PROPOSED DEVELOPMENT OF HOTEL SEBATA, RESTAURANT, CONFERENCE AND WEDDING FACILITIES, HEALTH SPA AND RECREATIONAL FACILITIES ON PORTION 48 (A PORTION OF PORTION 39) OF THE FARM 272 JQ, RIETVLY, RUSTENBURG LOCAL MUNICIPALITY, NORTH WEST PROVINCE

NWP/EIA/24/2012



# DRAFT BASIC ASSESSMENT REPORT

**PREPARED BY:** 



# OCTOBER 2012

ENVIRONMENTAL AND SOCIAL CONSULTANTS

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# DIRECTORATE: ENVIRONMENTAL QUALITY & PROTECTION

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File Reference Number: Application Number: Date Received:

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

Kindly note that:

- 1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
- 2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
- 3. Where applicable **tick** the boxes that are applicable in the report.
- 4. An incomplete report may be returned to the applicant for revision.
- 5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
- 6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
- 7. No faxed or e-mailed reports will be accepted.
- 8. The report must be compiled by an independent environmental assessment practitioner.
- 9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
- 10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

# SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?  $VES\sqrt{}$ 

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

Please refer to Appendix D attached for fauna and flora assessment and heritage impact assessment

# 1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail<sup>1</sup>:

The proposed development was initially authorised by the Department of Agriculture, Conservation and Environment on 30 November 2007. An amendment to the authorization was undertaken by Nemai Consulting in December 2008 and it was authorised on 04 May 2009. However due to financial constraints the development did not take place and the authorisation period has lapsed.

A new application has been submitted to the Department of Economic Development, Environment, Conservation and Tourism, North West Province in terms of the current legislation. The new application entails the same scope of work as per the December 2008 amendment undertaken by Nemai Consulting and authorised on 04 May 2009 and is described as follows:

Sebata Group has appointed Nemai Consulting to undertake the environmental investigation for the proposed development of Hotel Sebata, Restaurant, Conference and Wedding Facilities, Health Spa and Recreational Facilities on Portion 48 (A Portion of Portion 39) of the Farm 271 JQ, Rietvly, Rustenburg Local Municipality, North West Province. The study area is located approximately 4kms west of the intersection of the old Swartruggens Road (P2-3) with Phokeng Road (P115-1). The study area is accessed via a gravel road off the old Swartruggens Road (P2-3) and the site is located within a few hundred metres from the main road. The study area is located northeast of the Swartruggens Road (P2-3).

The proposed development entails the construction of a seven storey hotel with an approximate floor space of  $11\ 350\text{m}^2$ , a restaurant of approximate floor space of  $435\text{m}^2$ , conference centre area with an approximate floor space of  $1016\text{m}^2$  and a hall and chapel for weddings of approximate floor space of  $962\text{m}^2$ . The total area for development is 8,715 hectares. The proposed Hotel Sebata will feature approximately twenty five rooms and the restaurant will feature approximately one hundred seats, a health spa and recreational activities.

The site is ideally situated to respond to the demand of the tourism industry within Rustenburg and surrounding areas including Pilanesberg, Koster, Swartruggens and Mafikeng. The proposed development will not only benefit the local communities through job creation but will play an important role in stimulating economic investment into the area.

The main function of the proposed hotel is to provide overnight accommodation for guests and tourists. The hotel will feature approximately twenty five rooms with en-suite

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

#### bathrooms.

The restaurant will feature approximately one hundred seats and will be used by guests and tourists as well as day visitors attending the conference facilities or visitors to the health spa.

The wedding venue will be utilised for private wedding functions. The conference centre will provide conference facilities for business clients visiting Rustenburg and Phokeng for business activities and will constitute the reception area for weddings.

The health spa will be used by both day and overnight guests and visitors. The swimming pool facilities will be available exclusively for overnight guests and visitors and for individuals making use of the spa facilities.

Access to the site is available through the following roads that feature within the Rietvly area:

- 1. The old Swartruggens Road (P2-3) which runs through the Rietvly area, approximately 1.5kms from the study area; and
- 2. The Phokeng Road Boshoek Road located at the eastern boundary of the Rietvly area.

No new roads will be constructed for the proposed development. The existing gravel road will be upgraded to provide access to and from the hotel.

The study area is located in a rural area comprising of farms and small holdings. The site is currently vacant and the land is thus unutilised. The current surrounding land uses include residential and small scale farming.

During the site visit undertaken on 05 July 2012 it was observed that the study area is severely degraded due to human activity on the site. This includes burnt vegetation and trees, littering, felling of trees, dumping of waste and rubble and the invasion of alien plant species.

#### Provision of Engineering Services

#### Water

There are no municipal water provision services in the area. Water in the study area is provided by a borehole located on the property. This borehole would not provide sufficient water for the project and so four options for additional water supply have been identified.

The first option is to have water provided by Royal Bafokeng due to its close proximity to the site – approximately 3kms from the site and a water meter will be installed. The Report on Availability of Services conducted by Vela VKE in 2007 indicates that Royal Bafokeng Administration has a pump station and pipe line on the Goedgedacht farm located north of the study area. The Report indicates that it could be technically possible to tap into the exiting line to supply water to the hotel. An agreement still needs to be concluded to obtain permission to take water from the existing Royal Bafokeng Administration pipe line should this option be the preferred water supply option.

The Report provides another option for the water supply for the hotel, namely using water from one of the two existing reservoirs in Thlabane. Rustenburg Local Municipality plans to provide water to Bellevue – an area south of the study area. An agreement will have to be concluded with the Rustenburg Local Municipality in order to install a pipe from one of their reservoirs as the first phase of the water reticulation for Belleview. Alternatively an agreement can be reached with the Rustenburg Local Municipality to allow a dedicated connection to one of the reservoirs in Thlabane. A 5m

long pipe line will be required and negotiations for the necessary servitudes and way leaves will have to be undertaken.

The third option is to connect to Magaliessig water connection service as Magaliessig is located in close proximity to the site – approximately 5km from the site.

The fourth option is to drill additional boreholes, as the existing boreholes on site provide water that is suitable for consumption. It should be noted that this is not the preferred option.

#### Electricity

Electricity for the proposed development will be provided by the Rustenburg Local Municipality.

The Report on Availability of Service conducted by Vela VKE in 2007 indicates that the estimated electrical need for the proposed development is 1 MVA. The Rustenburg Local Municipality indicated that the current electrical supply can be upgraded to supply 1 MVA and it can be done by either two 500KVa mini-substations or a single MVA mini-substation.

# Sewerage

A septic tank and French drain system will be used for the proposed development. The sewer system to be installed will adhere to the SABS standards and will be serviced by a private company on a regular basis. The Report on Availability of Service conducted by Vela VKE in 2007 indicates that the septic tank and French drain system can be used however adequate precautions need to be adhered to including 'Sanitation systems, as a rule, should not be installed closer than 70 metres from a production borehole used for human consumption." Should water be provided by the option of drilling of new boreholes, this must be accounted for in the layout of the hotel to prevent contamination.

#### Domestic solid waste

Domestic solid waste will be disposed of at a permitted municipal dumping area. The removal task will be the sole responsibility of the hotel and no burning or on-site disposal will take place. The waste will be collected in a central location and then transported to a landfill.

#### Infrastructure

No new roads will be constructed for the proposed development. The existing gravel road will be used to provide ingress and egress from the study area. The existing gravel road will be serviced and maintained on a regular basis to ensure and maintain access to the site by visitors and guests. Adequate storm water drainage will be provided to drain the areas of the proposed development.

Please refer to Appendix D attached to this Report for a copy of the Report on Availability of Services conducted by Vela VKE in 2007.

This Basic Assessment Report describes the proposed project and provides information on the possible environmental impacts and the Environmental Management Programme (please refer to Appendix G attached) provides mitigation measures for the identified environmental impacts.

Lack of fencing around the proposed site meant free access to site and during the site assessment undertaken in July 2012 it was observed that the site has been considerably disturbed trough the felling of trees and numerous places where fires have been undertaken and the initial construction of the N11 resulted in the disturbance and transformation of the majority of the habitat units within the study area.

Increased human activity with predominant land uses within the study area consisting of residential, commercial and industrial developments further contributed to the disturbance and loss of habitat units within the study area resulting in the loss of flora and fauna within the study area. Alien invasive plant species scattered or planted in rows along the road within the study area were observed during the site visit undertaken on 30 November 2011 by Nemai Consulting team.

A Flora and Fauna Assessment was undertaken by Nemai Consulting in July 2012 (please refer to Appendix D attached) to determine the impact of the project on the vegetation and animals in the study area. Due to poor habitat quality within the study area observation of faunal species was expected to be poor. No Red Data species were recorded during the field assessment as these species require stable and healthy habitats.

The Report indicates that few, if any, threatened small mammals are expected to occur within the study area. This is due to the fact that the study area is not fenced thus providing free access into the area. This resulted in vagrancy and informal dumping of excess building rubble into the study area. Fragmentation and increased poor quality of the environment resulted in a high degree of habitat degradation which in turn impacted the fauna occurrence in the area. One mammal species, Common Duiker, was encountered during the field assessment.

The Report indicates that no sensitive or endangered fauna were recorded within the study area or are likely to occur on site. Habitat disturbance and degradation together with the development of human settlements resulted in larger mammal species moving away from the area.

The Report indicates that conservation and planning tools were consulted for relevancy for this project, and found that an Important Bird Area (IBA) occurs in the study area. The IBA areas are important habitats for conservation of bird populations. Following literature research the Report indicates that this IBA is known for two breeding colonies of Cape Vulture and large populations of raptors and blue cranes. However due to habitat destruction and fragmentation and due to high levels of human disturbance the natural habitat within the study area has been severely impacted thus limiting the occurrence of suitable habitat for large terrestrial birds and certain smaller raptor species. The Report indicates that potential nesting sites for raptors were searched for during fieldwork (especially on larger *Eucalyptus* trees) but none were found.

The Endangered Aloe peglerae is reported to occur in this area, and as a result this area has been given a Critical Biodiversity Area (CBA) 1 status These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. However due to habitat fragmentation and habitat loss, the ecosystems and species are not fully intact and are highly disturbed.

The Report provides details on the Red Data plant species recorded within the 2527CA quarter degree square in terms of the 1:50 000 grid of South Africa (please refer to Appendix D attached). The Report recommends that during the construction phase, that detailed searches for the rare/threatened and protected species are made during the appropriate time of year when plants are likely to be visible.

The Report indicates that the proposed development will not have a significant impact on biodiversity conservation within the region. The Report recommends that the larger exotic species that are not included in the Category 1 list of invasive species could also be allowed to remain for aesthetic purposes. However species such as syringe (*Melia azedarach*), *Eucalyptus grandis* and *Eucalyptus camaldulensis* should be removed as these are regarded as being highly invasive under suitable conditions. The Environmental Management Programme and the Flora and Fauna Assessment provide mitigation measures to minimise the potential impacts associated with the project. All identified impacts as a result of the proposed development can be minimised and adequately managed through the implementation of mitigation measures. The adequate implementation of the proposed mitigation measures will result in a minimal impact on the environment (i.e. sensitive habitats such as wetlands to be protected through the creation of appropriate buffer zones).



Plate 1: Locality map indicating the proposed development

# 2. FEASIBLE AND REASONABLE ALTERNATIVES

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

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

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

Two technology alternatives have been identified for the proposed development.

The Baseline Alternative (Alternative 1) includes the existing design of the hotel as highlighted below in the BAR report. Alternatives 2 and 3 will look at Green Infrastructure and Green Building options. It should be noted that a feasibility study is yet to be undertaken for the sustainability element of the project, which will only be developed at a later stage in the project. It has therefore not been determined what Green Building elements can be incorporated into the design at this stage. Alternative 2 and 3 are therefore only considerations at this point.

Although Green Buildings do not necessarily have higher upfront capital costs, considerable planning is required to synergise the elements of sustainability in order to get increased benefits i.e. reduction in energy usage and increased day-lighting without increasing heat gains etc.

The aims of Alternative 2 and 3 are to consider technologies that reduce energy consumption and water consumption. In addition, the approach towards landscaping is to plant indigenous vegetation while grouping together plants with similar water requirements.

Although Alternatives 2 and 3 will be considered, it has not yet been determined what level of sustainability will be incorporated into the design. The design as included in Alternative 1 was previously authorised in 2009 and it is anticipated that this design will again be authorised but that the Department will welcome any potential benefits brought about by introducing Green Building/Sustainability principles.

# Alternative 1 – The Sebata Hotel – Baseline Alternative

Alternative 1 consists of using the original architectural designs for the project as approved and authorised by the department in 2009. (Appendix A).

This design includes a 7 story hotel containing approximately 25 guest rooms with en-suite bathrooms (floor space 11350 m<sup>2</sup>); a 100-seater restaurant (435 m<sup>2</sup>); wedding and conference facilities (962 m<sup>2</sup>) and all associated infrastructure, including health spa and swimming pool facilities.

The total area of development is 8715 hectares.

#### <u>Energy</u>

Electricity will be supplied by the Rustenburg Local Municipality. The building design includes the use of a shading structure along the front of the building which will cool the building facade and reduce energy consumption. Energy consumption will also be reduced due to the design of the hotel windows, which will focus on views to the external environment, also emphasising natural lighting.

<u>Water</u>

Current design comprises standard designs for water fittings, fixtures and irrigation. Water will be obtained from one of four options:

 3km 160mm diameter uPVC water pipeline can be developed linking the Sebata Hotel with the Royal Bafokeng Pump Station (located on the Farm Goedgedact).

- 6km 75mm diameter water line from Rustenburg Local Municipality Reservoir (located in Thlabane).
- The RLM is also planning for the provision of water to the area south of the hotel (known as Bellevue). The hotel may then connect to the pipeline which could possibly be located along the provincial road linking the hotel to one of the reservoirs.
- Drilling of new boreholes to augment the existing supply from boreholes on site.

A storm water management plan will be developed according to the requirements of the Department of Water Affairs and municipal bylaws.

#### Building Materials

All glues, adhesives, paints, carpets and other fabrics used in the design are industry standard norms. Building materials include concrete, steel and glass as well as thatch used in constructing entertainment area 'lapas'.

#### <u>Waste</u>

Domestic solid waste will be disposed of at a municipal dumping are. No burning or on-site disposal will take place; rather waste will be collected in a centralised location and transported to a registered waste disposal landfill.

# Alternative 2 - The Sebata Hotel – Green Infrastructure

This alternative involves large-scale green infrastructure, focussing on large scale renewable energy generation for the Sebata Hotel (Solar thermal systems):

Solar thermal energy is a technology that creates energy using solar radiation to heat a fluid (i.e. oil). The hot fluid is then transported in a pipe to enable the heat to be used directly via a heat exchanger, stored for later use. It can also be converted into electricity from a conventional generator coupled to a turbine.

Solar thermal technologies use concentrator systems due to the high temperatures needed to heat the fluid.

- Parabolic trough and solar dish may not be feasible as it requires large amounts of land as parabolic troughs and dishes are placed parallel to each other.
- Solar Power Tower requires vast tracts of land for heliostats/reflectors and is therefore not applicable within the project area.
- Deep heat Geothermal Systems/ Ground Source Heat Pumps are buried ground loops which transfer heat from the ground into the hotel to provide space heating and, in some cases, to preheat domestic hot water. It involves refrigerant liquid being pumped through pipes in the ground, heating the liquid. The liquid is then pumped back to the house and the heat exchanged. The same technique can be used to cool the building. This option is possible for the Sebata Hotel Development but would need further feasibility studies.

#### Alternative 3– The Sebata Hotel – Green Building

The degree to which sustainable green design is incorporated into the Sebata Hotel will be established at a later stage when feasibility studies are conducted. These feasibility studies will investigate the availability of resources as well as capital costs to sustainable development and timescales involved with implementing these measures.

This alternative will consider Green Building Options which are dependent on a Green Building Feasibility Study.

Alternative 3 involves the use of the original design for the hotel (Alternative 1) and incorporating as many aspects of green design and sustainable infrastructure (outlined below) as is feasible. Particular emphasis will be placed on the use of 'green' designs with regard to energy efficiency, water

conservation and sustainable landscaping.

# Sustainable Water Use

This involves measures of reducing water-use and reusing greywater in place of potable water in irrigation. These measures include:

- Use of specialised fixtures and fittings (eg low-flow showerheads, dual-flush or waterless toilets, aerated faucets);
- Dual-reticulation water systems and associated grey water irrigation;
- Condensate collection from the HVAC unit this can supplement the irrigation of landscaping;
- Rainwater harvesting and use of collected rainwater for irrigation and/or vehicle washing;
- Interior and exterior water monitoring and metering of water consumption;
- Leak detection of water pipes and alert sensors;
- Pamphlets/signage advertising water conservation (e.g. encouraging towel reuse rather than daily washing policy).

# Landscaping

To reduce water consumption in landscaping, zones will be created that group vegetation with different water consumption requirements. Use of indigenous, heat tolerant xeriphytic vegetation which have low water requirements, should be preferred. Provide a natural vegetation corridor in the grounds of the hotel, linking to the broader environment. This can enhance the natural environment and provide natural pathways for any potential wildlife living in the vicinity of the hotel.

Other water efficient measures to be considered include:

- Subsurface irrigation system; and
- Monitoring and moisture sensor alert.

# Sustainable Urban Drainage and Stormwater Management

Collection and treatment of runoff (i. e removal of Total Suspended Solids (TSS), litter, interceptors to remove hydrocarbons). Limit run-off and promote infiltration of rainwater which can be achieved through permeable paving, softscape, drains and green roofing.

#### Renewable Energy

Small scale renewable energy generation for the Sebata Hotel (solar thermal systems) will be included to some degree. This includes small scale solar thermal systems for Energy Generation such as:

- Photovoltaics (PV) can be used to power aspects of the hotel. PV technologies are becoming more technologically advanced and more common. Solar technologies include PV panels, pumps and fans to convert sunlight into useful outputs. PV can be used for parks and pathways lighting and water features, etc.
- Building Integrated Photovoltaics (BIPV) can be used to replace conventional building materials in parts of the building envelope such as roofs, skylights or facades. They can be used as a source of electrical power. The advantage of integrated photovoltaics over more common nonintegrated systems is that the initial cost can be offset by reducing the amount spent on building materials and labour that would normally be used to construct the part of the building that the BIPV modules replace. BIPV is feasible for the Sebata Hotel as it can be integrated into shading structures, roof materials, facades, windows, etc. The initial increased capital costs would have to be considered prior to procurement of materials. It should be noted that BIPV has high capital costs and feasibility studies would need to be completed in order to determine the payback rates of the the PV.
- Centralised Heating, Ventilation and Air Conditioning (HVAC) Warmed or cooled or dehumidified air flows through a series of ducts to be distributed to all the rooms of the hotel. A central HVAC system is the most quiet and convenient way to heat/cool the hotel. This system is also more efficient than split AC units. It will however, need to be determined whether this is feasible.

#### Materials

Reduce the use of hazardous and non-polluting materials (i.e. chlorine free, zero ozone depleting, low toxicity materials).

The following materials will be given preference:

The use of regional materials and recycled materials, use of reused/ reclaimed or certified timber, use of rapidly renewable materials (e.g. bamboo) and modular materials.

- Materials should also be durable. This means that materials will not have to be replaced regularly during the operation of the hotel.
- The volatile organic compound (VOC) emissions must be reported by suppliers of:
- Adhesives and sealants
- Paints and coatings
- Carpet and hard flooring
- Ceiling systems
- Urban Heat island Mitigation materials with a low Solar Reflective Index of 29 (light colouring to reflect light) for shading structures as well as the use of trees and vegetation for shading and thermal comfort. This reduces the need for air-conditioning.

#### Waste Management

Construction and operational waste management will be developed with the main contractors on site. Identification of main materials to be diverted from landfill will be undertaken. It will need to be determined whether materials will be separated at source or co-mingled.

The former is the preferred option however it requires training and commitment. The Waste Management Plan will include:

- Provision of adequately sized and accessible facilities and clearly labelled containers for the storage of collection at source separated waste: recyclable plastics, glass, metals, paper and cardboard, non-compostable waste and compostable waste.
- Organic waste management to be collected from the hotel kitchen and restaurants.

#### Entertainment

Guests will be provided with options for sustainable recreation. This will include activities such as hiking, bike trails and walks.

#### **Transportation**

Amenities such as an ATM, medical services, a grocery store and retail outlets will be provided at the hotel, minimising the need for travel during a guest's stay. Staff will be provided with public transport and bicycle stands to promote the use of sustainable transport methods.

Other proposed energy efficiency measures to be considered include:

- In order to reduce energy consumption, the following or combination thereof, will be considered to reduce heat gains in winter and heat losses during the summer months:
- The provision of energy metering and reporting facilities allows the energy performance of the building to be recorded and monitored to allow future improvement and understanding of energy use in buildings.
- Sustainable lighting: include lighting controls and sensors;
- Use of natural ventilation (i.e. openable windows);
- Thermostats for occupant control;
- Day-lighting and glares design for natural lighting for windows to reduce energy use and to promote views of the countryside.
- Hotel room key card to activate electricity or use smart controls to predetermine requirements;
- Movable shading structures to reduce heat gain in summer;
- Energy Star Appliances to be used (e.g. refrigerators, ovens, ice machines, steam cookers, televisions, washing machines, copiers, faxes, water coolers);
- Solar water heaters for hotel/staff accommodation and for kitchens;
- Energy-efficient light bulbs (CFL or LED);

- Improvements to air tightness of façade, building air leakage rate; Green roofs to reduce heating and cooling gains and losses. •
- •

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

# 3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:	Latitude (S): Longitude (E):		(E):		
ALTERNATIVES 1, 2 AND 3					
Alternative S1 <sup>2</sup> (preferred or only site alternative)	25°	37.755'	270	9.698'	
Alternative S2 (if any)					
Alternative S3 (if any)					
In the case of linear activities: Alternative:	Latitude (S): Longitude (E):		(E):		
Alternative S1 (preferred or only route alternative)					
Starting point of the activity					
Middle/Additional point of the activity					
End point of the activity					
Alternative S2 (if any)					
Starting point of the activity					
Middle/Additional point of the activity					
End point of the activity					
Alternative S3 (if any)					
Starting point of the activity					
Middle/Additional point of the activity					
End point of the activity					

<sup>&</sup>lt;sup>2</sup> "Alternative S.." refer to site alternatives.

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

# 4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	Size of the activity:
Alternative A1 <sup>3</sup> (preferred activity alternative)	Seven storey hotel = $\pm$ 11 350m <sup>2</sup> ; Restaurant = $\pm$ 435m <sup>2</sup> ; Conference centre area = $\pm$ 1016m <sup>2</sup> ; Hall and chapel for weddings = $\pm$ 962m <sup>2</sup> . Total area for development = 8,715 ha
Alternative A2 (if any)	Seven storey hotel = $\pm$ 11 350m <sup>2</sup> ; Restaurant = $\pm$ 435m <sup>2</sup> ; Conference centre area = $\pm$ 1016m <sup>2</sup> ; Hall and chapel for weddings = $\pm$ 962m <sup>2</sup> . Total area for development = 8,715 ha
Alternative A3 (if any)	Seven storey hotel = $\pm$ 11 350m <sup>2</sup> ; Restaurant = $\pm$ 435m <sup>2</sup> ; Conference centre area = $\pm$ 1016m <sup>2</sup> ; Hall and chapel for weddings = $\pm$ 962m <sup>2</sup> . Total area for development = 8,715 ha

# or, for linear activities:

#### Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

# Length of the activity:



<sup>&</sup>lt;sup>3</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

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

# Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

# 5. SITE ACCESS

Does ready access to the site exist?

# ALTERNATIVES 1, 2 AND 3

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

Describe the type of access road planned:

# ALTERNATIVES 1, 2 AND 3

Ready access to the site exists through the following roads that feature within the Rietvly area:

- 1. The old Swartruggens Road (P2-3) which runs through the Rietvly area, approximately 1.5kms from the study area; and
- 2. The Phokeng Road Boshoek Road located at the eastern boundary of the Rietvly area.

No new roads will be constructed for the proposed development. The existing gravel road will be used to provide access to and exist from the study area.

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

# 6. SITE OR ROUTE PLAN

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

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;



of

site/servitude:

the

Size



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

Please refer to Appendix A, Appendix C and Appendix E attached.

# 7. SITE PHOTOGRAPHS

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

Please refer to Appendix B attached.

# 8. FACILITY ILLUSTRATION

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

Please refer to Appendix C attached.

# 9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity	
ALTERNATIVES 1, 2 AND 3	R 291 900 000
What is the expected capital value of the activity on completion?	
ALTERNATIVES 1, 2 AND 3	
What is the expected yearly income that will be generated by or as a result of the	R 110 265 634
activity?	
Will the activity contribute to service infrastructure?	YES√
ALTERNATIVES 1, 2 AND 3	
The existing gravel road will be serviced and maintained on a regular	
basis to ensure and maintain access to the site.	
Is the activity a public amenity?	NO√
ALTERNATIVES 1, 2 AND 3	
How many new employment opportunities will be created in the development phase	
of the activity?	1130
ALTERNATIVES 1, 2 AND 3	
What is the expected value of the employment opportunities during the	R 54 240 000
development phase?	
ALTERNATIVES 1, 2 AND 3	

NW DEDECT		

What percentage of this will accrue to previously disadvantaged individuals?	80%
ALTERNATIVES 1 AND 2	
How many permanent new employment opportunities will be created during the	226
operational phase of the activity?	
ALTERNATIVES 1 AND 2	
What is the expected current value of the employment opportunities during the first	R 135 788 589
10 years?	

#### 10 years? ALTERNATIVES 1 AND 2

What percentage of this will accrue to previously disadvantaged individuals?

# 9(b) Need and desirability of the activity

# Motivate and explain the need and desirability of the activity (including demand for the activity): ALTERNATIVES 1, 2 AND 3

75%

NEED:		
1.	Was the relevant provincial planning department involved in the	YES√
	application?	
2.	Does the proposed land use fall within the relevant provincial planning	YES√
	framework?	
3.	If the answer to questions 1 and / or 2 was NO, please provide furthe explanation:	er motivation /

# ALTERNATIVES 1, 2 AND 3

DESIRAB	ILITY:		
1.	Does the proposed land use / development fit the surrounding area?	YES√	
2.	Does the proposed land use / development conform to the relevant YES		
	structure plans, SDF and planning visions for the area?		
3.	Will the benefits of the proposed land use / development outweigh the	YES√	
	negative impacts of it?		
4.	If the answer to any of the questions 1-3 was NO, please provide furth	er motiva	ation /
	explanation:		
5.	Will the proposed land use / development impact on the sense of place?	YES√	
6.	Will the proposed land use / development set a precedent?		NO√
7.	Will any person's rights be affected by the proposed land use /		NO√
	development?		
8.	Will the proposed land use / development compromise the "urban edge"?		NO√
9.	If the answer to any of the question 5-8 was YES, please provide furth	er motiva	ation /
	explanation.		
	The proposed development will be located within a rural area thus impacting the sense of		
	place. However the development will be in an aesthetically pleasing	manner	, with
	appropriate landscaping to mitigate this impact.		

# ALTERNATIVES 1, 2 AND 3

BENEFITS:					
1.	Will the land use / development have any benefits for society in general?	NO√			
2.	Explain:				

3.	Will the land use / development have any benefits for the local YES $$
	communities where it will be located?
4.	Explain:
	The existing gravel road will be serviced and maintained on a regular basis to ensure and maintain access to the site. Other road users will also be able to make use of this upgraded road.
	The proposed development will create job opportunities for local people during both construction and operation phases of the proposed development. The proposed development will therefore create temporary as well as permanent employment opportunities for the local communities. This will in turn improve the living standards for the local communities and will boost economic development in the area. Sebata are committed to recruiting from the local area for skilled and unskilled staff as much as possible. This provides opportunities for capacity- building in the local community.
	Provision of opportunities for small retail businesses (i.e. cultural village; retail component).
	Increase tourism opportunities and attractions to the Rustenburg area.

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

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

#### **ALTERNATIVES 1, 2 AND 3**

Administering authority: Date:

Title of legislation, policy or guideline:

National Environmental Management Act (Act	National & Provincial	1998		
No. 107 of 1998)				
Environmental Conservation Act (Act No. 73 of	National	1989		
1989)				
National Environmental Management:	National	2004		
Biodiversity Act (Act 10 of 2004);				
National Heritage Resources Act (Act No. 25 of	National & Provincial	1999		
1999)				
National Water Act (Act No 36 of 1998)	National	1998		
Hazardous Substances Act (Act No. 15 of 1973)	National	1973		
Occupational Health and Safety Act (Act No. 85	National	1993		
of 1993)				

#### 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

#### 11(a) Solid waste management

ALTERNATIVES 1, 2 AND 3	YES√	
Will the activity produce solid construction waste during the construction/initiation		
phase?		
ALTERNATIVES 1, 2 AND 3		
It is difficult to estimate the quantity at this stage however the rubble will consist of	Quantity to	o be
construction rubble / excavation material during the construction phase.	determine	d
ALTERNATIVES 1 2 AND 3		

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

Construction rubble will be collected in a centralized location before being transported to a formal municipal solid waste disposal facility.

# **ALTERNATIVES 1, 2 AND 3**

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

#### How will the solid waste be disposed of (describe)? **ALTERNATIVES 1, 2 AND 3**

Domestic solid waste from the proposed development will be disposed of at a registered waste disposal facility.

Waste management and minimization will be undertaken though recycling with the provision of adequately sized and accessible facilities and clearly labelled containers for the storage of various types of waste: i.e. recyclable plastics, glass, metals, paper and cardboard, non-compostable waste and compostable waste. Organic waste management for hotel kitchen and restaurants will be undertaken.

It must be noted that alternatives 2 and 3 will result in reduced quantities of waste during the operational phase than alternative 1.

# ALTERNATIVES 1, 2 AND 3

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

All solid waste will either be channelled into the existing municipal solid waste system or be disposed of in an effective manner by registered waste companies.

Hazardous waste will be disposed of at a licensed hazardous waste disposal facility. Spoil material (i.e. excess soil) will be used as backfill or will be disposed of at a licensed disposal site.

Safe disposal certificates to be obtained and kept on site for the duration of the construction phase.

During the operational phase domestic solid waste will either be delivered to a municipal waste site or be collected by the Rustenburg Local Municipality (awaiting confirmation).

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

# **ALTERNATIVES 1, 2 AND 3**

Can any part of the solid waste be classified as hazardous in terms of the relevant NO√ legislation?

If yes, inform the competent authority and request a change to an application for scoping and EIA. ALTERNATIVES 1, 2 AND 3 NO√

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

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

# 11(b) Liquid effluent

# **ALTERNATIVES 1, 2 AND 3**

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

Quantity to be determined

# **ALTERNATIVES 1, 2 AND 3**

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

# ALTERNATIVES 1, 2 AND 3

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

# ALTERNATIVES 1, 2 AND 3

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

#### ALTERNATIVES 1, 2 AND 3

Will the activity produce effluent that will be treated and/or disposed of at another facility? **ALTERNATIVES 1, 2 AND 3** 

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

Postal code:

Telephone:

E-mail:

#### ALTERNATIVES 1, 2 AND 3

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

Measures that will be implemented to ensure the optimal reuse of recycling of waste water include:

- Grey water re-use systems can be used for irrigation;
- A feasibility study will have to be undertaken to determine whether rain water harvesting can be implemented.

Unknown at this stage m<sup>3</sup> NO√



# 11(c) Emissions into the atmosphere

# ALTERNATIVES 1, 2 AND 3

Will the activity release emissions into the atmosphere?

# ALTERNATIVES 1, 2 AND 3

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

# ALTERNATIVES 1, 2 AND 3

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

# ALTERNATIVES 1, 2 AND 3

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

Short-term dust emissions are expected during the construction phase of the project.

The proposed project will result in an increase in the number of vehicles that will utilize the road which in turn will cause an increase in noxious gas emission from vehicles using this road.

The proposed project will therefore have an indirect effect on the release of emissions during the construction phase of the project. During the operational phase there will be an increase in the number of vehicles utilizing the road in order to access the proposed development.

# 11(d) Generation of noise

# ALTERNATIVES 1, 2 AND 3

Will the activity generate noise? ALTERNATIVES 1, 2 AND 3

If yes, is it controlled by any legislation of any sphere of government? ALTERNATIVES 1, 2 AND 3



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

# ALTERNATIVES 1, 2 AND 3

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

An increase in noise levels is expected during the construction phase due to construction vehicles and machinery. The additional vehicle capacity may result in increased noise levels.

During operational phase an increase in traffic is expected due to the vehicles travelling to the hotel and its facilities. Traffic will increase due to hotel clients; visitors and delivery vehicles accessing the area.

# 12. WATER USE

# ALTERNATIVES 1, 2 AND 3

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

municipal	water board	groundwater	river, stream, dam	other	the activity will not use
			or lake		water
Water sources for the hotel will be finalised during the feasibility study.					

#### ALTERNATIVES 1, 2 AND 3

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

the volume that will be extracted per month:

Not known at

YES√ NO√

#### ALTERNATIVES 1, 2 AND 3

Does the activity require a water use permit from the Department of Water Affairs? **NOV** If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

Water sources for the hotel will be finalised during the feasibility study. If a water use license is required the application will be submitted when the source has been selected.

# 13. ENERGY EFFICIENCY

#### **ALTERNATIVE 1**

None

#### ALTERNATIVES 2 AND 3

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

The following energy efficiency measures considered for the operation phase of the project include:

- Low voltage or compact fluorescent lights will be considered during the construction phase of the project.
- Efficient light bulbs (i.e. CFL, LED);
- Energy Star Appliances (i.ee AAA type appliances) to be used (i.e. refrigerants, ovens, ice machines, steam cookers, televisions, washing machines, copiers, faxes, water coolers, etc.);
- Consider solar hot water heaters for hotel/staff accommodation and for kitchens;
- Solar reflective roof of hotel reducing cooling needs during the summer;
- Improvements to air tightness of façade, building air leakage rate;
- Consider green roofs to reduce heating and cooling gains and losses.

# **ALTERNATIVE 1**

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

The building design includes the use of a shading structure along the front of the building which will cool the building facade and reduce energy consumption.

Energy consumption will also be reduced due to the design of the hotel windows, which will focus on views to the external environment, also making use of natural lighting.

Vegetation such as indigenous trees will provide shade for guests while sitting outside.

# ALTERNATIVES 2 AND 3

Alternative 2 involves the use of Large Scale Renewable Energy sources, such as parabolic trough and solar dish systems and deep heat geothermal systems.

Alternative 3 will consider the use of smaller scale solar thermal systems for energy generation.

# SECTION B: SITE/AREA/PROPERTY DESCRIPTION

#### Important notes:

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

Section	С	Сору	No.	
(e.g. A):				

2. Paragraphs 1 - 6 below must be completed for each alternative.

#### **ALTERNATIVES 1, 2 AND 3**

YES√ 3. Has a specialist been consulted to assist with the completion of this section?

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Please refer to Appendix D attached.

Property description/physical Portion 48 (A Portion of Portion 39) of the Farm 271 JQ, Rietvly, Rustenburg Local Municipality, North West Province

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

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

Current land-use zoning:

address:

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

Is a change of land-use or a consent use application required? Must a building plan be submitted to the local authority?

Commercial

	NO√
YES√	

Locality map:

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

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

# 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

#### ALTERNATIVES 1, 2 AND 3 Alternative S1:

Flat√

Alternative S2 (if any):

Alternative S3 (if any):

# 2. LOCATION IN LANDSCAPE

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

NB: Indicate by highlighting/ticking

# ALTERNATIVES 1, 2 AND 3

2.1		
2.2		
2.3		
2.4		
2.5		

# 2.6 Plain $\sqrt{}$

2.7

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

# ALTERNATIVES 1, 2 AND 3

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



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

# 4. GROUNDCOVER

Indicate the types of groundcover present on the site:

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

# ALTERNATIVES 1, 2 AND 3

Please refer to Appendix D: Specialist Reports attached to this Report.

2.8 2.9 If any of the boxes marked with an "E "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

# 5. LAND USE CHARACTER OF SURROUNDING AREA

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

# ALTERNATIVES 1, 2 AND 3

5.1 Natural area $\sqrt{}$ 5.2 Low density residential $\sqrt{}$ 5.33 Agriculture $\sqrt{}$ 5.42 Other land uses (specify): Farming $\sqrt{}$ 

# ALTERNATIVES 1, 2 AND 3

Visual impact associated with a 7-storey hotel complex and associated infrastructure.

The development will be in an aesthetically pleasing manner, with adequate landscaping to mitigate this impact.

It is anticipated that the proposed development will contribute to a minor increase in noise ambient levels.

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

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

If YES, specify and explain: If YES, specify:

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

If YES, specify and explain: If YES, specify:

# 6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

Archaeological or palaeontological sites, on or close (within 20m) to the site?



lf YES. explain:

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly	The Heritage Impact Assessment (please refer to Appendix D				
explain the	attached) undertaken by Nemai Consulting in July 2012 indicates				
findings of	that no archaeological material was found in the study area.				
the specialist:					
	The Study also indicates that no historically related material was				
	found in the study area. However if during construction				
	archaeological material is uncovered work should cease immediately				
	and an archaeologist or heritage practitioner must be contacted.				
Will any building	Vill any building or structure older than 60 years be affected in any way? NO $$				

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

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

NO√

Please refer to Appendix D attached.

# SECTION C: PUBLIC PARTICIPATION

# 1. ADVERTISEMENT

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

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;
- (b) giving written notice to-
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in-
  - (i) one local newspaper; or

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

# 2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

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

# 3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

# 4. DETERMINATION OF APPROPRIATE MEASURES

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

# 5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as

prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

# 6. AUTHORITY PARTICIPATION

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

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

List of authorities and interested and affected parties informed:

The list of authorities and interested and affected parties informed of the				
proposea aevelopment incluae:				
• The Department of Agriculture Environmental Affairs and Rural				
Development North Region:				
Development North Region,				
<ul> <li>The Department of Water Affairs, Hartebespoort;</li> </ul>				
The Rustenburg Local Municipality;				
The local ward councillors;				
The Bojanala Platinum District Municipality;				
The South African Heritage Resources Agency, Cape Town;				
The Wildlife Environment Society of South Africa;				
- The Poyal Reference Control Administration: and				

- The Royal Bafokeng Central Administration; and
   The Dustanting Dublic Library
- The Rustenburg Public Library.

List of authorities from whom comments have been received:

No comments have been received at this stage.

# 7. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

Has any comment been received from stakeholders?



If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

No comments have been received at this stage.

# SECTION D: IMPACT ASSESSMENT

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

# 1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties. No comments have been received at this stage.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E): No comments have been received at this stage.

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

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

Alternative (preferred alternative)

# PLANNING AND DESIGN PHASE

General requirements during the planning pre-construction phase have been identified and listed as follows:

- Design to consider and incorporate environmental requirements.
- Define and communicate roles and responsibilities for the implementation of the Environmental Management Programme (EMPr).
- Conduct appropriate environmental baseline studies.
- Determine and document the road conditions for identified haul roads.
- Develop and implement an environmental awareness programme.
- Prior to establishment of the site camp, the Contractor must compile and provide a plan showing the positions of all buildings, lay down yards, batch plants, vehicle wash areas, vehicle repair area, batching areas and infrastructure for approval by the Resident Engineer.
- A suitable position for the construction camp to be selected, in consultation with the Environmental Control Officer and the Resident Engineer. The Contractor must compile and submit Environmental Method Statements to the Resident Engineer and the Environmental Control Officer for approval.
- Environmental Awareness induction and Health and Safety induction to be undertaken for all site personnel prior to work commencing.

The identified impacts were assessed according to a number of criteria to arrive at an overall significance rating. All impacts are analysed with regard to: extent, magnitude, duration, probability and significance.

Кеу:					
Е	=	Extent	•	L = Local – extend to the site and its immediate surroundings R = Regional – impact on the region but within the province N = National – impact on an interprovincial scale	

			- I - International - impact outside South Africa
М	=	Magnitude	<ul> <li>Degree to which impact may cause irreplaceable loss of resources</li> <li>Low – Natural and social functions and processes are not affected or minimally affected</li> <li>Medium – Affected environment is notably altered; natural and social functions and processes continue albeit in a modified way</li> <li>High – Natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease</li> </ul>
D	=	Duration	<ul> <li>S = Short term - 0-5 years.</li> <li>M = Medium term - 5-11 years.</li> <li>L = Long term - impact ceases after the operational life cycle of the activity either because of natural processes or by human intervention.</li> <li>P = 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.</li> </ul>
Ρ	=	Probability	<ul> <li>C = Certain - the event is expected to occur in most circumstances.</li> <li>L = Likely - the event will probably occur in most circumstances.</li> <li>M = Moderate - the event should occur at some time.</li> <li>U = Unlikely - the event could occur at some time.</li> <li>R = Rare/Remote - the event may occur only in exceptional circumstances</li> </ul>
S	=	Significance	<ul> <li>Provides an overall impression of an impact's importance, and the degree to which it can be mitigated. The range for significance ratings is as follows-</li> <li>0 – Impact will not affect the environment. No mitigation necessary.</li> <li>1 – No impact after mitigation.</li> <li>2 – Residual impact after mitigation.</li> <li>3 – Impact cannot be mitigated</li> </ul>

# CONSTRUCTION PHASE

A positive impact identified for the construction phase is the socio-economic benefit resulting from job creation. Temporary jobs will be created for the local community as required in the tender document for contractors.

Negative impacts identified for the construction phase of the project include: construction camp; surface and ground water; soil; vegetation; fauna; aesthetic quality, noise; traffic; air; archaeological artefacts, waste and safety.

The identified negative impacts can be minimized through the adequate implementation of mitigation measures as provided in the Environmental Management Programme (please refer to Appendix G attached).

JOB CREATION ALTERNATIVES 1,2 AND 3						
Impact			Mitigation			
<ul> <li>Employr</li> <li>Local su for th construct supplies</li> <li>Local lat as far as</li> <li>The labo in construction</li> </ul>	nent creation uppliers to le provisi tion materi , as far as po pour to be e bour to be e s is practical. purers to be uction activi	n. be used on of als and ossible. mployed e trained ties.	Employment creation is a positive impact therefore no mitigation measures are required.			
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A
After Mitigation	-	N/A	N/A	N/A	N/A	N/A

CONSTRUCTION CAMP ALTERNATIVES 1,2 AND 3					
Impact	Mitigation				
<ul> <li>Setting of construction camp.</li> <li>Improper storage of material.</li> </ul>	<ul> <li>The extent of the site should be limited, to avoid any additional clearance of vegetation.</li> <li>Contractor should take into consideration when identifying a possible site location the regulated area Site camp not to be established within this regulated area.</li> <li>The Contractor shall establish the construction site in consultation with the Environmental Control Officer (ECO) and the Resident Engineer.</li> <li>The Contractor shall draw-up a plan of all parts of the construction site showing the layout of site establishment, topsoil stockpiles, storage areas, planned access and circulation routes etc. The plan shall be submitted to the ECO and Resident Engineer for comment and approval.</li> <li>The Contractor will include environmental hazards and impacts into the safety file for inclusion into the Contractor's mitigation measures.</li> <li>The Contractor will document awareness sessions with their staff and staff are to sign acknowledgement of these issues.</li> <li>In the event of an archaeological site being uncovered during excavations all work will be halted in terms of the Heritage Act until permission to continue is provided by the heritage authority.</li> <li>The Contractor shall ensure that the Contractor's camp and working areas are kept clean and tidy at all times. The Resident Engineer or/and the ECO shall inspect these areas on a regular basis.</li> </ul>				

•		Routes for temporary access and haul roads shall
		be located within the approved demarcated areas
		and vehicle movement shall be confined to these
		roads.
		All construction activities shall be restricted to
		working areas designated on the drawings and/or
		working areas designated on the drawings and/or
		demarcated and approved by the Resident
		Engineer. Materials including spoil shall be
		stockpiled at designated sites.
•		Burning of vegetation on site is prohibited.
•		The Contractor shall ensure that the risk of fire at
		any location on the site is kept to a minimum.
•		The Contractor shall supply fire fighting equipment
		and this equipment shall be kent in good operating
		order
		The Contractor to have emergency shill kits
•		The Contractor to have emergency spill kits
		available on site at all times should there be a
		spillage of a hazardous substance.
•		No smoking allowed on the site. The Contractor is to
		provide designated safe smoking areas.
		The location of fuel storage sites, vehicle, machinery
		and equipment maintenance and refuelling sites
		must be located at least 100m from water bodies.
		and must be outside the Regulated Area (1:100
		flood line)
		Compart mixing to occur only in a designated area
•		on on imponyious lover (or plastic or compati
		wiving pit). The supplify water to be contained for re-
		mixing pit). The runoff water to be contained for re-
		use in cement mixing or disposed of to the waste
		water system. Contaminated water will not be
		dispersed to the environment.
•		Unused cement bags to be stored in an area not
		exposed to the weather and packed neatly to
		prevent hardening or leakage.
•		All spillages from any chemical must be reported to
		the ECO.
		All hazardous substances on site to be handled/
		utilised by competent employees/ personnal
		Chemicale and hozardous materials to be stored in
		demorphed adapted whended areas and as the
		demarcated, adequately bunded areas enclosed in
		accordance with the OHS Act.
•		The bund wall to allow for 110% for the volume of
		storage containers.
		The bund area to be impervious to prevent
		infiltration of spillages or leaks into the soil.
		Any storage tanks containing hazardous materials
		must be placed in a ventilated bundwall area.
		Vehicles to be refueled within the demarcated
		refueling area. No re-fuelling to be undertaken pear
		water bodies or drainage shappele
		Washing to be undertained in the
•		wasning to be undertaken in the maintenance area
		with suitable wastewater collection measures.
•		Drip trays to be used during servicing of equipment
		to prevent leaks and spillages.
•	•	Drip trays to be provided for stationary or parked

Before Mitigation Af ter	- -	L	L	S S	C U	2
	+/-	Extent	<ul> <li>constructi</li> <li>Contracto provided hours, on</li> <li>Magnitude</li> </ul>	on campsite. or to ensure on site, at weekends a <b>Duration</b>	that security the site camp nd public holida <b>Probability</b>	y services are o after working ays. Significance
			<ul> <li>spillages.</li> <li>Where vertrays must and mace possible.</li> <li>All accide immediate</li> <li>Chemical: a register disposal t</li> <li>All flamm must com Safety Da substance</li> <li>The Contender Engineer a</li> <li>Waste sh designate</li> <li>Good hout</li> <li>All construstion speed ling implement</li> <li>No membra allowed to construction</li> </ul>	ehicles/mach st be used to chinery mus dental spill ely. s collected in red disposal o be kept in f able and he apply with leg ata Sheets for es used to be tractor to im and the ECO ould be restri- d areas and usekeeping p uction vehicl mit with a ted on site. pers of the o o loiter on p on camp site	inery are leak o contain the s t be repaired ages to be a drip trays to be facility and cer file on site. azardous subs jislation and by or all hazardou available in file mediately notif of any pollution ricted to storag removed daily. ractices to be for es must travel maximum of construction tea rivate property s.	ing oil/fuel drip pill. All vehicles d as soon as cleaned up e disposed of at rtificates of safe stances storage y-laws. Material is and chemical e on site. fy the Resident incidents. je in specifically ollowed. at low speeds, 30km/h to be am/s should be away from the

SURFACE AND GROUNDWATER ALTERNATIVES 1, 2 AND 3					
Impact	Mitigation				
Contamination of surface water and groundwater during construction activities.	<ul> <li>Fuelling equipment to be regularly inspected and any leaks to be immediately repaired.</li> <li>To manage the handling, use and storage of hazardous substances (i.e. fuel and oil). Hazardous substances to be stored safely and in secondary containers within a bunded area and personal protective equipment to be used when handling these substances.</li> <li>All staff to be aware of emergency procedure in case of spillages.</li> <li>Vehicles and machinery to be in good working order to avoid oil and fuel leaks.</li> <li>Drip trays to be provided for stationary plant (i.e. compressors, pumps, generators) and for parked</li> </ul>				

			<ul> <li>equipment.</li> <li>Drip trays to be used during servicing of equipment.</li> <li>Vehicles to be serviced only in the designated area.</li> <li>Pollutants (i.e. cement, concrete, fuels) to be prevented from entering any water course.</li> <li>All hazardous materials to be stored in appropriate containers on site and disposed of at a licensed disposal facility.</li> </ul>				
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	L	М	S	U	2	
After Mitigation	-	L	L	S	U	1	

A 1	
AL	Mitigation
<ul> <li>Impact</li> <li>Soil erosion and contamination due to construction activities such as excavation and compaction.</li> <li>Soil contamination due to vehicles refuelling.</li> <li>Soil loss and siltation.</li> </ul>	<ul> <li>Mitigation</li> <li>Adequate sedimentation control measures to be implemented in areas susceptible to erosion.</li> <li>Appropriate measures to be implemented to avoid spillages during refuelling (i.e. use of drip trays).</li> <li>Any spillage to be immediately removed and appropriately disposed of.</li> <li>Topsoil on site must be saved and stored. It is imperative that this soil be collected and stored to ensure that valuable seeds in the soil are not lost to the process of site rehabilitation.</li> <li>The top layer of soil to be removed and stockpiled in a designated area and to be later reused in rehabilitation.</li> <li>No topsoil, which has been stripped, shall be buried or in any other way be rendered unsuitable for further use.</li> <li>Topsoil shall be stripped when it is in a dry condition in order to prevent compaction.</li> <li>Stripped topsoil shall be stock piled on sites adjacent to where it has been stripped which have been approved by the Resident Engineer.</li> <li>Soil stockpiles shall not take the form of windrows, unless this can be placed far enough away from the working area. This is to prevent the soil from being spread out or mixed with the other spoil during construction.</li> <li>Topsoil stripped from different sites shall be stockpiled separately and clearly identified as such. Topsoil obtained from different soil types shall not be mixed.</li> <li>Soil stockpiles shall not be higher than 1,5m.</li> <li>No vehicles shall be clearly demarcated in order to prevent vehicle access and later identification as the resource for rehabilitation and vegetation establishment.</li> <li>Soil stockpiles shall not be allowed to become contaminated with oil, diesel, petrol, waste or any other matter which may inhibit the later growth of vegetation in the soil.</li> </ul>
	hazardous substances (i.e. fuel and oil). Hazardous

VEGETATION ALTERNATIVES 1,2 AND 3					
Impact	Mitigation				
<ul> <li>Impact on vegetation during construction activities. It was observed during the site visit undertaken on 05 July 2012 that the study area has been severely disturbed due to many large areas on site being used for making fires and tree trunks</li> </ul>	<ul> <li>Access to the site to be adequately controlled.</li> <li>The impact on flora to be kept to a minimum.</li> <li>The impact on flora to be within the development footprint.</li> <li>Permanent marking of natural features such as trees and harvesting of wood or plants from the area is prohibited.</li> </ul>				

observe site. It i trees ha converte	d thoughrou is believed ve been fell ed into firewo	ught the that the ed to be bod.	<ul> <li>All persection footprint.</li> <li>The exist impact or Removal, outside the The removal, outside the The removes the removes of the</li></ul>	onnel to s ting access the environ damage on the designate oval of plant i ed. ation matter tion after con genous spec- ion and stabil ation measu ssessment ( undertaken e implemente	tay within th roads to be us ment. or disturbance d area is not pe material for med is prohibited. shall be burnt struction must of cies should be lisation of the sit res provided in (please refer t by Nemai Con-	e construction ed to minimize of any plant ermitted. dicinal purposes or removed for occur. e used for the e. o the Flora and to Appendix D nsulting in July
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	L	М	S	L	2
After Mitigation	-	L	L	S	L	1

	FAUNA ALTERNATIVES 1, 2 AND 3				
Impact		Mitigation			
Impact on fauna during construction activities.		<ul> <li>No fishing</li> <li>No bird ne</li> <li>No trappin</li> <li>All incide recorded.</li> <li>Employee site and t safely ren</li> <li>Work to b noise leve</li> <li>All person</li> <li>Waste red</li> <li>Domestic</li> <li>The mitig Fauna As in July 20</li> </ul>	is allowed. esting sites a ng, poaching nts regarding to be ence o report the noved. be restricted to els at night. nel to be ind ceptacles to b animals or lin jation measu sessment un 12 to be impl	re to be disturbe or killing of anir g disturbance of puraged not to presence of fa from 07h00 - 18 ucted on protect be scavenger provestock on site ures provided in ndertaken by N emented.	ed. mals is allowed. of animals to be disturb fauna on una so it can be 8h00 to minimise stion of animals. roof. are prohibited. n the Flora and lemai Consulting
+/- Impa	cts Extent	Magnitude	Duration	Probability	Significance
Before - Mitigation	L	М	S	L	2
After - Mitigation	L	L	S	Μ	1

AESTHETIC QUALITY ALTERNATIVES 1,2 AND 3				
Impact	Mitigation			
Visual impacts associated with construction activities.	<ul> <li>Damage to the natural environment to be kept to a minimum.</li> <li>The clearing of all sites should be kept to a minimum</li> </ul>			

			<ul> <li>and surrou be left inta</li> <li>The Contractivities, Engineer quality of t</li> <li>The exist construction the environ</li> <li>No paintinallowed. M shall only</li> <li>All excava compacted</li> <li>No constraction litter or an surroundinaround on</li> </ul>	unding veget act. ractor shall r which in t are likely to he area. ing access on phase in o nment. ng or markin Marking for be with pegs ated materia d) or removed uction rubble ny other mat ngs should be the construc	ation should as not establish or he opinion of o adversely af road to be u order to minimiz g of natural fe surveying and and beacons. I should be fla d from site. e, construction n erial not found e allowed at any tion site.	a far as possible - undertake any f the Resident fect the scenic sed during the ce the impact on eatures shall be other purposes attened out (not material, refuse, naturally in the ytime to be lying
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	L	М	Р	С	2
After Mitigation	-	L	М	Р	С	2

NOISE ALTERNATIVES 1, 2 AND 3							
Impact Mitigation							
Noise     construct     including     equipme     electricit	associated tion g constructio ent ins y generators	d with activities on traffic, stallation, s, etc.	<ul> <li>All construction vehicles to be fitted with silencers and adhere to SABS 0181 requirements.</li> <li>Relevant traffic authorities to be contacted for any anticipated disruptions.</li> <li>Traffic safety measures including signage and safety measures (as appropriate) to be put in place.</li> <li>Construction vehicles to adhere to speed limits.</li> <li>Vehicles operators to be suitably licensed and to be inducted an excitation and additional additional and additional additionadditional additional additio</li></ul>				
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	L	L	S	М	2	
After Mitigation	-	L	L	S	М	2	

TRAFFIC ALTERNATIVES 1, 2 AND 3							
Impact	Mitigation						
Increase traffic volumes and vehicles movement.	<ul> <li>Relevant traffic authorities to be contacted for any anticipated disruptions.</li> <li>Safe determined speed limit to be adhered to.</li> <li>Traffic safety measures including signage and safety measures (as appropriate) to be put in place.</li> <li>Construction vehicles to adhere to speed limits.</li> <li>Vehicles operators to be suitably licensed and to be inducted on environmental and safety issues.</li> </ul>						
+/- Impacts Extent	Magnitude Duration Probability Significance						

Before	-	L	М	S	С	2
Mitigation						
After	-	L	М	S	Μ	2
Mitigation						

AIR ALTERNATIVES 1,2 AND 3								
Impact Mitigation								
Dust activities transpor material	from con tation of fill a etc.	struction including and spoil	<ul> <li>No fires are allowed on site. Contractor to strict adhere to Regulation 27 (i.e. "fire precautions of construction sites") of the Construction Regulatior (GNR. 1010 of 2003).</li> <li>No waste to be burnt on site.</li> <li>Dust suppression measures to be undertaken (e. wetting down dirt roads, bare areas and stockpile soils).</li> <li>Stockpiles' location to take into consideration th prevailing wind directions and locations of sensitiv receptors.</li> <li>Material loads to be covered and secured durin transportation.</li> <li>Equipment causing excessive smoke (above th normal standard) should not be allowed on site.</li> <li>All machinery / plant to be serviced and lubricate regularly to ensure a good working order.</li> <li>All construction vehicles are to adhere to the speed.</li> </ul>					
	+/- Impacts	Extent	Magnit	ude Duration	Probability	Significance		
Before Mitigation	-	L	L	S	L	2		
After Mitigation	-	L	L	S	U	1		

ARCHAEOLOGICAL ARTEFACTS ALTERNATIVES 1,2 AND 3							
Impact	Mitigation						
Impact on the archaeological nature of the area.	<ul> <li>All unearthed graves that might be discovered to be reported to SAPS.</li> <li>If any artefacs are found work in the area should cease immediately and the Resident Engineer to be notified as soon as possible.</li> <li>Upon receipt of such notification, the Resident Engineer will arrange for the excavation to be examined by an Archaeologist as soon as possible.</li> <li>The relevant heritage authority (SAHRA) shall be informed to ensure that appropriate management action is taken immediately in collaboration with the specialist.</li> <li>Under no circumstances shall archaeological artefacts be removed, destroyed or interfered with by the Contractor, his employees, his sub-contractors or his sub - contractors' employees.</li> <li>A three - strand fence shall protect archaeological sites, which will be at least 2m outside the extremities of the site. The fence shall be clearly marked with danger tape. Vehicular traffic should not be allowed on archaeological and historical sites, within at least a 5m radius from the perimeter of the site.</li> </ul>						

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	L	М	S	L	2
After Mitigation	-	L	L	S	L	2

WASTE ALTERNATIVES 1. 2 AND 3							
Impact	Mitigation						
ALT Impact • Land, air and water pollution through poor waste management practices.	<ul> <li>ERNATIVES 1, 2 AND 3</li> <li>Mitigation</li> <li>Solid Waste: <ul> <li>Bins to be wind and scavenger proof.</li> <li>Bins to be emptied on a weekly basis or as often as required.</li> <li>Waste management measures such as waste reduction, recycling, reuse, treatment and adequate safe disposal to be undertaken.</li> <li>Separate receptacles for recycling of different types of waste to be provided.</li> <li>All receptacles for different types of waste to be clearly marked to indicate the type of waste it contains.</li> <li>Site to be cleared of litter at the end of each working day.</li> <li>Waste disposal to be done at a registered landfill site.</li> <li>Receipts of safe disposal to be kept on site for ECO inspection.</li> <li>All waste (i.e. domestic refuse, surplus spoil material, building rubble, etc.) removed from site to be disposed at a licensed landfill site and certificates of safe disposal to be kept on site.</li> </ul> <b>Liquid Waste:</b> <ul> <li>The Contractor to install and maintain mobile toilets at work site.</li> <li>Sewage waste to be appropriately routed to avoid contamination of the adjacent land and stormwater system.</li> <li>Waste from fuel depot, workshop and truck washing area to be routed to an oil separation system before being released or directed into a conservancy tank.</li> <li>Certificates of safe disposal to be kept on site for ECO inspection.</li> <li>All chemical spills to be contained, cleaned up and disposed of at a licensed hazardous disposal facility.</li> <li>Certificates of safe disposal to be kept on site for ECO inspection.</li> <li>All chemical spills to be contained, cleaned up and disposed of at a licensed hazardous disposal facility.</li> <li>Certificates of safe disposal to be kept on site for ECO inspection.</li> <li>The ablution sanitary facilities to be easily accessible and to be secured in order to prevent them from</li> </ul> </li> </ul>						
	Chemical toilets to be placed at strategic points (away)						

			<ul> <li>from any v</li> <li>Ablution f sanitary co</li> <li>Chemical as often a</li> <li>Certificate be retaine</li> <li>Performin facilities is</li> </ul>	watercourse, acilities to bondition. toilets to be s necessary. s of safe dis d. g ablutions s prohibited.	with minimal vis be maintained serviced on a posal from able outside of es	sual impact). in a clean and weekly basis or ution facilities to stablished toilet		
			Hazardous W	aste:				
			A register	A register of all hazardous waste must be kept by the				
			contractor	contractor and form part of project documents.				
	±/-		<ul> <li>All waste to be see associated accompar describing</li> <li>Hazardou landfill site</li> <li>Certificate inspection</li> </ul>	containers d cured and la d hazards, nied by a s the load and s waste disp es of safe disp n.	lesignated for c abelled with the be properly le shipping paper d its associated osal to be done posal to be kept	off site transport e contents and oaded and be (i.e. manifest) hazards. e at a registered t on site for ECO		
	Impacts	Extent	Magnitude Duration Probability Significance					
Before Mitigation	-	L	М	S	L	2		
After Mitigation	-	L	L	S	U	1		

SAFETY ALTERNATIVES 1, 2 AND 3								
Impact	Mitigation							
<ul> <li>Accidents associated with construction activities.</li> <li>Criminal activities associated with construction.</li> </ul>	<ul> <li>Construct</li> <li>Complian (Act No. 8</li> <li>Contracto Safety M Manager works in (2003).</li> <li>Barrier taj</li> <li>Proper s Employee</li> <li>Undertake</li> <li>All staff associate provided training.</li> <li>All waste be secur associate accompar describing</li> <li>Hazardou hazardou</li> <li>Certificate inspectior</li> </ul>	ion site to be ce with Occu 55 of 1993). r to provide Management for approval terms of be to be erect supervision es to be clearl e a risk asses to be mad d with haz with adequa containers de red and lab d hazards, nied by a s g the load and is waste disposes of safe disponent	fenced off. pational Health an Occupation Plan to the prior to the con- the Construction ted around oper of employees ly identifiable. assment to identified e aware of the cardous substration ate protective esignated for offer belled with the be properly I shipping paper d its associated posal to be dor posal facility. posal to be kept	a and Safety Act mal Health and e Construction mmencement of on Regulations n trenches. at all times. Ty hazards. ne health risks ances and be equipment and f site transport to e contents and oaded and be (i.e. manifest) hazards. ne at a licensed con site for ECO				
+/- Impacts Extent	xtent Magnitude Duration Probability Significance							
Before - L Mitigation	М	S	L	2				

After	-	L	L	S	U	1
Mitigation						

REHABILITATION ALTERNATIVES 1, 2 AND 3							
Impact			Mitigation				
			<ul> <li>On comp away an materials, waste, ru works of e</li> <li>Areas thu restore th practicabl</li> <li>All structu fencing to surroundir</li> <li>The site to construction Reinstater following:</li> <li>Any dar activities to material a</li> <li>All cement</li> <li>Areas wh occurred contamina hazardous</li> <li>Temporar concomita</li> <li>Contents transferre</li> <li>Burying of prohibited</li> <li>The site to</li> </ul>	letion of the y d remove f foundations ibble, hazard every kind. us cleared sh e ground to e before tops res, equipme be removed on area. be returned on as far ment tasks in mage caus to be repaire to be cleane and waste to a residue to l ere spillages must be cl ated soil to s waste dispo y buildings ant material t from the che d to a license of waste at l. be clean an	works the Contr rom the site s, plumbing and dous materials hall be graded its original pro- soil placement. It is original s as is reason aclude (but not n as is reason aclude (but not n as is reason aclude (but not n as a is reason aclude (but not n aclude (but not n	ractor shall clear all construction d other fixtures, and temporary and scarified to ofile as near as aste, rubble and a damage to the state (i.e. prior to nable practical. restricted to) the struction-related m site. e (e.g. oil, fuel) riately and the f at a licensed ished and the rom site. be drained and lity. working area is ect completion.	
			Resident I	Engineer and	ECO.		
	+/- Impacts	Extent	nt Magnitude Duration Probability Significance				
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A	
After Mitigation	-	N/A	N/A	N/A	N/A	N/A	

# **OPERATION PHASE**

#### OPTIONS 1, 2 AND 3

A positive impact identified for the operation phase of the project is that of creation of permanent jobs during the operational phase of the project for the administration and maintenance of the hotel and associated infrastructure. Another positive impact is the local economic development in the area. Also a positive impact is the increase in

property value expected after the proposed development is in place. Use of land as the study area is and has been vacant thus the site being unutilized is another positive aspect.

Negative impacts identified for the operation phase of the project include: surface and ground water; soil; vegetation; fauna; aesthetic value, noise, waste and sustainable supply and availability of bulk supply services (i.e. water, sewerage, electricity). The identified negative impacts can be minimized through the adequate implementation of mitigation measures as provided in the Environmental Management Programme (please refer to Appendix G attached).

JOB CREATION ALTERNATIVES 1,2 AND 3								
Impact	Impact Mitigation							
Employment creation during the operational phase of the project for the administration and maintenance of the hotel and associated infrastructure.     Employment creation is a positive impact therefore no mitigation measures are required.						pact therefore no		
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance		
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A		
After Mitigation	-	N/A	N/A	N/A	N/A	N/A		

LOCAL ECONOMIC DEVELOPMENT ALTERNATIVES 1,2 AND 3								
Impact			Mitigation					
The proposed development will boost local economic development through job creation and increase in the number of tourists and visitors to the area.     Local economic development is a positive impart therefore no mitigation measures are required.					positive impact required.			
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance		
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A		
After Mitigation	-	N/A	N/A	N/A	N/A	N/A		

INCREASED TOURISM POTENTIAL OF THE AREA ALTERNATIVES 1, 2 AND 3							
Impact			Mitigation				
The pro will inc potential the num visitors to	<ul> <li>The proposed development will increase the tourism potential of the area though the number of tourists and visitors to the area.</li> <li>Increased tourism potential is a positive impact therefore no mitigation measures are required.</li> </ul>						
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A	

After	-	N/A	N/A	N/A	N/A	N/A	
Mitigation							

INCREASE IN PROPERTY VALUE ALTERNATIVES 1,2 AND 3							
Impact			Mitigation				
The proposed development will bring about an increase in property value in the area.     The increase in property value is a positive i therefore no mitigation measures are required.					positive impact required.		
	+/- Impacts	Extent	Magnitude Duration Probability Significat				
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A	
After Mitigation	-	N/A	N/A	N/A	N/A	N/A	

USE OF LAND ALTERNATIVES 1,2 AND 3								
Impact			Mitigation	Mitigation				
The pro will make the stuc vacant currently	posed deve e use of the ly area is and the not utilized.	elopment land as currently land is	<ul> <li>Making use of the study area which currently is and has been vacant and unutilized is a positive impact therefore no mitigation measures are required.</li> </ul>					
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance		
Before Mitigation	-	N/A	N/A	N/A	N/A	N/A		
After Mitigation	-	N/A	N/A	N/A	N/A	N/A		

SURFACE AND GROUNDWATER ALTERNATIVES 1, 2 AND 3								
Impact	Mitigation							
Contamination of surface and groundwater during maintenance activities.	<ul> <li>During ma measures and groun</li> <li>Managem substance to be store a bunded be used w</li> <li>All staff to of spillage</li> <li>Vehicles a to avoid o</li> <li>Drip trays compress equipmen</li> <li>Drip trays</li> <li>Vehicles t</li> <li>Pollutants prevented</li> </ul>	aintenance a should be in ad water pollu- ient, handling es (i.e. fuel a ed safely and area and per /hen handling be aware o es. and machine il and fuel lea s to be pro- ors, pumps, t to be used d o be serviced (i.e. cem I from enterin	ctivities the foll mplemented to ition: g, use and stora and oil). Hazard d in secondary of ersonal protective g these substan f emergency pr ery to be in goo aks. vided for static generators) a luring servicing d only in the des ent, concrete, g any watercou	owing mitigation prevent surface ge of hazardous lous substances containers within ve equipment to ces. ocedure in case d working order onary plant (i.e. and for parked of equipment. signated area. fuels) to be rse.				
+/- Impacts Extent	Magnitude Duration Probability Significance							
Before - L Mitigation	М	S	U	2				

After	-	L	L	S	U	1
Mitigation						

SOIL ALTERNATIVES 1, 2 AND 3							
Impact			Mit	tigation			
Contami mainten	nation of sc ance activitie	oil during es.	•	During m measures pollution: Adequate implemen The top la designate Managem substance to be stor a bunded be used v All staff to of spillage Vehicles to avoid of Drip trays compress equipmen Drip trays Vehicles to	aintenance a s should be s sedimentat ated in areas ayer of soil to ed are and to nent, handling es (i.e. fuel a ed safely and area and pe when handling be aware o es. and machine il and fuel lea s to be pro- sors, pumps, at to be used d	activities the foll implemented ison control m susceptible to e be removed an be later reused g, use and stora and oil). Hazard d in secondary of ersonal protective g these substan f emergency pr ery to be in goo aks. vided for static generators) a luring servicing d only in the des	owing mitigation to prevent soil easures to be rosion. d stockpiled in a in rehabilitation. ge of hazardous lous substances containers within ve equipment to ces. ocedure in case d working order onary plant (i.e. and for parked of equipment. signated area.
	+/- Impacts	Extent	Ma	agnitude	Duration	Probability	Significance
Before Mitigation	-	L	М		S	М	2
After Mitigation	-	L	L		S	U	1

VEGETATION ALTERNATIVES 1, 2 AND 3								
Impact			Mitigation					
Impact on vegetation during maintenance activities.			<ul> <li>During m. measures impact on</li> <li>Access to</li> <li>The impact footprint.</li> <li>Permanen and harv prohibited</li> <li>All persor</li> <li>The exist impact on</li> <li>Rehabilitation</li> </ul>	aintenance a should be vegetation: the site to be ct on flora to act on flora marking of esting of wo lanel to stay w ing access the environnation after ma	ctivities the foll implemented t e adequately co be kept to a mir to be within th f natural feature od or plants fr ithin the constru- roads to be us nent. intenance must	owing mitigation o minimize the ntrolled. ne development es such as trees om the area is action footprint. sed to minimize occur.		
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance		
Before Mitigation	-	L	М	S	L	2		
After Mitigation	-	L	L	S	L	1		

FAUNA ALTERNATIVES 1,2 AND 3							
Impact							
Impact     maintena	on fauna ance activitie	during es.	<ul> <li>During m. measures impact on</li> <li>Use of ex</li> <li>No trappin</li> <li>All incide recorded.</li> <li>Employee site and t safely ren</li> <li>Work to H noise leve</li> <li>All person</li> <li>Waste red</li> <li>Domestic</li> <li>The mitig Fauna As in July 20</li> </ul>	aintenance a should be fauna: isting roads to ng, poaching nts regarding to be enco o report the noved. be restricted els. animals or liv pation measu sessment ur 12 (appendix	ctivities the folk implemented to o minimize the i or killing of anin g disturbance of presence of fau to 07h00 - 18k ucted on protect pe scavenger provided in dertaken by No D) to be impler	owing mitigation to minimize the mpact on fauna. nals is allowed. If animals to be disturb fauna on una so it can be n00 to minimise tion of animals. oof. are prohibited. In the Flora and emai Consulting nented.	
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	L	М	S	L	2	
After Mitigation	-	L	L	S	М	1	

AESTHETIC VALUE ALTERNATIVES 1,2 AND 3							
Impact			Mitigation				
Visual     with a 7-     and asso	impact as storey hotel pciated facilit +/- Impacts	sociated complex ties. <b>Extent</b>	The development will designed in such a way that will compliment the natural surrounding environment, with appropriate landscaping to mitigate this impact.MagnitudeDurationProbabilitySignificance				
Before Mitigation	-	L	М	Р	С	2	
After Mitigation	-	L	М	Р	С	2	

NOISE ALTERNATIVES 1,2 AND 3							
Impact			Mitigation				
Noise associated with maintenance activities including traffic, equipment installation, electricity generators, etc.			<ul> <li>During maintenance activities the following mitigation measures should be implemented to minimize the noise impact:</li> <li>All heavy vehicles to be maintained to reduce noise levels.</li> <li>Silencers to be fitted on noise generating equipment.</li> <li>No amplified music allowed on site.</li> <li>Plant equipment and machinery to be inspected and maintained to ensure that they are effectively muffled.</li> </ul>				
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	L	L	S	L	2	

After	-	L	L	S	Μ	2
Mitigation						

WASTE ALTERNATIVES 1, 2 AND 3						
Impact	Mitigation					
Land, air and water pollution through poor waste management practices.	<ul> <li>Solid Waste:</li> <li>Bins to be wind and scavenger proof.</li> <li>Bins to be emptied on a weekly basis or as often as required.</li> <li>Waste management measures such as waste</li> </ul>					
	<ul> <li>reduction, recycling, reuse, treatment and adequate safe disposal to be undertaken. Separate receptacles for glass, paper, metals and plastics to be provided.</li> <li>Separate receptacles for recycling of different types of waste to be provided.</li> <li>All receptacles for different types of waste to be</li> </ul>					
	<ul><li>clearly marked to indicate the type of waste it contains.</li><li>Site to be cleared of litter at the end of each working day.</li></ul>					
	<ul> <li>Waste disposal to be done at a registered landfill site.</li> <li>Receipts of safe disposal to be kept on site for ECO inspection.</li> </ul>					
	• All waste (i.e. domestic refuse, surplus spoil material, building rubble, etc.) removed from site to be disposed at a licensed waste disposal facility and certificates of safe disposal to be kept on site. Liquid Waste:					
	<ul> <li>The Contractor to install and maintain mobile toilets at work site.</li> <li>Sewage waste to be appropriately routed to avoid</li> </ul>					
	<ul> <li>Waste water from kitchens, showers and sinks to be discharged into conservancy tanks prior to disposal at a licensed disposal facility.</li> </ul>					
	<ul> <li>Runoff from fuel depot, workshop and truck washing area to be routed to an oil separation system before being released or directed into a conservancy tank.</li> <li>Certificates of safe disposal to be kept on site for ECO.</li> </ul>					
	<ul> <li>Certificates of safe disposal to be kept of site for LCC inspection.</li> <li>Waste from chemical toilets to be disposed of by a registered contractor.</li> </ul>					
	<ul> <li>All chemical spills to be contained, cleaned up and disposed of at a licensed hazardous waste disposal facility.</li> <li>Cortificates of sofe disposal to be kept on site for</li> </ul>					
	<ul> <li>Certificates of safe disposal to be kept on site for ECO inspection.</li> <li>The Contractor to provide adequate sanitary facilities (e.g. chemical toilets) as per building guidelines (SABS 0400). There should be one toilet</li> </ul>					
	<ul> <li>for every 15 workers on site.</li> <li>The ablution sanitary facilities to be easily accessible and to be secured in order to prevent them from blowing over.</li> </ul>					
	<ul> <li>Chemical toilets to be placed at strategic points (away from any watercourse, with minimal visual impact). Ablution facilities to be maintained in a clean and sanitary condition.</li> </ul>					

			Chemical toilets to be serviced on a weekly basis or     as often as necessary					
			<ul> <li>Certificates of safe disposal from ablution facilities to be retained.</li> </ul>					
			• Performing ablutions outside of established toilet facilities is prohibited.					
			<ul> <li>Hazardous Waste:</li> <li>All waste containers designated for off site transport to be secured and labelled with the contents and associated hazards, be properly loaded and be accompanied by a shipping paper (i.e. manifest) describing the load and its associated hazards.</li> <li>Hazardous waste disposal to be done at a licensed hazardous waste disposal facility.</li> <li>Certificates of safe disposal to be kept on site for</li> </ul>					
	+/-							
	Impacts	Extent	Magnitu	de   Duration	Probability	Significance		
Before Mitigation	-	L	М	S	L	2		
After Mitigation	-	L	L	S	U	1		

SUSTAINABLE SUPPLY AND AVAILABILITY OF BULK SUPPLY SERVICES ALTERNATIVES 1,2 AND 3							
Impact			Mitigation				
Sustainable supply and availability of bulk supply services (i.e. water, sewerage, electricity)			<ul> <li>Electricity for the proposed development will be provided by the Rustenburg Local Municipality.</li> <li>Septic tanks will be used for the proposed development. The sewer system to be installed will adhere to SABS standards and will be serviced by a private company on a regular basis.</li> </ul>				
	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance	
Before Mitigation	-	L	L	L	L	2	
After Mitigation	-	L	L	L	М	1	

#### DECOMMISIONING PHASE

#### **OPTIONS 1,2 AND 3**

Please note that no decommissioning and closure phase is expected for the proposed development. However, if decommissioning will be undertaken a separate Basic Assessment Report inclusive of a site decommissioning Environmental Management Programme should be developed and implemented.

# 'NO GO' ALTERNATIVE

#### 'NO GO' ALTERNATIVE

The 'No-Go' alternative means that the proposed development will not take place and the area will retain its status quo. This will mean that the area will not benefit of the

opportunities provided by the proposed development including temporary and permanent job opportunities; local economic development and increase in property value.

No impacts are applicable as the area will retain its status quo.

# 3. ENVIRONMENTAL IMPACT STATEMENT

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

Several positive impacts have been identified for this project. The first positive impact is the socio-economic effects resulting from job creation. Temporary jobs will be created for the local community as required in the tender document for contractors. Permanent jobs will be created during the operational phase of the project. The proposed development will boost local economic development through job creation and increase in the number of tourists and visitors to the area.

Another positive impact is the increase in property value in the area. The proposed development will bring about an increase in property value in the area.

All negative impacts identified for the construction and operation phases of the proposed development can be minimized provided that the proposed mitigation measures provided in this Basic Assessment Report, the Environmental Management Programme (please refer to Appendix G attached) and the Flora and Fauna Study (please refer to Appendix D attached) are adequately implemented during the construction and operation phases of the project.

The environmental consequences associated with the impacts identified in Section 2 above are not considered significant if appropriately managed during the construction and operation phases of the project.

Free access to the site resulted in a high degree of vagrancy and informal dumping of domestic refuse and excess building rubble and materials. The overall ecological integrity of the proposed development site is poor. The high number of invasive species was attributed to the human settlements which resulted in transformation of the majority of habitat units in the survey area.

#### ALTERNATIVES 1, 2 AND 3

From an environmental perspective all three identified alternatives will impact on the environment through the proposed hotel and associated infrastructure.

There are various benefits regarding the proposed development. The positive impacts of the proposed development outweigh the negative impacts. Mitigation measures to minimize the identified negative impacts are provided in this Report and Appendix F: Environmental Management Programme attached to this Report.

There are significant positive impacts of the proposed development and they are listed as follows:

- Creation of employment opportunities during the construction and operation phases of the proposed development;
- The proposed development will engage the green building technology to promote a low carbon footprint development;
- The proposed development will bring about an increase in local economic

development of the area;

- The proposed development will set an example by using natural construction material to create living spaces;
- The proposed development will bring about an increase in the tourism potential of the area;
- Use of land: the site is currently and has been vacant thus the land is not being utilized.

All three identified alternatives have been assessed and mitigation measures have been provided for the identified impacts. All identified impacts can be minimized provided that the proposed mitigation measures provided in this Basic Assessment Report, the Environmental Management Programme (please refer to Appendix G attached) and the Flora and Fauna Study (please refer to Appendix D attached) are adequately implemented during the construction and operation phases of the project.

A Flora and Fauna Assessment was undertaken by Nemai Consulting in July 2012 (please refer to Appendix D attached) to determine the impact of the project on the vegetation and animals in the study area.

The Report indicates that no sensitive or endangered fauna were recorded within the study area or are likely to occur on site. Habitat disturbance and degradation together with the development of human settlements resulted in larger mammal species moving away from the area.

The Report indicates that conservation and planning tools were consulted for relevancy for this project, and found that an Important Bird Area (IBA) occurs in the study area. The IBA areas are important habitats for conservation of bird populations. Following literature research the Report indicates that this IBA is known for two breeding colonies of Cape Vulture and large populations of raptors and blue cranes. However due to habitat destruction and fragmentation and due to high levels of human disturbance the natural habitat within the study area has been severely impacted thus limiting the occurrence of suitable habitat for large terrestrial birds and certain smaller raptor species. The Report indicates that potential nesting sites for raptors were searched for during fieldwork (especially on larger *Eucalyptus* trees) but none were found.

The Report provides details on the Red Data plant species recorded within the 2527CA quarter degree square in terms of the 1:50 000 grid of South Africa (please refer to Appendix D attached). The Report recommends that during the construction phase, that detailed searches for the rare/threatened and protected species are made during the appropriate time of year when plants are likely to be visible.

The Report indicates that the proposed development will not have a significant impact on biodiversity conservation within the region. The Report recommends that the larger exotic species that are not included in the Category 1 list of invasive species could also be allowed to remain for aesthetic purposes. However species such as syringe (*Melia azedarach*), *Eucalyptus grandis* and *Eucalyptus camaldulensis* should be removed as these are regarded as being highly invasive under suitable conditions.

A Heritage Impact Assessment was undertaken by Nemai Consulting in July 2012 (please refer to Appendix D attached) to determine the impact of the project on the cultural resources in the study area. The Study indicates that no archaeological material was found in the study area. The Study also indicates that no historically related material was found in the study area. However, an abandoned structure was found on site (please refer to Appendix D attached). Furthermore the Study indicates that during construction it is possible that unearthed graves or archaeological materials (i.e. stone tools and pottery) may be discovered. Provided such may occur, the development should cease immediately and reported to the SAPS. In case of the

archaeological materials (i.e. stone tools and pottery) an archaeologist or heritage practitioner must be contacted.

# 'NO GO' ALTERNATIVE

The 'No-Go' alternative means that the proposed development will not take place and the area will retain its status quo. This will mean that the no temporary and permanent jobs will be created, the area will not benefit of local economic development and there will not be an increase in the property value in the area.

# SECTION E. RECOMMENDATION OF PRACTITIONER

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



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

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

While the construction phase has no preferred alternative in terms of environmental impact, Alternative 3 is the preferred alternative in terms of environmental impacts during the operational phase.

Alternative 3 promotes feasible sustainable development focussing on water reuse, landscaping, energy conservation and recycling, without requiring the prohibitive capital investment required for alternative 2.

All mitigation measures provided in this Basic Assessment Report and the Environmental Management Programme (please refer to Appendix G attached) to be adhered to.

All mitigation measures provided in the Flora and Fauna Assessment (please refer to Appendix D attached) undertaken by Nemai Consulting in July 2012 to be adhered to.

The Heritage Impact Assessment (please refer to Appendix D attached) undertaken by Nemai Consulting in July 2012 indicates that no archaeological material was found in the study area. The Study also indicates that no historically related material was found in the study area. However if during construction archaeological material is uncovered work should cease immediately and an archaeologist or heritage practitioner must be contacted.

The following conditions are recommended for inclusion in the environmental authorization:

- Appointment of an Environmental Control Officer to monitor compliance with the Environmental Authorization and the approved Environmental Management Programme;
- All mitigation measures provided in the Flora and Fauna Assessment (please refer to Appendix D attached) undertaken by Nemai Consulting in July 2012 to be adhered to.
- Construction camp to be established in an already disturbed area and away from any surface water bodies;
- Impact on water bodies from the construction or operation phases of the project is prohibited;
- Vegetation removal to be kept to a minimum;

- Construction activities to be restricted to working hours: 07h00 to 18h00;
- Activities to take place within the development footprint;
- 'No go' area to be demarcated;
- To manage handling, use and storage of materials on site;
- To manage the handling, use and storage of hazardous substances (i.e. fuel and oil);
- Bund wall to be built around hazardous storage area;
- The bund wall to allow for 110% for the volume of storage container;
- Personal Protection Equipment (PPE) to be used when handling hazardous chemicals/ substances;
- Pollutants (i.e. cement, concrete, fuels) to be prevented from entering any water courses;
- Contaminated soil or water to be removed and disposed of at a permitted disposal site and certificates of safe disposal to be retained;
- Basic fire fighting equipment to be provided on site;
- Drip trays are to be used for machinery and vehicles that are parked or stationary;
- All construction vehicles are to adhere to the speed limit on site to prevent dust pollution;
- Erosion control measures to be implemented where applicable;
- Noise generating activities near residential areas, should be limited to take place during daylight working hours;
- Construction vehicles to be kept in good working order to prevent excessive noise;
- Maintenance of construction vehicles to prevent fuel and oil spillages;
- Adequate chemical toilets to be provided on site;
- All construction workers to be clearly identifiable;
- No construction workers to be allowed on site over night except for security personnel;
- Surrounding residents should be notified in advance of construction schedule;
- Ensure that area for waste storage is wind proof;
- Waste to be disposed of at licensed disposal facility;
- Waste minimization, reduction, recycling and re-use to be promoted;
- If any archaeological and cultural sites are discovered the relevant heritage authority to be notified and work is to stop immediately and these areas to be demarcated;
- Materials used during the construction and rehabilitation phases of the project may not be disposed of on site;
- Rehabilitation to be undertaken post construction;
- Only indigenous vegetation to be utilized during rehabilitation.

Is an EMPr attached?

YES√

The EMPr must be attached as Appendix F.

# **SECTION F: APPENDIXES**

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Maps

Appendix F: Public Participation

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Correspondence