Draft Scoping Report

for the Upgrade of the Hans Hoheisen Wildlife Research Station, on portion 2 of the Farm Kempiana 90 KU, Mpumalanga

April 2010

Prepared for submission

to:

DEA

by:

V&L LANDSCAPE ARCHITECTS

HANS HOHEISEN WILDLIFE RESEARCH STATION

ENVIRONMENTAL SCOPING REPORT

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

MDEDET reference number
12/12/20/1820

Prepared by:

On behalf of:

University of Pretoria

29th April 2010

Prepared for Approval By
Department of Environmental Affairs (National)

(For official use only)

File Reference Number:						
Application Number:						
Date Received:						

V&L Landscape Architects
Tel: 013 – 744 3759
Fax: 013 – 744 3759
Email: craig@vrl.co.za
Document Compiled by: V&L Landscape Architects

APPLICATION INFORMATION

DATE OF SUBMISSION 29th April 2010

LOCATION: Portion 2 of the Farm Kempiana 90 KU.

PROPONENTS: ***University of Pretoria***

CONSULTANT:

V&L Landscape Architects
Physical Address:
75 Melkweg,
Steiltes,
Nelspruit
1213
Postal Address:
P O Box 26696
STEILTES
1213
Tel: (013) 744-3759
Fax: (013) 744-3759
Cell 1: 082-7447-153 E-Mail: craig@vrl.co.za

CONTACT PERSON: Craig Gebhardt

CREDENTIALS: BSc. Hons. (Environmental Science)

REPORT DESIGNATION: Environmental Impact Assessment: **Draft Scoping Report**

DECISION MAKING AUTHORITY: Department of Environmental Affairs: Sensitive Environments
Department of Environmental Affairs: Waste Management

TYPE OF APPLICATION: Environmental Authorisation
Requirement in terms of Waste Licence Application

Activities falling Under NEMA: Environmental Management:

No R386 of 2006

1(d) resorts, lodges, hotels or other tourism and hospitality facilities in a protected area contemplated in the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);

15 The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long

No R387 of 2006

2 Any development activity, including associated structures and infrastructure, where the total area of the development area is, or is intended to be, 20 hectares or more

Activities falling Under NEMA: Waste Management:

No R781 of 2009

3(2) The storage including the temporary storage of hazardous waste at a facility that has the capacity to store in excess of 35m3 of hazardous waste at any one time, excluding the storage of hazardous waste in. Lagoons

3(3) The storage including the temporary storage of general waste in lagoons.

3(11) The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.

3(18) The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity

3(19) The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.

4(1) The biological, physical or physico-chemical treatment of hazardous waste at a facility that has the capacity to receive in excess of 500 kg of hazardous waste per day.

4(4) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.

4(5) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.

4(6) The treatment of hazardous waste in lagoons.

4(8) The incineration of waste regardless of the capacity of such a facility.

4(11) The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).

DEPT. REFERENCE NO.: 12/12/20/1820

Table Contents

1 EXECUTIVE SUMMARY

INTRODUCTION

V&L Landscape Architects, as Independent Environmental Consultants and Impact Assessors, have been appointed by the University of Pretoria, to facilitate the Integrated Environmental Management (IEM) procedure, for the proposed upgrade to Hans Hoheisen Animal Research Institute, on portion 2 of the Farm Kempiana 90 KU.

The proposed site of the activity falls within the footprint of the existing Hans Hoheisen Wildlife Research Station

The Hans Hoheisen Wildlife Research Station comprises the land (a 37 ha portion of land), the various buildings, and services on the property.

The intention of the project is to refurbish, launch, and manage the Hans Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans frontier conservation area (TFCA), the Greater Limpopo Trans Frontier Park and local communities.

Refurbishing and upgrading the facilities at the Hans Hoheisen Wildlife Research Station (including the accommodation currently on the premises) are being undertaken with the intention of

- Establishing the Station as a research platform to be utilized by the University of Pretoria in association with local and international partners, and other interested parties
- To facilitate the development of research programmes and projects that will provide information to
    - Support the management of diseases at the interface (wildlife / livestock / humans) that have a negative effect on the development of trans frontier parks and conservation areas, given the impact of these diseases and their control on land-use options for development and poverty reduction, particularly of the rural poor
    - Assist with the development of human resources, infrastructure and technology with emphasis on Detection, Identification and Monitoring (DIM) of diseases
    - Provide information that will facilitate harmonisation of policies, and the improvement of varying standards and competencies of participating countries within the context of DIM

The project is to be undertaken in a phased approach. The first phase is currently underway and involves the renovation of existing structures and infrastructure. This activity commenced mid 2009 and is scheduled for completion by August 2010. The nature of this refurbishment is such that is falls outside the ambit of the EIA regulations.

The planned Phase II development will encompass all proposed activities that are listed in terms of NEMA under the EIA regulations (R386 and R387) and NEM:Waste Act (59 of 2008). A preliminary design plan has been developed to guide the project, however the final design and layout will be informed by specialist inputs and be responsive to issues identified during the EIA process.

ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENTS

The development is listed in terms of Government Notices R386 of 2006 and R781 of 2009 under Chapter 5 of the National Environmental Management Act, Act 107 of 1998 and therefore requires an Environmental Impact Assessment (EIA) to be undertaken. A Scoping and Environmental Impact Assessment is to be undertaken. The proposed development involves listed activities, as defined in terms of Government Notices R386 of 2006 and R781 of 2009 under Chapter 5 of the National Environmental Management Act, Act 107 of 1998. Listed activities are activities, which may have potentially detrimental impacts on the environment and therefore require environmental authorisation from the relevant authorising body. The proposed development occurs within a formally protected area and thus the National Department of Environmental Affairs DEA, both Waste Management and Environment is the responsible regulatory authority.

The purpose of scoping is to define the boundaries of the environmental impact assessment – both geographically and in terms of which aspects of the activities will be investigated – to proceed to a full EIA.

This document outlines the scoping process followed, describes the proposed development and the context in which it will take place, and identifies the potential environmental impacts.

It represents the initial identification of key issues or concerns as highlighted by the relevant authorities, Interested and/or Affected Parties (I&AP) and professional judgement of the Environmental Assessment Practitioner. Scoping allows for the identification of the anticipated impacts, particularly those, which require specialist investigations. The results of the specialist studies, a full assessment of the impacts and proposed alternatives will form part of the EIR Report.

GENERAL PROJECT DESCRIPTION

The Hans Hoheisen upgrade project will result in the refurbishment and ultimately launch the Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans-frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities.

Broadly, the activities that trigger the EIA process are waste related and are as follows:

Waste Sources

1. Animals will be held within defined biosafety zones at HHWRS. Predators will be housed in predator cages, while ungulates will be housed in bomas and pens. Since research on specific diseases will form a core function of the station, it is assumed that animal bedding and enclosures may be contaminated with pathogens. The soiled bedding from cages and enclosures may be considered a solid hazardous waste stream. Animal carcasses are also considered to be a hazardous solid waste stream. All water emanating from enclosures and cages will form a liquid hazardous waste stream.

2. Veterinary research will also be undertaken in a defined necropsy room within the biosafety zone.

   Animal tissues containing potential pathogens will be handled in this facility. Animal tissues that are no longer required for veterinary research will form a solid hazardous waste stream. Washing of equipment and the necropsy room will generate a potentially hazardous liquid waste stream.

3. Multi-disciplinary laboratories exist at the facility where various laboratory activities will take place.

   These activities include: determination of the efficacy of scheduled drugs, microbiological procedures, serological procedures and PCR. Empty containers and other solid medical waste form a hazardous waste stream. Water from the laboratories forms a hazardous liquid waste stream.

   (These Waste streams may contain various pollutants and potentially hazardous pathogens.)

Waste storage

Liquid waste is anticipated to be treated on a continuous basis as it is produced. It will not be stored.

Solid waste may be temporarily stored until sufficient quantities are generated to allow for disposal. In this regard a dedicated temporary storage facility is proposed where medical waste can be safely stored. This is anticipated to be a purpose designed secure storeroom.

Waste treatment;

Waste treatment will be determined by the type of waste generated, for example:

1. Chemicals
2. Biological material such as carcasses, tissues and fluids
3. Sharps
4. Reagents
5. Pathogens
6. Laboratory disposables

Management of waste will be in accordance of the practices determined by bio-security level two (2) operations (BSL2). BSL2 regulations are attached as an addendum.

At this point the following waste treatment technologies are being investigated for wastestreams emanating from the upgraded facility:

Solid Wastes:*

- Incineration in an on-site incinerator
- Alkaline hydrolysis of organic matter
- Storage and offsite disposal
- Combinations of the above technologies

*General waste is excluded as this will be sorted for recycling at the Southern African Wildlife College and disposed of under contract at a registered waste site.

*Liquid Wastes **:*

- Chemical treatment in a series of tanks
- Biological treatment in a series of tanks
- Thermal treatment – incineration
- Combinations of the above technologies

**Domestic sewerage will be treated by existing septic tanks and soak-aways. The capacity of these systems will be confirmed.

Waste disposal
This will be undertaken in accordance with BSL2 standards.

This will include incineration of various types of waste on the premises as well as the disposal of treated (pathogen free) liquid effluent to an evaporation pond. There is not anticipated to be any discharge of liquid effluent to the environment.

APPROACH TO THE PROJECT

The application for the proposed upgrade will entail a Scoping and EIA Process, as per the National Environmental Management Act: NEMA, 1998 (Act No. 107 of 1998) as amended and the Environmental Impact Assessment Regulations of 2006. The listed activities pertinent to the project will be discussed in more detail in Section 6.

This Scoping Report represents the initial identification of key issues or concerns as highlighted by the relevant authorities, Interested and/or Affected Parties (I&APs) and professional judgement by the Environmental Assessment Practitioner. Scoping allows for the identification of the anticipated impacts, particularly those, which require specialist investigations. The results of the specialist studies, a full assessment of the impacts and proposed alternatives will form part of the forthcoming EIA Report.

PUBLIC PARTICIPATION

An advertisement was placed in the local news paper (The Lowvelder) on Tuesday, 30th March 2010.

Site notices were placed in prominent positions, for the public to view. Signs were placed at the access control boom adjacent to the Manyeleti Entrance Gate as well as at the Hans Hoheisen Entrance. See **Appendix C, Annexure C** Viz. Site Notice Photographs.

Following the notification of the proposed development to Interested and Affected Parties (I&APs) a meeting with the immediate neighbours and interested and affected parties was held. This Public Participation Meeting was held on the 12th April 2010 and will be a tool for engaging with

adjacent landowners, Community Based Organisations (CBOs) and Non-Governmental Organisations (NGOs). The comments/issues and questions raised at the Meeting can be viewed in section 11 of this document and are also appended as **Appendix C; Annexure D** of this Report.

The Draft Scoping Report will be made available for public review from 22nd April 2010 to 22nd May 2010. Comments on the draft report will be incorporated into the Final Scoping Report for submission to DEA. The Draft EIR will then be compiled and submitted to the public for comment.

Should further public meetings be required they will be held in August 2010 to present the findings of the Draft EIR. Registered I&APs would be invited to such a session.

IDENTIFICATION OF KEY ENVIRONMENTAL ISSUES

A baseline description of the environment was gathered through visual inspections of the site and its surroundings, desktop studies as well as preliminary specialist findings. I&AP input is also used to inform these issues.

Broad Environmental issues that may be addressed in the Environmental Impact Assessment Report include the following:

Likely KEY concerns during EIA:
Impact to sensitive environments
Disturbance to geology/soil – Gabbro (vertic clay soils, low erodibility, poor drainage)
Loss of vegetation – Gabbro Grassy Bushveld – ***Least threatened***
Displacement or destruction of fauna – potential for protected species (e.g. baboon spider, plated lizard). Impacts on species movement.
Visual impact on KNP/Orpen and surrounding properties o Damage to sense of place
Noise impact on KNP/Orpen and surrounding properties o Damage to sense of place
Smell impact on KNP/Orpen and surrounding properties o From accumulation of dung and faeces o From treatment of wastes
Disease risk o Risk to wildlife in adjacent Protected Area o Risk to humans
Waste treatment issues o Contamination of soil and ground water o Odours o Fallout from incinerator

- No fatal flaws currently identified on site
- Area is to a large degree free from impacts – this will change due to new footprints and fences
- No heritage concerns identified

Issues raised during public participation

Additional to the above mentioned impacts a number of concerns have been raised by various I&AP's. Most of these concerns are captured in the broad categories listed above.

Smell and Smoke

- Incineration of lab waste (cultures and medical supplies) was likely to produce far greater odour and smoke risks, than animal tissue this should be monitored and controlled strictly.
- Laboratory cultures should first be deactivated with formalin in the laboratory, prior to incineration to reduce risks. Using alkaline could also be further investigated.
- The quantity of medical wastes such as syringes and containers should not be under-estimated as these accumulate rapidly.
- Waste treatment plants and evaporation ponds must be purpose designed and built to deal with a specific type of waste.

Waste Treatment

- Monitoring points be put in place to check water quality in the Timbavati to the west and the drainage to the south east. Various monitoring points may be necessary.
- Design should ensure that water entering the evaporation pond is free of odours. This should be a design criterion.
- Flies and blow flies were likely to be an important management issue that would need to be carefully controlled. If not controlled this could impact on the facility and it neighbours. Flytraps are available to address this problem and must be brought into the management plan. Manure should also be managed and controlled. It could be composted. Note should be taken not to introduce Ivermectin-contaminated manure into the compost as this will kill certain species, particularly dung beetles.
- Predator manure would have to be disposed of – probably through incineration.
- Carnivore feed brought in from outside should be managed in conjunction with the State Veterinarian. This is likely to generate ample waste in terms of bone material – this must be planned for. Boma design must also make provision for the cold storage of predator feed.

Impact to Sensitive Environments

- The transport of feed such as Lucerne, must be properly controlled and managed to ensure that seeds are not introduced into the Protected Areas.
- Predator feed is likely to be sourced from the community in the form of donkeys however, the option of surplus meat from elephant should be considered if KNP proceeds with elephant management in the form of culling.

Visual and Noise Impact

- Key concerns surrounding the placement of the tented accommodation. This will have a direct visual and acoustic impact on neighbour. This is of particular relevance given the potential change to sense of place.
- The neighbours must be kept informed through clear communication channels, so that reporting of noise incidents can be properly managed. This applies to both construction and operational phases.

Security

- Access control and security must be addressed during the construction and operation phase. This has been a problem during the Phase I development, with workers wondering freely through the bush to Orpen Camp and onto neighbouring properties.

As a result of the above-mentioned anticipated impacts, the specialist studies as listed below, will be undertaken during the EIA phase of the process. Such specialist studies assist with the development of an understanding of the processes involved and the potential positive and negative impacts of the proposed upgrade on both the social and biophysical environments:

» Engineering/Specialist design reports
  - Extensive studies into the various applicable waste treatment technologies will be undertaken by specialists in the field, and will inform the design of the proposed facilities.
  - A revised facility layout will be developed and evaluated.

» Ecological Survey and Sensitivity Mapping
  - A study incorporating minimum requirements as prescribed by MTPA/SANPARKS, for activities which may have a detrimental effect on the environment will be carried out.
  - Within this report, ecological units will be delineated based on the soils and vegetation.
  - Species lists will be compiled for mammals, avifauna and reptiles with particular focus on threatened species. Sensitive faunal communities will also be mapped.

This survey will be carried by an independent appointed specialist.

CONCLUSION

The EIA report will assess the impacts of each of the activities as well as ascertain the cumulative impacts of the upgrade in its entirety. The EIA Report will outline the necessary mitigation measures to be put in place in order to minimise negative impacts and optimise positive impacts.

2 ABBREVIATIONS/DEFINITIONS

EMP	Environmental Management Plan, "means an environmental management plan in relation to identified or specified activities envisaged in Chapter 5 of the Act and described in regulation **34"**
EIA	Environmental Impact Assessment, "in relation to an application to which scoping must be applied, means the process of collecting, organising, analysing, interpreting and communicating information that is relevant to the consideration of that application"
EIR	Environmental Impact Report
DEA	Department of Environmental Affairs
DWAF	Department of Water Affairs and Forestry
DME	Department of Minerals and Energy
SAHRA	South African Heritage Resources Agency
ECO	Environmental Control Officer – 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
I&AP	means an interested and affected party contemplated in section 24(4)(d) of the Act, and which in terms of that section includes – (a) any person, group of persons or organisation interested in or affected by an activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity;
The Act	**"** means the National Environmental Management Act,1998 (Act No. 107 of 1998)"
RoD	Record of decision
EAP	Environmental Assessment Practitioner as defined in section 1 of the Act

3 ENVIRONMENTAL ASSESSMENT PRACTITIONER

V&L Landscape Architects, as Independent Environmental Consultants and Impact Assessors, have been appointed by the University of Pretoria, to facilitate the Integrated Environmental Management (IEM) procedure, for the proposed upgrade to Hans Hoheisen Animal Research Institute, on portion 2 of the Farm Kempiana 90 KU.

V&L Landscape Architects			
Contact Person:	**Craig Gebhardt**		
Postal Address:	**P.O. Box 26696, Steiltes, Nelspruit**	Postal Code:	**1213**
Tel. No.:	**(013) 744 3759**	Fax. No.:	**(013) 744 3759**
Cell. No.:	**082 744 7153**	e-mail:	**craig@vrl.co.za**
Professional Affiliations:	**International Association for Impact Assessment (IAIA)**		
Credentials:	**BSc. Hons (Environmental Science)**		

4 PROPOSED ACTIVITY

4.1 DESCRIPTION AND BACKGROUND

The Hans Hoheisen upgrade project will result in the refurbishment and ultimately launch the Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans-frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities.

Broadly, the activities that trigger the EIA process are waste related and are as follows:

Waste Sources

1. Animals will be held within defined biosafety zones at HHWRS. Predators will be housed in predator cages, while ungulates will be housed in bomas and pens. Since research on specific diseases will form a core function of the station, it is assumed that animal bedding and enclosures may be contaminated with pathogens. The soiled bedding from cages and enclosures may be considered a solid hazardous waste stream. Animal carcasses are also considered to be a hazardous solid waste stream. All water emanating from enclosures and cages will form a liquid hazardous waste stream.

2. Veterinary research will also be undertaken in a defined necropsy room within the biosafety zone.

   Animal tissues containing potential pathogens will be handled in this facility. Animal tissues that are no longer required for veterinary research will form a solid hazardous waste stream. Washing of equipment and the necropsy room will generate a potentially hazardous liquid waste stream.

3. Multi-disciplinary laboratories exist at the facility where various laboratory activities will take place.

These activities include: determination of the efficacy of scheduled drugs, microbiological procedures, serological procedures and PCR. Empty containers and other solid medical waste form a hazardous waste stream. Water from the laboratories forms a hazardous liquid waste stream.

(These Waste streams may contain various pollutants and potentially hazardous pathogens.)

Waste storage
Liquid waste is anticipated to be treated on a continuous basis as it is produced. It will not be stored.

Solid waste may be temporarily stored until sufficient quantities are generated to allow for disposal. In this regard a dedicated temporary storage facility is proposed where medical waste can be safely stored. This is anticipated to be a purpose designed secure storeroom.

Waste treatment;
Waste treatment will be determined by the type of waste generated, for example:

1. Chemicals
2. Biological material such as carcasses, tissues and fluids
3. Sharps
4. Reagents
5. Pathogens
6. Laboratory disposables

Management of waste will be in accordance of the practices determined by bio-security level two (2) operations (BSL2). BSL2 regulations are attached as an addendum.
At this point the following waste treatment technologies are being investigated for wastestreams emanating from the upgraded facility:

Solid Wastes:*

- Incineration in an on-site incinerator
- Alkaline hydrolysis of organic matter
- Storage and offsite disposal
- Combinations of the above technologies

*General waste is excluded as this will be sorted for recycling at the Southern African Wildlife College and disposed of under contract at a registered waste site.

*Liquid Wastes **:*

- Chemical treatment in a series of tanks
- Biological treatment in a series of tanks
- Thermal treatment – incineration
- Combinations of the above technologies

**Domestic sewerage will be treated by existing septic tanks and soak-aways. The capacity of these systems will be confirmed.

Waste disposal
This will be undertaken in accordance with BSL2 standards.

This will include incineration of various types of waste on the premises as well as the disposal of treated (pathogen free) liquid effluent to an evaporation pond. There is not anticipated to be any discharge of liquid effluent to the environment.

Facility Layout
Hans Hoheisen wildlife Research Station will consist of an area broadly divided into five zones that will cover approximately 37 ha.

1. Public Access Zone
2. Accommodation Zone
3. Restricted Access - Animal Enclosure Zone
4. Restricted Access – Bio Safety Zone
5. Restricted Access – Industrial zone

The purpose of this broad zoning is to facilitate access control to restricted areas and to ensure that the station operates efficiently.

1. Public Access Zone

The public access zone will act as a primary buffer for the restricted access zone and is situated on Eastern portions of the property. (See Appendix A, Viz. Layout Plan).

This zone is accessed immediately from the entrance gate. While it is the lowest security level zone, it will still have strictly regulated access control. This is managed through the existing electronically controlled gate.

The following infrastructure is to be included within this zone.

- An access road controlled by access gate (existing)
- 6 visitors accommodation units (VIP use) and landscaping features such as berms (New infrastructure)
- General Office Space (Existing infrastructure) and the development of a canteen (New infrastructure).
- New/revised parking area (New infrastructure)

2. Accommodation Zone

The Accommodation zone is restricted to personnel and visiting scientists. It includes the existing accommodation facilities on the property and forms the southern and western buffer. (See Appendix A, Viz. Layout Plan).

- Student/Scientist Accommodation (existing infrastructure)
- Visiting Scientist permanent tented facility (new infrastructure)
- Permanent Staff Accommodation (3 existing and 1 new structure)

3. Restricted Access - Bio-safety Zone

As such the facility will be a quarantine facility. It will operate as a Biosecurity Level 2 or 3 facility. There are international rules and protocols which govern the design and operation of such facilities and these will most definitely apply to Hans Hoheisen both in its operation and in its design.

The bulk of the restricted zone will be situated on the northern portion of the site. (See **Appendix A**, Viz. Layout Plan).

The following infrastructure is planned or is currently located within this zone.

- Laboratories and necropsy room (Existing & Planned)
- New offices (new infrastructure)
- Access Road (new infrastructure)
- Solid waste temporary storage room (new infrastructure)
- Liquid Waste reticulation and treatment tanks (new infrastructure)
- Animal holding pens and cages (upgrade of existing infrastructure)

4. Restricted Access - Industrial Zone
The following infrastructure is planned or is currently located within this zone.

- Incinerator or other hazardous solid waste disposal technology (new infrastructure)
- Water treatment works

5. Restricted Access – Animal Enclosure Zone
- Animal holding pens, cages and bomas (new infrastructure)

4.1.1 DEVELOPMENT CONSUMPTION AND UTILITIES.

The construction phase of the activity is expected to produce waste streams that are in line with a facility upgrade of this nature. This will be quantified in the draft EIR. The management of construction waste streams will be dealt with in the EMP.

Electricity

The site has current linkage to existing power sources and preliminary indications show there is sufficient capacity to cope with the addition of all extra infrastructure and facilities.

In line with the principles of environmental sustainability and the current electricity climate in South Africa, the development will be designed to take cognisance of restrictions in power supply through National Demand Management. To this end the following principles will be considered:
- Energy efficient architecture and building design
- Incorporation of demand-side management into the upgrade.

A Standby Generator with change-over panel will be installed. Voltage fluctuation is a major problem and protection equipment must be installed.

The existing reticulation will be checked and tested. Where required the reticulation will be maintained or upgraded.

The electrical reticulation of the individual buildings will be checked as part of the upgrade or maintenance of the buildings

Water:

In line with the principles of sustainability, water efficiency will be encouraged and water usage predictions will be contained within the draft and final EIR document. The facility currently abstracts water from a borehole on the property. A second borehole is maintained as a backup source.

Waste:

Size of site and classification

The following approximations are provided, however these will be revised once the final design of the facility is complete. It should be noted that volumes indicated are based on the maximum levels anticipated.

The following is an extract from the initial Waste Licence application form submitted in terms of the NEM: Waste Act. This application form will be revised once the final design is complete and the EIA has been completed.

Size of facility for a waste management activity	Temporary storage of effluent = 50m² Evaporation pond = 400m² Incineration facility = 100m²
Area where the waste management activity takes place	Estimated total area for waste management activities = 600m²
Classification of facility in terms of the type and quantity of waste received	Facility for treatment of self generated waste. No externally generated waste will be treated. Effluent will be treated in closed system with no intended environmental outflows.

Estimated waste quantities

Hazardous waste	Non hazardous waste	Total waste handled (tonnes per day)
All water, out of laboratories that may contain pathogens, chemical and body fluids.		2000 litres per day
Water from bomas, pens and other holding facilities, where applicable.		2000 litres per day
Animal bedding – potentially pathogen soiled.		0.5 ton per day
Empty drug and chemical containers.		10 kg
All animal tissues, body fluids and other solids potentially contaminated with pathogens (necropsy waste).		Variable not more than 1.5 tonnes per day
Laboratory disposables, including animal tissues, body fluids (specimens), plastic, glass and metal containers (including sharps).		Included in the above (Necropsy waste)
	Office and domestic waste solid.	100 kg
	Office and domestic waste fluid.	1400 litres per day
	Office and domestic waste sewerage.	500 litres per day

Liquid waste:
It is anticipated that internal sewage reticulation will be joined to an existing septic tank and soak away system. Sewerage and waste water systems will be kept separate as the waste water system will have to deal with animal pathogens and will thus be purpose-designed to ensure effective treatment.

Waste water effluent from the laboratories and related infrastructure will be treated in a series of tanks to ensure that it is neutralised prior to being released to an evaporation pond. The system will be a closed system with no outflow to the environment.

Design of both the waste water and sewerage systems should ensure that water entering the evaporation pond, as well as air exiting the septic tank system is free of odours. This will be an important design criterion.

Solid waste:
Any solid construction waste will be stored and sorted in a demarcated area on site and when waste quantities are sufficient it will be trucked off site and disposed of at a licensed municipal landfill site. Any hazardous waste produced during the construction phase will be disposed of at a properly registered hazardous waste site. Permission will be sought from the local municipality in this regard.

Domestic waste will be managed by the Wildlife College, where waste is sorted and recyclables are stored to be recycled, while other waste is dumped in an approved waste site

Biological or chemical waste will have to be managed. This includes bedding and waste from the animal holding facilities, waste from laboratories, necropsies, and chemical waste from other experiments or tests.

A specialist will have to compile a solid waste management programme. This detailed design will be presented in the draft EIR

4.1.2 DEVELOPMENT INFRASTRUCTURE

The following issues have been identified during the scoping process and full detail on these will be published in the Draft EIR Document and made available for comment.

4.1.2.1 Bulk Services

- Access

There are four proposed access control points to the facility as highlighted in **figure 1**. Access A would serve as the main access control point to the property while access point B would give controlled access to students and residents into residential zone. Access points C & D would be a strictly controlled access point into the Restricted Access/Bio-safety Zone.

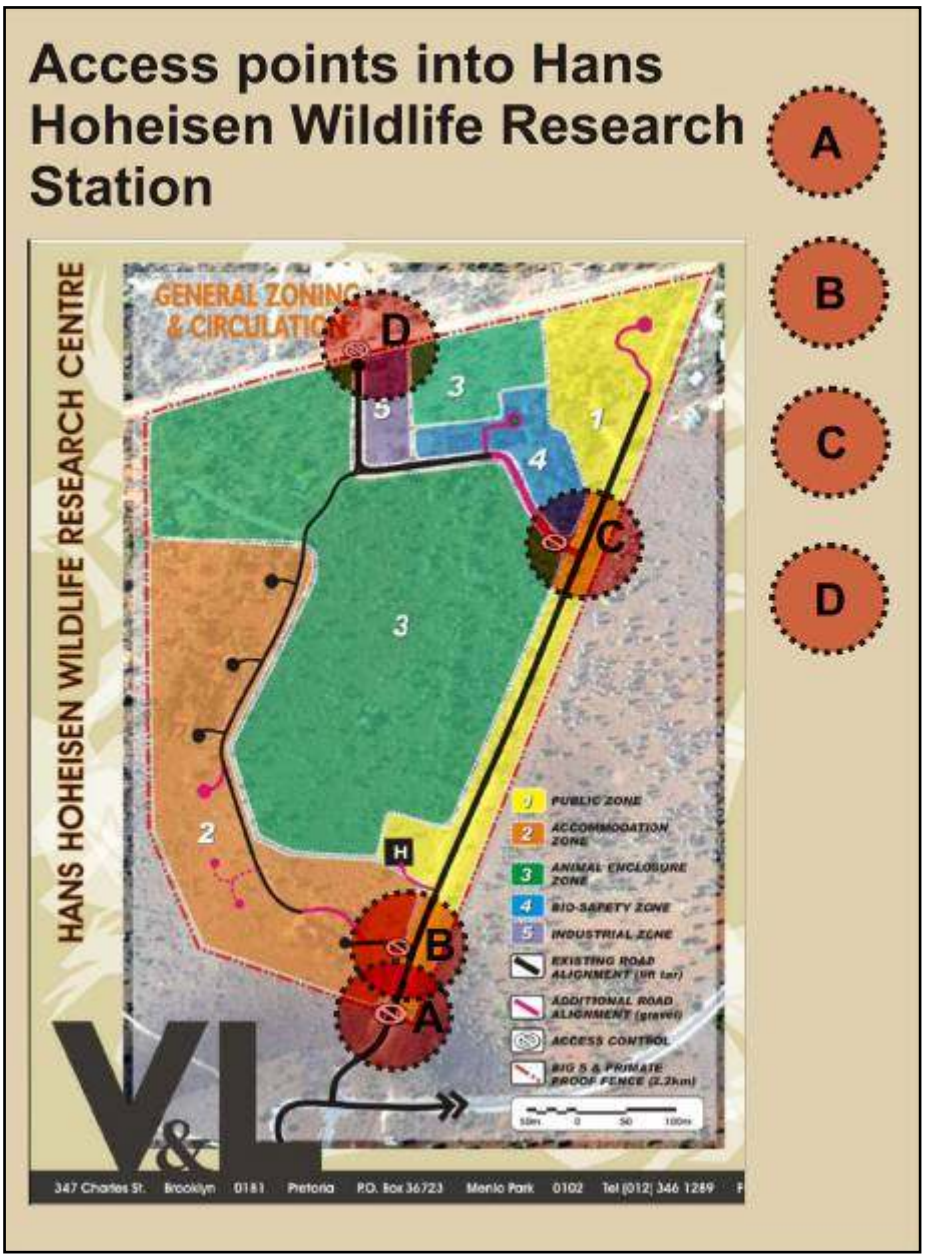


Figure 1

- Water

Bulk water supply will be provided by abstraction from a borehole on site. Details of this will be published in the final EIR document. This borehole is existing.

- Sewage

The project engineers are in the process of finalising sewerage design. It is however anticipated that on site sewerage treatment will take place in the form of septic tanks and soak a ways. This system is already in existence and preliminary indication show that it is capable of dealing with the additional volumes.

It is important to mention that sewerage and waste water systems will be kept separate as the waste water system will have to deal with animal pathogens and will thus be purpose-designed to ensure effective treatment.

Design of both the waste water and sewerage systems should ensure that water entering the evaporation pond, as well as air exiting the septic tank system is free of odours. This will be an important design criterion.

4.1.2.2 Internal Services.

Reference will be made to various documents while designing the articulation of all basic services.

The following documents will be used as prescribed:

- Guidelines for the provision of Engineering Services and Amenities.
- Guidelines for human settlements, Planning and Design – CSIR (Red Book).
- South African Bureau of Standards (SABS 1200/SANS 1200).

- Roads and Storm water.

» **Roads**

Internal road structures as well as roads used for access into the development will be properly articulated. The roads will have stabilised surfaces and take stormwater runoff into account.

Drainage will ensure that there is no large accumulation of runoff, but that it is channelled off the road at regular intervals so that it can infiltrate into the ground.

Further information as to the road construction and related topics will be published in the Draft EIR and made available for comment.

» **Storm water Reticulation**

Consideration of the storm water and its proper attenuation within the road network will be planned for. It must be noted that very little change to the current stromwater regime is expected. Additional structures are minimal and there will be little or no surface hardening or extensive hard landscaping.

- Water Reticulation

The quality of water supplied to HHWRS by exiting boreholes is very poor, and results in excessive calcification of geysers and pipes. The water is also very corrosive. Water reticulation will be installed to each new section within the Hans Hoheisen Research Station footprint. Existing water tanks and reticulation will be expanded and upgraded to incorporate demands of new infrastructure.

The following has relevance:

- Borehole yield capacities are to be tested so as to ensure existing boreholes can meet the expected water needs of the facility, and make sure that the borehole equipment does not exceed the capacity of the boreholes.
- Water is pumped to a central storage facility comprising 6 x 10 000 litre tanks.
- The water to be used for domestic purposes (human consumption and laboratory use) is purified by use of a reverse osmosis plant installed at the central storage facility. All water for livestock, cleaning purposes and fire fighting remains untreated.
- Water storage with enough holding capacity for approximately 48-hours is to be standard.
- All existing water pipelines (steel and other) to be tested and replaced if necessary with uPVC pipes.
- A fire pump system with fire hydrants in the technical/experimental area is installed.
- Booster pump on the water supply to the necropsy room

Water will be potable and subscribe to all necessary health standards. It is anticipated that water will be provided via boreholes situated on the property.

4.2 FEASIBILITY

The Hans Hoheisen Wildlife Research Station comprises the land (a 37 ha portion of land), the various buildings, and services on the property.

The intention of the project is to refurbish, launch, and manage the Hans Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans frontier conservation area (TFCA), the Greater Limpopo Trans Frontier Park and local communities.

Refurbishing and upgrading the facilities at the Hans Hoheisen Wildlife Research Station (including the accommodation currently on the premises) are being undertaken with the intention of

- Establishing the Station as a research platform to be utilized by the University of Pretoria in association with local and international partners, and other interested parties
- To facilitate the development of research programmes and projects that will provide information to
    - Support the management of diseases at the interface (wildlife / livestock / humans) that have a negative effect on the development of trans frontier parks and conservation areas, given the impact of these diseases and their control on land-use options for development and poverty reduction, particularly of the rural poor
    - Assist with the development of human resources, infrastructure and technology with emphasis on Detection, Identification and Monitoring (DIM) of diseases
    - Provide information that will facilitate harmonisation of policies, and the improvement of varying standards and competencies of participating countries within the context of DIM

The project is to be undertaken in a phased approach. The first phase is currently underway and involves the renovation of existing structures and infrastructure. This activity commenced mid 2009 and is scheduled for completion by August 2010. The nature of this refurbishment is such that is falls outside the ambit of the EIA regulations.

4.3 ALTERNATIVES IDENTIFIED

The role of alternatives is to find the most effective way of meeting the **need** and **purpose** of the proposal, either through enhancing the environmental benefits of the proposed activity, and or through reducing or avoiding potentially significant negative impacts.

The following alternatives have been identified and a short description is included:

4.3.1 NO DEVELOPMENT/STATUS QUO

If executed, the proposed no development/status quo would culminate in the existing facility remaining as it is. The site currently consists of areas where infrastructure has been in existence for a number of years and sections of open natural bush. Land surrounding the development is protected under the national parks act.

The facility as it stands is in need of an upgrade as technologies currently used as well as some of the infrastructure in place is of poor quality and is in a general state of disrepair. By implementing the “no development” option current demand for a world class, quality wildlife-disease research station will not be realised. The current facility is perfectly placed to carryout research involving the diseases of wildlife, humans, and livestock at an interface between a Trans Frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities. In exploring the possibility of a total relocation, the suitability of this site and the upgrade there of will be seriously compromised.

The option of implementing the “no development/status quo” is not considered viable.

We therefore request **exemption** from assessing location alternatives for the proposed project.

4.3.2 LOCATION

4.3.2.1 Development Location

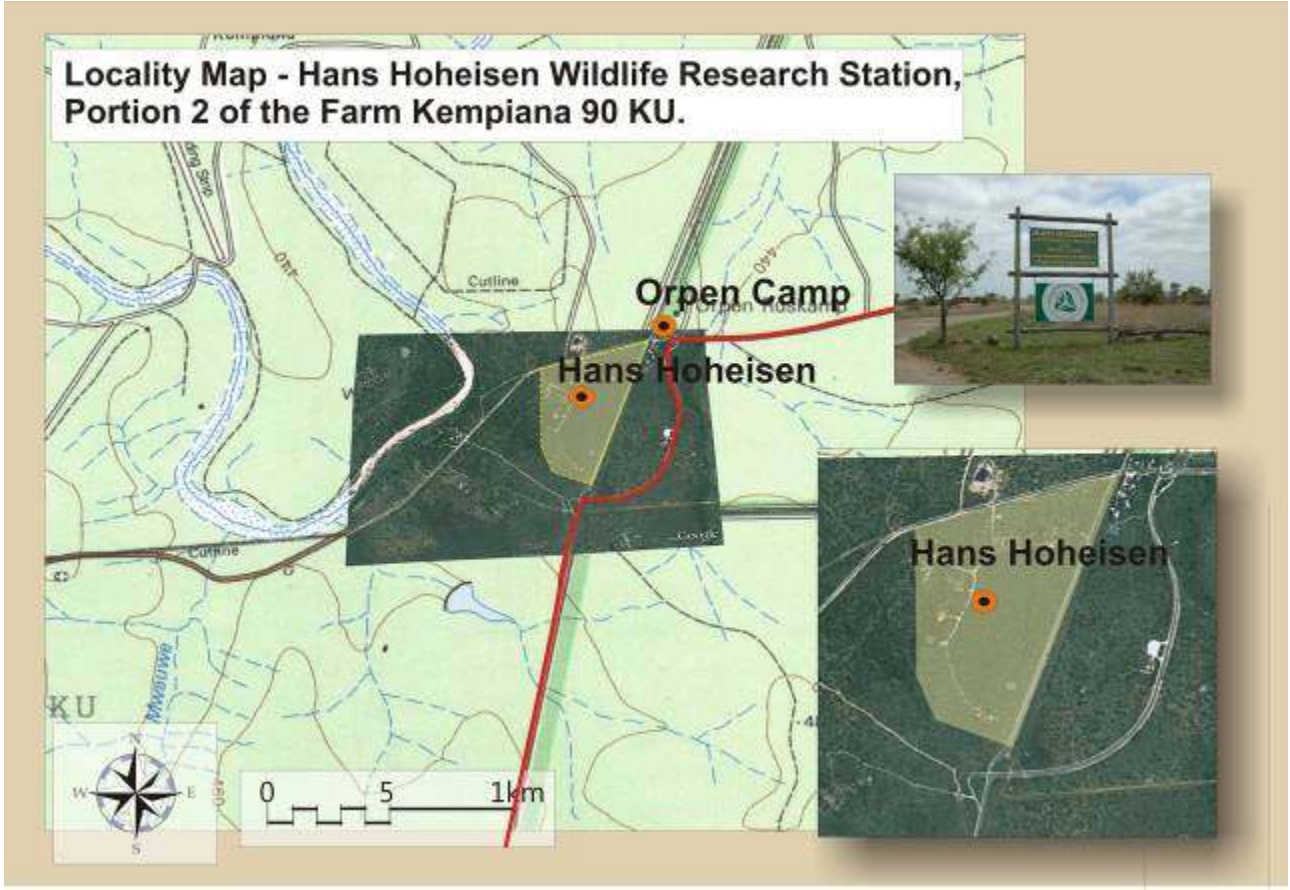


Figure 5.

The Hans /Hoheisen Research Station is situated, as indicated in the figure above, on portion 2 of the Farm Kempiana 90 KU, Mpumalanga. This development location is preferred for the following reasons:

4.3.3 DESIGN/LAYOUT

Alternative Site Layout 1 (Preferred).

Design of the upgrade layout has been considered in depth and as a result the most suitable layout (to date) for the development has been drafted. It may be necessary for further, careful re-working once interested and Affected Parties as well as ecological studies have been incorporated and taken cognisance of. These inputs will better inform the design process and possibly lead to small changes of the proposed upgrade layout.

The design deemed most pertinent at present can be viewed as **Appendix B, Annexure A** of this document.

4.3.4 TECHNOLOGY

The most modern of technologies will be used to ensure practical, cost effective and proper development of the project, while ensuring that environmental impacts are minimised.

This is most relevant when considering the waste management segment of the upgrade.

A waste engineering specialist will be appointed to undertake planning of waste treatment systems. During this planning process technology alternatives will be investigated in order to identify the most applicable options.

The following table indicates the broad alternatives in terms of each waste stream that have currently been identified for further investigation, however this table is by no means exhaustive and further alternatives will be added:

Technology	Waste Streams						
	Manure	Medical waste – containers, slides & sharps	Animal Tissue	Laboratory liquid waste & body fluids	Animal bedding & carnivore faeces	Boma wash water	Sterilised liquid effluent
Incinerator		√	√	√	√		
Alkaline Hydrolysis		√	√				
Chemical Sterilisation				√			
Biological treatment				√		√	
Composting	√		√				
Bio-digestor (biogas)	√				√		
Evaporation dams							√
Release to environment						√	√
Removal off site to registered facility		√	√	√	√		

5 THE STUDY AREA

5.1. BIO-PHYSICAL DESCRIPTION OF THE STUDY AREA.

The study area falls within the Gabbro Grassy Bushveld vegetation type as defined in the Vegetation of Southern Africa, Lesotho and Swaziland, (Ladislav Mucina and Michael C. Rutherford 2006).

The study area is evaluated against the "blueprint" for this vegetation type as detailed below.

5.2. DISTRIBUTION

Flats and hills mainly in the Kruger National Park in isolated patches from Orpen Camp in the north, southwards including Rooigras Vlakte (northeast of Skukuza) and some areas stretching from north of Pretoriuskop to around Afsaal in the south. Altitude 200–550 m.

5.3. GEOLOGY AND SOILS

Undisturbed State

The Gabbro Grassy Bushveld veld type closely follows the sinuous intrusions of the Timbavati gabbro (Mokolian Erathem). The unit is also mapped on surrounding potassic granite and gneiss of Archaen basement and the gneiss and migmatite of the Nelspruit Suite 9also Archaen) Dark vertic clay soils (20 – 50% clay) often swell and shrink. Loose rock is often present on the surface. Some shallow lithosols occur in places. Where gabbro is in contact with the adjacent granite, a mixed soil sometimes develops with a gabbro-derived A-horizon overlying a granite-derived B-horizon.

Current Status

The site constitutes sections where Gabbroid based geology gives rise to vertic clay soils that may exhibit signs of low erodibility and, poor drainage. Historic use of the site has resulted in disturbance to the soil horizons and structure of some sections of the site. The presence of hardened surfaces, infrastructure and human habitation within the site has resulted in a disturbance of soil structure in certain areas.

There are some sections of the site that exhibit characteristics of the undisturbed geology and soils state.

5.4. VEGETATION

Undisturbed State

Gabbro Grassy Bushveld constitutes open savanna with a dense grass cover (with dominants including *Themeda triandra*) with few scattered trees and shrubs. Sparser grass cover is encountered on shallow soils.

Current Status

The entire site varies between totally transformed and disturbed sections. There are also sections within the footprint that may be deemed undisturbed natural bush clusters. The site has a medium to low conservation status.

5.5. TOPOGRAPHY

Undisturbed State

The general physical geography and topography for the area within which the proposed development site falls, is a mix of open savanna and undulating landscapes. The area lies at an altitude of approximately 800 and 1600 meters above sea level.

Current Status

The proposed upgrade will take place within the existing footprint of the current Hans Hoheisen Research Institute. The area is generally flat with a slight rise and watershed running roughly from north to south mid way across the property.

5.6. CLIMATE

Summer rainfall, with dry winters. Mean Annual Precipitation (MAP) from about 500-650 mm. Generally a frost-free region.

5.7. CONSERVATION STATUS

Conservation Status of the Vegetation Type

Least threatened. Target 19%. Altogether 96% statutorily conserved in the Kruger National Park and the remainder is conserved in private reserves (Timbavati and Manyeleti). Very little is transformed and erosion is low.

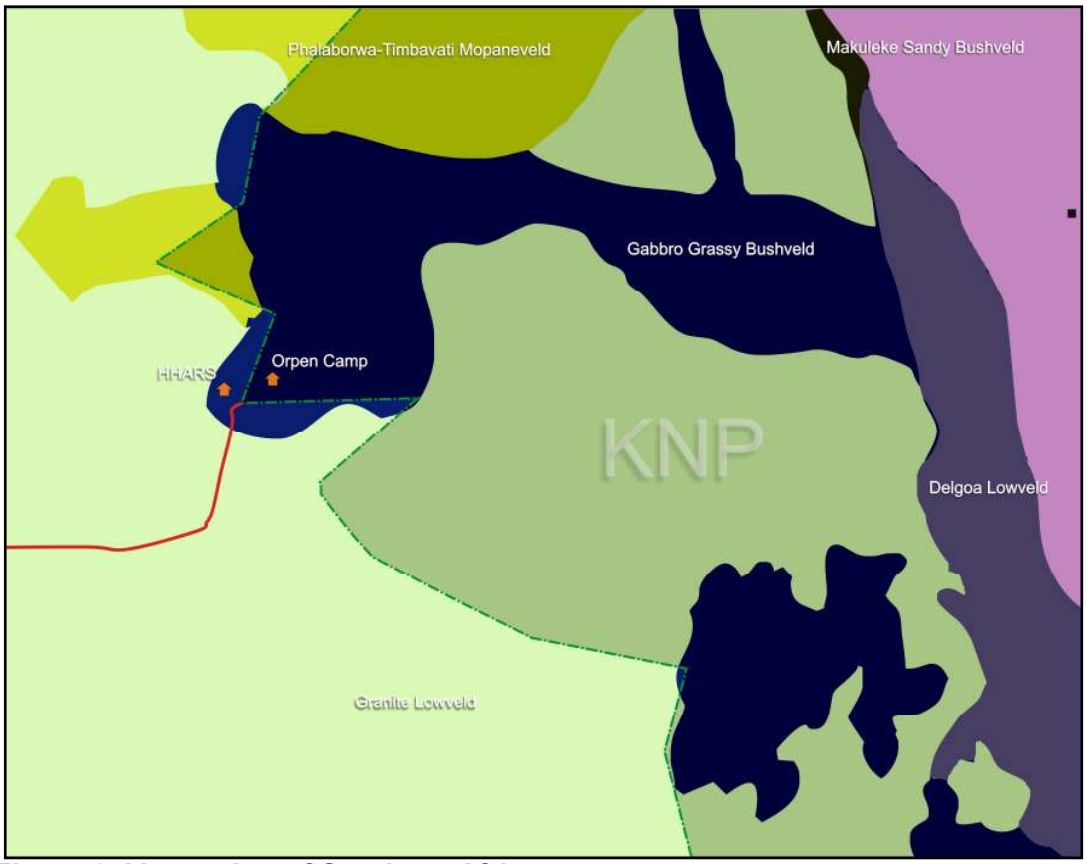


Figure 3: Vegetation of Southern Africa

Conservation Status of the Site
After completion of a basic desktop sensitivities scan it was concluded that the site has a medium to low rating as far as broad ecological sensitivity is concerned. It must be mentioned however that the occurrence of potentially endangered species within the footprint may raise the ecological sensitivity rating to that of medium to high. This rating will be re-evaluated with the input of various specialists.

With reference to the Mpumalanga Biodiversity Conservation Plan for the area it can be clearly seen that the development site falls within the Lowveld Bio-region; Savanna Biome and the Gabbro Grassy Bushveld veld type. This veld type is rated least vulnerable in terms of its general conservation status.

6 SOCIO-ECONOMIC ENVIRONMENT

6.1 INTRODUCTION

Hans Hoheisen is situated close to Orpen gate along the R531 that runs from Klasserie Town to Orpen Gate. For more detail in this regard you are referred to **Appendix A; Annexure A.** Viz. the Locality Map.

The area surrounding HHWRS is used for conservation purposes as well as tourism based operations integrally liked to conservation. A number of world renowned hospitality and tourism facilities operate around HHWRS.

Due to the prime position of the existing facility within this conservation conglomerate and the intention of the project being the elevation of the facility as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities, the project has the ability to add much valuable input into both the conservation, game farm and local environment.

Cognisance must however be taken of possible conflict with the adjacent landuse of ecotourism, particularly from visual, acoustic and smell impacts.

6.3 LAND USE CURRENTLY

At the present the site forms part of the Kempiana Contractual Park surrounded by the Kruger National park and within close proximity to the Timbavati and Manyeleti Reserves. The current use of the facility as a wildlife research station is in line with the existing land use.

7 INSTITUTIONAL ARRANGEMENTS AND PLANNING DOCUMENTATION

7.1 RELEVANT AUTHORITIES WITHIN THE STUDY AREA

All relevant authorities within the study area were invited to an initial departmental site meeting and subsequent interaction was engaged in. These authorities are included in a list below. Comment stemming from the initial phases of the public and departmental participation process are attached.

- Department of Environmental Affairs
- Mpumalanga Department of Economic Development, Environment and Tourism
- Bushbuckridge Local Municipality
- Department of Water Affairs
- Department of Health
- Mpumalanga Tourism and Parks Authority
- SANParks
- DAFF: State Veterinary Department

7.2 RELEVANT PLANNING DOCUMENTATION

It is important to evaluate the proposal in terms of relevant documents and planning guidelines applicable to the area. These include (but are not limited to) National Parks Act, Protected Areas Act.

8 LEGISLATION AND GUIDELINES

8.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (NEMA) AND NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (NEMWA)

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 R386 and R387) for which an EIA must be conducted.

This proposal has been identified as such a listed activity:

Activities falling Under NEMA: Environmental Management:

No R386 of 2006

1(d) resorts, lodges, hotels or other tourism and hospitality facilities in a protected area contemplated in the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);

15 The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long

No R387 of 2006

2 Any development activity, including associated structures and infrastructure, where the total area of the development area is, or is intended to be, 20 hectares or more

Activities falling Under NEMA: Waste Management:

No R781 of 2009

3(2) The storage including the temporary storage of hazardous waste at a facility that has the capacity to store in excess of 35m3 of hazardous waste at any one time, excluding the storage of hazardous waste in. Lagoons

3(3) The storage including the temporary storage of general waste in lagoons.

3(11) The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.

3(18) The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity

3(19) The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.

4(1) The biological, physical or physico-chemical treatment of hazardous waste at a facility that has the capacity to receive in excess of 500 kg of hazardous waste per day.

4(4) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.

4(5) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.

4(6) The treatment of hazardous waste in lagoons.

4(8) The incineration of waste regardless of the capacity of such a facility.

4(11) The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).

8.2 ANIMAL DISEASES ACT (ADA 35 OF 1984)

In terms of section 20 of the Animal Diseases Act certain investigations, experiments, diagnostic tests or research with, or manufacturing and evaluation of any products as listed in Section 20 will need a permit from the Director of Veterinary services.

The provisions of the Animal health Act regarding the control, transit, slaughter and disposal of disease infected carcasses should be considered.

An application for a permit must be submitted to the Department of Agriculture, Forestry & Fisheries, Directorate Veterinary Services.

8.3 NATIONAL ENVIRONMENT MANAGEMENT ACT (NO 107 OF 1998) (NEMA)

Sustainable development requires the consideration of all relevant factors including:

(i) that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions

2.1 The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

8.4 NATIONAL WATER ACT (NO 36 OF 1998) (NWA)

Section 22.2 of the Water Act states "A person who uses water (a) must use the water subject to any condition of the relevant authorisation of that use; (b) is subject to any limitation, restriction or prohibition in terms of this Act or any other applicable law (c) in the case of the discharge or disposal of water or water containing waste contemplated in section 21(f),(g), (h) or (j) must comply with any applicable waste standards or management practices prescribed under section 26(l)(h) and (i), unless the conditions of the relevant authorisation provide otherwise: (d) may not waste that water:

The National Water Act aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional or catchments level. The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways, which take into account:

(a). Meeting the basic human needs of present and future generation;
(b). Promoting equitable access to water;
(c). Redressing the results of past racial discrimination;
(d). Promoting the efficient, sustainable and beneficial use of water in the public interest;
(e). Facilitating social and economic development;
(f). Providing for growing demand for water use;
(g). Protecting aquatic and associated ecosystems and their biological diversity;
(h). Reducing and preventing pollution and degradation of water resources;
(i). Meeting international obligations;
(j). Promoting river safety;
(k). Managing floods and droughts.

8.5 AIR QUALITY ACT (AQA)

Under AQA, a list of activities which result in atmospheric emissions will be published. A minimum emission standard will be established in respect of a substance resulting from a listed activity and which requires an atmospheric emission licence before being commenced.

8.6 ENVIRONMENTAL PERMITTING REQUIREMENTS

Environmental permits will be required and must be obtained before construction may proceed.

Letters of agreement between service providers must be obtained.

8.7 NATIONAL HERITAGE RESOURCES ACT 25 OF 1999

The protection of archaeological and paleontological sites and material is the responsibility of a provincial heritage resources authority and all archaeological objects, paleontological material and meteorites are the property of the state. Any person who discovers archaeological or paleontological objects or material or a meteorite in the course of development must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

The Act identifies various activities that require the submission of an environmental impact assessment prior to provincial heritage resource authorities, if an evaluation of the impact of such development on heritage resources is not required in terms of any other legislation. The proposed development requires an HIA as it will involve changing the character of the site >5 000 m^2 (Section 38 of NHRA).

8.8 OTHER LEGISLATION

- Integrated Environmental Management (IEM)

9 ENVIRONMENTAL ISSUES, POTENTIAL IMPACTS AND MITIGATION MEASURES

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 and/or social. 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 society.

A number of issues have been identified during the scoping exercise.

The bio-physical issues identified include:

- Services *(Electricity, water, sewage and waste removal/treatment)*
- Access *(Access control through KNP)*
- Noise *(Construction and operational noise)*
- Visual *(Construction machinery as well as building design and placement parameters)*
- Ecological *(Occurrence of red data or sensitive fauna and flora within the proposed upgrade footprint)*

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 residential/estate 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.

10 METHODOLOGY FOR ASSESSING 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
	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

11 PUBLIC PARTICIPATION PROCESS

The public participation process to be conducted for this EIA began on the 12th April 2010 and will continue as an ongoing consultation with the competent authorities and I&AP's until RoD is issued and construction completed.

Figure 8 below will diagrammatically explain the proposed phases of public participation in the full EIA process.

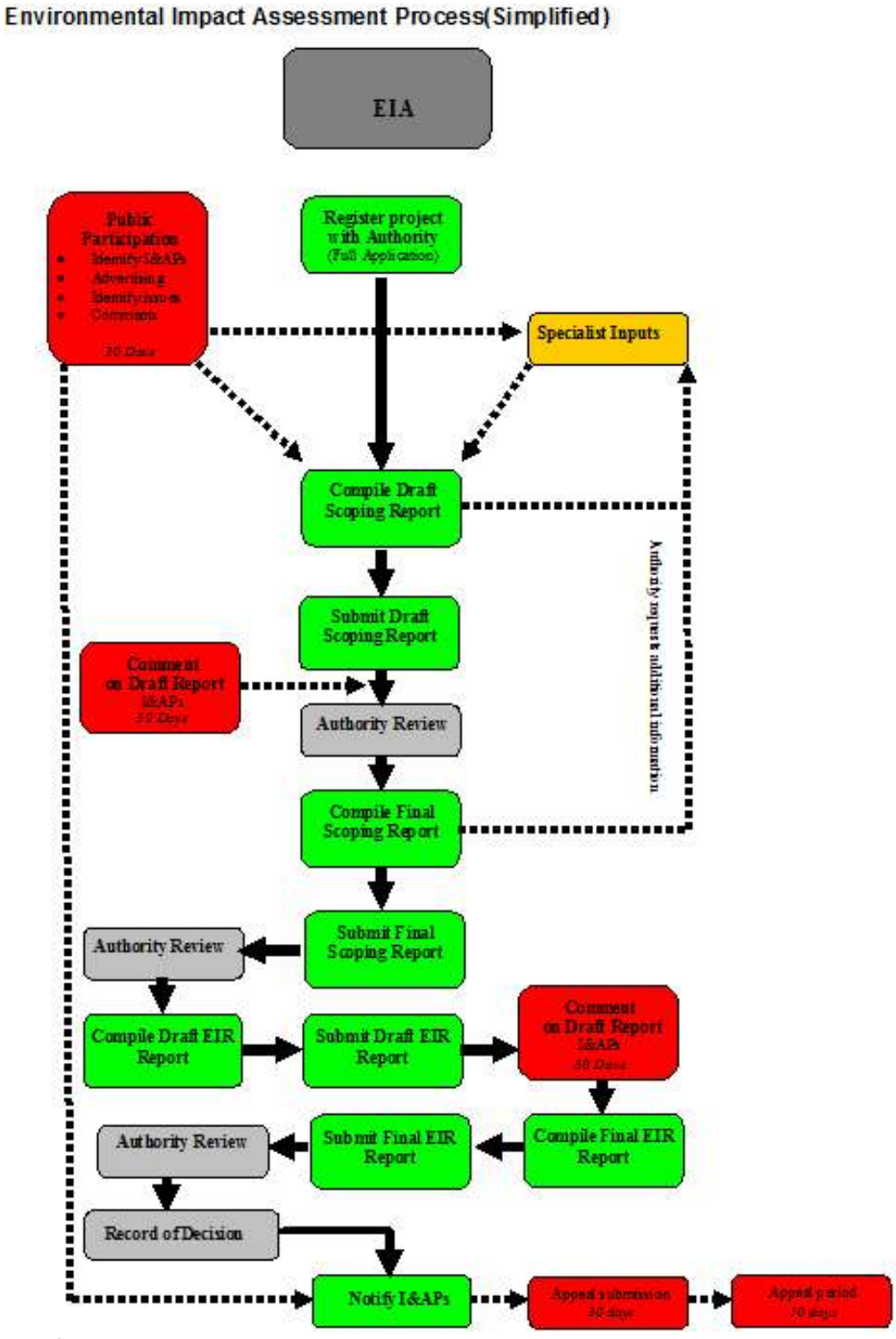


Figure 8

11.1 NOTIFICATION OF INTERESTED AND AFFECTED PARTIES (I&AP'S)

An advertisement was placed in the Lowvelder on the Tuesday, 30th 2010. (See **Appendix C, Annexure A** for a copy of the advertisement); and site notices were placed in prominent positions on and near the proposed site (See **Appendix C, Annexure C** for a copy of the site notice). A departmental site meeting was held on the 12th April 2010.

11.2 INTERESTED AND AFFECTED PARTIES IDENTIFIED

All I&AP's were identified. All were personally invited to a public meeting by facsimile or e-mailed invitations; a Background Information Document was circulated at both the public and Departmental meetings. All concerned Departments were notified by fax, e-mail and telephone of the site meeting. A Background Information Document was circulated to all identified I&AP's. See **Appendix C; Annexure B**.

11.3 ISSUES AND RESPONSES

Below is a list of the comments raised during the public and departmental meetings.

MINUTES OF THE EIA PUBLIC MEETING FOR THE PROPOSED PHASE II UPGRADE OF HANS HOHEISEN WILDLIFE RESEARCH STATION

Date: 12 April 2010
Revision Date:
Time: 14:00 pm
Venue: Hans Hoheisen Wildlife Research Station.

Attendance:

- Marie Watson (University of Pretoria)
- Nick Kriek (University of Pretoria)
- Francois Nel (Southern African Wildlife College)
- Almero Bosch (Timbavati Private Nature Reserve)
- Richard Burroughs (University of Pretoria)
- Lin-Mari de Klerk (DAFF)
- Björn Reininghaus (State Vet – Orpen)
- Roy Bengis (State Vet – Skukuza)
- Mark Bourn (MTPA – Manyeleti)
- Louis van Schalkwyk (University of Pretoria)
- Louis van der Merwe (Ikama Project Managers)
- Gert Meintjies (Hotgroup R&D technologies)
- Craig Gebhardt (V&L Landscape Architects – Environmental Consultant)

Apologies:

- Brent Pirrow – Adjacent Land owner
- Richard Sowrie (KNP Section Ranger)
- Rosinah Ndhambi (KNP Orpen Camp Manager)
- Allen Dibakoane (Department of Public Works)

1. INTRODUCTION

A public meeting was held to explain the proposed development planned for Phase II of the Hans Hoheisen Wildlife Research Station refurbishment project.

Craig Gebhardt from V&L welcomed everyone and explained the environmental impact assessment (EIA) process and the proposed public participation process.

Clarity was provided that Phase II of the project incorporated all the activities that would potentially trigger the need for an EIA while Phase I, which is currently underway, deals with renovations to existing structures only.

Craig also explained that the technologies proposed for Phase II had not been finalised and that the EIA process would be used to aid with the planning and final design.

Craig provided a brief overview of the proposed activities for Phase II. The presentation covered the material presented in the Background Information Document (BID).

The floor was then opened for questions from the public. The project team were available to provide information.

2. QUESTIONS & INPUT

Prof. Kriek
Explained that the facility was not an extension of the University of Pretoria (UP). It is being developed in partnership with UP, Peace Parks Foundation and MTPA. It will be a stand-alone research platform managed by the University of Pretoria. It will be utilised by numerous institutions. Note to be taken that this facility was functional since 1973 until its degeneration in the early 90's.

The facility will operate in the context of the Trans Frontier Conservation Areas (TFCA), with particular focus on infectious diseases and pharmacological research. The facility will be part of a research platform for various institutions to perform research, specifically aimed on the context of the TFCAs. Emphasis will be placed on Zoonoses (specifically the transmission of diseases between wildlife, livestock and humans.

As such the facility will be a quarantine facility. It will operate as a Biosecurity Level 2 or 3 facility. There are international rules and protocols which govern the design and operation of such facilities and these will most definitely apply to Hans Hoheisen both in its operation and in its design.

Prof Kriek also indicated that DAFF (Directorate of Veterinary Services) had stipulated conditions for the facility to operate. The facility would be governed by these.

The facility would only work with diseases that are endemic to the region. No foreign pathogens may be introduced. BSL2 and BSL 3 regulations would be applied to ensure that all measures are in place to contain pathogens within the environment.

Any work involving unusual pathogens will have to be approved and authorised by DAFF under strict conditions.

Craig Gebhardt
Opened the issue of the installation of a incinerator to the floor. Is an incinerator the appropriate technology for pathogen disposal? Do the I&APs have specific concerns about the use of an incinerator?

Dr Roy Bengis
Commented that modern incinerator technology was quite advanced and that he would anticipate the facility to utilise a diesel-driven incinerator with a primary and secondary combustion chamber. This type of incinerator produces very low emissions and odour due to the secondary combustion chamber.

He indicated that this type of incinerator was effective in dealing with all pathogens likely to be encountered, even anthrax. The risk of dispersion of pathogens into the atmosphere has been shown to be very negligible.

Dr Bengis also indicated that the incineration of lab waste (cultures and medical supplies) was likely to produce far greater odour and smoke risks, than animal tissue.

Laboratory cultures should first be deactivated with formalin in the laboratory, prior to incineration to reduce risks. Using alkaline could also be further investigated.

The quantity of medical wastes such as syringes and containers should not be under-estimated as these accumulate rapidly.

Waste treatment plants and evaporation ponds must be purpose designed and built to deal with a specific type of waste. This was agreed upon by the project engineer.

Dr Bengis also enquired whether the current septic tank system and soak-aways were sufficient and suggested that monitoring points be put in place to check water quality in the Timbavati to the west and the drainage to the south east.

Soil filtration is known to be an effective way to remove pathogens naturally – done by soil organisms. It should be acceptable to allow treated outflow from evaporation ponds to be discharged.

Mark Bourne
Note to be taken that numerous water abstraction boreholes are in the vicinity – Monitoring points may be necessary.

The possibility of a waste digester should be considered to reduce odours and provide biogas that could be utilised in the labs (or incinerator?).

Louis van der Merwe
Louis explained that the sewerage and waste water systems would be separate. The waste water system would have to deal with animal pathogens and would be purpose-designed to ensure effective treatment.

He mentioned that the current phase I would utilise a closed system that would entail off-site disposal. Phase II would entail on-site treatment. Effluent would be treated in a series of tanks to ensure that it was neutralised prior to being released to an evaporation pond. The system would be a closed system with no outflow to the environment.

Louis responded to a question of odour from the evaporation pond by saying that the design should ensure that water entering the evaporation pond is free of odours. This would be a design criteria.

Dr Bengis / Björn Reininghaus / Craig Gebhardt
The issue of investigating Alkaline Hydrolysis as an alternative method for neutralising pathogens was discussed. The State Vet in Nelspruit runs a small unit for disposing of dog carcasses. Bjorn agreed to provide more information to the Project Team.

This alternative will be investigated in the EIA.

Mark Bourne
Will the smell from animal bomas not attract predators to the area, away from other game viewing areas?

Dr Bengis responded that it was difficult to monitor this, but in his experience at Skukuza there was no noticeable effect.

The transport of feed such as Lucerne, must be properly controlled and managed to ensure that seeds are not introduced into the Protected Areas.

Dr Bengis
Flies and blow flies were likely to be an important management issue that would need to be carefully controlled. If not controlled this could impact on the facility and it neighbours. Flytraps are available to address this problem and must be brought into the management plan. Manure should also be managed and controlled. It could be composted. Note should be taken not to introduce Ivermectin-contaminated manure into the compost as this will kill certain species, particularly dung beetles.

Predator manure would have to be disposed of – probably through incineration.

Carnivore feed brought in from outside should be managed in conjunction with the State Veterinarian. This is likely to generate ample waste in terms of bone material – this must be planned for. Boma design must also make provision for the cold storage of predator feed.

Predator feed is likely to be sourced from the community in the form of donkeys however, the option of surplus meat from elephant should be considered if KNP proceeds with elephant management in the form of culling.

Almero Bosch
University of Pretoria has a vested interest and cannot do the specialist vegetation survey.

The following concerns/questions was raised: Who was notified of the meeting? Why did no community representatives attend the meeting?

> Craig Gebhardt – Noted. UP would do an initial inventory, however an external specialist would undertake further specialist scans.
>
> Process was advertised as per regulation. Site notices, newspaper and direct notification to adjacent landowners were circulated

Craig Gebhardt
Request to forward any further issues to V&L. Minutes of the meeting will be circulated to all registered I&APs. This will be followed by the Draft Scoping report for comment.

Participants were thanked and the meeting closed at 15h15

3. Additional Comments received from persons not able to attend the meeting:

Brent Pirrow – Adjacent Land owner
Key concerns surrounding the placement of the tented accommodation. This will have a direct visual and acoustic impact on him as a neighbour. This is of particular relevance given the potential change to sense of place.

It is suggested that as a first option the layout be revisited to investigate the feasibility of placing the tented accommodation to the north of the current student accommodation. This would provide visual and acoustic screening.

As a second option the use of landscaping must be considered to reduce visual and noise impact.

The neighbours must be kept informed through clear communication channels, so that reporting of noise incidents can be properly managed. This applies to both construction and operational phases.

Richard Sowrie (KNP Section Ranger)
Access control and security must be addressed during the construction phase. This has been a problem during the Phase I development, with workers wondering freely through the bush to Orpen Camp.

12 PLAN OF STUDY FOR ENVIRONMENTAL IMPACT REPORT (EIR)

12.1 DESCRIPTION OF TASKS

- Detailed specialist planning will be undertaken to inform the design of the facility.
- Specialist studies will be commissioned to evaluate the site and appropriate technologies.
- All issues, concerns and impacts raised during the investigation, public participation, scoping process, specialist and authority consultation will be evaluated and the significance determined through appropriate rating and ranking techniques.
- Environmental control and mitigation measures will be proposed.
- A draft EIA report will be prepared in accordance with the EIA regulations.
- The draft EIA report will be made available to all I&AP's (including relevant departments) in accordance with the EIA regulations.

12.1.1 SPECIALIST STUDIES

The following specialist studies are required, and will be included in the EIR:

- Ecological Survey and Sensitivity Mapping
  - A study incorporating minimum requirements as prescribed by MTPA/SANPARKS, for activities which may have a detrimental effect on the environment will be carried out.
  - Within this report, ecological units will be delineated based on the soils and vegetation.
  - Species lists will be compiled for mammals, avifauna and reptiles with particular focus on threatened species. Sensitive faunal communities will also be mapped.

  This survey will be carried by an independent appointed specialist.

- Engineering/Specialist design reports
  - Extensive studies into the various applicable waste treatments technologies will be undertaken by specialists in the field, and will inform the design of the proposed facilities.
  - A revised facility layout will be developed and evaluated.

12.1.2 STAGES OF CONSULTATION WITH COMPETENT AUTHORITIES

The first step of the EIA process involves consultation with the relevant authority involved with the decision making process concerning the authorisation of the proposed project. The main purpose of this is to clarify the requirements of the regulations and procedures to be followed. During this phase the authorities also register the activity. Authority involvement undertaken during this scoping exercise has included the following:

1. A project application was submitted to DEA: Environmental and DEA: Waste Management, by the Consultants; and the project was acknowledged and issued with the following reference number, ***12/12/20/1820***
2. A departmental site meeting was to be held on the 12th April 2010.

Once the Scoping Report and Plan of Study has been submitted and approved, the consultant will contact the relevant authorities and hold a further meeting, if required.

The Final EIA report will be submitted to DEA for authorisation once it has been reviewed by I&APs.

Mitigation measures will be developed for issues raised by both the public (I&AP's) and the relevant Departments or Authorities. 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. Alternatives should be identified as early as possible in the project cycle. V&L Landscape Architects not only welcomes stakeholders' input/suggestions, but also urges the public and competent authorities to submit possible alternatives.

12.1.3 PROPOSED PUBLIC PARTICIPATION PROCESS

ALSO SEE Chapter 11

A public participation meeting was held at a venue accessible and comfortable to all I&AP's identified. The need for a second public meeting will be established during the environmental impact assessment process. If required, a second public meeting will be arranged where further issues would be discussed and explained.

I&APs may provide input to the process at any point as per the conditions of GN385.

Once the Scoping Report and Plan of Study for EIA has been approved by DEA, the activities scheduled in 12.1.4 will commence.

Copies of the Draft Environmental Impact Assessment Report will be made available to I&AP's for their comment, during a period of four weeks (30 days). Registered I&AP's will be contacted directly regarding the availability of the report. All reports available for comment by I&APs will be published at www.vrl.co.za – notice board page.

The EIA report would include the detail of the public participation process, the summary of the comments received from I&AP's during the scoping process and how these comments have been considered in the EIA report.

Comments from I&AP's on the draft EIA report would be included before submission of the final report to DEA.

12.1.4 SCHEDULE OF TASKS FOR THE EIA STUDY

ACTION DESCRIPTION	PLANNED DATE
SUBMISSION OF SCOPING REPORT & PLAN OF STUDY FOR EIR	29 April 2010
"GO-AHEAD" FROM DEA	1 June 2010
INITIATE SPECIALIST STUDIES	April 2010
2nd DEPARTMENTAL SITE VISIT (if required)	4 June 2010
2nd PUBLIC MEETING (if required)	4 June 2010
DRAFT EIR DOCUMENT	1 July 2010
FINAL DATE FOR COMMENTS	31 July 2010
FINAL EIR DOCUMENT	6 August 2010

13 FINAL CONCLUSIONS AND RECOMMENDATIONS

The principles of Ecological Sustained Development (ESD) recognise the interdependence of human welfare and the environment. It is also recognised that development cannot be sustained beyond certain environmental limits and imply that there are sustainable levels of both production and consumption.

The foundation of environmental policy in South Africa recognises the principles of Integrated Environmental Management (IEM), which essentially underpin environmental, social and economic motivation.

In motivation of this upgrade to the Hans Hoheisen Wildlife Research Station on portion 2 of the Farm Kempiana 90 KU, the intention of the project is to refurbish, launch, and manage the Hans Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans-frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities.

Refurbishing and upgrading the facilities at the Hans Hoheisen Wildlife Research Station (including the accommodation currently on the premises) will have a positive outcome in terms of obtaining valuable understanding of the interface between wildlife diseases, humans and livestock.

This upgrade project, if implemented correctly has the ability to add much valuable input into both the conservation, game farm and local environment.

The EAP is of the opinion that the proposed upgrade of the Hans Hoheisen Wildlife Research Station is environmentally viable and that the competent authority may authorise this plan of study for EIA.

14 REFERENCES

The Integrated Environmental Management Guideline Series published by the National Department of Environmental Affairs in 1992 was be used for the preparation of the report. These documents are: -

The Integrated Environmental Management Procedure, Guideline Document 1, Integrated Environmental Management Guideline Series, Department of Environment Affairs 1992.

Guidelines for Scoping, Guideline Document 2, Integrated Environmental Management, Guideline Series, Department of Environment Affairs 1992

Guidelines for Report Requirements, Guideline Document 3, Integrated Environmental Management Guideline Series, Department of Environment Affairs, 1992.

Guidelines for Review, Guideline Document 4, Integrated Environmental Management Guideline Series, Department of Environment Affairs, 1992.

Checklist of Environmental Characteristics, Guideline Document 5, Integrated Environmental Management Guideline Series, Department of Environment Affairs, 1992.

Glossary of terms used in Integrated Environmental Management, Guideline Document 6, Integrated Environmental Management Guideline Series, Department of Environment Affairs, 1992.

In addition to this, the Integrated Environmental Management Information Series (CSIR 2002) consisting of the following will be used:

Information Series 1: Screening

Information Series 2: Scoping

Information Series 3: Stakeholder Engagement

Information Series 4: Specialist Studies

Information Series 5: Impact Significance

Information Series 6: Ecological Risk Assessment

The Vegetation of Southern Africa, Lesotho and Swaziland, L. Mucina and M.C. Rutherford.

15 APPENDIXES

Appendix A - Locality

Annexure A: Locality Map

Appendix B - Layout

Annexure A: Layout Plan

Annexure B: Site Photographs

Appendix C - Public Participation Process

Annexure A: Advert

Annexure B: Basic Information Document

Annexure C: Site Notices & Photographs

Annexure D: Minutes

Annexure E: Registers

Appendix D – General Information

Annexure A: Land Owner Confirmation

Appendix E – Comment and Communications

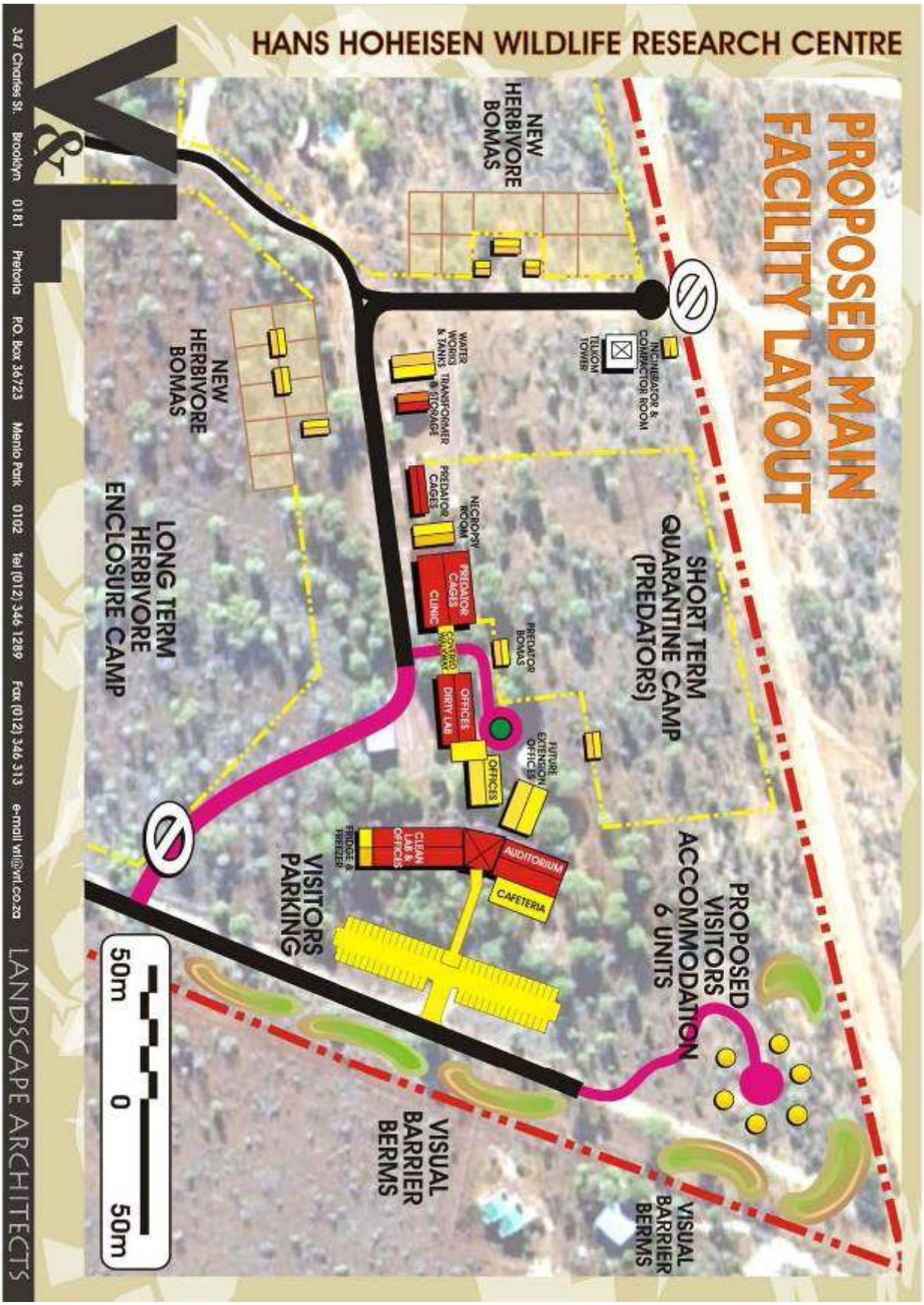
Annexure A: Letter from DEAT Confirming Acceptance of Application

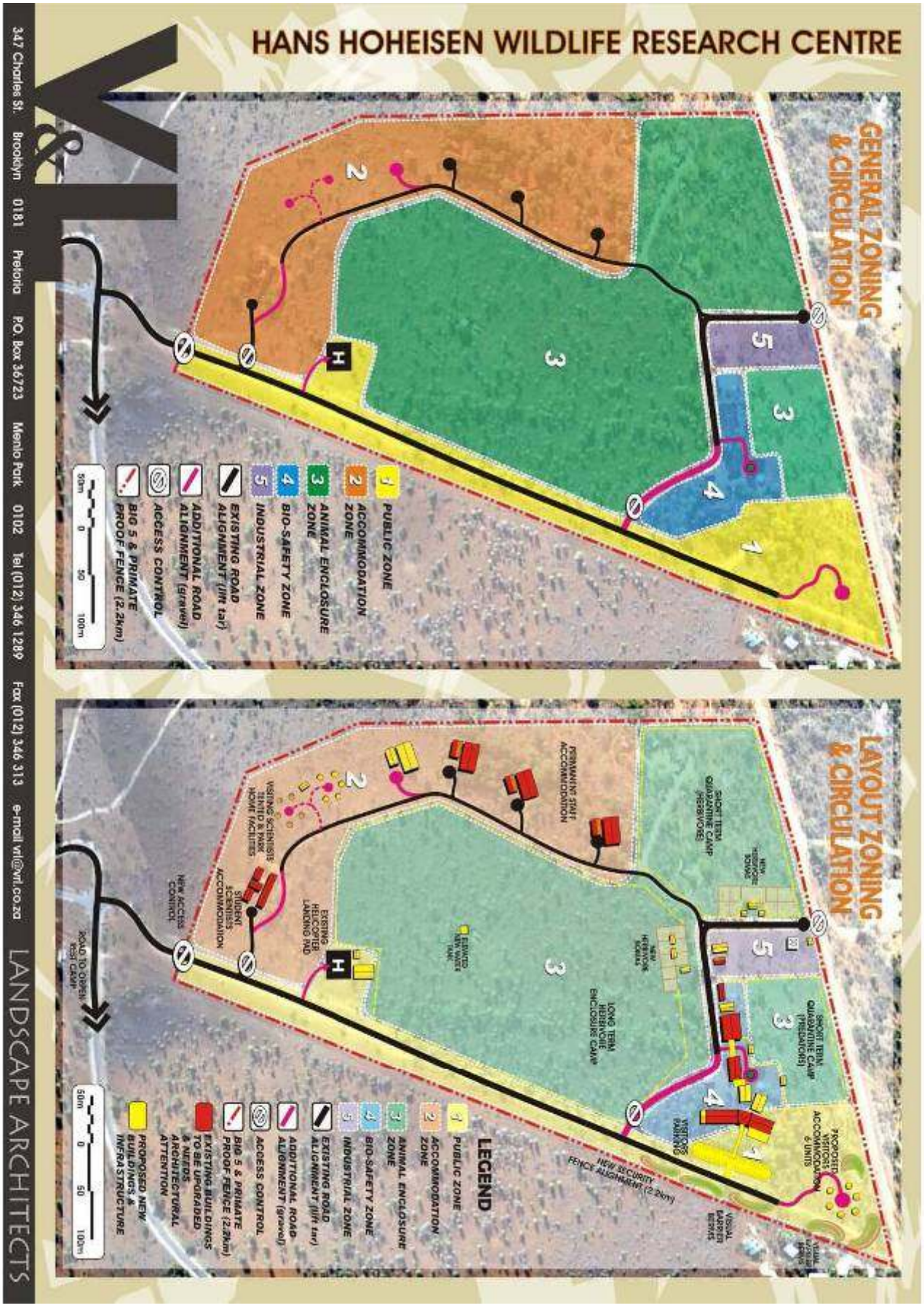
Appendix A - Locality

Annexure A: Locality Map

Appendix B - Layout

Annexure A: Layout Plan (Preferred)




HANS HOHEISEN WILDLIFE RESEARCH CENTRE
GENERAL ZONING & CIRCULATION
LAYOUT ZONING & CIRCULATION
LEGEND
PUBLIC ZONE
ACCOMMODATION ZONE
ANIMAL ENCLOSURE ZONE
BIO-SAFETY ZONE
INDUSTRIAL ZONE
EXISTING ROAD ALIGNMENT (lift tar)
ADDITIONAL ROAD ALIGNMENT (gravel)
ACCESS CONTROL
BIG 5 & PRIMATE PROOF FENCE (2.2km)
EXISTING BUILDINGS TO BE UPGRADED & NEEDS ARCHITECTURAL ATTENTION
PROPOSED NEW BUILDINGS & INFRASTRUCTURE
347 Charles St. Brooklyn 0181 Pretoria P.O. Box 36723 Menlo Park 0102 Tel (012) 346 1289 Fax (012) 346 313 e-mail vrl@vrl.co.za
LANDSCAPE ARCHITECTS

Appendix B - Layout

Annexure B: Site Photographs

Hans Hoheisen Wildlife Research Station Upgrade
Site Photographs

General example of natural bush within upgrade footprint

General area - proposed settling pond

Proposed incinerator site

Helicopter Landing Pad and surrounding area

View from proposed visitors accommodation units, of Orpen staff units

Appendix C - Public Participation Process

Annexure A: Advert

NOTICE

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: Notice is given in terms of 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 activities falling Under NEMA: Environmental Management and NEMA: Waste Management: IMPROVEMENT OF HANS HOHEISEN ANIMAL RESEARCH STATION ON PORTION 2 OF THE FARM KEMPIANA 90KU.
Notice No: DEA (Project Ref No 12/12/20/1820)
Proposed Activity: Relevant Notice R386, 21 April 2006
1: The construction of facilities or infrastructure, including associated structures or infrastructure, for - d) resorts, lodges, hotels or other toursm and hospitality facilities in a protected area facilities in a protected area contemplated in the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);"
15: "The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long."
Relevant Notice R387, 21 April 2006
2: "Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more."
Relevant Notice R781 of 2009
3(2) The storage including the temporary storage of hazardous waste at a facility that has the capacity to store in excess of 35m3 of hazardous waste at any one time, excluding the storage of hazardous waste in. Lagoons 3(3) The storage including the temporary storage of general waste in lagoons 3(11) The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres. 3(18) The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity 3(19) The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste. 4(1) The biological, physical or physico-chemical treatment of hazardous waste at a facility that has the capacity to receive in excess of 500 kg of hazardous waste per day. 4(4) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste. 4(5) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste. 4(6) The treatment of hazardous waste in lagoons. 4(8) The incineration of waste regardless of the capacity of such a facility. 4(11) The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).
Description: Development of facilities integral to the phase II upgrade of the Hans Hoheisen Wildlife Research Centre which will necessitate the design and construction of waste management and treatment facilities. Location: Portion 2 of the Farm Kempiana 90 KU.
Extent (Physical footprint): The site is approximately 37 ha in size. Proponent: University of Pretoria Public Meeting: A public meeting will be held on site (Han Hoheisen Research Institute). Interested and affected parties will be forwarded information pertaining to this meeting as soon as it is available and on request.
Date: 12th April 2010
Time: 14:00 pm
Contact: Steven Henwood V&L Landscape Architects P O Box 26696 Steiltes
Nelspruit 1213
013-744-3759 (Tel/Fax)
086-672-5384 (E-mail to Fax)
steve@vrl.co.za
In order to ensure that you are identified as an interested and /or affected party; please submit your name, contact information, interest in the matter to the person above. Indicate whether or not you will be interested in attending a public meeting by no later than 9th April 2010.
ML001025

Appendix C - Public Participation Process

Annexure B: Basic Information Document

HANS HOHEISEN WILDLIFE RESEARCH STATION UPGRADE

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS:
BACKGROUND INFORMATION DOCUMENT
(Facilitation of Public Participation during EIA)

DEA (Project Ref No 12/12/20/1820)

LANDSCAPE ARCHITECTS

PREFACE

This Background Information Document (BID) addresses the proposed Phase II, upgrade of the Hans Hoheisen Animal Research Institute. The EIA covers the major impact of waste storage and disposal. The projects triggers are listed in the table below.

Activities falling Under NEMA: Environmental Management	
No R**386** of 2006	
1(d)	resorts, lodges, hotels or other tourism and hospitality facilities in a protected area contemplated in the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);
15	The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long
No R**387** of 2006	
2	Any development activity, including associated structures and infrastructure, where the total area of the development area is, or is intended to be, 20 hectares or more

Activities falling Under NEMA: Waste Management	
No R**781** of 2009	
3(2)	The storage including the temporary storage of hazardous waste at a facility that has the capacity to store in excess of 35m^3 of hazardous waste at any one time, excluding the storage of hazardous waste in. lagoons
3(3)	The storage including the temporary storage of general waste in lagoons.
3(11)	The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.
3(18)	The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity
3(19)	The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.
4(1)	The biological, physical or physico-chemical treatment of hazardous waste at a facility that has the capacity to receive in excess of 500 kg of hazardous waste per day.
4(4)	The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.
4(5)	The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.
4(6)	The treatment of hazardous waste in lagoons.
4(8)	The incineration of waste regardless of the capacity of such a facility.
4(11)	The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).

The proposed development will take place on portion 2 of the Farm Kempiana 90 KU. All development falls within the existing footprint of the property.

The development is listed in terms of Government Notices R386 of 2006 and R781 of 2009 under Chapter 5 of the National Environmental Management Act, Act 107 of 1998 and therefore requires an Environmental Impact Assessment (EIA) to be undertaken. A Scoping and Environmental Impact Assessment is to be undertaken.

This document contains an outline of the proposed project. This information is based on preliminary information made available through the Department of Defence and the technical design team.

The purpose of this document is to make basic information available to Interested and Affected Parties (I&AP's), to empower them to understand the scope of the application. It will also enable I&AP's to make initial input and comment as part of the public participation process. The public participation process is a component of the EIA.

PUBLIC PARTICIPATION – Background

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 addition, the second principle of the National Environmental Management Act (NEMA) states that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. The third principle states that development must be socially, environmentally and economically sustainable. It further states that environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

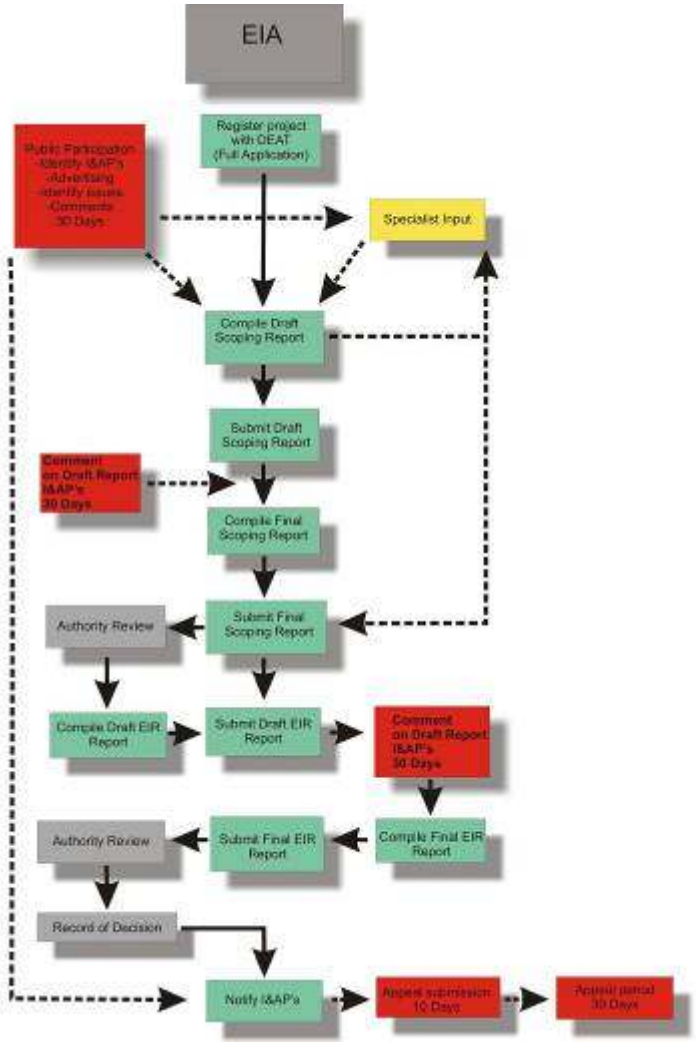
It then continues to say that the participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured. Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment. Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.

The EIA regulations (section 21, 22 and 26, 1998) states among other things that that an independent consultant must be appointed to act on behalf of the client and to ensure that the public participation process is managed properly and that thorough, readable and informative reports are produced.

The EIA Process and I&AP involvement:

The schematic below illustrates the EIA process to be undertaken for this project. Opportunities for I&AP involvement are indicated by the red blocks.



1. INTRODUCTION

V&L Landscape Architects, as Independent Environmental Consultants and Impact Assessors, have been appointed by Pretoria University, to facilitate the Integrated Environmental Management (IEM) procedure, for the proposed upgrade to Hans Hoheisen Animal Research Institute, on portion 2 of the Farm Kempiana 90 KU.

2. MOTIVATION FOR APPLICATION

The Hans Hoheisen Wildlife Research Station comprises the land (a 37 ha portion of land), the various buildings, and services on the property.

The intention of the project is to refurbish, launch, and manage the Hans Hoheisen Wildlife Research Station as a research platform to support research involving the diseases of wildlife, humans, and livestock at an interface between a trans-frontier conservation area, the Greater Limpopo Trans Frontier Park and local communities.

Refurbishing and upgrading the facilities at the Hans Hoheisen Wildlife Research Station (including the accommodation currently on the premises) with the intention of

- Establishing the Station as a research platform to be utilized by the University of Pretoria in association with local and international partners, and other interested parties
- To facilitate the development of research programmes and projects that will provide information to
    - Support the management of diseases at the interface (wildlife / livestock / humans) that have a negative effect on the development of trans-frontier parks and -conservation areas, given the impact of these diseases and their control on land-use options for development and poverty reduction, particularly of the rural poor
    - Assist with the development of human resources, infrastructure and technology with emphasis on Detection, Identification and Monitoring (DIM) of diseases

- Provide information that will facilitate harmonisation of policies, and the improvement of varying standards and competencies of participating countries within the context of DIM

The objective of this document is to provide the scope and objectives of the project, the time lines, and priorities of implementation according to available funding

3. LOCATION

The proposed site of the activity falls within the footprint of the existing Hans Hoheisen Research Institute.

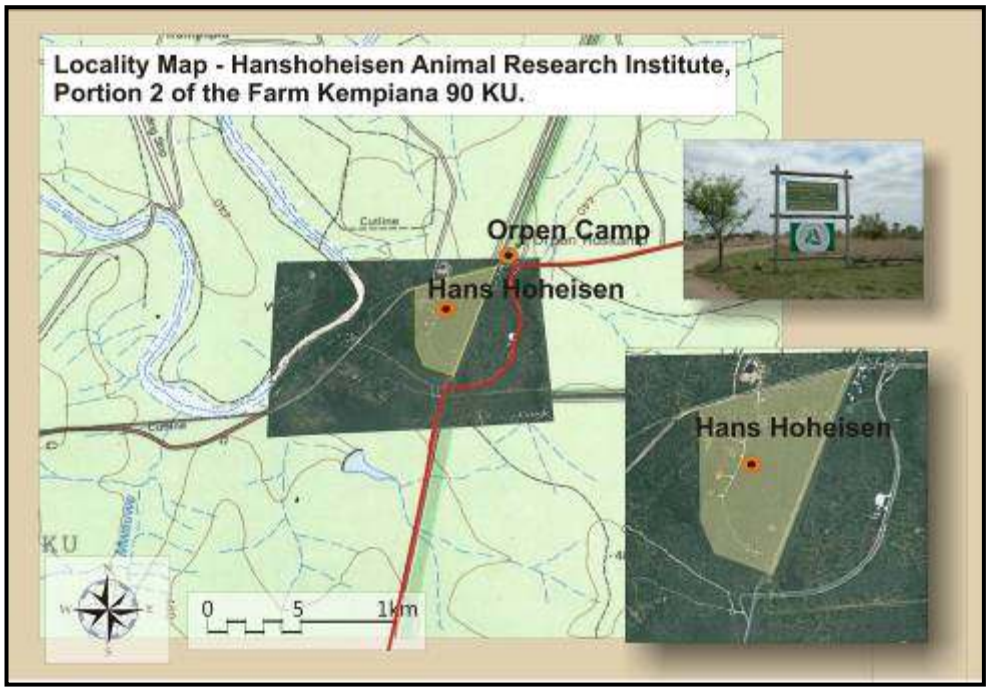


Figure 2 - Locality Map

3. RECEIVING ENVIRONMENT

5.1. BIO-PHYSICAL DESCRIPTION OF THE STUDY AREA.

The study area falls within the Gabbro Grassy Bushveld vegetation type as defined in the Vegetation of Southern Africa, Lesotho and Swaziland, (Ladislav Mucina and Michael C. Rutherford 2006).

The study area is evaluated against the “blueprint” for this vegetation type as detailed below.

5.2. DISTRIBUTION

Flats and hills mainly in the Kruger National Park in isolated patches from Orpen Camp in the north, southwards including Rooigras Vlakte (northeast of Skukuza) and some areas stretching from north of Pretoriuskop to around Afsaal in the south. Altitude 200–550 m.

5.3. GEOLOGY AND SOILS

Undisturbed State

The Gabbro Grassy Bushveld veld type closely follows the sinuous intrusions of the Timbavati gabbro (Mokolian Erathem). The unit is also mapped on surrounding potassic granite and gneiss of Archaen basement and the gneiss and migmatite of the Nelspruit Suite 9also Archaen) Dark vertic clay soils (20 – 50% clay) often swell and shrink. Loose rock is often present on the surface. Some shallow lithosols occur in places. Where gabbro is in contact with the adjacent granite, a mixed soil sometimes develops with a gabbro-derived A-horizon overlying a granite-derived B-horizon.

Current Status

The site constitutes sections where Gabbroid based geology gives rise to vertic clay soils that may exhibit signs of low erodibility and, poor drainage. Historic use of the site has resulted in disturbance to the soil horizons and structure of some sections of the site. The presence of hardened surfaces, infrastructure and human habitation within the site has resulted in a disturbance of soil structure.

There are some sections of the site that exhibit characteristics of the undisturbed geology and soils state.

5.4. VEGETATION

Undisturbed State

Gabbro Grassy Bushveld constitutes open savanna with a dense grass cover (with dominants including *Themeda triandra*) with few scattered trees and shrubs. Sparser grass cover is encountered on shallow soils.

Current Status

The entire site varies between totally transformed and disturbed sections. There are also sections within the footprint that may be deemed undisturbed natural bush clusters. The site has a medium to low conservation status.

5.5. TOPOGRAPHY

Undisturbed State

The general physical geography and topography for the area within which the proposed development site falls, is a mix of open savanna and undulating landscapes. The area lies at an altitude of approximately 800 and 1600 meters above sea level.

Current Status

The proposed upgrade will take place within the existing footprint of the current Hans Hoheisen Research Institute. The area is generally flat with a slight rise and watershed running roughly from north to south mid way across the property.

5.6. CLIMATE

Summer rainfall, with dry winters. Mean Annual Precipitation (MAP) from about 500-650 mm. Generally a frost-free region.

5.7. CONSERVATION STATUS

Conservation Status of the Vegetation Type

Least threatened Target 19%. Altogether 96% statutorily conserved in the Kruger National Park and the remainder is conserved in private reserves (Timbavati and Manyeleti) Very little is transformed and erosion is low.

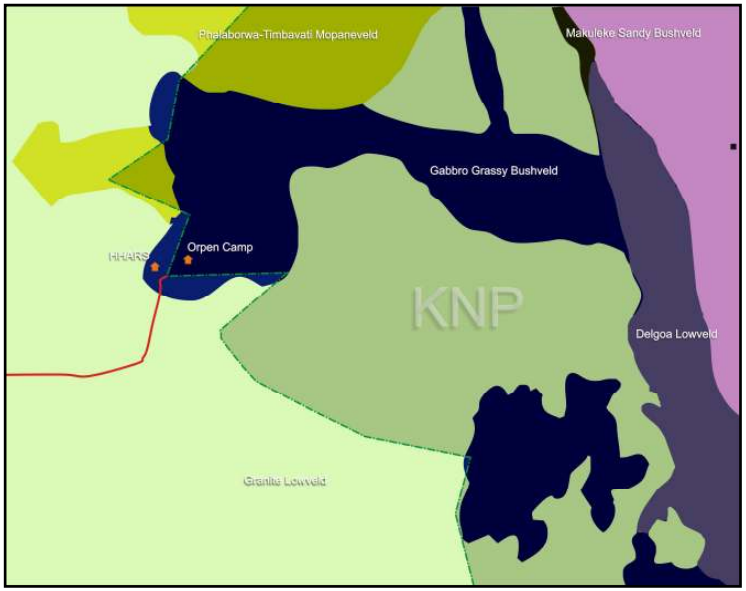


Figure 3: Vegetation of Southern Africa

Conservation Status of the Site
After completion of a basic desktop sensitivities scan it was concluded that the site has a medium to low rating as far as broad ecological sensitivity is concerned. It must be mentioned however that the occurrence of potentially endangered species within the footprint may raise the ecological sensitivity rating to that of medium to high. This rating will be re-evaluated with the input of various specialists.

With reference to the Conservation Plan for the area it can be clearly seen that the development site falls within the Lowveld Bio-region; Savanna Biome and the Gabbro Grassy Bushveld veld type. This veld type is rated least vulnerable in terms of its general conservation status.

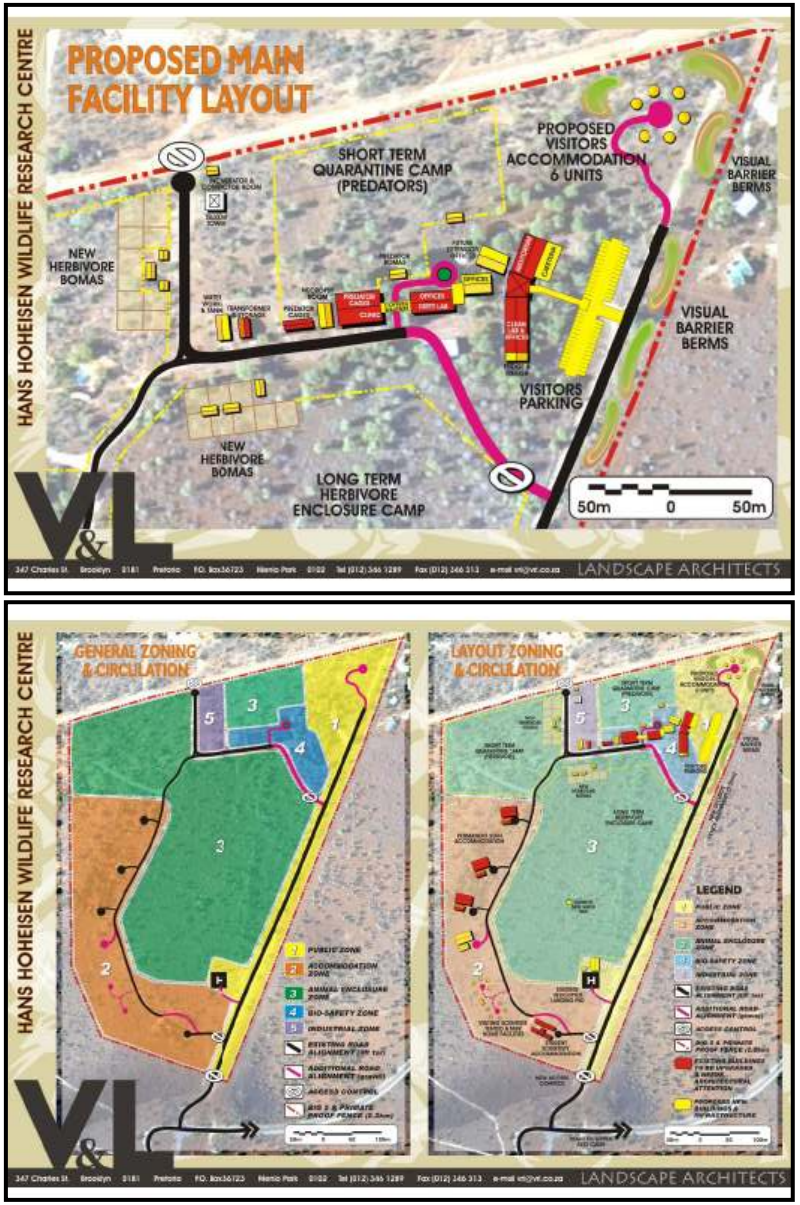
3. PROPOSED ACTIVITY

The activity is summarised by the following points which are below:

- Footprint expansion
  - Expansion of offices
  - New staff accommodation, guest housing and camp site
  - New bomas, cages and enclosures
  - Roads and services

- Waste activities
  - Waste storage
  - Waste treatment
  - Waste disposal

(These activities and their proposed locations are schematically represented in figures 4 & 5 below.)



Figures 4 & 5

4. POTENTIAL IMPACTS

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

- No fatal flaws identified on site
- Area is to a large degree free from impacts – this will change due to new footprints and fences
- Historical fauna movements may be restricted due to fences
- No heritage concerns identified

Likely concerns to arise from EIA:	Input to EIA
Impact to sensitive environments	
Geology/soil – Gabbro (vertic clay soils, low erodible, poor drainage)	V&L
Vegetation – Gabbro Grassy Bushveld – ***Least threatened***	V&L
Fauna – potential for protected species (e.g. baboon spider, plated lizard). Impacts on species movement.	Specialist scan.
Visual impact on KNP/Orpen	V&L
Noise impact on KNP/Orpen	Client
Smell impact on KNP/Orpen	Client
Disease risk	Client
Waste treatment	Specialist input.

Approach lights

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 Landscape Architects not only welcomes stakeholders' input/suggestions, but also urges 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.

4.1 Scoping of potential impacts

Through the scoping phase of the EIA, which comprises the initial 30 day registration period for I&AP's (subsequent to the publication of on-site and newspaper advertisements), as well as the circulation of this document and the public meeting session, the V&L Landscape Architects will compile the Draft Scoping Report. This report will be made available for comment to all registered I&AP's. This report will contain, amongst other, the following information:

- A description of the proposed activity and of any feasible and reasonable alternatives that have been identified.
- a description of the property on which the activity is to be undertaken and the location of the activity on the property
- a description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity
- a description of environmental issues and potential impacts, including cumulative impacts, that have been identified
- information on the methodology that will be adopted in assessing the potential impacts that have been identified, including any specialist studies or specialised processes that will be undertaken
- details of the public participation process conducted in terms of regulation **28**(a) of the EIA regulations of 2006.
- a plan of study for environmental impact assessment which sets out the proposed approach to the environmental impact assessment of the application

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 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 below.

6. CONCLUSION

I&AP Registration Form

THE PROPOSED PHASE II, UPGRADE OF THE HOHEISEN ANIMAL RESEARCH INSTITUTE.

HANS

V&L REFERENCE NO.: VL 2010/213
DEA REF. NO.: 12/12/20/1287

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 – Section 58 no.1 - 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 kept 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 (**Preferable**)	
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 draft reports and the final document to be submitted to the decision-making authority

Please complete and return this response sheet to **V&L** by no later **than 9 April 2010**

CONTACT DETAILS

V&L
P O Box 26696
Steiltes
Nelspruit
1213
013-744-3759 (Tel/Fax)
086-672-5384 (Fax to e-mail)

012-346 1289 (Tel – PTA office)

E-mail craig@vrl.co.za or steve@vrl.co.za

Please feel free to phone us should you not have access to fax or e-mail

Appendix C - Public Participation Process

Annexure C: Site Notices

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of 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:

IMPROVEMENT OF HANS HOHEISEN WILDLIFE RESEARCH STATION ON PORTION 2 OF THE FARM KEMPIANA 90KU.
DEA (Project Ref No 12/12/20/1820)

Proposed Activity:
The application is in respect to aspects of the proposed development being listed as activity No: 1(d) and 15 of Notice 386 as well as 2 of Notice 387 in terms of Section 24 and 24D of the National Environmental Management Act, 1998

Relevant Notice **R386, 21 April 2006**

1: "The construction of facilities or infrastructure, including associated structures or infrastructure, for –
d) resorts, lodges, hotels or other tourism and hospitality facilities in a protected area contemplated in the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003);"
15: "The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long."

Relevant Notice **R387, 21 April 2006**

2: "Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more."

Relevant Notice **R781 of 2009**

3(2) The storage including the temporary storage of hazardous waste at a facility that has the capacity to store in excess of 35m³ of hazardous waste at any one time, excluding the storage of hazardous waste in Lagoons
3(3) The storage including the temporary storage of general waste in lagoons.
3(11) The treatment of effluent, wastewater or sewage with an annual throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres
3(18) The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity
3(19) The expansion of facilities of or changes to existing facilities for any process or activity, which requires an amendment of an existing permit or license or a new permit or license in terms of legislation governing the release of pollution, effluent or waste.
4(1) The biological, physical or physico-chemical treatment of hazardous waste at a facility that has the capacity to receive in excess of 500 kg of hazardous waste per day.
4(4) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste
4(5) The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste
4(8) The treatment of hazardous waste in lagoons.
4(8) The incineration of waste regardless of the capacity of such a facility.
4(11) The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity)

Description: Development of facilities integral to the phase II upgrade of the Hans Hoheisen Wildlife Research Centre which will necessitate the design and construction of waste management and treatment facilities.
Location: The Upgrade is to take place portion 2 of the Farm Kempiana 90 KU.
Extent: The site is approximately 37 ha in size.
Proponent : University of Pretoria
Public Meeting:
Should response as a result of this advertising process necessitate such, then a public meeting will be held on site (Hans Hoheisen Wildlife Research Station on the 12th April 2010 at 14pm. Registered Interested and Affected parties will be forwarded information pertaining to this meeting as soon as it is available.
Date of Advertisement: Tuesday, 30th 2010, Lowvelder, Nelspruit

Contact:
Steven Henwood
V&L Landscape Architects
P O Box 26696
Steltes
Nelspruit
1213
013-744 375989 (Tel/Fax)
086-672 5384 (E-mail to Fax)
steve@vrl.co.za

In order to ensure that you are identified as an interested and/or affected party; please submit your name, contact information, interest in the matter and whether or not you will be interested in attending a public meeting to the contact person above by no later than 09th April 2010

Appendix C - Public Participation Process

Annexure C: Site Notice Photographs

Hans Hoheisen
Site Notice Photographs

Site notice at Orpen/Manyeleti control boom

Site notice at Hans Hoheisen entrance gate

Appendix C - Public Participation Process

Annexure D: Public Meeting Minutes

MINUTES OF THE EIA PUBLIC MEETING FOR THE PROPOSED PHASE II UPGRADE OF HANS HOHEISEN WILDLIFE RESEARCH STATION

Date: 12 April 2010
Revision Date: 21 April 2010
Time: 14:00 pm
Venue: Hans Hoheisen Wildlife Research Station.

Attendance:

- Marie Watson (University of Pretoria)
- Nick Kriek (University of Pretoria)
- Francois Nel (Southern African Wildlife College)
- Almero Bosch (Timbavati Private Nature Reserve)
- Richard Burroughs (University of Pretoria)
- Lin-Mari de Klerk Lorist(DAFF)
- Bjorn Reininghaus (State Vet – Orpen)
- Roy Bengis (State Vet – Skukuza)
- Mark Bourn (MTPA – Manyeleti)
- Louis van Schalkwyk (University of Pretoria)
- Louis van der Merwe (IKAMA Project Managers)
- Gert Meintjies(Hotgroup Technologies)
- Craig Gebhardt (V&L Landscape Architects – Environmental Consultant)

Apologies:

- Brent Pirrow – Adjacent Land owner
- Richard Sowrie (KNP Section Ranger)
- Rosinah Ndhambi (KNP Orpen Camp Manager)
- Allen Dibakoane (Department of Public Works)

4. INTRODUCTION

A public meeting was held to explain the proposed development planned for Phase II of the Hans Hoheisen Wildlife Research Station refurbishment project.

Craig Gebhardt from V&L welcomed everyone and explained the environmental impact assessment (EIA) process and the proposed public participation process.

Clarity was provided that Phase II of the project incorporated all the activities that would potentially trigger the need for an EIA, while Phase I which is currently underway deals with renovations to existing structures only.

Craig also explained that the technologies proposed for Phase II had not been finalised and that the EIA process would be used to aid with the planning and final design.

Craig provided a brief overview of the proposed activities for Phase II. The presentation covered the material presented in the Background Information Document (BID).

The floor was then opened for questions from the public. The project team were available to provide information.

5. QUESTIONS & INPUT

Prof. Kriek
Explained that the facility was not an extension of the University of Pretoria (UP). It is being developed in partnership with UP, Peace Parks Foundation and MTPA. It will be a stand-alone research platform managed by the University of Pretoria. It will be utilised by numerous institutions. Note to be taken that this facility was functional since 1973 until its degeneration in the early 90's.

The facility will operate in the context of the Trans Frontier Conservation Areas (TFCA), with particular focus on infectious disease and pharmacological research. The facility will be part of a research platform for various institutions to perform research, specifically aimed on the context of the TFCAs. Emphasis will be placed on Zoonoses (specifically the transmission of diseases between wildlife, livestock and humans.

As such the facility will be a quarantine facility. It will operate as a Biosecurity Level 2 or 3 facility. There are international rules and protocols which govern the design and operation of such facilities and these will most definitely apply to Hans Hoheisen both in its operation and in its design.

Prof Kriek also indicated that DAFF (Directorate of Veterinary Services) had stipulated conditions for the facility to operate. The facility would be governed by these.

The facility would only work with diseases that are endemic to the region. No foreign pathogens may be introduced. BSL2 and BSL 3 regulations would be applied to ensure that all measures are in place to contain pathogens within the environment.

Any work involving unusual pathogens will have to be approved and authorised by DAFF under strict conditions.

Craig Gebhardt
Opened the issue of the installation of an incinerator to the floor. Is an incinerator the appropriate technology for pathogen disposal? Do the I&APs have specific concerns about the use of an incinerator?

Dr Roy Bengis
Commented that modern incinerator technology was quite advanced and that he would anticipate the facility to utilise a diesel-driven incinerator with a primary and secondary combustion chamber. This type of incinerator produces very low emissions and odour due to the secondary combustion chamber.

He indicated that this type of incinerator was effective in dealing with all pathogens likely to be encountered, even anthrax. The risk of dispersion of pathogens into the atmosphere has been shown to be very negligible.

He also indicated that the incineration of lab waste (cultures and medical supplies) was likely to produce far greater odour and smoke volumes than animal tissue.

Laboratory cultures should first be deactivated with formalin in the laboratory, prior to incineration to reduce risks. Using alkaline hydrolysis could also be further investigated.

The quantity of medical wastes such as syringes and containers should not be under-estimated as these accumulate rapidly.

Waste treatment plants and evaporation ponds must be purpose-designed and built to deal with a specific type of waste. This was agreed upon by the project engineer.

Dr Bengis also enquired whether the current septic tank system and soak-aways were sufficient and suggested that monitoring points be put in place to check water quality in the Timbavati River to the west and the drainage to the south east.

Soil filtration is known to be an effective way to remove pathogens naturally – done by soil organisms. It should be acceptable to allow treated outflow from evaporation ponds to be discharged.

Mark Bourne
Note to be taken that there are numerous water abstraction boreholes in the vicinity – Monitoring points may be necessary.

The possibility of a waste digester should be considered to reduce odours and provide biogas that could be utilised in the labs (or incinerator?).

Louis vd Merwe

Louis explained that the sewerage and waste water systems would be separate. The waste water system would have to deal with animal pathogens and would be purpose-designed to ensure effective treatment.

He mentioned that the current Phase I would utilise a closed system that would entail offsite disposal. Phase II would entail on-site treatment. Effluent would be treated in a series of tanks to ensure that it was neutralised prior to being released to an evaporation pond. The system would be a closed system with no outflow to the environment.

Louis responded to a question of odour from the evaporation pond by saying that the design should ensure that water entering the evaporation pond is free of odours. This would be a design criterion.

Dr Bengis / Bjorn Reininghaus / Craig Gebhardt
The issue of investigating Alkaline Hydrolysis as an alternative method for neutralising pathogens was discussed. The State Vet in Nelspruit runs a small unit for disposing dog carcasses. Bjorn agreed to provide more information to the Project Team.

This alternative will be investigated in the EIA.

Mark Bourne
Will the smell from animal bomas not attract predators to the area, away from other game-viewing areas?

Dr Bengis responded that it was difficult to monitor this, but in his experience at Skukuza there was no noticeable effect.

The transport of feed such as Lucerne must be properly controlled and managed to ensure that seeds of exotic plants are not introduced into the Protected Areas.

Dr Bengis
Flies and blow flies were likely to be an important management issue that would need to be carefully controlled. If not controlled this could impact on the facility and it neighbours. Flytraps are available to address this problem and must be brought into the management plan. Manure should also be managed and controlled. It could be composted. Note should be taken not to introduce Ivermectin-contaminated manure into the compost as this will kill insects, particularly dung beetles.

Predator manure would have to be disposed of – probably through incineration.

Carnivore feed brought in from outside should be managed in conjunction with the State Veterinarian. This is likely to generate a lot of waste in terms of bone material – this must be planned for. Boma design must also make provision for the cold storage of predator feed.

Predator feed is likely to be sourced from the community in the form of donkeys; however, the option of surplus meat from elephants should be considered if KNP proceeds with elephant management in the form of culling.

Almero Bosch
University of Pretoria has a vested interest and cannot do the specialist vegetation survey.

The following concerns/questions were raised:
Who was notified of the meeting? Why did no community representatives attend the meeting?

> Craig Gebhardt – Noted. UP would do an initial inventory, however, an external specialist would undertake further specialist scans.
>
> EIA Process was advertised as per regulation. Site notices, newspaper and direct notification to adjacent landowners were circulated.

Craig Gebhardt
Request to forward any further issues to V&L. Minutes of the meeting will be circulated to all registered I&APs. This will be followed by the Draft Scoping report for comment.

Participants were thanked and the meeting closed at 15h15

Additional Comments received from persons not able to attend the meeting:

Brent Pirow – Adjacent Land owner

Key concerns surrounding the placement of the tented accommodation. This will have a direct visual and acoustic impact on him as a neighbour. This is of particular relevance given the potential change to a 'sense of place'.

It is suggested that as a first option the layout be revisited to investigate the feasibility of placing the tented accommodation to the north of the current student accommodation. This would provide visual and acoustic screening.

As a second option the use of landscaping must be considered to reduce visual and noise impact.

The neighbours must be kept informed through clear communication channels, so that reporting of noise incidents can be properly managed. This applies to both construction and operational phases.

Richard Sowrie (KNP Section Ranger)

Access control and security must be addressed during the construction phase. This has been a problem during the Phase I development, with workers wondering freely through the bush to Orpen Camp.

All persons entering Hoheisen must be aware that their entry permit into the Protected area via the first boom gate does not give them right to enter the National Park or Contractual National Park - Ngala (of which the boundaries are all clearly demarcated), and only permits entry to the Hoheisen Centre.

- ***No entry is permitted on foot.***
- ***Additional permits will be required for entry into the National Park, even if the trip is only to the Orpen shop. Trips to the fuel station do not require additional permits.***

All vehicles entering the protected area must be closed if people are sitting on the back of a bakkie, a closed canopy is sufficient. This includes trips from boom gate to Hoheisen Centre as well.

Appendix C - Public Participation Process

Annexure D: Departmental Meeting Minutes

Good Afternoon

Please find attached the minutes of the EIA public meeting held at Hans Hoheisen Wildlife Research Station. These minutes capture the primary issues that were discussed by I&APs.

These minutes are being sent to you since you indicated that you would not be able to attend the departmental site visit and public meeting on the 12th April 2010, but wished to be kept informed of the proceedings.

Ms Pumeza Skepe-Mngcita of DEA: Environmental Management visited the site on 13th April 2010 and inspected the current and planned facilities. DAFF was represented at the site visit by the State Veterinarian for Orpen.

The following Departments were invited to attend a site visit on either the 12th or 13th of April 2010, but indicated that they could not attend. It was requested that minutes of the Public meeting be forwarded to them.

- DEA: Waste Management
- Department of Water Affairs
- Department of Health
- MTPA Veterinary Services
- Bushbuck Ridge Local Municipality

We aim to submit the Draft scoping report for comment by the end of April 2010.

Please contact myself of Steven Henwood steve@vrl.co.za should you wish to make any further comments of to gain clarification on any issues.

Regards,

Craig Gebhardt
V&L Landscape Architects
013 744 3759
082 744 7153
craig@vrl.co.za

Appendix C - Public Participation Process

Annexure D: Public Meeting Register

12/04/2010

LANDSCAPE ARCHITECTS

Attendance Register for Public Meeting. Hans Hoheisen Wildlife Research Station

NO	NAME	CAPACITY	E-MAIL	TEL	FAX	SIGNATURE
1	CRAIG GEBHARDT	V&L (EAP)	CRAIG@VRL.CO.ZA	082 744 7153	013 744 3759	[signature]
2	Marie Watson	Centre Administr. CUWS, UP	marie.watson@up.ac.za	0824400208	012 529 8559	[signature]
3	Nick Kriek	"	nick.kriek@up.ac.za	0829086035	0125298559	[signature]
4	Francois Nel	SAWC	fnel@sawc.org.za	0829083371	0157937314	[signature]
5	Almero Bosch	Timbavati Private Nature Reserve	almero@timbavati.co.za	083 7972277	(015) 793-3181	[signature]
6	Richard Burroughs	U.P.	Richard.burroughs@up.ac.za	082-5685896	012 529 8559	[signature]

NO	NAME	COMPANY	E-MAIL	TEL	FAX	SIGNATURE
7	LinMari de Klerk-Lorist	DAFF	LinmarieDK@daff.gov.za	013 7355641	013 7355155	
8	BJORN REININGHAUS	Vet Dev.	SVORPEN@gmail.com	084/8528133	086/6949049	
9	M Bowen	MTPA - Manyeleti	mbmanyeleti@gmail.com	0835558060 / 0137355556		
10	Louis van Schalkwyk	UP	louis.vanschalkwyk@up.ac.za	0836332203		
11	Geer Teersties	Hortgroup	Geer@Hortgroup.co.za	082 7518364	0866405744	
12						
13						
14						

Appendix C - Public Participation Process

Annexure D: Departmental Meeting Register

12/04/2010
10h00
VENUE: HANS HOHEISEN WILDLIFE RESEARCH STATION

LANDSCAPE ARCHITECTS

Attendance Register for Departmental Site Meeting,
Hans Hoheisen Wildlife Research Station.

NO	NAME	CAPACITY	E-MAIL	TEL	FAX	SIGNATURE
1	CRAIG GEBHARDT	ENVIRONMENTAL PRACTITIONER	CRAIG@VRL.CO.ZA	082 744 7153	013 744 3759	
2	B. REININGHAUS	SV:ORPEN@ [illegible]	SVORPEN@ GMAIL.COM	0848528153	086 6999 049	
3	P.P Skepe	DEA	PSkepe@deat.gov.za	012-3103061	012-3207559	
4						
5						
6						

Appendix D - General Information

Annexure A: Land Owners Confirmation

0137668449

MPUMALANGA PROVINCIAL GOVERNMENT

No 7 Government Boulevard
Riverside Park
Ext. 2
Nelspruit, 1200
Republic of South Africa

Private Bag X11302
Nelspruit, 1200
☎ +27 (13) 779 0002
+27 (13) 7731760
E-Mail tmgwenya@mpg.gov.za

Department of Public Works, Roads and Transport
FACILITIES AND PROPERTY

Litiko Letemisebenti Yemphakatsi, Temigwaco Nelokuftutsa | Departement van Openbare Werke, Paaie en Vervoer | UmNyango wezemiSebenzi yomPhakathi, zeeNdlela neeokuThutha

MEMORANDUM

TO : MR. M MOHLASEDI
HEAD OF DEPARTMENT

FROM : MR. PM KHOZA
GM: FACILITIES AND PROPERTY

MS D THWALA
SENIOR MANAGER: EHLANZENI NORTH

SUBJECT : APPROVAL TO CONDUCT ENVIROMENTAL IMPACT ASSESSMENT ON PORTION 2 OF THE FARM KEMPIANA 90 KU: HANS HOHEISEN.

PURPOSE

To obtain Approval to Conduct Environmental Impact Assessment on Portion 2 of the farm Kempiana 90 KU situated at the Bushbuckridge Local Municipality.

BACKGROUND

The Department is the custodian of the above-mentioned property, which is used by the Mpumalanga Tourism and Parks Agency, through the Department of Economic Development, Environment and Tourism, for Nature Conservation and Research Centre.

The Department of Economic Development, Environment and Tourism, through MTPA have sourced out funds from the Peace Park Foundation (donor) to revamp the existing structures in the property, to be fully utilized as Nature Conservation and Research Centre.

Plans to revamp the existing structures and fencing of the property are at the advance stage.

"SIVUTA UMLILO"

MPUMALANGA
A Pioneering Spirit

EXPANDED PUBLIC WORKS PROGRAMME

013/000445

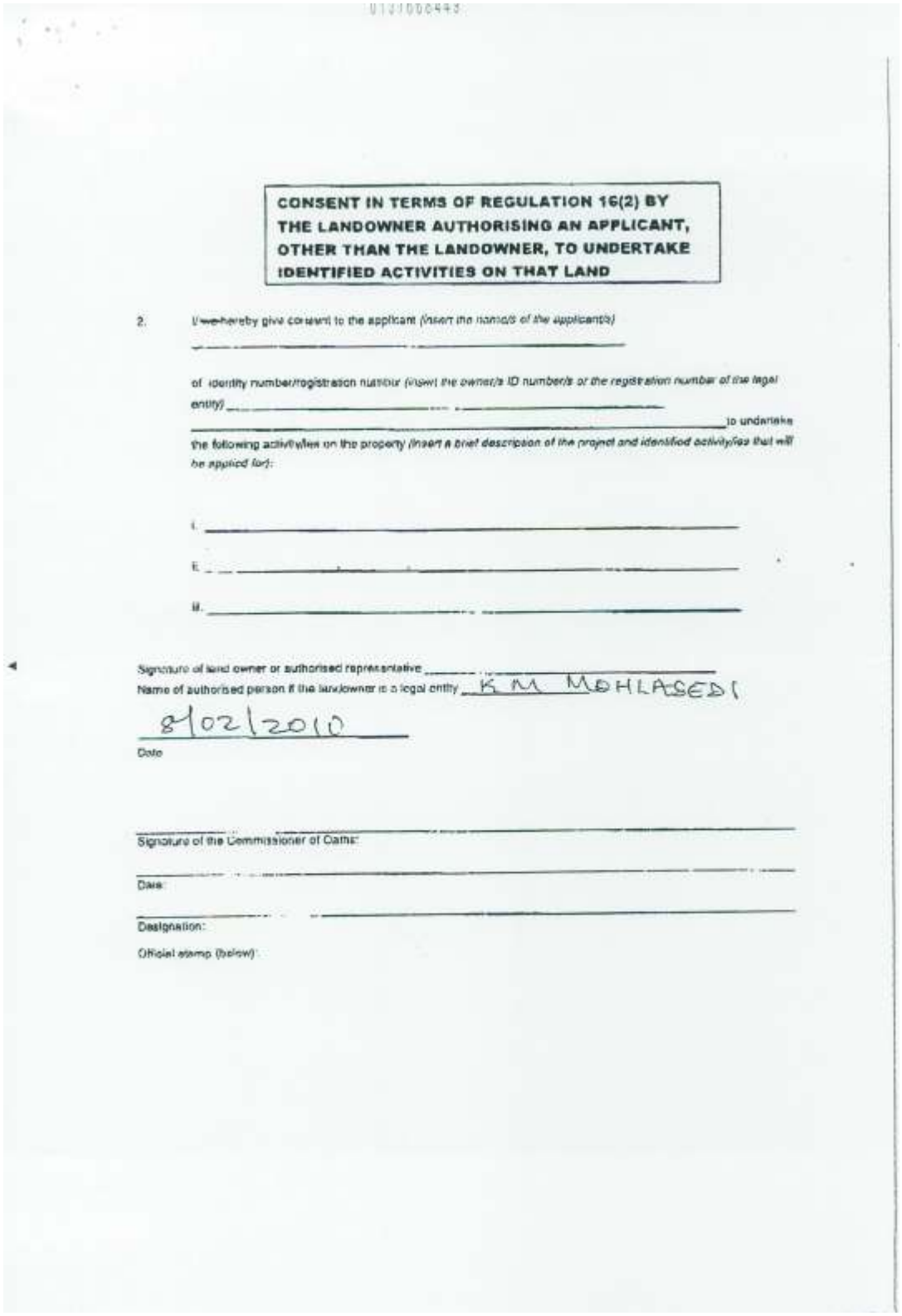
CONSENT IN TERMS OF REGULATION 16(2) BY THE LANDOWNER AUTHORISING AN APPLICANT, OTHER THAN THE LANDOWNER, TO UNDERTAKE IDENTIFIED ACTIVITIES ON THAT LAND

Kindly note that

1. This form must be completed when application is made for environmental authorisation in terms of the Environmental Impact Assessment Regulations, 2006 promulgated in terms of sections 24 (5) and 44 of the National Environmental Management Act, 1998 (Act 107 of 1998) (as amended) ("GN R385") where the applicant is not the owner of the land on which the proposed activity will take place.
2. This form must be attached to the application form for environmental authorisation.
3. This form is current as of 20 June 2006. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
4. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that can extend itself as each space is filled with typing.
5. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
6. Incomplete applications may be returned to the applicant for revision.
7. The use of "not applicable" in the form must be done with circumspection as if it is used in respect of material information that is required by the competent authority for assessing the application, and may result in the rejection of the application as provided for in the regulations.
8. No faxed or e-mailed applications will be accepted. Only hand delivered or posted applications will be accepted.
9. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

DEPARTMENT DETAILS

National Department of Environmental affairs
Attention: 1) Directorate: Environmental Impact Management.
2) Directorate: Waste Management



CONSENT IN TERMS OF REGULATION 16(2) BY THE LANDOWNER AUTHORISING AN APPLICANT, OTHER THAN THE LANDOWNER, TO UNDERTAKE IDENTIFIED ACTIVITIES ON THAT LAND

2. I/~~we~~ hereby give consent to the applicant *(insert the name/s of the applicant/s)*

_____

of identity number/registration number *(insert the owner/s ID number/s or the registration number of the legal entity)* _____

_____ to undertake the following activity/ies on the property *(insert a brief description of the project and identified activity/ies that will be applied for)*:

i. _____

ii. _____

iii. _____

Signature of land owner or authorised representative _____

Name of authorised person if the landowner is a legal entity K M MOHLASEDI

8/02/2010

Date

_____

Signature of the Commissioner of Oaths:

_____

Date

_____

Designation:

Official stamp (below):

CONSENT IN TERMS OF REGULATION 16(2) BY THE LANDOWNER AUTHORISING AN APPLICANT, OTHER THAN THE LANDOWNER, TO UNDERTAKE IDENTIFIED ACTIVITIES ON THAT LAND

CONTACT INFORMATION

Name of land owner	PORTION 2 OF FARM KEMPIANA 90 KU
Trading name (if any):	
Contact person:	
Physical address:	
Postal address:	
Postal code:	Cell:
Telephone:	Fax:
E-mail:	

If there is more than one landowner, please attach a list of their contact details to this application

☐ Extra page attached

CONSENT

1. I/we the undersigned (insert the name/s of the owner/s of the land)
KGOPANA MATHEW (WRHLASED)

of identity number/registration number (insert the owner/s ID number/s or the registration number of the legal entity)
5902245780087

am/are the registered owner/s of the property/ies: (REPRESENTING PWRT)
PORTION 2 OF FARM KEMPIANA 90 KU

located at (insert physical address or a brief description of the location of the property)

0131000443

Page 1 of 2

Property | Owner | Deed/Document | LPI Enquiry | Interdict | Document Request | Transfers | Bulk Properties | User Admin | Billing

Property Enquiry Details

Property enquiry results for "KU, 90, KEMPIANA, 2" in the Deeds Registry at "MPUMALANGA "

For information only

Property detail:

Deeds registry	MPUMALANGA
Property type	FARM
Farm name	KEMPIANA
Farm number	90
Portion	2
Province	MPUMALANGA
Registration division/Administrative district	KU
Local authority	NOT AVAILABLE
Previous description	-
Diagram deed number	T35180/979
Extent	37.9605 H
LPI Code	T0KU00000000009000002

Title Deeds detail:

Document	Registration date	Purchase date	Amount	Microfilm reference	Document copy?
T35180/1979	19791005	-	-	-	Not available

Owners detail:

Document	Full name	Identity Number	Share	Person Enquiry?
T35180/1979	REPUBLIEK VAN SUID-AFRIKA	-	-	Yes

Endorsements / Encumbrances:

Endorsement / Encumbrance	Holder	Amount	Image Scanned reference	Document copy?
I-8139/2006C	-	-	20061207 09:41:32	Yes
KU,90,2	-	-	1988 1108 0774	Yes
INFO FROM PRETORIA	-	-	-	Not available

http://www.deeds.gov.za/ITSODeedsWebB/deedsweb/propd_farm_results.jsp?office=... 2009/09/09

SUBJECT : APPROVAL TO CONDUCT ENVIROMENTAL IMPACT ASSESSMENT ON PORTION 2 OF THE FARM KEMPIANA 90 KU: HANS HOHEISEN.

During a liaison meeting held on 10 December 2009, between DEDET, MTPA, Peace Park Foundation and Public Works, Roads and Transport it was resolved that an EIA must be conducted on the property as required by the law, hence approval is sought from this Department as the Landowner.

The next liaison meeting will be held on **09 February 2010**, to report back on tasked given to stakeholders for the implementation of the project.

All cost to conduct the EIA and the revamping of the property will be born by the Peace Park Foundation as a donor.

RECOMMENDATION.

It is recommended that the Head of Department or his delegated representative approve the application and give consent to conduct Environmental Impact Assessment on the Property, by MTPA. Attached, is a consent form to be duly signed by the Head of Department or his delegated representative.

MS DV THWALA
SM: EHLANZENI NORTH DISTRICT.

2010/02/04
DATE

RECOMMENDED/ ~~NOT RECOMMENDED~~

MR P M KHOZA
GM: FACILITIES AND PROPERTY

2010/02/04
DATE

APPROVED/ ~~NOT APPROVED~~

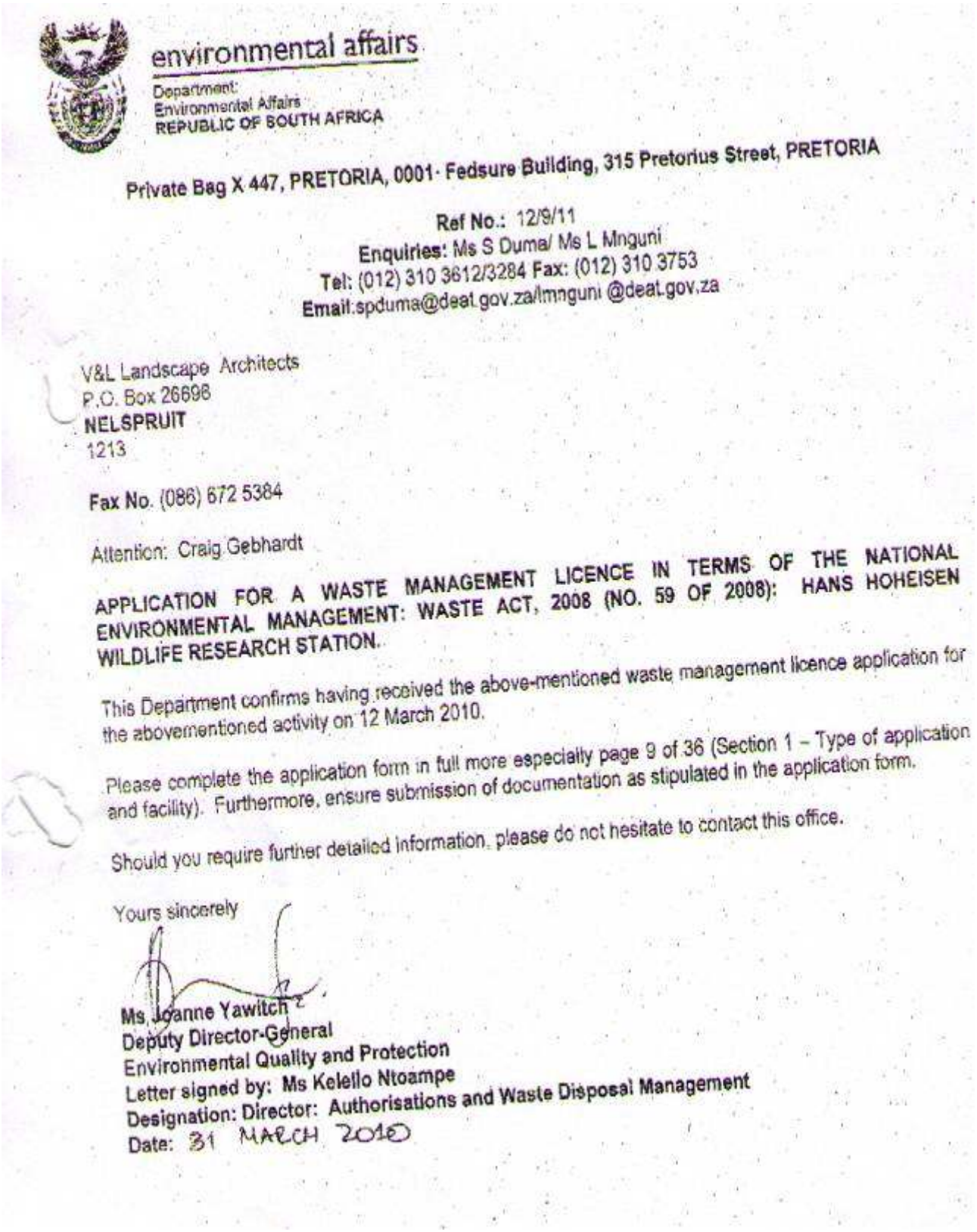
K M MOHLASEDI
HEAD OF DEPARTMENT

8/2/2010
DATE

MPUMALANGA
A Pioneering Spirit

Appendix E – Comment and Communications

Annexure A: Letter from DEAT "Acceptance of application"



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447, PRETORIA, 0001 · Fedsure Building, 315 Pretorius Street, PRETORIA

Ref No.: 12/9/11
Enquiries: Ms S Duma/ Ms L Mnguni
Tel: (012) 310 3612/3284 Fax: (012) 310 3753
Email:spduma@deat.gov.za/lmnguni @deat.gov.za

V&L Landscape Architects
P.O. Box 26698
NELSPRUIT
1213

Fax No. (086) 672 5384

Attention: Craig Gebhardt

APPLICATION FOR A WASTE MANAGEMENT LICENCE IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (NO. 59 OF 2008): HANS HOHEISEN WILDLIFE RESEARCH STATION.

This Department confirms having received the above-mentioned waste management licence application for the abovementioned activity on 12 March 2010.

Please complete the application form in full more especially page 9 of 36 (Section 1 – Type of application and facility). Furthermore, ensure submission of documentation as stipulated in the application form.

Should you require further detailed information, please do not hesitate to contact this office.

Yours sincerely

Ms Joanne Yawitch
Deputy Director-General
Environmental Quality and Protection
Letter signed by: Ms Kelello Ntoampe
Designation: Director: Authorisations and Waste Disposal Management
Date: 31 MARCH 2010