

FINAL BASIC ASSESSMENT REPORT

in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

File Reference Number:

12/1/9/3 - M5

Project Title:

Jejane – Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT

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LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM**

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2010

Basic Assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

File Reference Number:

NEAS Reference Number:

Date Received:

Due date for acknowledgement:

Due date for acceptance:

Due date for decision

Kindly note that:

(For official use only)

1. The report must be compiled by an independent Environmental Assessment Practitioner.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable in the report.
4. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.
5. An incomplete report may be returned to the applicant for revision.

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6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.
8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2010.
9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.
10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

<p>Postal Address: Central Administration Office Environmental Impact Management P. O. Box 55464 POLOKWANE 0700</p>	<p>Physical Address: Central Administration Office Environmental Affairs Building Cnr Suid and Dorp Streets POLOKWANE 0699</p>
<p>Queries should be directed to the Central Administration Office: Environmental Impact Management:-</p> <p>For attention: Mr E. V. Maluleke Tel: (015) 291 1315 / (015) 291 5640 Fax: (015) 295 5015 Email: malulekeev@ledet.gov.za</p>	

VIEW THE DEPARTMENT'S WEBSITE AT [HTTP://WWW.LEDET.GOV.ZA/](http://www.ledet.gov.za) FOR THE LATEST VERSION OF THE DOCUMENTS.

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SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES	NO ✓
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If YES, please complete the form entitled “Details of specialist and declaration of interest” or appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

The application will be for the extension of resort rights² in order to facilitate the following developments and changes:

- Remainder Portion 1 Vienna 207 K T (PB. 4-19-2-33-207-1):
 - “Legalising” the existing Bush Camp A for 20 persons (in existing structures)
 - Increasing the existing staff camp from 10 to 18 persons on an existing concrete slab (by relocating the existing staff camp from Antwerpen)
 - New accommodation for Assistant Manager
 - New office/administration building
 - Legalizing 2 additional chalets (on existing serviced sites)

- Portion 1 Antwerpen 60 K U (LHL15/19/2/1-33(20))
 - Increase the number of chalets by one additional chalet (on site of staff accommodation that will be relocated to Vienna)
 - Increasing the number of people accommodated in the existing Bush Camp B from 12 to 20 in the existing structures
 - A manager’s house

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

² The existing development, Jejane (the farm Ptn 1 Antwerpen 60KU), was established through consolidation with Vienna Game Farm (Ptn 1 Vienna 207KT) to form Jejane Private Nature Reserve in May 2002. The farm Vienna 207KT was proclaimed a Private Game Reserve by the Provincial Administrator of the Transvaal in terms of Proclamation 281 of 1967 and was effective from 25th July 1967 and consent to register the property as a Share Block was approved by the Transvaal provincial Administration on the 5th April 1989. Consent to register the farm Ptn 1 Antwerpen 60KU as a Share Block was approved by the Department of Agriculture on 4th December 2002 (Consent reference 01/10771(2) #36656. **See ROD (16/1/2 – 105) attached as Appendix G, Annexure A**

According to EIA Regulations in terms of Chapter 5 of NEMA, the proponents are applying for:
Activity Notice: R 546; Listing: 18

- The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.
 - a) In... Limpopo...province:
 - i. Outside urban areas, in:
 - (gg) Areas within 10km from National Parks or world heritage sites or 5 km from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the Department may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Legislative Background

The very consideration of a development in terms of EIA is about the consideration of alternatives related to the development. The NEMA prescribes that all environmental impact assessments, which are to be utilised in informing an application for environmental authorisation, must identify and investigate the alternatives to the activity on the environment (Sections 24(4)(b)(i) and 24(4A) of NEMA) and include a description and comparative assessment of the advantages and disadvantages that the proposed activity and feasible and reasonable alternatives will have on the environment and on the community that may be affected by the activity (Regulation 22(2)(h) of No. R. 543 of 18 June 2010). If, however, after having identified and investigated alternatives, no feasible and reasonable alternatives exist, no comparative assessment of alternatives, beyond the comparative assessment of the preferred alternative and the option of not implementing the activity (Sections 24(4)(b)(i) and 24(4A) of NEMA), is required during the assessment phase. In this instance, the EAP managing the application must provide the competent authority/LEDET with detailed, written proof of the investigation(s) undertaken and motivation indicating that no reasonable or feasible alternatives, other than the preferred alternative and the no-go option, exist (Regulation 22(4) of No. R. 543 of 18 June 2010).

Definition of Alternatives

“Alternatives”, in relation to a proposed activity, means different means of meeting the general purposes and requirements of the activity, which may include the following types of alternatives:

- The property/ies on which, or location where, it is proposed to undertake the activity;
 - Refers to both properties as well as alternative sites on the same property.
- The type of activity to be undertaken;
 - Provision of public transport rather than increasing the capacity of roads.
- The design or layout of the activity;
 - Different architectural and or engineering designs.
 - Consideration of different spatial configurations of an activity on a particular site (Site Layout)
- The technology to be used in the activity;
 - Option of achieving the same goal by using a different method or process.
- The operational aspects of the activity;
- Demand
 - When a demand for a certain product or service can be met by some alternative means, i.e. the demand for electricity/storm water controls could be met by supplying more energy or using energy more efficiently by managing demand.
- Input
 - Input alternatives for projects that may use different raw materials or energy sources in their processes.
- Routing
 - Alternative routes generally applies to linear developments (pipeline routes).
- Scheduling and Timing
 - Where a number of measures might play a part in an overall programme, but the order in which they are scheduled will contribute to the overall effectiveness of the end result.
- Scale and Magnitude
 - Activities that can be broken down into smaller units and can be undertaken on different scales, i.e.

- for a housing development there could be the option 10, 15 or 20 housing units.
- The option of not implementing the activity (no-go option).
 - The no-go option is taken to be the existing rights on the property and this includes all the duty of care and other legal responsibilities that apply to the owner of the property. All the applicable permits must be in place for a land use to be an existing right.

The key criteria when identifying and investigating alternatives are that they should be “feasible” and “reasonable”. The “feasibility” and “reasonability” of and the need for alternatives must be determined by considering, *inter alia*, (a) the general purpose and requirements of the activity, (b) need and desirability, (c) opportunity costs, (d) the need to avoid negative impact altogether, (e) the need to minimise unavoidable negative impacts, (f) the need to maximise benefits, and (g) the need for equitable distributional consequences. The (development) alternatives must be socially, environmentally and economically sustainable. They must also aim to address the key significant impacts of the proposed residential development by maximising benefits and avoiding or minimising the negative impacts.

Identification and Investigation of Alternatives Including Motivations

Given the aforementioned definition and description of alternatives, alternatives for investigation in this assessment were first identified by considering whether the different types of alternatives could meet the general purposes and requirements of the existing infrastructure and status quo, and subsequently constitute a comparable activity. Thereafter, the need for an alternative was assessed to determine whether it warranted further investigation. Certain alternatives could not be considered as legitimate alternatives for comparable assessment from the onset of the assessment process because they apply to aspects/parts of the proposed activity. Consequently, they were considered throughout the assessment process to address site-specific impacts when the need for mitigation was identified by the relevant specialist studies.

Purpose and Requirements of reconfiguring certain elements and expanding

The purpose for reconfiguring certain elements is to improve operational efficiency within the Jejane area as well as improve the current safety of employees.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

It would be unreasonable and may also have greater impact on ecological parameters that have not been impacted on by historical activities.

Alternative No. 2: Type of Activity

Purpose and Requirements

The specific nature of this activity, reconfiguration and expansion of an existing camp, does not afford alternative types of activities that can meet the same purposes or requirements, specifically the improvement of operational efficiency and live-in conditions.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

The purpose and requirements of the proposed reconfiguration and expansion cannot be achieved by using an alternative type of activity. Consequently, this type of alternative is not applicable.

Alternative No. 3: Design and Layout

Purpose and Requirements

The purpose and requirements of the proposed development, including reconfiguration and expansion, can be achieved using different architectural and or engineering designs, and by considering different spatial configurations of the development on the particular site (Site Layout).

Methodology

A preferred Site Layout (**Appendix A, Annexure B**) has been prepared. This layout has been informed by various specialist studies, which were either undertaken prior to this application or during the assessment process to identify potential impacts on the environment and community, and recommend appropriate mitigations to avoid or minimise negative impacts or enhance beneficial impacts.

Criteria used to investigate and assess alternatives

Improvements made to various past Site Layout formats, that form aspects of the final and preferred Site Layout were undertaken to address specific impacts. The assessment of the specific impacts associated with both Site Layouts included a comparison of the nature of the impact, the extent and duration of the impact, the probability of the impact occurring, the degree to which the impact can be reversed, the degree to which the impact may cause irreplaceable loss of resources, and the degree to which the impact can be mitigated (Section D 6).

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

Whilst alternative designs and or site layouts are reasonable, particularly given the need to avoid negative impacts

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or to minimise unavoidable negative impacts, the extent of those changes is restricted by the need for shade and ‘anonymity’ provided by the onsite vegetation as well as the presence of existing infrastructure and the need for the new developments to tie into these structures and services. Furthermore, the changes are informed by the findings contained in the relevant specialist studies. Consequently, this type of alternative had to be considered throughout the assessment process and evolve incrementally as and when the impacts were identified by the relevant specialist studies. The final and preferred site layout is an outcome of the aforementioned process or the ‘end result’. The fact that it could not be predicted from the onset of the assessment process made it impossible to propose as an alternative for assessment.

Alternative No. 4: Technology

Purpose and Requirements

The purpose and requirements of the proposed reconfiguration and expansion cannot be met by this type of alternative, specifically by using different technologies (methods or processes)

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

The purpose and requirements of the proposed reconfiguration and expansion cannot be achieved by using this type of alternative, ‘technology’. Consequently, this type of alternative is not applicable. Never the less, alternative technologies were sought throughout the assessment process to address specific impacts identified by the specialist studies, in the manner described in the above mentioned alternative for ‘Design and Layout (Alternative No. 3).

Alternative No. 5: Operational Aspects

Purpose and Requirements

Whilst alternative operational aspects (procedures) cannot meet the purpose for providing accommodation such as improving live-in conditions, they can meet the purpose to improve operational efficiency associated with the reconfiguration of certain internal elements and location of the manager’s unit in close proximity to the existing camps. The proposed activity pertains to an existing operation and one of the fundamental purposes is to improve operational efficiency by addressing flaws associated with the current layout and arrangements.

Methodology

An investigation, specifically a comparative assessment of potential alternative operational aspects (procedures) with the proposed changes to the existing layout that could address existing operational flaws thereby improving

operational efficiency

Criteria used to investigate and assess alternatives

Operational flaws/inefficiencies were first identified and linked to the proposed changes in the layout. Potential alternative operational aspects (procedures) were identified for the proposed changes to the internal elements to address the aforementioned flaws in operational efficiency. Finally, the extent to which the flaws/inefficiencies could be minimised or avoided by the physical changes were comparatively assessed with the corresponding alternative operational aspects (procedures).

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

Findings show that a comparative assessment of alternative operational aspects (procedures) with the proposed changes to the existing layout could not reasonably achieve the same operational efficiency requirements.

Alternative No. 6: Demand

Purpose and Requirements

The purpose and requirements of the proposed reconfiguration and expansion cannot be met by this type of alternative, specifically by reducing the demand (or need) for the proposed activity. Businesses should be permitted to improve operational efficiency (within reason) and purpose built accommodation cannot be unreasonably withheld.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

The purpose and requirements of the proposed reconfiguration and expansion cannot be achieved by using this type of alternative, 'demand'. Consequently, this type of alternative is not applicable. Never the less, alternative means were sought throughout the assessment process to address specific impacts, in the manner described in the above mentioned alternative for 'Design and Layout (Alternative No. 3)'. For example, ways of reducing the demand for electricity were suggested by using energy saving devices.

Alternative No. 7: Input

Purpose and Requirements

The purpose and requirements of the reconfiguration and expansion of the existing infrastructure can be met using different raw materials or energy sources.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

However, the need for alternative inputs (to address site-specific impacts) cannot be predicted at the onset of the assessment process and is, therefore, not reasonable. However, alternative raw materials or energy sources were sought throughout the assessment process to address specific impacts identified by the specialist studies, in the manner described in the above mentioned alternative for 'Design and Layout (Alternative No. 3).

Alternative No. 8: Routing**Purpose and Requirements**

The purpose and requirements of the reconfiguration and expansion of the existing infrastructure cannot be met using an alternative route. This specific type of alternative generally applies to linear developments, such as pipeline routes.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

This type of alternative, 'Routing' is not applicable. Never the less, alternative routes for internal services were sought throughout the assessment process to address specific impacts identified by the specialist studies, in the manner described in the above mentioned alternative for 'Design and Layout (Alternative No. 3).

Alternative No. 9: Scheduling and Timing**Purpose and Requirements**

The purpose and requirements of the reconfiguration and expansion of the existing infrastructure can be met using alternative scheduling and timing, specifically changing the order in which activities are scheduled to contribute to the overall effectiveness of the end result.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

However, the need for alternative scheduling or timing (to address site-specific impacts) cannot be predicted at the onset of the assessment process and is, therefore, not reasonable. However, alternative scheduling or timing was sought throughout the assessment process to address specific impacts identified by the specialist studies, in the manner described in the above mentioned alternative for 'Design and Layout (Alternative No. 3). For example, rehabilitation should not be left until the end of construction, etc.

Alternative No. 10: Scale and Magnitude**Purpose and Requirements**

The purpose and requirements of the reconfiguration and expansion of the existing infrastructure cannot be met using an alternative scale or magnitude, specifically a smaller physical footprint.

Methodology

NA

Criteria used to investigate and assess alternatives

NA

Reasoned explanation why an alternative was or was not found to be reasonable or feasible

This type of alternative, 'Scale and Magnitude', is not applicable. The reconfiguration of the internal elements will not increase the existing development footprint as all proposed infrastructural changes will take place within the historically disturbed "lodge" footprint. Additional to this, the proposed size of the upgrades and buildings is minimal, such that they cannot be reasonably reduced without compromising the improved live-in and operational conditions that are sought.

Alternative No. 11: No-go Option

The option of not implementing the activity (no-go option) was used as the benchmark against which all impacts associated with the proposed development were assessed.

Conclusion

Some types of alternatives were not applicable to the nature of the proposed activity, including its purpose or requirements ('Type of Activity', 'Technology', 'Demand', 'Routing' and 'Scale and Magnitude'). A range of different types of alternatives did exist, but not all warranted investigation ('Property and Location', 'Design and Layout', 'Input', 'Scheduling and Timing'). Based on the findings of the investigation that was undertaken (of 'Operational Aspects') and reasoned motivation there was no verifiable evidence for the existence of any reasonable and feasible alternative(s) other than the preferred option and the no-go option, at the time of this environmental impact assessment process. Consequently, no reasonable and feasible alternatives other than the preferred option and the no-go option were identified, described and assessed. Having said that, alternatives, specifically modifications and changes to activities in order to prevent and/or mitigate environmental impacts, were considered throughout the assessment process. The development proposal was amended in an incremental manner throughout the EIA process to address impacts and issues, as and when the need for mitigation was identified.

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Latitude (S):

Longitude (E):

Alternative:

Alternative S1³ (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

24°	16'	18"	30°	00'	34"
°	'	"	°	'	"
°	'	"	°	'	"

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

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

Latitude (S):

Longitude (E):

°	'	"	°	'	"
°	'	"	°	'	"
°	'	"	°	'	"

Alternative S2 (if any)

³ "Alternative S.." refer to site alternatives.

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

°	'	''	°	'	''
°	'	''	°	'	''
°	'	''	°	'	''

Alternative S3 (if any)

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

°	'	''	°	'	''
°	'	''	°	'	''
°	'	''	°	'	''

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates 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 A1⁴ (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or,

for linear activities:

Size of the activity:

2664m ²
m ²
m ²

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

m
m
m

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

Size of the site/servitude:

⁴ "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

	m ²
	m ²
	m ²

5. SITE ACCESS

Does ready access to the site exist?

YES ✓	NO
m	

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

Describe the type of access road planned:

The access road at the main gate will not be altered and will still be used as in the past 20 years.

All development areas are already provided with internal access roads (gravel) and no new major access roads will be constructed.

Only short access strips to the Manager and Assistant Manager's houses will be constructed.

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.

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. **See Appendix A; Annexure A (Locality Map) & Annexure B (Preferred Layout)**

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;
- 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;
- 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 Department of Water Affairs);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 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
- 6.11 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. **See Appendix B; Annexure A (Site photos of the existing infrastructure and proposed sites).**

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.

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?

What is the expected capital value of the activity on completion?	R4 to 5 million	
What is the expected yearly income that will be generated by or as a result of the activity?	RR70 000	to R100 000
Will the activity contribute to service infrastructure?	YES ✓	NO
Is the activity a public amenity?	YES	NO ✓
How many new employment opportunities will be created in the development phase of the activity?	45	
What is the expected value of the employment opportunities during the development phase?	R1.25 million	
What percentage of this will accrue to previously disadvantaged individuals?	85%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	3	
What is the expected current value of the employment opportunities during the first 10 years?	R1.5 million	
What percentage of this will accrue to previously disadvantaged individuals?	100%	

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

Legislative Background and Strategic Context

The National Environmental Management Principles of NEMA, 1998, which guide the interpretation, administration and implementation of NEMA, 1998 (and the EIA Regulations, 2010) specifically *inter alia*, require that environmental management must place people and their needs at the forefront of its concern (Section 2(2)). The latter refers to the broader societal/community needs and interests, and is put into effect through the EIA Regulations, 2010, which require environmental impact assessments to specifically consider 'need and desirability' in order to ensure that the 'best practicable environmental option' is pursued and that development more equitably serves broader societal needs now and in the future. Furthermore, it ensures that the proposed actions of individuals are measured against the long-term public interest.

What is needed and desired for a specific area must be strategically and democratically determined (DEA&DP (2010) Guideline on Need and Desirability). The strategic context for informing need and desirability is best addressed and determined during the formulation of the sustainable development vision, goals and objectives of Integrated Development Plans ('IDPs') and Spatial Development Frameworks ('SDFs') during which collaborative and participative processes play an integral part, and are given effect to, in the democratic processes at local government level (DEA&DP (2010) Guideline on Need and Desirability). The need and desirability must therefore be measured against the contents of the credible IDP, SDF and EMF for the area, and the sustainable development vision, goals and objectives formulated in, and the desired spatial form and pattern of land use reflected in, the area's IDP and SDF (DEA&DP (2010) Guideline on Need and Desirability). Integrated Development Planning (and the SDF process) effectively maps the desired route and destination, whilst the project-level EIA decision-making finds the alternative that will achieve the desired goal (DEA&DP (2010) Guideline on Need and Desirability). However, inadequate planning or the absence of a credible IDP and SDF means that the EIA has to address the broader need and desirability considerations. Consequently, 'need and desirability' is determined by considering the broader community's needs and interests as reflected in a credible IDP, SDF and EMF for the area, and as determined in the EIA decision-making process.

Furthermore, the Constitution calls for *justifiable* economic development. The specific needs of the broader community must therefore be considered together with the opportunity costs and distributional consequences in order to determine whether or not the development is 'justified'.

The general meaning of need and desirability refers to time and place, respectively, i.e. is this the right time and is it the right place for locating the proposed activity. The need and desirability of this application has been addressed below:

The private nature reserves in the Central Lowveld region (Jejane falls within these), Klaserie, Umbabat, Thornybush, Timbavati, Sabi Sand, Kapama, Balule, Selati, Makalali, Karongwe and the Blyde-Olifants Conservancy is the largest privately owned nature reserve complex in the world. Including the recently declared escarpment protected areas, half a million hectares of land has been returned to nature. A large part of these private reserves is located within Maruleng. The spatial implication for development in Maruleng is that the

environmental areas be protected and that the tourism potential of these areas is exploited, taking cognisance of the impact of such development on the environment.

The analysis of the Maruleng spatial reality leads to the conclusion that Maruleng SDF should focus on the following:

- General improvement of basic road, water and electricity infrastructure and elimination of services backlogs in the rural villages.
- **Promotion and facilitation of tourism related economic activity** by accommodating private sector investment in and the **development of game reserves, game lodges**, tourism related manufacturing and trade, and hospitality developments (hotels, guest houses, bed and breakfast developments, and the like).
- Provide incentives for private sector investment in agricultural value added processing in cooperation with the District Municipality as well as Provincial departments and agencies.

In order to comprehend the need for the proposed extension of resort rights as well as fully understand the changes to infrastructure and the implications thereof, it is important to know what the current land-use is and what is intended.

Since the approval of the first resort rights in 1989 the development has been auctioned and in 2002 was further extended by the purchasing of the adjacent land (Portion 1 Antwerpen) and the subsequent development on this portion.

The development presently consists of the following:

Vienna:

- 32 chalet sites serviced (30 developed) – See no. 1 on site plan
- Bush Camp A for 12 persons and Assistant Manager's house – See no. 4 onsite plan
- Staff accommodation A for 10 people – See no. 2 on site plan
- 1 pool and under roof recreation – See nos. 6 and 8 on site plan
- 3 boreholes – See no. 7 on site plan

Antwerpen:

- 14 chalet sites serviced (8 developed) – See no. 1 on site plan
- Bush Camp B for 20 persons – See no 5 on site plan
- Staff accommodation B for 8 people – See no. 3 on site plan
- 1 pool – See no. 6 on site plan
- Under roof recreation area – See no. 8 on site plan
- 1 borehole – See no. 7 on site plan
- Various Hides
- Game viewing roads
- Dams
- Infrastructure

The development on the two farms forms one entity with no fences, with one service infrastructure and one management body and is generally known as JEJANE PRIVATE NATURE RESERVE.

Further to this the following changes and additions are proposed and described under the extension of current landuse rights:

Remainder Portion 1 Vienna 207 K T:

- Formalising the existing Bush Camp (20 persons)
- Increasing the existing staff camp from 10 to 18 persons (relocation of the existing staff camp from Antwerpen)
- New accommodation for Assistant Manager
- New office/administration building
- Formalising 2 additional chalets (on existing serviced sites)

Portion 1 Antwerpen 60 K U:

- One additional chalet (on site of staff accommodation)
- Increasing the number of people accommodated in the existing Bush Camp from 12 to 20 in the existing structures
- A manager's house

Motivation⁵

The following is a brief explanation (in motivation of the proposed changes) of the difficulties and restraints experienced as a result of the current Jejane setup.

Two Separate staff accommodation areas

The staff is currently accommodated at two different localities.

- **Staff accommodation A (no. 2 on site plan) is located close to the entrance gate**, proposed office and workshop/sheds. This locality is ideal from an operational point of view.
- **Staff accommodation (no. 3 on site plan) is located in the north-eastern corner of the property** and makes it difficult for staff to enter and exit the development when visiting town. This remoteness also complicates the allocation of tasks and the transportation of staff to the hub of operations at Staff accommodation A, the office and workshop/sheds.

The transporting of staff to and from the remote Staff accommodation area B **increases fuel costs** and the **costs of the maintenance** of two separate staff areas.

⁵ An extract from "Memorandum in Support of the Extension of Resort Rights on Portion 1 of the Farm Antwerpen 60 K U and Remainder Portion 1 Of The Farm Vienna 207 K T" - Derick Peacock Associates October 2010

LEDET BA Report, EIA 2010: Project Name: _ Jejane – Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT.

Safety of staff cannot be guaranteed when travelling to Staff accommodation B due to the presence of the dangerous game (Big 5).

It is therefore important that all staff be concentrated in one area at the entrance of the property at Staff accommodation A.

No accommodation for Manager

- Currently the farm manager occupies **leased accommodation** on a neighbouring farm.
- The availability of this accommodation could change on short notice and creates a lot of uncertainty.
- This also means that the **manager is not on the property permanently** and creates problems during period of crisis (fire/maintenance/security/etc.)
- **A residence needs to be created for the manager at a central locality from where he can be within easy reach of the total reserve.**
- **Assistant Manager accommodation not adequate**
- The assistant manager (in direct charge of the staff) is presently accommodated in a **converted chalet in the existing Bush Camp A** that actually forms part of the accommodation facilities of the Bush Camp. This accommodation is being used on **a temporary basis**.
- **Proper accommodation facilities strategically located relative to staff housing needs to be built for the assistant manager to ensure effective monitoring of the staff.**

“Legalizing” Bush Camp A (no. 4 on site plan)

Existing structures on the farm have been converted into Bush Camp A in response to a need for casual accommodation for:

- **construction personnel visiting the development** during periods of building activity
- **guests visiting members**
- **casual tourists to the area**

Bush Camp A has been in operation for nearly twenty years and the developers have now on advice realized that there are no land-use rights in place for the existing camp.

Bush Camp A now forms an integral part of the development and it will therefore be requested that permission be granted to retain this facility and that it be “legalized”.

Limited accommodation at Bush Camp B (no. 5 on site plan)

- In terms of the land-use rights granted in 2002 for Bush Camp B the maximum number is restricted to 12 persons.
- The functioning of this facility has proved that the **optimum number of persons that makes it feasible is 20.**
- Existing Bush Camp B has therefore over the years been equipped to accommodate 20 persons.
- **It is herewith requested that the number of persons be increased from 12 to 20 for Bush Camp B.**

Two additional chalets (no. 15 on site plan)

- As indicated in Section 3 rights for 30 chalets and thereafter a further 14 chalets were granted totalling 44 chalets.
- Over the past **20 years two additional chalets sites were prepared and serviced** in the central area where all the other chalets are concentrated. This was purely due to an oversight.
- These two chalets sites are an integral part of the design, planning and functioning of the existing development.
- **This application is to also “legalize” these two additional chalets.**

One additional chalet (no. 16 on site plan)

- In order to **fund the moving of the staff accommodation** from Staff accommodation B to Staff accommodation A it is necessary to **utilize the footprint and existing service infrastructure at this location of this area for an additional chalet.**
- The development of this chalet will thus have a **minimal environmental impact** and will be able to **use some of the existing structures and existing services infrastructure** (water electricity) that is present on the site.
- **This application is thus also for this additional chalet.**

Office/Administration building (no. 14 on site plan)

- The development has up till now not had a dedicated office administration building to deal with the matters of the development.
- A small office reception is required and will now be provided at the entrance to the development.

NEED:			
i.	Was the relevant municipality involved in the application?	YES ✓	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES ✓	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	YES ✓	NO
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	YES ✓	NO
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES ✓	NO

iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
v.	Will the proposed land use / development impact on the sense of place?	YES	NO ✓
vi.	Will the proposed land use / development set a precedent?	YES	NO ✓
vii.	Will any person's rights be affected by the proposed land use / development?	YES	NO ✓
viii.	Will the proposed land use / development compromise the "urban edge"?	YES	NO ✓
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES ✓	NO
ii.	<p>Explain:</p> <p>The current lack of accommodation capacity on Jejane limits the possible income, which in turn has negatively affected Jejane's ability to break even. The inability, under current circumstances, of Jejane to be a self sufficient entity has an impact on the receiving environment as well as on the local economy.</p> <p>In this regard possible closure of Jejane would not be to the greater socio-economic interest of the Maruleng region, as a development of this nature has the ability to uplift. Uplift in the sense that the area is rapidly growing and that conservation sensitive activities are seen as a preferred land use format with the ability to provide jobs and inflow of currency into the Greater Hoedspruit/Klaserie/Timbavati/Balule.</p> <p>We are of the opinion that Jejane Farm, the greater Hoedspruit area and the local community would be losing out on a viable economic growth opportunity.</p>		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES ✓	NO
iv.	<p>Explain:</p> <p>In order to comprehend the need for the proposed extension of resort rights as well as fully understand</p>		

	<p>the changes to infrastructure and the affect that these changes will have on the local economy as well as the implications that these changes will have for the local community (from where staff are sourced), it is important to know why the applicant has decided to carry out the various changes as proposed.</p> <p>The changes proposed have been motivated due to difficulties and restraints experienced as a result of the current Jejane setup. The current layout and setup of the operation is restrictive and has led to inefficient management and subsequent poor operation of Jejane. Due to poor articulation and placement of current infrastructure, allocation of tasks and the transportation of staff have led to increased fuel costs, increased maintenance and decreased safety.</p>
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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:
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), as amended.	Department of Agriculture	1983
DEA (2010), Public Participation 2010, Integrated Environmental Management Guideline Series 7, Department of Environmental Affairs, Pretoria, South Africa.	Department of Environmental Affairs	2010
DEA&DP (2010) Guideline on Alternatives, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP).	Department of Environmental Affairs & Development Planning	2010
DEAT (2002) Specialist Studies, Information Series 4, Department of Environmental Affairs and Tourism (DEAT), Pretoria.	Department of Environmental Affairs and Tourism	2002
DWA (2007), Guideline for Developments within a Floodline (Edition 1), Department of Water Affairs and Forestry, Pretoria, South Africa.	Department of Water Affairs	2007
Ferrar, A.A. & Lotter, M.C. 2007. Mpumalanga Biodiversity Conservation Plan Handbook. Mpumalanga Tourism & Parks Agency, Nelspruit.	Mpumalanga Tourism & Parks Agency	2007
Government Notice No. R. 543, R. 544, R. 545, R. 546 and R. 547 in Government Gazette No. 33306 of 18 June 2010.	Limpopo Department of Economic Development , Environment and Tourism	2010
National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA").	National Department of Environmental Affairs & Limpopo Department of Economic Development , Environment and Tourism	1998

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 ✓	NO
Estimated @ 50 m ³	

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

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

The solid waste will be trucked off site. The local municipality currently provides this service to Jejane.

See **Appendix G; Annexure B** for proof of existing contract with the Maruleng Local Municipality (as requested by LEDET), for the removal of waste from Jejane.

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

The solid waste will be dumped at a registered waste management site. The local municipality currently provides this service to Jejane.

See **Appendix G; Annexure B** for proof of existing contract with the Maruleng Local Municipality (as requested by LEDET), for the removal of waste from Jejane.

Will the activity produce solid waste during its operational phase?

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

YES ✓	NO
Estimated @ 20 m ³	

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

The solid waste will be trucked off site. The local municipality currently provides this service to Jejane.

See **Appendix G; Annexure B** for proof of existing contract with the Maruleng Local Municipality (as requested by LEDET), for the removal of waste from Jejane.

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

The solid waste will be dumped at a registered waste management site. The local municipality currently provides this service to Jejane.

See **Appendix G; Annexure B** for proof of existing contract with the Maruleng Local Municipality (as requested by LEDET), for the removal of waste from Jejane.

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 department 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?

YES	NO ✓
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If yes, inform the department and request a change to an application for scoping and EIA.

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

YES	NO ✓
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If yes, then the applicant should consult with the Department 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?	YES	NO ✓
If yes, what estimated quantity will be produced per month?	m ³	
Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	NO ✓
If yes, the applicant should consult with the Department to determine whether it is necessary to change to an application for scoping and EIA.		
Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	NO ✓
If yes, provide the particulars of the facility:		
Facility name:		
Contact person:		
Postal address:		
Postal code:		
Telephone:	Cell:	
E-mail:	Fax:	
Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:		
<p>The existing Jejane facility is serviced by sewerage systems consisting of septic tanks and french drains. Due to the existing low density of development and the relative infrequent use of these facilities (units are only used at certain times of the year when shareholders utilise the property while on holiday) the septic tanks and soakaways have functioned effectively without any problems over the past 20 years.</p> <p>Despite this the proponent has opted to update the sewerage system so as to be more environmentally acceptable. In this regard no soak away system will be used, but rather all septic tanks will be linked to a conservancy tank that will be evacuated (by honey sucker) when necessary.</p> <p>Below is a brief evaluation of the proposed sewerage treatment technologies that are to be installed and utilised on Jejane.</p> <p>1. Temporary storage in conservancy tanks for removal to municipal treatment works</p> <ul style="list-style-type: none"> Description of the system Two separate systems should be designed for each unit by separating grey water (bath, shower and hand basin water) and sewage (toilets and kitchen water). Each unit, will gravity feed sewerage laden wastewater into a conservancy tank for temporary storage. The conservancy tank is a covered tank that receives untreated effluent and stores it temporarily. The tank requires routine emptying at 		

intervals.

Grey water originating from baths and showers will be released through an approved soak-away drainage system.

Conservancy tanks will be of the prefabricated variety and will be installed underground. Effluent will be gravity fed to the septic tank using standard 4" PVC piping. The volume of the conservancy tank will be designed according to the size of the unit. Conservancy tanks will be designed to accommodate peak volumes of effluent for periods of 1 week at a time. The tanks will have a reserve volume equal to the design volume. All tanks will be fitted with a monitor and alarm to indicate the level of effluent in the tank as well as to warn when the tank reaches the pump-out level (50% of total volume).

Effluent will be pumped from the conservancy tanks by a registered waste removal company and transported to the municipal sewerage treatment works for disposal.

- **Requirements for operation of conservancy tanks and soakaways**

Physical

For the effective operation of a conservancy tank system the following elements are critical:

- The ability to locate the tank adjacent to the house/unit. Soil should be of a nature to allow a suitable sized hole to be excavated for the tank as well as to allow the laying of pipework to allow the tank to be gravity fed.
- For the effective operation of a soakaway system for grey water the following elements are critical:
 - There should be sufficient soil depth to allow for the percolation of effluent.
 - Such water does not contain pathogens and therefore does not have the same requirements as water exiting a septic tank.
 - The permeability of the soil must ensure sufficient soil contact time to allow for the breakdown of soap and other contaminants.

Legal

As a minimum the following legal parameters must be met:

- The discharge of domestic wastewater into a watercourse is contemplated in Schedule 3 of the General Authorisation issued under the National Water Act (36 of 1998). The general Authorisation in regard of this activity is not applicable in catchments B11 and B12. Since the site falls within these catchments, a licence application will be required to discharge treated effluent into a watercourse.
- The release of effluent in a manner which may detrimentally impact on a water resource is contemplated in Schedule 4 of the General authorisation issued under the National Water Act (36 of 1998). The release of effluent into a soakaway is covered in this schedule. The applicability of the general authorisation must be established. The disposal of wastewater must be registered with DWAF if the quantity of wastewater exceeds 50 000l per day.
- National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977) for construction, operation and maintenance of any structure used for the collection, treatment or disposal of waste.
- SABS 0400-1990
- MoU or service agreement from the municipal sewerage treatment works confirming capacity

and willingness to accept waste.

- **Advantages/Disadvantages of the system in the context of this development**

Advantages/Positive	Disadvantage/Negative
Low cost in terms of equipment	High maintenance. Requires regular monitoring and pumping.
No discharge into the immediate environment. Dramatically reduced risk of groundwater contamination.	Risk of spillage while pumping and transporting untreated effluent.
Sites provide suitable soil depth for the excavation to installing piping and tanks	Potential for odours.
Reduced risk of environmental contamination due to impervious conservancy tank.	Risk of overflow due to inadequate pumping and monitoring failure.

Suitability of technology

A dual system of conservancy tanks for sewerage and soakaway systems for grey water holds environmental benefits in terms of reduced discharge of pathogens and pollutants.

Recommendation:

Based on the above, it is recommended that the development install a combination of septic and conservancy tanks. Where connection to the municipal bulk services and or the use of septic tanks with soakaways is not suitable, *Septic tank systems coupled to conservancy tanks* are viewed as an acceptable alternative for the development as a whole.

Furthermore it is imperative that stipulations of the National Water Act are adhered to. The various components of the sewerage treatment system should also be sited where they are not easily visible, and if not sited below ground, should be screened to further reduce visual impact. These units must be monitored in line with the requirements of DWAF and other compliance organisations.

In conclusion the EAP suggests, based on an assessment of the available information and applicable guidelines, standards and legislation, that septic tanks may be used but only if these are linked to conservancy tanks. The final design must take cognisance of these recommendations and adherence to guidelines, standards and legislation must be ensured though regular monitoring.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO ✓
YES	NO

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:

Emissions will be limited to those from construction machines. Mitigation measures will; be put into place so as to minimise these.

11(d) Generation of noise

Will the activity generate noise?

YES ✓	NO
YES	NO ✓

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:

The activity will not create noise pollution as a nature based tourism facility holds quietness and tranquillity in high regard. Ambiance created within the lodge/facility setup is of the utmost importance and thus great care will be taken to ensure that very little noise pollution occurs.

12. WATER USE

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

municipal water board	groundwater ✓	river, stream, other	the activity will not use water
		dam or lake	

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:

27 30 000
Litres/month or
91 000
liters/day****
YES ✓ NO

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.

****Water to the development has been affectively provided without problems over the past 20 years by 3 boreholes.

The 3 most viable boreholes that have been delivering potable water of good quality for more than 20 years have a total yield of 280 kl/day.

The total requirement of the existing development together with the proposed new extensions is estimated at 91 kl/day. There is thus more than sufficient water of good quality available.

A reservoir exists centrally to the development from where the chalets are gravity fed.

A second reservoir feeds the staff housing, Bush Camp A (and the proposed office and Assistant Manger's residence).

Water from the close-by borehole is pumped to the tank at Bush Camp B and also supplies the existing Staff accommodation B (proposed new chalet).

The only additional requirement for water is thus for the manager's cottage as can be deducted from the above.

The following comment was received from DWA:

"According to records held by this office, Antwerpen 60 KU and Viennea 207 KT do not have water allocation. It must be noted that the resort is regarded as a commercial activity. The commercial activity does not fall under Schedule 1 therefore the proposed activity will be required to be authorized through section 21 (a) of the Act for taking water from water resource (borehole).

13. ENERGY EFFICIENCY

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

The proponent wishes to use as may environmentally friendly techniques for the construction and running of Jejane. Use of solar energy, "green" building materials, water storage receptacles (to minimise water wastage), etc..., is being investigated **and if feasible**, will all contribute to making this activity an energy efficient one.

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

N/A

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 C Copy No.
(e.g. A):

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** **NO**

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

The proposed activity is located within the Jejane Game Farm Share Block and the Vienna Game Farm (Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT). The site lies approximately 6km north east of Hoedspruit in the Northern Province.

TOKU00000000006000001
TOKT00000000020700001

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

The property is zoned as "agriculture" with the existing resort rights incorporated by means of Schedule Nr 139 and 141 of the Maruleng Land-Use Management Scheme 2008 (LUMS).

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES ✓	NO
YES	NO ✓

Must a building plan be submitted to the local authority?

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

See Appendix A, Annexure A (Locality Map)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

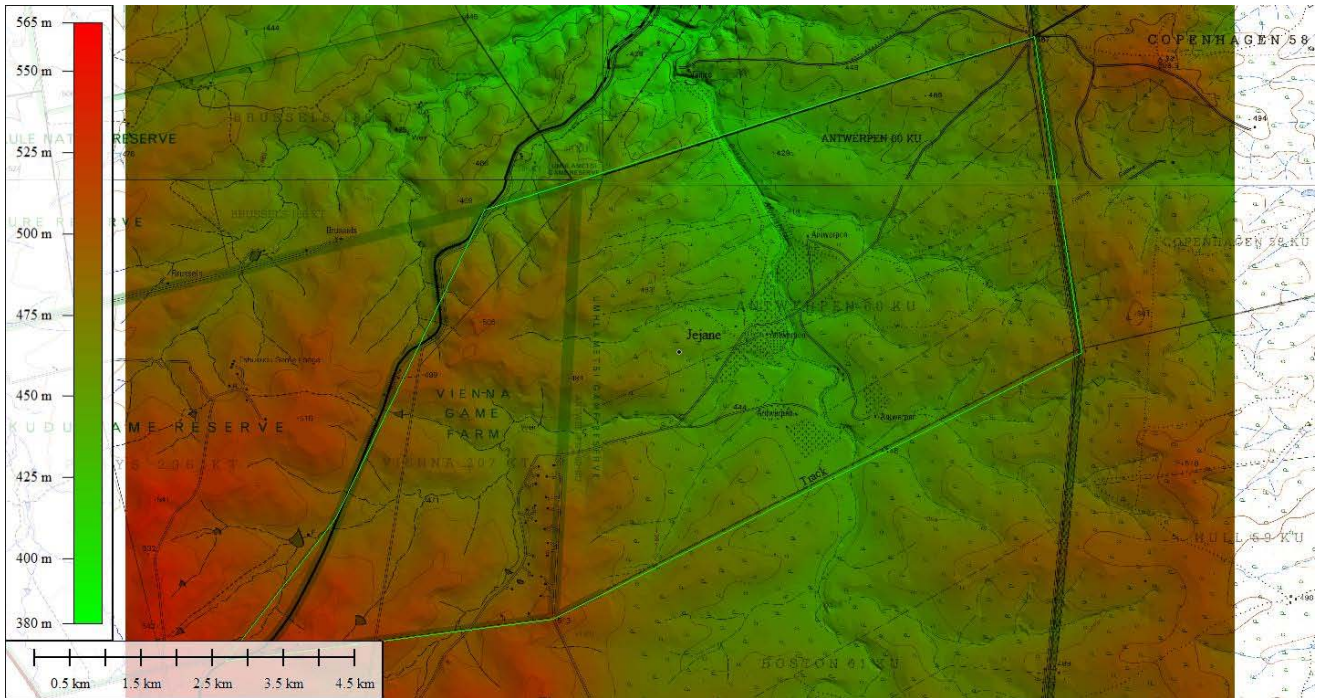
Flat ✓	1:50 – 1:20 ✓	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

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

The site lies within the northern Lowveld with the Drakensberg Mountains visible about 20km to the south west. The gradient of the area is moderate, falling toward the north and north east.

The site lies within the local catchment of the northward flowing Mohlabetzi River, which forms the eastern most boundary of the site. The Mohlabetzi River is in turn a tributary of the Olifants River.

A non-perennial tributary of the Mohlabetzi River flows from the south, across the adjacent Vienna farm. This tributary then swings to the east to bypass the development site just north of the Antwerpen farm boundary and joins with the Mohlabetzi about 2km further to the north east.

Three topographical features are recognizable on the development site, namely the crest, which forms the local

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watershed, the mid-slopes and the foot-slopes. The watercourse lies beyond the foot-slope, but does not form part of the development site. The gradient of the development site ranges from about 1:10 on the northern mid-slopes of the site, to about 1:20 in the flatter southern areas.

A number of drainage lines are present, draining to the north, north east and east toward the afore-mentioned tributary and seep lines are present on the ecotones between the mid-slopes and foot-slopes.

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	NO ✓	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO ✓	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO ✓	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO ✓	YES	NO	YES	NO
An area sensitive to erosion	YES ✓	NO	YES	NO	YES	NO

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).

Soil classification on the development site was done according to the Taxonomic System for South Africa (Macvicar, C.N. 1991) by Mr Francois de Wet during his survey of the soils and vegetation of the site. Soil depths and textures were recorded on site with the aid of a soil auger. His full report is included as **Appendix D; Annexure A** to this document.

The survey of the soil at the development site revealed mostly shallow (less than 230 mm) soil conditions on the mid-slopes and crests. These soils have an average depth to saprolite (weathered rock) of about 200mm and are characterized by the Glenrosa form. Red sandy loams of the Hutton soil form are may also be found on these mid-slopes and crests.

The lower lying parts of the catena (between mid-slopes and foot-slopes) are characterised by the Cartref soil form. The E-horizon of the profile indicates seasonal wetness which is not ideal for structural development.

On the lower lying foot-slopes sensitive duplex clays are found. Patches of sodic pans are present closer to the drainage lines. These soils are very sensitive to disturbance and are prone to gully and sheet erosion.

Alluvial soils, although not well developed in the upper catchment areas, are present along the drainage lines. These soils are also sensitive, especially to vegetation clearing.

4. GROUND COVER

Indicate the types of groundcover present on the site:

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

Natural veld - good condition ^E ✓	Natural veld with scattered aliens ^E ✓	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure✓	Bare soil

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.

According to Acocks (1988), the general veld type at the area may be classified as *Arid Bushveld*.

Locally, *Sclerocarya birrea* (Marula) and *Combretum apiculatum* (Red Bushwillow) dominates the higher lying parts of the catena (*crests and mid-slopes*). *Acacia nigrescens* (Knob Thorn) is present in association with the Migmatite or Dolorite intrusions.

The ecotones between the mid-slopes and foot-slopes are characterized by *Terminalia sericea* (Silver Cluster Leaf) on the contours. Seep lines are not always clearly visible immediately below the *Terminalia sericea* community, but are characterized by the dominance of a green band of herbaceous plants, sedges and grasses such as *Eragrostis gummiflua*, *Eragrostis meridionalis*, *Brachiaria nigropedata* and *Pogonarthria squarrosa*.

The foot-slope areas are characterized by the presence of shrubs and trees such as *Euclea divinorum* (Magic Guarri) or *Acacia nilotica* (Scented Pod Acacia).

No Red Data species were noted at any of the development sites.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does 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	✓	5.22 School	
5.2 Low density residential		5.23 Tertiary education facility	
5.3 Medium density residential		5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial ^{AN}		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam ^A		5.29 Sewage treatment plant ^A	
5.9 Light industrial		5.30 Train station or shunting yard ^N	
5.10 Heavy industrial ^{AN}		5.31 Railway line ^N	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport ^N	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station ^H		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River, stream or wetland	
5.17 Plantation		5.38 Nature conservation area	✓
5.18 Agriculture		5.39 Mountain, koppie or ridge	
5.19 Archaeological site		5.40 Graveyard	

5.20 Quarry, sand or borrow pit		5.41 River, stream or wetland	
5.21 Dam or Reservoir		5.42 Other land uses (describe)	

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity?

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If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain:	
If NO, specify:	

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	
If NO, specify:	

The site is situated on Portion 1 of the farm Antwerpen 60 K U, which is 606,0526 ha in size, as well as the Remainder Portion 1 of the farm Vienna 207 K T. This section is 1 452, 3220 ha in size.

The two properties (in total more than 2 000 ha in extent) have the Big 5 roaming freely and game viewing takes place from the existing extended network of roads and walks. These properties form part of a greater conservation area, known as the Uhlametsi Vienna Inkonkomi (UVI) Conservancy

The MOHLABETSI NATURE RESERVE consists of Portion 1 of the farm Antwerpen (the site), Portion 1 of the farm Vienna 207 KT (the site), Portions 2,3 5 and the remaining Portion of the farm Antwerpen 60 KU (directly to the north). These farms are all managed as game reserves within the UVI Conservancy.

To the south west is the farm Amsterdam 208 KT, which hosts game, but is not managed as a game reserve as such, and does not form part of the UVI Conservancy.

The town of Hoedspruit lies about 10km to south west, and to the south, beyond Amsterdam, lies SADF property. To the far east lies the Klaserie Private Nature Reserve.

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site?

YES	NO ✓
Uncertain	

If YES, explain:

If uncertain, conduct a specialist investigation by a recognised specialist 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:

An Archaeological Investigation of the Antwerpen Game Farm was conducted during June 2002 by Francois Coetzee of the Archaeology Contracts Unit of UNISA. His full report is included as **Appendix D; Annexure B** to this document.

Mr. Coetzee consulted various archaeological and ethnographic sources to compile a concise cultural framework of the area under investigation. He also visited the site on 4 June 2002. Utilising the existing road system, the area was extensively surveyed by vehicle and on foot. Each of the 14 proposed stands were visited. Emphasis was placed on indications of significant historical and pre-historical settlements and structures.

Due to the **site falling within the areas surveyed**, the Archaeological Investigation as carried out was deemed to be **sufficient** in indicating Archaeological sensitivities for this Basic Assessment.

The following findings are of relevance:

Stone Age:

No Stone Age settlements, structures or artefacts were identified on or in the immediate vicinity of the proposed 14 stands. Though surface scatters of **Early Stone Age** and **Middle Stone Age** artefacts may be found near or in the stream. This is substantiated by the exposure (in an erosion donga) of several Middle Stone Age artefacts further upstream to the west of the game farm (Vienna News 1998).

Iron Age

Several Silver Leaves potsherds were found exposed in an erosion donga, further upstream to the west of the farm, in 1997 (Vienna News 1998). Isolated finds of Silver Leaves pottery (AD 400) usually indicates salt works, as the pots were used in the crystallisation process of making salt. The find also implies a possible settlement or outpost in the area.

No Iron Age settlements, structures or artefacts were recorded on or in the immediate vicinity of the proposed 14 stands.

Ethno-historical

The area is dominated by various Shangaan-Tsonga groups (*cf* Van Warmelo 1935).

Will any building or structure older than 60 years be affected in any way?

YES	NO ✓
YES	NO ✓

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

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 Public Participation Process (PPP) was undertaken according to Regulation 54 of the EIA Regulations, 2010, and took into consideration the Public Participation 2010 Guideline Document (DEA, 2010).

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the department in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (v) the manner in which and the person to whom representations in respect of the application may be made.

- See Appendix E, Annexure A & B (Site notice and the content thereof)
- See Appendix E, Annexure C & D (Background Information Document and Draft BAR)
- See Appendix E, Annexure E & F (News Paper Advertisement)

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the department in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the

application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these Regulations.

Advertisements and notices must make provision for all alternatives.

Potentially interested and affected parties were notified of the proposed application and site meeting by –

- Fixing two notice boards at a place conspicuous to the public, specifically at the Jejane Control Gate as well as the Kamogelo Shopping Centre Notice Board in Hoedspruit, on the 30th November, 2011 (**Appendix D, Annexure A & B**). There was no reasonable alternative site (Section D 5).
- Giving written notice to owners and occupiers of land adjacent to Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT and organs of state having jurisdiction in respect of the proposed activity. A Background Information Document (BID) was prepared and distributed via email and per hand (**Appendix D, Annexure C & D**).
- Placing an advertisement in a local newspaper, the Hoedspruit Times, on the 2nd of December, 2011 (**Appendix D, Annexure E & F**). No official Gazette existed at the time of the application. The proposed activity shall not have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it will be undertaken.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

The level of public participation was determined by taking into account the scale of the anticipated impacts of the proposed project, the sensitivity of the affected environment and the degree of controversy of the project, and the characteristics of the potentially affected parties. Based on the findings of the aforementioned consideration, there was no reason to elaborate on the minimum requirements of the public participation process outlined in the EIA Regulations, 2010 or use reasonable alternative methods for people desiring of but unable to participate in the process due to illiteracy, disability or any other disadvantage. Thus the decision was taken to circulate a detailed Background Information Document and that this, with additional input from I&AP's, would be adequate in terms of engaging with the public and affected parties. Communication with the LEDET regarding a site visit resulted in the LEDET requesting to see the site only when the Draft Basic Assessment Document had been submitted to their office.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

In terms of regulation 55(1), all organs of state which have jurisdiction in respect of the proposed activity and all persons who submitted written comments, or requested, in writing, to be registered were placed on the register (**Appendix E, Annexure G**).

Name of Authority informed:	Comments received (Yes or No)
Ward Councilor (Ward 11) Cllr. Popela M.B (071 315 1752)	No comment on BID No comment on DBAR To date no issues have been raised.
Mopani District Municipality (MDM) tim@mopani.gov.za 015 811 6300 Maruleng Municipality (MLM) Mrs. Rosina Ngoveni (ngovenir@maruleng.gov.za 084 886 6019) Mr. Ramothwala R.J (ramothwalar@maruleng.gov.za 079 880 5377) Mr. Modiba T.S (modibas@maruleng.gov.za 084 709 4410)	No comment on BID No comment on DBAR To date no issues have been raised.
Limpopo Economic Development, Environment and Tourism. (LEDET) Masungi Tshuketana (TshuketaniM@ledet.gov.za 082 371 6256) Department of Water Affairs (DWA) Khethiwe Phoku (phokyk@dwaf.gov.za , 013 759 7310) Sampie Shabangu (ShabanguS2@dwa.gov.za , 013 759 7300) Mbali Dlamini (dlaminim@dwa.gov.za , 082 325 9685)	No comment on BID Comment on the DBAR was received. Comment was as follows: <ul style="list-style-type: none"> • A proof as to when the existing development established must be included in the forthcoming final Basic Assessment Report (BAR); • The Archaeological Investigation, Soil Analysis and Vegetation Survey reports must be signed with original signatures of the authors and the qualifications and expertise of the authors to conduct such studies must be included; • The Type of sanitation system currently used and recommended in the report is not supported and therefore an alternative sanitation system that does not use a soak away method must be investigated and recommended to replace the existing one.; and • An agreement letter from the Maruleng Local Municipality that confirms the disposal of the solid waste to their registered landfill site must be attached in the forthcoming final BAR.

South African Heritage Resources Agency (SAHRA) Philip Hine (phine@sahra.org.za , 021 462 4502)	No comment on BID No comment on DBAR To date no issues have been raised.
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7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

YES ✓	NO
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If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Comment on the Draft BAR was received from DWA. Their comment was as follows:

- Water abstraction from the borehole/s need to be registered.
- If an onsite sewerage treatment facility is to be used this should be licensed or registered in terms of section 21 (g) of the National Water Act.

List of Applicant, Occupiers of the site, Owners and occupiers of land adjacent to site as notified:

The owner or person in control of that land if the applicant is not the owner or person in control of the land:

The applicant is the owner or person in control of the land.

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:

The applicant occupies the site where the activity is to be undertaken (Jejane Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd). There was no reasonable alternative site (Section D 5).

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:

Farm Amsterdam

Mr. H. Joubert (joubertboer@mweb.co.za 082 462 2259)

Portion 2 of the Farm Vienna

Mr. C Sussens (015 793 1884)

Marula

Ms. M Muller (info@offbeatsafaris.co.za 082 494 1735)

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Farm Antwerpen Ptn. 5 & remaining (Nthaba)
 J. Campbel (campbelj@mweb.co.za 083 308 0034)
Farm Antwerpen Ptn. 3 (Mohlabetsi Nyala)
 W. Nortier (nortbenz@gmail.com 083 700 2929)
 J.Duthie (john@acmsshelela.co.za 083 377 8161)
 Don (don@tandatula.co.za 083 447 7153)
Farm Antwerpen Ptn. 2 (Inkonkoni)
 G. Griffioen (gerriegrif@gmail.com , 083 648 3339)
Farm Boston Ptn. 1 (Umhlametsi):
 M. Frankel (011) 6785745)

List of Organs of State and other Authoritative Bodies as notified:

The municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area:

Ward Councilor (Ward 11)
 Cllr. Popela M.B (071 315 1752)

The municipality which has jurisdiction in the area:

Mopani District Municipality (MDM)
tim@mopani.gov.za 015 811 6300

Maruleng Municipality (MLM)
 Mrs. Rosina Ngoveni (ngovenir@maruleng.gov.za 084 886 6019)
 Mr. Ramothwala R.J (ramothwalar@maruleng.gov.za 079 880 5377)
 Mr. Modiba T.S (modibas@maruleng.gov.za 084 709 4410)

Limpopo Economic Development, Environment and Tourism. (LEDET)
 Masungu Tshuketana (TshuketaniM@ledet.gov.za 082 371 6256)

Department of Water Affairs (DWA)
 Khethiwe Phoku (phokyk@dwaf.gov.za, 013 759 7310)
 Sampie Shabangu (ShabanguS2@dwa.gov.za, 013 759 7300)
 Mbali Dlamini (dlaminim@dwa.gov.za, 082 325 9685)

South African Heritage Resources Agency (SAHRA)
 Philip Hine (phine@sahra.org.za, 021 462 4502)

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

The Limpopo Department of Economic Development, Environment and Tourism have commented on the Draft Basic Assessment Report.

Comment was as follows:

- A proof as to when the existing development established must be included in the forthcoming final Basic Assessment Report (BAR);
- The Archaeological Investigation, Soil Analysis and Vegetation Survey reports must be signed with original signatures of the authors and the qualifications and expertise of the authors to conduct such studies must be included;
- The Type of sanitation system currently used and recommended in the report is not supported and therefore an alternative sanitation system that does not use a soak away method must be investigated and recommended to replace the existing one.; and
- An agreement letter from the Maruleng Local Municipality that confirms the disposal of the solid waste to their registered landfill site must be attached in the forthcoming final BAR.No issues have been raised by any other parties. However the EAP has identified the following issues that may impact on the receiving environment and potential I&AP's

Further to this a number of issues have been identified during the scoping exercise.

The bio-physical issues identified include:

- Ground and surface water impact
- Ecological - Biodiversity, sensitivity and vegetation communities
- Geotechnical
- Sanitation and waste management
- Storm water management

The socio-economic impacts identified include:

- Socio-economic impact – Cultural or historic
- Need and desirability
- Compatibility with regional planning

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

Comment on the Draft BAR and the EAP's subsequent response to these issues has been incorporated into this document (the final BAR).

Comment:

- A proof as to when the existing development established must be included in the forthcoming final Basic Assessment Report (BAR);

EAP's response:

- Proof of the legal establishment of the existing development has been attached in the form of an Environmental Authorisation (16/1/2 – 105) as issued by the Limpopo Province Environmental Affairs on the 9/9/2002. See **Appendix G; Annexure A** for reference.

Comment:

- The Archaeological Investigation, Soil Analysis and Vegetation Survey reports must be signed with original signatures of the authors and the qualifications and expertise of the authors to conduct such studies must be included;

EAP's response:

- Noted. See signed specialist declaration as attached to each specialist study.

Comment:

- The Type of sanitation system currently used and recommended in the report is not supported and therefore an alternative sanitation system that does not use a soak away method must be investigated and recommended to replace the existing one.; and

EAP's response:

- Noted. Further investigation of sewerage treatment alternatives has lead to the recommendation that septic tanks coupled to conservancy tanks be installed on Jejane.

Furthermore it is imperative that stipulations of the National Water Act are adhered to. The various components of the sewerage treatment system should also be sited where they are not easily visible, and if not sited below ground, should be screened to further reduce visual impact. These units must be monitored in line with the requirements of DWAF and other compliance organisations.

In conclusion the EAP suggests, based on an assessment of the available information and applicable guidelines, standards and legislation, that septic tanks may be used but only if these are linked to conservancy tanks. The final design must take cognisance of these recommendations and adherence to guidelines, standards and legislation must be ensured though regular monitoring.

Comment:

- An agreement letter from the Maruleng Local Municipality that confirms the disposal of the solid waste to their registered landfill site must be attached in the forthcoming final BAR.

EAP's response:

- Waste is currently removed from the farm at regular intervals by the Maruleng Municipality for which they levy a monthly charge. (Invoices attached as **Appendix G; Annexure B** have been supplied as proof of current waste removal. This agreement is to continue.

No issues have been raised by any other parties. However the EAP has identified the following issues that may impact on the receiving environment and potential I&AP's

No issues raised to date. However the EAP has identified issues as listed above that may impact on the receiving environment and potential I&AP's.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

The general objective of integrated environmental management is, inter alia, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" (Section 23(2)(b) of NEMA).

The purpose of the assessment is to synthesise and analyse information relevant to the environmental impacts of a proposal. In order to achieve this, two elements, namely the outline of methodology used and the systematic assessment of the impacts are required.

The environmental significance scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can be ecological, economic, social, or all of the aforementioned. The evaluation of the significance of an impact relies heavily on the values of the person making the judgement. For this reason, impacts of especially a social nature need to reflect the values of the affected

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society.

Issues associated with the proposed development have been identified and the following provided in order to analyse their effect on the receiving environment:

- The significance scale; and
- Mitigation measures to reduce negative impacts and enhance positive impacts.

Below is a brief explanatory note on the methodology adopted for assessing the significance of the identified impacts.

The following ratings were used to determine the significance of each impact:

Extent	Local	Impact limited to footprint
	Site	Impact affects site as a whole
	Regional	Impact affects neighbours
Duration	Short term	Time span shorter than the phases
	Medium term	Time span as long as the phases
	Long term	Time span as long as the operational phase I
	Permanent	Mitigation will not be possible
Intensity	Low	Natural processes not affected
	Medium	Modified processes will continue
	High	Functioning of processes will cease
Probability	Improbable	Probability very low
	Probable	Possibility that impact will occur
	Highly probable	Impact will most likely occur
	Definite	Impact will occur regardless
Determination of significance without mitigation	No significance	Not substantial; does not require mitigation
	Low	Impact of little importance
	Medium	Impact of importance
	High	Impact of great importance

It is more important to identify likely environmental impacts than to precisely evaluate the more obvious impacts

All assessors (the different specialists) try to evaluate all the significant impacts, recognising that precise evaluation is not possible. It is better to have a *possible* or *unsure* level of certainty on important issues than to be *definite* about unimportant issues. This is the 'Probability Scale', which provides an indication of the risk or chance of an impact-taking place. There is no doubt that some impacts would occur if the development takes place, but certain other (usually secondary) impacts are not as likely, and may or may not result from mining and related activities in the area. Although these impacts may be severe, the likelihood of them occurring may affect their overall significance and must therefore be taken into account. It is therefore necessary for the author to state his estimate of the likelihood of an impact occurring.

Alternative (preferred alternative)

Potential Impact	Type of Impact	Construction	Operation
Impact 1: Visual Quality.	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 2: Surface and Ground Water Pollution.	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 3: Habitat Loss (Fauna and Flora)	Direct	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 4: Barriers to Dispersal and migration of fauna and flora.	Direct	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 5: Noise and Light Pollution	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 6: Erosion and Siltation	Direct & Indirect	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 7: Employment Opportunities	Direct & Indirect	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 8: Soil Contamination	Direct	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 9: Air Pollution	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 10: Ecological	Direct	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 11: Access and Traffic	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 12: Storm water	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 13: Compatibility with regional planning	Indirect	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact 14: Solid waste disposal	Direct & Cumulative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Impact 1: Visual Quality.

Impact Description: The proposed Jejane site has a visual sensitivity of **Medium** to **High**. The relatively undisturbed natural vegetation, undulating landscape, hillocks and mixed exposures contribute to this rating. However with careful planning the integrity of the local visual landscape can be maintained

Impacts on the visual landscape will be **LOW** (if mitigated), permanent and localised. The adoption of mitigation measures is important so that the local visual landscape's quality is maintained.

Visual Quality

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	Medium	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	Medium	Low
Operation	Negative	Local	Long Term	Medium	Highly probable	Medium	Low

Mitigation:

- The development of physical structures and infrastructure must follow the mitigation guidelines as set out in the EMP as well as comply with the rules and regulations. In this regard a set of Architectural Design Guidelines for Jejane should be drawn up.
- All physical structures should conform to overall character of the area, maintaining a sense of place.
- Lines of the landscape must be considered. Development should not protrude beyond horizon line or boulder/tree line.
- All structures should be sited above the 100 year flood line and outside of seasonally wet areas.
- Any structure built on slopes greater than 1:5 and on ridges and plateaus must be built in such a way as to minimise their visual impact.
- Appropriate landscaping and rehabilitation of indigenous vegetation should be included in the development of the site.
- Structures should be designed with visual impacts in mind. There should be no large reflective surfaces, and colours and textures should resemble the natural environment.

Impact 2: Surface and Ground Water Pollution.

Impact Description: Without mitigation there may be impact on the local environment. The significance of these impacts will be **MODERATE**, permanent and localised. With adoption of mitigation measures the significance of impacts may be reduced to **LOW**.

Surface and Groundwater pollution can be caused by various activities during the construction and operation phases if not properly managed. These activities include:

- Preparation of construction building site -
 - Levelling of construction site
- Operation of building site –
 - Production of litter from construction crew
 - Inadequate ablution facilities
 - Construction and operation of storm water management system –
 - Increase in surface run-off water due to hardened surfaces
- Construction activities –
 - Mixing of cement and concrete on site
 - Use of construction vehicles and machinery –
 - Oil dripping from standing vehicles
 - Spills from servicing or re-fuelling
 - Leaks from stored fuel and oil
- During the operational phase, potential risks to surface or ground water are anticipated to be:
 - Fuel or lubricant spillages associated with vehicles
 - Fuel spillage associated with machinery such as generators
 - Spillage or seepage of untreated sewerage associated with houses
 - Litter washed into watercourses

Surface and Ground Water Pollution

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	Medium	Low
Behaviour of construction staff	Negative	Local	Short Term	Low	Probable	Medium	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	Medium	Low
Use and servicing of construction vehicles	Negative	Local	Short Term	High	Probable	Medium	Low
Operational: Fuel spillage associated with vehicles/machinery	Negative	Local		Low	Unlikely	Medium	Low
Operational: Leakage of untreated sewerage	Negative	Local		Low	Unlikely	Medium	Low
Operational: Litter entering watercourse	Negative	Local		Low	Unlikely	Medium	Low

Mitigation:

Construction:

- All personal washing operations will take place at a location where waste water can be disposed of in an acceptable manner. Facilities not feeding into a formal drain should ensure that biodegradable soaps are used.
- Dry chemical toilets must be made available at the construction camp and must be cleaned and serviced regularly. All chemical toilets must be placed above the 1:100 year flood line or at least 100 m away from any water course or wet area.
- At least one toilet must be provided for every 15 employees or part thereof and must be serviced at least twice a month.
- All maintenance and repair work of construction vehicles will be carried out within an area designated for this purpose, equipped with the necessary pollution containment measures.
- The ground under the servicing and refuelling areas must be protected against pollution caused by spills and/or tank overfills.

- In the event of a breakdown or emergency repair, any accidental spillage must be cleaned up or removed immediately.
- All construction equipment and machinery must be maintained in good order. Regular checks must be undertaken for leaks and any found must be immediately repaired.
- Construction vehicles have to be parked in the construction camp area after working hours.
- The Site Environmental Officer must ensure that reasonable precautions are taken to prevent the pollution of the ground and water resources on and adjacent to the sites during the construction phase.
- No natural watercourse is to be used for the cleaning of tools or any other apparatus. This includes for purposes of bathing, or the washing of clothes etc. All washing operations will take place at a location where waste water can be disposed of in an acceptable manner.
- The contractor must maintain good housekeeping practices that ensure that all work sites are kept tidy and litter free, ensuring no runoff of refuse into surrounding watercourses.
- No spills may be hosed down into a storm water drain or sewer, or into the surrounding natural environment. All contaminated soil is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate registered landfill site.
- Cement must not be mixed directly on the ground. Areas where cement and concrete are handled should be bunded/covered with impermeable sheeting and suitable methods developed to contain any excess water containing waste. Water and slurry from concrete mixing operations must be contained to prevent pollution of the ground surrounding the mixing points.
- Tar and oil based products (if used) should be applied to the manufacturers specifications. Care should be taken to identify pollution timely and suitable methods of decontamination should be used.
- Excavation of sand to solid ground must be done carefully and appropriate drainage incorporated. Excavating soil or imported backfill is to be stockpiled along the trench within the working servitude, and may not take place within the 1:100 year flood line. Topsoil is to be separated from subsoil to allow for effective rehabilitation.
- A drainage diversion system is to be installed to divert run-off from areas of potential pollution. Internal storm water reticulation is to be constructed early on in the project in order to significantly reduce the storm water effluent during construction, and storm water drains must include oil traps.
- There should be monitoring and inspection of the site's drainage system to ensure that the water flow is unobstructed.
- Minimise losses of water by careful design and operation and regular inspection, maintenance and feedback to management on the Local Authority water services infrastructure and water management systems.

Operation:

- All vehicles residing on the premises should be parked on impermeable surfaces.
- Drip trays to be placed under all machinery (tractors, generators etc) to catch any spillages of lubricant.
- Maintenance vehicles to be refuelled at designated refuelling point (workshop) over an impervious surface.
- Equipment for dealing with spillage is to be kept on site. Absorbent materials for remediation of fuel spills are to be kept and maintenance staff are to be instructed as to its application and disposal in a registered hazardous waste site.
- All maintenance and repair work of maintenance vehicles will be carried out within an area designated for this purpose, equipped with the necessary pollution containment measures.
- Any fuels stored on site should be in a bunded area to contain spillages. All generators should be installed within a bunded area.
- In the event of a breakdown or emergency repair, any accidental spillage must be cleaned up or removed immediately.
- No spills may be hosed down into a storm water drain or sewer, or into the surrounding natural environment. All contaminated soil is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate registered landfill site.
- The ECO to audit those reasonable measures are implemented to minimise the risk of spillage of fuel into watercourses.
- Any washing of vehicles to be conducted on a surfaced area fitted with a basic oil/water separation mechanism.
- The area must be kept tidy and litter free, ensuring no runoff of refuse into surrounding watercourses.

Impact 3: Habitat Loss (Fauna and Flora)

Impact Description: The proposed Jejane Reserve has not been significantly impacted on and the vegetation is very close to its natural state. This said however, the sites on which construction/refurbishment/re-alignment are to take place have been impacted on historically.

The development to take place on Jejane is in principal a very small change in land-use, and falls in line with the proposed landuse strategies as described in the Maruleng IDP and SDF. The development will thus not contribute to large scale fragmentation and loss of faunal habitats. The limited habitat loss and fragmentation that could occur on site, once mitigated properly, would be permanent, site bound and of **LOW** significance.

The adoption of recommendations is crucial. It is also noted that the development has the potential to ensure capital expenditure on conservation of habitat and prevention of future habitat loss.

LEDET BA Report, EIA 2010: Project Name: _ Jejane – Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT.

Habitat Loss (Fauna and Flora)

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	High	Low
Behaviour of construction staff	Negative	Local	Short Term	Medium	Probable	High	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	High	Low
Use and servicing of construction vehicles	Negative	Local	Short Term	Medium	Probable	High	Low
Operation	Negative	Local	Long term	Medium	Probable	High	Low

Mitigation:

- Existing vegetation should be retained at all costs. Where protected plants are encountered no disturbance will be allowed. Any unavoidable disturbance will be strictly controlled and permitted by the relevant authority.
- The layout design should wherever possible be confined to areas that are already developed or that have been impacted on historically.
- The layout design should only include areas where access road routes can be found that will have little impact in construction, such as the upgrade of existing roads or tracks.
- Prior to construction the development area and separate sites should be demarcated with danger tape and contractors informed that no access to areas outside of this zone is allowed.
- An independent Environmental Control Officer (ECO) should be appointed and one of this person's roles during the construction phase should be monitoring of illegal plant harvesting.
- The independent Environmental Control Officer should be present on site, particularly during initial site clearing operations, in order to monitor whether this is being adhered to or not.
- Indigenous vegetation should be utilized in landscaping and rehabilitation of disturbed areas to retain linkages and to retain a sense of place.
- Construction teams must, as a contractual obligation, not be allowed to collect firewood or any other plant resources from surrounding vegetation.

- The presence of alien vegetation should be carefully monitored and all plants destroyed, particularly around construction sites.
- In order to comply with the Conservation of Agricultural Resources Act, all listed invasive exotic plants as should be targeted and controlled, even if these are in areas not impacted by the development.
- The ECO should spend time in the above-mentioned areas and monitor whether alien species are being removed or not.
- Building contractors should be made aware of the necessity to dump any building rubble off-site
- The ECO should search surrounding vegetation to check whether building contractors are dumping any building rubble on site or not.
- Penalties should be levied on any contractor who does not comply.
- All conservation-important plants should be translocated to adjacent similar habitat prior to clearing of vegetation; where trees are too large to transplant; relevant permits for removal should be obtained from the Department of Water Affairs & Forestry and / or the Mpumalanga Tourism & Parks Agency.
- Construction teams must, as a contractual obligation, not be allowed to enter surrounding untransformed vegetation.
- Any evidence of poaching must be followed up, and where possible, perpetrators prosecuted according to the Nature Conservation Act

Impact 4: Barriers to Dispersal and migration of fauna and flora.

Impact Description: The construction of any structures, artificial landscapes, roads and fencing may create barriers to dispersal and migration of indigenous fauna. The ideology, if practiced correctly, behind an eco-friendly development will however to some extent, mitigate these impacts.

Barriers to faunal dispersal and migration will probably occur and without mitigation the significance of the impacts will be **MODERATE**. These impacts will be permanent and localised. With mitigation the impacts could be reduced to a significance rating of **LOW**.

Barriers to Dispersal and migration of fauna and flora.

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	Medium	Low
Preparation of construction site	Negative	Local	Medium Term	Medium	Highly Probable	Medium	Low
Operation	Negative	Local	Long term	Medium	Highly Probable	Medium	Low

Mitigation:

- The layout design should wherever possible be confined to areas that are already developed or that have been impacted on historically.
- The layout design should only include areas where access road routes can be found that will have little impact in construction, such as the upgrade of existing roads or tracks.
- The development areas or sites should be demarcated with danger tape and contractors informed that no access to areas outside of this zone is allowed.
- The Environmental Control Officer should be present on site, particularly during initial site clearing operations, in order to monitor whether this is being adhered to or not.
- Design aspects of infrastructure need to be proactive so as to avoid possible negative impacts that design faults may have on the receiving environment. Aspects such as the height of the lowest electrified wire above the ground and sloping the fence out and not in are an example of this.
- Design should allow for no vertical pavements which may trap small invertebrates; and similar structures to allow for the movement of faunal species across potential barriers such as roads and fences.

Impact 5: Noise and Light Pollution

Impact Description: The development will comprise a number of housing structures with associated recreational activities. The construction and operation of these will lead to some noise and light pollution that will impact on local fauna and neighbours within close proximity to the development.

Noise pollution, although minimal, will occur with a localised and permanent impact. The significance of this impact will be **LOW** after mitigation.

Light pollution, with mitigation can be listed as having a **LOW** impact rating.

Noise and Light Pollution

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	Medium	Low
Behaviour of construction staff	Negative	Local	Short Term	Medium	Probable	Medium	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	Medium	Low
Use and servicing of construction vehicles	Negative	Local	Short Term	Medium	Probable	Medium	Low
Operation	Negative	Local	Long Term	Medium	Probable	Medium	Low

Mitigation:

- Noise disturbance or any other form of disturbance that may have an effect on the landowner/tenants/persons lawfully living in the vicinity must be kept to a minimum.

- Construction activities should only take place during normal working hours, and landowners/tenants living in the area should be informed prior to any activities that are bothersome taking place.
- Machinery such as pumps / compressors should be placed in a manner that will allow the noise generated from them to be directed away from existing residential settlements bordering the development.
- All vehicles and machinery must be fitted with baffles and silencer boxes to reduce noise emissions in line with ambient noise levels.
- Lighting for use in the development should be placed in such a way as to minimise impact on any person or animal viewing the development. The use of down lighting is recommended. No spotlights are permitted.
- The lighting should be in line with the general ambiance of calm and relaxation and maintain a sense of place.
- When not in use areas where lighting occurs should be kept switched off.

Impact 6: Erosion and Siltation.

Impact Description: As the proposed Development is to be situated within close proximity to ecosystems that should remain intact; “generally JeJane can be viewed as having high conservation status as it form part of a greater conservation entity”, it is important to highlight the impact that erosion and the resultant siltation will have on these resources. Due to the slope and erodibility of the soils in some parts and within some development sites, the area may be prone to soil erosion. Construction activities may cause further erosion and siltation of the nearby rivers and sensitive areas.

During the Operational phase the significance of this impact is viewed as **MEDIUM** but may be mitigated to **LOW** as vegetation cleared during construction will have re-established providing natural stabilisation of the terrain against erosion.

Erosion and Siltation

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	High	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	High	Low
Operation	Negative	Local	Long term	Low	Probable	Medium	Low

Mitigation:

- During construction the ECO should ensure that all areas susceptible to erosion are protected by the installation of the necessary, temporary and permanent drainage works as soon as possible, and that the measures necessary for the prevention of surface water being concentrated in water sources and from scouring the slopes, banks and other areas have been taken.
- Erosion protection measures required should include:
- The use of (indigenous, endemic) groundcover or grass
- Hard landscaping e.g. gabions, berms.
- Storm water drainage measures are required on site to control runoff and prevent erosion.
- Roads to be constructed/repared should be constructed in such a way as to minimise and control runoff and resultant erosion.
- Construction on steeper slopes should make use of materials that reduce runoff by allowing water to percolate into the ground as opposed to channelling it away with the greatest possible velocity.

Impact 7: Employment Opportunities

Description of the impact: The proposed development will create employment opportunities for a small number of peoples, both local and regional. During construction there will be a need for skilled and unskilled labour, as construction requires. A small number of highly skilled individuals from outside the community may have to be sourced if they are not available from within.

Employment Opportunities

Activity	Nature	Extent	Duration	Intensity	Probability	Significance
Construction activities	Positive	Local & Regional	Short Term	Medium	Highly Probable	High
Operation	Positive	Local	Long Term	Medium	Highly probably	High

Mitigation:

- No mitigations required as the creation of employment opportunities constitutes a positive impact.
- The use of local communities is encouraged in the sourcing of employees
- A diversity of skills and jobs can be created through the development. For example, domestic workers, maintenance workers, etc.....

Impact 8: Soil Contamination

Impact Description: Through the construction activity and during the operational phase there is a risk of soil contamination through spillage of cement, fuel or chemicals. The impact of contaminated soil on natural vegetation is high, however soil contamination would be very localised in extent.

Soil Contamination

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	High	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	High	Low
Operation	Negative	Local	Short Term	Medium	Probable	High	Low

Mitigation:

Construction:

- All maintenance and repair work of construction vehicles will be carried out within an area designated for this purpose, equipped with the necessary pollution containment measures.
- The ground under the servicing and refuelling areas must be protected against pollution caused by spills and/or tank overfills.
- In the event of a breakdown or emergency repair, any accidental spillage must be cleaned up or removed immediately.
- All construction equipment and machinery must be maintained in good order. Regular checks must be undertaken for leaks and any found must be immediately repaired.
- Construction vehicles have to be parked in the construction camp area after working hours. Drip trays must be installed under vehicles.
- The Site Environmental Officer must ensure that reasonable precautions are taken to prevent the pollution of soil on and adjacent to the sites during the construction phase.
- All contaminated soil is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate registered landfill site.

- Cement must not be mixed directly on the ground. Areas where cement and concrete are handled should be bunded/covered with impermeable sheeting and suitable methods developed to contain any excess water containing waste. Water and slurry from concrete mixing operations must be contained to prevent pollution of the ground surrounding the mixing points.
- Tar and oil based products (if used) should be applied to the manufacturers specifications. Care should be taken to identify pollution timely and suitable methods of decontamination should be used.
- Excavation of sand to solid ground must be done carefully and appropriate drainage incorporated. Excavating soil or imported backfill is to be stockpiled along the trench within the working servitude, and may not take place within the 1:100 year flood line. Topsoil is to be separated from subsoil to allow for effective rehabilitation.

Operation

- All vehicles residing on the premises should be parked on impermeable surfaces.
- Drip trays to be placed under all machinery (tractors, generators etc) to catch any spillages of lubricant.
- Maintenance vehicles to be refuelled at designated refuelling point (workshop) over an impervious surface.
- Equipment for dealing with spillage is to be kept on site. Absorbent materials for remediation of fuel spills are to be kept and maintenance staff are to be instructed as to its application and disposal in a registered hazardous waste site.
- All maintenance and repair work of maintenance vehicles will be carried out within an area designated for this purpose, equipped with the necessary pollution containment measures.
- Any fuels stored on site should be in a bunded area to contain spillages. All generators should be installed within a bunded area.
- In the event of a breakdown or emergency repair, any accidental spillage must be cleaned up or removed immediately.
- All contaminated soil is to be excavated to the depth of contaminant penetration, placed in 200 litre drums and removed to an appropriate registered landfill site.
- The ECO to audit so as to ensure that reasonable measures are implemented to minimise the risk of spillage of fuel.
- Any washing of vehicles to be conducted on a surfaced area fitted with a basic oil/water separation mechanism.

Impact 9: Air Pollution

Impact Description: Since the proposed development entails re-alignment and refurbishing, air pollution is seen as an insubstantial impact and rated as having a **LOW** significance. Air pollution will be limited to vehicle emissions and dust as a result of vehicle movement.

This impact is likely to be most significant during the construction phase due to the intensity of the activity. Dust may also be generated while roads are constructed and stabilised.

The operational phase will generate very little emission into the atmosphere. Emissions are expected to arise from vehicles and from the use of generators for electricity production.

Air Pollution

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Low	Probable	Low	Low
Preparation of construction site	Negative	Local	Short Term	Low	Probable	Low	Low
Operation	Negative	Local	Long Term	Low	Probable	Low	Low

Mitigation:

Construction:

- Construction vehicles should be fitted with standard emission reduction equipment. Air filters must be cleaned regularly.
- Construction vehicles should be in good operational condition. Vehicles producing excessive smoke must be serviced
- Construction vehicles should be operated when necessary and not left running
- The contractor must monitor driving speeds so that excessive dust is not generated. This is of particular relevance to deliveries of materials to the site.

Operation:

- Road surfaces must be maintained to reduce dust
- All installed generators should have effective emission reduction equipment fitted as standard.
- Generators should only be operated on demand and not permanently.

Impact 10: Ecological

Impact Description: Locally, *Sclerocarya birrea* (Marula) and *Combretum apiculatum* (Red Bushwillow) dominates the higher lying parts of the catena (crests and mid-slopes). *Acacia nigrescens* (Knob Thorn) is present in association with the Migmatite or Dolorite intrusions.

The ecotones between the mid-slopes and foot-slopes are characterized by *Terminalia sericea* (Silver Cluster Leaf) on the contours. Seep lines are not always clearly visible immediately below the *Terminalia sericea* community, but are characterized by the dominance of a green band of herbaceous plants, sedges and grasses such as *Eragrostis gummiflua*, *Eragrostis meridionalis*, *Brachiaria nigropedata* and *Pogonarthria squarrosa*.

The foot-slope areas are characterized by the presence of shrubs and trees such as *Euclea divinorum* (Magic Guarri) or *Acacia nilotica* (Scented Pod Acacia).

No Red Data species were noted at any of the development sites.

Although no red data species or potentially sensitive ecological zones have been noted on site, the proposed development/re-alignment or upgrade sites are situated within an area set aside for the conservation of wildlife as well as tourism activities associated with conservation areas. Therefore any impact that may occur due to construction and operational activities must be mitigated satisfactorily. Ecological impacts on Jejane carry a rating of **MEDIUM** and may be mitigated to **LOW** significance.

Ecological

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Medium Term	Medium	Unlikely	Medium	Low
Preparation of construction site	Negative	Local	Medium Term	Medium	Unlikely	Medium	Low
Operation	Negative	Local	Long Term	Medium	Unlikely	Medium	Low

Mitigation:

- The layout design should wherever possible be confined to areas that are already developed or that have been impacted on historically.
- The layout design should only include areas where access road routes can be found that will have little impact in construction, such as the upgrade of existing roads or tracks.
- Where it is unavoidable for a road to cross a stream or sensitive area, the shortest crossing should be sought and construction methods should ensure least impact and impedance to the stream.
- If a stream has to be crossed the necessary licence or general authorisation should be sought from DWAF.
- The development zone should be demarcated with danger tape and contractors informed that no access to areas outside of this zone is allowed. Vehicles may not be 'parked' or stopped adjacent to the road.
- The Environmental Control Officer should be present on site, particularly during initial site clearing operations, in order to ensure that sensitive areas and streams are not negatively impacted on.

Impact 11: Access and Traffic

Impact Description: Construction vehicles would make use of existing roads for to access the sites. Measures to mitigate impacts on traffic flow during construction include ensuring that all regulations relating to traffic management are observed. As far as possible, attempts should be made to ensure that high construction-related road usage coincides with low flow periods. This impact can be considered to be of a **medium to very low significance** with the application of mitigation measures.

During the construction phase the impact will be negative due to the creation of dust. Subsequent to construction, the impact of may be greatly reduced and in fact be of a positive nature as excessive utilisation of the road networks for staff transportation will be minimised.

Access and Traffic

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Preparation of construction site	Negative	Local	Short Term	Medium	Highly Likely	Medium	Low
Construction activities	Negative	Local	Short Term	Medium	Highly Likely	Medium	Low
Operation	Positive	Local	Long Term	Medium	Highly Likely	Medium	High

Mitigation:

Construction;

- Roads to be constructed/repared should be constructed in such a way as to minimise and control runoff and resultant erosion
- During construction the ECO should ensure that all areas susceptible to erosion are protected by the installation of the necessary, temporary and permanent drainage works as soon as possible, and that the measures necessary for the prevention of surface water being concentrated in water sources and from scouring the slopes, banks and other areas have been taken.
- Storm water drainage measures are required on site to control runoff and prevent erosion.
- The road must be constructed prior to the delivery of building materials in order to reduce the impacts of dust and erosion.

.Operation:

- The road must be maintained to reduce dust and noise impact
- Drainage diversions must be kept free of soil.

Impact 12: Storm water

Impact Description: Surface hardening is associated with development. Hardened surfaces result in reduced infiltration rates and higher volumes and velocities of surface run-off. If stormwater is not managed and correctly channelled there is an increased risk of erosion and loss of habitat.

Storm Water

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Medium	Probable	Medium	Low
Preparation of construction site	Negative	Local	Short Term	Medium	Probable	Medium	Low
Operation	Negative	Local	Short Term	Medium	Probable	Medium	Low

Mitigation:

- During construction the ECO should ensure that all areas susceptible to erosion are protected by the installation of the necessary, temporary and permanent drainage works as soon as possible, and that the measures necessary for the prevention of surface water being concentrated and from scouring the slopes, banks and other areas have been taken.
- Erosion protection measures required should include:
- The use of (indigenous, endemic) groundcover or grass
- Hard landscaping e.g. gabions, berms.
- Storm water drainage measures are required on site to control runoff and prevent erosion.
- Roads to be constructed/repared should be constructed in such a way as to minimise and control runoff and resultant erosion.
- Construction on steeper slopes should make use of materials that reduce runoff by allowing water to percolate into the ground as opposed to channelling it away with the greatest possible velocity.

- Hard surfaces should be minimised during design.
- A full storm water management plan must be articulated in the engineering report; however this should steer away from the traditional approach of rapid drainage, and allow for natural percolation of water to recharge the ground water. This must be implemented in the construction phase.

Impact 13: Compatibility with regional planning

Impact Description: The private nature reserves in the Central Lowveld region (Jejane falls within these), Klaserie, Umbabat, Thornybush, Timbavati, Sabi Sand, Kapama, Balule, Selati, Makalali, Karongwe and the Blyde-Olifants Conservancy is the largest privately owned nature reserve complex in the world. Including the recently declared escarpment protected areas, half a million hectares of land has been returned to nature. A large part of these private reserves is located within Maruleng. The spatial implication for development in Maruleng is that the environmental areas be protected and that the tourism potential of these areas is exploited, taking cognisance of the impact of such development on the environment.

The IDP and SDF for the region identify the area for eco-tourism related development.

The proposed development falls in line with both these planning documents and as such can be seen to have a positive impact in terms of local planning.

Compatibility with regional planning

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Operation	Positive	Local	Long Term	Medium	Probable	High	High

Mitigation is not required as the impact is positive

Impact 14: Solid waste disposal

Impact Description: Construction waste is an ongoing issue on a construction site. Accumulation of waste can lead to health and safety hazards. In light of this any construction waste must be dealt with according municipal and governmental regulations.

The effects of litter/waste pollution on the biophysical environment would be small, but could be more significant for the aesthetics of the area if not properly controlled. This potential impact could be readily managed by the provision of suitable refuse disposal facilities and the effective implementation of an EMP.

The significance of this potential impact is considered to be **LOW** if the proposed mitigation measures are implemented.

Solid Waste Disposal

Activity	Nature	Extent	Duration	Intensity	Probability	Significance before mitigation	Significance after mitigation
Construction activities	Negative	Local	Short Term	Low	Probable	Medium	Low
Preparation of construction site	Negative	Local	Short Term	Low	Probable	Medium	Low
Operation	Negative	Local	Long Term	Low	Probable	Medium	Low

Mitigation:

- A place for food preparation and eating must be designated within the construction site. Dry chemical toilets must be made available at a ratio of 1:15 at the construction site and must be cleaned and serviced regularly.
- The contractor may not dispose of any waste and/or construction debris by burning or by burying. An adequate number of appropriate refuse bins must be provided at the construction site for refuse and solid waste.

- These bins must be emptied on a daily basis into an appropriate containment vessel that should be located in a designated waste storage area. This waste should be removed regularly to a registered dumping site for disposal.
- All waste must be transported in an appropriate manner (e.g. plastic rubbish bags). A specific site should also be allocated for construction waste e.g. empty cement bags etc. A low temporary fence may be erected around such a site in order to contain the waste and assist the effective removal thereof from the site.
- Waste should be separated and stored separately on site until removal. Construction waste should be removed on a weekly basis.

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

The preceding chapters and the specialist reports provide a detailed assessment of the anticipated environmental impacts on specific components of the biophysical and social environments associated with the proposed Jejane Upgrade and re-alignment.

This BAR has provided a comprehensive assessment of the potential environmental impacts, identified by the EIA team and I&APs, associated with the proposed project. **This investigation has not identified any potential impacts on the biophysical or social environments that are so severe as to suggest that the proposed extension should not proceed.** The conceptual design has taken cognisance of the various environmental considerations and accordingly, incorporates remedial measures aimed at curtailing the significance of the potential negative environmental impacts associated with the proposed development, as well as enhancing the potential positive environmental (including Socio-economic and land use) impacts.

The significance of the potential environmental (biophysical and social) impacts associated with the proposed development are summarised below.

It should be noted that the impacts have been assessed with a reasonable amount of confidence.

From the table below it is apparent that there is no long term or operational phase impacts of significant concern. The negative impacts associated with the operational phase are likely to be of medium to low significance, particularly if the proposed mitigation measures are implemented. Moreover, there are a number of potential

positive impacts associated with the proposed development, viz., compliance with forward planning/ SDF for the area, the creation of positive construction and operational phase impacts on employment opportunities and increased economic activity.

With regards to the short term or construction phase impacts, the significance of the construction phase impacts are likely to be curtailed by the relatively short duration of the construction phase. Moreover, many of the construction phase impacts could be mitigated by the effective implementation of the mitigation measures outlined above. If these measures were put into practice the significance of all construction phase impacts would be reduced to low. While the probability of the construction phase impacts occurring is relatively high without mitigation, the effective implementation of the mitigation measures will reduce the probability of the impacts occurring.

Summary of the significance and probability of the potential positive and negative impacts associated with the proposed Jejane Development.

Description of impact	Significance of impact	
	Without mitigation	With mitigation
Operational and Construction phase: Biophysical and Social environment		
Visual Quality	Medium (-) (Highly Probable)	Low (-) (Unlikely)
Surface and Ground Water Pollution	Medium (-) (Probable)	Low (-) (Probable)
Habitat Loss (Fauna and Flora)	High (-) (Probable)	Low (-) (Unlikely)
Barriers to Dispersal and migration of fauna and flora	Medium (-) (Probable)	Low (-) (Possible)
Noise and Light Pollution	Medium (-) (Probable)	Low (-) (Unlikely)
Erosion and Siltation	Medium (-) (Probable)	Low (-) (Possible)
Employment Opportunities	High (+) (Probable)	
Soil Contamination	High (-) (Probable)	Low (-) (Possible)
Air Pollution	Low (-) (Probable)	Low (-) (Possible)
Ecological	Medium (-) (Probable)	Low (-) (Probable)
Access and Traffic	Medium (-) (Probable)	Low (-) (Probable)
Storm water	Medium (-) (Probable)	Low (-) (Probable)
Compatibility with regional planning	High (+) (Probable)	High (+) (Probable)
Solid waste disposal	Medium (-) (Probable)	Low (-) (Probable)

Significance: positive impacts indicated by no shading & (+), negative impacts indicated by shading & (-)

Probability: (in brackets)

It is felt that the proposed Resort Extension will have an overall positive impact on the socio-economic environment, and should the necessary mitigation measures be implemented there are no impacts envisaged of high significance or any fatal flaws.

No-go alternative (compulsory)

A possible alternative is one of no development at all, leaving the site and Jejane Private Game Reserve as well as current infrastructure in its present state. The site currently consists of natural bush, used for low impact eco-tourism.

The current layout and setup of the operation is restrictive (as highlighted in chapter 3 above) and has led to inefficient management and subsequent poor operation of Jejane. Due to poor articulation and placement of current infrastructure, allocation of tasks and the transportation of staff have led to increased fuel costs, increased maintenance and decreased safety.

In addition to this the current lack of accommodation capacity on Jejane limits the possible income, which in turn has negatively affected Jejane's ability to break even. If the current status quo remains, one must entertain the likelihood of the current operation being halted, resulting in possible large scale negative impact on the receiving environment as well as on the local economy.

In this regard possible closure of Jejane would not be to the greater socio-economic interest of the Maruleng region, as a development of this nature has the ability to uplift. Uplift in the sense that the area is rapidly growing and that conservation sensitive activities are seen as a preferred land use format with the ability to provide jobs and inflow of currency into the Greater Hoedspruit/Klaserie/Timbavati/Balule.

Furthermore, the site and surrounding land, falls within the Maruleng Municipality and the spatial implication for development in Maruleng is that the **environmental areas** be **protected** and that the **tourism potential** of these areas is **exploited**, taking cognisance of the impact of such development on the environment.

The EAP suggests that due to the above mentioned factors, that Jejane Game Reserve, the greater Kruger to Canyon Biosphere and the local community would be losing out on a viable economic growth opportunity, should the No Go alternative be exercised.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES ✓	NO
-------	----

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the department in respect of the application:

Recommendations

Should the proposed activity be authorised, the most important mitigation measures, which should be stipulated as requirements in any authorisation include the following:

- The Construction Phase EMP that addresses, inter alia, the issues discussed under Construction Phase impacts, viz. sedimentation, deterioration of water quality, traffic, windblown dust, noise disturbance and socio-economic impacts, should be effectively implemented for the duration of the project.
- A suitably qualified professional should be appointed to act as the ECO and oversee the implementation of the EMP during construction.
- There should be strictly no development approved in the Ecological "no development" zones and careful mitigation measures applied to the "Development with mitigation" areas to ensure no encroachment of development into the sensitive areas of the property.
- Sewerage treatment should be in the form of septic tanks and conservancy tanks. No soakaway systems are allowable. Placement should ensure responsible environmental management.
- If any human remains are discovered during earth moving activities, excavations must stop at the location of these findings and these must be treated with respect. The South African Heritage Resources Agency must be notified immediately. An archaeologist may be required to remove the remains at the expense of the developer.
- Effective design of all stormwater outlet areas to prevent erosion and flooding at the point of discharge and immediately downstream.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Public Participation Process

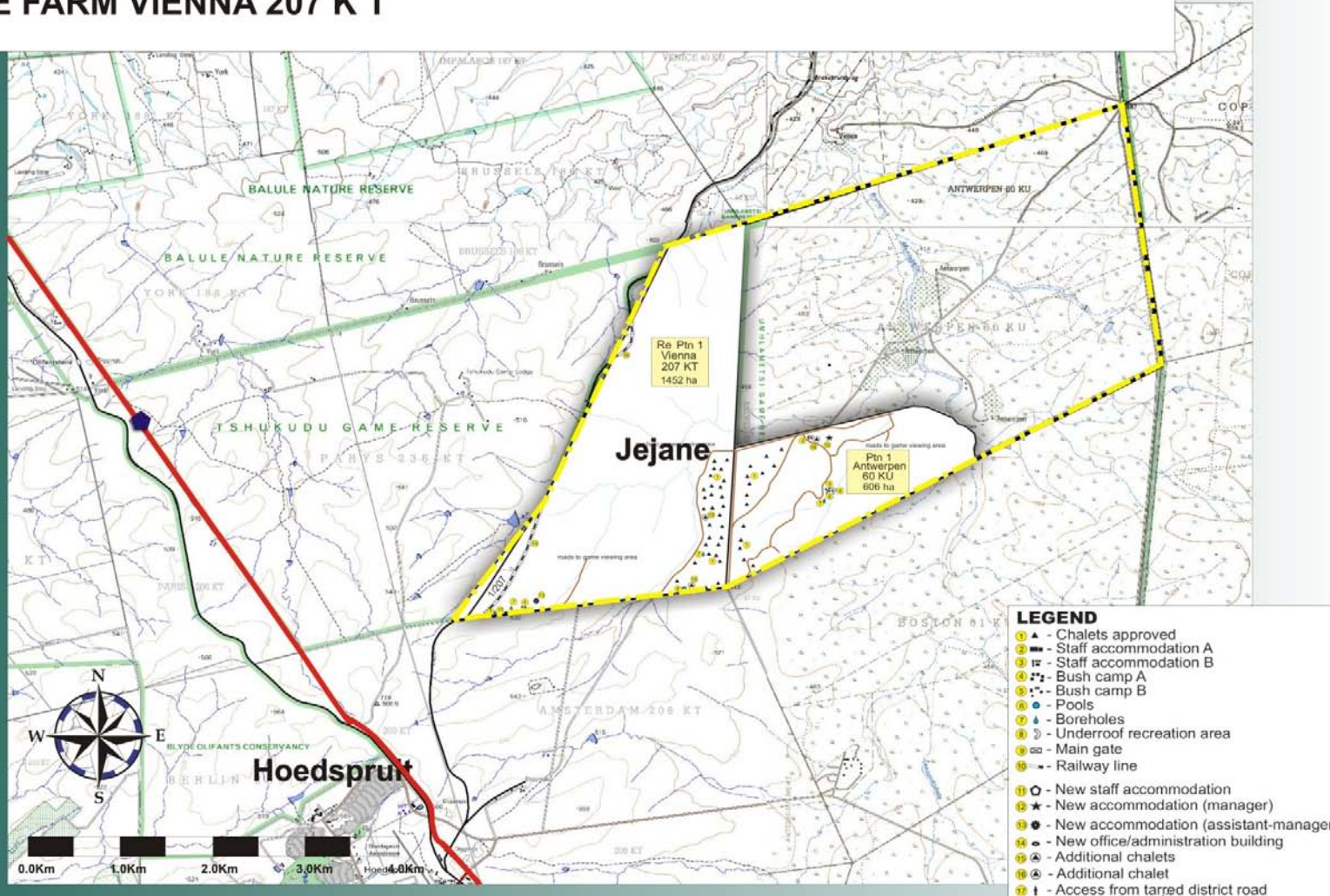
Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix A: Site plan(s)
Annexure A: Locality Map

LOCALITY MAP - JEJANE

PORTION 1 OF THE FARM ANTWERPEN 60 K U AND REMAINDER PORTION 1 OF THE FARM VIENNA 207 K T



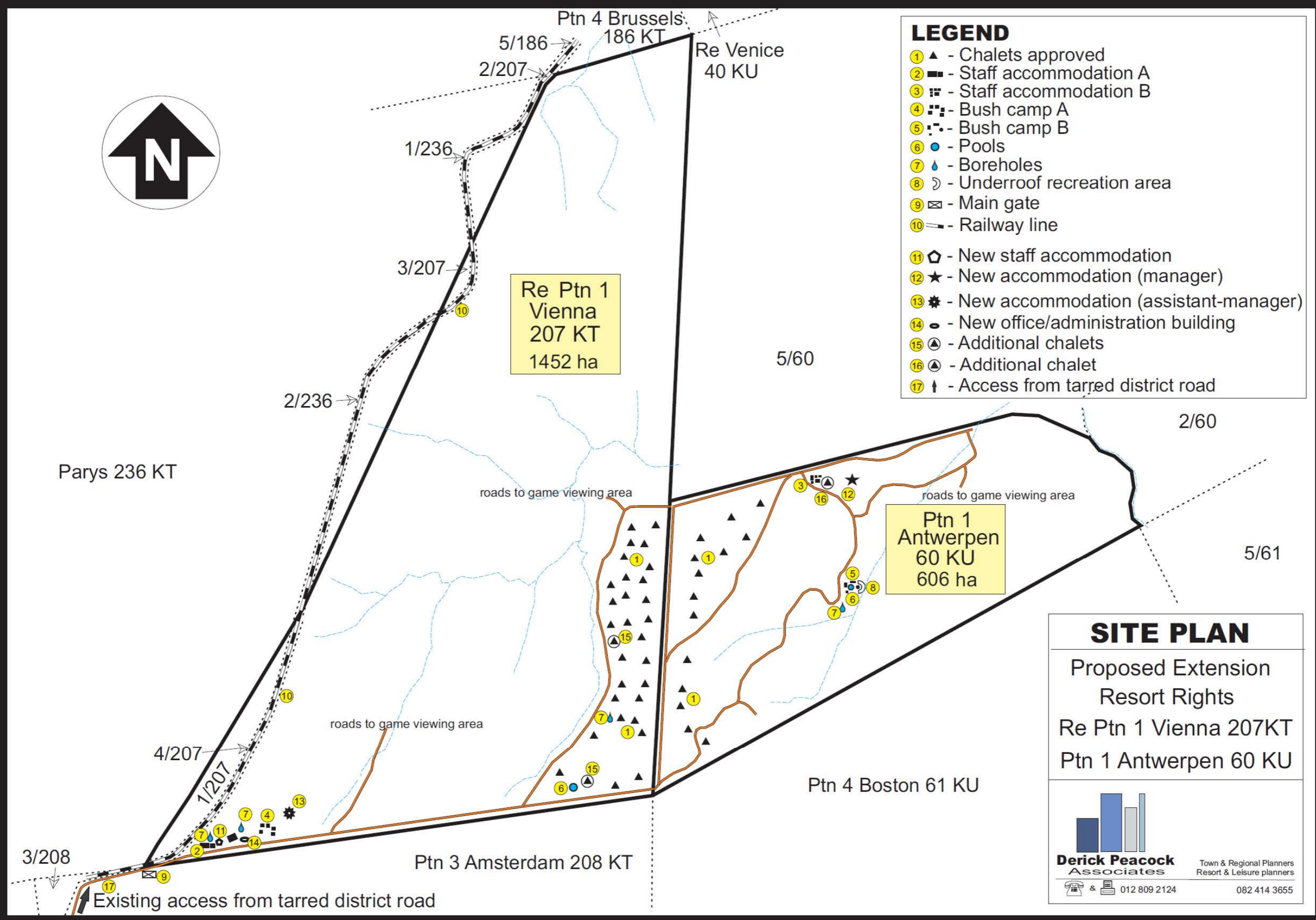
Appendix A: Site plan(s)
Annexure B: Preferred layout



LEGEND

- ① ▲ - Chalets approved
- ② ■ - Staff accommodation A
- ③ ■ - Staff accommodation B
- ④ ■ - Bush camp A
- ⑤ ■ - Bush camp B
- ⑥ ● - Pools
- ⑦ ⚡ - Boreholes
- ⑧ ⌋ - Underroof recreation area
- ⑨ ⊠ - Main gate
- ⑩ — - Railway line

- ⑪ ⬠ - New staff accommodation
- ⑫ ★ - New accommodation (manager)
- ⑬ ⚙ - New accommodation (assistant-manager)
- ⑭ ● - New office/administration building
- ⑮ ▲ - Additional chalets
- ⑯ ▲ - Additional chalet
- ⑰ ↑ - Access from tarred district road

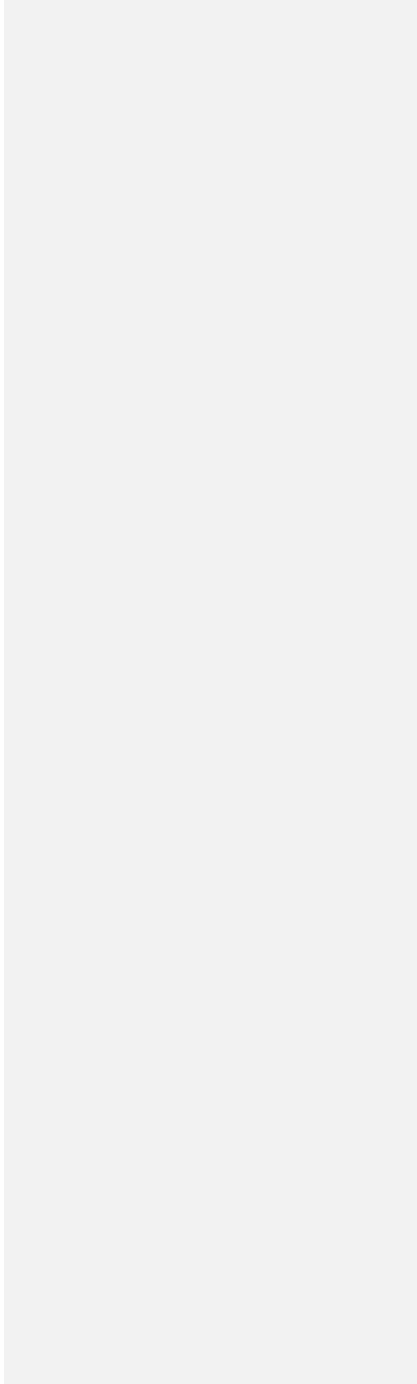
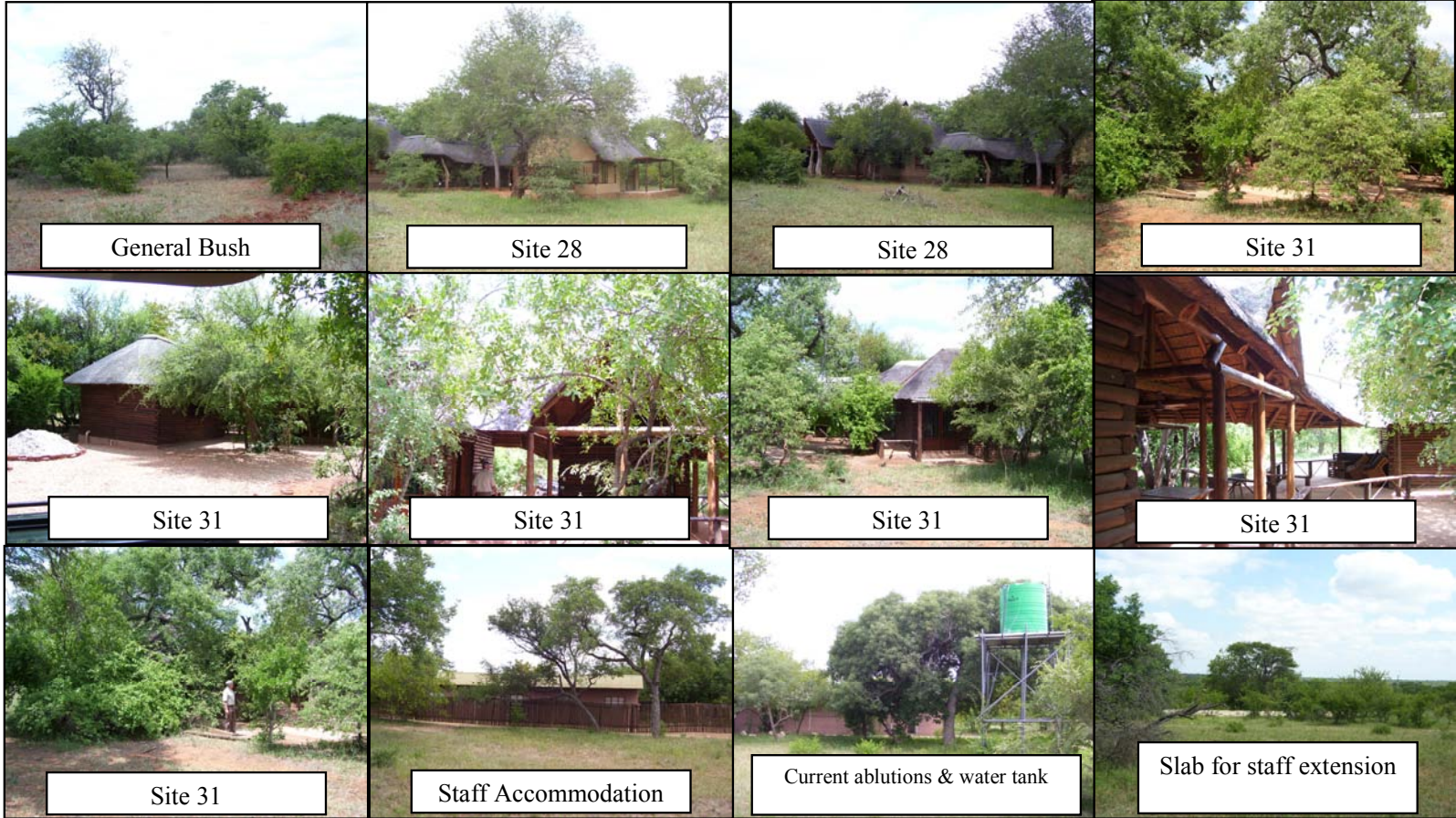


SITE PLAN

Proposed Extension
Resort Rights
Re Ptn 1 Vienna 207KT
Ptn 1 Antwerpen 60 KU

Derick Peacock Associates
Town & Regional Planners
Resort & Leisure planners
012 809 2124 082 414 3655

Appendix B: Photographs
Annexure A: Site photos of the existing infrastructure and sites





Staff Accommodation
to be moved



Staff Accommodation
to be moved



Staff Accommodation
to be moved



Staff Accommodation
to be moved



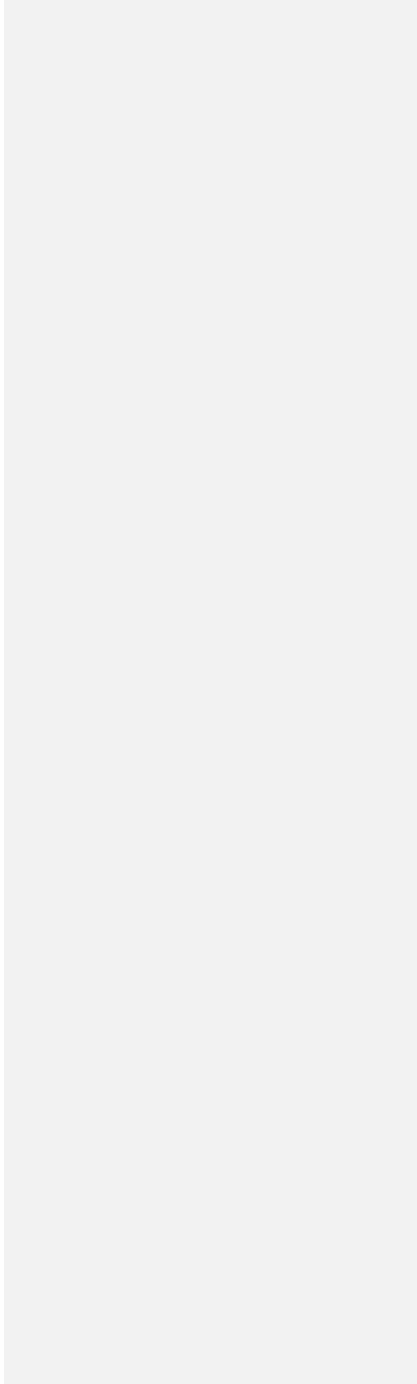
Workshop



Workshop



Workshop



Appendix C: Facility illustration(s)

Appendix D: Specialist reports
Annexure A: Soil Analysis and Vegetation Survey



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PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIROMENT & TOURISM

EIA SPECIALIST FORM

(For official use only)

File Reference Number:

NEAS Reference Number:

Date Received:

Details of specialist for application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

Jejane – Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT.

REFERENCE NUMBER

12/1/9/3 - M5

Specialist Name:

Francois de Wet

Name of company (If any):

Enviropulse CC

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1050

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Professional affiliation(s) (if any)

Botanical Society of SA & Grassland

Society of SA

Environmental

Assessment Practitioner :

Company Name:

Postal address:

Postal code:

Telephone:

E-mail:

FRANCOIS DE WET		
ENVIROPULSE CC		
SUITE MW POST NET 430, P/BAG X 1838 MIDDELBURG 1050		
1050	Cell:	0824628563
013 244 2041	Fax:	086 692 2120
sedewet@iafrica.com		

The specialist appointed in terms of the Regulations:-

I, S. F. de Wet e that --

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

S. F. de Wet
Signature of the specialist:

ENVIROPULSE CC
Name of company (if applicable):

13/08/2012
Date:

SOIL ANALYSES: ANTWERPEN 60 KU

Francois de Wet. June 2002.

1. Introduction:

Terms of reference included the following:

- A) To identify the soils represented within the Antwerpen Shareblock Area development mining area and indicate red flags applicable in development activities within this area.
- B) To provide mitigations where applicable

2. Methodology:

The soil classification was done according to the Taxonomic System for South Africa (Macvicar, C.N. 1991). The classification was done by the use of a soil auger. Soil depths and textures were recorded on site.

A total of 8 soil auger samples were assessed at 14 development sites on the Antwerpen Shareblock Area. *In addition to these soil assessments, soil / vegetation associations were noted.*

3. Results:

General description:

The geological substrate at Antwerpen underlying the soil is Gneiss, a metamorphic form of Granite, with an abundance of Migmatite and Doloritic intrusions throughout the area.

Sclerocarya birrea (Marula) and *Combretum apiculatum* (Red Bushwillow) dominates the higher lying parts of the catena (*crests and mid-slopes*). *Acacia nigrescens* (Knob Thorn) is present in association with the Migmatite or Dolorite intrusions.

The *ecotones* between the mid-slopes and foot-slopes are characterized by *Terminalia sericea* (Silver Cluster Leaf) on the contours. Seep lines are not always clearly visible immediately below the *Terminalia sericea* community, but is characterized by the dominance of a green band of herbaceous plants, sedges and grasses such as *Eragrostis gummiflua*, *Eragrostis meridionalis*, *Brachiaria nigropedata* and *Pogonarthria squarrosa*.

These ecotones to the foot-slopes are characterized by a gray E sub-horizon, which is as deep as 600 mm below the soil surface.

The *foot-slope* areas are characterized by the presence of shrubs and trees such as *Euclea divinorum* (Magic Guarri) or *Acacia nilotica* (Scented Pod Acacia). On these lower lying foot-slopes sensitive duplex clays are found. Patches of sodic pans are present closer to the drainage lines.

Alluvial soils, although not well developed in the upper river catchment areas, are present along the *drainage lines*.

Specific Results:

The *soil depths* of the survey of the soils at the Antwerpen Shareblock Area shows that mostly shallow (less than 230 mm) soil conditions exist on the mid-slopes and crests, which are mostly underlain by a *lithocutanic* horizon.

Topsoil Depth:

The average depth to saprolite (weathered rock) of the lithocutanic soils, which dominate the development area, was 200mm.

Lithocutanic soils were characterized by the *Glenrosa* form.

The topsoil depth of the red sandy loams of the *Hutton* soil form, found on the mid-slopes and crests, was also 200 mm.

Sub-soil Depth:

The *Glenrosa* sub-horizons were between 200 and 230 mm below the surface. The *Hutton* form, with its red apedal sub-horizon, was as deep as 550-600 mm below soil surface.

Soil Textures:

Soil texture of the topsoil was *loamy sand* and that of the deeper sub-soils *sandy loam*.

Survey	Development Site Number	Soil Form	Depth A	Depth E	Depth B	Clay A	Clay E	Clay B	Vegetation
1	33	Hutton (Hu)	200 mm	n/a	550 mm	10-15%	n/a	10-15%	<i>Combretum apiculatum</i> / <i>Albizia harveyi</i>
2	43	Cartref (Cf)	250 mm	600 mm	n/a	0-10%	0-10%	n/a	<i>C. apiculatum</i> / <i>Acacia exuvialis</i>
3	44	Hutton (Hu)	200 mm	n/a	550 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>Sclerocarya birrea</i>
4	34	Glenrosa (Gs)	200 mm	n/a	200-230 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>Sclerocarya birrea</i>
5	35	Hutton (Hu)	200 mm	n/a	200-230 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>S. birrea</i>
6	45	Glenrosa (Gs)	200 mm (est.)	n/a	200-230 mm (est.)	10-15% (est.)	n/a	15-20% (est.)	<i>C. apiculatum</i> / <i>A. exuvialis</i>
7	36	Glenrosa (Gs)	200 mm (est.)	n/a	200-230 mm (est.)	10-15% (est.)	n/a	15-20% (est.)	<i>C. apiculatum</i> / <i>Terminalia prunioides</i>
8	46	Glenrosa (Gs)	200 mm (est.)	n/a	200-230 mm (est.)	10-15% (est.)	n/a	15-20% (est.)	<i>C. apiculatum</i> / <i>T. prunioides</i>
9	37	Glenrosa (Gs)	200 mm (est.)	n/a	200-230 mm (est.)	10-15% (est.)	n/a	15-20% (est.)	<i>C. apiculatum</i> / <i>S. birrea</i>
10	38	Glenrosa (Gs)	200 mm (est.)	n/a	200-230 mm (est.)	10-15% (est.)	n/a	15-20% (est.)	<i>C. apiculatum</i> / <i>A. exuvialis</i>
11	39	Glenrosa (Gs)	200 mm	n/a	200-230 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>S. birrea</i> / <i>A. tortilis</i>
12	40	Glenrosa (Gs)	250 mm	n/a	200-230 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>A. exuvialis</i> / <i>A. nigrescens</i>
13	41	Hutton (Hu)	200 mm	n/a	550 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>A. nigrescens</i>
14	42	Glenrosa (Gs)	200 mm	n/a	200-230 mm	10-15%	n/a	15-20%	<i>C. apiculatum</i> / <i>A. galpinii</i>

4. Discussion and Mitigation Measures:

Soil types affected:

The soil types (forms) affected by development are shown in Map 7 (Soil Types).

a. Higher lying areas of catena:

The soil types affected by the by the development are the *Glenrosa* Form (dominant) and the *Hutton* form (less abundant).

Topsoil depth is less than 200 mm. *Loamy-sandy* topsoil overly poorly developed *sandy-loamy* lithocutanic or 500 mm deep red apedal sub-horizons:

Soil texture is therefore sufficiently low: soils will not negatively affect the foundations, resulting in cracks in the walls of buildings to be constructed.

The general area where development is envisaged (characterized by lithocutanic and red apedal sub-horizons) is therefore suitable for the development (for building and for roads).

b. Lower Lying parts of catena (ecotones between Mid-slopes and Foot-slopes):

Sites are mostly above this part of the terrain. However, one site, site 43 was originally marked out within the ecotones to the lower parts of the catena.

The *Cartref* form would be affected in this one site shown in **Map 7**. It is recommended that the position of site 43 be moved 500 m up-slope, as indicated in **Map 7**.

The E-horizon present at site 43 indicates seasonal wetness, which would affect the damp levels of the building at that site. The position of site 43 is very close to the seep line (immediately above) and the wetland below that site would be affected by the development if the site is kept at the original position. However, on the mid-slope, 500 m from site 43, the soil will be suitable for development.

5. Conclusion:

This soil analyses indicates that construction and planning at the Antwerpen Shareblock Area are possible and would be ecologically sound if this can be done by taking into account the soil properties and following mitigation measures where applicable.

6. References:

MACVICAR, C.N. 1991. Soil classification: A taxonomic system for South Africa. Memoirs on the Agricultural Natural Resources of S.A. No. 15. Dept. Agriculture Development. Pretoria. 257pp.

Appendix D: Specialist reports
Annexure B: Archaeological Investigation.



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PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIROMENT & TOURISM

EIA SPECIALIST FORM

File Reference Number:

NEAS Reference Number:

Date Received:

(For official use only)

Details of specialist for application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

JeJane – Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and
Remainder Portion 1 of the Farm Vienna 207 KT.

REFERENCE NUMBER

Specialist Name:

Name of company (If any):

Postal address:

Postal code:

Telephone:

E-mail:

Professional affiliation(s) (if any)

Francois P Coetzee

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Registered CRM heritage specialist with the Association of South African
Professional Archaeologists (ASAPA), SAHRA and AMAFA

Environmental Assessment Practitioner :	Steven Henwood		
Company Name:	Henwood Environmental Solutions		
Postal address:	PO Box 12340, Steiltes; Nelspruit		
Postal code:	1213	Cell:	078 672 3645
Telephone:	078 672 3645	Fax:	086 719 6216
E-mail:	shenwood@mweb.co.za		

The specialist appointed in terms of the Regulations:-

I, FP Coetzee e that --

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

Name of company (if applicable):

14-08-2012

Date:

**An Archaeological Investigation of Antwerpen Game Farm, Hoedspruit District,
Northern Province**

**The Archaeology Contracts Unit
University of South Africa
PO Box 392
Pretoria
0003**

June 2002

Survey conducted and report compiled by:

Francois Coetzee

Executive Summary

No Stone Age or Iron Age settlements, structures or artefacts were identified on or in the immediate vicinity of the proposed 14 stands. However, archaeological finds in erosion dongas which in close proximity to the game farm, indicate the occurrence of Middle Stone Age and Early Iron Age artefacts in the area.

As a result, please note:

- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed during the construction of the resort development as well as the access roads, a university or museum has to be notified in order for an investigation and evaluation of the find(s), by a qualified archaeologist, to take place.

Special care should thus be taken during the excavation of the trenches for the underground cables. It is strongly recommended that a qualified archaeologist be present during this phase to facilitate any possible damage to any archaeological remains located under the present ground surface.

1. Introduction

The Archaeology Contracts Unit (UNISA) conducted an investigation, focussing on the archaeological and historical aspects, on Antwerpen Game Farm, Hoedspruit. This report was requested by Van Riet & Louw Landscape Architects.

The aim of this investigation is to locate, identify and document visible archaeological artefacts, structures (including graves) and settlements of cultural significance in the proposed area of development.

The aim of the development is to sell and later develop 14 stands on the recently acquired Antwerpen Portion 1.

2. Terms of Reference

The terms of reference of this survey are as follows:

- * Compile a brief contextualisation of the area's ethnographic and colonial history
- * Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements within the proposed areas
- * Assess the significance of the impact of the proposed development on the archaeological remains within the area
- * Estimate the level of sensitivity/importance of the archaeological remains within the area
- * Propose possible mitigation measures provided that such action is necessitated by the re-zoning of the area

3. Definitions and Approach

- Archaeological remains can be defined as human-made objects, which reflect past ways of life, deposited on or in the ground.
- All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory. No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report.
- Cognisance will also be taken of the **Minerals Act (Act No 50 of 1991)** and the **National Environmental Management Act (Act No 107 of 1998)** when making any recommendations.
- Rating the **significance of the impact** on a historical or archaeological site is linked to the significance of the site itself. If the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low.

- Cultural resources are non-renewable.
- The guidelines as provided by the **NHRA (Act No. 25 of 1999)** in Section 3, with special reference to subsection 3, and the Australian ICOMOS Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and a university or museum would be required to be notified in order for an investigation and evaluation of the find(s) to take place (*cf. NHRA (Act No. 25 of 1999)*, Section 36 (6)).
- A copy of this report will be lodged with the **South African Heritage Resources Agency (SAHRA)** as stipulated by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), Section 38 (especially subsection 4).

4. Methodology

4.1 Literature Study

Various archaeological and ethnographic sources were consulted to compile a concise cultural framework of the area under investigation.

4.2 Maps and Other Sources

The proposed area of development was localised by using the 1:50 000 Topographic Map 2430BD followed by an on-site investigation. The orientation and location of the sites were determined by using a Global Positioning System (GPS)¹ correlated with the geographic features (i.e. rivers, fields, topography etc.) of the survey area.

4.3 Fieldwork

An on-site investigation was conducted on Antwerpen Game Farm (Antwerpen Portion 1). Utilising the road system the area was extensively surveyed by vehicle and on foot. Each of the 14 proposed stands were visited. Emphasis was placed on indications of significant historical and prehistorical settlements and structures.

5. Area Description

Antwerpen Game Farm is a fenced, relatively undisturbed, well-managed game farm of approximately 6000 ha. Existing development is limited to specific areas on the periphery. The proposed 14 stands will be located adjacent to the area of existing development. The

¹ According to the manufacturer a standard deviation is to be expected when determining the location of sites. However, care has been taken to correlate the reading with the topography and to obtain a low dilution of precision (DOP) before plotting sites on a map.

game farm borders on a stream on the northern and western side. Dirt roads, used for game viewing, transect the property.

6. Chronological Framework

PERIOD	APPROXIMATE DATE
Early Stone Age	more than c. 2 million years ago - c. 250 000 years ago
Middle Stone Age	c. 250 000 years ago - c. 25 000 years ago
Later Stone Age (Includes San Rock Art)	c. 25 000 years ago - c. AD 200 (up to historic times in certain areas)
Early Iron Age	c. AD 400 - c. AD 1025
Late Iron Age (Stonewalled sites)	c. AD 1025 - c. AD 1830 (c. AD 1640 - c. AD 1830)

7. Archaeological and Ethnohistorical Context

7.1 Stone Age

No Stone Age settlements, structures or artefacts were identified on or in the immediate vicinity of the proposed 14 stands. Though surface scatters of **Early Stone Age** and **Middle Stone Age** artefacts may be found near or in the stream. This is substantiated by the exposure (in an erosion donga) of several Middle Stone Age artefacts further upstream to the west of the game farm (Vienna News 1998).

7.3 Iron Age

No Iron Age settlements, structures or artefacts were recorded on or in the immediate vicinity of the proposed 14 stands.

The Urewe Tradition of the **Early Iron Age** (EIA) is presently divided into the Kwale Branch and Knope Branch. The Kwale Branch consists of three phases (dated between AD 400 - 800) namely, Silver Leaves, Mzonjani and Broederstroom. These sites are usually located on low-lying spurs close to water. Several Silver Leaves potsherds were found exposed in an erosion donga, further upstream to the west of the farm, in 1997 (Vienna News 1998). Isolated finds of Silver Leaves pottery (AD 400) usually indicates salt works, as the pots were used in the crystallisation process of making salt. The find also implies a possible settlement or outpost in the area.



Silver Leaves potsherds



Grinding and Rubbing Stones

The **Late Iron Age** (LIA) settlements are characterised by stone-walled enclosures situated on defensive hilltops. This occupation phase has been linked to the arrival of the Northern Sotho, Tswana and Northern Ndebele (Nguni-speakers) in the region from the sixteenth to seventeenth centuries AD.

The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery, commonly attributed to the Sotho-Tswana. This correlates with oral traditions about various groups who sought refuge in the mountains during the processes of disruption in the interior caused during the so-called *difaqane* (c. 1825 - 1830s).

7.4 Ethnohistorical

The area is dominated by various Shangaan-Tsonga groups (*cf* Van Warmelo 1935).

10. Conclusions and Recommendations

No Stone Age or Iron Age settlements, structures or artefacts were identified on or in the immediate vicinity of the proposed 14 stands. However, archaeological finds in erosion dongas which in close proximity to the game farm, indicate the occurrence of Middle Stone Age and Early Iron Age artefacts in the area.

As a result, please note:

- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed during the construction of the resort development as well as the access roads, a university or museum has to be notified in order for an investigation and evaluation of the find(s), by a qualified archaeologist, to take place.

Special care should thus be taken during the excavation of the trenches for the underground cables. It is strongly recommended that a qualified archaeologist be present during this phase to facilitate any possible damage to any archaeological remains located under the present ground surface.

REFERENCE

Huffman, T.N. & Calabrese, J.A. 1998. Archaeological Investigation of an Early Iron Age Site on Vienna Game Farm, Hoedspruit. *Vienna News*. March

Van Warmelo, N.J. 1935. *A preliminary survey of the Bantu tribes of South Africa*. Ethnographic Publications V. Government Printer: Pretoria.

Appendix E: Public Participation Process
Annexure A: Site notice text

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of a Basic Assessment in terms of Regulation 54 of the Regulations published in Government Notice R543 under section 24(5) read with section 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) of intent to carry out the following activity:

Project name: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo

Project description: The application will be for the extension of resort rights in order to facilitate the following developments and changes:

- **Remainder Portion 1 Vienna 207 K T:**
 - Formalising the existing Bush Camp (20 persons)
 - Increasing the existing staff camp from 10 to 18 persons (relocation of the existing staff camp from Antwerpen)
 - New accommodation for Assistant Manager
 - New office/administration building
 - Formalising 2 additional chalets (on existing serviced sites)
- **Portion 1 Antwerpen 60 K U**
 - One additional chalet (on site of staff accommodation)
 - Increasing the number of people accommodated in the existing Bush Camp from 12 to 20 in the existing structures
 - A manager's house

Listed activity: GN 546, Listing Notice 3 of 2010 - Activity: 18

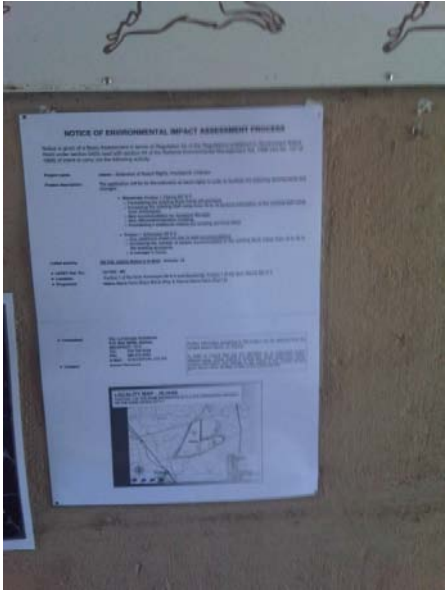
- **LEDET Ref. No.:** 12/1/9/3 - M5
- **Location:** Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.
- **Proponent:** Jejane Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd
- **Consultant:**

V&L Landscape Architects
P.O. Box 26696, Steiltes
NELSPRUIT
, 1213
Tel: 013 744 3759
Fax: 086 672 5384
E-Mail: steve@vrl.co.za
- **Contact:** Steven Henwood

Further information pertaining to this project can be obtained from the contact person above, on request.

In order to ensure that you are identified as an interested and/or affected party, please submit in writing (fax, email, letter) your name, contact information and interest in the matter to the contact person given above within 55 days of date of this advertisement.

Appendix E: Public Participation Process
Annexure B: Proof of displayed notice boards



Appendix E: Public Participation Process
Annexure C: Background Information Document (BID) text

BACKGROUND INFORMATION DOCUMENT

For Jejane – Extension of Resort Rights, Hoedspruit, Limpopo

LEDET's REF. NO.: 12/1/9/3 - M5

PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide background information to the proposed project and to obtain comments and contributions from stakeholders with regards to potential environmental impacts – which includes (but is not limited to): ecological, social, economic, physical, aesthetic, etc.

You are invited to register as an Interested and Affected Party (I&AP) and to assist us in identifying possible impacts of the proposed development on the environment and to make suggestions for mitigation and/or alternatives.

Please complete the enclosed reply sheet and forward it to the address provided below:

Postal Address: P.O. Box 26696, STEILTES, NELSPRUIT, 1213
Fax: 086 6725384
E-mail: Steven Henwood steve@vrl.co.za
For any enquiries or further information contact us at:

Tel: 013 744 3759

APPLICABLE LEGISLATION

The Environmental Impact Assessment (EIA) process is a planning and decision-making tool that is used to identify the potential environmental impacts of a proposed development or project. It is conducted in compliance with Chapter 5 of the National Environmental Management Act, 1998 (NEMA). The regulations identify a list of activities (Government Gazette GN 544, GN545 and GN546) for which an EIA must be conducted.

The proposal has the following listed activities:

GN 546, Listing Notice 3 of 2010

Activity: 18

"The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.

a) In Limpopo Province:

i. Outside urban areas, in:

(gg) Areas within 10km from National Parks or world heritage sites or 5 km from any other protected area identified in terms of NEMIPAA or from the core area of a biosphere reserve."

Therefore, a Basic Assessment is required.

When an applicant proposes to undertake a listed activity, an application must be made for environmental authorisation. The application must be supported by a report, which has been compiled as a result of an assessment procedure. After the competent authority has made a decision on the application, an appeal may be made against the decision, or parts thereof.

V&L Landscape Architects (V&L), as the independent Environmental Consultant, has been appointed by the proponent/applicant to compile the Basic Assessment Report, which will be reviewed by the relevant competent authority (e.g. Mpumalanga Department of Economic Development, Environment and Tourism) after a thorough public participation process has been conducted. This includes the opportunity to review all draft documentation before submission to LEDET.

The phases of a Basic Assessment are:



The aim of this report is to ensure that the environmental impacts are taken into consideration, to ensure stakeholder engagement, and to provide decision makers with sufficient information to make an informed decision on the proposed activities.

The Record of Decision (RoD) as to whether the proposed project should proceed will be based on information provided in the Report.

Your comments will form part of the Report.

PUBLIC INVOLVEMENT

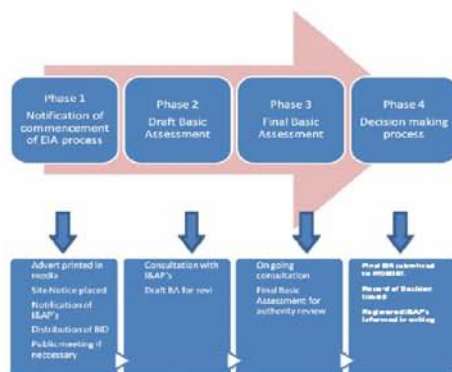
The public has the right to be informed about any activity that might have an impact, whether desirable or undesirable, on the environment.

The purpose of the public participation process is to inform, consult, involve, collaborate with, and empower stakeholders in the decision making process.

The objective of informing is to provide balanced and objective information to the public in order to assist with understanding of all existing issues.

Consultation will allow for feedback from stakeholders on alternatives and decisions that can inform the EIA process.

In order to ensure effective participation, the public involvement process includes the following steps:



LOCATION

The site is situated on Portion 1 of the farm Antwerpen 60 K U, which is 606,0526 ha in size, as well as the Remainder Portion 1 of the farm Vienna 207 K T. This section is 1 452, 3220 ha in size.

The property is situated approximately 6 km north-east of Hoedspruit town and approximately 5 km east of road P17-4 (or otherwise known as the R40

the Hoedspruit – Phalaborwa) road one of the major access routes in the area.

Access via a dirt road that runs parallel to the railway line is obtained from the tarred unnumbered district road that in turn links up to the R40 across from the R527/R40 junction.

PROJECT BACKGROUND & MOTIVATION

Background¹

Resort rights have been approved on both properties and a very successful development has been in operation since 1990.

The two properties (in total more than 2 000 ha in extent) have the Big 5 roaming freely and game viewing takes place from the existing extended network of roads and walks. These properties form part of a greater conservation area.

Recreational facilities in the form of pools, underroof recreational area and hides compliment the abovementioned natural recreation facilities.

In 2008 the Maruleng Land-use Management Scheme (LUMS) has been proclaimed and included the subject properties with their existing land-use rights as Schedule 139 and 141.

The properties are thus now subject to the conditions of the LUMS and therefore an application for the extension of the existing rights has to be submitted in terms of the Townplanning and townships Ordinance and the LUMS.

In order to comprehend the need for the proposed extension of resort rights as well as fully understand the changes to infrastructure and the implications thereof, it is important to know what the current land-use is and what is intended.

Since the approval of the first resort rights in 1989 the development has been auctioned and in 2002 was further extended by the purchasing of the adjacent land (Portion 1 Antwerpen) and the subsequent development on this portion.

¹ An extract from "Memorandum in Support of the Extension of Resort Rights on Portion 1 of the Farm Antwerpen 60 K U and Remainder Portion 1 Of The Farm Vienna 207 K T" - Derick Peacock Associates October 2010

The development presently consists of the following:

Vienna:

- 32 chalet sites serviced (30 developed) – See no. 1 on site plan
- Bush Camp A for 12 persons and Assistant Manager’s house – See no. 4 on site plan
- Staff accommodation A for 10 people – See no. 2 on site plan
- 1 pool and underroof recreation – See nos. 6 and 8 on site plan
- 3 boreholes – See no. 7 on site plan

Antwerpen:

- 14 chalet sites serviced (8 developed) – See no. 1 on site plan
- Bush Camp B for 20 persons – See no 5 on site plan
- Staff accommodation B for 8 people – See no. 3 on site plan
- 1 pool – See no. 6 on site plan
- Underroof recreation area – See no. 8 on site plan
- 1 borehole – See no. 7 on site plan
- Various Hides
- Game viewing roads
- Dams
- Infrastructure

The development on the two farms forms one entity with no fences, with one service infrastructure and one management body and is generally known as JEJANE PRIVATE NATURE RESERVE.

Further to this the following changes and additions are proposed and described under the extension of current landuse rights:

Remainder Portion 1 Vienna 207 K T:

- **Formalising the existing Bush Camp (20 persons)**
- **Increasing the existing staff camp from 10 to 18 persons (relocation of the existing staff camp from Antwerpen)**
- **New accommodation for Assistant Manager**
- **New office/administration building**
- **Formalising 2 additional chalets (on existing serviced sites)**

Portion 1 Antwerpen 60 K U:

- **One additional chalet (on site of staff accommodation)**
- **Increasing the number of people accommodated in the existing Bush Camp from 12 to 20 in the existing structures**
- **A manager’s house**

Motivation²

The following is a brief explanation (in motivation of the proposed changes) of the difficulties and restraints experienced as a result of the current Jejane setup.

Two Separate staff accommodation areas

The staff is currently accommodated at two different localities.

- ***Staff accommodation A (no. 2 on site plan) is located close to the entrance gate,*** proposed office and workshop/sheds. This locality is ideal from an operational point of view.
- ***Staff accommodation (no. 3 on site plan) is located in the north-eastern corner of the property*** and makes it difficult for staff to enter and exit the development when visiting town. This remoteness also complicates the allocation of tasks and the transportation of staff to the hub of operations at Staff accommodation A, the office and workshop/sheds.

The transporting of staff to and from the remote Staff accommodation area B ***increases fuel costs*** and the ***costs of the maintenance*** of two separate staff areas.

Safety of staff cannot be guaranteed when travelling to Staff accommodation B due to the presence of the dangerous game (Big 5).

² An extract from "Memorandum in Support of the Extension of Resort Rights on Portion 1 of the Farm Antwerpen 60 K U and Remainder Portion 1 Of The Farm Vienna 207 K T" - Derick Peacock Associates October 2010

It is therefore important that all staff be concentrated in one area at the entrance of the property at Staff accommodation A.

No accommodation for Manager

- Currently the farm manager occupies **leased accommodation** on a neighbouring farm.
- The availability of this accommodation could change on short notice and creates a lot of uncertainty.
- This also means that the **manager is not on the property permanently** and creates problems during period of crisis (fire/maintenance/security/etc.)
- **A residence needs to be created for the manager at a central locality from where he can be within easy reach of the total reserve.**
- **Assistant Manager accommodation not adequate**
- The assistant manager (in direct charge of the staff) is presently accommodated in a **converted chalet in the existing Bush Camp A** that actually forms part of
- the accommodation facilities of the Bush Camp. This accommodation is being used on a **temporary basis.**
- **Proper accommodation facilities strategically located relative to staff housing needs to be built for the assistant manager to ensure effective monitoring of the staff.**

"Legalizing" Bush Camp A (no. 4 on site plan)

Existing structures on the farm have been converted into Bush Camp A in response to a need for casual accommodation for:

- **construction personnel visiting the development** during periods of building activity
- **guests visiting members**
- **casual tourists to the area**

Bush Camp A has been in operation for nearly twenty years and the developers have now on advice realized that there are no land-use rights in place for the existing camp.

Bush Camp A now forms an integral part of the development and it will therefore be

requested that permission be granted to retain this facility and that it be "legalized".

Limited accommodation at Bush Camp B (no. 5 on site plan)

- In terms of the land-use rights granted in 2002 for Bush Camp B the maximum number is restricted to 12 persons.
- The functioning of this facility has proved that the **optimum number of persons that makes it feasible is 20.**
- Existing Bush Camp B has therefore over the years been equipped to accommodate 20 persons.
- ***It is herewith requested that the number of persons be increased from 12 to 20 for Bush Camp B.***

Two additional chalets (no. 15 on site plan)

- As indicated in Section 3 rights for 30 chalets and thereafter a further 14 chalets were granted totalling 44 chalets.
- Over the past **20 years two additional chalets sites were prepared and serviced** in the central area where all the other chalets are concentrated. This was purely due to an oversight.
- These two chalets sites are an integral part of the design, planning and functioning of the existing development.
- ***This application is to also "legalize" these two additional chalets.***

One additional chalet (no. 16 on site plan)

- In order to **fund the moving of the staff accommodation** from Staff accommodation B to Staff accommodation A it is necessary to **utilize the footprint and existing service infrastructure at this location of this area for an additional chalet.**
- The development of this chalet will thus have a **minimal environmental impact** and will be able to **use some of the existing structures and existing services infrastructure** (water electricity) that is present on the site.

- ***This application is thus also for this additional chalet.***

Office/Administration building (no. 14 on site plan)

- The development has up till now not had a dedicated office administration building to deal with the matters of the development.
- A small office reception is required and will now be provided at the entrance to the development.

DESCRIPTION OF TASKS

An advertisement was placed under the classified section of the Hoedspruit Herald to notify the public of the proposed development:

Notice boards advertising the application have been placed at visible locations on and near the site.

Project information will be forwarded directly to registered interested parties and community leaders for their input.

PRESUMED ISSUES

Environmental issues that may be addressed in the Report could include the following:

- Services
- Ecology
- Hydrology and storm water management

Mitigation measures will also be developed for these issues. Stakeholders are however welcome to comment on these issues and provide additional observations.

Consideration of Alternatives is one of the most critical elements of the EIA process. Its role is to provide a framework for sound decision-making, based on the principle of sustainable development.

Alternatives should be identified as early as possible in the project cycle.

V&L not only welcome stakeholders' input/suggestions, but also urge the public to submit possible alternatives.

It is important to note that an alternative is defined as a possible course of action, in place of another, that would meet the same **purpose** and **need**.

When submitting alternatives, the recommended alternative must be:

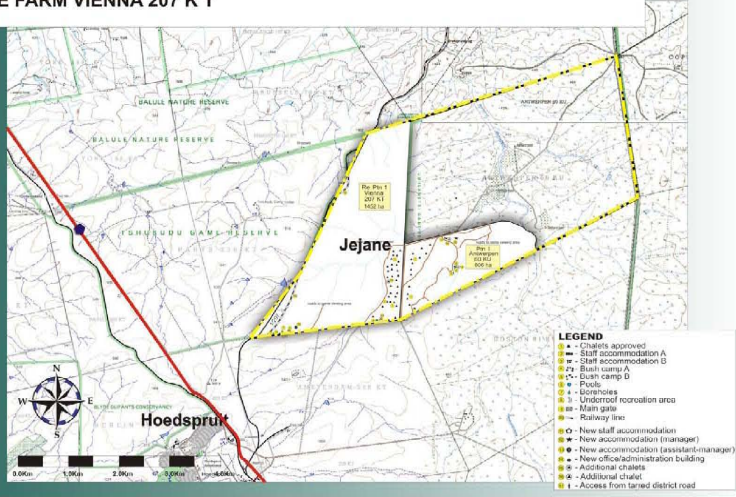
- Practicable,
 - Feasible,
 - Relevant,
 - Reasonable and
 - Viable.

In order to ensure that you are registered as an interested and/or affected party, please submit your name, contact information and interest in the matter to the contact person given on the first page of this document.

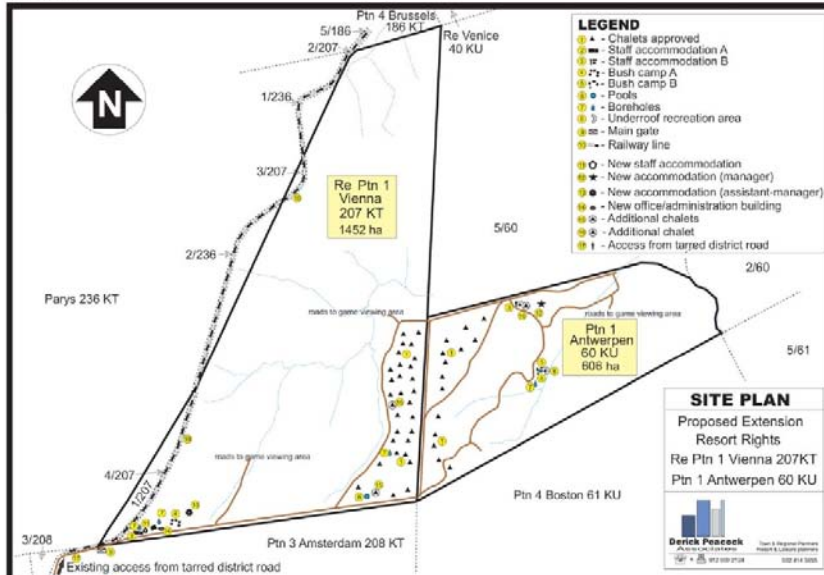
LOCALITY MAP

LOCALITY MAP - JEJANE

PORTION 1 OF THE FARM ANTWERPEN 60 K U AND REMAINDER PORTION 1 OF THE FARM VIENNA 207 K T



SITE LAYOUT



REGISTRATION AND COMMENT SHEET

Jejane – Extension of Resort Rights, Hoedspruit, Limpopo

LEDET's REF. NO.: 12/1/9/3 - M5

Title _____ **Name** _____
Surname _____
Company Name/Interest Group _____
Postal or Residential Address _____
Town/City _____
Postal Code _____
Tel () _____
Cell _____
Fax () _____
E-mail address _____

In accordance with NEMA – Regulation 56 of GN R 543 of the EIA Regulations – A registered interested and affected party is entitled to comment, in writing, on all written submissions made to the competent authority, provided that (c) – the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application. Please supply such information in the space provided below.

Please indicate with an **x** whether you would like to be kept informed of the EIA process

YES, I would like to be informed.	YES
NO, I am not interested	NO

If **YES**, how would you like to be informed? (please mark the appropriate block with an "x")

E-mail	
Fax	

COMMENTS: (If you require more space than that which is provided, please attach additional pages)

Thank you for your participation

Please be assured that your comments will form part of the final document to be submitted to the decision-making authority

Please complete and return this response sheet to **V&L**

P.O. Box 26696
 Stellies, Nelspruit
 1213
 Fax: 086 672 5384
 E-mail: steve@vrl.co.za

Feel free to phone us on 013 744 3759, should you not have access to fax or e-mail



Appendix E: Public Participation Process
Annexure D: Proof of Background Information Document (BID) and Draft BAR - distributed via email

From: Steven [shenwood@mweb.co.za]
Sent: 05 December 2011 12:19 PM
To: 'joubertboer@mweb.co.za'
Subject: Jejane - Extension of Resort Rights - BID
Attachments: Jejane BID_version_2.pdf

Dear Mr. Joubert,

CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:

1. Jejane - Extension of Resort Rights, Hoedspruit, Limpopo (LEDET Ref No.: 12/1/9/3 - M5)

You are invited to register as an Interested and Affected Party (I&AP) and to assist us in identifying possible impacts of the proposed development on the environment and to make suggestions for mitigation and/or alternatives.

In terms of and in accordance with NEMA – Regulation 56 of GN R 543 of the EIA Regulations – A registered interested and affected party is entitled to comment, in writing, on all written submissions made to the competent authority. With regard to the Jejane Application I have attached a Background Information Document so as provide background information to the proposed project and to obtain comments and contributions from stakeholders with regards to potential environmental impacts – which includes (but is not limited to): ecological, social, economic, physical, aesthetic, etc.

Please could you forward any written comments or requirements you may have with respect to the project. Kindly submit your comments to V&L Landscape Architects, contact details as attached below.

Regards
Steven Henwood (Nat Dip. Nature Conservation)
V&L Landscape Architects
P O Box 26696
Steiltes
Nelspruit
1213
013 744 3759 (Tel/Fax)
0866 725 384 (Fax to e-mail)
Cell: 078 672 3645
steve@vrl.co.za

From: Steven [shenwood@mweb.co.za]
Sent: 05 December 2011 12:21 PM
To: 'john@acmsshelela.co.za'
Subject: Jejane - Extension of Resort Rights - BID
Attachments: Jejane BID_version_2.pdf

Dear John,

**CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998
(ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR
ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:**

1. Jejane - Extension of Resort Rights, Hoedspruit, Limpopo (LEDET Ref No.: 12/1/9/3 - M5)

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Regards
Steven Henwood (Nat Dip. Nature Conservation)
V&L Landscape Architects
P O Box 26696
Steiltes
Nelspruit
1213
013 744 3759 (Tel/Fax)
0866 725 384 (Fax to e-mail)
Cell: 078 672 3645
steve@vrl.co.za

From: Steven [shenwood@mweb.co.za]
Sent: 05 December 2011 12:20 PM
To: 'info@offbeatsafaris.co.za'
Subject: Jejane - Extension of Resort Rights - BID
Attachments: Jejane BID_version_2.pdf

Dear M. Muller

**CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998
(ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR
ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:**

1. Jejane - Extension of Resort Rights, Hoedspruit, Limpopo (LEDET Ref No.: 12/1/9/3 - M5)

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Please could you forward any written comments or requirements you may have with respect to the project. Kindly submit your comments to V&L Landscape Architects, contact details as attached below.

Regards

Steven Henwood (Nat Dip. Nature Conservation)

V&L Landscape Architects

P O Box 26696

Steiltes

Nelspruit

1213

013 744 3759 (Tel/Fax)

0866 725 384 (Fax to e-mail)

Cell: 078 672 3645

steve@vrl.co.za

From: Steven [shenwood@mweb.co.za]

Sent: 05 December 2011 12:20 PM

To: 'nortbenz@gmail.com'

Subject: Jejane - Extension of Resort Rights - BID

Attachments: Jejane BID_version_2.pdf

Dear Mr. Nortier,

CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:

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Please could you forward any written comments or requirements you may have with respect to the project. Kindly submit your comments to V&L Landscape Architects, contact details as attached below.

Regards

Steven Henwood (Nat Dip. Nature Conservation)
V&L Landscape Architects
P O Box 26696
Steiltes
Nelspruit
1213
013 744 3759 (Tel/Fax)
0866 725 384 (Fax to e-mail)
Cell: 078 672 3645
steve@vrl.co.za

From: Steven [shenwood@mweb.co.za]
Sent: 05 December 2011 12:21 PM
To: 'gerriegrif@gmail.com'
Subject: Jejane - Extension of Resort Rights - BID
Attachments: Jejane BID_version_2.pdf

Dear Mr. Griffioen

CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:

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In terms of and in accordance with NEMA – Regulation 56 of GN R 543 of the EIA Regulations – A registered interested and affected party is entitled to comment, in writing, on all written submissions made to the competent authority. With regard to the Jejane Application I have attached a Background Information

Document so as provide background information to the proposed project and to obtain comments and contributions from stakeholders with regards to potential environmental impacts – which includes (but is not limited to): ecological, social, economic, physical, aesthetic, etc.

Please could you forward any written comments or requirements you may have with respect to the project. Kindly submit your comments to V&L Landscape Architects, contact details as attached below.

Regards
Steven Henwood (Nat Dip. Nature Conservation)
V&L Landscape Architects
P O Box 26696
Steiltes
Nelspruit
1213
013 744 3759 (Tel/Fax)
0866 725 384 (Fax to e-mail)
Cell: 078 672 3645
steve@vrl.co.za

From: Steven [shenwood@mweb.co.za]
Sent: 05 December 2011 12:20 PM
To: 'campbelj@mweb.co.za'
Subject: Jejane - Extension of Resort Rights - BID
Attachments: Jejane BID_version_2.pdf

Dear Mr. Campbel

CONSULTATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998), AS AMENDED, WITH REGARD TO THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE FOLLOWING PROJECTS:

1. Jejane - Extension of Resort Rights, Hoedspruit, Limpopo (LEDET Ref No.: 12/1/9/3 - M5)

You are invited to register as an Interested and Affected Party (I&AP) and to assist us in identifying possible impacts of the proposed development on the environment and to make suggestions for mitigation and/or alternatives.

In terms of and in accordance with NEMA – Regulation 56 of GN R 543 of the EIA Regulations – A registered interested and affected party is entitled to comment, in writing, on all written submissions made to the competent authority. With regard to the Jejane Application I have attached a Background Information Document so as provide background information to the proposed project and to obtain comments and contributions from stakeholders with regards to potential environmental impacts – which includes (but is not limited to): ecological, social, economic, physical, aesthetic, etc.

Please could you forward any written comments or requirements you may have with respect to the project. Kindly submit your comments to V&L Landscape Architects, contact details as attached below.

Regards

Steven Henwood (Nat Dip. Nature Conservation)
V&L Landscape Architects
P O Box 26696
Steiltes
Nelspruit
1213
013 744 3759 (Tel/Fax)
0866 725 384 (Fax to e-mail)
Cell: 078 672 3645
steve@vrl.co.za

From: Steven [<mailto:shenwood@mweb.co.za>]

Sent: 10 April 2012 09:42 AM

To: Dlamini Mbali Marcia

Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR

Your Ref: 12/1/9/3 - M5

10 April 2012

To Mbali Dlamini,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

This document is sent directly to all registered I&AP's. A printed copy is available and should you require a hard copy please request this from Mr. Henwood (contact details below). The Basic Assessment Report (BAR) is compiled according to a report template provided by the authority. The BAR is supported by specialist reports, maps and other documents. These Appendices are referenced in the document.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'Shabangu Sampie Howard (NSP)'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To whom it may concern,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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From: Steven [<mailto:shenwood@mweb.co.za>]

Sent: 10 April 2012 09:42 AM

To: 'modibas@maruleng.gov.za'

Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR

Your Ref: 12/1/9/3 - M5

10 April 2012

To Mr. Modiba T.S,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]

Sent: 10 April 2012 09:42 AM

To: 'phokyk@dwaf.gov.za'

Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR

Your Ref: 12/1/9/3 - M5

10 April 2012

To Khethiwe Phoku,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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From: Steven [<mailto:shenwood@mweb.co.za>]

Sent: 10 April 2012 09:42 AM

To: 'tim@mopani.gov.za'

Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR

Your Ref: 12/1/9/3 - M5

10 April 2012

To whom it may concern,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]

Sent: 10 April 2012 09:42 AM

To: 'ngovenir@maruleng.gov.za'

Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR

Your Ref: 12/1/9/3 - M5

10 April 2012

To Mrs Rosina Ngoveni,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'ramothwalar@maruleng.gov.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Mr. Ramothwala R.J,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'don@tandatula.co.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Don,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'phine@sahra.org.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Phillip Hine,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'dlaminim@dwa.gov.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Mbali Dlamini,

REVISED DRAFT BASIC ASSESSMENT

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'nortbenz@gmail.com'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To W Nortier,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'info@offbeatsafaris.co.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Ms Muller,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'joubertboer@mweb.co.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To H Joubert,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'campbelj@mweb.co.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To J Campbell,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'ShabanguS2@dwa.gov.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To Sampie Shabangu,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'john@acmsshelela.co.za'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To J Duthie,

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

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From: Steven [<mailto:shenwood@mweb.co.za>]
Sent: 10 April 2012 09:42 AM
To: 'gerriegrif@gmail.com'
Subject: Revised Draft Basic Assessment for Jejane - Extension of Resort Rights

Our Ref: Jejane – Extension of Resort Rights, Hoedspruit, Limpopo - DBAR
Your Ref: 12/1/9/3 - M5

10 April 2012

To G. Griffioen

REVISED DRAFT BASIC ASSESSMENT

FOR THE PROPOSED JEJANE – EXTENSION OF RESORT RIGHTS, HOEDSPRUIT, LIMPOPO.

Please find attached the Revised Draft Basic Assessment Report for the proposed Jejane – Extension of Resort Rights, Hoedspruit, Limpopo, on Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T.

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**Appendix E: Public Participation Process
Annexure E Advertisement text**

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of a Basic Assessment in terms of Regulation 54 of the Regulations published in Government Notice R543 under section 24(5) read with section 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) of intent to carry out the following activity:

Project name: JeJane – Extension of Resort Rights, Hoedspruit, Limpopo

Project description: The application will be for the extension of resort rights in order to facilitate the following developments and changes:

- **Remainder Portion 1 Vienna 207 K T:**
 - Formalising the existing Bush Camp (20 persons)
 - Increasing the existing staff camp from 10 to 18 persons (relocation of the existing staff camp from Antwerpen)
 - New accommodation for Assistant Manager
 - New office/administration building
 - Formalising 2 additional chalets (on existing serviced sites)

- **Portion 1 Antwerpen 60 K U**
 - One additional chalet (on site of staff accommodation)
 - Increasing the number of people accommodated in the existing Bush Camp from 12 to 20 in the existing structures
 - A manager's house

Listed activity:

GN 546, Listing Notice 3 of 2010 - Activity: 18

- **LEDET Ref. No.:** 12/1/9/3 - M5
- **Location:** Portion 1 of the farm Antwerpen 60 K U and
Remainder Portion 1 of the farm Vienna 207 K T.
- **Proponent:** JeJane Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd
- **Consultant:** V&L Landscape Architects
P.O. Box 26696, Steiltes
NELSPRUIT, 1213

Tel: 013 744 3759
Fax: 086 672 5384
E-Mail: steve@vrl.co.za

Contact: Steven Henwood

In order to ensure that you are identified as an interested and/or affected party, please submit in writing your name, contact information and interest in the matter to the contact person given above within 55 days of publication of this advertisement.

Appendix E: Public Participation Process
Annexure F: Proof of placed advertisement

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LEGALS

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of a Basic Assessment in terms of Regulation 54 of the Regulations published in Government Notice R543 under section 24 (5) read with section 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) of intent to carry out the following activity: **Project name: Jejana Extension of Resort Rights, Hoedspruit, Limpopo.** **Project description: The application will be for the extension of resort rights in order to facilitate the following developments and changes: "Remainder Portion 1 Vienna 207 K T: Formalising the existing Bush Camp (20 persons), increasing the existing staff camp from 10 to 18 persons (relocating of the existing staff camp from Antwerpen). New accommodation for Assistant Manager, New office, administration building, Formalising 2 additional chalets (on existing serviced sites) "Portion 1 Antwerpen 60 K U: One additional chalet (on site of staff accommodation) increasing the number of people accommodated in the existing Bush Camp from 12 to 20 in the existing structures. A manager's house. Listed activity: GN 546, Listing Notice 3 of 2010 Activity 18. "LEDET Ref No: 12/1/9/3 M5 Location: Portion 1 of the farm Antwerpen 60 K U and Remainder Portion 1 of the farm Vienna 207 K T. Proponent: Jejana Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd. "Consultant: V&L Landscape Architects P.O. Box 26696, Steiltes NELSPRUIT, 1213 Tel: 013 744 3759 Fax: 086 672 5384 E-Mail: steve@vrl.co.za Contact: Steven Henwood. In order to ensure that you are identified as an interested and/or affected party, please submit in writing your name, contact information and interest in the matter to the contact person given above within 55 days of publication of this advertisement.**

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Famous pastors visit Hoedspruit

PASTOR William and Deborah Mitchell who will be visiting Hoedspruit in December. They are living in London but are world Famous Prophets that have been to every Continent. Diaries the following dates:
 4 Dec - William to Minister and Prophecy @ 09:00 at the AGS Hoedspruit Church - Interchurch everyone is welcome.
 6 Dec - Deborah to Minister and give testimony @ 18:00 at the AGS Hoedspruit Church - This is the Lydia's meeting and all women are welcome - Interchurch 7 Dec - William to Minister and Prophecy @ 18:00 at the AGS Hoedspruit Church - Interchurch meeting all are welcome.
 Do not miss out. There is a great anointing over these two Prophets and they give a true prophetic word.

Support Sisters with Blisters

EVERYONE is invited to take part in the Sisters with Blisters initiative on Friday, December 2 at 8:00. Invite your friends, dress funny and join the walk from the Kamogelo Centre to Pick n Pay. Go make some noise, bring an instrument and be part in the kick off of the 16 days of activism against woman and child abuse with a bang. For more information contact Christine on 083 300 2933. This is a Hlokomela and Hoedspruit Victim Support Unit initiative.

KERSMARK 2011
 Tzaneen Laerskool Skoolsaal
 Die wonderlike Kersmark is om die draai, en die vooruitgang daarvan is werklik iets om na uit te sien! Soos reeds verneem is dit 'n eenbetalpunt kersmark met uitstallings soos leer en denim handsakke, juwele, opvoedkundige speelgoed, biltong en neute, lekkers, glowsticks, busnywerheid lekkernye, kerse, Christelike geskenkies, skilderye, kinderbae, en nog vele meer unieke kersgeskenke! Kom neem ook die besonderse Spesiale Onoortlyk Kias stalletjie waar - pragtige handgemaakte produkte! Daar is 'n kostelike area, kom geniet heerlike plaaslike disse. Kompetisies om voor uit te kyk, sluit in Inkleur-kompetisie, 11kg Kerskoek raffie, eet-soveel-as-wat-jy-kan, en nog hope meer! Kom ondersteun die spesiale kersmark ten bate van die onderhoud van SPO Kias by Tzaneen Laerskool!
Woensdag 7 Desember 2011
 13:00 - 19:00
Donderdag - Saterdag 8-10 Des 2011
 9:00 - 19:00
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Appendix E: Public Participation Process
Annexure G: List of registered Interested and Affected Parties (I&AP's)

**Appendix E: Public Participation Process
Annexure H Comments and responses**

	Name	Issue Raised	Response
1	Masungi Tshuketa (LEDET)	A proof as to when the existing development established must be included in the forthcoming final Basic Assessment Report (BAR);	Proof of the legal establishment of the existing development has been attached in the form of an Environmental Authorisation (16/1/2 – 105) as issued by the Limpopo Province Environmental Affairs on the 9/9/2002. See Appendix G; Annexure A for reference.
2	Masungi Tshuketa (LEDET)	The Archaeological Investigation, Soil Analysis and Vegetation Survey reports must be signed with original signatures of the authors and the qualifications and expertise of the authors to conduct such studies must be included;	Noted. See signed specialist declaration as attached to each specialist study
3	Masungi Tshuketa (LEDET)	The Type of sanitation system currently used and recommended in the report is not supported and therefore an alternative sanitation system that does not use a soak away method must be investigated and recommended to replace the existing one.; and	Noted. Further investigation of sewerage treatment alternatives has lead to the recommendation that septic tanks coupled to conservancy tanks be installed on Jejane. Furthermore it is imperative that stipulations of the National Water Act are adhered to. The various components of the sewerage treatment system should also be sited where they are not easily visible, and if not sited below ground, should be screened to further reduce visual impact. These units must be monitored in line with the requirements of DWAF and other compliance organisations.
4	Masungi Tshuketa (LEDET)	An agreement letter from the Maruleng Local Municipality that confirms the disposal of the solid waste to their registered landfill site must be attached in the forthcoming final BAR.No issues have been raised by any other parties. However the EAP has identified the following issues that may impact on the receiving environment and potential I&AP's	Waste is currently removed from the farm at regular intervals by the Maruleng Municipality for which they levy a monthly charge. (Invoices attached as Appendix G; Annexure B have been supplied as proof of current waste removal. This agreement is to continue.

Appendix F: Environmental Management Programme (EMPr)

ENVIRONMENTAL MANAGEMENT PROGRAMME

in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2006, as amended 2010

ENVIRONMENTAL MANAGEMENT PROGRAMME FOR JEJANE - Extension of Resort Rights, MPUMALANGA.



Prepared by:
V&L Landscape Architects

Prepared for:
Jejane Game Farm Share Block (Pty)
& Vienna Game Farm (Pty) Ltd



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LIST OF ABBREVIATIONS/DEFINITIONS

EMP	-	Environmental Management Plan
EIA	-	Environmental Impact Assessment
EIR	-	Environmental Impact Report
CLO	-	Community/Client Liaison Officer
MDALA	-	Mpumalanga Department of Agriculture and Land Affairs
LEDET-		Department of Economic Development, Environment and Tourism
DWAF	-	Department of Water Affairs and Forestry
DME	-	Department of Minerals and Energy
SABS	-	South African Bureau of Standards
SAHRA	-	South African Heritage Resources Agency
ECO	-	Environmental Control Officer
ROD	-	Record of Decision

A person appointed by the project manager, developer, engineer or contractor to oversee compliance to the EMP. This person can be an internal appointment or an external consultant / specialist depending on the authorities' requirements.

Project Manager / Engineer

- Designated project manager / engineer for the construction project

Proponent / Client / Developer

- Person or company responsible for proposing the project

Contractor

- Person and/or company appointed to complete project

SECTION A: DETAILS AND CREDENTIALS OF AUTHOR

V&L, as an Independent Environmental Consultants and Impact Assessors, have been appointed by Jejane Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd, to facilitate the Integrated Environmental Management (IEM) procedure, for the proposed Extension of Resort Rights, Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT.

Environmental assessment practitioner:

Contact person:

Postal address:

Postal code:

Telephone:

E-mail:

Qualifications & relevant experience

Professional affiliation(s) (if any)

S.J. Henwood		
Mr. Steven Henwood		
Po box 26696, Steiltes, Nelspruit		
1213	Cell:	078 672 3645
013 744 3759	Fax:	013 744 3759
steve@vrl.co.za		
Nat. Dip. Nature Conservation		
IAIASA		

SECTION B: BACKGROUND

V&L, as an Independent Environmental Consultants and Impact Assessors, have been appointed by Jejane Game Farm Share Block (Pty) & Vienna Game Farm (Pty) Ltd,

This document forms part and is appended to the Final BAR and will be submitted for approval by the Department of Economic Development, Environment and Tourism with reference number, 17/2/3/E - 53.

The proposed activity is located within the Jejane Game Farm Share Block and the Vienna Game Farm (Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT). The site lies approximately 6km north east of Hoedspruit in the Northern Province.

The application will be for the extension of resort rights in order to facilitate the following developments and changes:

- Remainder Portion 1 Vienna 207 K T (PB. 4-19-2-33-207-1):
 - “Legalising” the existing Bush Camp A for 20 persons (in existing structures)
 - Increasing the existing staff camp from 10 to 18 persons on an existing concrete slab (by relocating the existing staff camp from Antwerpen)
 - New accommodation for Assistant Manager
 - New office/administration building
 - Legalizing 2 additional chalets (on existing serviced sites)

- Portion 1 Antwerpen 60 K U (LHL15/19/2/1-33(20))
 - Increase the number of chalets by one additional chalet (on site of staff accommodation that will be relocated to Vienna)
 - Increasing the number of people accommodated in the existing Bush Camp B from 12 to 20 in the existing structures
 - A manager’s house

According to EIA Regulations in terms of Chapter 5 of NEMA, the proponents are applying for:

Activity Notice: R 546

Listing: 18

The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded.

a) In... Limpopo...province:

i. Outside urban areas, in:

(gg) Areas within 10km from National Parks or world heritage sites or 5 km from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.

KEY ENVIRONMENTAL ISSUES RAISED

The assessed impacts were identified in the public consultation phase and have been subjected to detailed investigation and assessment. These impacts include potential biophysical and social impacts that may arise during the operational phase of the proposed activities (i.e. long-term impacts) and construction phase impacts (i.e. short-term impacts).

The methodology was developed by V&L Landscape Architects) and has been continually refined and improved based on our

experience in applying it to numerous EIA processes. The methodology is broadly consistent to that described in the NEMA EIA Regulations and in the DEAT Guideline Document for these regulations (DEAT, 2006b).

Each issue identified for the proposed study area was taken into consideration in order to ascertain the most suitable layout that has the least possible impacts, or the most manageable impacts, on the environment.

Any layout chosen for the proposed land development area has the potential to impact on the site and its adjoining land users.

The most significant potential negative impacts relate to:

- » Ground and surface water impact
- » Ecological - Biodiversity, sensitivity and vegetation communities
- » Geotechnical
- » Sanitation and waste management
- » Storm water management
- » Socio-economic impact – Cultural or historic
- » Need and desirability
- » Compatibility with regional planning

The assessed impacts were identified in the public and authority consultation phase and have been subjected to detailed investigation and assessment. These impacts include potential biophysical and social impacts that may arise during the operational phase of the proposed activities (i.e. long-term impacts) and construction phase impacts (i.e. short-term impacts).

The methodology was developed by V&L and has been continually refined and improved based on our experience in applying it to many EIA processes. The methodology is broadly consistent to that described in the NEMA EIA Regulations and in the DEAT Guideline Document for these regulations (DEAT, 2006b).

Each issue identified for the proposed study area was taken into consideration in order to ascertain the most suitable layout that has the least possible impacts, or the most manageable impacts, on the environment.

The following table summarises the significance of the identified potential impacts (i) before and mitigation; and (ii) once recommended mitigation measures are in place.

Ref.	Description of impact	Significance of impact	
		Without mitigation	With mitigation
5.1	Operational and Construction phase: Biophysical and Social environment		
5.5.1.	Visual Quality	Medium (-) (Highly Probable)	Low (-) (Unlikely)
5.1.2	Surface and Ground Water Pollution	Medium (-) (Probable)	Low (-) (Probable)
5.1.3	Habitat Loss (Fauna and Flora)	High (-) (Probable)	Low (-) (Unlikely)
5.1.4	Barriers to Dispersal and migration of fauna and flora	Medium (-) (Probable)	Low (-) (Possible)
5.1.5	Noise and Light Pollution	Medium (-) (Probable)	Low (-) (Unlikely)
5.1.6	Erosion and Siltation	Medium (-) (Probable)	Low (-) (Possible)
5.1.7	Employment Opportunities	High (+) (Probable)	
5.1.8	Soil Contamination	High (-)	Low (-)

		(Probable)	(Possible)
5.1.9	Air Pollution	Low (-) (Probable)	Low (-) (Possible)
5.1.10	Ecological	Medium (-) (Probable)	Low (-) (Probable)
5.1.11	Access and Traffic	Medium (-) (Probable)	Low (-) (Probable)
5.1.12	Storm water	Medium (-) (Probable)	Low (-) (Probable)
5.1.13	Compatibility with regional planning	High (+) (Probable)	High (+) (Probable)
5.1.14	Solid waste disposal	Medium (-) (Probable)	Low (-) (Probable)

Significance: positive impacts indicated by no shading & (+), negative impacts indicated by shading & (-) Probability: (in brackets)

RECOMMENDED MANAGEMENT ACTIONS

The EMP provides much more detailed mitigation measures and should all proposed mitigation measures be instituted it is not envisaged that the proposed development poses any negative impacts of high significance which cannot be mitigated.

PUBLIC PARTICIPATION PROCESS

Public participation forms an integral component of the EIA process. The public participation process for the project was summarised in the Basic Assessment Report.

The Public Participation Process (PPP) was undertaken according to Regulation 54 of the EIA Regulations, 2010, and took into consideration the Public Participation 2010 Guideline Document (DEA, 2010).

The level of public participation was determined by taking into account the scale of the anticipated impacts of the proposed project, the sensitivity of the affected environment and the degree of controversy of the project, and the characteristics of the potentially affected parties. Based on the findings of the aforementioned consideration, there was no reason to elaborate on the minimum requirements of the public participation process outlined in the EIA Regulations, 2010 or use reasonable alternative methods for people desiring of but unable to participate in the process due to illiteracy, disability or any other disadvantage. Thus the decision was taken to circulate a detailed Background Information Document and that this, with additional input from I&AP's, would be adequate in terms of engaging with the public and affected parties. Communication with the LEDET regarding a site visit resulted in the LEDET requesting to see the site only when the Draft Basic Assessment Document had been submitted to their office.

Potentially interested and affected parties were notified of the proposed application and site meeting by –

- Fixing two notice boards at a place conspicuous to the public, specifically at the Jejane Control Gate as well as the Kamogelo Shopping Centre Notice Board in Hoedspruit, on the 30th November, 2011. There was no reasonable alternative site.

Giving written notice to owners and occupiers of land adjacent to Portion 1 of the Farm Antwerpen 60 KU and Remainder Portion 1 of the Farm Vienna 207 KT and organs of state having jurisdiction in respect of the proposed activity. A Background Information

Document (BID) was prepared and distributed via email and per hand.

SECTION B: ROLE PLAYERS

RESPONSIBILITIES OF THE ROLE PLAYERS

Developer

The developer remains ultimately responsible for ensuring that the development is implemented according to the requirements of the EMP. Although the developer appoints specific role players to perform functions on his/her behalf, this responsibility is delegated. The developer is responsible for ensuring that sufficient resources (time, financial, human, equipment, etc.) are available to the other role players (e.g. the ECO, ELO and contractor) to efficiently perform their tasks in terms of the EMP. The developer is liable for restoring the environment in the event of negligence leading to damage to the environment.

The developer must ensure that the EMP is included in the tender documentation so that the contractor who is appointed is bound to the conditions of the EMP. The developer must appoint an independent Environmental Control Officer (ECO) during the planning phase to oversee all the environmental aspects relating to the development.

Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement includes site preparation. The notice must include a date on which it is

anticipated that the activity will commence, and must include the name and contact details of the appointed ECO.

Any changes to, or deviations from, the project description set out in the RoD must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the RoD to apply for further authorisation in terms of the regulations.

Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the applicant must notify the Department (LEDET) as soon as the new details become known to the applicant.

The holder of the authorisation (RoD) must submit an environmental compliance audit report to the Department within 30 days of completion of the construction phase. The environmental audit report must be compiled by an independent auditor, and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the conditions of the RoD as well as this EMP.

The holder of the RoD is responsible for compliance with the provisions for Duty of Care and Remediation of Environmental Damage contained in Section 28 of the National Environmental Management Act, 1998 (Act 107 of 1998).

A copy of the Record of Decision must be kept at the property where the activity will be undertaken. The authorization must be produced to any authorised official of the department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorization who works or undertakes work at the property.

Contractor

The contractor, as the developer's agent on site, is bound to the EMP conditions through his/her contract with the developer, and is responsible for ensuring that she/he adheres to all the conditions of the EMP. The contractor must thoroughly familiarise him/herself with the EMP requirements before coming onto site and must request clarification on any aspect of these documents, should they be unclear. The contractor must ensure that he/she has provided sufficient budget for complying with all EMP conditions at the tender stage. The contractor must comply with all orders (whether verbal or written) given by the ECO, project manager or site engineer in terms of the EMP.

Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) is appointed by the developer as an independent monitor of the implementation of the EMP. He/she must form part of the project team, appointed prior to commencement of construction (including construction camp selection and site clearing) and be involved in all aspects of project planning that can influence environmental conditions on the site. Where possible, the ECO must attend relevant project meetings, conduct inspections to assess compliance with the EMP and be

responsible for providing feedback on potential environmental problems associated with the development. In addition, the ECO is responsible for:

- ❖ Liaison with relevant authorities;
- ❖ Liaison with contractors regarding environmental management; and
- ❖ Undertaking routine monitoring and appointing a competent person/institution to be responsible for specialist monitoring, if necessary.

The ECO has the right to enter the site and undertake monitoring and auditing at any time, subject to compliance with health and safety requirements applicable to the site (e.g. wearing of safety boots and protective head gear).

(a) Liaison with Authorities

The ECO will be responsible for liaising with the Department. The ECO must submit monthly environmental compliance reports to the authorities. These reports must contain information on the contractor and developer's levels of compliance with the EMP; a description of all activities on site, problems identified, transgressions noted and remedial action implemented. All reports must reflect the Department's reference number on the cover. The ECO is to suggest corrective action measures to eliminate the occurrence of the non-compliance incidents. In order to keep a record of any impacts, the ECO must keep on-site: an Environmental Site Diary (which needs to be kept up-to-date), copies of all reports submitted to the Department, a complaints register of all public complaints and the remedies applied to such complaints. The ECO must remain employed until all rehabilitation

measures as well as site clean-up are completed and the site is handed over to the applicant by the contractor for operation.

(b) Liaison with Contractors

The ECO is responsible for informing the contractors of any decisions that are taken concerning environmental management during the construction phase. This would also include informing the contractors of the necessary corrective action to be taken.

The Authorities

The Department (LEDET) retains the right to monitor and/or inspect the proposed project during both construction and operational phases.

SECTION C: PLANNING AND DESIGN PHASE			
<i>Issue/Activity</i>	<i>Action Required</i>	<i>Responsible person</i>	<i>Frequency</i>
1. <u>EMP</u>	An approved ECO must be appointed before any construction activities commence. It is recommended that for the initial commencement phase the ECO is on site once a week as a minimum, thereafter the frequency can be negotiated between the ECO and the contractor as required. This EMP must be made binding to the main contractors as well as individual contractors and should be included in tender documentation for the construction contract. The contractors must also ensure that the construction crew is aware of the requirements set out in the EMP for this development prior to commencing activities on site.	Developer	Prior to construction starting.
2. <u>Geotechnical Investigation</u>	a) The contractor must ensure that a qualified individual conduct a detailed geotechnical investigation (Phase II) of each individual proposed stand (test pits) since only a Phase I investigation has been conducted to date; b) Identify any expansive, collapsible or compressible soils c) Determine excavation and foundation requirements d) Make the necessary recommendations regarding founding stability	Contractor Geotech Geotech Geotech	Prior to construction starting Prior to construction starting Prior to construction starting Prior to construction starting
3. <u>Site Preparation-</u> <i>Sound environmental principles need to be adopted in the preparation of the site.</i>	a) Erect a perimeter fence around the works area to ensure sufficient access control, protection of contractor's equipment, tools, plant and equipment. b) Clearly demarcate all material lay down areas. c) Ensure that perimeter fence is kept and maintained in good	Contractor Contractor	Once-off Once-off

	working order for the total duration of the construction project.		
	d) The area to be zoned “private open space” (no development) needs to be appropriately demarcated and staff need to be instructed to only conduct approved activities within these areas (i.e. alien invasive species removal). The proposed barrier (fence or danger tape) needs to be checked by the ECO for efficacy.	Contractor	Continuous
	e) Do not use the site for any other purpose other than for the proper carrying out of the Works under the Contract.	Contractor	Prior to construction commencing
	f) Marking for surveying and other purposes must be done using pegs, beacons or rope and droppers.	ECO	Bi-weekly
	g) Utilise the method of debushing most appropriate for the environment and species in question. Favour mechanical rather than chemical methods wherever possible.	Contractor	Continuous
	h) No vegetation on neighbouring properties may be damaged or utilised	Contractor	Once-off
	i) Exotic (invasive) flora – to be removed from the site; a weed control program implemented and spread of exotic invasive species to be controlled	Contractor/ECO	Once-off
	j) Before any construction, borrowing and/or quarrying, the entire available topsoil layer (except in the area designated “no development”) has to be stripped. Ensure that it is stockpiled separately from subsoil and rocky material.	Contractor/ECO	Continuous
	k) In the absence of a recognisable topsoil layer, strip the upper most 300mm of soil.	Contractor/ECO	Continuous
	l) Co-ordinate excavation to limit unnecessarily prolonged exposure of stripped areas and stockpiles. Retain vegetation and soil in position for as long as possible, removing it immediately ahead of construction / earthworks in that area.	Contractor	Once-off
	m) Strip and stockpile herbaceous vegetation, overlying grass and other fine organic matter along with the topsoil.	Contractor	Once-off
	n) Do not strip topsoil when it is wet.	Contractor	Once-off
	o) Store stripped topsoil in an approved location and in an approved manner for later re-use in the rehabilitation process.		
	p) Establish marker pegs along the boundaries of working areas,	Contractor	Once-off

	access roads, haul roads before commencement of work.	Contractor	Once-off, monitor regularly
<p>4. <u>Construction site</u> <i>Careful planning of the Construction site can ensure that time and costs associated with environmental management and rehabilitation are reduced.</i></p> <p><i>With regards to the establishment of the campsite, mitigation measures as detailed in the section to the right will only be applicable should the workforce of the appointed contractors stay overnight. This aspect will, therefore, have to be confirmed first, on site prior to commencement of any activities.</i></p>	<p>4.1. Structures and accommodation</p> <p>a) Erect all temporary buildings and structures, including offices, workshops, and stores, within predetermined zones as per the approved site plan.</p> <p>b) Erect all temporary and permanent labour housing within predetermined zones off the construction site as per the approved site plan and / or relevant Sketch Plans.</p> <p>c) Secure housing sites using 1,2m high fence. In areas where security or theft is a problem, the fence height may be increased to 1,8m or 2,4m and topped with razor wire. These fences are to remain in position until the completion of construction.</p> <p>d) Ensure that essential services (including showers, appropriate sanitation and drinking water facilities) are provided for all housing and/or campsites.</p> <p>e) Maintain essential services in a functional state. These may not be overloaded. Defects and inadequacies must be rectified immediately.</p> <p>f) Scavenger and weather proof bins will be provided in a suitable waste storage area for temporary storage. These bins will be emptied and transported to an appropriate facility once a week.</p> <p>g) Provide a designated place for food storage, preparation and consumption. Food storage must be separate from sleeping quarters and waste storage areas.</p> <p>h) Ensure that cooking facilities, as approved by the Project Manager is made available - preferably gas or electricity. Ensure regular checks of the mentioned facilities as per OSH Act and/or site safety plan by the relevant appointed personnel.</p> <p>i) Allow for household amenities, such as washing and drying of clothes, as well as areas for social interaction.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor/ Project manager</p> <p>Contractor/ Project manager</p> <p>Contractor</p> <p>Contractor/ Project manager</p> <p>Contractor/ Project manager</p> <p>Contractor/ Project manager</p>	<p>Initial set-up period</p> <p>Initial set-up period</p> <p>Initial set-up period</p> <p>Initial set-up period</p> <p>Continuous</p> <p>Initial set-up period</p> <p>Initial set-up period</p> <p>Initial set-up period</p>

	<p>j) The Contractor must attend to drainage of the camp site to avoid standing water and / or sheet erosion.</p>	Contractor	Continuous
	<p>4.2. Storage areas</p>		
	<p>a) A suitable and safe area for storage of the construction material is to be provided: choice of location for storage areas must take into account prevailing winds, distance to water bodies (no storage within 100 m of the wetland) and general on-site topography.</p>	Contractor	Initial set-up period
	<p>b) Storage areas must be designated, demarcated and fenced if necessary</p>	Contractor/ Project manager	Initial set-up period
	<p>c) Storage areas should be secure so as to minimise the risk of crime. They should also be safe from access by children/ animals etc.</p>		
	<p>d) Hazardous materials such as fuel, oil, paint, herbicide and insecticides shall be stored in bermed areas or under lock and key, as appropriate, in well ventilated areas.</p>	Contractor	Initial set-up period Continuous
	<p>e) Definitions of hazardous substances / materials are those that are potentially: poisonous, flammable, carcinogenic or toxic.</p>	Contractor	
	<p>f) Material Safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.</p>	Contractor	Continuous
	<p>g) Fire prevention facilities must be present at all storage facilities.</p>	Contractor	Continuous
	<p>h) Sufficient care must be taken when handling these materials to prevent pollution.</p>	Contractor	Continuous
	<p>4.3. Roads and Access</p>		
	<p>a) Choice of access routes should take into account minimum disturbance to public and neighbours in close proximity to the site.</p>	Contractor	Continuous
	<p>b) Wherever possible existing roads should be used to avoid the</p>	Contractor	Continuous

	<p>disturbance of additional land or natural veld.</p> <p>c) Runoff from roads must be managed to avoid erosion and pollution problems.</p>	<p>Contractor</p> <p>Contractor</p>	<p>Initial set-up period</p> <p>Initial set-up period</p>
<p><u>5. Alien Invasive Species</u></p> <p><i>It is important at the outset of a project to establish a program for the eradication and control of alien invasive vegetation</i></p>	<p>a. Areas such as watercourses, wetlands, riparian and pristine areas must be prioritised.</p> <p>b. Alien vegetation need only be eradicated on sites where the entire site is not cleared.</p> <p>c. The ECO is responsible for the identification of alien invasive species. The specie-specific method of control and eradication should be implemented.</p> <p>d. The ECO is responsible to provide the specific training required to implement the required control method. Only personnel who have been appropriately trained is allowed to engage in this activity.</p> <p>e. All personnel tasked to engage in the process of alien invasive vegetation control needs to receive proper training in the following:</p> <ul style="list-style-type: none"> - Methods and control measures. - Equipment and techniques - Types of herbicide (selective and non-selective) - Health and safety issues - Safety gear <p>f. Prior to the actual eradication process the ECO or contractor must ensure the following:</p> <ul style="list-style-type: none"> - All personnel have adequate training required - All personnel have essential safety equipment - Only identified alien species are targeted - Ensure correct application of herbicides <p>g. Team supervisors must receive training in the following:</p> <ul style="list-style-type: none"> - Herbicide awareness. Basic training on the mode of action of herbicides. - Operator safety. Handling of concentrates and spray 	<p>Contractor / ECO</p> <p>Contractor / ECO</p> <p>ECO</p> <p>ECO</p> <p>ECO / Contractor</p> <p>ECO / Contractor</p>	<p>Prior to site clearing and construction</p> <p>To be determined prior to site clearing</p> <p>Prior to site clearing</p> <p>Prior to site clearing</p> <p>Prior to site clearing</p> <p>Prior to site clearing</p>

	<p>mixtures, personal hygiene and protective clothing.</p> <ul style="list-style-type: none"> - Safe storage of products at depots and operational sites and spray mixtures at operational sites. - Mixing. Handling of concentrates and mixing techniques. - Safety procedures to be observed during transportation of product spray mixtures, equipment and personnel. - Care and maintenance of application equipment, saws etc. - Record keeping in respect of quantities of product/spray mixtures used, area treated, person hours per area/operation, stock control - Planning. Advanced planning for follow-up operations, transportation, equipment and spares requirements, product procurement and availability. Team management - First aid. Actions to be taken in case of accidental contamination, suspected and actual poisoning, chronic poisoning, eye contamination and other physical injuries. - Health of operators. Persons unsuitable for use as application operators would include e.g. chronically ill, disabled, pregnant women. Awareness of possible allergic reactions. Wearing of protective apparel. - Managing major and minor spills, accident sites. <p>h. Spill kits must be available on site in case of any accidental contamination or spillages.</p>	ECO / Contractor	Prior to site clearing
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SECTION D: CONSTRUCTION PHASE

<p>1. <u>Maintenance of Construction site</u></p> <p><i>Conscientious maintenance of the Construction site can ensure that time and costs associated with environmental management and rehabilitation are reduced.</i></p>	<p>1.1. Maintenance of Access</p> <p>a) Contractors should ensure that access roads are maintained in good condition by attending to potholes, corrugations and stormwater damage as soon as these develop.</p>	Contractor	Weekly inspection
	<p>b) If necessary, staff must be employed to clean surfaced roads adjacent to construction sites where materials have been spilt.</p>	Contractor	When necessary
	<p>1.2. Surfaces</p> <p>a) The Contractor must monitor and manage drainage of the camp site to avoid standing water and soil erosion.</p>		Continuous
	<p>b) The construction site must be fenced off and demarcation of material lay down areas must precede all activities on site.</p>	Contractor	Initial set-up period
	<p>c) Run-off from the camp site must not discharge into neighbouring properties or adjacent wetland/riparian belt.</p>	Contractor	Initial set-up period
	<p>1.3. Ablutions</p> <p>a) An adequate number of portable/ chemical toilets shall be supplied</p>	Contractor	Initial set-up period
	<p>(1 toilet per 15 users is the norm). The use of septic tanks, soak ways or pit latrines is strictly prohibited.</p>	Contractor	Initial set-up period
	<p>b) Do not locate any site toilet, sanitary convenience, within a horizontal distance of 100m of the identified wetland or riparian zone.</p>	Contractor	Initial set-up
	<p>c) The Contractor is to ensure that open areas or the surrounding bush are not being used as a toilet facility.</p>	Contractor	Weekly
	<p>d) Regular inspections shall be carried out to ensure toilets are kept in a hygienic state.</p>	Contractor	Weekly
<p>e) Chemical toilets are to be cleaned regularly and effluent disposed of off-site at an approved municipal sewage system.</p>	Contractor	Weekly	
<p>f) Toilet paper shall be supplied to all toilets. Combine drinking water facilities with hand washing facilities near site toilets.</p>			
<p>g) Toilet facilities will be screened and put as far away from the neighbours and roads as possible</p>	Contractor		

	<p>1.4. Camp/site Waste Disposal</p> <p>a) Refuse generated from the campsite, construction area, storage area or any other area shall be collected and placed in suitable covered refuse bins on a daily basis. A litter patrol around the construction camp is to take place every day to collect any litter that may have been strewn around.</p> <p>b) Bins and/or skips should be emptied regularly and waste should be disposed of at a registered landfill site.</p> <p>c) All refuse containers are to be covered at all times.</p> <p>1.5. Provision of Water</p> <p>a) Sufficient potable water shall be provided for drinking, cooking and ablutions.</p> <p>b) Great care is to be taken that the water supply is not contaminated in any way.</p> <p>1.6. Provision of Food preparation and eating areas</p> <p>a) Provide a designated place for food storage, preparation and consumption. Food storage must be separate from waste storage areas.</p> <p>b) Eating areas should be regularly serviced and cleaned to ensure the highest possible standards of hygiene and cleanliness.</p> <p>c) All litter throughout the site should be picked up and placed in the bins provided</p> <p>d) Open fires should not be allowed. Fires for cooking should be limited to fire places designed for the purpose. Gas is more preferable</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor/ Project manager</p> <p>Contractor/ Project manager Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Weekly</p> <p>Once-off, monitor daily</p> <p>Initial set-up period</p> <p>Once-off, monitor daily</p> <p>Weekly</p> <p>Daily</p> <p>As required</p> <p>Daily</p> <p>Initial set-up period</p> <p>Daily</p>
<p>2. <u>Staff conduct</u></p>	<p>2.1. Environmental Education and Awareness</p> <p>a) Ensure that all site personnel have a basic level of</p>		

	<p>environmental awareness training.</p> <p>b) It is essential that construction personnel be made aware of the sensitivity of the “no development” zones (the pristine areas, koppies, grasslands, and wetlands) and that their movements be limited to the construction areas only, which needs to be enforced.</p> <p>c) It is the Contractor’s responsibility to provide the site foreman with no less than 1 hour’s environmental training and to ensure that the foreman has sufficient understanding to pass this information onto the construction staff.</p> <p>d) Translators are to be used where necessary.</p> <p>e) The need for a “clean site” policy also needs to be explained to the construction workers.</p> <p>2.2. Worker conduct on site</p> <p>a) A general regard for the social and ecological well-being of the site and adjacent areas (especially the untransformed areas), is expected of the site staff.</p> <p>b) Workers need to be made aware of the following general rules:</p> <ul style="list-style-type: none"> i.) No alcohol / drugs to be present on site. ii.) No firearms allowed on site or in vehicles transporting staff to / from site, (unless used by security personnel). iii.) Prevent excessive noise. iv.) Prevent unsocial behaviour. v.) Bringing pets onto the site is forbidden vi.) No harvesting of firewood from the site or from the areas adjacent to it vii.) Construction staff are to make use of the facilities provided for them, as opposed to ad-hoc alternatives. (e.g.: fires for cooking; the use of surrounding bush as a toilet facility; are forbidden). viii.) Trespassing on private / commercial properties adjoining the site is forbidden ix.) Driving under the influence of alcohol is prohibited. 	<p>Project manager / ECO Contractor / ECO</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Project manager /ECO</p> <p>Project manager</p>	<p>During staff induction & ongoing During staff induction, to be monitored continuously</p> <p>Prior to moving onsite</p> <p>Continuous</p> <p>Continuous</p> <p>During staff induction & ongoing</p> <p>During staff induction & monitored on an ongoing basis</p>
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	<p>2.3. Fauna and Flora</p> <p>a) Capture/snaring of fauna is strictly prohibited</p> <p>b) Anyone found doing the above-mentioned will be prosecuted or disciplined</p> <p>c) Faunal species found should be translocated</p> <p>d) No vegetation on neighbouring properties (or in the untransformed “no development” zone) is to be used for firewood.</p> <p>e) Permits are required for removal, relocation and pruning of protected species (permits can be obtained from MPTA or DWAF)</p>	<p>Contractor/ ECO Contractor</p> <p>ECO</p> <p>Contractor/ ECO</p>	<p>Continuous As necessary As necessary Continuous</p> <p>As necessary</p>
<p>3. <u>Dust/Air pollution</u> <i>Main causes of air pollution are dust from vehicle movements and stockpiles, vehicle emissions and fires.</i></p>	<p>a) Phasing of operations will avoid the exposure of soil and sand for prolonged periods.</p> <p>b) If necessary, the construction site shall be watered (or an appropriate alternative method used) to control possible dust fallout.</p> <p>c) Vehicles travelling to and from the construction site must adhere to speed limits (40 km/h) so as to avoid producing excessive dust.</p> <p>d) Vehicles and machinery are to be kept in good working order and to meet manufacturer’s specifications for safety, fuel consumption etc.</p> <p>e) No fires are allowed on site unless first cleared with the ECO and Project Manager.</p> <p>f) Stockpiles may cause dust and so must be managed in accordance with the guidelines in Materials Management in section 8.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor / ECO</p> <p>Contractor</p>	<p>Monitor daily</p> <p>Monitor daily</p> <p>Continuous</p> <p>Weekly</p> <p>As necessary</p> <p>Daily</p>
<p>4. <u>Soil Erosion</u></p>	<p>4.1. Topsoil stripping and stockpiling</p> <p>a) Once an area has been cleared of vegetation, the top layer</p>	<p>Contractor</p>	<p>Once-off, monitor</p>

	<p>(nominally 150mm) of soil should be removed and stockpiled in a designated area. Topsoil is to be handled twice only – once to strip and stockpile, and once to replace and level.</p> <p>b) Should there be a need to stockpile soil; those stockpiles must be covered in excessively windy conditions</p> <p>c) No stockpiles or construction materials may be stored or placed within any drainage line (including the wetland) on site or in close proximity to stormwater drains.</p> <p>d) Position topsoil stockpiles on the higher side of a disturbed area.</p> <p>e) Ensure that all topsoil is stored in such a way and in such a place that it will not cause the damming up of water, erosion gullies, or wash away itself.</p> <p>f) Do not stockpile topsoil in heaps exceeding 2m in height.</p> <p>g) Protect topsoil stockpiles from erosion.</p> <p>h) Fencing may not cause erosion and may not impede the flow of any watercourse or natural drainage. Fencing must be monitored throughout the construction phase, and any signs of erosion resulting from it must be remedied immediately.</p> <p>i) Remove exotic / invasive plants and broad leaf weeds that emerge on topsoil stockpiles</p> <p>j) Ensure that topsoil is at no time buried, mixed with spoil (excavated subsoil), rubble or building material, or subjected to compaction or contamination by vehicles or machinery. This will render the topsoil unsuitable for use during rehabilitation.</p> <p>k) The Contractor will be held liable for the replacement of any topsoil rendered unsuitable for use during rehabilitation, for reasons due to his negligence or mismanagement on site.</p> <p>4.2. Exposed surfaces</p> <p>a) The time that stripped areas are exposed shall be minimised wherever possible.</p> <p>b) Top soiling and revegetation shall commence immediately after the completion of an activity and at an agreed distance behind any particular work front.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor / ECO</p> <p>Contractor</p> <p>Contractor</p>	<p>regularly</p> <p>As required</p> <p>Once-off, monitor regularly</p> <p>Once-off, monitor regularly</p> <p>Once-off, monitor regularly</p> <p>Continuous</p> <p>Continuous</p> <p>Continuous</p> <p>Continuous</p> <p>Continuous</p>
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	<p>c) Stormwater control (See 5) and wind screening should be undertaken to prevent soil loss from the site.</p> <p>d) Side tipping of spoil and excavated materials shall not be permitted – all spoil material shall be disposed of as directed by the contractor.</p> <p>e) Soils that become compacted through the activities of the development must be loosened to an appropriate depth to allow seed germination.</p> <p>f) Structures to prevent erosion must be built in areas that are prone to erosion (especially steep roads)</p> <p>4.3. Surface water management</p> <p>a) No water may be abstracted from any surface water body without necessary permission from DWAF for the purpose of construction unless permitted in terms of the Contract.</p> <p>b) Monitor water consumption and ensure that all possible use is accounted for and areas of waste are identified (i.e. water used for surface wetting, for potable supply etc.).</p> <p>c) Repair identified leaks and address issues of water wastage as soon as these are identified.</p> <p>d) Where possible, recycle water on the construction site.</p> <p>e) Avoid over-wetting, saturation and unnecessary runoff during dust control activities and irrigation.</p> <p>f) Ensure that water abstraction points, if permitted, (i.e. from rivers, dams, etc.) do not degrade or erode as a result of leaking pipes, spills, muddy conditions or wash-aways. Rectify problems as soon as they arise.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Monitor regularly</p> <p>Monitor regularly</p> <p>As each activity is completed</p> <p>Continuous</p> <p>Continuous</p> <p>As required</p> <p>Where identified</p>
<p>5. <u>Stormwater</u></p>	<p>5.1. General Principles</p>		

<p><i>Construction activities frequently result in diversions of natural water flow resulting in concentration of flow and an increase in the erosive potential of the water. Measures in this section are aimed at reducing the erosive potential of stormwater.</i></p>	<p>a) Do not drain, fill or alter in any way, any wetland. b) Do not allow surface water or stormwater to be concentrated, or to flow down, cut or fill slopes without erosion protection measures being in place. c) Earth, stone and rubble is to be properly disposed of so as not to obstruct natural water pathways over the site. i.e.: these materials must not be placed in stormwater channels, drainage lines or the wetland. d) Line overflow and scour channels with stone pitching along their length and at their points of discharge to prevent soil erosion. The point of discharge must be at a point where there is dense natural grass cover. e) Ensure that channels do not discharge straight down the contours. These must be aligned at such an angle to the contours that they have the least possible gradient. f) Locate any point of overland discharge at least 50m away from the wetland or drainage line. No surface stormwater generated as a result of the development may be directed directly into any watercourse. g) Surface water rich in sediments and other pollutants must be prevented from entering any watercourse, and all mechanisms for dissipating water energy must be implemented at the inception of the construction phase.</p>	<p>Project manager Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Monitor weekly</p> <p>Monitor daily</p> <p>Continuous</p> <p>Continuous</p> <p>When the need arises</p> <p>Whenever the need arises</p>
<p>6. <u>Water Quality (Surface and groundwater)</u></p> <p><i>Water quality is affected by the incorrect handling of substances and materials. Soil erosion and</i></p>	<p>6.1. <i>General Principles</i></p> <p>a) Mixing / decanting of all chemicals and hazardous substances must take place either on a tray or on an impermeable surface. Waste from these should then be disposed of to a suitable waste site. b) The storage and handling of fuel, lubricants and other chemicals must be in especially demarcated impervious and</p>	<p>Contractor</p> <p>Contractor</p>	<p>Regular Monitoring.</p> <p>Prior to start of construction – monitor</p>

<p><i>sediment is also detrimental to water quality. Mismanagement of polluted run-off from vehicle and plant washing and wind dispersal of dry materials into rivers and watercourses are detrimental to water quality.</i></p>	<p>bunded areas</p> <p>c) Every effort should be made to ensure that any chemicals or hazardous substances do not contaminate the soil or groundwater on site. It is the holder of the RoD's responsibility to rectify any source of pollution from the development and to take appropriate measures to prevent any pollution of surface as well as groundwater.</p> <p>d) Care must be taken to ensure that run-off from vehicle or plant washing does not enter the ground water.</p> <p>e) Wash water must pass through a French drain system before entering the environment.</p> <p>f) Ensure that no stormwater is allowed to enter any drainage installation for the reception, conveyance, storage and / or treatment of sewage.</p> <p>g) Ensure that water passing through vehicle wash bays and workshops pass through oil baffles / oil traps / oils separators before passing into conservancy tanks.</p> <p>h) Treat all oil sludge collected in the said traps, including sump liners, as hazardous waste</p> <p>i) Take special care during rainy periods to prevent the contents of sumps and drip trays from overflowing.</p> <p>j) If water will be sourced from the on-site boreholes, the water needs to be properly treated prior to human consumption. Untreated water can be used for all other activities such as washing of equipment, dust suppression, concrete mixing, compacting etc.</p> <p>k) Deflect any unpolluted water / runoff away from any dirty area</p> <p>l) Emergency contact numbers should be referred to in order to deal with spillages and contamination of aquatic environments.</p>	<p>Contractor / Developer</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>regularly</p> <p>Regular Monitoring.</p> <p>Regular Monitoring</p> <p>Regular Monitoring</p> <p>Regular Monitoring</p> <p>Regular Monitoring</p> <p>Whenever the need arises</p> <p>During rainy periods</p>
<p>7. <u>Wetland Protection</u></p> <p><i>All requirements of the National</i></p>	<p>a) No activity such as construction camps, temporary housing, temporary ablution, stockpiling of topsoil, storing of equipment and material, disturbance of</p>	<p>Contractor / ECO</p>	<p>Continuous</p>

<p><i>Water Act, 1998 (Act 36 of 1998) must be complied with as prescribed by the Department of Water Affairs and Forestry (DWAF).</i></p>	<p>natural habitat, temporary access haul roads, impermeable surfacing, any other activity</p> <p>b) It is further recommended that no roads be constructed through the wetland.</p> <p>c) No channelling of water must take place (wetlands should retain diffuse flow),</p> <p>d) No stormwater or runoff from the roads is allowed straight into the wetlands without first slowing the flow and where possible filtering litter, etc.</p> <p>e) Alien vegetation should be removed from the wetland.</p> <p>f) An Emergency Preparedness Plan should detail potential risks and anticipate where and when incidents could occur, and what steps should be taken in the event that a spill occurs.</p>	<p>Contractor / ECO Contractor / ECO Contractor / ECO</p> <p>Contractor / ECO</p> <p>Contractor / ECO</p>	<p>Initial site preparation Initial site preparation Weekly monitoring</p> <p>Initial site preparation Weekly monitoring Initial site preparation Weekly monitoring</p>
<p>8. <u>Fauna and Flora</u></p>	<p>8.1. <i>Plant harvesting - pressure on vegetation</i></p> <p>a) Prior to construction, the borders of the areas to be developed should be demarcated with danger tape in order to prohibit access by the construction team into ecologically sensitive vegetation communities. This danger tape must be removed once construction is completed.</p> <p>b) An Environmental Control Officer should be appointed during this phase and one of this person's roles during the construction phase should be monitoring of illegal plant harvesting.</p> <p>c) Construction teams must, as a contractual obligation, not be allowed to collect any medicinal plant resources from surrounding vegetation. However, collection of firewood from plantations of invasive exotics should be allowed.</p>	<p>Contractor / ECO</p>	<p>Initial site preparation Weekly monitoring</p>

	<p>d) The Environmental Control Officer should spend time in the ecologically sensitive habitats during construction and search for any evidence of harvesting of plant resources (bark removal, digging for tubers, etc).</p> <p>8.2. Alien invasive plants</p> <p>a) In order to comply with the Conservation of Agricultural Resources Act, all listed invasive exotic plants as indicated in the specialist report should be targeted and controlled, particularly in grassland where <i>Acacia mearnsii</i> and <i>Pinus patula</i> are significant threats.</p> <p>8.3. Solid waste management –</p> <p>b) Building contractors should be made aware of the necessity to dump any building rubble at approved off-site facilities (Belfast).</p> <p>c) The Environmental Control Officer should search surrounding ecologically sensitive vegetation to check whether building contractors are dumping any building rubble on site, and if they are, then immediate steps must be taken to clean the area and prevent future dumping.</p> <p>d) Penalties should be levied on any contractor who does not comply.</p> <p>8.4. Fauna</p> <p>a) Construction teams must, as a contractual obligation, not be allowed to enter surrounding untransformed vegetation.</p> <p>b) Any evidence of poaching must be followed up by the Environmental Control Officer, and where possible, perpetrators should be prosecuted under the Mpumalanga Nature Conservation Act</p> <p>8.5. Soil erosion -</p> <p>a) All topsoil removed during clearing of roads and housing footprints should be stockpiled for later use such as landscaping gardens and / or rehabilitating disturbed areas. Stockpiling must not take place within any drainage lines.</p> <p>b) Any steep road surfaces should have water-traps and drainage furrows constructed in order to direct water off the</p>	Contractor / ECO	<p>Initial site preparation Weekly monitoring</p> <p>Initial site preparation Weekly monitoring</p> <p>Initial site preparation Weekly monitoring</p>
		Contractor / ECO	
		Contractor / ECO	

	<p>road as quickly as possible</p> <p>c) Cut-off drains diverting storm water around the perimeter of the development should be professionally designed to handle expected run-off and prevent erosion</p> <p>d) Outflow from cut-off drains and storm water diversions should be attenuated sufficiently to prevent erosion of receiving environment</p>	Contractor / ECO	<p>Initial site preparation</p> <p>Weekly monitoring</p>
9. <u>Materials Management</u>	<p>9.1. Borrow material</p> <p>a) The use of gravel and / or sand from borrow / gravel pits must adhere to all applicable legislation in terms of authorisation and permits</p> <p>9.2. Stockpiling</p> <p>a) Stockpiles should not be situated such that they obstruct natural water pathways.</p> <p>b) Stockpiles should not exceed 2m in height unless otherwise permitted by the Contractor (in consultation with the ECO).</p> <p>c) If stockpiles are exposed to windy conditions or heavy rain, they should be covered either by vegetation or cloth, depending on the duration of the project.</p> <p>d) Stockpiles may further be protected by the construction of berms or low brick walls around their bases.</p> <p>e) Stockpiles should be kept clear of weeds and alien vegetation growth by regular weeding.</p> <p>9.3. Handling Hazardous Materials</p> <p>a) All concrete mixing must take place on a designated, impermeable surface.</p> <p>b) No vehicles transporting concrete to the site may be washed on site.</p> <p>c) Lime and other powders must not be mixed during excessively windy conditions.</p> <p>d) All substances required for vehicle maintenance and repair must be stored in sealed containers until they can be disposed</p>	<p>Contractor / Engineer</p> <p>Contractor</p> <p>Contractor / ECO</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Prior to construction</p> <p>As necessary</p> <p>Monitor daily</p> <p>As necessary</p> <p>As necessary</p> <p>Monthly checks</p> <p>Continuous</p>

	<p>of / removed from the site.</p> <p>e) Hazardous substances / materials are to be transported in sealed containers or bags.</p> <p>f) Spraying of herbicides / pesticides should not take place under windy conditions and must comply with OHSAs specs and other chemical handling laws.</p> <p>g) The emergency numbers should be consulted should any accidents / spillages of hazardous substances and / or materials take place. The Project Manager is to outline an emergency plan for dealing with accidents / spillages of hazardous materials. This statement must be handed to the Contractor.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Continuous</p> <p>As necessary</p> <p>Continuous</p> <p>Continuous</p> <p>Initial set-up / As necessary</p>
<p>10. <u>Waste Management</u></p> <p><i>Definition:</i> <i>"Refuse" refers to all construction waste (such as rubble, asphalt millings, cement bags, waste cement, timber, cans, other containers, wire and nails), household and office waste.</i></p>	<p>10.1. General waste management</p> <p>a) Refuse must be placed in the designated skips / bins which must be regularly emptied. These should remain within demarcated areas and should be designed to prevent refuse from being blown out by wind.</p> <p>b) In addition to the waste facilities within the construction site, provision must be made for waste receptacles to be placed at intervals along the work front.</p> <p>c) Littering on site is forbidden and the site shall be cleared of litter at the end of each working day.</p> <p>d) Recycling is to be encouraged by providing separate receptacles for different types of waste and making sure that staff are aware of their uses.</p> <p>10.2. Waste Disposal</p> <p>a) Solid</p> <p>i.) Where necessary, dedicate a storage area on site for the</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Continuous</p> <p>Continuous</p> <p>Daily</p> <p>Continuous</p>

	<p>collection of construction waste.</p> <p>ii.) Unless otherwise specified by the Project Manager, remove stored domestic waste to the nearest registered solid waste disposal facility (Belfast).</p> <p>iii.) Ensure that solid waste is transported properly, avoiding waste spills en-route.</p> <p>iv.) No solid waste may be burned on site</p> <p>b) Liquid</p> <p>i.) Any chemical toilets used on site shall be cleaned regularly and waste disposed of by a registered waste contractor.</p> <p>c) Hazardous</p> <p>i.) Hazardous waste disposal must be carried out by an approved waste Contractor. Waybills for this should be provided.</p> <p>ii.) A sump (earth or other) must be created for concrete waste. This is to be de-sludged regularly and the cement waste is to be removed to a tip site as approved by the local municipality.</p> <p>iii.) Collect any hazardous waste in receptacles located on a drip tray on site pending disposal.</p> <p>iv.) Retain waste oils and batteries for recycling by the supplier wherever possible.</p> <p>v.) Regularly dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site.</p> <p>vi.) Contain chemical spills, and arrange for cleanup / control by the supplier, or by professional pollution control personnel.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Project manager</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Before construction begins</p> <p>On a weekly basis</p> <p>Continuous</p> <p>As necessary</p> <p>Monitor weekly</p> <p>Continuous</p> <p>Monitor weekly</p> <p>Monitor daily</p>
<p>11. <u>Social Impacts</u></p> <p><i>Regular communication between the Contractor and</i></p>	<p>a) Contractor's activities and movement of staff to be restricted to designated construction areas.</p> <p>b) Construction must be limited to normal working hours (07h00 – 17h00).</p> <p>c) Should the construction staff be approached by members of the public or other stakeholders, they should assist them in</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Continuous</p> <p>Continuous</p> <p>Continuous</p>

<p><i>Interested and Affected Parties (I&AP's) – especially the relevant neighbours and downstream users is important for the duration of the contract.</i></p>	<p>locating the Contractor, or provide a number on which they may contact the Contractor.</p> <p>d) Appropriate notification signs must be erected to warn the public of the dangers of the construction site.</p> <p>e) The conduct of the construction staff when dealing with the public or other stakeholders shall be in a manner that is polite and courteous at all times.</p> <p>f) Disruption of access for local tenants of adjacent businesses must be minimised and must have the Engineer's/Project Manager's permission</p> <p>g) The Contractor is to inform neighbours in writing of disruptive activities at least 24 hours beforehand. This can take place by away approved of by the I&AP's (especially the adjacent homes) and the Contractor.</p> <p>h) Any complaints received from the public during the construction period must be attended to as soon as possible and addressed to the satisfaction of all concerned.</p> <p>i) Contractor must take measures to discourage labourers from loitering.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Prior to construction</p> <p>Continuous</p> <p>Continuous</p> <p>At least 24 hours prior to the activity taking place</p>
<p>12. <u>Crime, safety and security</u></p>	<p>a) The implementation of adequate and appropriate fencing and/or barriers between the site and adjoining properties and developments must be undertaken, to ensure sensitivity to adjoining businesses and their properties, particularly during construction phases. The fences, once erected have to be checked and maintained.</p> <p>b) The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act, 1993 (Act No.85 of 1993) and the National Building Regulations.</p> <p>c) The contractor must supply his own security arrangements for the construction site.</p> <p>d) Ensure the contact details of the police or security company</p>	<p>Contractor / Project manager</p> <p>Contractor</p>	<p>Once-off and monitored weekly</p> <p>Daily</p>

	<p>and ambulance services are available on the site.</p> <p>e) Ensure that the handling of equipments and materials is supervised and adequately instructed.</p> <p>f) Limit access to the construction site only to the workforce.</p> <p>g) Do not allow the movement of public within the development site by posting notices at the entrance gates.</p>	<p>Contractor</p> <p>Contractor</p>	<p>Once-off; continuous monitoring</p> <p>Continuous</p>
13. <u>Noise Pollution</u>	<p>a) Unless otherwise specified by the Project Manager, normal work hours will apply (i.e. from 07h00 to 17h00, Mondays to Saturdays).</p> <p>b) No loud music is permitted on site.</p> <p>c) Noise from labourers to be controlled</p> <p>d) Noise suppression should be applied to all construction equipment</p> <p>e) If noise levels at the boundaries of the site exceed 7dB above ambient levels, then the local health authorities are to be informed.</p> <p>f) Notify adjacent landowners of after-hours construction work and of any other activity that could cause a nuisance.</p> <p>g) Respond to community complaints with regard to noise generation, taking reasonable action to eliminate and/or minimise the impact.</p> <p>h) Where complaints cannot be addressed to the satisfaction of all parties, then the Contractor will, upon instruction by the Project Manager, provide an independent and registered Noise Monitor to undertake a survey of the noise output levels. Recommendations to reduce noise to legislated levels must be implemented.</p>	<p>Contractor/ Project Manager</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor/ Project manager</p>	<p>Continuous</p> <p>Continuous</p> <p>As necessary</p> <p>As necessary</p> <p>As necessary</p> <p>As necessary</p> <p>As necessary</p>
14. <u>Visual Impacts</u>	<p>a) Rubble and litter must be removed every two weeks or more often as the need arises and be disposed of at a registered landfill.</p> <p>b) Lighting on the construction site should be pointed downwards</p>	<p>Contractor</p>	<p>Bi-weekly or as necessary</p> <p>Continuous</p>

	<p>and away from oncoming traffic.</p> <p>c) Cluster construction activities on site</p> <p>d) Cordon off construction site with shade cloth if necessary</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>As necessary</p> <p>As necessary</p>
15. <u>Archaeological Artefacts</u>	<p>a) Construction personnel must be sensitised to the requirements of the South African Heritage Resources Act (SAHRA).</p> <p>b) The grave yards (as indicated in the Heritage report) must be clearly marked as “no go” areas.</p> <p>c) Should any material of cultural or archaeological significance be encountered during construction, all activities must cease immediately and SAHRA must be informed accordingly.</p> <p>d) Artefacts can only be moved once a permit is obtained from SAHRA.</p> <p>e) Should any activity be planned for the historical buildings on-site (those older than 60 years), the relevant permits and authorisation needs to be applied for according to SAHRA.</p>	<p>Contractor/ ECO</p> <p>Contractor/ ECO</p> <p>Contractor/ ECO</p> <p>Specialist</p> <p>Contractor/ ECO</p>	<p>As necessary</p> <p>Prior to construction</p> <p>As necessary</p> <p>As necessary</p> <p>As necessary</p>
16. <u>Site Clean-up and rehabilitation</u>	<p>a) All structures are to be removed from site.</p> <p>b) The area that previously housed the construction site is to be checked for spills of substances such as oil, paint etc. and these should be cleaned up.</p> <p>c) All hardened surfaces within the construction site area should be ripped, all imported materials removed, and the area shall be top soiled and regressed</p> <p>d) The Contractor must arrange the cancellation of all temporary services.</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Project completion</p> <p>Project completion</p> <p>Project completion</p> <p>Project completion</p>
17. <u>Traffic</u>	<p>a) Construction vehicles should use the main road through Dullstroom, and main access gate to site; except the six stands at the upper dam, where access will be via the</p>	<p>Contractor</p>	<p>Daily</p>

	<p>secondary access.</p> <p>b) As far as possible, attempts should be made to ensure that high construction-related road usage coincides with low flow periods.</p>	Contractor	Daily
SECTION E: OPERATIONAL PHASE			
<p>1. <u>Site management</u></p>	<p>A maintenance plan for the estate must be developed with regard to maintaining roads, buildings, perimeter fencing, cleaning, fire and game management, etc. in order to ensure that they are kept presentable and in good working order.</p>	Management	Once-off, monitoring regular
<p>2. <u>Performance evaluation and record keeping</u></p> <p><i>To provide guidance during self-performance evaluations of the operation</i></p>	<p>a) Compile a checklist applicable to the site and the needed permits from the aspect register and the legal requirements specified and ensure that it is completed once a year. The checklist should typically include all identified aspects (as provided in the above document).</p> <p>b) During this evaluation specific attention should be given to the effectiveness of the EMP's and other proposed mitigation measures.</p> <p>c) Ensure that all information obtained from changed process etc. is relayed to all the applicable documents</p>	<p>Management</p> <p>Management</p> <p>Management</p>	<p>Annually</p> <p>Annually</p> <p>When necessary</p>
<p>3. <u>Eradication of alien floral species</u></p>	<p>a) The use of alien invasive plants for landscaping is prohibited, and a long-term management plan for the eradication and control of existing alien invasive plants should be implemented.</p> <p>b) It is recommended that after the alien plant species are removed, the natural grass or indigenous vegetation from the area be allowed to cover the bare areas where the alien vegetation used to be.</p>	<p>Management / Individual owners</p> <p>Management / Individual owners</p>	<p>Once-off, monitoring regular</p> <p>Once-off, monitoring regular</p>

<p>4. <u>Erosion</u></p>	<p>a) The stormwater system, especially the discharge points, must be inspected and damaged areas must be repaired if required</p> <p>b) Litter blocking the stormwater system must be removed.</p> <p>c) Regular maintenance of the stormwater system must be undertaken. This should include removal of blockages, and monitoring of stability of stormwater structures to prevent any signs of erosion.</p>	<p>Management</p> <p>Management</p> <p>Management</p>	<p>Continuous, bi-annual monitoring</p> <p>Bi-weekly</p> <p>Bi-weekly, especially during rainy seasons</p>
<p>5. <u>Water quality</u></p>	<p>a) Any damages to the sewage system must be repaired immediately</p> <p>b) The stormwater system, especially the discharge points, must be inspected and damaged areas must be repaired if required.</p> <p>c) Monitoring of the quality of the water should be done quarterly and sent to DWAF.</p>	<p>Management</p> <p>Management</p> <p>Management/ Specialist</p>	<p>Monitor regularly</p> <p>Continuous, bi-annual monitoring</p> <p>Quarterly</p>
<p>6. <u>Ecological Monitoring</u></p>	<p>a) Regular removal of alien species</p> <p>b) Removal of any litter</p> <p>c) Monitoring of stormwater entering the system [It is recommended that the stormwater management systems be designed in such a way that the natural flow regime (velocity of the water) of the wetlands are not exceeded by 50% in the event of 1:10 year flood to prevent the possibility of erosion in the wetland].</p>	<p>Management / Specialist</p> <p>Management Specialist</p>	<p>Continuous, bi-annual monitoring</p> <p>Continuous</p> <p>Annually</p>
<p>7. <u>Waste management</u></p>	<p>a) Domestic waste must be disposed of by an approved method (to Belfast).</p> <p>b) Sufficient litterbins should be placed at strategic points.</p> <p>c) Hazardous waste must be disposed of at an official registered site, or be removed by registered waste</p>	<p>Management</p> <p>Management</p> <p>Management</p>	<p>Once-off, monitor continuously</p> <p>Once-off, continuous</p> <p>Monitor continuously</p>

	<p>contractors.</p> <p>d) Potentially hazardous materials include empty containers of pesticides, chemicals, and oil. Such containers must be disposed of at an appropriate landfill site, approved for the disposal of hazardous materials.</p>	Management	As required
8. <u>Crime & Safety</u>	<p>a) Perimeter fencing, gates, etc. need to be checked and maintained.</p> <p>b) Sufficient lighting (energy saving devices must be implemented) needs to be provided.</p>	Management Management	Weekly Once-off

Appendix G: Other information

Appendix G: Other information
Annexure A: Record of Decision Jejane 16/1/2 – 105



LIMPOPO PROVINCE
ENVIRONMENTAL AFFAIRS
ENVIRONMENTAL IMPACT ASSESSMENT SECTION
P.O. Box 217, Polokwane, 0700
Corner Dorp and Suid Streets, Polokwane, 0699
Tel: 015-295 9300/1/2 Fax: 015-295 5015/819 Cell: 083 443 5749

ENQUIRIES: MELINDA RODGERS

FAX TRANSMISSION

TO: Peter Velcich / Mandy vd. Westhuizen
ADDRESS: km Riet & houw h.A

Tel./FAX NO: (012) 346 1289 TEL NO: _____
PAGES: 6 (including cover sheet) DATE: 11/09/2002

Attached, please find Environmental Authorisation
for Pt 1 Antwerpen

Regards.

Please advise this office if any part of this transmission is not clear or missing

M. Rodgers



Limpopo

PROVINCIAL GOVERNMENT

Cnr. Suid & Dorp Street
P.O. Box 217
Polokwane
0700
Tel: (015) 295 9300
Fax: (015) 295 5819

Environment - EIA Unit
Ref No: 16/1/2 - 105
Enq: Melinda Rodgers

van Riet & Louw Landscape Architects
P. O. Box 36723
MENLO PARK
0102

Tel/Fax: (012) 346 1289

For Attention: Peter Velcich / Mandy van der Westhuizen

Re: ENVIRONMENTAL AUTHORISATION

By virtue of the powers delegated by the Minister in terms of Section 28 (a) of the Environmental Conservation Act, 73 of 1989, the Department of Finance and Economic Development hereby, in terms of Section 22 of the Act, authorises -


Proposed private resort upgrade on a shareblock basis, with a further 14 guesthouses and supporting infrastructure on Ptn 1 of the farm Antwerpen 60 KU.

The authorisation is valid for 5 years, the expiry date being the date corresponding with the date on which the Environmental Authorisation was signed, in 2007.

Enclosed please find the Record of Decision and the conditions under which the application is approved.

All interested and/or affected parties registered for this project have to be notified of the decision and the conditions it is subject to, within 14 days from the date on which the Record of Decision was signed.

Formal appeals can be lodged with the Honourable Member of the Executive Council Mr. T. MUFAMADI. Such appeals should be lodged within 30 days from the date on which the Record of Decision was signed.


Senior Manager: Scientific Services
For HEAD OF DEPARTMENT

09/09/2002
Date

DEPARTMENT OF FINANCE AND ECONOMIC DEVELOPMENT



Limpopo

PROVINCIAL GOVERNMENT

46 Hans van Rensburg Street
Private Bag X9486
Polokwane
0700
Tel: (015) 298 7000
Fax: (015) 295 7010

RECORD OF DECISION

This is the record of decision in terms of Section 22 of the Environmental Conservation Act, 1989 with regard to the undertaking of the activities described below as required in GNR 1182, read with GNR 1183, both of 5 September 1997.

Reference Number: 16/1/2 - 105

Brief description of the project:

Proposed private resort upgrade on a shareblock basis, with a further 14 guesthouse sites and supporting infrastructure on Ptn 1 of the farm Antwerpen 60 KU. The 14 sites chosen taking into account existing access, practicality and aesthetic quality.

Location: The farm is located approximately 6 km north east of Hoedspruit, within the Uhlametsi Vienna Inkonkomi Conservancy. The development area lies on the western extremity of the Antwerpen farm boundary, where it abuts the existing Vienna Game Reserve, where a similar development exists.

Co-ordinates:

Applicant: Antwerpen No 4 (Pty) Ltd
P. O. Box 077
FONTAINEBLEAU
2032

Contact person: James R. Thomson
Contact Number: (011) 782 6256

Consultant: Peter Velcich
P. O. Box 36723
MENLO PARK
0102

Tel/Fax: (012) 346 1289

Site Visit: Conducted by M. Rodgers on 2002/06/04.

DECISION:

Approval of the application subject to the conditions provided below

- Conditions:**
1. Compliance with the applicable standard conditions which are attached.
 2. This authorisation refers only to the development proposal as specified and described in the Scoping Report compiled by van Riet & Louw Landscape Architects dated July 2002.

- 2.1 Any other activity listed in GN R 1182 in terms of Section 21 of the Environmental Conservation Act (ECA), No 73 of 1989 which has not yet been addressed in this report, is not covered by this authorisation, and must comply with the requirements of the Act and GN R 1183.
3. All interested and/or affected parties, identified or registered for this project have to be notified of the decision and the conditions it is subjected to, within 14 days from the date on which the Record of Decision was signed.
4. Detailed measures included in the Scoping Report for mitigation and Environmental Impact Management during construction must be strictly adhered to in order to make the development as environmentally friendly possible. Applicable measures must be included in contractual agreements or specifications to make it binding on contractors. Any conditions listed below serves to highlight some issues and does not limit mitigation for this specific project to these conditions. The management of the Conservancy may attain stricter conditions, providing it still complies to the conditions of the ROD.
5. The Department of Water Affairs and Forestry's policy on a sequential approach of waste prevention, waste minimisation, re-use, recycling and only then waste discharge or land disposal, must be implemented. All solid waste must be removed to a recognised/licenced waste disposal site. No solid waste may be disposed of at the site. Storage of solid waste on site, until such time as it is be disposed of, must be in an acceptable manner.
6. Implementation of water saving devises must be encouraged where possible.
7. The septic tank system must be constructed according to acceptable engineering design. Any reasonable measures must be taken to prevent wastewater overflowing from any wastewater disposal system.
8. Sewer sludge removed from any disposal system must be removed and disposed of according to the requirements of any relevant laws and regulations.
9. Measures must be implemented to ensure that drinking water is not contaminated by french drain systems and that quality requirements are met.
10. The clearing of groundcover for construction purposes must be initiated in a controlled manner to minimise the potential of dust and accelerated erosion from occurring and to enhance the aesthetics of the area. Rehabilitation of disturbed areas must also be ongoing to prevent the erosion of soils into any watercourse during storm events.

11. Only indigenous botanical species should be considered for any landscaping. Only suitable herbicides, as recommended by applicable specialist while appropriately registered, are allowed in weed control exercises. These must be managed according to specifications and appropriately controlled.
12. Sections 35 & 36 of the National Heritage Resources Act, 1999, must be strictly adhered to.
13. If any tangible or intangible evidence of culturally significant material, graves or archaeological material is found all activity must cease on site and the South African Heritage Resources Agency (SAHRA) be informed.

Key factors for the decision:

1. The process that has been followed is adequate for this development.
2. Considerations in terms of conserving the integrity of the receiving environment was conducted in a manner ensuring it should not be jeopardised in any foreseeable way.
3. The development acts as trade-off, paying for land used for conservation purposes. It is adjacent to an existing viable similar development, but still remain in moderation.
4. Specialist soil analysis and archaeological investigation, indicates no constraints towards the suitability of the site for the proposed development.

Duration and date of expiry:

If construction does not commence within a period of 5 years, this authorisation will be invalidated. The expiry date in the year 2007 being the date corresponding with the date on which the Record of Decision was signed.

Appeal: A formal appeal can be lodged with the Honourable MEC, Mr. T MUFAMADI within thirty days from the date on which the Record of Decision was signed.

Issued by: **Dr. W. G. Knill**
General Manager: Environment.


.....
Dr. W. G. KNILL

9.9.02
.....
DATE

STANDARD CONDITIONS FOR EIA AUTHORISATIONS

Project: proposed private resort upgrade on a shareblock basis, with a further 14 guesthouses and supporting infrastructure on Ptn 1 of the farm Antwerpen 60 KU.

File No: 16/1/2 - 105

- 1.1 This authorisation refers to the specified project referred to above and described in the Record of Decision.
- 1.2 Changes in the project resulting in significant environmental impacts are only permissible if approved in writing by the department.
- 2.1 The department must be notified, within 30 days, of change of ownership/project developer. Conditions established in the record of decision must be made known to the new owner/developer and are binding on the new owner/developer.
- 2.2 The department must be notified of any change of address of the owner/developer.
3. Proof of compliance with the conditions described in the record of decision must be forwarded to the department one week prior to the commencement of construction or operation of the development (as appropriate).
4. Solid waste must be disposed at a site, or in a manner, approved by the Department of Water affairs and Forestry.
5. One weeks notice must be given to the department before commencement of construction activities.
6. One weeks notice must be given to the department before commencement of operation.
7. The owner/developer must notify the authority within 24 hours if any condition of the permit is not adhered to.
8. Records relating to the compliance/non-compliance with the conditions of the authorisation must be kept in good order. Such records must be made available to the department within 7 days of written request by the department for such records.
9. Non-compliance with, or any deviation from, the conditions as set out in this authorisation constitutes a failure in compliance with the authorisation. Such failure in compliance is regarded as an offense and will be dealt with in terms of Sections 29,30 and 31 of the Environmental Conservation Act (Act No. 73 of 1989), as well as any other appropriate legal mechanisms. In addition; the authorisation may be withdrawn on thirty days notice under section 22(4).

Appendix G: Other information
Annexure B: Maruleng Local Municipality – Waste Removal Accounts



MARULENG

MUNICIPALITY

VAT No.: 4620198384
All correspondence to be addressed to the Municipal Manager.

(015) 793-2409

FAX (015) 793-2341

627, Hoedspruit 1380

Website: www.maruleng.gov.za

Permit Mail



SOUTHAFRICA

CHEQUE PAYMENTS

Detach this portion and attach to your cheque, mail to abovementioned address or place in cheque box in the rates hall.

JEJANE GAME FARM SHARE BLOCK
P O BOX 894
HOEDSPRUIT
1380

"VALUATION ROLL 2012-2016 OUT FOR PUBLIC COMMENTS UNTIL 01 JUNE 2012"

"RATES POLICY 2012-2013 OUT FOR PUBLIC COMMENTS UNTIL 26 MAY 2012"

This account is payable in full on, or before the due date. Should it be outstanding after the due date these services will be disconnected without further notice.

MARULENG LOCAL MUNICIPALITY

TAX INVOICE

ACCOUNT DATE	ERF NO.	ACCOUNT NO.	DATE	CLIENT VAT NO.	TAX INVOICE NO.	
21 MAY 2012	FARM-00000001-0-0147	0008002793	21 MAY 2012		0008002793201205	
STREET NAME & NUMBER		LAND AREA	MARKET VALUE	DEPOSIT		
PTN 1 OF THE FARM ANTWERPEN 1			1,515,100.00	0.0		
METER NO	METER TYPE	OLD READING	NEW READING	READING DATE	CONSUMPTION	
1						
2						
3						
4						
5						
6						
7						
8						
DATE	CODE	DESCRIPTION	UNITS	TARIFF	VALUE	
14/05/2012	008888	Opening Balance			3,208.39	
21/05/2012	000903	PAYMENT - THANK YOU			4,052.93-	
21/05/2012	000903	RATES GENERAL REBATE	1515100.000 @	.00960	1,212.08	
21/05/2012	000825	ADD REFUSE	1.000 @	828.85000*	848.46-	
	009030	VAT			828.85	
					116.04	
+	120 DAYS	90 DAYS	60 DAYS	30 DAYS	CURRENT	TOTAL DUE
	0.00	0.00	0.00	0.00	463.97	463.97



0008002793

EAYS PAY

BANKING DETAILS

NAME: MARULENG MUNICIPALITY
BANK: STANDARD BANK
ACCOUNT NUMBER: 033355487
BRANCH CODE: 052752
REFERENCE: YOUR ACCOUNT NUMBER

ACCOUNT NO. 0008002793

TOTAL DUE: 463.97

NAME: JEJANE GAME FARM SHARE BLOCK

TOTAL DUE ON OR BEFORE:

11/06/2012



MARULENG

MUNICIPALITY

VAT No.: 4620198384
All correspondence to be addressed to the Municipal Manager.

(015) 793-2409

FAX (015) 793-2341

627, Hoedspruit 1380

Website: www.maruleng.gov.za

Permit Mail



SOUTH AFRICA

JEJANE GAME FARM SHARE BLOCK
P O BOX 894
HOEDSPRUIT
1380

please note that all tariffs will be changes on the next account of July 2012, as it will be the beginning of our financial period. This account is payable in full on, or before the due date. Should it be outstanding after the due date these services will be disconnected without further notice.

MARULENG LOCAL MUNICIPALITY

TAX INVOICE

ACCOUNT DATE	ERF NO.	ACCOUNT NO.	DATE	CLIENT VAT NO.	TAX INVOICE NO.	
29 JUN 2012	FARM-00000001-0-0147	0008002793	29 JUN 2012		0008002793201206	
STREET NAME & NUMBER		LAND AREA	MARKET VALUE	DEPOSIT		
PTN 1 OF THE FARM ANTWERPEN 1			1,515,100.00	0.0		
METER NO	METER TYPE	OLD READING	NEW READING	READING DATE	CONSUMPTION	
1						
2						
3						
4						
5						
6						
7						
8						
DATE	CODE	DESCRIPTION	UNITS	TARIFF	VALUE	
20/06/2012	008888	Opening Balance			463.97	
02/07/2012	000903	PAYMENT - THANK YOU			463.97-	
02/07/2012	000903	RATES GENERAL REBATE	1515100.000 @	.00960	1,212.08	
02/07/2012	000825	ADD REFUSE	1.000 @	828.85000*	848.46-	
	009030	VAT			828.85	
					116.04	
+	120 DAYS	90 DAYS	60 DAYS	30 DAYS	CURRENT	TOTAL DUE
	0.00	0.00	0.00	0.00		1,308.51
					1,308.51	



0008002793

EAYS PAY

BANKING DETAILS

NAME: MARULENG MUNICIPALITY
BANK: STANDARD BANK
ACCOUNT NUMBER: 033355487
BRANCH CODE: 052752
REFERENCE: YOUR ACCOUNT NUMBER

ACCOUNT NO. 0008002793

TOTAL DUE: 1,308.51

NAME: JEJANE GAME FARM SHARE BLOCK

TOTAL DUE ON OR BEFORE:

20/07/2012

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, Steven Henwood declare that I –

- (a) act as the independent environmental practitioner in this application;
- (b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- (c) do not have and will not have a vested interest in the proposed activity proceeding;
- (d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- (f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (h) will keep a register of all interested and affected parties that participated in a public participation process; and
- (i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.



Signature of the Environmental Assessment Practitioner:

V&L Landscape Architects

Name of company:

17/08/2012: