



**PROPOSED DEVELOPMENT OF A HOTEL AT THE
CONFLUENCE OF THE TIMFENHENI AND CROCODILE
RIVERS WITHIN THE KRUGER NATIONAL PARK**

DEA REFERENCE: 12/12/20/610/69

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS:

PLAN OF STUDY FOR EIA PHASE

FOR SUBMISSION TO:

**ALL REGISTERED INTERESTED AND AFFECTED PARTIES FOR
REVIEW AND COMMENT**

BY:

V&L LANDSCAPE ARCHITECTS



MARCH 2012

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1. BACKGROUND

Should the Final Scoping Report be accepted by the DEA, V&L shall proceed with the EIA Process, as described in the Guideline Documents 3, 4 and 5 compiled by the Department of the Environment, Agriculture, and Tourism May, June and October 2006 respectively. Documents to be produced will comply with the requirements stipulated in the Regulations 32-35 published in Government Notice R385 under Section 24(5) read with Section 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended.

The objectives of the EIA process are as follows:

- To identify issues/concerns that should be included into the scope of the Environmental Impact Assessment process;
- To inform stakeholders about the proposed development and provide them with an opportunity to raise their concerns that will contribute towards the EIA process;
- to establish/confirm the scope and contents of the Scoping and EIA Report and to identify possible specialist studies to be conducted to address significant issues in the EIA phase;
- To understand and thoroughly document the issues/concerns raised by stakeholders in such a way that delay due to misunderstanding will be prevented at all cost;
- 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 Environment, Agriculture, 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 identify/ describe possible environmental issues associated with the construction and operational phases of proposed change of land use and to determine the significance thereof;
- To reflect all the required information/ findings in a logical and systematic way in order to assist the DEA with the evaluation of the proposed change of land use in terms of the requirements of National Environmental Management Act, 1998 (Act No. 107 of 1998)as amended; and
- To describe/ recommend specific measures/ Environmental Management Plan (EMP) to be implemented to address significant aspects/ impacts associated with the proposed development. The EMP will incorporate measures as specified in the Comprehensive KNP Environmental Management Plan.

2. APPROACH

Aspects and impacts (cumulative impacts, degree of impacts, nature of impacts, degree to which impacts can be reversed), associated with the construction and operational phases identified during the Scoping phase shall be 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, Pretoria.

Comprehensive mitigation measures informed by the specialist reports as well as consultation with key stakeholders shall be included in the report as well as in the Draft Environmental Management Plan. The Draft EMP will be prepared as an Addendum to the existing KNP Environmental Management Plan.

The EIA process to be followed will furthermore:

- be open and transparent and will be maintained throughout the entire lifecycle of the EIA-process; and
- respect the democratic rights and obligations of the participants/ stakeholders.

3. IMPACT IDENTIFICATION AND ASSESSMENT METHOD

The identification and assessment of environmental impacts is a multi-faceted process, which combines quantitative and qualitative analysis and evaluation. It involves the application of scientific measurements and professional judgement to determine the significance of environmental impacts associated with the proposed project.

The process involves consideration of inter alia:

- The purpose and need for the project;
- Views and concerns of interested and affected parties; and
- Environmental legislation and guidelines.

The assessment of impacts is based on an objective Significance Assessment Methodology, which is in accordance with the Department of Environmental Affairs and Tourism's (DEAT) Guideline Document 5: Assessment of Alternatives and Impacts (2006). This method requires the allocation of a significance rating, which is determined by multiplying probability and severity ratings.

The following potential impacts have been identified for the project and will be assessed in the EIA Phase for all relevant alternatives:

3.1 Impacts Associated with the Park and Ride Facility

- **Construction Phase**
 - De-vegetation for parking areas, internal roads, services and welcome centre.
 - Loss of smaller faunal species such as invertebrates, reptiles and smaller mammals.
 - De-vegetation for the purposes of developing berms and the re-vegetation of the berms once developed.

- Potential poaching of fauna by construction team.
- Impacts on aesthetics of the area and genius loci during construction. This will also specifically relate to tourism and impacts on adjacent developments.
- Noise emanating from construction could have impact on fauna, tourists and surrounding developments.
- Dust generation from construction could impact on fauna, tourists and surrounding developments.
- Removal of vegetation within a protected area.
- Heavy vehicle traffic increase that could have an impact on general traffic in the KNP, impact on roads and potentially increase numbers of road kills.
- Potential impact of traffic congestion at Malelane Access gate.
- Security risk will increase due to large vehicles accessing the park. Poached items could therefore be smuggled out of the park easier than normal.
- Crime may increase as a result of contract workers in the area.
- Stockpile areas for construction material, generation and disposal of building waste and liquids and vehicle maintenance could have a negative impact on ground water, surface water and the environment as a whole.
- Impacts associated with stockpiles and building material on fauna (Poisoning and suffocating).
- Possible damage on sub-surface heritage features which were unable not identified in scoping or EIA phase.
- Damage and removal of protected floral species which have been identified on site which require permitting. The philosophy will however be to avoid all tree removal wherever possible.
- Solid Waste Management Impacts on surrounding environment.
- Additional sewage requirements of construction team may have impacts on the surrounding environment if not managed effectively.
- Excavation requirements for service and utility provision.
- Potential impacts of erosion due to storm water runoff.
- Visual Impacts on surrounding developments such as Pestana Hotel and Leopard Creek Golf Estate.
- Unauthorised fire on site could cause potential impacts.

– **Operational Phase**

- Increased traffic congestion at the Malelane Gate which is already congested at peak seasons.
- Increased area of hard surfaces which will increase quantity and velocity of storm water runoff. This runoff could also include impurities from leaks of vehicles which will have a negative impact on surrounding soils and ground water.
- Loss of habitat for fauna, invertebrate and flora, impact on biodiversity (Cumulative Impact).
- Negative visual impact on surrounding operators and visitors visiting the park.
- Waste generation of facility.
- Additional Sewage Requirements of operational phase.
- Noise impacts associated with operations.
- Light pollution of the facility.
- Impacts associated with 24 hour access relating to security, and impacts on fauna.

– **Cumulative Impacts**

- Waste generation;
- Traffic;
- Water Usage;
- Electricity Consumption; and
- Loss of habitat for fauna and flora (long term impact on biodiversity)

3.2 Impacts Associated with the Safari Resort and Road Re-Alignment

– **Construction Phase**

- De-vegetation for parking areas, internal roads, services and safari resort development components.
- Loss of smaller faunal species such as invertebrates, reptiles and smaller mammals.
- De-vegetation for new road re-alignment.
- Impacts associated with closure of S114 and rehabilitating decommissioned section.
- Potential poaching of fauna by construction team.
- Impacts on aesthetics of the area and genius loci during construction. This will also specifically relate to tourism and impacts on adjacent developments.
- Noise emanating from construction could have impact on fauna, tourists and surrounding developments.
- Dust generation from construction could impact on fauna, tourists and surrounding developments.
- Removal of vegetation within a protected area.
- Heavy vehicle traffic increase that could have an impact on general traffic in the KNP, impact on roads and potentially increase numbers of road kills.
- Security risk will increase due to large vehicles accessing the park. Poached items could therefore be smuggled out of the park easier than normal.
- Crime may increase as a result of contract workers in the area.
- Stockpile areas for construction material, generation and disposal of building waste and liquids and vehicle maintenance could have a negative impact on ground water, surface water and the environment as a whole.
- Impacts associated with stockpiles and building material on fauna (Poisoning and suffocating).
- Possible damage on sub-surface heritage features which were unable not identified in scoping or EIA phase.
- Damage and removal of protected floral species which have been identified on site which require permitting. The philosophy will however be to avoid all tree removal wherever possible.
- Solid Waste Management Impacts on surrounding environment.
- Additional sewage requirements of construction team may have impacts on the surrounding environment if not managed effectively.
- Excavation requirements for service and utility provision.
- Potential impacts of erosion due to storm water runoff.
- Visual Impacts on surrounding developments such as Pestana Hotel and Leopard Creek Golf Estate due to additional traffic volumes.

- Impacts on sensitive Sodic Sites identified by specialist.
- Impacts on red data faunal species and their breeding habits.
- Impact on elephant, hippo, buffalo and other species which move across the S114 to the crocodile river;
- Impacts on *Adenium Swazicum* populations found on site.
- Unauthorised fire on site could cause potential impacts.
- Impacts of placing electricity supply cable under the Crocodile River to minimise visual impact.

– Operational Phase

- Increase of hard surface area i.e. increased stormwater run off, which could impact on Crocodile River and Timfenheni Spruit pollution, erosion & destruction of habitat (cumulative impact);
- Loss of habitat for fauna, invertebrate and flora, impact on biodiversity (Cumulative impact);
- Negative visual impact on character of the park should architecture not be in line with natural surroundings;
- Waste generation (Cumulative impact) could impact on capacity of landfill site;
- Waste generation & management could impact on fauna;
- Potential Impact of RBC treatment plant for sewage management;
- Increased traffic generation during operational phase (Cumulative impact);
- Financial impact on existing concessions within the Park and surrounding tourist accommodation facilities;
- Sustainability of carrying capacity of Safari Resort;
- Existing capacity of KNP to accommodate additional tourist numbers;
- The re-routing of the S114 Road could impact on existing Game Drive Routes and other tourist road users;
- Light pollution (i.e. visual impact) could impact on surrounding properties and environment;
- Noise pollution could impact on surrounding properties and environment;
- Possible depletion of natural resources such as water, or contamination of groundwater should the development not be managed properly (Cumulative impact);
- Loss of potential natural habitat;
- Additional burden on electrical service provider (Cumulative Impact);
- Disturbance of nocturnal fauna through night driving;
- Impact on elephant, hippo, buffalo and other species which move across the S114 to the crocodile river;
- Roadkill due to night driving (staff);
- Safety measures implemented to protect guests could pose a danger to fauna and impact on migration routes.

– Cumulative Impacts

- Waste generation;
- Traffic;
- Water Usage;

- Electricity Consumption; and
- Loss of habitat for fauna and flora (long term impact on biodiversity)

3.3 Beneficial impacts associated with project

– Construction Phase

- Creation of employment opportunities for local communities.
- Increased income generation for local entrepreneurs and service providers providing services/supplies to the construction process.
- In-direct benefit will include the increased standard of living for many families in the surrounding communities.
- Payment of funds to contribute to the management of the Park.

– Operational Phase

- Rehabilitation of disturbed areas;
- Skills development and long term job opportunities;
- Community and local socio-economic upliftment;
- Generation of funds to contribute to the management of the Park;
- Environmental Interpretation, education and awareness opportunities to educate visitors to the KNP about the importance of conservation;
- Increased income generation for local entrepreneurs and service providers providing services/supplies to the operations process;
- Economic multiplier effect of tourism on businesses in the local and regional economy; and
- Creation of a destination that appeals to the tastes and preferences of a new or broader tourist market and exposes them to nature and heritage.

4. SIGNIFICANCE ASSESSMENT METHODOLOGY

In terms of the Significance Assessment Methodology, developed in accordance with the above guidelines, the significance of an impact is the product of a probability rating and a severity rating. A detailed description of the mentioned methodology follows below:

4.1 Significance, Probability and Severity Rating

Significance is the product of probability and severity.

Probability describes the likelihood of the impact actually occurring, and is rated as follows:

- Improbable - Low possibility of impact to occur due to design or history. Rating: 2
- Probable - Distinct possibility that impact will occur. Rating: 3
- Highly probable - Most likely that impact will occur. Rating: 4
- Definite - Impact will occur regardless of any prevention measures. Rating: 5

The **severity rating** is calculated from the factors allocated to intensity and duration. Intensity and duration factors are awarded to each impact, as described below.

4.2 Intensity Factor

The intensity factor is awarded to each impact according to the following method:

- **Low intensity** - nature and/or man made functions not affected (minor process damage or human/wildlife injury could occur). Factor 1
- **Medium intensity** - environment affected but natural and/or manmade functions and processes continue (Some process damage or human/ wildlife injury may have occurred). Factor 2.
- **High intensity**-environment affected to the extent that natural and/or human-made functions are altered to the extent that it will temporarily or permanently cease (Major process damage or human/wildlife injury could occur). Factor 4

4.3 Duration

Duration is assessed and a factor awarded in accordance with the following:

- **Short term:** <1 to 5 years. Factor 2
- **Medium term:** 5 to 15 years. Factor 3
- **Long term:** impact will only cease after the operational life of the activity has ended, either because of natural process or by human intervention. Factor 4
- **Permanent** - mitigation, either by natural process or by human intervention, will not occur in such a way or in such a time span that the impact can be considered transient. Factor 4.

4.4 Severity Factor

The severity rating is obtained from calculating a severity factor, and comparing the severity factor to the rating in the table below. For example:

$$\begin{aligned}\text{The Severity factor} &= \text{Intensity factor} \times \text{Duration factor} \\ &= 2 \times 3 \\ &= 6\end{aligned}$$

A severity factor of six (6) equals a severity rating of medium severity (Rating 3) as per table below:

RATING	FACTOR
Low Severity (Rating 2)	Calculated values 2 to 4
Medium Severity (Rating 3)	Calculated values 5 to 8
High Severity (Rating 4)	Calculated values 9 to 12
Very High Severity Rating (Rating 5)	Calculated values 13 to 16
Severity factors below 3 indicate no impact	

4.5 Significance Rating

A Significance Rating is calculated by multiplying the severity rating with the probability rating. The significance rating should influence the development project as described below:

- **Low significance** (calculated Significance Rating 4 to 6): Positive impact and negative impacts of low significance should have no influence on the proposed development project.
- **Medium significance** (calculated Significance Rating >7 to 14): Positive impact: should weigh towards a decision to continue. Negative impact should be mitigated to a level where the impact would be of low significance before project can be approved.
- **High significance** (calculated Significance Rating 15 and more) Positive impact: Should weigh towards a decision to continue, should be enhanced in final design. Negative impact: Should weigh towards a decision to terminate proposal, or mitigation should be performed to reduce significance to at least low significance rating.

5. TASKS TO BE UNDERTAKEN DURING EIA PHASE

In order to effectively assess the impacts of the proposed Safari Resort and associated infrastructure in Malelane, project details and facility layouts will need to be finalised based on specialist recommendations.

The following technical reports/information will be obtained in order for the associated impacts to be assessed:

- Stormwater Management Plan;
- Waste Water Management Plan;
- Wet Services Report;
- Waste Management Plan;
- Facility Layouts and Design Specifications;
- Alternative energy solutions;
- Alternative Green Building Techniques;
- Electronic Services Report;
- Electrical Reticulation and Supply;
- Services report containing information on provision of civil and electrical services as well as the re-routing of Rhenosterkoppies Road;
- Traffic Statement, confirming additional traffic to be generated and required upgrades;
- Noise Statement, confirming additional noise to be generated and required mitigation measures.

The following specialist investigations will be undertaken:

- Vegetation and Fauna Assessments (Consideration of the impact the development will have on the Pel's Fishing Owl, Saddle Billed Stork's and Crocodiles breeding nearby). The EWT will be contacted to provide input on impacts and possible mitigation;
- Visual Impact Assessment;
- Hydrogeological Investigation;

- Floodline determination;
- Invertebrate Assessment to be included in Ecological Assessment;
- An aquatic assessment will not be undertaken but required management guidelines will be included in the Environmental Management Plan which will include Monitoring Practices; and
- Geological Investigation.

Assessment of each anticipated impact will be based on the above information and specialist input. All specialist recommendations and mitigation measures will be included in the EIA report.

A draft EIA report along with a detailed management plan will be provided to I&AP's for comment for a period of 40 days. The Environmental Management Plan will address the following aspects:

- Specialist recommendations and mitigation measures for each potential impact identified;
- Management Interventions and Management Requirements;
- Indicators;
- Compliance requirements; and
- Monitoring guidelines.

Once comments have been received from I&AP's, the draft EIA report will be amended accordingly and provided to the DEA as a Final EIA report for decision making purposes.

6. TERMS OF REFERENCE FOR SPECIALIST STUDIES

SPECIALIST STUDY	SCOPE OF WORK
<p style="text-align: center;">Floodline Determination</p>	<p><u>Terms of Reference:</u></p> <ul style="list-style-type: none"> - Hydrological calculations of the catchment, i.e. determination of the flood peaks, using applicable methods. - Hydraulic calculations for the controls that would influence the flood levels. - Modeling of surveyed information in HEC-RAS modeling program, i.e. determination of the flood levels. <p><u>Deliverables:</u></p> <ul style="list-style-type: none"> - Certified drawings showing both the 1:100 year floodline for the present Conditions. - Flood levels for various surveyed cross-sections for the purpose of flood Management.

SPECIALIST STUDY	SCOPE OF WORK
	<ul style="list-style-type: none"> - Summary report on work done and results obtained from calculations.
<p>Visual Impact Assessment</p>	<p><u>Terms of Reference:</u></p> <ul style="list-style-type: none"> - Prepare an introduction, summarise assumptions and limitations and provide a methodology statement; - Delineate the study area in which the project is proposed and determine the visual extent (ZVI) of the development; - Discuss the project scope and identify the project’s visible elements and components during the different development phases; - Research the potential of obtrusive lighting and the affect of reflective materials; - Identify the affected observers in the ZVI and discuss their exposure to the proposed project; - Key viewpoints will be identified to represent observer group’s visual exposure and to assess the potential visual impacts; - Determine the sensitivity of the visual resource and its susceptibility to impacts on its character and sense of place; - Determine the sensitivity of the affected observers and their visual perception of the proposed project; - Assess the significance of the impacts on the visual resource and observers as a result of the proposed project for each of the different phases; - Recommend mitigation measures in order to alleviate the impacts on the visual resource and on the affected observers; and - Provide a final conclusion. <p><u>Deliverables:</u></p> <ul style="list-style-type: none"> - Address the concerns that are raised by interested and affected parties which relates to visual or sense of place aspects; - Research the potential of obtrusive lighting and the affect

SPECIALIST STUDY	SCOPE OF WORK
	<p>of reflective materials;</p> <ul style="list-style-type: none"> - Determine the impact on the visual resource, i.e. the impact on the aesthetic values placed on the landscape and the sense of place; - Determine the impact on the observers in the study area due to changes in the visual characteristics of the receiving environment; - Recommend mitigation measures to alleviate or reduce the anticipated impacts; and - All inputs must be included in a final report.
<p>Water Use License Application</p>	<p><u>Terms of Reference:</u></p> <p>The following water uses, as defined in Section 21 of the National Water Act of 1998 are envisaged to require authorisation:</p> <ul style="list-style-type: none"> - Section 21(a) Taking water from a water resource; - Section 21(b) Storing of Water; - Section 21(c) Impeding the flow of water in a watercourse; - Section 21 (f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; - Section 21(i) Altering the bed, banks, course or characteristics of a watercourse; - Section 21 (g) Disposing of waste in a manner which may detrimentally impact on a water resource; <p><u>Deliverables:</u></p> <ul style="list-style-type: none"> - Confirmation of requirements for compliance with current water use legislation using latest facility designs. - Registration of all water uses with the Department of Water Affairs. - Liaison with other specialists on all matters related to water use, in terms of management and mitigation, if and where appropriate. In this capacity, IWR Water Resources will assist in the compiling of the EMP and IWWMP as and if required.

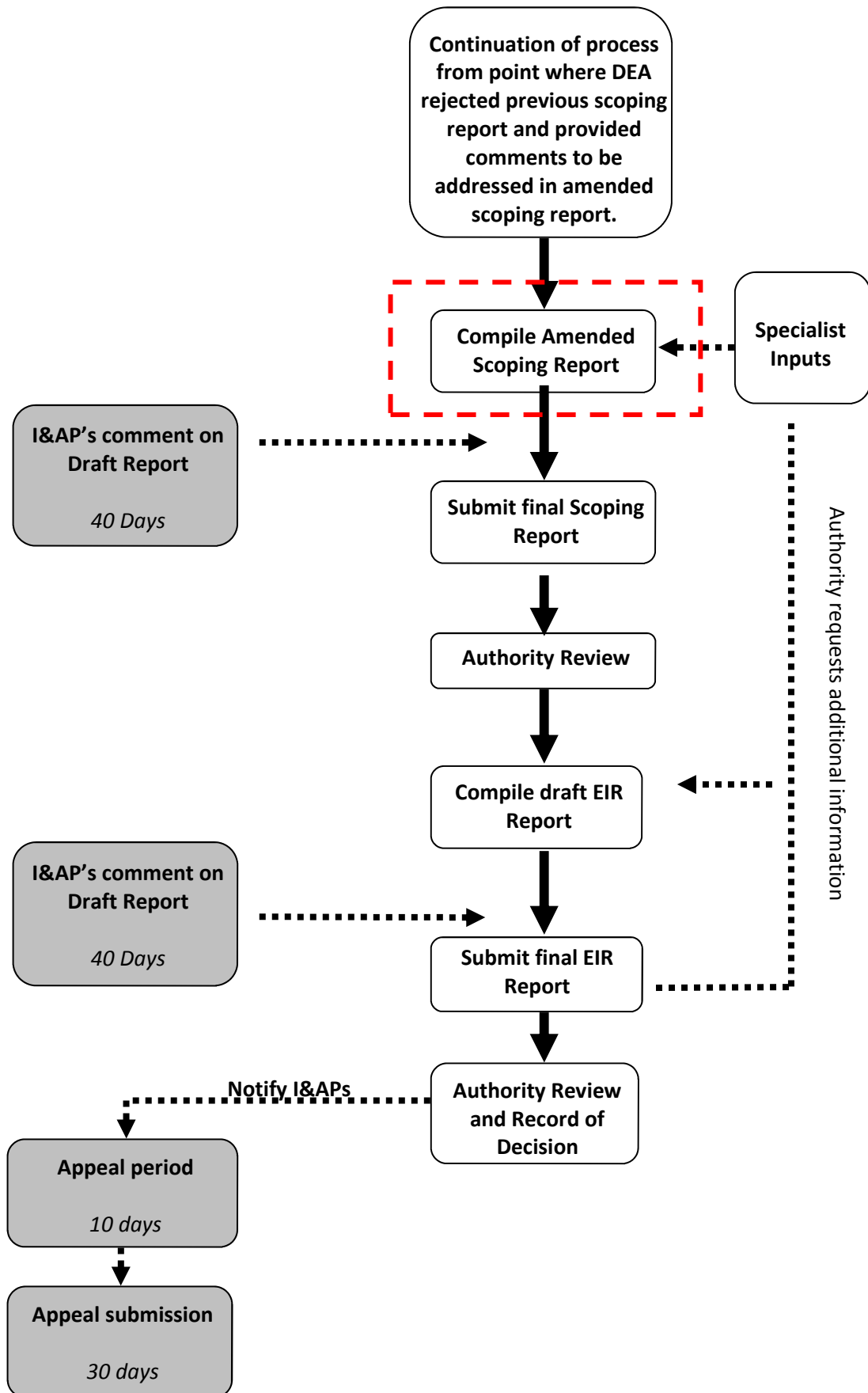
SPECIALIST STUDY	SCOPE OF WORK
	<ul style="list-style-type: none"> - A complete water use authorization technical motivational document in a format acceptable to the Department of Water Affairs. - Regular follow-up with the Mpumalanga Regional Office of the Department of Water Affairs on the progress of its processing of the application. Once the motivation for General Authorisation has been accepted by the Regional Office of DWA to the National Office, written confirmation will be provided to the developer.
<p>Socio Economic Assessment</p>	<p><u>Terms of Reference:</u></p> <ul style="list-style-type: none"> - Community and business surveys in Malelane and Komatipoort. - A representative sample (%) of the population will be drawn and a team will conduct the surveys. - Impact on the local economy in terms of income generation, employment opportunities and improved standard of living for the local communities will be assessed. - The specialist will also conduct a survey with major tour operators telephonically in order to get their perceptions and input. - These operators will be sourced from the SANParks database.
<p>Terrestrial Invertebrate Assessment</p>	<p><u>Terms of Reference:</u></p> <p>The Invertebrate Study will follow MPTA (2006) recommendations but with some deviation from requirements as motivated below, of untransformed portions of project areas.</p> <ul style="list-style-type: none"> - The inclusion of termites as an indicator group currently presents practical difficulties both in sample collection and identification of specimens, and exclusion of this group is therefore proposed. - The mygalomorph spiders (trapdoor and baboon spiders), as well as ground beetles (Carabidae and Tenebrionidae) and scorpions, often require very intensive and time consuming sampling to provide statistically testable data for reliable biodiversity estimation.

SPECIALIST STUDY	SCOPE OF WORK
	<ul style="list-style-type: none"> - In addition, high seasonal and weather-induced variation in activity of many beetle species complicates comparison of data from different sites and time periods. In order to focus on groups for which reliable data can be obtained in a cost-effective manner, it is therefore proposed that these groups be omitted from the biodiversity estimation/monitoring aspect of the surveys, and to survey only for priority species in these taxa. - Since permanent transformation of the construction areas is envisaged for a project of this nature, full rehabilitation with the aim of restoring natural plant and animal communities is unlikely; - Monitoring of indicator groups such as leafhoppers within the site is thus probably unnecessary. Monitoring of ant communities is however important in the light of recent concerns regarding potentially invasive ant species in the KNP (Sithole et al. 2010). - Monitoring of pollinators of <i>Adenium swazicum</i>, if these can be identified, should also be considered. - Time and cost constraints often do not allow a meaningful time interval between sample periods, so a spring/early summer survey is proposed for the initial assessment; this is acceptable as long as any future sampling for monitoring purposes utilising data from this survey as a baseline is always undertaken at the same time of year. <p><u>Deliverables:</u></p> <ul style="list-style-type: none"> - List of invertebrate species of conservation concern that might be expected to occur in the area, based on data from the literature and other sources. - Estimates of probability of occurrence and preliminary information on presence/absence of Red Data invertebrates and other priority species and groups. - Particular emphasis will be placed on Red Data and/or protected spiders, scorpions, dragonflies & damselflies, beetles and butterflies. - GPS coordinates for any conservation-important specimens found and maps indicating distributions of all priority species confirmed on the site. - Recommendations for additional survey work, if required,

SPECIALIST STUDY	SCOPE OF WORK
	<p>e.g. to confirm presence/absence of further priority species, refine on-site distribution mapping of those confirmed as present, or to establish additional baselines for monitoring the potential spread of invasive species as a result of the construction process.</p> <ul style="list-style-type: none"> - Recommendations for mitigation measures/management options to conserve priority species and to manage potential problem species.
<p>Heritage Impact Assessment</p>	<p><u>Terms of Reference</u></p> <ul style="list-style-type: none"> - Identify possible archaeological, cultural and historic sites within the proposed development area; - Specific Mention was made of three grave sites in close proximity to the proposed Park and Ride Facility. This needs to be verified. - Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources; - Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance. <p><u>Deliverables</u></p> <ul style="list-style-type: none"> - Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied; - A visit to the proposed development area. - Heritage Impact Assessment Report.
<p>Ecological Assessment</p>	<p><u>Terms of Reference</u></p> <ul style="list-style-type: none"> - Describe the baseline terrestrial ecology of the impact footprint. - Assess the Conservation Importance of the terrestrial habitats represented within the study area; this will include predicting which threatened species of fauna and flora potentially occur. - Identify key issues that would be associated with the

SPECIALIST STUDY	SCOPE OF WORK
	<p>development.</p> <ul style="list-style-type: none"> - Make recommendations for mitigation measures. <p><u>Deliverables</u></p> <ul style="list-style-type: none"> - Species lists of threatened and endangered species; - Sensitivity rating of all 5 sites; and - Detailed sensitivity map of preferred site alternative.
<p>Geotechnical and Geo-hydrological Assessment</p>	<p><u>Terms of Reference</u></p> <ul style="list-style-type: none"> - The main objective of the Preliminary Geotechnical Investigation is to make an initial determination for an identified parcel of land as to whether or not such land is fit for human settlements. - This assessment is based on a detailed literature study of the available information on the area and on the visual observations made during the site walk-over survey. - The site walk-over survey will be conducted for the five potential sites. The survey will be done by a suitably qualified Engineering Geologist. - The main aim of the walk-over survey is to get a “feel” for the site in an effort to premeditate any potential geotechnical constraints identified at a later stage during the Phase I and Phase II geotechnical investigations. Attention is focussed on the topography of the sites, existing profiles (e.g. in gullies and road cuttings), surface characteristics of the material on site and to any rock outcrop that might exist. - The main objective of the Hydrogeological Investigation is to determine the feasibility of providing water for the proposed development from groundwater resources.

7. PROPOSED PROCESS DIAGRAM



8. ALTERNATIVES TO BE CONCERNED

Alternatives identified as part of the scoping phase will be investigated, assessed, and reported upon in more detail in the Environmental Impact Assessment Report.

These alternatives include:

- 5 Alternative Sites identified by SANParks
- 2 Layout Alternatives for the Park and Ride Facility.

The alternative of no development will be investigated. The under mentioned alternative land-uses will be compared to the proposed development to determine the most desired usage of the preferred site:

- No development
- Proposed activity/ies

9. PUBLIC PARTICIPATION

The approach followed regarding Interested and Affected Parties during the EIA process will be as per the requirements of the Environmental Impact Regulations published in Government Notice R385 in Government Gazette No. 28753 of 21 April 2006, under Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Focus Group Meetings with various stakeholder groups were held in 2011 and stakeholders were provided with an opportunity to comment and provide inputs. No further meetings have been scheduled for the EIA process. Should the DEA require additional meetings V&L will make the necessary arrangements.

All relevant government departments will be engaged throughout the process and their concerns and comments will be captured.

10. SPECIFIC INFORMATION REQUIRED BY DEA

Documents to be produced will comply with the requirements stipulated in the Regulations 32-35 published in Government Notice R385 under Section 24(5) read with Section 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended.

Should the DEA require specific information following submission of the Scoping Report, the information shall be obtained and included in the EIA Report.