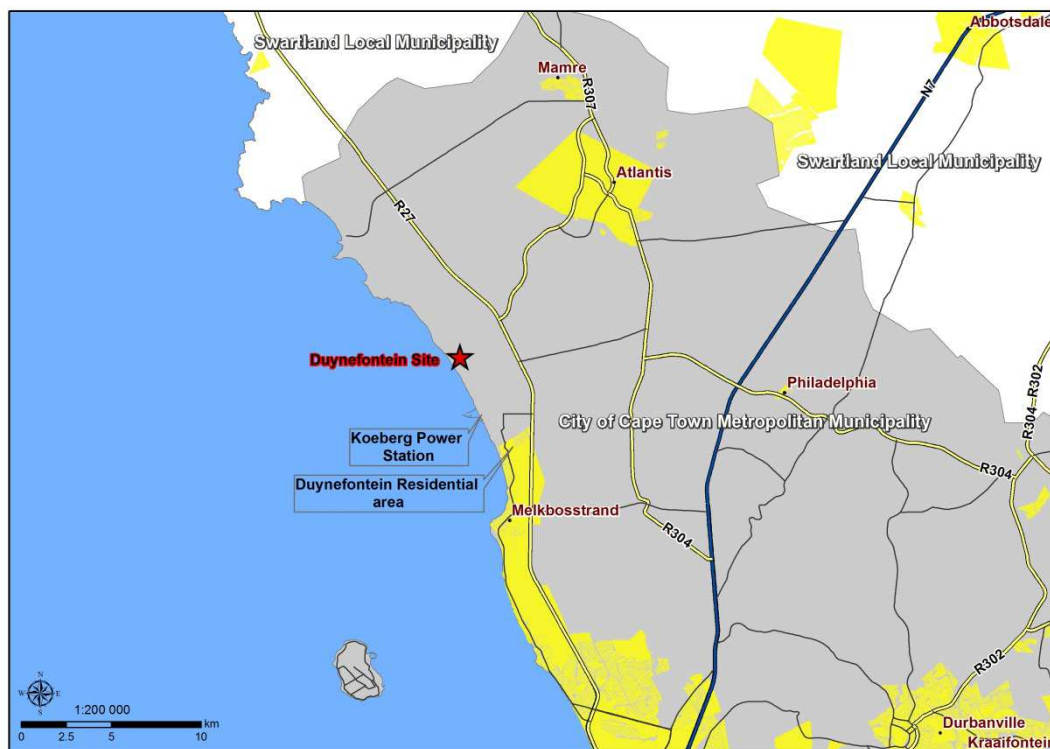


Figure 2: Surrounding Development

2.1.3 Property Information

The properties owned by Eskom at the Duynefontein site are listed below in Table 1 and illustrated in Figure 3. According to the City of Cape Town Metropolitan Municipality, the properties below are zoned agricultural in terms of the applicable town planning scheme, except for the Remainder of the farm Duynefontein 34 JR.

For more information regarding the land use rights for the Remainder of the farm Duynefontein 34 JR is attached to this report as Annexure A.

Table 1: Duynefontein Property Information.

Duynefontein				
Land Description			Title Deed	Total Size (Hectares)
Farm Name	Farm No.	Portion		
Duynefontein	34	0	T21209/1967	1257.3890
Kleine Springfontein	33	6	T21287/1987	54.1648
Kleine Springfontein	33	0	T13256/1975	1399.4196
Total		6		2 928.4019

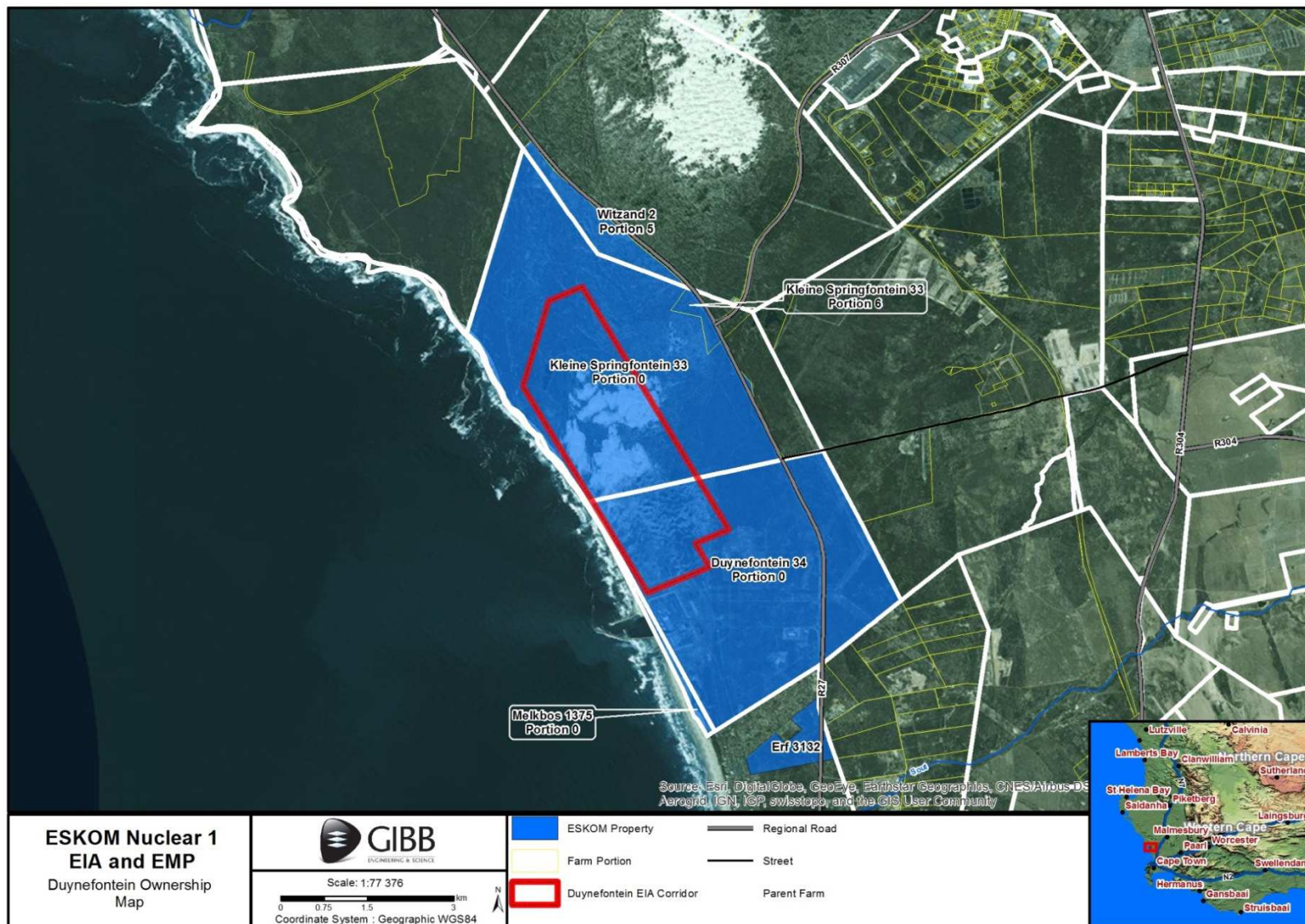


Figure 3: Dwynefontein Property Information

2.1.4 Existing Land Use

The Blaauwberg District can be divided into two broad land use sections namely an urban core and agricultural/ conservation areas. The largest portion of the urban core is located in the south of the District, whereas substantial portions of agricultural and conservation uses are located on the northern side of the District.

Growth in this District is concentrated within new development areas including Sunningdale, Parklands and along the west coast. Commercial activities are generally concentrated along Koeberg Road, Blaauwberg Road and Parklands Main Road as well as commercial centres at major intersections.

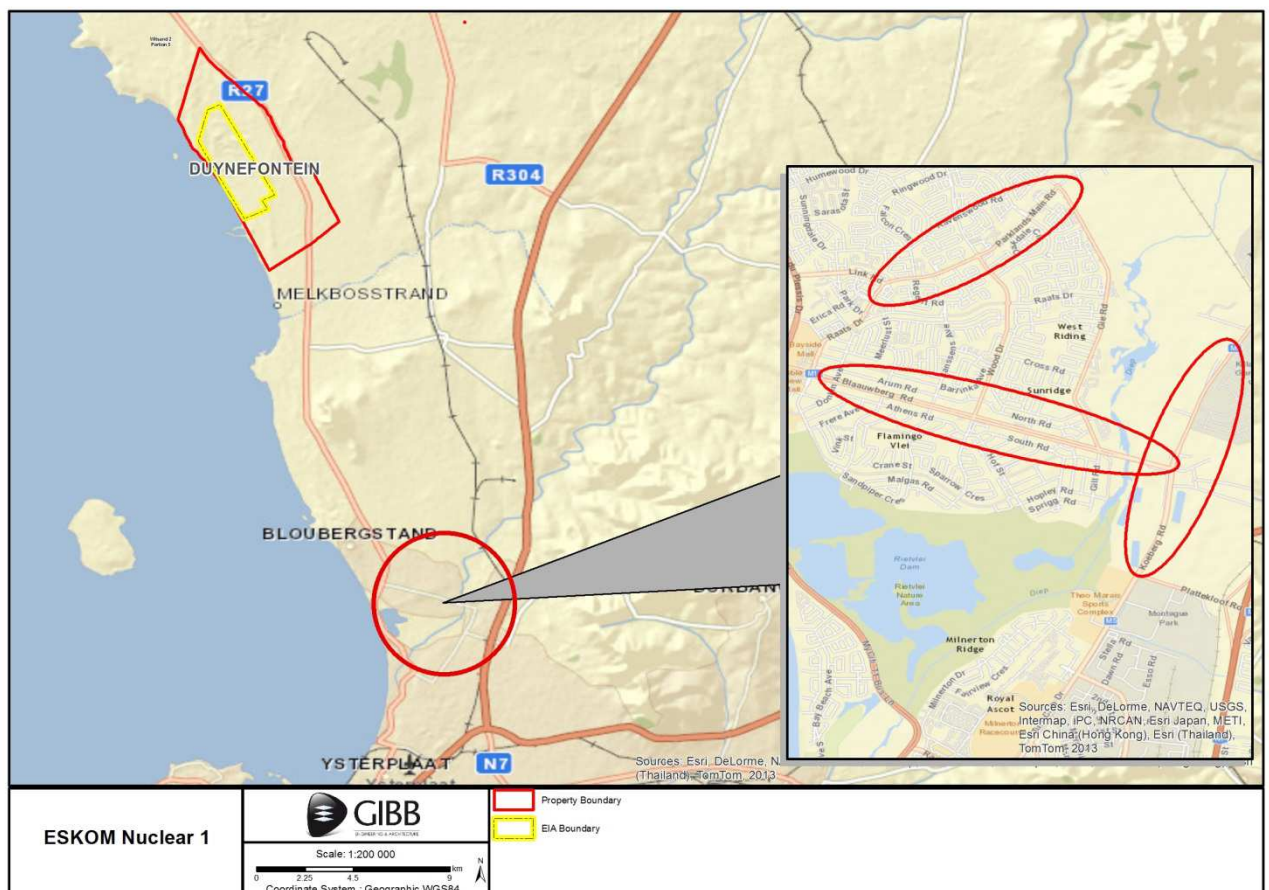


Figure 4: Location of commercial development in the Blaauwberg District

The proposed Duynfontein site forms part of the conservancy encircling the Koeberg Power Station site.

More about the future growth is discussed in Section 2.1.5 of this report.

2.1.5 Policy Environment

(a) Blaauwberg District Plan

As previously mentioned, the proposed Duynfontein site lies within the Blaauwberg District Plan. This plan was drafted in 2012 by the City of Cape Town Metropolitan Municipality and forms part of eight plans developed for each of the planning districts. The plan was drafted as a medium term plan (developed for an approximate 10-year planning timeframe). This District Plan pursues several actions including:

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

According to the SDF, new development is promoted along the West Coast Road indicating that the city is growing in the direction of the proposed Duynfontein site. The proposed extension falls within the 16 km radius from the existing Koeberg Nuclear Power Station. Some isolated new development is also proposed around the Atlantis area which is located to the north east of the proposed Duynfontein site.

Figure 5: Proposed new developments below indicates the future land use proposals located in the vicinity of the Koeberg Nuclear Power Station. The development proposals for the area include high, medium and low density residential development as well as industrial development. According to the SDF, the possible yield of the new development areas totals about 86000 mixed/ residential units and approximately 1 845 000 m² GLA industrial.

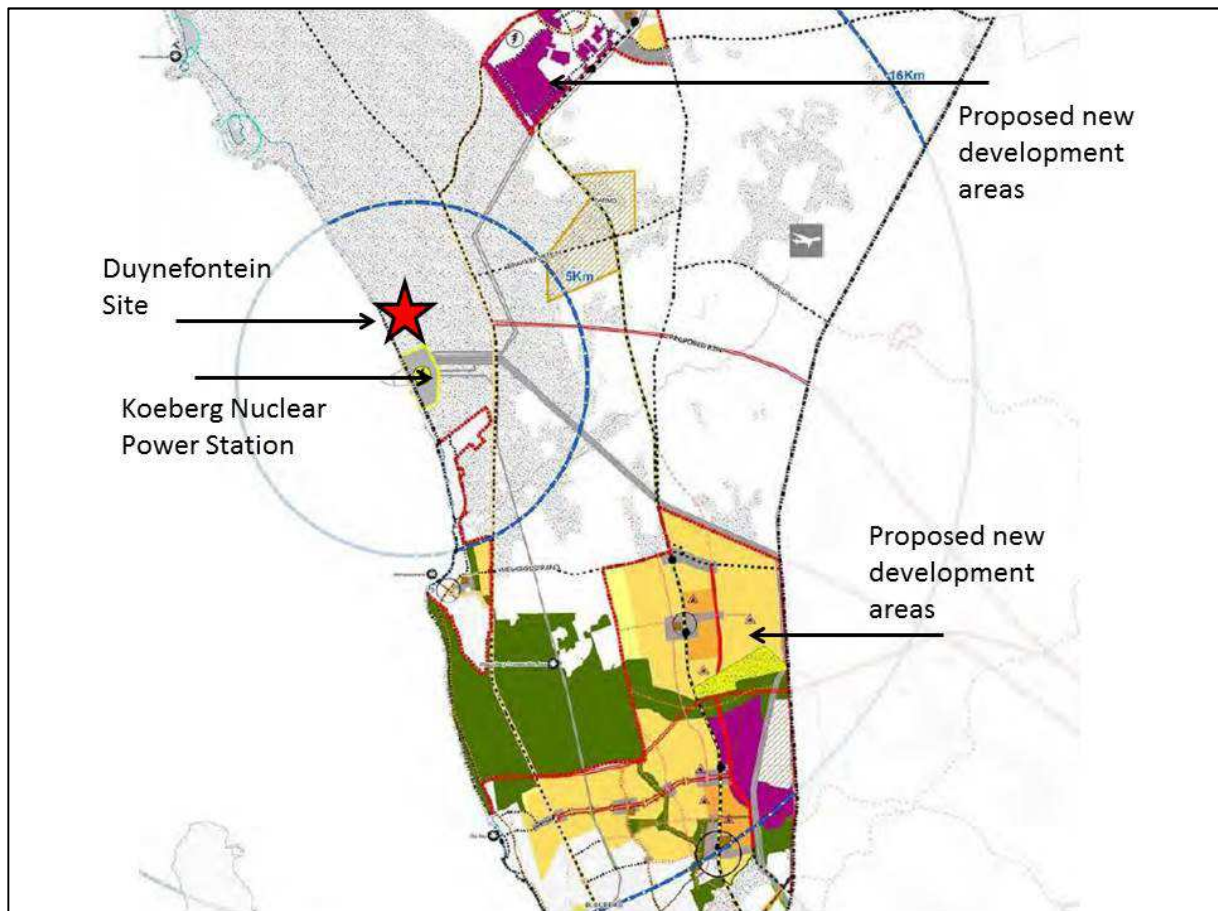


Figure 5: Proposed new developments

The areas in the immediate vicinity of the proposed Duynefontein site are earmarked as “Core 1” which indicates areas that are formally protected as indicated in Figure 6 below.

Beyond the “Core 1” uses there are buffer zones (“Buffer 1 and 2”) and the strategy supported within these zones focuses on managing the rural interface with conservation areas to reinforce safeguarding proposals through:

- Activities in the buffer 2 areas edging the Blaauwberg Conservation Area should reinforce the conservation initiative and may include activities such as environmental education, conservation tourism activities and agricultural use.
- Links/ connectivity need to be ensured between the Koeberg Nature Reserve and the Witsands Aquifer Conservation Area.

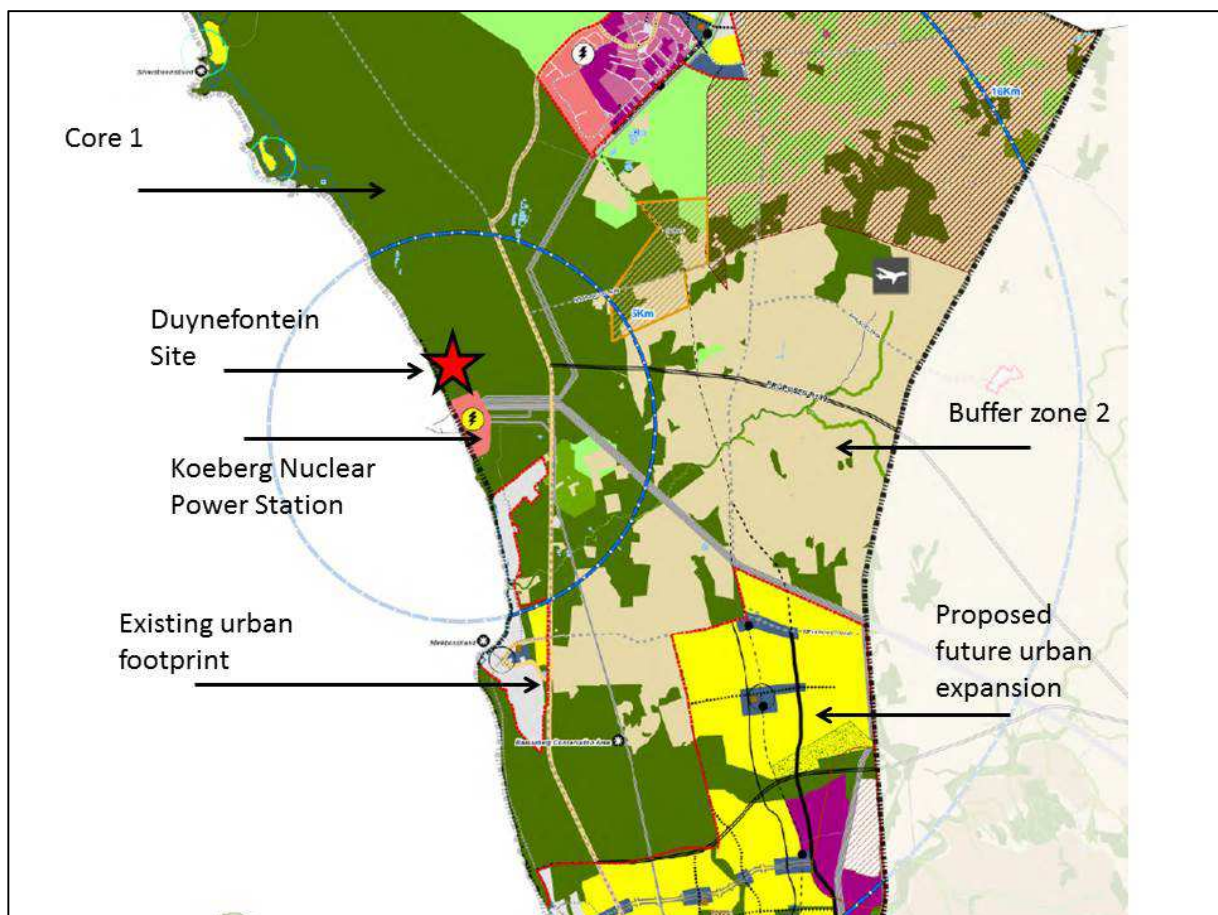


Figure 6: Land use proposals around the proposed Duynefontein site.

The SDF indicates that the Koeberg Nuclear Power Station (KNPS) “is a risk to development in the district and development must comply with the safety standards and development restrictions imposed by the Department of Energy in relation to the KNPS. If sufficient infrastructure provision to implement the necessary safety procedures of KNPS is not incorporated in forward planning for the district, the consequences should an event occur at the KNPS, could be disastrous.’

“All urban development within the KNPS Precautionary Action Zone (PAZ) (area within a 5km radius of the Koeberg nuclear reactors) and Urgent Protective action

planning Zone (UPZ) (area within a 5 km – 16km radius of the Koeberg nuclear reactors) must conform to the following restrictions necessary to ensure the viability of the Koeberg Nuclear Emergency Plan:

- No new development is permissible within the PAZ (as defined above) other than development that is directly related to the siting, construction, operation and decommissioning of the Koeberg Nuclear Power Station or that is as a result of the exercising of existing zoning rights. On this basis, no application for enhanced development rights (rezoning, subdivision, departure from land use, or Council's consent, including application for a guesthouse or second dwelling) that will increase the transient or permanent resident population, and that is not directly related to the siting, construction, operation and decommissioning of the Koeberg Nuclear Power Station, can be approved. Furthermore, the projected population within the PAZ must be evacuated within four hours from the time that an evacuation order is given, as demonstrated by means of a traffic evacuation model approved by Council and acceptable to the National Nuclear Regulator (NNR).
- New development within the UPZ (as defined above) may only be approved subject to demonstration that the proposed development will not compromise the adequacy of disaster management infrastructure required to ensure the effective implementation of the Koeberg Nuclear Emergency Plan (version approved by the NNR). Specifically, within the UPZ area, an evacuation time of 16 hours of the projected population, within any 67,5° sector to designated mass care centres (as appropriate), must be demonstrated by means of a traffic (evacuation) model approved by Council and acceptable to the NNR. The evacuation time must be measured from the time that the evacuation order is given.

These development controls will be superseded by National Regulations on Development in the Formal Emergency Planning Zone of the KNPS to ensure effective implementation of the Koeberg Nuclear Emergency Plan' when approved."

2.2 Bantamsklip

2.2.1 Regional Context

The proposed Bantamsklip site is situated in the Western Cape and falls within the jurisdiction of the Overberg District Municipality. The Overberg District Municipality (Overberg Municipality) is divided into four local municipalities: Theewaterskloof, Cape Agulhas, Overstrand and Swellendam Local Municipalities as can be seen in Figure 7: Overberg District Municipality below. The Overberg District Municipality includes the towns of Grabouw, Caledon, Hermanus, Bredasdorp and Swellendam. The municipal area covers 12,241 square kilometres and in 2011 had an estimated population of 258,161 people.

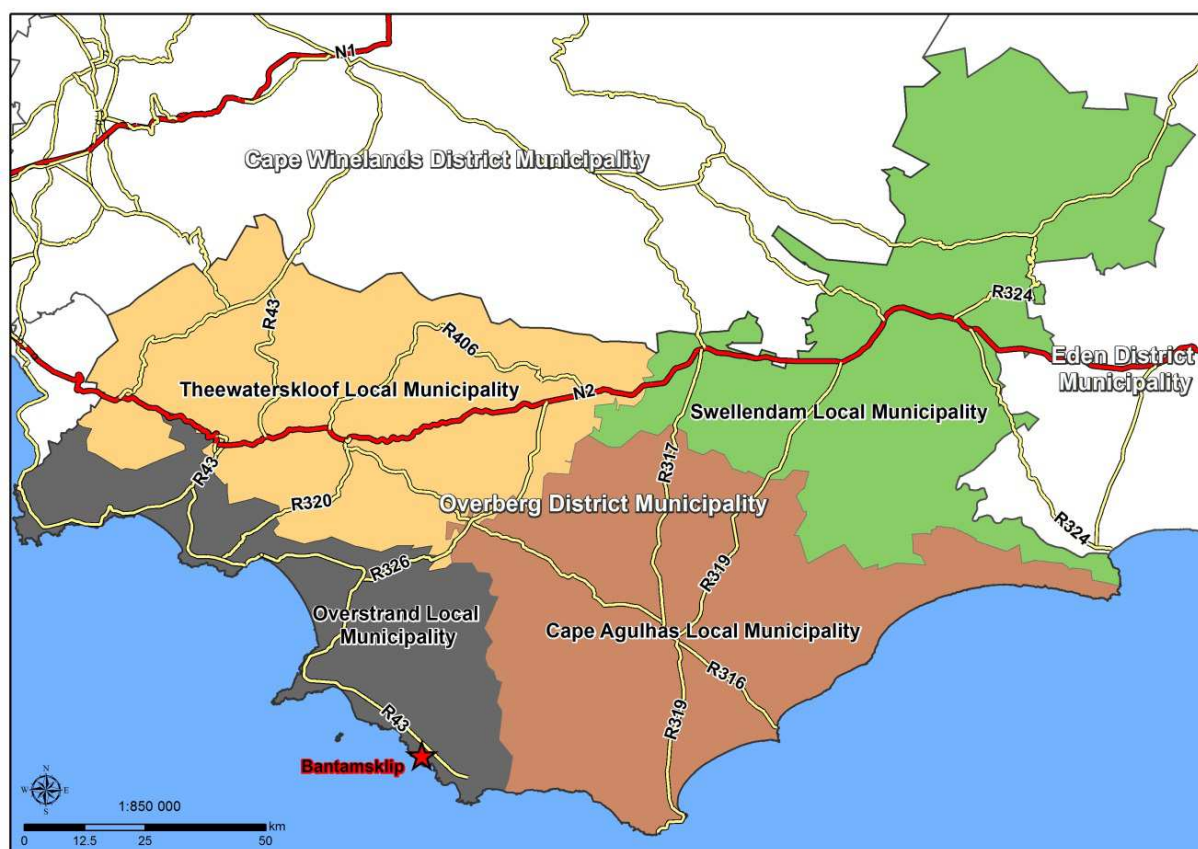


Figure 7: Overberg District Municipality

2.2.2 Local Context

The proposed Bantamsklip site is located within the Overstrand Local Municipality. The municipal area of Overstrand covers a surface of almost 1708 square kilometres, has a permanent population of approximately 90 000 people and includes towns like Sandbaai, Gansbaai, Hermanus and Stanford.

(a) Hermanus

“The Greater Hermanus functions as the primary civic, administrative and tourism centre within its sub-regional and municipal context. 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 temperature climate, have made Greater Hermanus a popular retirement, holiday and tourism destination.”

Overstrand Municipal Wide Spatial Development Framework, 2012

(b) Gansbaai

According to the Overstrand Municipal Wide Spatial Development Framework,2012,
“Gansbaai, a fishing village and a popular residential, holiday and retirement town is increasingly functioning as an international tourist and holiday destination.”

Overstrand Municipal Wide Spatial Development Framework,2012

The growth potential of the town is centred on the growth of the eco-tourism industry which includes shark diving, mari-culture and fishing industry as well as the expected increase in passing tourism movement. The Greater Gansbaai consists of the harbour, its north and south facing residential settlements and its unique natural features such as the De Kelder and Klipgat caves and the pristine natural setting of the peninsula.

(c) Pearly Beach

According to the Overstrand Municipal Wide Spatial Development Framework,2012,
“Pearly Beach is a popular, relatively isolated retirement and holiday town located between fynbos covered dunes and the shoreline. In this instance, the objective of this SDF must be to ensure, through appropriate and area-specific development strategies and policies that the future development pressure is managed in a manner that serves to enhance the unique qualities of this coastal settlement.”

Overstrand Municipal Wide Spatial Development Framework,2012

2.2.3 Property Information

According to the Overberg Municipality, the properties owned by Eskom are zoned Agricultural in terms of the applicable Town Planning Scheme. The properties are listed and discussed in Table 2 below.

Table 2: Bantamsklip Property Information

Bantamsklip				
Land Description			Title Deed	Total Size (Hectares)
Farm Name	Farm No.	Portion		
Hagelkraal	318	Rem	T13021/1992	1320.5774
Buffeljagt	309	3	T78020/1993	362.7053
Luipaards Poort	310	0	T78020/1993	25.5481
Total		45		1 708.8308

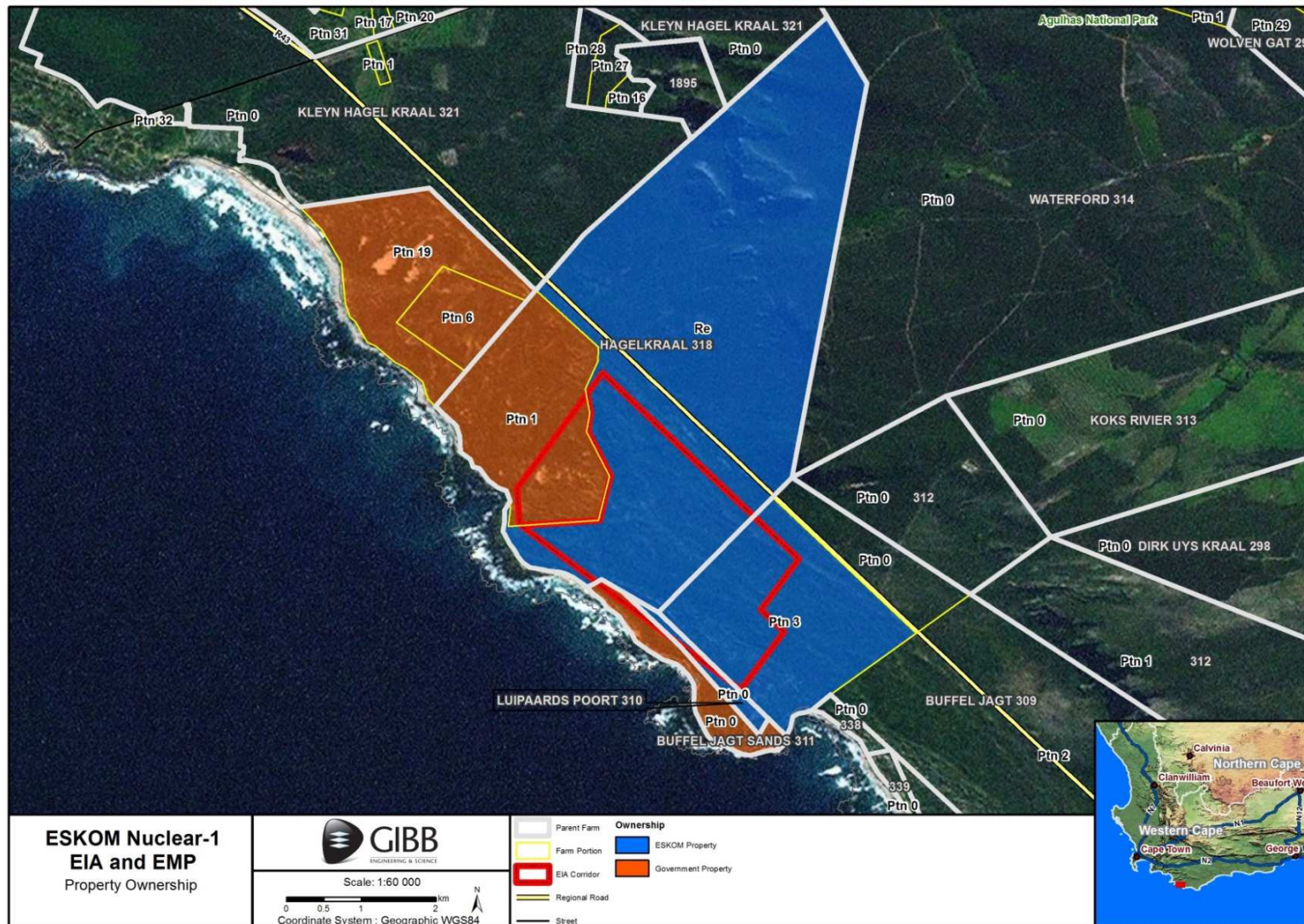


Figure 8: Bantamsklip Property Information

2.2.4 Existing Land Use

The proposed Bantamsklip development site is located approximately 200m inland from the ocean. The proposed Bantamsklip site and its surrounds can be classified as undeveloped or agricultural/ conservation land and the closest settlements in the vicinity of the proposed Bantamsklip development site is Pearly Beach to the north and Buffeljagsbaai to the south (approximately 15km apart). The closest and largest town to the proposed Bantamsklip development site is Gansbaai and which is located to the north of Pearly Beach as indicated in Figure 9. Gansbaai is located approximately 20 kilometers to the north-west of the proposed Bantamsklip development site.

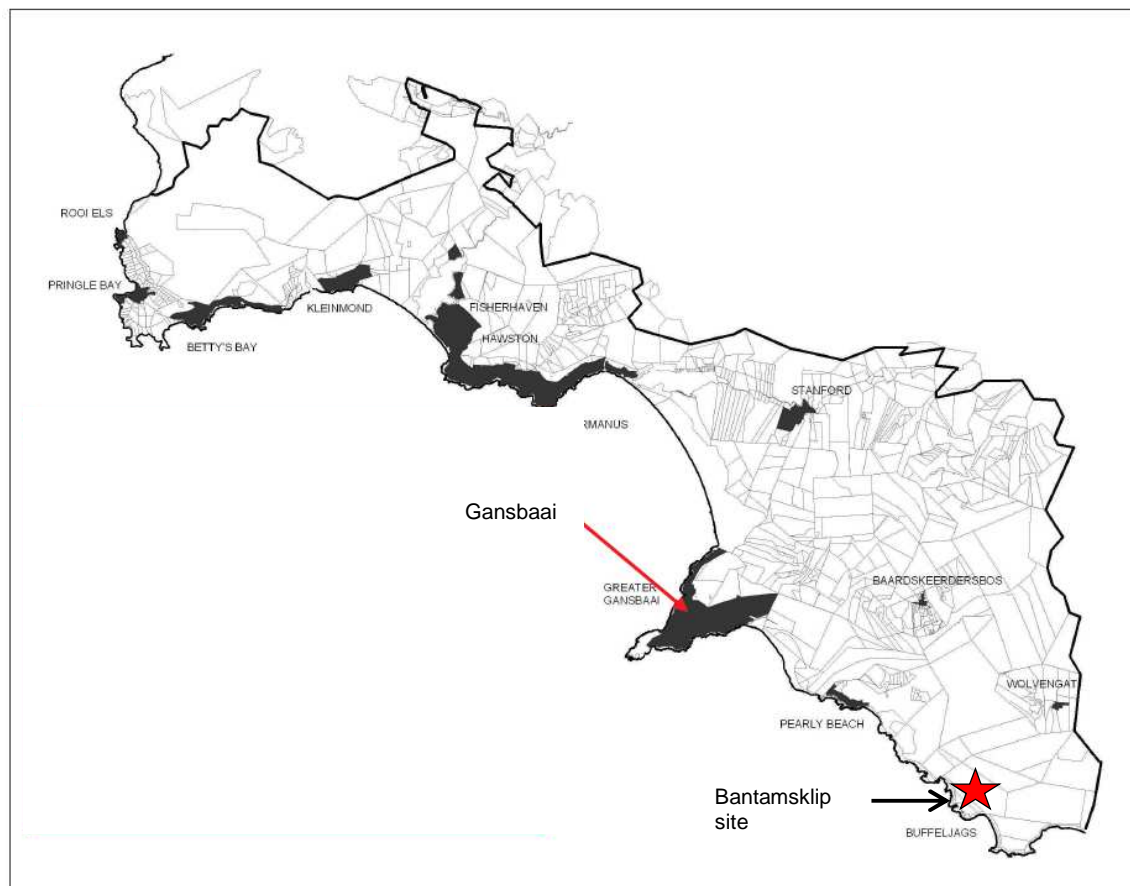


Figure 9: Bantamsklip Site Location

2.2.5 Policy Environment

The Spatial Development Framework (SDF) for the Overstrand Local Municipality was drafted in 2012. The SDF does not address the proposed nuclear power station facility and therefore does not indicate whether a development of this nature is supported or not. It is the intention of this section of the report to give an overview of the areas that will be affected by the proposed Nuclear-1 power station, should the facility be constructed on the Bantamsklip site.

This section will aim to describe the vision and spatial principles proposed by the SDF, give an overview of the land use and settlement pattern of the municipality and provide some detail as to the character and growth of settlements in close proximity to the proposed

nuclear power station site. The section will furthermore give a brief description of the development patterns for Gansbaai, Pearly Beach and Buffeljagsbaai as indicated in the SDF. The purpose thereof is to be aware of potential development proposals that might have an impact on the proposed nuclear power station, should this facility be constructed at the Bantamsklip site.

The vision for Overstrand is “*striving to be the most desirable destination to visit, stay and do business.*” The SDF promotes, amongst others, the following spatial principles to be implemented:

- Identifying an overarching spatial development pattern within a clear hierarchy of nodes and settlements;
 - Development should be guided by an overarching hierarchical spatial development pattern of nodes and settlements.
- Containment of development;
 - The growth of urban nodes and rural/ agricultural settlements should be strictly contained within well-defined boundaries.
- Compaction and densification;
 - Growth should be managed to ensure that development pressures are directed and absorbed within the defined urban areas.
- Ecological Integrity;
 - The diversity, health and productivity of natural eco systems, through the rural, urban and agricultural areas should be maintained through an interlinked web of natural spaces and the protection of important and sensitive habitats.
- Agricultural enhancement; and
 - Protect prime and unique agricultural areas from non-soil based land use activities.
- Land Use diversification.
 - The diversification of rural and industrial based development opportunities, based on the locational and comparative resource advantages must be promoted in selected areas to stimulate economic growth and employment of the rural population.

The SDF differentiates between urban and agricultural nodes. Urban nodes would typically include Hermanus and Gansbaai and settlements such as Baardskeerdersbos and Wolwegat. The proposed hierarchy of nodes is described in Table 3 and illustrated in Figure 10.

Table 3: Hierarchy of Nodes

Hierarchy	Order	Classification
Regional Node	1 st	Greater Hermanus (Overstrand Municipality)
Sub-regional Node	2 nd	Greater Gansbaai, Kleinmond
Local Node	3 rd	Rooi Els, Pringle Bay, Betty's Bay, Stanford
Rural Node	4 th	Baardekoorsbos
Rural Settlement	5 th	Buffeljags, Wolwegat, Spanjaardskloof

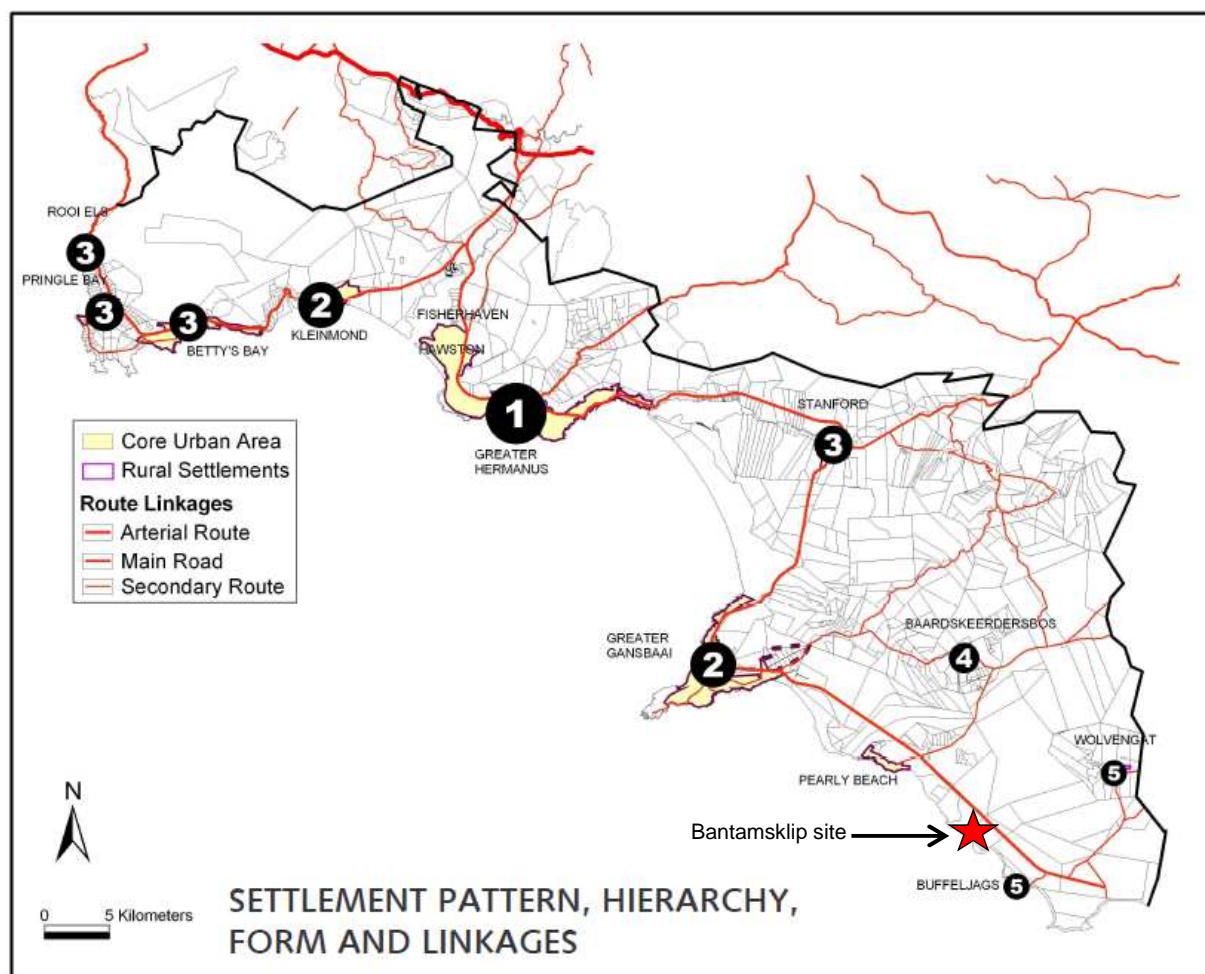


Figure 10: Urban and rural settlement pattern, form, hierarchy and linkages.

- (a) Gansbaai
- (i) Local Spatial Development Principles

The SDF promotes the development of the tourism, fishing and mari-culture industry as well as the current role of the coastal villages as holiday resorts, retirement villages and the provision of a balanced mix of residential stock for low, medium and high income. The SDF indicates a backlog (based on 2006 data) of approximately 1050 subsidised housing units.

The SDF seeks to restrict development to within the urban edge and therefore promotes residential infill development in a northern direction towards the R43, industrial development around the harbour area, an eastward extension of the existing industrial area and southward residential development towards Birkenhead.

A factor that might have an impact on the growth of Gansbaai is the proposal to construct/ develop a local bypass and collector route parallel to and inland of the R43. The viability of this proposal still needs to be investigated, but should this be implemented it may result in the future expansion of the existing town to the east.

The SDF also mentions that the viability of a public transport service must be investigated to link areas such as Pearly Beach and Buffeljagsbaai to Gansbaai and Hermanus.

(b) Pearly Beach

The following figure illustrates the location of Pearly Beach.

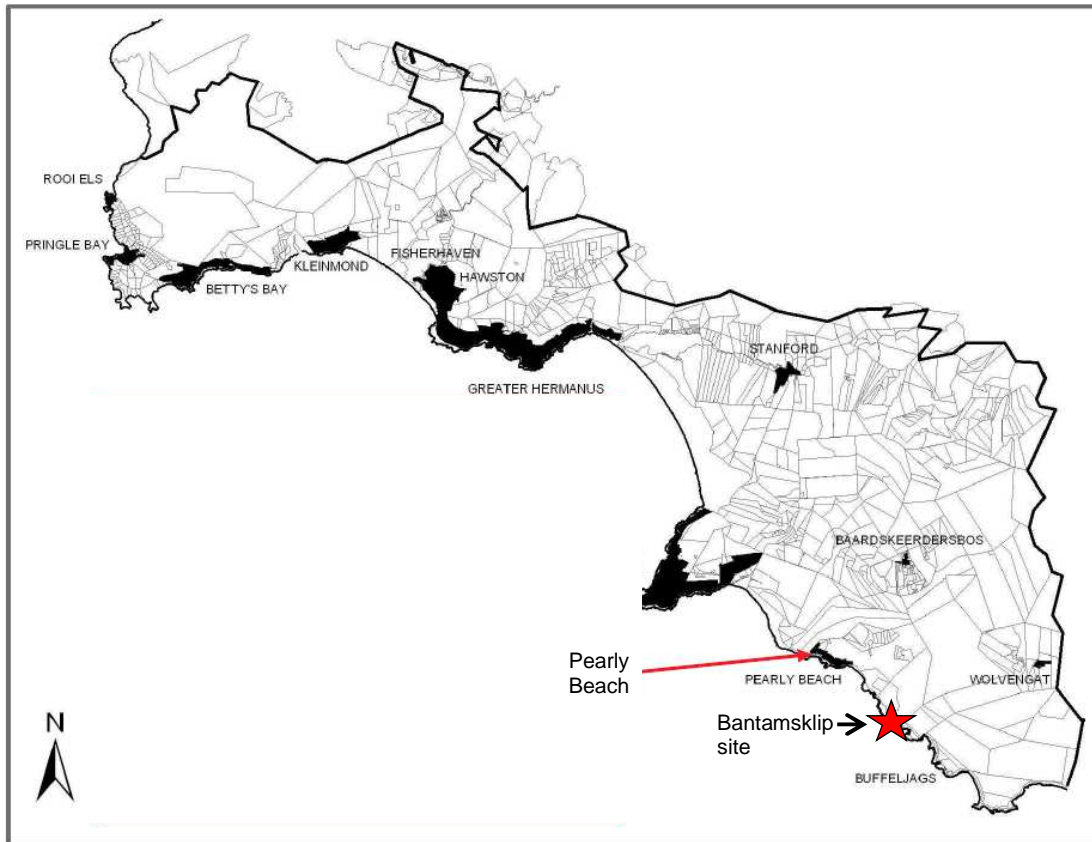


Figure 11: Location of Pearly Beach

(i) Local Spatial Development Principles

The SDF would like to promote appropriate infill development within the existing boundaries of the town and strengthen its function as a retirement and tourism village. The SDF proposes that the existing footprint be contained and that no further expansion of the town beyond the existing urban edge be supported. Commercial uses should only be supported in clearly demarcated areas.

The SDF supports the southward growth of Eluxolweni and the integration of this area with the main town of Pearly Beach.

2.3 Thyspunt

2.3.1 Regional Context

The Thyspunt site is situated within the Kouga Local Municipality which falls within the Cacadu District Municipality in the Eastern Cape Province. The Cacadu District is divided into nine local municipalities, described in Table 4 below:

Table 4: Cacadu District Municipality

Local Municipality	Seat	Population (2011)	Area (km ²)	Density (inhabitants/km ²)
Camdeboo	Graaff-Reinet	50,993	12,422	4.1
Blue Crane Route	Somerset East	36,002	11,068	3.3
Ikwezi	Jansenville	10,537	4,563	2.3
Makana	Grahamstown	80,390	4,376	18.4
Ndlambe	Port Alfred	61,176	1,841	33.2
Sundays River Valley	Kirkwood	54,504	5,994	9.1
Baviaans	Willowmore	17,761	11,668	1.5
Kouga	Jeffreys Bay	98,558	2,670	36.9
Kou-Kamma	Kareedouw	40,663	3,642	11.2
<i>Total</i>		<i>450,584</i>	<i>58,243</i>	<i>7.7</i>

The Cacadu District Municipality with its nine local municipalities is illustrated in Figure 12.

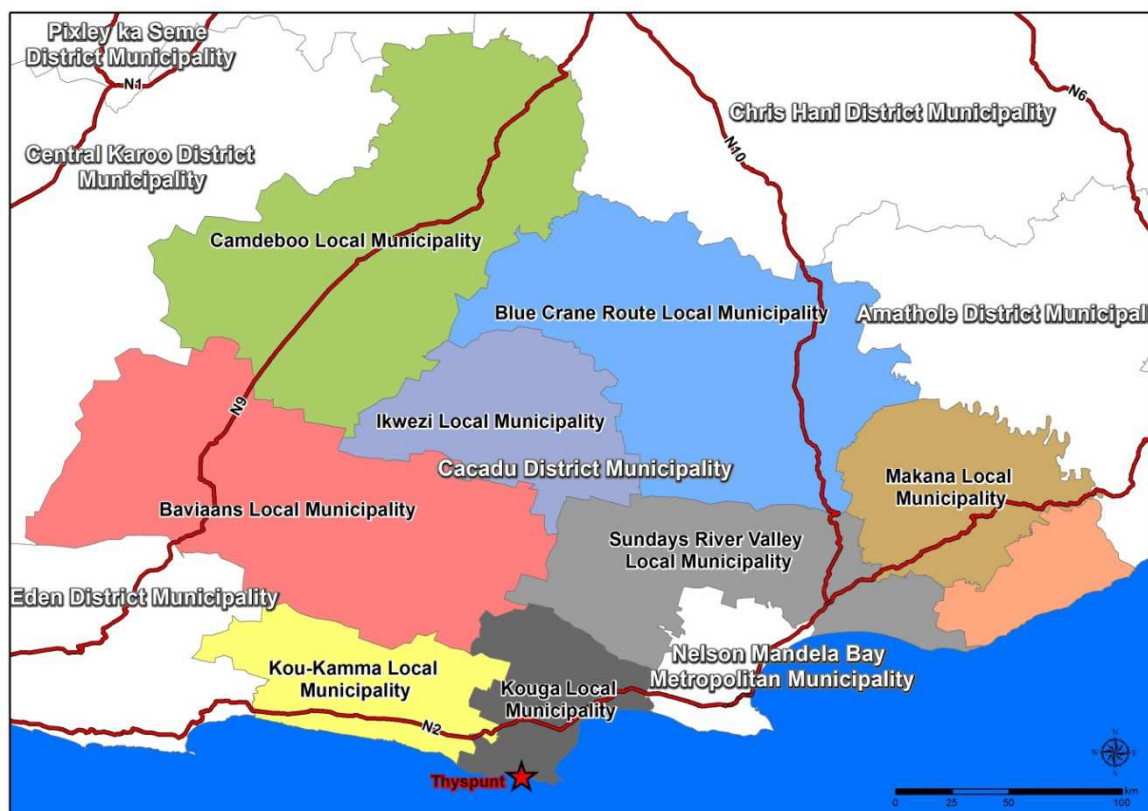


Figure 12: The nine local municipalities in the Cacadu District Municipality

The Cacadu District covers an area of 58,243 square kilometres in the south-western part of the Eastern Cape Province. It extends to the Great Fish River in the east and the Sneeuberge in the north. The metropolitan area around Port Elizabeth, forming the Nelson Mandela Bay Metropolitan Municipality, is excluded from the District.

The south-western part of the District (west of Port Elizabeth) is marked by several ranges of mountains that run parallel to the sea, including the Baviaanskloof Mountains, the Kouga Mountains and the Tsitsikamma Mountains. In the southeastern part (east of Port Elizabeth) is the Albany region around the city of Grahamstown. The northern interior of the District is the southeastern end of the Karoo.

To the west the District borders on the Eden and Central Karoo districts of the Western Cape; to the north it borders on the Pixley ka Seme District of the Northern Cape; and to the east it borders on the Chris Hani and Amathole districts of the Eastern Cape.

The regional roads traversing the Cacadu District Municipality include the N2, N9 and N10 highways.

The following section focuses on the context of Thyspunt within the Kouga Local Municipality.

2.3.2 Local Context

The SDF of the Kouga Local Municipality describes the settlement dynamics of the municipal area as follows:

The study area is generally characterised by three topographical regions, i.e. Coastal Region, Gamtoos River Valley, and the Humansdorp and surrounding area. These distinct topographical areas have specific characteristics that guide planning and future land use management. The Coastal Region has strong growth trends with high tourism related activities. The Gamtoos River Valley is characterised by strong agricultural activity with a number of smaller nodes, and the Humansdorp and surrounding area provide a strong economic function and regional administrative hub. The Tsitsikamma/ Humansdorp/ Oyster Bay region is one of the most productive dairy farm regions in the country.

The Eastern Cape SDP and the Cacadu SDF clearly defines a hierarchy of settlements and levels of investment. Based on these Provincial and District guidelines, the settlements in the Kouga Municipality are ranked in Table 5:

Table 5: Hierarchy of Settlements and Levels of Investment

Category	Settlement/ Town
Level 3 Settlements : Regional & District Centres	Humansdorp Jeffreys Bay
Level 2 Settlements : District Centres	Hankey Patensie St Francis Bay/ Cape St Francis
Level 1 Settlements : Smaller towns, villages & settlements	Loerie Thornhill/ Sunnyside Oyster Bay
Other nodes & settlements (not classified)	Andrieskraal

	Maaitjiesfontein Melon Longmore Forest
--	--

As indicated below in Figure 13 the settlement pattern within the Kouga Municipal area differs substantially with vast rural areas and major and smaller settlements, all providing economic and social functions within the study area.

Section 2.3.3 will provide more detailed information regarding the Thyspunt site earmarked for the proposed Nuclear-1 plant and its supporting facilities. Thyspunt is identified in the Kouga SDF as a 'key focus area' and is indicated as being 'protected area' according to the Oyster Bay SDF and the St Francis Bay SDF, as shown in Figure 13 and Figure 14 below:



Figure 13: Oyster Bay SDF

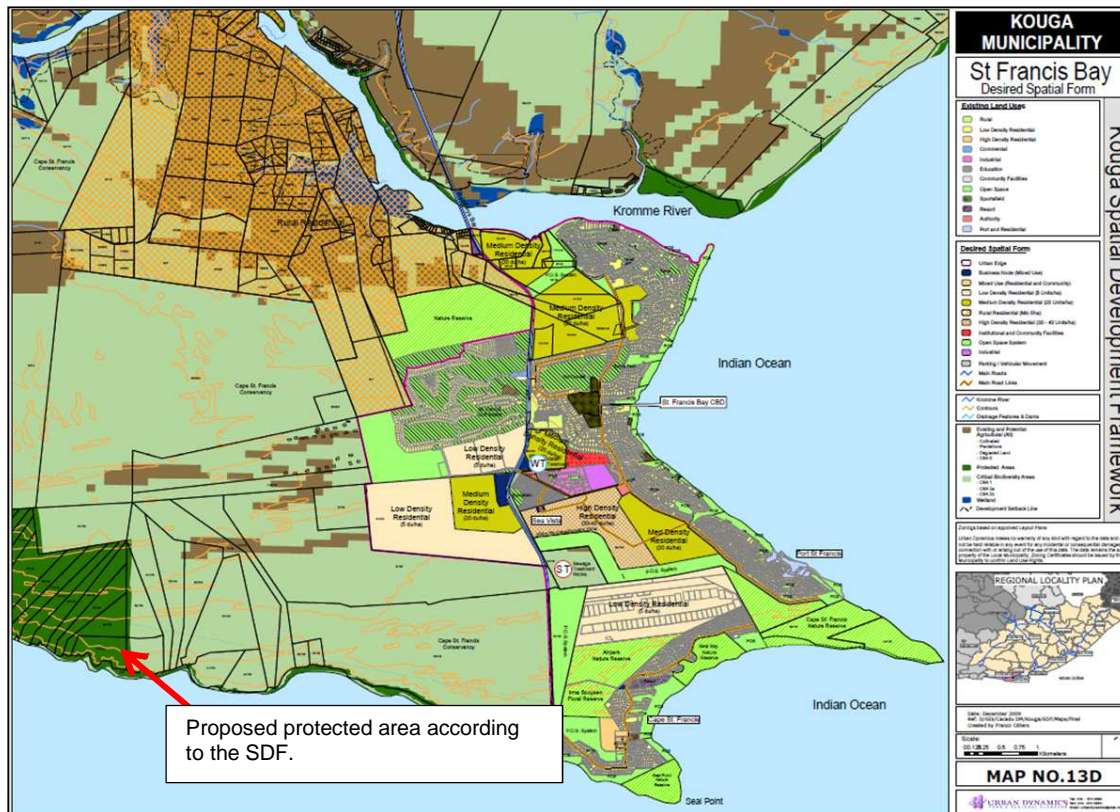


Figure 14: St Francis Bay SDF

The other relevant settlements in the Kouga Municipality are discussed for a comprehensive perspective of the study area:

(a) Humansdorp

Humansdorp functions as the largest commercial and industrial centre in the region and the town fulfils a central placed function with a large residential and commercial component. A large portion of the town's residential erven is earmarked for high density, low income purposes, with specific reference to Kruisfontein and KwaNomzamo. Lower density, high income residential areas are mostly situated in Humansdorp central, Boskloof and Panorama. Business is mainly concentrated in the Humansdorp town centre along the main road and main access road between Jeffreys Bay and Humansdorp.

In addition, a number of “house shops”, informal traders and spaza shops are located in the residential areas of Kruisfontein and KwaNomzamo. Humansdorp retains its strong regional function with established business infrastructure and acts as a regional service centre, supplying the surrounding agricultural communities and coastal towns with business commodities and services. Most of the commercial and industrial activities of the region are centred in Humansdorp.

(b) Jeffreys Bay

Jeffreys Bay is situated along the coast, approximately 13km south-east of Humansdorp. The character of Jeffreys Bay has substantially changed over the last 40 years from a small holiday village to a permanent residential and retirement node. The town has experienced significant growth within the residential and commercial sectors over the last 10 years. However, the demand for low income residential

segment remains high. High density, low income residential areas of Pellsrus, Tokyo Sexwale and Ocean View are experiencing ongoing demand for additional housing. Business is mainly concentrated along the main access road (De Gama Road) within three distinct roads. Increased commercial development along St Francis Drive towards the west and enroute to Humansdorp has developed over the last 24 months. The town is generally linear in shape and stretches along the coast from the Kromme River in the south to the Kabeljauws River in the north. Proposed development generally stretches inland up to the N2 National Road.

(c) St Francis Bay and Cape St Francis

The residential areas of St Francis Bay and Cape St Francis are generally characterised by low density, upmarket residential developments which include a Golf Estate and the Marina Development. Business and industrial components in these areas are limited and dependant on Humansdorp and Jeffreys Bay as regional service centres. The low income residential segment is accommodated in the Sea Vista area with a critical demand for future expansion.

(d) Oyster Bay

Oyster Bay is predominantly a holiday town with a very small permanent population and is characterised by a low density residential fabric. Adjacent to Oyster Bay, Umzamowethu has a higher density character with a demand for subsidised housing.

(e) Hankey

Hankey functions as the largest commercial centre in the Gamtoos River Valley and the town fulfils a strong function as an agriculture and commercial node. The residential areas of Weston, Centerton, Phillipsville, Extension 4 and Rosedale accommodate most of the town's population in typical high density subsidised housing units. Business activity is mainly concentrated in Hankeytown along the main access road between Loerie and Patensie. Business growths in this areas has mainly been confined to the conversion of existing houses within the town and a need for an expansion of the business component and facilities in Phillipsville and Centerton has been identified. Industrial activity and job opportunities are limited to the agricultural industry.

(f) Patensie

Patensie, the second biggest town in the Gamtoos River Valley is situated in the western part of the Gamtoos Valley. The town has a fairly large industrial/ warehousing/ packing facility industry with the citrus co-op and tobacco co-ops situated in the town, fulfilling a strong commercial function within the Bo Gamtoos region. Cyril Ramaphosa, physically removed from the Patensie town centre, houses most of the population and the shortage of housing has been identified as a key concern, with limited developable land available.

(g) Loerie

This small settlement lacks proper urban structure with a large number of informal structures. The business component is poorly developed with no direct job creating opportunities within the town.

(h) Thornhill

The Thornhill Village is situated along the R102 next to the Thornhill Station with a small business node and limited community facilities. The Thornhill node provides an important function within the eastern section of the Kouga Municipal area and a demand for expansion of the node and growth in the area has been identified and prioritised.

The Kouga Local Municipality is indicated in Figure 15 below.

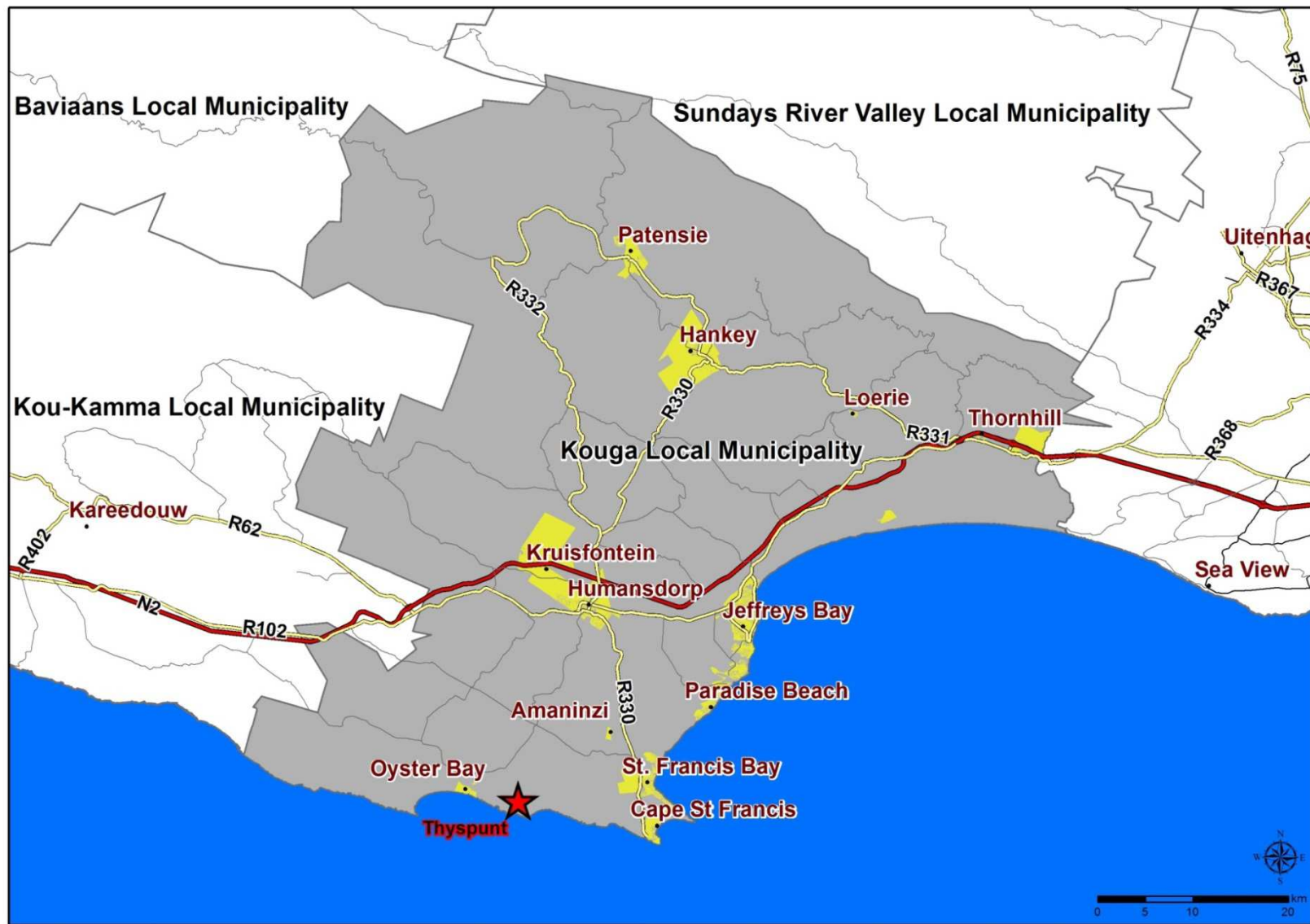


Figure 15: Kouga Local Municipality

2.3.3 Property Information

The Thyspunt site for the proposed Nuclear 1 power plant and supporting facilities consists of several farm portions, all of which are already, or in the process of being acquired by Eskom. Figure 16 illustrates the status of land ownership between Eskom and the previous owners. Please refer to Table 6 for more information regarding the above

It is important to note that the construction of the Nuclear-1 plant and its associated facilities will not be hindered by the process of Eskom gaining ownership of the outstanding properties, as the footprint of the plant will be catered for on the land already owned by Eskom.

Table 6: Thyspunt Property Information

THUYSPUNT					
Land Description			Title Deed	Total Size (Hectares)	Notes
Farm Name	Farm No.	Portion			
Buffelsbosch	742	19	T077503/08	15.9201	
Buffelsbosch	742	16	T76184/1990	85.5575	
Langefontein	736	4	T51152/1989	21.4133	
Welgelee	743	4	T28635/1989	222.8280	
Langefontein	736	8	T85804/1993	21.4133	
Buffelsbosch	742	9	T88253/1994	107.0680	Farm 744 is made up of Farms 742/9, 743 and 736/1 – it was noted at the SG office, but not registered
Welgelee	743	0	T88253/1994	222.7696	
Langefontein	736	1	T88253/1994	21.4133	
Welgelegen	735	14	T89489/1993	110.8876	
Welgelegen	735	16	T46702/1994	124.3475	
Welgelegen	735	17	T83908/1994	73.6843	
Buffels Bosch	742	17	T83907/1994	21.4133	
Langefontein	736	3	T60566/1989	21.4133	
Langefontein	736	2	T48531/1992	21.4133	
Langefontein	736	6	T50483/1994	21.4133	
Langefontein	736	7	T89982/1993	21.4133	
Welgelegen	735	2	T72097/1990	385.4066	
Farm	741	0	T39376/1992	35.1921	
Langefontein	736	17 (9)	T023606/11	8.4169	
Farm	809	0	T005384/11	768.3289	
Buffelsbosch	742	Rem	T50050/2010	78.8134	
Ongegunde Vryheid	746	92	T49758/11	188.3111	
Farm	824	0	T39376/1992	0.1023	
Farm	825	0	T39376/1992	0.0058	
Goed Geloof	745	179	T004328/11	48.9146	
Goed Geloof	745	2	T004328/11	146.7748	
Buffelsbosch	742	6	T24590/2011	243.0410	
Goed Geloof	745	210	T019442/11	0.1000	
Goed Geloof	745	209	T11243/2011	0.1000	
Welgelegen	735	9	T000940/11	80.3938	
Buffelsbosch	742	20	T4299/2013	16.8217	
Buffelsbosch	746	18	T14342/2013	21.4133	
Zeekoeirivier	793	0	T31926/2013	119.5515	
Buffelsbosch	742	21	Await TD	17.1353	

Farm	809	36	Await TD	14.9998	
Ongegunde Vryheid	746	23	Await TD	21.4133	
Welgelegen	735	18 (4)	T14342/2013	31.3938	Divided from Farm Welgelegen 735/4
Farm	826	1	Await TD	7.2901	Divided from Farm 826
Buffelsbosch	742	22 (7)	Await TD	32.0347	Divided from Farm Buffelsbosch 742/7 (referring to the northern portion)
Buffelsbosch	742	12	Await TD	32.2794	Divided and the remaining portion is no. 742/22 which is owned by the farmer
Welgelee	743	6 (2)	Await TD	12.2772	Divided from Farm Welglee 743/2
Ongegunde Vryheid	746	5	T37388/2013	34.6031	
Welgelee	743	8 (3)	Await TD	15.2386	Divided from Farm Welglee 743/3
Ongegunde Vryheid	746	11	T31001/2013	36.6296	
Buffelsbosch	742	14	Await TD	301.1563	Divided and the remaining portion is no. 742/25 which is owned by the farmer
Total		45		3828.5080	

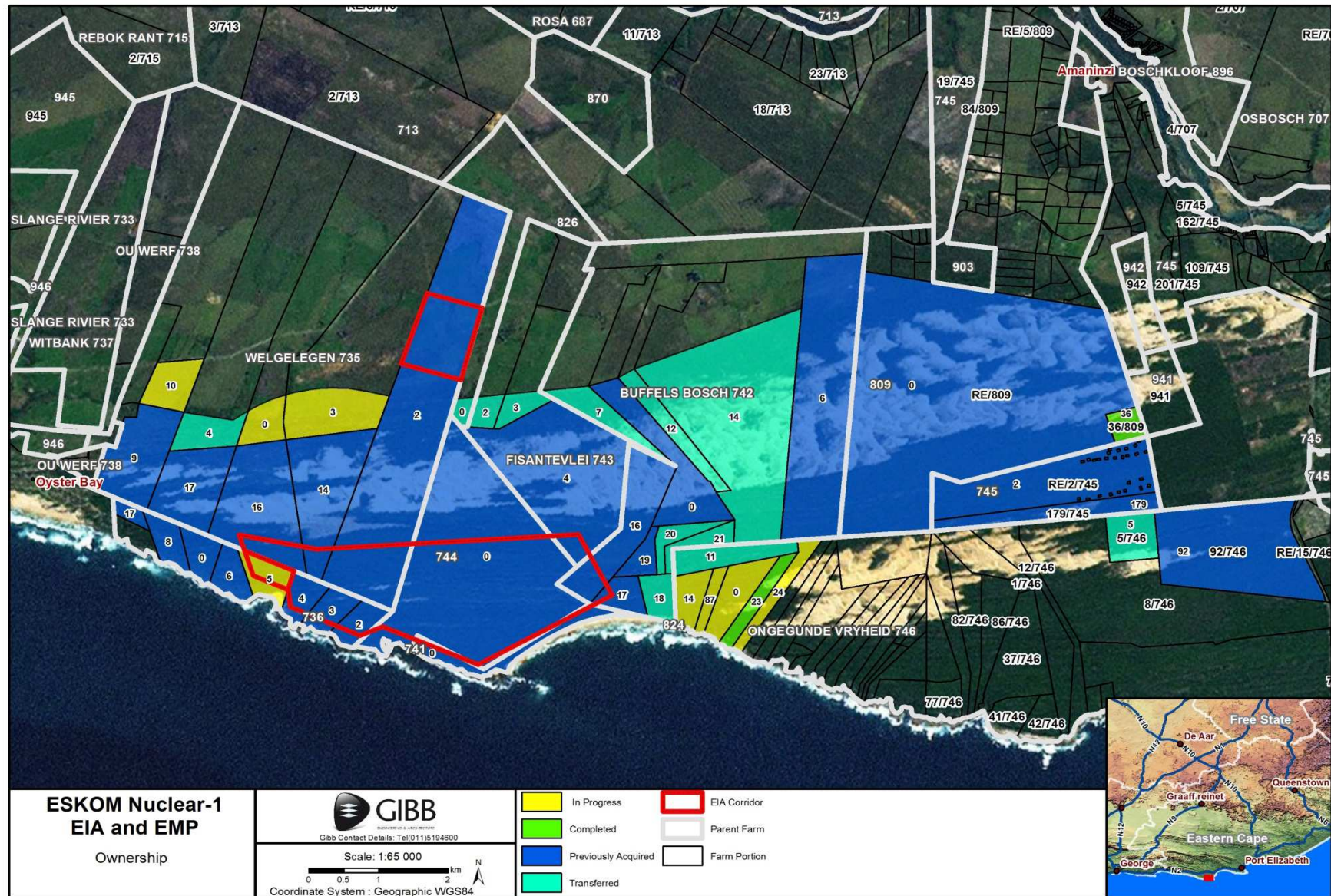


Figure 16: Status of land ownership between Eskom and previous owners

2.3.4 Existing Land Use and Zoning

The Thyspunt site is zoned 'Agricultural', but is not currently used for agricultural purposes. It is kept vacant for the purpose of the proposed nuclear power plant and auxiliary uses. After initial discussion with the Municipality, it was proposed that site be rezoned from 'Agriculture' to 'Special' for a nuclear facility to accommodate the proposed Nuclear 1 facility. The remainder portions are to be rezoned from 'Agriculture' to 'Open Space Zone 3', so that uses such as game farms are permitted.

The land uses in the vicinity include intensive farming (mostly dairy farms) and game farms (south of Humansdorp and Jeffrey's Bay). The dune strip central to the site also has important ecological significance.

Figure 17 illustrates the zoning plan for the proposed nuclear site in Thyspunt.

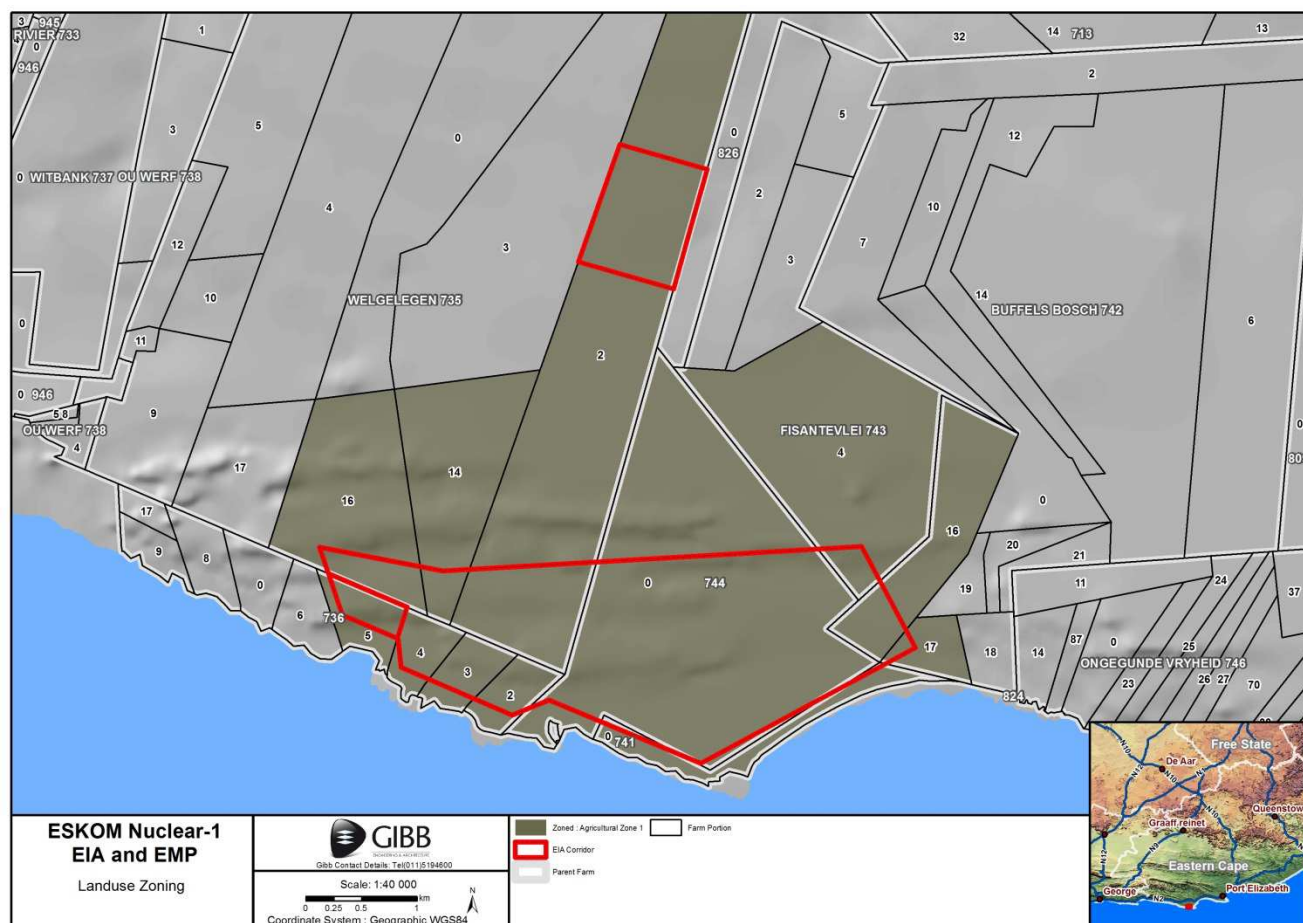


Figure 17: Thyspunt zoning plan

2.3.5 Policy Environment

The following policies with their relevant fundamentals were considered:

- (a) Provincial Growth and Development Plan (PGDP) (2004-2014)

The Eastern Cape PGDP states three basic objectives that provide the required conditions and support for growth and development. These objectives are:

- Infrastructure development and eradication of service backlogs;
- Human resources development and the development and promoting of skills levels; and
- Public sector and institutional transformation through capacity improvement.

The proposed Nuclear-1 development will address and support these objectives by initialising infrastructure upgrading and implementation; providing skills development for the people required to work on the project (i.e. construction and maintenance); and increasing the institutional capacity through an ESKOM initiative which is the proposed Nuclear 1 project.

(b) Eastern Cape Spatial Development Plan (ECSDP)

The ECSDP identifies certain objectives to be obtained through a spatial strategy which in turn can be applied through a strategic approach to investment. The strategic approach to investment and management of development should be applied on three levels to achieve the most significant results, i.e. level 1, level 2 and level 3, as stipulated below.

Level 1:

Fulfils basic human rights in the provision of basic services to both urban and rural areas, at a minimum level in terms of available resources. This would be guided by the incidence of service and infrastructure backlogs, the proximity of existing bulk services and the priorities identified in terms of District and Local Municipality IDP"s.

Level 2:

Ensures the managed investment of public sector funding in urban and rural areas in order to strengthen local capacity, build on the strengths and opportunities that exist and maximizes the development potential of existing infrastructure and settlement systems. **Capacity building must include institution building, training, skills transfer and community empowerment.**

Level 3:

Involves the provision of adequate funding to strategically targeted development zones, which have development potential. These will represent nodes or areas of opportunity, where a special focus of effort and investment will attract interest from the private sector to invest, either in joint ventures with Government or independently, in order to develop economic growth opportunities and to realize the potential which already exists.

The above sections in bold emphasise the areas where the proposed Nuclear-1 project supports the policy.

(c) The Kouga Spatial Development Framework

The proposed Nuclear-1 development will support the SDF objectives such as:

- promoting the integration of the social, economic, institutional and physical aspects of land development;
- promoting integrated land development in rural and urban areas in support of each other; and
- promoting the availability of residential and employment opportunities in close proximity to or integrated with each other.

Thyspunt is identified in the SDF as a 'key focus area' with the following information relating to the site:

The Thyspunt site, west of Cape St Francis has been acquired by ESKOM for possible future power generation purposes. As a result, the Kouga Coast Sub-Regional Structure Plan was prepared based on the need to maintain the viability of the Thyspunt site for possible future nuclear power generation. Subsequently, with the preparation of the St Francis Bay Spatial Development Framework and approval of same by the Kouga Council, the Kouga Coast Sub-Regional Structure Plan was replaced by the recommendations of the Greater St Francis Bay Spatial Development Plan.

With respect to the Thyspunt site, the following land use principles apply:

- To ensure the viability of the Thyspunt site for future possible power generation, development of the surrounding areas must be carefully managed.
- Any proposed changes to current land uses, in terms of standard rezoning procedures within the 16km monitoring and emergency zone, must be brought to the attention of Eskom Nuclear Sites Department at Koeberg Nuclear Power Station, for their consideration and comment.
- Urban expansion of Oyster Bay and Umzamowethu, which falls within the 0-5km zone should not be permitted.
- The provision of a small school (without a hostel) to cater for local children may be supported in Oyster Bay.
- Institutional land uses such as prisons, old age homes and hospitals that may result in the concentration of a resident population should not be developed within 16km of the Thyspunt site, because of potential evacuation difficulties.
- No new food processing plants to be allowed to be developed within the 16km.
- Agricultural activities to be monitored within 16km.

With respect to the future development of the Thyspunt site for power generating purposes, all National, Provincial and Local Legislative processes should be followed. Furthermore all relevant permits, environmental approval, implementation, design, development parameters and management of this site should be subject to all required approvals and international protocol associated with the land use type.

Future development of the Thyspunt site should take cognisance of bulk infrastructure and development of supporting land uses, with specific reference to housing, social facilities, etc.

3 SITE EVALUATION

The aim of the following chapter is to evaluate the sites with respect to its regional and local context, property information and the applicable policy environment by completing a SWOT analysis and develop criteria against which the sites will be analysed. The aim of the analysis is to assist in the decision making process of identifying the site with the least constraints from an urban planning perspective for locating the proposed Nuclear-1 facility.

The intention of the SWOT analysis is to identify strengths, weaknesses, opportunities and threats of each site. This analysis will give an indication of the critical issues that will need to be addressed as well as identify the positive of each site should the proposed Nuclear 1 facility be located at any of the three sites.

Subsequent to the SWOT analysis is the evaluation of the sites in terms of development criteria in order to assist in determining the preferred site for the placement of the Nuclear 1 facility. The approach taken was to evaluate and measure the sites by making use of the development criteria in order to systematically determine a preferred site.

The SWOT analysis and evaluation of the sites are not only informed by the preceding chapters of this report but also by the larger body of work produced as part of the Nuclear-1 Application for Environmental Authorisation. This body of work includes not only the main Environmental Impact Assessment Report and accompanying records of public participation including submissions received from Interested and Affected parties, Stakeholders and the public at large but also reports prepared by the Nuclear-1 appointed team of specialists. Of particular importance to the author and to the current study are the findings and recommendations from the following reports:

- Transportation Specialist Study (Appendix E25 of the Final EIR); and
- Social Impact Assessment Study (Appendix E18 of the Final EIR).

The SWOT analysis was further informed by the comments received from Local and District Municipalities such as the City of Cape Town.

Transportation Specialist Study

This Transportation Specialist Study considered whether activities associated with the construction and operation of the proposed nuclear power station will have an impact on traffic in the surrounding environment (extent determined uniquely for each site), and along the access routes to be used for the transportation of equipment and material. The report therefore considered the transportation impacts of the Nuclear-1 Power Station during the construction, operational and decommissioning phases of the development through the following:

- Site visits and traffic counts at critical road links in the area of each site under consideration;
- Description of the background traffic flow based on traffic counts;
- Calculation of future traffic flow based on the background traffic flow;
- Discussion of access location in terms of access spacing, sight distance and operational requirements;
- Conceptual design of the required road / rail upgrades for the facility or to improve evacuation times;

- Description of the proposed development and operation including routing of heavy vehicles;
- Calculation of trip generation and heavy vehicle movement frequency;
- Analysis of the existing and future operation of the road network;
- Existing and future upgrades to the transport network;
- Analysis of possible evacuation times of the local population using the road network;
- Description of the surrounding road / rail network and future transportation planning proposals for each site;
- The frequency and type of rail use;
- Description of the surrounding aviation air routes, within 80 km radius of each site;
- Description of the future development proposals for new, extensions and / or closure of airports affecting each site;
- Description of the shipping line network affecting each site;
- Description of the activities and functions at the ports and harbours affecting each site;
- Analysis of new access routes at Thyspunt and additional off-peak traffic accounts for these routes; and
- Inclusion of a peak season (December) traffic count at Thyspunt as requested in the public comments.

The result of the study found the following in terms of the three alternative sites.

The Duynefontein site requires no significant upgrades during the construction and operational phases of Nuclear-1 with regard to intersection upgrades, heavy load transport road upgrades and emergency evacuation upgrades. Duynefontein, however, requires a significant number of stand-by evacuation vehicles to ensure safe evacuation of construction workers if an accident does occur at the adjacent Koeberg Nuclear Power Station during the construction period. These vehicles can also be used to shuttle the construction workers to and from the site during the AM and PM peak periods.

The Bantamsklip site will have a significant impact on the transport network, with upgrades required to the public transport system, heavy load routes and road upgrades required for emergency evacuation purposes and bypassing Gansbaai. Due to the Bantamsklip site's isolated location, transporting heavy loads by road will require significant upgrades and the alternative transport by sea should be considered. A suitable site on the beach near to Bantamsklip will have to be identified and a landing with loading / off-loading facilities will have to be constructed.

The Thyspunt site requires significant transport upgrades with regard to public transport, access and emergency evacuation, during the construction phases. The recommended routes in Version 9 of this Report were revised as a result of public input and recommendations received between 29 May 2011 and 2 June 2011. Based on the feedback received, the R330 is now proposed to be used for light vehicle traffic and abnormal load transport, and sections will require upgrading for this purpose. The Oyster Bay Road is now proposed to be upgraded to a surfaced road to be used during the construction and operations phases for staff access, light vehicle traffic, heavy vehicle traffic and as an emergency evacuation route for areas such as Oyster Bay. DR1762, which links the R330 and Oyster Bay Road is now proposed to be surfaced to provide improved east-west connectivity. Bypass roads to the east and west of Humansdorp are also now proposed to be constructed to reduce the traffic impact on central Humansdorp

Social Impact Assessment

The Social Impact Assessment presented an assessment of the possible social impacts, including a rating of impacts as required by the EIA Regulations, the significance thereof and measures for mitigation through the enhancement of positive impacts and the mitigation of negative impacts. For each of the two primary project phases, viz. construction and operation, the existing and potential future impacts and benefits, associated only with the proposed development, were described and assessed, both prior to and after mitigation/ optimisation, according to prescribed assessment criteria.

The following social impacts were identified and assessed:

- Accommodation of staff and construction workers;
- Influx of job seekers;
- Increase in number of informal illegal dwellings;
- Creation of employment opportunities;
- Business opportunities;
- Impact on criminal activities;
- Risk of STDs, HIV and AIDS;
- Municipal services;
- Traffic impacts;
- Noise and dust impact;
- Loss of employment after construction;
- Visual impacts;
- Impact on social infrastructure and facilities;
- Impact on sense of place;
- Future land use planning;
- Perceived risks associated with nuclear incidents; and
- Assessment of no development option.

The assessment was based on a review of:

- Issues identified during the Scoping Process;
- Planning and policy documents pertaining to the area;
- Interviews with key interested and affected parties;
- Social issues associated with similar developments; and
- The experience of the author in the field of SIAs.

The following specific aspects were emphasized for the three proposed sites:

The area around the Duynfontein site may find it easier to accommodate large numbers of staff and construction workers than the other two sites, due to the development level of the area. A construction village will contribute positively to provide required accommodation for construction workers who do not have the option of alternative accommodation. Other developments in the area have the potential to absorb some of the influx of job seekers into the area. Municipal services and social infrastructure and facilities will experience additional strain. Implementation of mitigation measures is of high importance to cope with large numbers of people flowing into the area.

In terms of Bantamsklip accommodation for large numbers of staff and construction workers pose a serious problem, but can be mitigated. The erection of a construction village seems to be the preferred way to provide accommodation for construction workers, and should be done to enhance and support the building of sustainable

human settlements. The exact location of the construction village, however, needs to be determined. The future of the construction village, after the construction phase has been completed, requires a proactive negotiated decision between Eskom and the local municipality. Large numbers of job seekers into the area will impact negatively on the rural character of the area, especially if an increase in the number of informal illegal dwellings is experienced. Municipal services and social infrastructure is inadequate to cope with a growth in the number of people working and living in the area. The implementation of mitigation measures are a pre-requisite to ensure proper provision of services and infrastructure.

The situation in Thyspunt is very similar to that of Bantamsklip. However, the relative proximity of Humansdorp and Jeffreys Bay, do offer some alternative options to address some of the impacts. Accommodation for large numbers of staff and construction workers pose a serious problem but can be mitigated. The erection of a construction village seems to be the preferred way to provide accommodation for construction workers, and should be done to enhance and support the building of sustainable human settlements. As in the case of Bantamsklip, the actual site for the village needs to be determined. The future of the construction village after the construction phase has been completed requires a proactive negotiated decision between Eskom and the local municipality. Large numbers of job seekers into the area will impact negatively on the rural character of the area, especially if there is an increase in the number of informal illegal dwellings around the site and towards St. Francis Bay. Municipal services and social infrastructure is inadequate to cope with growth in the number of people working and living in the area. Implementing mitigation measures is a pre-requisite to ensure proper provision of services and infrastructure.

3.1 SWOT Analysis

The purpose of this section is to identify the strengths, weaknesses, opportunities and threats of each site by considering the site and proposed use in relation to existing local and regional traits and the future planning proposals. The issues relating to each site listed below were deducted from information received and documented above as well as interviews with the various municipalities.

3.1.1 Duynefontein

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Located adjacent to the existing Koeberg power station (existing infrastructure available such as civil services, within an existing conservation/protected area, etc.). • Good road/ vehicular access. • The possibility exists to construct an alternative access to the proposed Duynefontein site, if required. • The site is located in close proximity to urban amenities such as housing, social facilities and a potential workforce. • Existing Emergency Plan with infrastructure. 	<ul style="list-style-type: none"> • The site is located in the direction of future growth direction of the city. • Locating the facility at the Duynefontein site may impact on the existing transport model/evacuation model put in place for the Koeberg power station. Amending the approved plan to accommodate the proposed Nuclear 1 will take a lot of time. • Located adjacent to the existing Koeberg Power Station (national perspective – wanting to spread the generation to more than one area around South Africa).

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> Infrastructure present in close proximity to the proposed Duynfontein site. Cost of upgrading may be more cost and time effective than to construct new facilities required. The area around the nuclear facility will be used for conservation purposes. It may be utilized for recreational purposes such as hiking and mountain biking trails and may accommodate game. 	<ul style="list-style-type: none"> Future urban development around or in close proximity to the proposed Nuclear 1 site is a risk that will need to be managed. The current trends indicate that urban development will only increase in the area. Cost of upgrading services to comply with National Nuclear Regulators regulations may be costly, especially when the facility is located in close proximity to the urban development.

3.1.2 Bantamsklip

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> Upgrade of water infrastructure in the area may be beneficial for the proposed nuclear facility. The proposed Bantamsklip site is located in a rural part of the country and the expansion of existing towns is limited according to the applicable SDF. Gansbaai and Pearly beach are small towns and is located to the northwest of the site and along the coast. Development to the south-west is limited, which may be beneficial from a risk management point of view. 	<ul style="list-style-type: none"> The site is a somewhat isolated and far from urban amenities. The site is located approximately 2 hours from the Cape Town CBD and 1 hour from Hermanus. Gansbaai (30 minutes' drive) and Pearly beach (10 minutes' drive) are the closest towns to the site. The site can only be accessed via the R43 and from Bredasdorp in the east. Therefore limited opportunities exist for alternative accesses to the site. Presence of an existing workforce not located within close proximity to the site.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> The construction of the facility at the proposed Bantamsklip site will generate economic opportunities in the area as a result of an increase in population of a skilled workforce. The area around the nuclear facility will be used for conservation purposes. It may be utilized for recreational purposes such as hiking and mountain biking trails and may accommodate game. 	<ul style="list-style-type: none"> Second or alternative access to the site is problematic at this stage and may be expensive to implement. The resulting increased population will put added pressure on service delivery in the towns that will house the project's workers, which may prove to be unfeasible.

3.1.3 Thyspunt

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> The site is situated on undeveloped land which therefore presents limited urban restructuring. The site is within 10km of Oyster Bay, Cape St Francis and St Francis Bay, and within 20km of Humansdorp which is one of the largest activity centres within the region. It is therefore in the vicinity of social services and infrastructure, as well as a labour force. There is proper access to the site. 	<ul style="list-style-type: none"> The Kouga region is already functioning at full capacity regarding engineering services, including power, water and sanitation. There is currently only one access route to the site which makes it a lengthy trip to reach the site.

<ul style="list-style-type: none"> The adjacent land uses are compatible with a nuclear facility. 	
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> The site presents the opportunity for additional access routes. The site is suitably situated for the proposed nuclear plant to have a minimal visual impact on the surrounding environment. The adjacent areas can be developed as game farms or uses as such, which will support the region's economy. Additional jobs may be created as spin-offs from training personnel and facilitating social development. 	<ul style="list-style-type: none"> The resulting increased population will put added pressure on service delivery in the towns that will house the project's workers, which may prove to be unfeasible.

3.2 Development Criteria

The three pillars of sustainability, according to the Brundtland Commission, are the social environment, economic environment and natural environment. The concept of sustainability has evolved to now acknowledge the role of underlying governance structures. According to a study by the United Nations in 2013, "achieving sustainability in cities can be conceived by the integration of four pillars: social development, economic development, environmental management, and urban governance. In the town planning profession the notion of sustainability is taken another step further by recognising the provision of services (roads, water sewer, etc.) as well as institutional infrastructure such as schools and health facilities. Recognising the dynamic nature of sustainability is critical to development. Therefore the above-mentioned development pillars were used in evaluating the potential project sites. These pillars are used in the preparation of spatial development frameworks or development strategies informing the future growth of cities. To summarise, the town planning report took the following into consideration:

- The social environment;
- The economic environment;
- The physical environment:
 - Natural environment;
 - Built environment (provision of services); and
- The Institutional environment (governance, schools, health facilities, etc.)

The development pillars are therefore the departure point for the establishment of evaluation criteria applicable to the specific context of the project. As a result, evaluation criteria applied to the Nuclear-1 project were centred on ensuring an evaluation in terms of both sustainability principles as well as the attributes of the sites and their surrounding socio-economic and biophysical environments. The choice of specific criteria used within each pillar is in line with criteria for a project of this nature and is determined by the experience of the specialist within his field of study. This enabled a thorough analysis of the possible land use impacts of the proposed Nuclear-1 development on the surrounding areas. This methodology was followed for each of the potential sites. **It must be noted that the purpose of this analysis was to determine a physical land development footprint impact and not to consider the potential technology impacts.**

The four pillars indicated above form the corner stones of urban development as shown in Table 7 below.

Table 7: Evaluation of site in terms of criteria

Evaluation Criteria		Scoring		
Institutional				
Availability of institutional (municipal) infrastructure		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt		3	
Economic				
Proximity of existing labour force ***		10km (5)	20km (3)	30km (1)
	Duynefontein		3	
	Bantamsklip		3	
	Thyspunt	5		
Social				
Proximity of resident population		5km (0)	10km (3)	20km (5)
	Duynefontein		3	
	Bantamsklip			5
	Thyspunt		3	
Distance to urban services		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt	5		
Physical				
Presence of bulk services		10km (5)	20km (3)	30km (1)
	Duynefontein	5		
	Bantamsklip		3	
	Thyspunt	5		
Within the expected growth path of the region		Y (0)	N (5)	
	Duynefontein	0		
	Bantamsklip		5	
	Thyspunt		5	
Compatible surrounding land use		Comp (5)	Non comp (0)	
	Duynefontein	5		
	Bantamsklip	5		
	Thyspunt	5		
Accessibility by quality road		5km (5)	10km (3)	20km (0)
	Duynefontein	5		
	Bantamsklip	5		
	Thyspunt	5		
Complexity of transport route upgrades		Not Complicated (5)	Moderate (3)	Very Complicated (0)
	Duynefontein	5		
	Bantamsklip			0
	Thyspunt		3	
Potential for additional access*		Y (5)	N (0)	
	Duynefontein	5		
	Bantamsklip		0	

Thyspunt	5		
Potential for seamless integration of facility (visual, noise/ smell impact)	Y (5)	N (0)	
Duynefontein	5		
Bantamsklip	5		
Thyspunt	5		
Total			
Duynefontein			46
Bantamsklip			37
Thyspunt			49

* Note: Potential for additional access refers to ease of access to site from existing road infrastructure, furthermore it refers to additional access roads to cater for traffic require for the Nuclear Power Station.

** Please note that the numbers in the table above are indicative numbers and not statistical."

*** Please note that labour force refers to unskilled and semi-skilled individuals.

The above table of criteria indicates Thyspunt as the site with the highest score, therefore being the site with the least constraints from an urban planning perspective for the proposed Nuclear-1 facility.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusion

The aim of this study was for a town planning specialist to undertake consultation with the Kouga Local Municipality, Overberg Local Municipality and Cape Town Metropolitan Municipalities, to compile a town planning specialist report and ultimately assess externalities associated with any possible direct or indirect restriction on land use as result of the possible location of Nuclear-1 at any of the three identified sites.

Table 8 below summarises the land use impact of Nuclear-1 on the various sites in terms of:

- the direct impact on land use;
- indirect impact on land use;
- compatibility with local planning instruments as polices; and
- the impact of the facility in case of emergency.

Table 8: Land use impact of Nuclear-1

	DUYNEFONTEIN	BANTAMSKLIP	THYSPUNT
Direct impact on land use E.g. the impact of the nuclear site as well as the emergency planning zones on urban expansion.	<ul style="list-style-type: none">• The proposed development will have an impact on future development of the region i.t.o. land that can be utilised for future development. Areas around the site will need to be protected, densities may need to be lower than if the development was not there and infrastructure upgrades will be required, especially	<ul style="list-style-type: none">• The proposed site is not in the growth path of future urban development.• The impact of urban expansion will be limited due to the rural character of the towns. Growth of towns as a result of the Nuclear 1 facility being located at the proposed Bantamsklip site will need to be managed	<ul style="list-style-type: none">• The proposed site is not in the growth path of future urban development.• Growth and developments of nearby towns will have to be managed to comply with the restrictions and regulations concerning a nuclear facility in the vicinity.

	roads.	and directed to areas where development and expansion can be accommodated.	
Indirect impact on land use	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will not have a dramatic impact on services and facilities (indirect land uses) required to sustain them as will be the case with the Bantamsklip and Thyspunt sites. This only take into account the increase in population and not the impact of on existing policies as result of the existing Koeberg Power Station. 	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will have a dramatic impact on services and facilities required to sustain them. Especially in an area such as Gansbaai and Pearly Beach that has an existing population of approximately 11 000 and 1500 people respectively. 	<ul style="list-style-type: none"> The influx of approximately 2000 people, as projected when the site is fully operational, will have a dramatic impact on services and facilities required to sustain them in areas such as Humansdorp.
Compatibility with local planning instruments and policies	<ul style="list-style-type: none"> The Nuclear 1 facility is not specifically mentioned in the Municipal SDF, but existing surrounding land uses are compatible with proposed land use. There are some conflicts with future land use as the site is located within the growth path of the city. If the proposed development is implemented, this will have an impact on the future growth of the city i.t.o. urban form (densities allowed, 	<ul style="list-style-type: none"> The Nuclear 1 facility is not specifically mentioned in the Municipal SDF Surrounding land use is compatible with the proposed Nuclear 1. The future planning suggests that the proposed use could be accommodated on the proposed site. There are legislative processes in place that will require the submission of an application to the 	<ul style="list-style-type: none"> The Nuclear 1 facility is only briefly mentioned in the Kouga SDF. Surrounding land use is compatible with the proposed Nuclear 1. The future planning suggests that the proposed use could be accommodated on the proposed site. There are legislative processes in place that will require the submission of an application to the

	<p>etc.) and the existing risk management/ evacuation model.</p> <ul style="list-style-type: none"> • There are legislative processes in place that will require the submission of an application to the Municipality to obtain the rights for the proposed land use. 	Municipality to obtain the rights for the proposed land use.	Municipality to obtain the rights for the proposed land use.
Impact in case of emergency	<ul style="list-style-type: none"> • There is existing urban development around the proposed site that will be impacted upon, especially to the south and east of the site, which will be affected. • The site is located adjacent to an existing operational nuclear power plant. 	<ul style="list-style-type: none"> • Limited development exists around the site and the impact will be less than in Duynefontein due to the rural character of the Bantamsklip site. • The time it will take to evacuate people around the site will be less than in the case of Duynefontein. There is not a high population concentration around the site. Closest urban areas are Buffeljagsbaai, Pearly Beach and Gansbaai. 	<ul style="list-style-type: none"> • Limited development exists around the site. • The rural character of the area will be supportive of emergency procedures associated with the proposed nuclear facility.

4.2 Recommendation

In terms of the outcomes of this analysis, the context provided by the SWOT analysis and the evaluation provided by the Matrix it is clear that the Thyspunt site with the highest score, is therefore the site with the least constraints and is recommended from an urban planning perspective for the proposed Nuclear-1 facility.

5 REFERENCES

- City of Cape Town, Local Government, Environmental Affairs and Development Planning (2012), Spatial Development Plan and Environmental Management Framework, Blaauwberg District Plan.
- City of Cape Town, Local Government, Environmental Affairs and Development Planning (2012), Cape Town Spatial Development Framework, Statutory Report.
- Overstrand Local Municipality, Department of Planning (2013), Overstrand Integrated Development Framework: Long term spatial planning – Towards 2050
- Kouga Local Municipality, Department of Planning 2013/14, Integrated Development Plan

6 ANNEXURE A



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

Milpark
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Ask for: J Gelb
Tel no: 021550-1093
Fax no: 021 550-7517
e-mail : Jack.Gelb@capetown.gov.za
Website: <http://www.capetown.gov.za>
Ref: LC CFM 34 & 1375

Application no: 167489

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Umunxeba: 021 550-1093
iFeksi : 021 550-7517

iRef: LC CFM34 & 1375

Milpark
Koeberg &

Milnerton 7441
P O Box 35
MILNERTON

Vra vir: J Gelb
Tel no: 021 550-1093
Faks no : 021 550-751

Verw: LC CFM 34 & 1375

STRATEGY & PLANNING

Department : Planning & Building Development Management

REGISTERED POST

29 October 2010.

MLH Architects & Planners
P.O. Box 15002
VLAEBERG
8018

ATTENTION : ILANI NEL

Dear Madam


APPEAL : APPLICATION FOR REZONING AND CONDITIONAL USES FOR PORTIONS OF CAPE FARM No 34 AND CAPE FARM no 1375(KOEBERG NUCLEAR POWER STATION AND RELATED FACILITIES, DUYNEFONTEIN) MELKBOSSTRAND
YOUR CLIENT : ESKOM HOLDINGS LTD.

Attached is a copy of a letter received from the Department of Environmental Affairs & Development Planning dated 30 September, 2010 advising of the outcome of the Appeal against Council's decision to approve this application.

Therefore the decision taken by the Sub-Council (Koeberg) at the meeting held on 15 June, 2009 to approve the application on Cape Farms 34 and 1375 as set out in paragraphs 2.1 -2.4 in the attached letter, is hereby **CONFIRMED** subject to the attached conditions.

Yours faithfully


for **S.M. MATTHYSEN - DISTRICT MANAGER: DISTRICT B**
(for) **DIRECTOR: PLANNING & BUILDING DEVELOPMENT MANAGEMENT**

 mlh **FILE:**

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PWS		AG		PSH			



**DEPARTMENT of
ENVIRONMENTAL AFFAIRS
& DEVELOPMENT PLANNING**

Provincial Government of the Western Cape

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REFERENCE: E17/2/2/3/AM7/PTN OF CAPE FARM 34 AND CAPE FARM 1375 MELKBOSSTRAND
ENQUIRIES: MR G VAN LILLE

Plan Africa Consulting cc
14 Coetzenberg Road
EDGE MEAD
7441



Sirs

CITY OF CAPE TOWN: APPEAL: REZONING: CAPE FARMS 34 AND 1375, MELKBOSSTRAND

1. Your letter of appeal dated 25 September 2009, refers.
2. The Competent Authority for the administration of the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985) has decided that your appeal, against the decision of the City of Cape Town (Cape Town Administration) to approve the rezoning of portions of the land unit (as indicated on the attached Site Plan: (marked Annexure B: Figure 6) and generally in accordance with the Land Use Table (marked Annexure C), be dismissed in terms of section 44(2) and 42(1) of the said Ordinance, subject to the conditions as set out by Council. (marked Annexure D), and that the application be approved in the following manner:
 - 2.1 The rezoning from Rural to Noxious Industrial (to regularise the existing Koeberg Nuclear Power Station building footprint as a Conditional Use) of Cape Farm 34 and Cape Farm 1375 in terms of section 16(1) and of the Land Use Planning Ordinance, 1985 (No 15 of 1985) and of Part II Section 3b of the Divisional Council of the Cape Zoning Scheme Regulations subject to conditions of approval.
 - 2.2 The rezoning from Rural to Commercial (Office above Ground Floor) and the approval of a consent for Administrative, Commercial and Professional Offices (as a Conditional use on Ground Floor level) on Cape Farm 34 and Cape Farm 1375 in terms of section 16(1) of the Land Use Planning Ordinance, 1985 (No 15 of 1985) and of Part II Section 3b of the Divisional Council of the Cape Zoning Scheme Regulations subject to conditions of approval.
 - 2.3 The rezoning from Rural to General Industrial (with consent as a Conditional use for Places of Instruction and for buildings in excess of 11m in height) on Cape Farm 34 and Cape Farm 1375 in terms of section 16(1) of the Land Use Planning Ordinance, 1985 (No 15 of 1985) and of Part II Section 3b of the Divisional Council of the Cape Zoning Scheme Regulations subject to conditions of approval.

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- 2.4 The application for consent to allow a Conditional Use in terms of Part II Section 16 of the Divisional Council of the Cape Zoning Scheme Regulations for Public Utilities (Electricity Substations for the City of Cape Town and Eskom) in terms of Part II Section 3b of the Divisional Council of the Cape Zoning Scheme Regulations subject to conditions of approval.

Yours faithfully

G. van Lill

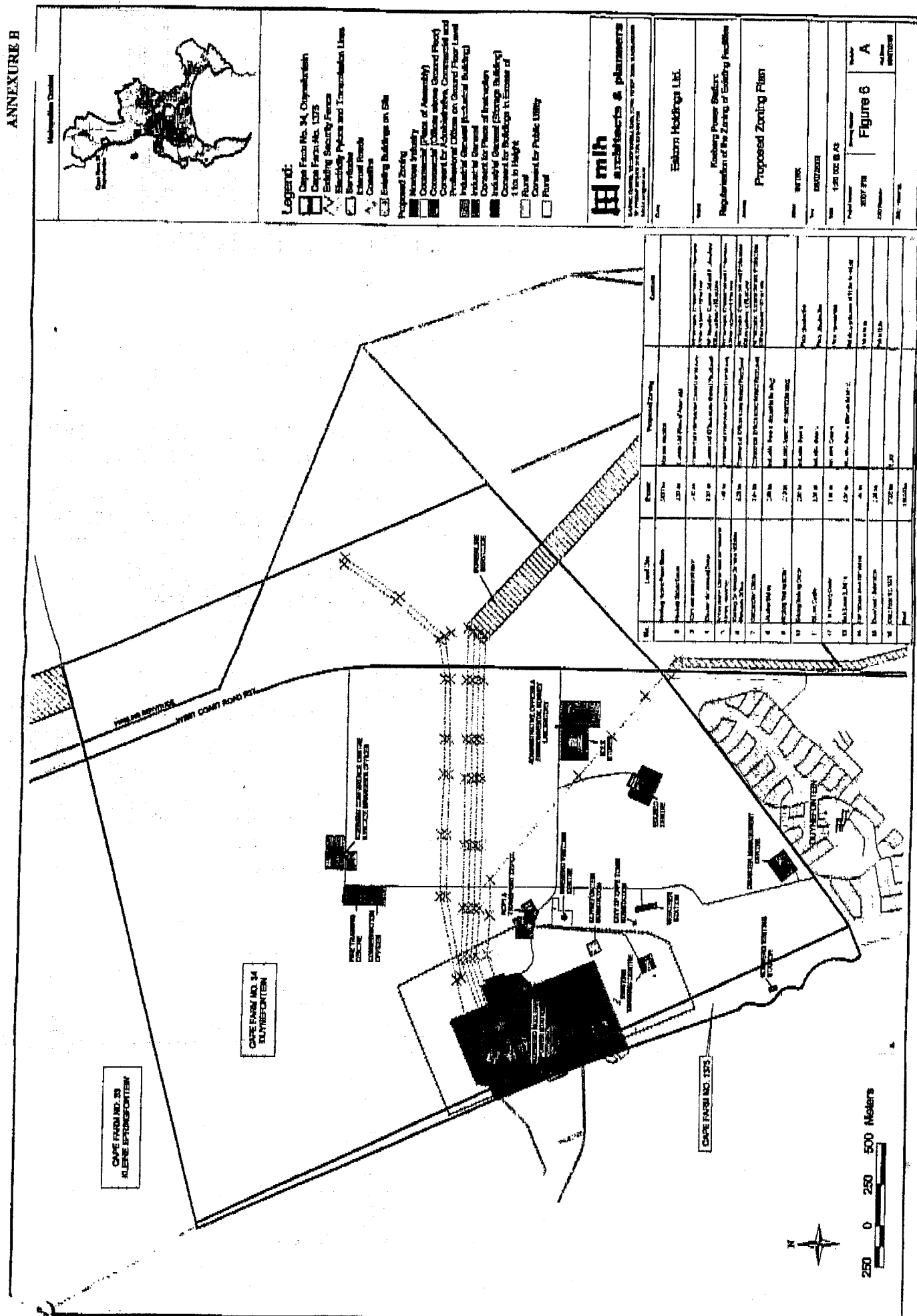
HEAD OF DEPARTMENT

DATE:

30/9/10

Cape farms 34 and 1375 melkbosstrand laa

ANNEXURE B



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ANNEXURE C

mth architects & planners

Table 1: Land Use Table

No.	Land Use	Extent	Proposed Zoning	Consent
1	Koeberg Nuclear Power Station	54.97 ha	Nuclear Industrial	
2	Koeberg Visitors Centre	1.37 ha	Commercial (Place of Assembly)	
3	ACP1 and Transport Depot	2.23 ha	Commercial (Offices above Ground Floor Level)	Administrative, Commercial and Professional Offices on Ground Floor Level
4	Disaster Management Centre	1.87 ha	Commercial (Offices above Ground Floor Level)	Administrative, Commercial and Professional Offices on Ground Floor Level
5	Administrative Offices and Environmental Survey Laboratory	6.48 ha	Commercial (Offices above Ground Floor Level)	Administrative, Commercial and Professional Offices on Ground Floor Level
6	Koeberg Conference Centre and Estate Managers Offices	3.23 ha	Commercial (Offices above Ground Floor Level)	Administrative, Commercial and Professional Offices on Ground Floor Level
7	Conservation Offices	1.44 ha	Commercial (Offices above Ground Floor Level)	Administrative, Commercial and Professional Offices on Ground Floor Level
8	Weather Station	0.40 ha	Industrial General (Industrial Building)	
9	Koeberg Testing Station	0.13 ha	Industrial General (Industrial Building)	
10	Existing Training Centre	0.80 ha	Industrial General	Place of Instruction
11	Edusec Centre	3.30 ha	Industrial General	Place of Instruction
12	Fire Training Centre	1.60 ha	Industrial General	Place of Instruction
13	Bulk Stores Building	1.24 ha	Industrial General (Storage Building)	Buildings in Excess of 11.0m in Height
14	City of Cape Town Substation	0.04 ha		Public Utility
15	Duynefontein Substation	0.49 ha		Public Utility
16	Cape Farm No. 1375	37.06 ha	Rural	
	Total	116.66 ha		

CFM 34 and 1375: Application for Regularisation of Zoning
mth ref: 2007 510June 2008
Eskom Contract no 4600017132

ANNEXURE D**ANNEXURE A****File Reference:****LC CFM 34 & 1375**

In this Annexure:

Council means the City of Cape Town

Scheme Regulations has the meaning assigned there by Ordinance No 15 of 1985

The Owner means the registered owner of the property (or successors-in-title):

The property means ERF/FARM

Cape Farm 34 and 1375 Duynfontein
(Molkbosstrand)**CONDITIONS IMPOSED IN TERMS OF SECTION 42(1) OF THE LAND USE PLANNING ORDINANCE, 1985 (NO. 15 OF 1985) and PART I SECTION 7 OF THE DIVISIONAL COUNCIL OF THE CAPE ZONING SCHEME****1. LAND USE**

Notwithstanding the regulations applicable, development shall be subject to the following:

- 1.1 The consolidation of the two properties concerned and that no further subdivision shall be permitted.
- 1.2 The buildings and use of the portion of the land unit (as reflected on the sketch plan submitted with the application (Project No. 20007 510 proposed zoning plan Fig. 6 dated 26/05/2007) shall be limited to a nuclear power station facility and related infrastructure that includes:
 - (a) Noxious Industrial building (to regularise the existing Koeberg Nuclear Power Station building footprint as a Conditional Use),
 - (b) Offices (above Ground Floor) and as a Conditional Use for Administrative, Commercial and Professional Offices (on Ground Floor level) to regularise the existing ACP1 and Transportation Depot, Disaster Management Centre, Administrative Offices and Environmental Survey Laboratory, Koeberg Conference Centre and Estates Managers and Conservation Offices.
 - (c) Industrial buildings (to regularise the existing Bulk Storage Building, Weather Station and Koeberg Test Station) and as a Conditional use for the following:
 1. Place of Instruction (existing Training Centre, Edusec Centre and Fire Training Centre);
 2. For buildings in excess of 11m in height to regularise the existing Storage building.
 - (d) Public Utilities (as a Conditional use for the Electricity Substations for the City of Cape Town and Eskom).
- 1.3 The submission of a Site Development Plan for the overall site within 3 month of this decision to the Director: Planning and Building Development Management (in consultation with the Executive Director: Engineering Services and Director: Environmental Resource Management) for approval depicting, inter alia:
 - (a) A layout plan (accurately scaled and dimensioned) showing servitudes, abutting roads and vehicular access points, on-site parking provision and refuse facilities, elevations, existing building footprints, setbacks, boundary walls and fencing.
 - (b) A Landscaping Plan showing, inter alia, details of all hard and soft landscaping, of the road verges and entrances, list of species, trees, shrub and ground cover and irrigation plan (i.e. type of system and water point connections) for the approval of the Director: Environmental Resource Management.
 - (c) The delineation of the remainder of the erf that was a proclaimed as a private nature reserve in 1991.
 - (d) The perimeter boundary enclosure of the site boundaries is to be visually permeable.

P.T.O

- 1.4 A signage manual to be submitted (within 1 month of the final decision) for the approval of the Director, Environmental Resource Management (inter alia, denoting emergency procedures and emergency exit routes etc.) and all signage is to be in accordance with the Outdoor Advertising and Signage By-Law.

- 1.5 The submission of a Transmission Corridor Management Plan with respect to management of Transmission lines.

2. DISASTER MANAGEMENT AND FIRE RESCUE & SAFETY

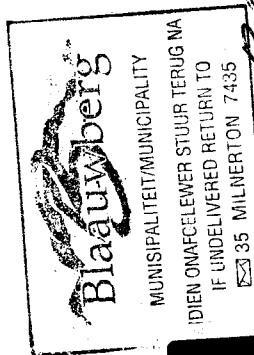
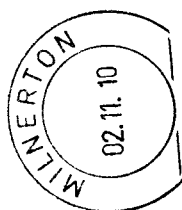
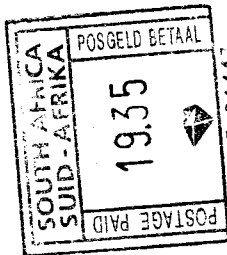
- 2.1 ESKOM to install a system of Fixed Radiation Monitors at those locations identified by the Emergency Planning Committee as part of an Early Warning System of the Koeberg Nuclear Emergency Plan.

3. SOLID WASTE MANAGEMENT

- 3.1 The proposed development will be subject to the standard building regulations on refuse disposal in terms of U1 (Provision of Areas) and U2 (Access to Areas), and shall be such that access thereto from any street for the purpose of moving or removing the refuse, is to the satisfaction of the local authority.
- 3.2 Subject to DSW Standard Conditions for the removal/collection of refuse applicable to a new and/or existing development including Sectional Title Units, namely that the refuse storage area/room be provide in a position nearest to an access road (public road) and be accessible for the Council's refuse collection vehicle at all times as this vehicle and/or its crew members (council staff) will not enter onto private property. Should there be an existing refuse room on the premises, then this room can be utilized for the storage of waste depending on the volume of waste being generated
- 3.3 Also subject to the Director, Solid Waste Management's Waste/Recycling storage Area/Rooms: Standards and Guidelines as set out in their comments attached as part of Annexure K
- 3.4 All waste/recycling storage area/rooms shall be approved by the Director, Solid Waste prior to construction, to ensure that the Council is able to service all installations, irrespective of whether these are currently serviced by Council or other companies.

4. GENERAL

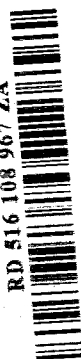
- 4.1 The developer (and/or successors-in-title) shall be responsible for all costs necessary to comply with the above conditions unless otherwise specified.
- 4.2 Council reserves the right to impose additional conditions at any subsequent approval required.



HTMS 01417
REMOTE SELLING

REC'D 12057 0828245

RD 516 108 967 ZA



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3/11

