

**DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT DESCRIPTION****Applicant:**

National Department of Public Works

**Report title: Draft Environmental Impact Assessment Report [EIAR] Verdrag SAPS Training Facility on the Farms Buffelskloof 452-KQ, Groenfontein 319-KQ and Buffelspoort 459-KQ.****Competent authority and reference number:**

National Department of Environmental Affairs [DEA]

NEAS Ref No: DEA/EIA/0001130/2012

Ref No: 14/12/16/3/3/38

**Legal:**

This EIA Report has been prepared in terms of the requirements of Regulations 31, 32 &amp; 33 of the Environmental Impact Assessment Regulations of 18 June 2010 as per Government Notice R 543

**Report compiled by:**

Signature

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11/02/2013

**Reviewed and approved by:**

Signature

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11/02/2013

**DECLARATION OF INDEPENDENCE**

We declare that we act as independent environmental assessment practitioners for this application, with no affiliation with or vested financial interests in the proponent other than for work performed in terms of the requirements of the Environmental Impact Assessment Regulations 2010 and the National Environmental Management Act, 1998 (Act 107 of 1998).

We have no conflicting interests in the undertaking of this activity and have no interest in secondary developments resulting from the possible authorisation of this application. Remuneration for our professional services rendered is not dependent on approval by any decision making authority responsible for authorising this application. We undertake to disclose to the competent authority any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);

**Signed****Date: 11/02/2013**

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## ABBREVIATIONS

DEA:	Department of Environmental Affairs
DWA:	Department of Water Affairs
EAP:	Environmental Assessment Practitioner
EIA:	Environmental Impact Assessment
EIAR:	Environmental Impact Assessment Report
EMP:	Environmental Management Programme
EWT:	Endangered Wildlife Trust
GDARD	Gauteng Department of Agriculture and Rural Development
IAIA:	International Association of Impact Assessment
I&AP's:	Interested and/or Affected Parties
NEMA:	National Environmental Management Act
NEMBA:	National Environmental Management: Biodiversity Act
NEMPAA:	National Environmental Management Protected Areas Act
SAHRA:	South African Heritage Resources Agency
SACLAP:	South African Council for the Landscape Architectural Profession
TIA:	Traffic Impact Assessment

## GLOSSARY OF TERMS

Alien Vegetation:	Alien vegetation is defined as undesirable plant growth which shall include, but not be limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area.
Alien Species:	A plant or animal species introduced from elsewhere: neither endemic nor indigenous.
Alternatives:	in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to – The property on which or location where it is proposed to undertake the activity; The type of activity to be undertaken; The design or layout of activity; The technology to be used in the activity; and The operational aspects of the activity.
Applicant:	Any person who applies for an authorization to undertake an activity or to cause such activity to be undertaken as contemplated in the National Environmental Management Act (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2006.
Arable Potential:	Land with soil, slope and climate components where the production of cultivated crops is economical and practical.
Buffer zone:	is a collar of land that filters out inappropriate influences from surrounding activities as described by Shafer (1999) according to Pfab (2001:11), also known as edge effects, including the effects of invasive plant and animal species, physical damage and soil compaction caused by trampling and harvesting, abiotic habitat alterations and pollution. According to Pfab (2001:11), buffer zones can also provide more landscape needed for ecological processes, such as fire, as pointed out by Shafer (1999).
Construction Activity:	A Construction Activity is any action taken by the Contractor, his subcontractors, suppliers or personnel during the construction process as defined in the South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 107 of 1998).
Critically Endangered:	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild, in the immediate future.
Ecology:	The study of the inter relationships between organisms and their environments.
Environment:	All physical, chemical and biological factors and conditions that influence an object and/or organism.
Environmental Impact:	An Impact or Environmental Impact is the degree of change to the environment, whether desirable or undesirable, that will result from the effect of a Construction Activity within the limits that define the construction site. An Impact may be the direct or indirect consequence of a Construction Activity.

**Environmental Impact Assessment:** Assessment of the effects of a development on the environment.

**Environmental Management Plan:** A legally binding working document, which stipulates environmental and socio-economic mitigation measures that must be implemented by several responsible parties throughout the duration of the proposed project.

**Indigenous:** means a species that occurs, or has historically occurred, naturally in a free state within the borders of South Africa. Species that have been introduced to South Africa as a result of human activity are excluded (South Africa (Republic) National Environmental Management: Biodiversity Act, 2004: Chapter 1).

**Interested and Affected Party:** any person, group of persons or organization interested in or affected by an activity contemplated in an application, or any organ of state that may have jurisdiction over any aspect of the activity

**Road Reserve:** The road reserve is a corridor of land, defined by co-ordinates and proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.

**Road Width:** For the purposes of the EMP, the Road Width is defined as the area within the Road Reserve i.e. fence line to fence line, but also includes all areas beyond the Road Reserve that are affected by the continuous presence of the road i.e. a reach of a water course.

**Mitigate:** The implementation of practical measures to reduce adverse impacts

**Public Participation Process:** is a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters

**Record of Decision:** A brief description of the proposed activity, the extent or quantities involved, the surface areas involved, the infra structural requirements and the implementation programme for which the authorization is issued

**Red data plant species:** are fauna and flora species that require environmental protection based on the World Conservation Union (IUCN) categories and criteria.

**Soil Compaction:** Mechanically increasing the density of the soil, vehicle passage or any other type of loading. Wet soils compact easier than moist or dry soils.

**Species:** means a kind of animal, plant or other organism that does not normally interbreed with individuals of another kind. The term "species" include any sub-species, cultivar, variety, geographic race, strain, hybrid or geographically separate population (South Africa [Republic] National Environmental Management: Biodiversity Act, 2004: Chapter 1).

**The Contractor:** the contractor as the developers agent on site, is bound by the ROD and EMP conditions through his/her contract with the developer, and is responsible for ensuring that conditions of the EMP and ROD are strictly adhered to at all times. The contractor must comply with all orders (whether verbal or written) given by the ECO, project manager or site agent in terms of the EMP.

**The Developer:** remains ultimately responsible for ensuring that the development is implemented according to the requirements of the EMP and the conditions of the Record of Decision (ROD) throughout all phases of the project.

**The Environmental Control Officer (ECO):** the ECO is appointed by the developer as an independent monitor of the implementation of the EMP i.e. independent of the developer and contractor.

**The Environmental Liaison Officer (ELO):** the Contractor shall submit to the Site Agent a nominated representative of the Contractor as an ELO to assist with day to day monitoring of the construction activities for the contract

**Vegetation:** is a collective word for plants. Vegetation can be regarded as the first link in any food chain.

**Vulnerable:** A taxon is 'Vulnerable' when it is not 'Critically Endangered' or 'Endangered' but is facing a high risk of extinction in the wild in the medium term future.

**Watercourse:** is "A river or spring; a natural channel in which water flows regularly or intermittently; a wetland, lake or dam into

which, or from which, water flows; and any collection of water which the Minister may by notice in the Government Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks” (South Africa [Republic] National Water Act, 1998).

#### DISTRIBUTION LIST

COPY NO.	ATTENTION	NAME OF ORGANISATION AND ADDRESS
1	Ms Masina Litsoane	<b>Department of Environmental Affairs</b> Assistant Director: Integrated Permitting System (IPS) Directorate: Environmental Impact Evaluation Private Bag X 447 PRETORIA 0001 Email: PSkepe@environment.gov.za / ZPhohlo@environment.gov.za
2	Ms Tinyiko Malungani Notified that Final Scoping Report can be downloaded	<b>Limpopo Department of Economic Development, Environment and Tourism</b> Private Bag X 9484 POLOKWANE 0700 Email: Malunganiitp@ledet.gov.za
3	Mr Hunter Pagole Notified that Final Scoping Report can be downloaded	<b>Modimolle Municipality</b> Private Bag X 1008 MODIMOLLE 0510 Fax: (014) 717-4077
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5	Mr Rens Botha	<b>Department of Water Affairs</b> Chief Engineer: Water Resources Management Private Bag X 995 PRETORIA 0001 Email: BothaR@dwa.gov.za
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7	Ms Marubini Mashuduma Notified that Draft EIA Report can be downloaded	<b>Department Agriculture, Forestry &amp; Fisheries</b> Private Bag X 120 PRETORIA 0001 Email: mashuduma@daff.gov.za
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9	Harriet Davis Notified that Draft EIA Report can be downloaded	<b>Endangered Wildlife Trust</b> Email: harrietd@ewt.org.za
10	Mr Lemson Betha Notified that Draft EIA Report can be downloaded	<b>Wildlife &amp; Environment Society of South Africa</b> Email: <a href="mailto:info@wessanorth.co.za">info@wessanorth.co.za</a>



## EXECUTIVE SUMMARY

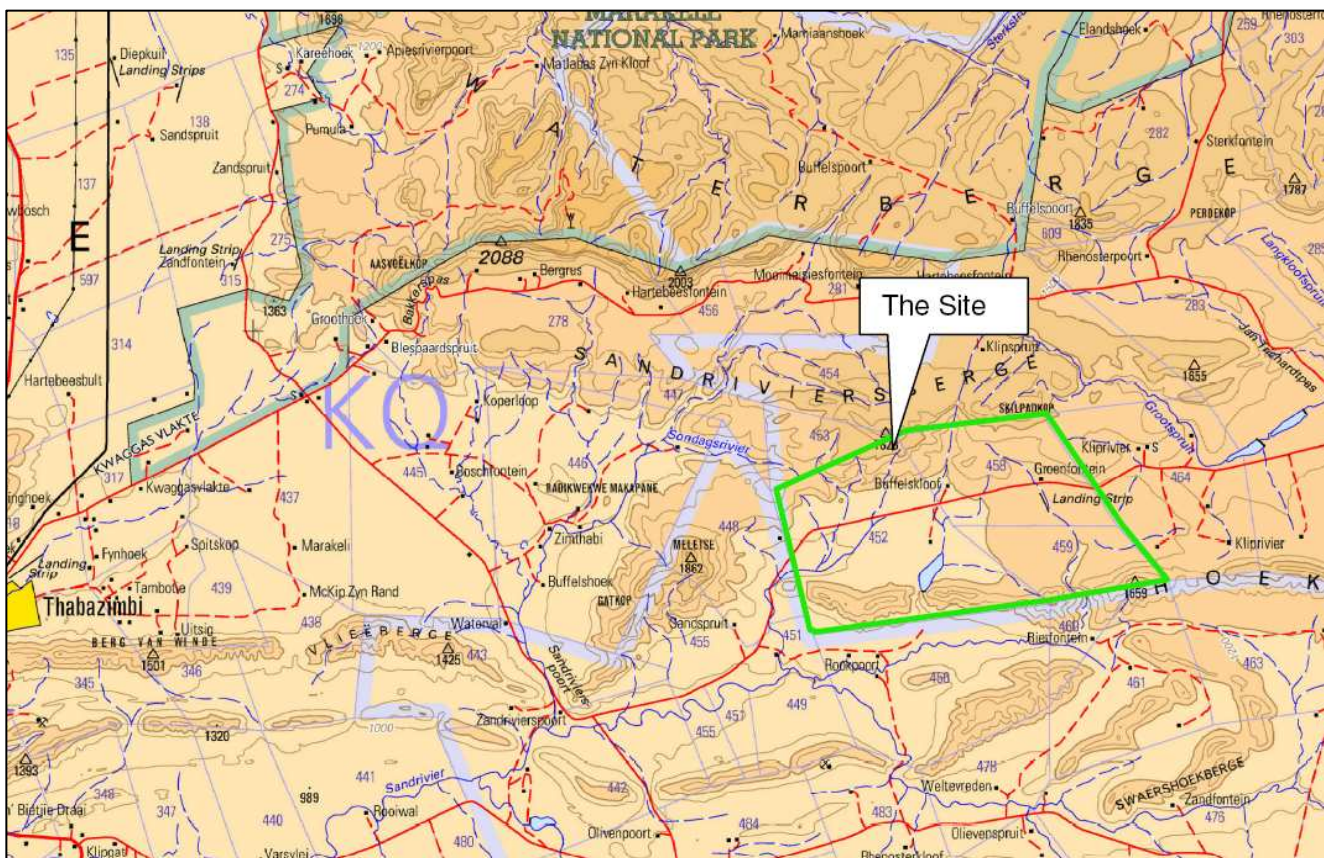
### 1. INTRODUCTION

Interdesign Landscape Architects (Pty) Ltd (ILA) has been commissioned by Metroplan Town and Regional Planners to undertake the appropriate environmental process on behalf of the Applicant the Department of Public Works for the proposed construction of additional facilities and upgrades to the existing facilities and infrastructure at the Verdrag SAPS Training Facility near Thabazimbi. The Verdrag Training Facility is situated on the Farms Buffelskloof 452 KQ, Buffelspoort 459 KQ and Groenfontein 458 KQ, within the Limpopo Province. The Farms fall within the jurisdictional boundaries of the Modimolle Municipality.

The project was registered with the DEA on 16 April 2012 and a Full Environmental Impact Assessment Process will be followed. The project has been assigned the following project reference numbers **NEAS Ref No: DEA/EIA/0001130/2012 and Ref No 14/12/16/3/3/38**. Refer to **Appendix 1** for a copy of the DEA project registration letter.

### 2. LOCALITY

The farm portions are situated between Thabazimbi and Modimolle within the Limpopo Province. Thabazimbi is about 35km to the west and Modimolle about 70km to the south east. The site is accessed from the P240 gravel road which leads to Alma in the east and to the D1485 intersection in the northwest toward Thabazimbi. The subject properties are located both directly to the north of and to the south of the P240. Refer to **Appendix 2** for a copy of the locality map indicating the co-ordinates of all of the existing and proposed features on site. Also refer to **Appendix 3** for a copy of the Orthophoto locality.



**Figure 1: Locality map indicating future bypass from Allandale Road to K101. The green line indicates the township access and the orange the dual carriage way route forming part of this application**

The application properties consist of the following Farm Portions:

- Portion 1 of the Farm Groenfontein 458-KQ [428,2660 ha];

- ✚ The Remaining extent of the Farm Groenfontein 458-KQ [1728,800 ha];
- ✚ Portion 1 of the Farm Buffelspoort 459-KQ [685,2256 ha];
- ✚ The Remaining extent of the Farm Buffelspoort 459-KQ [630,3804 ha];
- ✚ The Farm Buffelskloof 452-KQ [3994,4484 ha].

The SAPS Training institute facilities are situated on the valley floor between the Sandriviersberge to the north and the Hoekberge to the south. The site has been used as an advanced training institute for SAPS personnel since the early 1980's. Training and accommodation is located in a number of small and well circumscribed localities whereas the greatest portion of the site is, for all intents and purposes, managed as a game reserve.

### 3. GENERAL PROJECT DESCRIPTION

The Verdrag Training Facility has been operation for over 20 years and offers advanced skills training to the members of the South African Police Force.

The following additional facilities and upgrades are being proposed as part of this application process Refer to **Appendix 4** for a copy of the proposed lay-out:

#### **EXISTING ADMINISTRATION CAMP:**

- ✚ Renovation and maintenance of existing structures;
- ✚ Construction of new residential units;
- ✚ Construction of new ammunition safe;
- ✚ New gravity feed sewer pipeline

#### **NEW ALPHA CAMP [A TRAINING CAMP]**

Construction of:

- ✚ Trainer's accommodation;
- ✚ Student accommodation;
- ✚ Lecture facilities;
- ✚ Recreation Facilities & Gym;
- ✚ Admin block;
- ✚ Tactical training area;
- ✚ Ablution facilities
- ✚ New gravity feed sewer line

#### **EXISTING BRAVO CAMP [B TRAINING CAMP]**

All existing structures to be demolished and replaced with similar facilities. Replacement structures include:

- ✚ Lecture facilities;
- ✚ Student accommodation;
- ✚ Trainer's accommodation;
- ✚ Recreation facilities & Gym;
- ✚ Tactical training area;
- ✚ Existing sewer pump line will be replaced

#### **NEW ECHO CAMP [E TRAINING CAMP]**

Construction of:

- ✚ Student accommodation;
- ✚ Trainers accommodation;
- ✚ Admin block;
- ✚ Recreational facilities and Gym;
- ✚ Ablution facilities;
- ✚ Lecture facilities;
- ✚ Shooting range

#### **EXISTING DELTA CAMP [D TRAINING CAMP]**

Construction of:

- ✚ Additional accommodation units;
- ✚ Lecture facilities;

- Admin block

#### **OTHER**

- New landing strip and admin building;
- New shooting range and admin block;
- New ammunition safe;
- Maintenance of existing wastewater treatment facility [Aerobic-Anaerobic Stabilisation Ponds];
- Upgrade and maintenance of existing stormwater management infrastructure including upgrade of stormwater outlets [detail to be confirmed];
- Upgrade and maintenance of existing road infrastructure [roads leading from P240 to training camps will be tarred];
- Upgrade and maintenance of existing water supply and reticulation [detail to be confirmed];
- Upgrade of existing sewerage reticulation infrastructure [replacement of old pipes, maintenance/replacement of existing sewerage pump station which is currently not working, embankments of the pond system require maintenance as trees are growing on it and it can cause the embankment to collapse once filled with water, maintenance of reed bed].

## **4. PURPOSE OF THE EIA**

The purpose of the Environmental Impact Assessment (EIA) is specified in Guideline Document 3: A General Guide to the EIA Regulations, 2006 Published by the Department of Environmental Affairs (DEA) is as follows:

- Address issues that were raised during the scoping phase;
- Assess alternatives to the proposed activity in a comparative manner;
- To rank environmental issues identified during the environmental scoping exercise through application of a methodology for the determination of significance, based on the Guidelines compiled by the Department of Environmental Affairs and Tourism;
- To assess the relevant biophysical environmental components of the site to an appropriate level of detail. This includes the physical, biological, and socio-economic components;
- To reflect all the required information/ findings in a logical and systematic way in order to assist the GDARD with the evaluation of the proposed development in terms of the requirements of National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended; and
- To describe/ recommend specific measures in an Environmental Management Programme (EMP) to be implemented to address significant aspects/ impacts associated with the proposed development.

The public participation phase is an essential part of the EIA process. During the EIA Phase, public participation was conducted in accordance with the Plan of Study for EIA, which was included in the Scoping Report. In this instance that entailed the following:

- The draft EIA report will be made available to all registered I&AP's, Departments, Organisations and other key stakeholders and registered Interested & Affected Parties (I&AP's) for a 40 day review period; and
- All comments received on the Draft EIA Report will be included in this Final EIA report which will be submitted to the DEA for issuing of a decision.

## **5. APPROACH AND METHODOLOGY**

The approach to the study is based on a thorough evaluation of possible environmental aspects and associated impacts that the proposed development may have on the receiving environment, with the focus on the relevant physical, biological, and socio-economic characteristics of the development site, as well as the surrounding areas. Impacts identified by key stakeholders, Departments and relevant organisations are addressed in this report.

The function of the Environmental Impact Report [EIR] is to help the Competent Authority in making informed decisions, the public in understanding the likely impacts of the proposal and the proponent in managing these impacts. [DEAT (2004) *Environmental Impact Reporting, Integrated Environmental Management, Information Series 15, Department of Environmental Affairs and Tourism (DEAT), Pretoria*]

Furthermore this EIR serves to document and communicate, clearly and impartially:

- the context of the proposed activity;
- the probable impacts and risks associated with the proposed activity and its alternatives;
- measures to mitigate and manage negative impacts and enhance benefits - associated with the proposed activity and its alternatives, and the residual significance of impacts if mitigation measures were to be implemented effectively;
- the concerns of the interested public, authorities, and the communities affected by the proposal; and
- the level of confidence in predicting and evaluating impacts, any gaps in knowledge and areas of uncertainty which could substantially influence the findings.



## 5.1. ASSESSMENT OF SITE SENSITIVITY – BIOPHYSICAL ENVIRONMENT

On-site assessment of the environmental characteristics is supported by literature studies.

The following specialist investigations have been undertaken and all Final Reports are annexed to this EIA Report:

- ✚ Vegetation Assessment (Eco-Agent CC);
- ✚ Faunal Assessment (Eco-Agent CC);
- ✚ Avi-faunal Assessment (Eco-Agent CC)
- ✚ Geotechnical Investigation (Soilkraft CC);
- ✚ Hydrogeological Evaluation (WSM Leshika)

## 5.2 ASSESSMENT OF SITE SENSITIVITY – SOCIO-ECONOMIC ENVIRONMENT

The following studies were undertaken which identified impacts associated with the socio-economic environment.

- ✚ Heritage Impact Assessment (Dr Johnny van Schalkwyk Heritage Consultants);
- ✚ Town planning application [Application for Land Development Area in terms of the Development Facilitation Act (Act 67 of 1995)]

## 5.3 EIA PROCESS CONDUCTED IN LINE WITH ENVIRONMENTAL LEGISLATION

ILA has proceeded with the EIA Process, as described in Regulations 26-35 of GNR 543 of 18 June 2010 and as described in the following Guideline Documents published by the Department of Environmental Affairs:

- ✚ Guideline Documents 3, 4 and 5 of 2006;
- ✚ Integrated Environmental Management Guideline Series 7 – Public Participation in the EIA Process, Department of Environmental Affairs [2010];
- ✚ Integrated Environmental Management Guideline Series 5 – Companion to the National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations of 2010;
- ✚ Environmental Impact Reporting, Integrated Environmental Management, Information Series 15, Department of Environmental Affairs and Tourism (DEAT), Pretoria 2004]

Documents produced comply with the requirements stipulated in the Environmental Impact Assessment (EIA) Regulations promulgated 18 June 2010 as read with Government Notices R 543 (Regulations 26-35), R544, R545 and R546 as amended.

## 5.4 PUBLIC PARTICIPATION CONDUCTED IN LINE WITH THE REQUIREMENTS OF THE EIA REGULATIONS 2010

The approach followed regarding Interested and Affected Parties during the EIA process is as per the requirements of the Environmental Impact Regulations published in the National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations of 2010 (Government Notice No's R543, R544, R545 and R546 of 18 June 2010).

The following Guideline Documents published by the DEA were also utilised to guide the Public Process;

- ✚ Integrated Environmental Management Guideline Series 7 – Public Participation in the EIA Process, Department of Environmental Affairs [2010]; and
- ✚ Guideline Document 4 of 2006.

## 5.5 ASSESSMENT OF IMPACTS

Aspects and impacts (cumulative impacts, degree of impacts, nature of impacts, degree to which impacts can be reversed upon implementation of mitigation measures), associated with the planning, construction and operational phases identified during the Scoping phase are extensively assessed as determined through application of a methodology, which is based on DEAT (2006) Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Regulations, Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

Comprehensive mitigation measures informed by the finalised specialist reports as well as consultation with key stakeholders are included in the report as well as in the Environmental Management Programme.

The EIA process followed has furthermore been:

- ✚ open and transparent and is being maintained throughout the entire lifecycle of the EIA-process; and
- ✚ respects the democratic rights and obligations of the participants/ stakeholders.



## 6. RISKS AND KEY ISSUES

Risks, key aspects and impacts were identified following consultation with and written correspondences received from Interested and Affected Parties, Departments and Key Stakeholders, site visits as well as past experience with similar developments has also contributed to the identification process.

A list of impacts identified associated with the proposed upgrades to the training facility are listed below:

### 6.1 ANTICIPATED ENVIRONMENTAL AND SOCIAL ASPECTS

#### 6.1.1 PRE-CONSTRUCTION AND CONSTRUCTION PHASES

- Surveying, fencing, search-and-rescue, clearing and grubbing, topsoil stripping;
- Transport of material to site;
- Construction of the temporary site camp which involves clearing of the vegetation, fencing of the camp and related structures including store-rooms and vehicle parking areas;
- Construction of drainage and bridge structures;
- Earthworks include clearing of vegetation;
- Site clearance including removal of all building material, temporary structures and any other waste material generated during construction. All such material to be removed from site and disposed of appropriately once construction is complete.

#### 6.1.2 OPERATIONAL PHASE

- Open Space maintenance [removal of weeds];
- Maintenance of stormwater infrastructure [regular cleaning of debris and stormwater in and outlets].
- Erosion control;
- Maintenance of Waste Water Treatment Facility [Oxidation ponds];
- Maintenance of buildings and training facilities.
- Road maintenance.

### 6.2 ANTICIPATED IMPACTS

The anticipated impacts are associated with the preferred proposal Alternative 3.

#### 6.2.1 CONSTRUCTION PHASE

##### Beneficial Impacts

- Skills development and creation of job opportunities; and
- Eradication of invaders and establishment of indigenous vegetation.

##### Adverse Impacts

- Invasion by weeds and invasive alien plants as a result of surface disturbance;
- Increased erosion risk due to de-vegetation of areas of construction resulting from construction of new infrastructure such as the, accommodation units, training facilities and installation of services and new sewerage treatment plants at Camp B and below Camp C;
- Poaching of fauna by construction team;
- Loss of wetland habitat due to construction activity within riparian zones (new sewer line from landing strip admin building will cross a stream, the replacement of the defunct pipelines will also result in construction activity within riparian areas where pipelines cross streams and the upgrade of stormwater culverts and pipes within riparian areas. Should the areas be rehabilitated habitat should be able to re-establish for underground infrastructure. If the culvert upgrades require a permanent footprint larger than the current infrastructure wetland habitat loss in these local areas will be permanent);
- Interception of subsurface flows installation of services [replacement of defunct pipelines and installation of new pipelines];
- Increased sedimentation in waterways due to construction activity within riparian areas and stormwater run-off from areas where vegetation has been cleared;
- Water quality deterioration [accidental spillage of hazardous substances or contaminated stormwater run-off];
- Temporary diversion of stream during installation of pipelines and upgrade of culverts will lead to destruction of aquatic vegetation and habitat loss;
- Temporary diversion of stream will lead to mobilisation of sediment and impact on water quality;
- Minimal soil and water contamination risk associated with the decommissioning of the existing oxidation ponds

- ✱ Impact on aesthetics of the area and *genius loci* (Sense of place);
- ✱ Noise emanating from construction & dust generation could impact on fauna;
- ✱ Heavy vehicle traffic increase that could impact negatively on safety and quality of existing roads and possible roadkill;
- ✱ Crime may increase as a result of contract workers in the area;
- ✱ Stockpile areas for construction material, generation and disposal of building waste & liquids and vehicle maintenance could impact on ground water, surface water (rivers), soil the and environment as a whole;
- ✱ Stockpile areas for construction material could pose threat to fauna (in terms of suffocation/poisoning etc);
- ✱ Possible damage / loss of subterranean artefacts;
- ✱ Removal of protected trees;
- ✱ Waste Management could impact on soil and ground water;
- ✱ Waste Management could pose threat to fauna;
- ✱ Sanitation (toilet facilities) could impact on soil and ground water; and
- ✱ Unsupervised and misuse of fire on site could impact negatively on the environment.

## 6.2.2 OPERATIONAL PHASE

### Adverse

#### Beneficial Impacts

- ✱ Rehabilitation of disturbed areas [roads which will no longer be used and areas where pipelines were implemented which will now be discontinued, areas affected by erosion and the oxidation ponds once decommissioned];
- ✱ Upgrading of stormwater management infrastructure which could reduce erosion risks and protect riparian habitat and ecological functionality at outlet points and downstream. With implementation of a rehabilitation plan erosion on site can be managed.
- ✱ Upgrading and maintenance to existing sewerage and water infrastructure will reduce risk of environmental impacts such as sewerage leaks and water wastage due to defunct equipment;
- ✱ Skills development and long term job opportunities;
- ✱ Provision of additional facilities and improved quality facilities for SAPS training;
- ✱ Provision of movement corridors should grassed swales be implemented;
- ✱ Infiltration of stormwater runoff with implementation of RSuDS
- ✱ Simplified regulation and monitoring of purified effluent with use of submerged media reactor;
- ✱ Submerged media reactor provides a closed system with no insect infestations or odours

#### Adverse Impacts

- ✱ Permanent loss of habitat within permanent footprint of new buildings and infrastructure;
- ✱ Increased erosion if proper stormwater management measures are not implemented in areas where vegetation has been cleared [e.g. along road alignments]
- ✱ Waste generation could impact on capacity of landfill site;
- ✱ Waste generation & waste management could impact on fauna and lead to possible contamination of soil, surface and groundwater;
- ✱ Increased traffic generation during operational phase and maintenance of the P240 required;
- ✱ Increased noise pollution additional traffic along the P240/1;
- ✱ Possible contamination of groundwater should the development and wastewater treatment facility not be managed properly and equipment maintained and regularly inspected. The use of purified effluent poses a potential contamination risk to soil, surface and underground resources if the effluent does not meet the DWA specified standards;
- ✱ Roadkill due to night driving (staff, trainees);
- ✱ Potential fire hazard if effective fire management plan is not implemented and maintained.

## 6.2.3 ANTICIPATED CUMULATIVE IMPACTS

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time.

- (1) whether the resource is especially vulnerable to incremental effects;
- (2) whether the proposed action is one of several similar actions in the same geographic area;
- (3) whether other activities in the area have similar effects on the resource;
- (4) whether these effects have been historically significant for this resource; and
- (5) whether other analyses in the area have identified a cumulative effects concern.

The following cumulative impacts have been identified. These impacts are considered cumulative when assessed in addition to the

existing and surrounding land uses: the cumulative impacts can be considered when the

### **Construction Phase**

- ☛ Invasion by weeds and invasive alien plants as a result of surface disturbance
- ☛ Increased erosion risk due to de-vegetation of areas of construction
- ☛ Loss of wetland habitat due to construction activity within riparian zones
- ☛ Increased sedimentation in waterways

### **Operational Phase**

- ☛ Rehabilitation of disturbed areas;
- ☛ Waste generation could impact on capacity of landfill site
- ☛ Increased traffic generation during operational phase and maintenance of the P240 required
- ☛ Loss of wetland habitat due to construction activity within riparian zones

## **7. IMPACTS AND MITIGATION MEASURES**

Each impact was evaluated in terms of the proposed lay-out, land use & parameters applicable to the environmental management. Mitigation measures have been identified that will mitigate the impacts of medium and high significance successfully. The development proposal has considered the factors as indicated in NEMA (Act 107 of 1998) in order to result in the development of a sustainable land use.

## **8. CONCLUSION AND RECOMMENDATIONS**

The potential negative impacts on the environment can be successfully mitigated; provided that strict implementation of the Environmental Management Programme and auditing thereof takes place and that the recommendations as indicated under Section 4 & 8 are implemented.

From the findings of the Environmental Impact Assessment, the following can be concluded:

- ☛ The existing training facilities on the site have been in existence for 20 year, due to the limited development footprint the land use has contributed to the conservation of Open Space on the remainder of the property;
- ☛ The proposed development areas to be rezoned affect only a very limited area of the farm portions, i.e. approximately 5%, and the remaining 95% of the farm portions remains under an "Agricultural" zoning. A large portion of the property will therefore continue to be conserved;
- ☛ The location of the subject property in a remote rural area with very limited development makes it ideal for the purposes of the SAPS Training Institute, which requires a secluded and private setting. The nature of the training facilities for the SAPS furthermore requires that the respective camps on the site must be situated well apart and in dense vegetation, in order to prevent visual contact between the camp areas. The site is therefore extremely desirable in terms of its size, locality and nature for purposes of the SAPS training facilities;
- ☛ The proposed expansion and upgrading of the existing training facilities will lead to the creation of a limited number of employment opportunities that will aid in addressing unemployment, and contribute towards poverty alleviation within the grass-roots community. The development will furthermore contribute towards broadening the economic base of the region;
- ☛ The operation of the training institute for purposes of training the SAPS Special Forces is in national interest, and the need is undisputed;
- ☛ Considering the enhancing factors including the favourable location, size and nature of the site, together with the desirability and need for the proposed development the subject properties are well suited for the proposed uses and the application.

It is believed that both the beneficial and adverse impacts were thoroughly assessed. Site specific mitigation measures have been provided by specialist consultants and have been included in the EMP. Compliance with the requirements stipulated in the EMP and adherence to the mitigation measures will minimise and manage the environmental impacts identified in Section 7 of this Report

## SECTION 1: INTRODUCTION

### 1. DETAILS OF APPLICANT AND INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

#### 1.1 APPLICANT

The applicant is:

**Department of Public Works**

Private Bag X 65

PRETORIA

0001

Tel: (012) 337-3328

Fax: (086) 572-9671

Email: puseletso.ntsane@dpw.gov.za

#### 1.2 ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

*[Regulation 31(2)(a)(i)]*

The Environmental Assessment Practitioner is:



**INTERDESIGN**  
L A N D S C A P E  
A R C H I T E C T S

**INTERDESIGN LANDSCAPE ARCHITECTS (PTY) LTD (ILA)**

P.O. 74648

LYNNWOOD RIDGE

0040

Tel: (012) 348-1922

Fax: (012) 348-7154

Email: [claudia@ilaweb.co.za](mailto:claudia@ilaweb.co.za)

Contact person: Claudia Coetzee

##### 1.2.1 EAP EXPERTISE

*[Regulation 31(2)(a)(ii)]*

ILA performs comprehensive Environmental Impact Assessments (EIA's), as required by the National Environmental Management Act, 1998. ILA's expertise and experience also include visual impact assessment, as part of an EIA. The company furthermore conducts Ecological Planning and Rehabilitation which entails a process of site surveying and assessment of the physical, biotic and social-economic environment. This database is analysed to assist during the planning process of developments.

The Environmental Assessment Practitioners team consist of the following individuals:

✿ **Ms Karen Botes – Managing Director**

Qualifications: BL (UP) MTech (Hort.) *cum laude* PrLArch

✿ **Mrs Abigail El Mohamadi – Director**

Qualifications: BSc LArch (UP) PrLTech

✿ **Miss Claudia Coetzee – EIA Manager**

Qualifications: National Diploma in Journalism

✿ **Miss Shalini Chetty – Environmental Assessment Practitioner**

Qualifications: BA Environment and Development (U KZN Westville)

The Managing Director and Director of ILA in their personal capacities are members of the South African Council for the Landscape

Architectural Profession (SACLAP). (Registration numbers 99102 and 20198 respectively)

Karen Botes (Membership no. 1833), Abigail El Mohamadi (Membership no. 1857), Claudia Coetzee (Membership no 2857) and Shalini Chetty (Membership no 2376) are also members of the International Association of Impact Assessment (South Africa) IAIA.

## 1.2.2 LIMITATIONS AND GAPS IN KNOWLEDGE

### *[Regulation 31(2)(m)]*

The following limitations and gaps were identified during the EIA process;

- ✿ No groundwater quality data were available as the boreholes were not pumping during the site visit and samples were therefore not available for analysis to confirm the water quality and to determine whether contamination is present;
- ✿ Although no water levels could be measured water levels in the area are expected to be less than 15 metres below ground level.
- ✿ The geotechnical investigation conducted at the Verdrag Police Training Facility is of a preliminary nature only and should be considered as such. The purpose of the investigation was not to provide detailed zoning or recommendations, but to assess the feasibility of the proposed upgrade to the Verdrag facility, from a surface geotechnical standpoint Detailed geotechnical investigation needs to be undertaken to verify and refine the findings of this feasibility study prior to proceeding with construction,
- ✿ ILA has limited information available regarding the provision of electrical supply to the facility;
- ✿ No construction method statements are available.

## SECTION 2: SITE DESCRIPTION & SURROUNDING LAND USES

### 2. DESCRIPTION OF APPLICATION SITE AND EXISTING AND SURROUNDING LAND USES

#### 2.1 APPLICATION SITE

##### *[Regulation 31 (2)(c)]*

The proposal entails upgrading the existing facilities at the Verdrag SAPS Training Facility. The upgrades include upgrading of exiting infrastructure [replacement of defunct infrastructure] the construction of a new shooting range, and additional training facilities including student and trainer accommodation. New access roads and water and sewerage infrastructure will be constructed in order to service the new training camp and it is envisaged that the existing sewerage treatment ponds will be decommissioned in the future once funds become available to replace the current treatment works with a more modern facility **[Refer Section 4 for details]**.

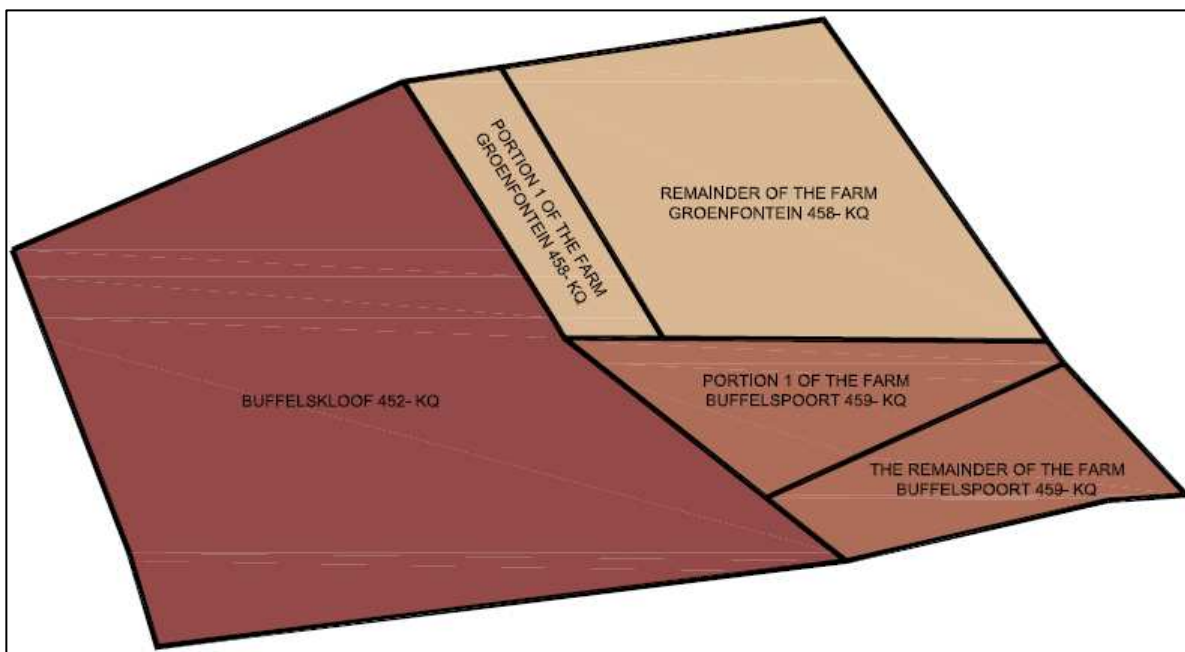
The subject farm portions are situated in the Limpopo Province, between the towns of Thabazimbi and Modimolle. The site is situated in the jurisdictional area of the Modimolle Local Municipality, but is also bordered by the Thabazimbi Local Municipal area to the west.

The SAPS Training institute facilities are situated on the valley floor between the Sandriviersberge to the north and the Hoekberge to the south **[Refer Appendix 5 for regional locality]**. The site has been used as an advanced training institute for SAPS personnel since the early 1980's. Training and accommodation is located in a number of small and well circumscribed localities whereas the greatest portion of the site is, for all intents and purposes, managed as a game reserve.

A significant feature on the Farm Buffelskloof 452-KQ is the Rookpoort Dam which was constructed in 1993. A permit for construction of the dam was issued by the then Department of Water Affairs and Forestry. The dam has a maximum storage capacity of 3,44 million cubic metres.

The properties forming part of this application are known as follows:

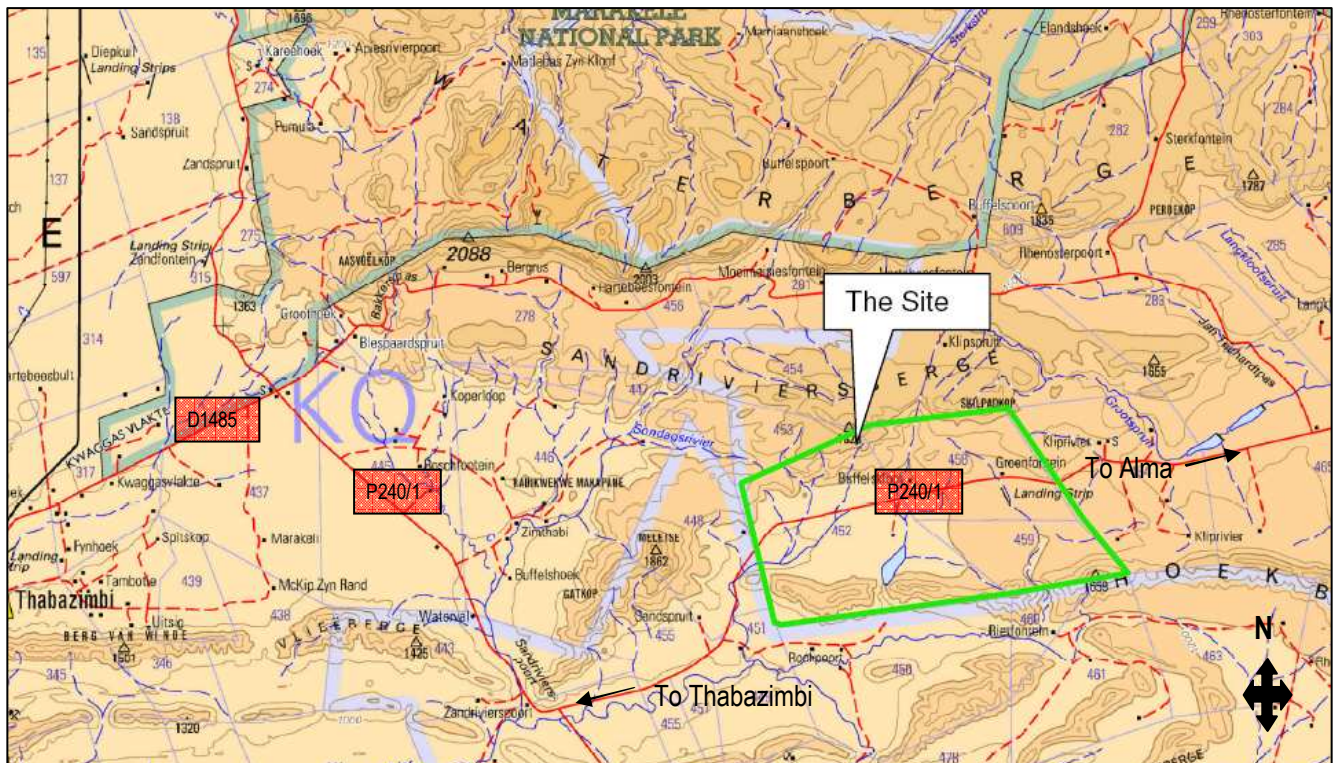
- Portion 1 of the Farm Groenfontein 458-KQ [428,2660 ha];
- The Remaining extent of the Farm Groenfontein 458-KQ [1728,800 ha];
- Portion 1 of the Farm Buffelspoort 459-KQ [685,2256 ha];
- The Remaining extent of the Farm Buffelspoort 459-KQ [630,3804 ha];
- The Farm Buffelskloof 452-KQ [3994, 4484 ha].



**Figure 2: Configuration of farm portions**

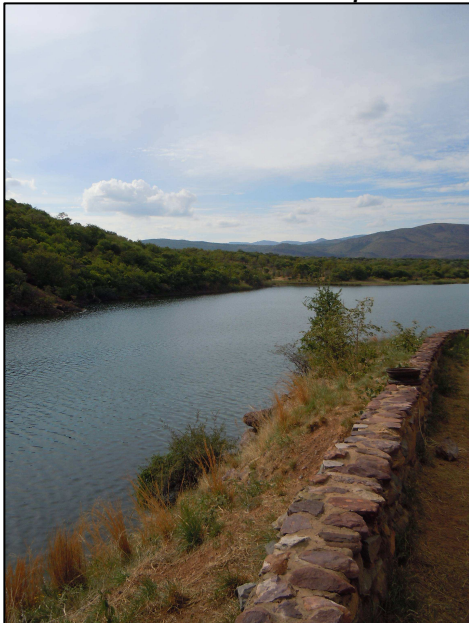


The properties are situated within the Limpopo Province and fall within the jurisdictional boundaries of the Modimolle Municipality. The Verdrag training facility is located roughly 37km directly east of Thabazimbi. The total area is bisected by road P240, an unpaved road leading from road D1485 which leads to Thabazimbi. Road P240 ultimately leads to Alma, to the east.



**Figure 3: Site Locality [Image: Metroplan Townplanners]**

**Photo 1: A view across the Rookpoort Dam looking North**



**Photo 2: A view of the existing landing looking South toward the dam. The new landing strip is proposed in a westerly direction from the point indicated in the photo**





**Photo 3: Existing A Training camp which will be upgraded**



**Photo 4: A view of the oxidation pond embankment of the pond situated nearest the eastern boundary of the application site. The view is toward the south west**



**Photo 5: The area proposed for the construction of the new Alpha Training Camp**





**Photo 6: A view of the existing Bravo Camp. An example of the trainer and student accommodation facilities**

## 2.2 EXISTING AND SURROUNDING LAND USES

The existing Verdrag SAPS Training Institute facilities are situated on diminutive areas of the farm portions. The training facilities currently consist of the administration camp with residential area, Bravo training camp, Charlie tented camp (no permanent structures), Delta training camp, Echo training camp, two shooting ranges in the north, two sewage works, an ammunition safe, urban training facility and landing strip. Most of the buildings in the training and administration camps are however temporary structures. The Rookpoort dam is situated on the site close to the Bravo camp, as well as a few smaller dams. Several non-perennial streams and catchment areas are also present on the farm portions.

The subject property is surrounded by farms that are used either for game farming or for cattle grazing. The Marekele National Park is also situated to the north in the Waterberg mountain range.

The surrounding farms located directly adjacent to the application property consist of the following land uses:

### NORTH

- ↻ Buffelspoort Farming;
- ↻ Shakawe Private Game Reserve

### SOUTH

Farming and game farming activities

### WEST

- ↻ Some adjacent properties have been sold for prospecting rights;
- ↻ Farming activities

### EAST

- ↻ Dabchick Wildlife Reserve
- ↻ Hoggenheimer Farming

## SECTION 3: LEGAL FRAMEWORK

### 3.1 REQUIREMENTS BY THE NATIONAL DEPARTMENT OF ENVIRONMENTAL AFFAIRS [DEA]

The National Department of Environmental Affairs [DEA] acknowledged receipt of the application in a letter of correspondence dated 16 April 2012. The project received the following reference number NEAS: DEA/EIA/0001130/2012 and Ref No 14/12/16/3/3/38. ILA further prepared a Scoping Report which was submitted to the DEA.

The Scoping Report was approved by the DEA in a letter of correspondence dated 15 October 2012 and the following information has been included in this EIA Report as per the Department's requirements [*Refer to Appendix 6 for a copy of the Scoping Report approval letter*]:

- ✚ Details of future plans for the site and infrastructure, upgrading to more advanced technologies; [*Section 4*];
- ✚ Total footprint [final site layout plan] and site sensitivity overlay [*Section 4*];
- ✚ Water use license information [*Section 3*];
- ✚ Impacts on vegetation ecology [*Section 5*];
- ✚ Avian biodiversity assessment [*Section 5*];
- ✚ Need and desirability of the land use [economic viability, environmental costs vs benefits of the training facility] [*Section 9*];
- ✚ Services Report [*Section 4*];
- ✚ Construction and operational phase EMP [*Section 8*];
- ✚ Signed application form - to be submitted with Final EIA Report

### 3.2 GUIDELINES AND LEGISLATION

This section provides an overview of the relevant policy, legal and administrative requirements which are applicable to the proposed project.

#### 3.2.1 ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENTS

##### **NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 [ACT 107 OF 1998], AS AMENDED**

The Environmental Impact Assessment (EIA) process followed complies with the National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations of 2010 (Government Notice No's R543, R544, R545 and R546 of 18 June 2010). The proposed project involves 'listed activities', as defined by the NEMA, 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 in the Limpopo Province, as the Applicant is a Government entity the National Department of Environmental Affairs is the responsible regulatory authority (Competent Authority). The Limpopo Department of Economic Development, Environment and Tourism [LEDET] is a key stakeholder and has up to date been provided with copies of the Draft & Final Scoping Report and Draft EIA Report for comment.

The Scoping and EIA for the proposed development is undertaken in terms of the EIA regulations, 2010 published in Government Gazette Notices R543, R544, R545 and R546 in terms of the National Environmental Management Act, 1998 (Act 107 of 1998).

The following activities apply to the proposed development. A description of which aspect of the development triggers the activity is highlighted in green;

- ✚ The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, grit, pebbles or rock of more than 5 cubic metres from a watercourse [**GNR 544, Listing Notice 1, Item 18(i)**] *Required for implementation of new and replacement of defunct pipelines within a watercourse, including stormwater outlets such as culverts, road maintenance at existing crossings*
- ✚ The decommissioning of existing facilities or infrastructure for – (iv) activities where the facility or the land on which it is located is contaminated [**GNR 544, Listing Notice 1, Item 27**] *It is hereby recorded that this listed activity was not included in the Legal Notice or Background Information Document which was made available during the initial public process. Since registering the project with DEA the project engineers conducted an investigation into the existing services and highlighted certain shortcomings. In the design report compiled by Dux Consulting Engineers dated 19 June 2012 it was confirmed that the*

*training facility required water for irrigation and fire-water. The engineers proposed that submerged media reactor waste water treatment modules be implemented at the various camps. This would serve to replace the existing oxidation ponds over a period of time as implementation of the modules will be phased. Once the oxidation ponds are no longer in use they must be decommissioned and the areas rehabilitated. The contamination risk is anticipated to be very low.*

- ✦ The expansion of facilities or infrastructure for the bulk transportation of water, sewerage or stormwater where (a) the facility or infrastructure is expanded by more than 1000 metres in length. [GNR 544, Listing Notice 1, Item 37(a)] *Required for the installation of additional pipelines to service new training camps.*
- ✦ The expansion of (ii) channels, (iii) bridges, (v) bulk stormwater outlet structures within a watercourse or within 32m of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line [GNR 544, Listing Notice 1 Item 39(ii), (iii), (v)] *Required for stormwater management on site*
- ✦ The construction of a road wider than 4 metres with a reserve less than 13,5 metres in (a) Limpopo (ii) outside urban areas, in (cc) Sensitive areas as identified in an environmental management framework as contemplated in Chapter 5 of the Act and as adopted by the Competent Authority. [GNR 546, Listing Notice 3, Item 4 (a) (i)(cc)] *Required for the internal roads at new camp sites.*
- ✦ The construction of aircraft landing strips and runways 1,4 kilometres and shorter in (a) Limpopo (ii) outside urban areas in (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority. [GNR 546, Listing Notice 3, Item 8(a)(ii)(dd)] *Required for the clearance of a new landing strip.*
- ✦ The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation in Limpopo, (ii) outside urban areas in (cc) sensitive areas as identified in an environmental management framework as contemplated in Chapter 5 of the Act and as adopted by the Competent Authority. [GNR 546, Listing Notice 3, Item 13(c)(ii)(cc)] *Required for construction of all new structures including new shooting range.*
- ✦ Phased activities for all activities listed in this Schedule and as it applies to a specific geographical area, which commenced on or after the effective date of this Schedule, where any phase of the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold [GNR 546, Listing Notice 3, Item 26]
- ✦ The expansion of reservoirs for bulk water supply where the capacity will be increased by more than 250 cubic metres in Limpopo, outside urban areas, in sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority. [GNR 546, Listing Notice 3, Item 17(a)(i)(dd)]. *Upon receipt of the preliminary engineering design report on 18 June 2012, it was confirmed that additional reservoir capacity was required at the Admin Camp and the Delta Camp. The existing reservoirs at these two camps will be expanded by 5090 m³ each.*

### 3.2.2 OTHER LEGAL REQUIREMENTS AND GUIDELINES

The following list of legislation and guidelines are applicable to the proposed development.

#### DEVELOPMENT FACILITATION ACT, 1995 (ACT NO. 67 OF 1995)

The Development Facilitation Act (DFA) guides the implementation of reconstruction and development programmes and projects in relation to land and lays down general principles governing land development. The Applicant has applied to the Limpopo Development Tribunal for the establishment of a Land Development Area to be known as the SAPS Verdrag Training Institute. The applicant is applying for the rezoning of 16 portions to establish a land development area measuring 362.176 hectares as per the Land Development lay out, refer to Appendix 2. The residual 7104.9444 hectares will remain under an 'Agricultural' zoning.

*This application has been submitted in terms of the DFA Legislation and was approved by the Tribunal on 31 May 2012. Such approval is however conditional and is subject to the issuing of an Environmental Authorisation by DEA.*

#### NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. A list of Threatened Ecosystems was published (Government Gazette 2011) as part of the National Environmental Management Biodiversity Act, 2004. (Act 10 Of 2004). These Threatened Ecosystems are described by SANBI & DEAT (2009). The vegetation specialist considered these ecosystems during the field investigation.

*The application site comprises Central Sandy Bushveld which is not threatened in the Limpopo Province.*

#### NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998)[NWA]

The National Water Act guides the management of water in South Africa as a common resource. The Act aims to regulate the use of

water and activities, which may impact on water resources through the categorisation of 'listed water uses' encompassing water extraction, flow attenuation within catchments as well as the potential contamination of water resources, where the Department of Water Affairs (DWA) is the administering body in this regard.

EcoAgent CC has been commissioned to apply on behalf the Applicant to the Department of Water Affairs for the registration of existing Water Uses:

The following existing activities associated with the Training Facility require registration and licensing in terms of the NWA, 1998

- ✚ The Rookpoort Dam is situated on the Farm Buffelskloof 452-KQ. A permit was issued by the Department of Water Affairs and Forestry for construction of the Dam. The dam is the main source of water supply to the training facility;
- ✚ Boreholes for supply of water;
- ✚ River crossings [pipes and roads];
- ✚ Sewerage treatment works;
- ✚ All facilities affected by the 1:100 year floodline.

In terms of Section 21 of the National water Act, 1998 (Act 36 of 1998) the following uses require authorisation from the DWA for which water use registrations have been submitted on which a decision is currently still pending:

- ✚ Section 21 (a) 'taking water from a water resource'; *[Application has been submitted to DWA]*
- ✚ Section 21 (b) 'storing water'; *[Application has been submitted to DWA]*
- ✚ Section 21 (c) 'impeding or diverting the flow of water in a watercourse'; *[Application for existing infrastructure has been submitted to DWA]*
- ✚ Section 21 (g) 'disposing of waste in a manner which may detrimentally impact on a water resource'; *[Application for existing oxidation ponds has been submitted to DWA and an application is to be submitted for new waste water treatment works]*
- ✚ Section 21 (i) altering the bed, banks, course or characteristics of a watercourse'; *[Application has been submitted to DWA for existing infrastructure]*

Please note that the Applicant will apply to the Department of Water Affairs for the necessary licenses for **new activities** which require authorisation by DWA. The current application is being managed under the Site Clearance specifications of the Applicant. The next phase to be initiated by the Applicant is known as the Design Phase and all new water use licenses will be applied for during the design phase of the project as detailed information and budget for detailed information has not been made available as part of the Site Clearance phase of the project. New water use license activities which must be licensed prior to construction commencing on these activities are summarised as follows:

- ✚ New proposed sewerage treatment works;
- ✚ Additional river crossings;
- ✚ Upgrade of existing river crossings

## **NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT 59 of 2008)**

The Waste Act reforms the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith.

Activities in respect of which a waste management license is required in accordance with section 20(b) of the Waste Act includes

- ✚ The treatment of effluent, wastewater or sewage with an annual throughput capacity of 15 000 cubic metres or more. [No 718 Category B Item 7] *Required for the existing oxidation pond facility as well as for the new proposed sewerage treatment facility.*
- ✚ The decommissioning of activities listed in this Schedule [No 718 Category A Item 20] *Required for decommission of the existing oxidation ponds once they are no longer in use and have been replaced by the new sewerage treatment works.*

The training facility has made use of an Aerobic-Anaerobic Stabilisation Pond treatment system since 1982. No record of a permit or license issued by the Department of Water Affairs for the operation of this facility is available. A formal enquiry was submitted to the DEA to determine whether the ponds required a license in terms of the new Waste Act. It was confirmed by DEA that the wastewater treatment facility must be subject to a Waste Management License Application. As the annual throughput of the facility exceeds 15 000m<sup>3</sup> it is also being subject to a full Environmental Impact Assessment Process. The new sewerage treatment works proposed to replace the oxidation ponds and described in Section 4 also requires a license as the combined throughput capacity will exceed 15



000m<sup>3</sup>.

The above activity is listed as a Category B activity and any person who wishes to commence, undertake or conduct an activity listed under this Category, must conduct a full Environmental Impact Assessment process, as stipulated in the Environmental Impact Assessment Regulations made under section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as part of a waste management license application.

The existing Waste Water Treatment Facility is therefore being investigated as part of this EIA Process.

### **NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT NO. 25 OF 1999)**

The National Heritage Resources Act legislates the necessity for cultural and heritage impact assessments in areas earmarked for development, which exceeds 0.5 hectares. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. The South African Heritage Resources Agency (SAHRA) administers permits.

*A Heritage Impact Assessment has therefore been conducted on the application site. Cultural and heritage resources were recorded on the subject property; however none of these are affected by the proposed lay-out of new facilities and infrastructure. The recommendations of SAHRA and those of the Heritage specialist have been included in the Environmental Management Programme.*

### **NATIONAL FORESTS ACT, 1998 (ACT NO. 84 OF 1998)**

This Act provides for the management, utilisation and protection of forests through the enforcement of permitting requirements associated with the removal of protected tree species, as indicated in a list of protected trees (first promulgated in 1976 and updated since). The Department of Water Affairs and Forestry (DWAF) administer permits in this regard.

Protected trees have been recorded on site. None of these trees may be removed or damaged by the development activity without a permit issued by DAFF. The trees will be marked prior to construction commencing. The Layout of facilities is quite flexible and it is not anticipated that any of the trees will have to be removed.

Protected species were identified by the vegetation specialist during the site investigation and are located at the following camps

- **Existing Camp A : *Acacia erioloba* and *Sclerocarya birrea*;**
- **New Residential Extension to Existing Housing This area is situated directly east of the Existing Training Camp A : None**
- **New Echo Camp: None**
- **Existing D Training Camp (to be upgraded): None [the species richness of indigenous species is high, particularly for the tree species, but no protected tree species and no red data species were recorded]**
- **New Ammunition Safe at existing safe: None**
- **Existing B Training Camp (to be demolished and replaced): None**
- **New Shooting Range and Administration Block: *Philenoptera violacea* and *Sclerocarya birrea*;**
- **New A Training Camp: *Spirostachys africana***
- **New Administration building and extension the existing Landing Strip: None**
- **New Sewer Lines From the existing A Training Camp to the existing western Sewage Works A & B: *Acacia erioloba* and *Sclerocarya birrea***
- **Sewer lines from the new A Training Camp and from the Administration Block at the Landing Strip to the existing eastern Sewage Works C, D & E : None**

Such species may not be removed or relocated without a permit from Department Agriculture and Forestry. The vegetation specialist will conduct another site visit during the pegging of the site in order to mark the protected trees with the land surveyor. Where practical the affected trees will be retained. If the lay out cannot practically and safely accommodate the trees the required permit process must be undertaken prior to the trees being removed.

### **OCCUPATIONAL HEALTH AND SAFETY ACT (ACT NO. 85 OF 1993)**

The purpose of this Act is to provide for the health and safety of persons at work, and for the health and safety of persons in connection with the use of plant and machinery. It serves also for the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

*Requirements in terms of this act relate mostly to working conditions of employees during the construction and operational phases. Aspects related to the Health & Safety Act have been included in the Environmental Management Programme.*

### **NATIONAL VELD & FOREST FIRE ACT (ACT 101 of 1998)**

The purpose of this Act is to prevent and combat veld, forest and mountain fires throughout the Republic. The Act provides for a variety of institutions, methods and practices for achieving this purpose.

*It will be the responsibility of the Applicant [Public Open Works] to ensure that a veldfire programme is properly implemented. As per Section 12 of the Act the Applicant is responsible for ensuring that firebreaks are implemented and maintained.*

*The Thabazimbi Fire Protection Association (Thabazimbi FPA) was established in 2007 and is presently chaired by Mr Anton Scheepers. The section leader for Thabazimbi FPA is Warrant Officer Hennie Kruger.*

*It is the responsibility of land owners to adhere to the rules of the Thabazimbi FPA and to ensure that all firebreaks, fire fighting equipment and fire fighting teams are up to standard. It is very important to inform neighbours when you plan to burn firebreaks or even arrange to burn firebreaks together. Especially during the burning season, communication through a core team is very important, informing neighbours when and where to report during run away veldfires.*

### **DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM (DEAT) (2006) GUIDELINES 3, 4 & 5**

The EIA process is being conducted according to the Guideline documents 3, 4 and 5 compiled by the Department of Environmental Affairs and Tourism.

### **CONSERVATION OF AGRICULTURAL RESOURCES ACT 1983 (ACT 43 OF 1983)**

The Act provides for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invade plants; and for matters connected therewith.

*All invader species classified in terms of the Conservation of Agricultural Resources Act 1983 (Act 43 of 1983) within the road reserve to be identified and eradicated in an ecologically sensitive manner during the construction phase. Maintenance of weeds will be required during the operational phase. No chemicals may be used due to the proximity of the watercourses; weed removal must take place manually.*

### **HAZARDOUS SUBSTANCES ACT 1973 (ACT 15 of 1973)**

To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products; to provide for the division of such substances or products into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and to provide for matters connected therewith.

*Mitigation measures have been included in the EMP for the storage of hazardous goods during the construction phase.*

### **LIMPOPO ENVIRONMENTAL MANAGEMENT ACT (ACT NO 7 OF 2003)**

To consolidate and amend the environmental management legislation of or assigned to the Province and to provide for matter incidental thereto.

*It is recommended that the land owner apply for the formal protection of the site under the specifications of a Protected Natural Environment as provided for in Section 21(1)(a) of the above act.*