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- Starting point of the activity
- Middle point of the activity
- End point of the activity

θ	-	θ	-
θ	<u>'</u>	0	<u>'</u>
θ	<u> </u>	θ	<u> </u>

For route alternatives that are longer than 500m, please provide an addendum with coordinates taken every 250 meters along the route for each alternative alignment.

#### 4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A12 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

132,578.5 m <sup>2</sup>
53,031.4 m <sup>2</sup>
m²

Length of the activity:

m	
m	
m	

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative A1 (preferred activity alternative)
Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

197,996.1 m <sup>2</sup>
197,996.1 m <sup>2</sup>
<del>m²</del>

#### 5. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES&	NO		
4,330 n	1		

Describe the type of access road planned:

The development will be accessed off the R343 road which runs between Kenton-on-Sea and Grahamstown. There are two access roads planned, one to the western node using existing farm tracks. A gravel road is planned along this route. For the eastern node of 5 units a gravel road will be constructed from the R343 to the planned development. This road will be designed to engineering specifications, with a hard surface of 3-4 metres wide. Consultation with the vegetation specialist in the design stage will enable the developers to minimise the effects on the vegetation.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

<sup>&</sup>lt;sup>2</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

#### 6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;

This is impracticable, as it would require 8 plans of A0 size which is unmanageable and unnecessarily expensive. A 1:3 00 scale plan has been provided. Should the project go ahead the engineer will provide more detailed maps of all the residential erfs to homeowners, indicating 'No-Go' areas of sensitive vegetation or steams/catchment areas.

- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site:
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites:
- 6.4 the exact position of each element of the application as well as any other structures on the site:
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure:
- 6.6 all trees and shrubs taller than 1.8 metres:

The vegetation labelled Xeric and Succulent Thicket is all approximately 1.8m or taller, and therefore it is impracticable to map individual trees. These trees are included in the ortho-photograph upon which which the site map has been superimposed.

- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - rivers
  - the 1:100 year flood line (where available or where it is required by DWA);
  - ridges:
  - cultural and historical features:
  - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

#### 7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

#### 8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

Homeowners will only have such detailed plans drawn up after purchasing their land and contracting an architect. Each house will then vary slightly, according to the individual architect's designs. With this in mind, building style guidelines have been provided, and photographs are attached detailing the type of house that will be constructed. Both the guidelines and the photographs will inform the building designs chosen by residents.

#### 9. ACTIVITY MOTIVATION

# 9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

What is the expected yearly income that will be generated by or as a result of the activity?

Will the activity contribute to service infrastructure? Is the activity a public amenity?

How many new employment opportunities will be created in the development phase of the activity?

What is the expected value of the employment opportunities during the development phase?

What percentage of this will accrue to previously disadvantaged individuals?

How many permanent new employment opportunities will be created during the operational phase of the activity?

What is the expected current value of the employment opportunities during the first 10 years?

What percentage of this will accrue to previously disadvantaged individuals?

±R35,000,000.00
±R173,000.00
YES
YES
20+ jobs during construction.
±R500,000.00
50%
7 jobs (2 on a part time basis)
This is made up of:
- 3 jobs for maintenance
- 2 jobs for refuse collection/recycling
- 2 jobs on a long-term, part-time basis
for restoration of indigenous
vegetation to old lands and alien
removal
±R1,440,000.00 (full-time employees)
±R115,200.00 (6 months employment

- D25 000 000 00

a year for 4 years) = ±R1,555,200.00

100%

# 9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity): There is an increased demand for secure, low density rural lifestyle accommodation in a protected and unique natural environment. This is due to more urban inhabitants desiring to live in a more rural environment where they can experience nature in a calm and peaceful setting.

Indicate any benefits that the activity will have for society in general:

It would assist in the economic development of the Ndlambe district by stimulating investment in fixed infrastructure thereby creating an attraction to the area. Sustainable rural development can lead to revitalised rural areas, and relieves pressure on urban infrastructure.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

It will help maintain employment in the shrinking rural job market and create an opportunity to broaden the skills base within the local community. The home owners will obtain goods and services from the surrounding area, and this will lead to spin-offs for the local community. There is currently a decline in employment figures due to the decreased amount of income obtained from pineapple production in the region.

## 10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act (NEMA) No. 107 0f 1998	Department of Environmental Affairs (DEA)	2002
Environmental Impact Assessment Regulations (Government Notice No. R.543, 544, 545 & 546	Department of Environmental Affairs (DEA)	2010
Ndlambe Spatial Development Framework	Ndlambe Municipality	October 2006
Subtropical Ecosystem Programme		
National Environmental Management: Biodiversity Act	Department of Environmental Affairs(DEA)	2004
The Environment Conservation Act (ECA) No. 73 of 1989	Department of Environmental Affairs (DEA)	1989
White Paper on Spatial Planning and Land use Management	Ministry of Agriculture and Land Affairs	July 2001
National Water Act (NWA) No. 36 of 1998	Department of Water Affairs (DWA)	1998
National Forest Act (NFAA) No. 84 of 1998	Department of Agriculture, Forestry &Fisheries	1998

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National Heritage Resources Act (NHRA) No. 25 of 1999	South African Heritage Resources Association (SAHRA)	1999
Cacadu DM District Municipality Spatial Development Framework	Cacadu District Municipality	2006

# 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

## 11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

**YES** ±10 m<sup>3</sup>

If yes, what estimated quantity will be produced per month? How will the construction solid waste be disposed of (describe)?

It will be collected by the contractor and stored in bags, tips or drums depending on the nature of the waste, and taken to a registered landfill site by the contractor.

Where will the construction solid waste be disposed of (describe)?

It will be taken to the nearest registered landfill site (Makana/Nldambe Municipality depending where the building contractors are based) where it can be disposed of in the appropriate manner. Waste such as vegetation and earth will be disposed of in the composting site on the farm.

Will the activity produce solid waste during its operational phase? If yes, what estimated quantity will be produced per month?

±30 m³ during peak operational phases (June/July and December/January) and ±10 m³ during offpeak periods

How will the solid waste be disposed of (describe)?

Residents in the development will be required to separate their waste into glass, paper, organic and general waste. This will be collected by a contractor on a regular basis, and taken to the nearest waste/recycling facility. All municipal requirements in this regard will be complied with.

Non-recyclable waste will be transported to the Kenton-on-Sea municipal dump. Garden refuse and organic biodegradables from kitchens will be taken to the composting site. Alien vegetation will be destroyed. The disposal of solid waste has been considered as an employment opportunity for at least two persons.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Recyclable waste (glass and paper) will be taken to the Makana/Ndlambe Recycling facility. General waste that is not recyclable or biodegradable will be taken to the nearest Municipal landfill site. (Kenton-on-Sea).

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

NO

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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Is the activity that is being applied for a solid waste handling or treatment facility?



If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

#### 11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

m³
YES

If yes, what estimated quantity will be produced per month?

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Due to the nature of the development (ie holiday/weekend homes) biolytic sewage systems could not be considered as they require a constant flow to work optimally. More permanent residents can consider biolytic sewage systems. The geological/hydrological specialist has indicated that, due to the nature of the soil profiles of the site, septic tanks will be a suitable option for effluent disposal. The specialist has recommended that the septic tank should consist of a receptor tank and an adequately sized French drain soakaway. The receptor tank should be divided into two, and the French drain must be at least 5 m long, 60cm wide and 1 m deep. During the design phase the specialist will be present to ensure that the septic tanks are carefully sited on stable ground away from any streams/catchment areas. Any disturbed ground will be revegetated after construction.

Will the activity another facility?	produce	effluent	that will	be	treated	and/or	disposed	of at	NO
If yes, provide th	e particula	ars of the	facility:						
Facility name:									
Contact									
<del>person:</del>									
<del>Postal</del>									
address:									
Postal code:									
Telephone:						Ce	<del>  :</del>		
E-mail:						Fa	<del>X:</del>		

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

The design will incorporate water saving devices such as dual flush toilets and low-flow shower heads. Where possible, (slope and indigenous vegetation permitting) grey water will be let out onto indigenous vegetation or areas that will be grassed to create pastures for game. Septic tanks will be installed with a French drain. Water recycling and maintenance will be the responsibility of the Home Owner's Association.

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# 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Low concentration of dust, particulate vehicular exhaust emissions during construction.

Operation will not produce emissions that will require investigation.

# 11(d) Generation of noise

Will the activity generate noise?

If yes, is it controlled by any legislation of any sphere of government? If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Construction will result in the generation of noise from plant during normal working hours.

As the development is residential, the units are spaced relatively far apart, and the development is a significant distance from any other development, operational noise levels are not expected to be higher than would normally be expected from a low-density residential development, and are not expected to be detectable outside of the development.

#### 12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Groundwater 

Other

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

Does the activity require a water use permit from the Department of Water Affairs?

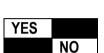
If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

Total annual water requirements are expected to be a maximum of 4 100 cubic metres (kilolitres), approximately evenly distributed throughout the year.

Water will be used solely for domestic purposes such as personal hygiene, cooking, laundry and domestic cleaning, and there will be no garden watering.

Water will be sourced from an existing borehole (approximately 79 per cent of total requirements – 2 910 kl), and from rainwater harvested from impermeable roof areas (approximately 21 per cent of total requirements – 1 190kl).

Water from the borehole will be piped from source and reticulated to individual properties.



YES

242,500

NO

litres

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Rainwater will be collected and stored in tanks of 10 000 litre capacity.

**Borehole:** Proposed abstraction from the borehole (approximately 12 per cent of its reliable annual yield) is permitted in terms of Item 1(a) of Schedule 1 of the National Water Act - taking water for reasonable domestic use in that person's household, directly from any water resource to which that person has lawful access – and no additional authorisation is required.

**Rainwater:** Rainwater harvesting is permitted in terms of Item 1(c) of Schedule 1 of the NWA - storing and using runoff water from a roof - and no additional authorisation is required.

### 13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Materials used will be in keeping with the recommendations for efficient energy usage. This includes stone/wooden walls which naturally regulate indoor temperatures. Roofs will be properly insulated and overhangs will be designed to shade during summer while allowing winter sun to penetrate into the house.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Home owners will have the option of installing solar panels to reduce electricity use, and solar water heaters for household water. Home owners will be advised to install compact fluorescent light bulbs both inside and outside their houses. External lighting, and any lighting required along the roads will be energy efficient, visually non-intrusive, low-mast, down-lighting of low intensity.

# SECTION B: SITE/AREA/PROPERTY DESCRIPTION

#### Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section	$\sim$	Conv	No	(0.0	۸).
	$\overline{}$	$\overline{vvvv}$	140.	<del>. c.u.</del>	<del>777.</del>

- 2. Paragraphs 1 6 below must be completed for each alternative.
- 3. Has a specialist been consulted to assist with the completion of this section?

YES

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

#### 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

#### Alternative S1:

						Steeper 1:5	than
Alternati	ve S2 (if any)	):					
						Steeper	than
						<del>1:5</del>	
Alternati	ve S3 (if any)	):					
Flat	1:50 —	<del>1:20                                    </del>	<del>1:15 – 1:10</del>	1:10 —	<del>1:7,5 – 1:5</del>	Steeper	than
	<del>1:20</del>	<del>1:15</del>		<del>1:7,5</del>		<del>1:5</del>	

#### 2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

# 3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Alternative S1:

Is the site(s) located on any of the following (tick the appropriate boxes)?

Shallow	water	ta	ble	(less
than 1.5n	n deep)			
Dolomite,	sinkho	ole	or	doline
areas				

Seasonally wet soils (often

close to water bodies)
Unstable rocky slopes or steep slopes with loose soil
Dispersive soils (soils that dissolve in water)
Soils with high clay content (clay fraction more than 40%)
Any other unstable soil or geological feature
An area sensitive to erosion

NO √
NO √

(if any):	
YES	<del>NO</del>
YES	NO

Alternative S2

(if any):	
YES	NO
YES	<del>NO</del>
YES	NO

Alternative

**S**3

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

#### 4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld good condition E
- 4.2 Natural veld scattered aliens E
- 4.3 Natural veld with heavy alien infestation <sup>E</sup>
- 4.4 Veld dominated by alien species <sup>E</sup>
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).



If any of the boxes marked with an "E "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

## 5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

#### 5.1 Natural area

- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial AN
- 5.9 Heavy industrial AN
- 5.10 Power station
- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam<sup>A</sup>
- 5.14 Quarry, sand or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant<sup>A</sup>
- 5.22 Train station or shunting yard N
- 5.23 Railway line N
- 5.24 Major road (4 lanes or more) N
- 5.25 Airport N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station H

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5.31 Landfill or waste treatment site				
5.32 Plantation				
5.33 Agriculture				
5.34 River, stream or wetland 5.35 Nature conservation area				
5.36 Mountain, koppie or ridge				
5.37 Museum				
5.38 Historical building				
5.39 Protected Area				
5.40 Graveyard				
5.41 Archaeological site				
5.42 Other land uses (describe)				
If any of the boxes marked with an "N "are ticked, how will this impact / be i	mpacted upon by the			
proposed activity.  Not Applicable (no boxes with an "N" are ticked)				
The series of th				
If any of the boxes marked with an "An" are ticked, how will this impact / It	be impacted upon by			
the proposed activity.				
If YES, specify and explain:				
If YES, specify:  Not Applicable (no boxes with an "An" are ticked)				
That Applicable (no boxes with all All are licked)				
If any of the boxes marked with an "H" are ticked, how will this impact / be i	mpacted upon by the			
proposed activity.	1 1 7			
If YES, specify and explain:				
If YES, specify:				
Not Applicable (no boxes with an "H" are ticked)				
6. CULTURAL/HISTORICAL FEATURES				
Are there any signs of culturally or historically significant elements, as	NO			
defined in section 2 of the National Heritage Resources Act, 1999, (Act				
No. 25 of 1999), including	Na svidanas af			
Archaeological or palaeontological sites, on or close (within 20m) to the site?	No evidence of such sites			
If YES,	Such Siles			
explain:				
If uncertain, conduct a specialist investigation by a recognised special	alist in the field to			
establish whether there is such a feature(s) present on or close to the site.				
Briefly				
explain the				
findings of				
the specialist:	110			
Will any building or structure older than 60 years be affected in any way?	NO			

Resources Act, 1999 (Act 25 of 1999)?

Is it necessary to apply for a permit in terms of the National Heritage

NO

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If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

# **SECTION C: PUBLIC PARTICIPATION**

#### 1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;

# Please find attached as Appendix B1.

- (b) giving written notice to—
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area:
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity;and
  - (vii) any other party as required by the competent authority;

# Please find copies of letters and proof of mail to I&APs and key stakeholders in Appendix G1.

- (c) placing an advertisement in—
  - (i) one local newspaper; or
  - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—