

# Environmental Final Basic Assessment Report

Proposed development of a Dinosaur Interpretation Centre within  
Golden Gate Highlands National Park, Free State Province

DEA Ref No: 14/12/16/3/3/1/1468

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Prepared for:



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## EXECUTIVE SUMMARY

### ***Background and Introduction***

The Golden Gate Highlands National Park (GGHNP) is national park which is situated in the eastern portion of the Free State Province and is a gateway to the proclaimed World Heritage Site of the Maloti Drakensberg Transfrontier Conservation Area.

Declared in 1963, the park is managed by South African National Parks (SANParks) The GGHNP in the Grassland Biome of South Africa and is mainly dominated by the Drakensberg grassland bioregion and the Mesic highland grassland bioregion.

The park maintains five high level objectives which stem from its mission statement. Responsible tourism is another high level objective which seeks to enhance visitor experience within the context of this culturally-rich, biodiversity-abundant landscape.

In line with this objective, SANParks propose to develop a Dinosaur Interpretation Centre (IC) within the GGHNP, on the Remaining Extent and Portion 1 of the Farm Glen Reenen No. 1361, Bethlehem, Free State Province

### ***Project Proposal***

The proposed IC is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and surrounding environment. The theme of the project design concept will blend with the landscape of the surrounding environment and the uniqueness of the GGHNP Area.

The proposed IC will entail the following features:

- Display area/s
- Multipurpose hall/facility for audio-visual and other presentations
- Food and beverage facility
- Palaeontological study area
- Look out point & walkways to discovery site
- Play area
- Parking area and associated landscaping of immediate surrounds
- Ablution facilities
- Management facilities
- Storage space
- Retail outlet for arts and crafts

Water and electricity will be sourced from existing resources within Golden Gate close to the proposed development area. Sewage will be processed at an existing sewage facility in proximity to the proposed development area. Solid waste will be removed to the local municipal landfill site at Clarens.

It was determined that a Basic Assessment process must be undertaken, to obtain Environmental Authorisation for the proposed development of the IC, as described in the paragraph below.

### **Basic Assessment Process**

An application for Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014 has been submitted to the National Department of Environmental Affairs (DEA) for consideration of this proposal. In response to acceptance of this application by the DEA, a Basic Assessment (BA) process is being undertaken in accordance with the NEMA EIA Regulations of 2014.

The application for Environmental Authorisation is to undertake the following listed activities in terms of Listing Notices 1 and 3, GR 983 and 985 of 4 December 2014, as amended:

#### *Listing Notice 1 - GR 983*

- **Activity 12:** The development of buildings exceeding 100 square metres in size or infrastructure or structures with a physical footprint of 100 square metres or more, where such development occurs if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.

#### *Listing Notice 3 – GR 985*

- **Activity 14:** The development of infrastructure or structures with a physical footprint of 10 square metres or more, in Free State, Limpopo, Mpumalanga and Northern Cape, outside urban areas, in a protected area identified in terms of NEMPAA, excluding conservancies, areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA.

### **Water Use License Application**

The proposed development will be undertaken within 500 metres of the Little Caledon River, therefore, a water use license (or general authorisation) should be obtained from the Department of Water and Sanitation in terms of Section 21 of the National Water Act, 1998 (Act No. 37 of 1998; NWA).

### **Specialist Studies**

Three specialist studies were identified to be carried out a part of this Basic Assessment process, namely:

- Ecological Impact Assessment;
- Palaeontological Impact Assessment - Phase 1: Desktop Study; and
- Phase 1 Archaeological Impact Assessment

Herewith a summary of the main findings derived from these specialist studies.

#### *Ecological Impact Assessment*

The Ecological Impact Assessment was carried by ME Daemane, Science Manager: Park Interface & Restoration Ecology of SANParks. The conclusion was made that the only sensitive habitat close to the proposed developmental area is the Little Caledon River. Drainage lines provide movement corridors for herpetofaunal species (frogs and reptiles). Impacts such as accelerated erosion may possibly result in the deposition of sediments in the drainage system which may have adverse impact on fauna, water

quantity and quality. The significance of impact without mitigation will be high on loss of flora, moderate for habitat loss, fauna and erosion. By implementing mitigation measures, the impacts will be significantly reduced to moderate (loss of flora), low (habitat loss and direct impact) and minor impact for erosion and sedimentation risks. In summary, the proposed development carries high risks at a local scale but this can be minimised by undertaking mitigation measures. No Red Data species are anticipated to be encountered in the proposed area and therefore the development carries moderate to low impact on the habitat and surrounding ecosystem (Daemane, 2015).

### Phase 1 Palaeontological Impact Assessment

A Phase 1 Palaeontological Impact Assessment was carried out by Dr. Jonah N. Choiniere of the University of the Witwatersrand, and the conclusion was made that the proposed development will overlie sedimentary bedrock that is extremely likely to contain vertebrate fossils of scientific and cultural importance. It is recommended that all construction staff are trained to identify possible fossils, and that a qualified palaeontologist be present during site work to monitor excavations into the sedimentary bedrock, should it be the case. This palaeontologist should have a collection permit from the South African Heritage Resources Agency so that they can legally excavate any important material that is discovered while the site is developed. With this mitigation recommendation in place, it will be possible to simultaneously complete the proposed project and protect valuable heritage resources.

### Phase 1 Archaeological Impact Assessment

A Phase 1 Archaeological Impact Assessment was carried out by Dr. Lloyd Rossouw from the National Museum, Bloemfontein, and his findings indicated that the site is made up of high-relief terrain covered by grass-covered valley sediments and scree deposits (colluvium), intersected by the Little Caledon River to the north. A foot survey of the riverbank and adjacent slopes revealed no evidence of in situ Stone Age archaeological material, capped or distributed as surface scatters on the landscape. There are also no indications of rock art, prehistoric structures or historical buildings older than 60 years within the vicinity of the study area. The project design concept is intended to blend in with the landscape of the surrounding environment and the uniqueness of the GGHNP Area.

Thus, the cultural landscape should not be negatively affected by the proposed development. The proposed site is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C). The age of the planted trees currently located within the proposed impact zone allocated for parking could not be established during the assessment. It is advised that, as a prerequisite, specialist input is obtained from a botanist in order to ascertain the age of the trees located within the proposed impact area.

### **Public Participation**

In accordance with Regulation 54 of the NEMA EIA Regulations of 2014 (GR 982 of 4 December 2014), notice were given to all potential interested and affected parties (I&APs) of the proposed application.

Written notice were given to any organ of state having jurisdiction in respect of any aspect of the activity and any other party as required by the competent authority.

The following key stakeholders was also be notified during the public participation process:

- Managing Executive: Parks Division (SANParks)

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- Regional General Manager: Northern Region
- Park Manager (SANParks) – Occupier of the Land
- The Clarens Tourism Forum
- The Clarens Rural Conservancy
- The Clarens Village Conservancy (CVC)
- The Golden Gate Park Forum

Advertisements were placed in two provincial newspaper, national newspaper and a local newspaper.

No concerns was raised during the PPP. A Comments and Response Report was compiled and included under Appendix E3 of this report.

The Applicant also request for deviation from the public participation requirements in terms of section 41 or the NEMA EIA Regulations, 2014 as follow:

- **Section 41(2)(b)(i) -**

*(2) The person conducting a public participation process must take into account any relevant 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 an application or proposed application which is subjected to public participation by-*

*(b) giving written notice, in any of the manners provided for in section 47D of the Act, to-*

*(i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken.*

The reason for this deviation request is necessitated due to the great extent of Golden Gate Highlands National Park (GGHNP) and therefore it will be unfeasible to notify all the occupiers of land adjacent to the Park. During the PPP the proponent will engage with the GGHNP Park Forum, which includes surrounding landowners and other interested parties, to notify them of the proposed development.

This application for exemption will not affect the rights and interests of I&APs negatively as all registered I&APs will be informed of the decision and their right to appeal, as required in the EA.

Following completion of the 30 day comment period, comments will be consolidated and the report amended to reflect these prior to submission to the DEA for review and decision-making.

### **Impact Assessment**

A total of 24 impacts predicted to occur during the various project phases were described and assessed using a quantitative significance rating methodology. These impacts were considered in terms of each of the two design alternatives including a no-go option, to not develop the proposed project. Reasonable mitigation measures were then identified, which would avoid, reduce or minimise impacts to lower the significance of these.

The concluding results of the impact assessment assigned low negative significance ratings to the development proposal, indicating that no adverse environmental impacts are likely to occur should the proposed development proposal be authorised.

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Design Alternative 1 is the preferred alternative because this option posed a lower impact significance to the sense of place of the surrounding area.

### ***Conclusion***

This Basic Assessment process has assessed impacts associated with the proposed development of the Dinosaur Interpretation Centre within the GGHNP, based on the outcomes of a multitude of contributing information that the development would not result in any impacts that cannot be acceptably mitigated, or fatal flaws and as such may be authorised.

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## ACORNYMS AND ABBRVIATIONS

<b>BA</b>	Basic Assessment
<b>CBA</b>	Critically Biodiversity Area
<b>DEA</b>	Department of Environmental Affairs
<b>DLM</b>	Dihlabeng Local Municipality
<b>EAP</b>	Environmental Assessment Practitioner
<b>ECO</b>	Environmental Control Officer
<b>EIA</b>	Environmental Impact Assessment
<b>EMF</b>	Environmental Management Framework
<b>EMPr</b>	Environmental Management Programme
<b>ESA</b>	Ecological Support Area
<b>GGHNP</b>	Golden Gate Highlands National Park
<b>GNR</b>	Government Notice Number
<b>HIL</b>	High Intensity Leisure
<b>I&amp;AP</b>	Interested and Affected Party
<b>IC</b>	Interpretation Centre
<b>IDP</b>	Integrated Development Plan
<b>LED</b>	Local Economic Development
<b>LIL</b>	Low Intensity Leisure
<b>NDT</b>	National Department of Tourism
<b>NEM:PAA</b>	National Environmental Management Protected Areas Act
<b>NEM:WA</b>	National Environmental Management Waste Act
<b>NEMA</b>	National Environmental Management Act
<b>NHRA</b>	National Heritage Resources Act
<b>NPA</b>	National Parks Act
<b>NWA</b>	National Water Act
<b>PSDF</b>	Provincial Spatial Development Framework
<b>SAHRA</b>	South African Heritage Resources Act
<b>SANParks</b>	South African National Parks
<b>SAPS</b>	South African Police Service
<b>SDF</b>	Spatial Development Framework

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## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

(For official use only)

**File Reference Number:**

**Application Number:**

**Date Received:**


Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

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### 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, 2014 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. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.

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15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

## SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?  YES  NO  
If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

### 1. PROJECT DESCRIPTION

#### a) Describe the project associated with the listed activities applied for

South African National Parks (SANParks) propose to develop a Dinosaur Interpretation Centre on the Remaining Extent and Portion 1 of the Farm Glen Reenen No. 1361 within Golden Gate Highlands National Park, Free State Province.

The Interpretation Centre (IC) for the Golden Gate Highlands National Park (GGHNP) is a proposed tourist attraction within the GGHNP, which is situated in the eastern portion of the Free State Province and is a gateway to the proclaimed World Heritage Site of the Maloti Drakensberg Transfrontier Conservation Area. SANParks is the mandated institutional entity responsible for the management of conservation and tourism within the GGHNP and whose operational responsibility it will be to manage the IC in a sustainable manner.

The proposed IC is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and surrounding environment.

The theme of the project design concept will blend with the landscape of the surrounding environment and the uniqueness of the GGHNP Area.

The proposed IC will entail the following features:

- Display area/s
- Multipurpose hall/facility for audio-visual and other presentations
- Food and beverage facility
- Palaeontological study area
- Look out point & walkways to discovery site
- Play area
- Parking area and associated landscaping of immediate surrounds
- Ablution facilities
- Management facilities
- Storage space
- Retail outlet for arts and crafts

The footprint area of the proposed IC is estimated at 2644m<sup>2</sup>, this excludes the footprint of the play area and walkway towards the find site.

During construction of the R702 road in the GGHNP, a 190-million year old fossil buried under two kilometres of lava, was uncovered and taken out and protected by a palaeontologist. This discovery

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lead to the establishment of the find site. The find site will not be impacted on by the proposed development of any human activities resulting from the development. A lookout area will be established to enable tourists or visitors to look out over the find site.

The Little Caledon River is situated in proximity to the proposed development area.

Water and electricity will be sourced from existing resources close to the proposed development area. Sewerage will be processed at an existing sewage facility in proximity to the proposed development area. Solid waste will be removed to the local municipal landfill site at Clarens as per existing arrangements that have been in place for many years. A letter confirming that the necessary electricity capacity is available, is included under Appendix J1 of this report.

**b) Provide a detailed description of the listed activities associated with the project as applied for**

Listed activity as described in GN 983, 984 and 985	Description of project activity
<p><b>GN 983 Activity 12 (x) (xii) (c):</b>                      The development of                      (x) buildings exceeding 100 square metres in size; or                      (xii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs-                      (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</p>	<p>The proposed development will entail buildings, infrastructure and structures with a physical footprint of 100 square metres or more within 32 metres of a watercourse.</p> <p>The proposed IC will entail the following features:</p> <ul style="list-style-type: none"> <li>• Display area/s</li> <li>• Multipurpose hall/facility for audio-visual and other presentations</li> <li>• Food and beverage facility</li> <li>• Palaeontological study area</li> <li>• Look out point &amp; walkways to discovery site</li> <li>• Play area</li> <li>• Parking area and associated landscaping of immediate surrounds</li> <li>• Ablution facilities</li> <li>• Management facilities</li> <li>• Storage space</li> <li>• Retail outlet for arts and crafts</li> </ul> <p>The footprint area of the proposed IC is estimated at 2644m<sup>2</sup>, this excludes the footprint of the play area and walkway towards the find site.</p>
<p><b>GN 985 Activity 14 (xii) (a) (ii) (aa), (hh)</b>                      The development of-                      (xii) infrastructure or structures with a physical footprint of 10 square metres or more;                      (a) In Free State, Limpopo, Mpumalanga and Northern Cape:                      ii. Outside urban areas, in:</p>	<p>The proposed development will entail buildings, infrastructure and structures with a physical footprint of more than 10 square meters, within the Golden Gate Highlands National Park, Free State Province.</p>

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(aa) A protected area identified in terms of NEMPAA, excluding conservancies; (hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA	
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### 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 as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

#### a) Site alternatives

<b>Alternative 1 (preferred and only alternative)</b>		
<b>Description</b>	<b>Lat (DDMMSS)</b>	<b>Long (DDMMSS)</b>
Development of the proposed IC at the camp site of Glen Reenen Rest Camp on the Remaining Extent and Portion 1 of the Farm Glen Reenen No. 1361, Bethlehem, Free State Province. This alternative is the preferred and only site alternative for the proposed development.  <i>Advantages:</i> <ul style="list-style-type: none"> <li>• The location is already known, accessible and managed by SANParks for the benefit of visitors;</li> <li>• It is a nationally and internationally recognized location;</li> </ul>	28°30'26.91"S	28°37'11.40"E

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<ul style="list-style-type: none"> <li>• It is a 'gateway' to a recognized landscape (the discover area) acknowledged by its World Heritage Status;</li> <li>• It is a site of ongoing international scientific investigation in a subject that intrigues a large portion of the world's population – dinosaurs;</li> <li>• There is an existing access road to the site;</li> <li>• The site is located in proximity to existing bulk services (e.g. water, electricity and sewage systems); and</li> <li>• The vegetation cover of the site is already disturbed.</li> <li>• The proposed IC was designed to blend in with the surroundings of site alternative 1.</li> </ul> <p><i>Disadvantages:</i></p> <p>No disadvantages were identified.</p>		
<b>Alternative 2</b>		
<b>Description</b>	<b>Lat (DDMMSS)</b>	<b>Long (DDMMSS)</b>
<p>Alternative 2 will be to develop the proposed IC the Golden Gate Hotel. This alternative was not investigated, the reason being that Alternative 1 is aligned within the Park Management Plan.</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> <li>• The location is already known and accessible;</li> <li>• It is a nationally and internationally recognized location;</li> <li>• There is an existing access road to the site; and</li> <li>• The site is located in proximity to existing bulk services (e.g. water, electricity and sewage systems).</li> </ul> <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>• The proposed IC will change the sense of place of the Golden Gate Hotel, as the design do not fit into the current landscape.</li> <li>• The site is located far from the discover area, making the option to build a view point impossible.</li> </ul>		
<b>Alternative 3</b>		
<b>Description</b>	<b>Lat (DDMMSS)</b>	<b>Long (DDMMSS)</b>
<p>Alternative 3 will be to develop the proposed IC in the Basotho Cultural Village, within QwaQwa. This alternative was not investigated, the reason being that Alternative 1 is aligned within the Park Management Plan.</p> <ul style="list-style-type: none"> <li>• The site is located within the Basotho Cultural Village that is currently an important tourist attraction in the GGHNP.</li> <li>• There is an existing access road to the site.</li> </ul> <p><i>Disadvantages:</i></p>		



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<ul style="list-style-type: none"> <li>• The site not located approximately 2km form the R712.</li> <li>• The access road will have to be upgraded, making it a more expensive option.</li> <li>• The proposed IC will change the sense of place of the Basotho Cultural Village, as the design do not fit into the current landscape.</li> </ul>		
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In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
• 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		

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.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

### b) Lay-out alternatives

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 1 is to locate the proposed development within the Glen Reenen Rest Camp.  <i>Advantages:</i> <ul style="list-style-type: none"> <li>• The location is already known, accessible and managed by SANParks for the benefit of visitors;</li> <li>• It is a nationally and internationally recognized location;</li> <li>• It is a 'gateway' to a recognized landscape (the discover area) acknowledged by its World Heritage Status;</li> <li>• It is a site of ongoing international scientific investigation in a subject that intrigues a large portion of the world's population – dinosaurs;</li> <li>• There is an existing access road to the site;</li> <li>• The site is located in proximity to existing bulk services (e.g. water, electricity and sewage systems); and</li> <li>• The vegetation cover of the site is already disturbed.</li> </ul>	28°30'26.00"S	28°37'10.00"E

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<ul style="list-style-type: none"> <li>The proposed IC was designed to blend in with the surroundings of site alternative 1.</li> </ul> <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>No disadvantages were identified.</li> </ul>		
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
This alternative was not investigated, the reason being that Alternative 1 is aligned within the Park Management Plan.		
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
This alternative was not investigated, the reason being that Alternative 1 is aligned within the Park Management Plan.		

### c) Technology alternatives

<b>Alternative 1 (preferred alternative)</b>
N/A
<b>Alternative 2</b>
N/A
<b>Alternative 3</b>
N/A

### d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

<b>Alternative 1 (preferred alternative)</b>
<p><b>Single story development:</b></p> <p>The development of a single story building that will serve as the IC, with a footprint area of 2644m<sup>2</sup>.</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> <li>The visual impact of this alternative is less significant.</li> <li>The footprint of this alternative is smaller.</li> </ul> <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>No disadvantages were identified.</li> </ul>
<b>Alternative 2</b>
<p><b>Double story development:</b></p> <p>The development of a double story building that will serve as the IC, with a footprint area of 3586m<sup>2</sup>.</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> <li>No noteworthy advantages were identified.</li> </ul> <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>The visual impact of this alternative is more significant than Alternative 1.</li> </ul>

**BASIC ASSESSMENT REPORT**

<ul style="list-style-type: none"> <li>• The footprint area of this alternative is larger than Alternative 1.</li> </ul>
<b>Alternative 3</b>
N/A

**e) No-go alternative**

This alternative will bring about that the development of the proposed IC will not take place. As a consequence, the proposed development of a tourist attraction within the GGHNP, which is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP, that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and environs, will not occur.

This is also not in line with SANParks high level objection to implement tourism growth and development strategies to increase tourism’s contributions to inclusive economic growth.

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

**3. PHYSICAL SIZE OF THE ACTIVITY**

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

**Alternative:**

**Size of the activity:**

Alternative A1<sup>1</sup> (preferred activity alternative)

	2644 m <sup>2</sup>
Alternative A2 (if any)	3586m <sup>2</sup>
Alternative A3 (if any)	N/A

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

**Alternative:**

**Length of the activity:**

Alternative A1 (preferred activity alternative)

	N/A
Alternative A2 (if any)	N/A
Alternative A3 (if any)	N/A

Alternative A2 (if any)

Alternative A3 (if any)

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

**Alternative:**

**Size of the site/servitude:**

Alternative A1 (preferred activity alternative)

	N/A
Alternative A2 (if any)	N/A
Alternative A3 (if any)	N/A

Alternative A2 (if any)

Alternative A3 (if any)

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<sup>1</sup> "Alternative A." refer to activity, process, technology or other alternatives.

**4. SITE ACCESS**

Does ready access to the site exist?  
 If NO, what is the distance over which a new access road will be built

YES	
m	

Describe the type of access road planned:

An access road to the development area does already exist. It will only be upgraded and extended to the proposed parking 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.

**5. 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 accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees 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).

A locality map is included under Appendix A1 of this report.

**6. LAYOUT/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:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

A site plan is included under Appendix A2 of this report.  
 The GGHP Zoning Map is included as a separate map under Appendix A3 of this report.

**7. SENSITIVITY MAP**

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

A sensitivity map is included under Appendix A4 of this report.

**8. 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 report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Site photographs are included under Appendix B of this report.

**9. FACILITY ILLUSTRATION**

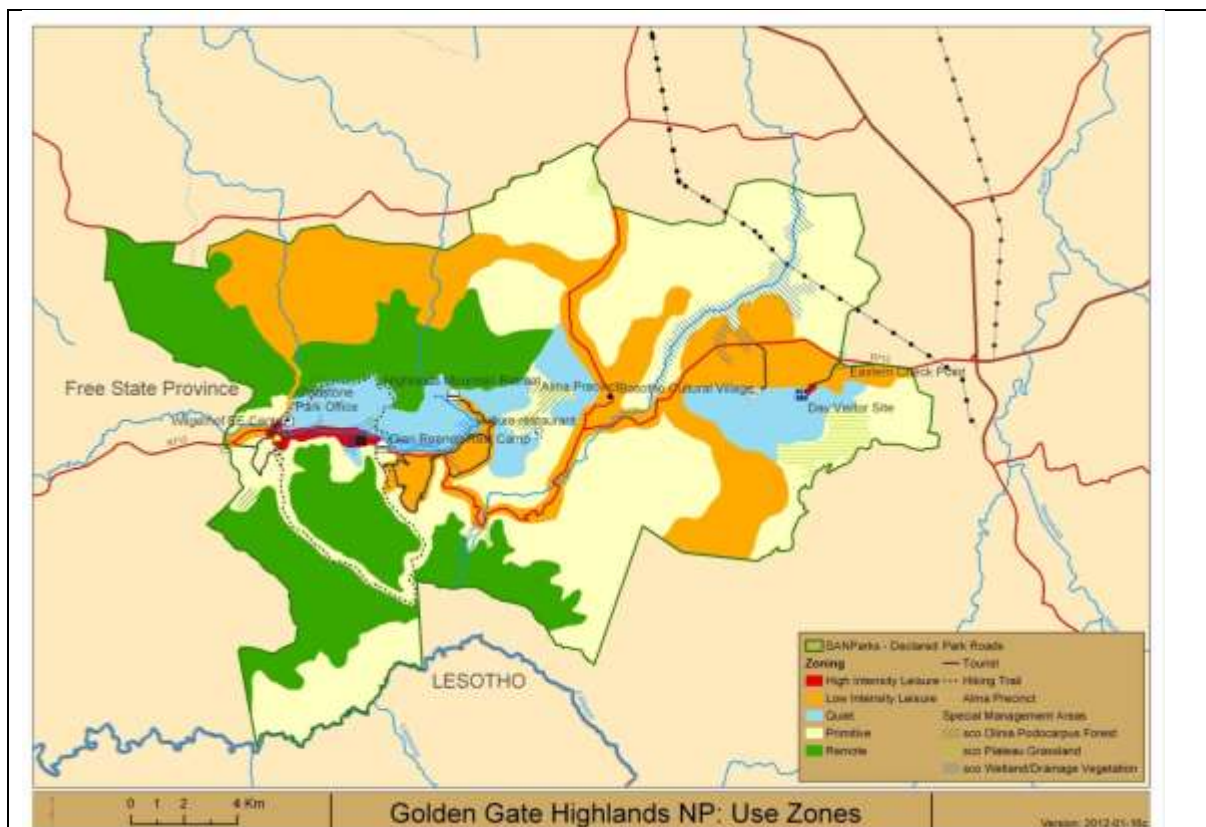
A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

The facility illustration is included under Appendix C of this report.

**10. ACTIVITY MOTIVATION**

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

<b>1. Is the activity permitted in terms of the property's existing land use rights?</b>	YES	Please explain
<p>The GGHNP is a protected area, with land declared in terms of the NPA (Act No. 57 of 1976) and the NEMPAA (Act No. 57 of 2003). The park has zoned areas (refer to Figure 1), which are based on the analysis and mapping of the sensitivity and value of the park's biophysical, heritage and scenic resource; an assessment of the regional context; and an assessment of the current and planned infrastructure and tourist routes/products; which all are interpreted in the context of park objectives. The zoned areas are also based on consideration of the regional context, as well as the park's current and planned infrastructure and tourist routes / products, and are aligned with the park's objectives.</p>		



**Figure 1:** Map of GGHNP Use Zones (see Appendix A3 for larger version of this map).

According to the draft GGHNP Management Plan 2012, several zones have been determined within which certain activities are permissible. These include:

- **Remote zones** are wilderness areas with no human habitation, the primary objective of which is to maintain the natural state with no impact on biodiversity pattern or processes;
- **Primitive zones** are areas with wilderness attributes and limited human access with potential for small-scale self-catering accommodation and a goal of maintaining the zone in a near-natural state with little to no impact on biodiversity pattern or processes;
- **Quiet zones** are areas characterized by unaccompanied (or accompanied under some circumstances) non-motorized access, where visitors can walk or cycle and experience nature without the intrusion of any form of motorized transport. The primary objective of which is to maintain the natural state with no impact on biodiversity pattern or processes in order to accommodate park recreational and tourism objectives;
- **Low intensity leisure (LIL) zones** are areas wherein motorised self-drive access with self-catering accommodation units in small camps without commercial facilities is permitted. Basic picnic sites and toilet facilities are provided in these areas; and
- **High intensity leisure (HIL) zones** are characterised by high density tourist development nodes with amenities and concentrated human activity, with planned and managed use to minimise impact on the environment (SANParks, 2012).

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<p>The Glen Reenen Rest Camp falls within an area zoned as <b>HIL</b>. The proposed development is therefore permitted in terms of the above zones and the properties' existing land use rights.</p>			
<p><b>2. Will the activity be in line with the following?</b></p>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	YES		Please explain
<p>The GGHNP falls within the Free State Province.</p> <p>The revised Province Spatial Development Framework of the Free State Province (PSDF) of 25 February 2013, provides a spatial vision and directives, policy and strategies for the province. The framework describes the six growth and development pillars, each of which has its own set of drivers with long-term programmes, on which the FSPSDF is based.</p> <p>Pillar 1 deals with Inclusive Economic Growth and Sustainable Growth Job Creation. The fifth driver of pillar 1 which is <i>Harness and Increase Tourism Potential and Opportunities</i> entails the following long-term programmes:</p> <ol style="list-style-type: none"> <li>a) Implementing a government support programme for tourism development and growth.</li> <li>b) Improving tourism marketing for the Free State.</li> <li>c) Expanding Free State tourism products and product range.</li> <li>d) Increasing and building human capacity for tourism development and service excellence (National Department of Rural Development &amp; Land Reform, 2013).</li> </ol> <p>SANParks' vision for the GGHNP is that the park will strive to:</p> <ul style="list-style-type: none"> <li>• Deliver sustainable ecosystem services;</li> <li>• Maintain of examples of natural and cultural heritage of the region;</li> <li>• Provide learning opportunities;</li> <li>• Act as a motivational demonstration site for managing the natural environment;</li> <li>• Promote sustainable use through responsible tourism and facilitation of socioeconomic benefits.</li> </ul> <p>The development of the GGHNP IC can be considered as part of the long term growth and development programmes as set out in the fifth driver of the first pillar of the PSDF. The development would further contribute to the park's goals as set by SANParks.</p>			
<b>(b) Urban edge / Edge of Built environment for the area</b>		NO	Please explain
<p>The park is located in a rural landscape, far from any towns. Land use in the area is characterised by conservation, traditional livestock farming, subsistence agriculture and game farms.</p>			
<b>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</b>	YES		Please explain
<p>The Dihlabeng Local Municipality (DLM) have identified five Key Focus Areas (KFAs) within the IDP, in order to enable sustainable service delivery, economic growth, job creation, poverty alleviation,</p>			

## BASIC ASSESSMENT REPORT

sustainable development as well as good governance, among others, in order to progressively attain 'a better life for all'.

DLM aim at promoting and enhancing Tourism Opportunities in order to become a popular tourist destination. Another goal is to market the Economic and Tourism potential of Dihlabeng (Dihlabeng Local Municipality, 2013-2014).

As such, the SDF acknowledges the development of new tourism opportunities of the GGHNP within its spatial planning framework, which GGHNP under the authority of SANParks proposes develop a Dinosaur Interpretation Centre at the Glen Reenen Rest Camp. Coupled with intensions for expansion of the park, an increase in human capital is inevitable to support the anticipated operational needs, and as such staff accommodation provisions are necessary.

<b>(d) Approved Structure Plan of the Municipality</b>	NO	Please explain
The proposed development falls within the authority of the SANParks, a statutory body of the DEA. It is therefore outside of the mandate of local municipal structural plans.		
<b>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</b>	YES	Please explain
<p>Tourism growth is one of the priorities which are in linked to the environment in some way and their environmental implications including the role of the EMF. One of the objectives under this priority is 'the promotion and enhancement of tourism opportunities and includes strategies such as the establishment of tourist facilities in townships. This priority takes advantage of the opportunities for tourism presented by the natural environment in Dihlabeng Local Municipality but could be in conflict with the environment if it does not maintain the ecological and conservation status of the area. The EMF addresses the potential conflict by giving guidelines for tourism development to maintain ecological and conservation functions of the Dihlabeng Local Municipality environment.</p> <p>Therefore the proposed activity will be in line with the Dihlabeng Local Municipality EMF.</p>		
<b>(f) Any other Plans (e.g. Guide Plan)</b>	YES	Please explain
<p>The GGHNP is managed under the guidance of the park management plan (dated 1 March 2012), promulgated in terms of sections 39 and 41 of the NEMPAA (Act No. 57 of 2003). Key functions of the management plan include to ensure that the Park is managed in accordance with the reason it was declared and to be a tool to guide management of a protected area at all levels, from the basic operational level to the Minister of Environmental Affairs. Currently, an updated version of this plan exists in draft format and is out for public comment. It is through the draft plan that the proposed development projects are recognised. The plan also describes the status quo, zoning, the park expansion strategy and identified programmes and projects (refer to Appendix A3 for the GGHNP Zoning Map).</p>		



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<p><b>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</b></p>	YES		Please explain
<p>The proposed development falls outside the mandate of the municipalities' planning framework, as it falls within the GGHNP, a national statutory conservation body. The park zoning schemes do recognise the proposed development as being appropriate to the zones in which they fall. Despite not considering the GGHNP within the plan, tourism growth was identified as a project objective of the DLM IDP.</p>			
<p><b>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</b></p>	YES		Please explain
<p>Given that the proposed project entails the development of an IC, it will be a world-class and state-of-the-art interpretation and education centre based on the globally significant natural and cultural resources of the GGHNP and its surrounds as a key tourist attraction for the GGHNP, the Free State Province and South Africa as well as a source of jobs and income for the surrounding communities.</p> <p>No local communities, other than those on neighbouring farms, occupy the area.</p>			
<p><b>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>	YES		Please explain
<p>The proposed development falls within the GGHNP, which maintains its known infrastructure. As such, the park is independent of municipal services. The provision of bulk services is coupled with the proposed development activities which would be supplemented by an existing services network.</p> <p>The SANParks engineer confirmed that capacities of existing sewerage system and electricity are adequate accommodate the proposed development. A letter from SANParks, confirming the available capacities of the sewerage system and electricity is included under Appendix J1 of this report.</p>			
<p><b>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</b></p>		NO	Please explain
<p>The proposed development will take place outside of the jurisdiction of the municipality, and as such, infrastructure planning of the municipality will not need consideration. Furthermore, development needs of the local municipalities are concentrated around urban areas which comprise the small towns within the region. Rural infrastructure such as road networks, tend to be a responsibility of the provincial</p>			

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<p>government. Given the small nature of the proposed development, it is not foreseen that additional road users will warrant further planning of connecting road networks.</p>		
<p><b>7. Is this project part of a national programme to address an issue of national concern or importance?</b></p>	<p>YES</p>	<p>Please explain</p>
<p>The proposed development in part, aligns with the fourth programme of the National Department of Tourism (NDT) Strategic Plan and Annual Performance Plan (2013/2014), namely Domestic Tourism.</p> <p>A strategic objective of this is to implement tourism growth and development strategies to increase tourism's contributions to inclusive economic growth. The proposed development would as such contribute towards this strategy, by providing a tourism facility of international importance and world class standards. The proposed IC shall reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and surrounding environment, which would attract visitors who will add to the local income.</p>		
<p><b>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</b></p>	<p>YES</p>	<p>Please explain</p>
<p>GGHNP-IC sets out with a number of key advantages that underpin its development as an internationally important location providing physical and intellectual access for visitors:</p> <ul style="list-style-type: none"> <li>• The location is already known, accessible and managed by SANParks for the benefit of visitors;</li> <li>• It is a nationally and internationally recognized location;</li> <li>• It is a 'gateway' to a recognized landscape acknowledged by its World Heritage Status; and</li> <li>• It is a site of ongoing international scientific investigation in a subject that intrigues a large portion of the world's population – dinosaurs.</li> </ul> <p>Although the story of GGHNP and all that it contains appears to be about landscape and science, the thread that links everything together are the human lives that have experienced and continue to experience the landscape as a resource, a place of safety, a place for scientific research and discovery, a place of recreation and a place of artistic and spiritual inspiration. However, the unique 'hook' for the visitor centre is its dinosaur story. The unlikely and extraordinarily chance meeting of a 190-million year old fossil that has experienced being buried under two kilometres of lava; blown up with dynamite to make way for construction of a Provincial Road; and a passing palaeontologist. It is through this remarkable ongoing story that we can entertain, educate and inspire our visitors who will join a journey through time and space that connects the ancient and modern landscapes of GGHNP (Haley Sharp South Africa, 2010).</p> <p>The location of the proposed development activities falls within the GGHNP. The mission of the park is described in the draft Golden Gate Highlands National Park Management Plan for stakeholder comment (2012). This reads: "A park as part of a wider functional land use mosaic in a changing world, will strive to:</p> <ul style="list-style-type: none"> <li>• Deliver sustainable ecosystem services;</li> <li>• Maintain of examples of natural and cultural heritage of the region;</li> <li>• Provide learning opportunities;</li> <li>• Act as a motivational demonstration site for managing the natural environment;</li> </ul>		

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- *Promote sustainable use through responsible tourism and facilitation of socioeconomic benefits.*

The above is to be achieved through collaborative teamwork of the vision of SANParks “A Sustainable National Park System Connecting Society”. “benefit of all” (SANParks, 2014).

This plan goes on to ascribe the park as having a high scenic value and the potential for improvements in the diversity of tourism products. Furthermore, the plan indicates that development of a Dinosaur Centre within the Glen Reenen high intensity use zone is a requirement to be actioned. Given that the plan represents the strategic goals for the park, this proposed development is desired.

<b>9. Is the development the best practicable environmental option for this land/site?</b>	YES	[REDACTED]	Please explain
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The GGHNP is internationally known tourism attraction. The proposed IC is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and environs.

The main outcome of the proposed development is that tourism will be enhanced within the GGHNP and the Eastern Free State and eventually in South Africa. While the proposed development will be located within a previously disturbed area, and the fact that no environmental fatal flaws were identified during the specialist studies undertaken as part of this Basic Assessment process, it therefore in the opinion of the Environmental Assessment Practitioner (EAP) the proposed development is the best practicable option for this site.

<b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b>	YES	[REDACTED]	Please explain
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Benefits associated with the proposed development include an increase in tourism potential for the area on a local, provincial, national and international level. Findings of the ecological, archaeological and paleontological studies determined that impacts after mitigation would range between low and medium. If this is compared to the high tourism potential as described above, the benefits of the proposed development outweighs the negative impacts thereof.

<b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b>	[REDACTED]	NO	Please explain
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The proposed development occurs within the boundaries of a national park and as such, does not influence development activities in the local municipality.

<b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b>	[REDACTED]	NO	Please explain
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The proposed development falls within the boundaries of a national park, managed by an employed staff contingent. Given that no communities reside in the park other than staff, this will not be a concern. Furthermore, the proposed activities would be in the interest of the park and accommodated persons, as identified in the management plan.

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<b>13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?</b>		NO	Please explain
The GGHNP is located in the rural regions of the Thabo Mofutsanyana District Municipality, outside of any urban areas.			
<b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</b>		NO	Please explain
N/A			
<b>15. What will the benefits be to society in general and to the local communities?</b>	Please explain		
The proposed development of the IC would benefit society through the park’s increased tourism attractions. Secondary benefits of this would be recreational and educational opportunities attributed to visitor experience. The GGHNP draft management plan recognises that the park has a unique ambience and sense of place, due to the relative remoteness from large urban centres and impacts of mass tourism, underdeveloped, wilderness qualities, variety of landscapes and cultural footprint.			
<b>16. Any other need and desirability considerations related to the proposed activity?</b>	Please explain		
None			
<b>17. How does the project fit into the National Development Plan for 2030?</b>	Please explain		
The National Development Plan for 2030 recognises tourism investment as a mechanism for building an inclusive rural economy. This action is suited towards building sustained growth as the pooling of resources through investment, would diversify the range of recreational, adventure, cultural and other attractions, thus resulting in a robust and inclusive industry for all to benefit from. The proposed development aligns with this attribute NDP goal.			
<b>18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</b>			
Through the undertaking of a basic assessment process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of public participation and specialist investigations formed part of this process, whilst mitigation measures and the needs and desirability of the project proposal were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for.			
<b>19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.</b>			
Through the undertaking of a basic assessment process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of public participation and specialist investigations formed part of this process, whilst mitigation measures and the needs and desirability of the project proposal were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for as follow:			
<p style="margin-left: 40px;">(2) <i>Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural heritage and social interests equitably.</i></p>			
The goal of this basic assessment is to identify and mitigate potential socio-economic impacts in order to meet the terms of Section 24 of the Constitution.			

*(3) Development must be socially, environmentally and economically sustainable.*

The overall goal of this Basic Assessment is to predict, identify and manage potential positive and negative impacts in the socio-economic, cultural-heritage and biophysical environments in order to meet the needs of present generations without compromising the needs of future generations which will give effect to sustainable development.

*(4) (a) Sustainable development requires the consideration of all relevant factors including the following:*

- i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
- ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
- iii. that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
- iv. that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;*
- v. that the use and exploitation of nonrenewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*
- vi. that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
- vii. that a riskaverse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
- viii. that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*

Specialists were appointed to undertake, Ecological, Palaeontological and Archaeological Impact Assessments as part of this Basic Assessment process to consider all impacts relating to the above. An EMPr were compiled to mitigate and manage all activities during the planning, construction and operational phases.

*(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*

All aspects, including socio-economic, cultural-heritage and biophysical was evaluated and assessed in order to minimize potential negative impacts which will give effect to integrated environmental management, as set out in Chapter 5 of NEMA, 1998.

*(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*

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A public participation process will be undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way to adhere to Section 24 of the Constitution.

- (d) *Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*

This will be taken into account during the operational phase of this project.

- (e) *Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*

The EMPr will be applicable throughout the lifecycle of the project.

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

A public participation process will be undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way to adhere to Section 24 of the Constitution.

- (g) *Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.*

The DEA decision making process has to be in accordance with the above.

- (h) *Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*

The proposed IC is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and surrounding environment.

- (i) *The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.*

This BAR does give effect to Section 5 of NEMA whereby all social, economic and environmental impacts of activities were considered, assessed and evaluated.

- (j) *The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*

Human rights will not be taken into account during all phases of this project.

- (k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*

The decision will take place in an open and fair manner and to give effect to Section 32 of the Constitution I&AP will be notified of the decision in terms of the requirements as set out in Section 41 of the NEMA EIA Regulations, 2014.

- (l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.*

All Governmental Authorities will be considered during the BA process to give their inputs on the project.

- (m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*

SANParks is a parastatal organisation and actual or potential conflicts of interest between organs of state should will be resolved through conflict resolution procedures.

- (n) Global and international responsibilities relating to the environment must be discharged in the national interest.*

The Interpretation Centre (IC) for the Golden Gate Highlands National Park (GGHNP) is a proposed tourist attraction within the GGHNP, which is situated in the eastern portion of the Free State Province and is a gateway to the proclaimed World Heritage Site of the Maloti Drakensberg Transfrontier Conservation Area. SANParks is the mandated institutional entity responsible for the management of conservation and tourism within the GGHNP and whose operational responsibility it will be to manage the IC in a sustainable manner. Accordingly, Global and international responsibilities relating to the environment will be discharged in the national interest.

- (o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*

It is not foreseen that any cultural-heritage resources will be affected by the project. The appropriate Heritage Specialists were appointed to undertake Impact Assessments in this field.

- (p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*

An EMPr were compiled in order to prevent or minimize any potential negative impacts to the environment. It will be the responsibility of the Applicant and Contractor to adhere to all measures set out in EMPr, in order to give effect to Section 28 (1) of NEMA.

- (q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*

## BASIC ASSESSMENT REPORT

The proposed IC is considered to become an educationally and scientifically orientated visitor attraction within the GGHNP that will be developed to world class standards and reflect a captivating set of sagas centred around the palaeontology and earth science significance of the GGHNP and surrounding environment. Consequently, the vital role of women and youth in environmental management and development will be recognised and their full participation therein will be promoted.

*(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.*

A SANParks ecologist undertook the Ecological Impact Assessment in which all possible impacts on wetlands and rivers were assessed and mitigation measures will be implemented. Refer to the EMPr in Appendix G of this report.

### 11. 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:

<b>Title of legislation, policy or guideline</b>	<b>Applicability to the project</b>	<b>Administering authority</b>	<b>Date</b>
National Environmental Management Act, Act No. 107 of 1998 (NEMA), as amended	The NEMA is the foremost legislative framework for environmental management in South Africa. It is through the NEMA, that the EIA Regulations are presented.	National Department of Environmental Affairs (DEA)	1998
Environmental Impact Assessment Regulations (Government Notice No. R. 983, 984 and 985) of 4 December 2015, as amended.	The EIA Regulations Listing Notices 1 to 3 of 2014 (Government Notices R 983, 984 and 985, dated 4 December 2015), as amended, list several activities for which Basic Assessment or Scoping and EIA processes are required, as are prescribed in the EIA Regulations of 2014 (Government Notice R 982, dated 4 December 2014).	National Department of Environmental Affairs (DEA)	2014
National Environmental Protected Areas Act, Act No. 57 of 2003 and associated Regulations.	Section 20 of the NEMPAA mandates for the declaration of national parks, whilst section 39 and 41 pertain to the preparation and implementation of management plans.	National Department of Environmental Affairs (DEA)	2003



BASIC ASSESSMENT REPORT

National Veld and Forest Fire Act, Act No. 101 of 1998	The purpose of the NVFFA is to prevent and combat veld, forest and mountain fires throughout the Republic. As such, fire prevention as an aspect of the EMPr must be accounted for.	Department of Agriculture, Forestry and Fisheries	1998
National Water Act, Act No. 36 of 1998 (NWA)	Section 21 of the NWA lists several water uses for which water use license applications are required in terms of the NWA. Wastewater effluent, if disposed to land (regardless of this being treated prior) requires a permit in terms of section 21 of the Act.	Department of Water and Sanitation: Upper Orange Water Management Area	1998
National Heritage Resources Act, Act No. 25 of 1999 (NHRA)	<p>Section 38 of the NHRA requires that any person who intends to undertake any of the following development activities must notify the responsible heritage resources authority at the very earliest stage of initiating such a development, and must furnish details of the location, nature and extent of the proposed development:</p> <p>“Construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier over 300 m in length;</p> <p>Any development or activity that will change the character of a site – exceeding 5 000 m<sup>2</sup> in extent.</p> <p>The proposed development will entail both the construction of internal access roads, underground cables, and the clearing and development of the proposed footprint areas.</p>	South African Heritage Resources Agency (SAHRA)	1999

**12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

**a) Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase? 

YES	
Unknown	

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

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

All solid waste generated from the construction of the IC, will be disposed of at the Claren landfill site, approximately 20 km from the proposed development area. Waste minimisation through the sorting of recyclable materials will be implemented.

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

The construction solid waste will be disposed in the municipal waste site at Clarens as per standing arrangement and practice.

Will the activity produce solid waste during its operational phase? 

YES	
0.94 m <sup>3</sup>	

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

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

The amount of solid waste produced was based on 46,000 visitors per annum with 0.25kg of waste per person visiting the Interpretation Center. The average quantity per month is 0.94m<sup>3</sup>. Solid waste will be collected with the rest GGHNP solid waste, sorted and transported to the Clarens municipal waste site as per existing agreement in place for many years.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Clarens municipal waste site.

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

Not applicable

*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.*

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? 

	NO
--	----

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

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

	NO
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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. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

**b) Liquid effluent**

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

	NO
m <sup>3</sup>	

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

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

	NO
--	----

## BASIC ASSESSMENT REPORT

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.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES

If YES, provide the particulars of the facility:

<b>Facility name:</b>	GGHNP Reedbed sewer system, Gladstone		
<b>Contact person:</b>	Manager: Technical Services (Charles Ntombela)		
<b>Postal address:</b>	Golden Gate Highlands National Park Private Bag X3 Clarens		
<b>Postal code:</b>	9707		
<b>Telephone:</b>	058-255 0075	<b>Cell:</b>	073 579 2190
<b>E-mail:</b>	Charles.ntombela@sanparks.org	<b>Fax:</b>	

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

The design and installations in the proposed dinosaur center will reduce use of water, i.e. flushing mechanism for toilets. All wastewater will be fed into the existing wastewater treatment system of the GGHNP in proximity to the site.

### c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

NO

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

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

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

The movement of construction machinery and vehicles over unpaved roads will result in the generation of dust, during the construction phase only. Dust suppression measures will be included in the Environmental Management Programme (EMPr).

### d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

NO

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

### e) Generation of noise

Will the activity generate noise?

NO

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

Describe the noise in terms of type and level:

The activity will produce noise during the construction period but not during the operational period.

## BASIC ASSESSMENT REPORT

### 13. WATER USE

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

Municipal	Water board	Groundwater	<b>River, stream, dam or lake</b>	Other	The activity will not use water
-----------	-------------	-------------	---	-------	------------------------------------

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:

36,776 litres

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

NO

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

### 14. ENERGY EFFICIENCY

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

The design of the building incorporates thick concrete walls for the major part of the building, covered by grass sods which will provide isolation for temperature management. All lighting installations, air-conditioning will consider the energy efficient ratings of the systems and equipment. Green building principles will be applied in all aspects of the design of the building.

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

N/A

**SECTION B: SITE/AREA/PROPERTY DESCRIPTION**

**Important notes:**

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

Section B Copy No. (e.g. A):

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

3. Has a specialist been consulted to assist with the completion of this section?  YES  NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

**Property description/physical address:**

<b>Province</b>	Free State
<b>District Municipality</b>	Thabo Mufutsanyane District Municipality
<b>Local Municipality</b>	Dihlabeng Local Municipality
<b>Ward Number(s)</b>	20
<b>Farm name and number</b>	Glen Reenen No. 1361
<b>Portion number</b>	Remaining Extent & Portion 1
<b>SG Code</b>	F00100000000136100000 F00100000000136100001

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

**Current land-use zoning as per local municipality IDP/records:**

Protected Area in terms of the NEMPAA (Act No. 57 of 2003).

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

Is a change of land-use or a consent use application required?  YES  NO

# BASIC ASSESSMENT REPORT

## 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

### Alternative S1:

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

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

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

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input checked="" type="checkbox"/>	2.6 Plain	<input type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

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

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

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

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

## 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).

## BASIC ASSESSMENT REPORT

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

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

### 5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	
Non-Perennial River		NO
Permanent Wetland	YES	
Seasonal Wetland		NO
Artificial Wetland		NO
Estuarine / Lagoonal wetland		NO

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

The Little Caledon River, which drains towards the Orange River originate from the park and is few meters from the proposed development. Network of high altitude wetlands exist in the park and the conservation of Little Caledon habitat is thereof of national importance (Daemane, 2015).

### 6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

<b>Natural area</b>	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	Agriculture
Retail commercial & warehousing	Old age home	<b>River, stream or wetland</b>
Light industrial	Sewage treatment plant <sup>A</sup>	<b>Nature conservation area</b>
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	<b>Mountain, koppie or ridge</b>
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	<b>Protected Area</b>
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	Sport facilities	<b>Archaeological site</b>
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an “N” are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

## BASIC ASSESSMENT REPORT

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

N/A

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

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)		NO
Core area of a protected area?	YES	
Buffer area of a protected area?		NO
Planned expansion area of an existing protected area?		NO
Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

Refer to the sensitivity map included under Appendix A3 of this report.

### 7. CULTURAL/HISTORICAL FEATURES

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

YES

Uncertain

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

#### Palaeontological significance

The following findings were obtained from the Palaeontological Impact Assessment Phase 1: Desktop Study for the Proposed Dinosaur Interpretation Center, Golden Gate Highlands National Park, Free State as compiled by the Palaeontologist, Dr. Jonah Choiniere, of the Evolutionary Studies Institute, University of the Witwatersrand.

The surface exposure of the proposed development site is composed of a mix of patchy grassland vegetation, primary outcrop of the Elliot and Clarens Formations, and thin areas of alluvium derived locally from these formations.

Vertebrate fossils from the Elliot and Clarens Formation preserve important information for studying the evolution of major vertebrate groups and for biostratigraphic correlation at a local and global level. These formations (particularly the Elliot) are internationally known for their fossil richness, and many of the fossil species previously discovered from them are known from nowhere else in the world. Thus,



these formations and their fossils can form a valuable part of the budding South African palaeotourism industry (which the proposed development is hoping to capitalize on).

It is highly likely that the proposed development of a Dinosaur Interpretation Center may result in the discovery of vertebrate fossils. It is essential that these fossils are examined by a trained palaeontologist in situ, so that their significance can be assessed and so that, if necessary, they can be excavated for further study. This will mitigate the potential threat to heritage resources effectively, as well as potentially provide fossil material and exposure for the proposed development (Choiniere, 2015).

### **Archaeological significance**

The following findings were extracted from the Phase 1 Archaeological Impact Assessment for the proposed development of a Dinosaur Interpretation Centre within Golden Gate Highlands National Park, FS Province, undertaken by Dr. L. Rossouw of the National Museum Bloemfontein.

In accordance with the types and ranges of heritage resources as outlined in Part 2, Sections 34, 35 and 37 of the National Heritage Resources Act (No 25 of 1999), there is no above-ground evidence of residential building structures or material of cultural significance, rock art, graves or intact archaeological sites within the demarcated area. It is unlikely that the proposed development will result in any significant archaeological impact at the site. The terrain is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C) (Rossouw, 2015).

### ***Trees with historical value (older than 60 years)***

Trees associated with historical settlements or farmsteads, that are older than 60 years old, are generally protected as heritage sites with cultural significance. Their removal or destruction will require the appropriate consent and a destruction permit from SAHRA. While many of the planted trees currently located within the proposed impact zone allocated for parking (current camping terrain) appear to be younger than 60 years old, the age of several specimens may well be older. It is advised that, as a prerequisite, specialist input is obtained from a botanist in order to ascertain the age of the trees located within the proposed impact zone (Rossouw, 2015).

No trees will be removed during construction of the proposed development. The development layout will incorporate the existing trees and construction activities will be carry out around the trees so that no damage is done to it. Thus no impact from this point of view will be made on any trees with a cultural significance.

### ***Cultural landscape***

The project design concept will blend in with the landscape of the surrounding environment and the uniqueness of the GGHNP Area. Thus, the cultural landscape will not be affected upon by the proposed development (Rossouw, 2015).

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

NO

## BASIC ASSESSMENT REPORT

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

NO

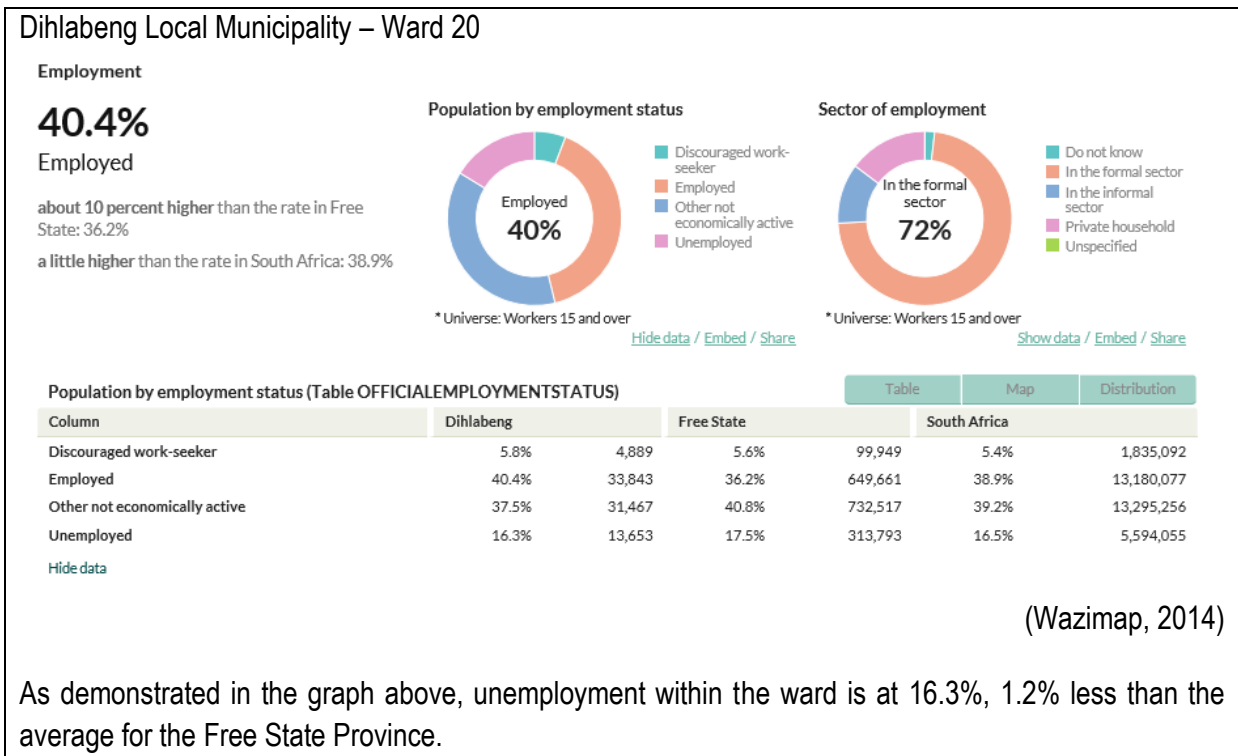
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

### 8. SOCIO-ECONOMIC CHARACTER

#### a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

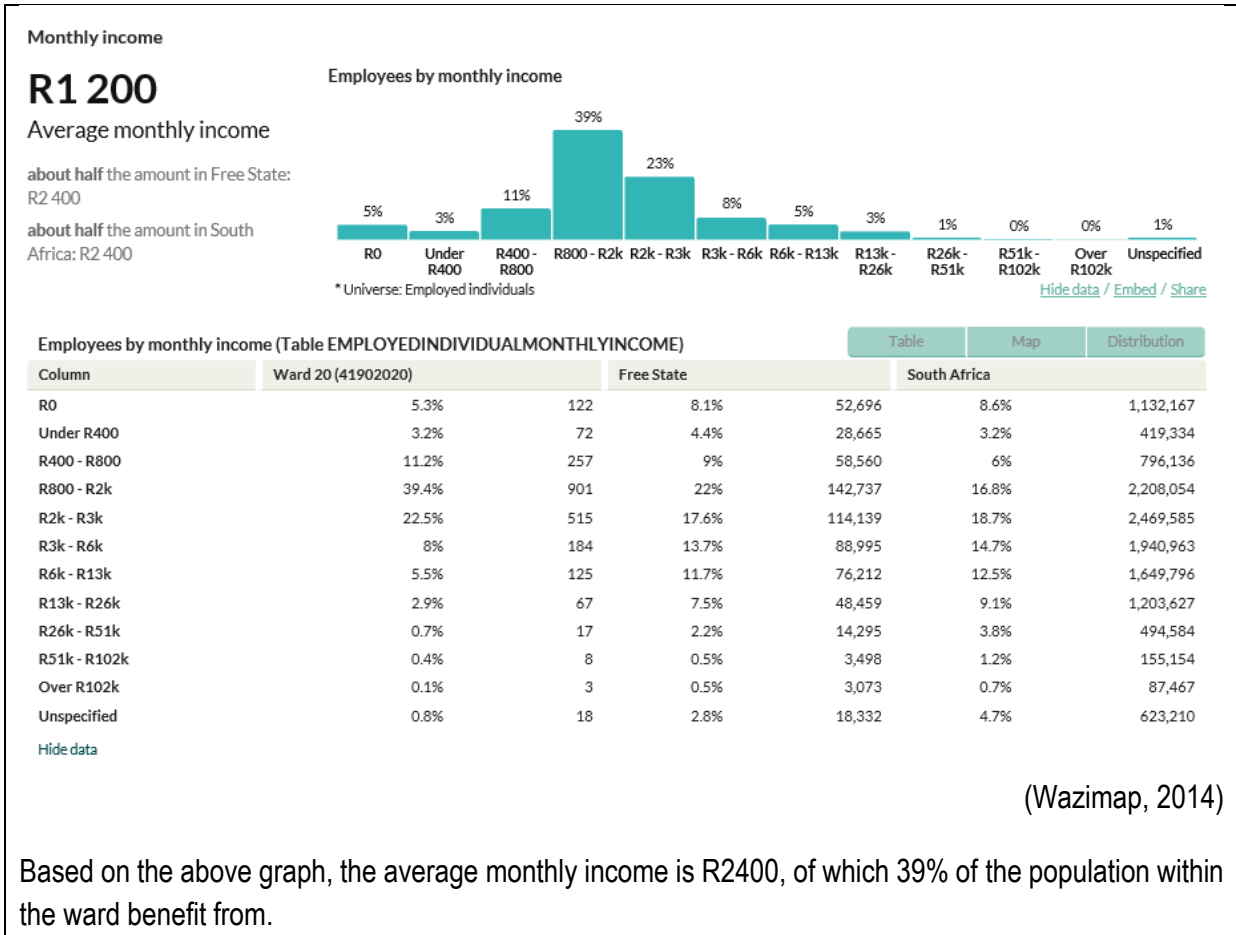
#### Level of unemployment:



#### Economic profile of local municipality:

Dihlabeng Local Municipality – Ward 20

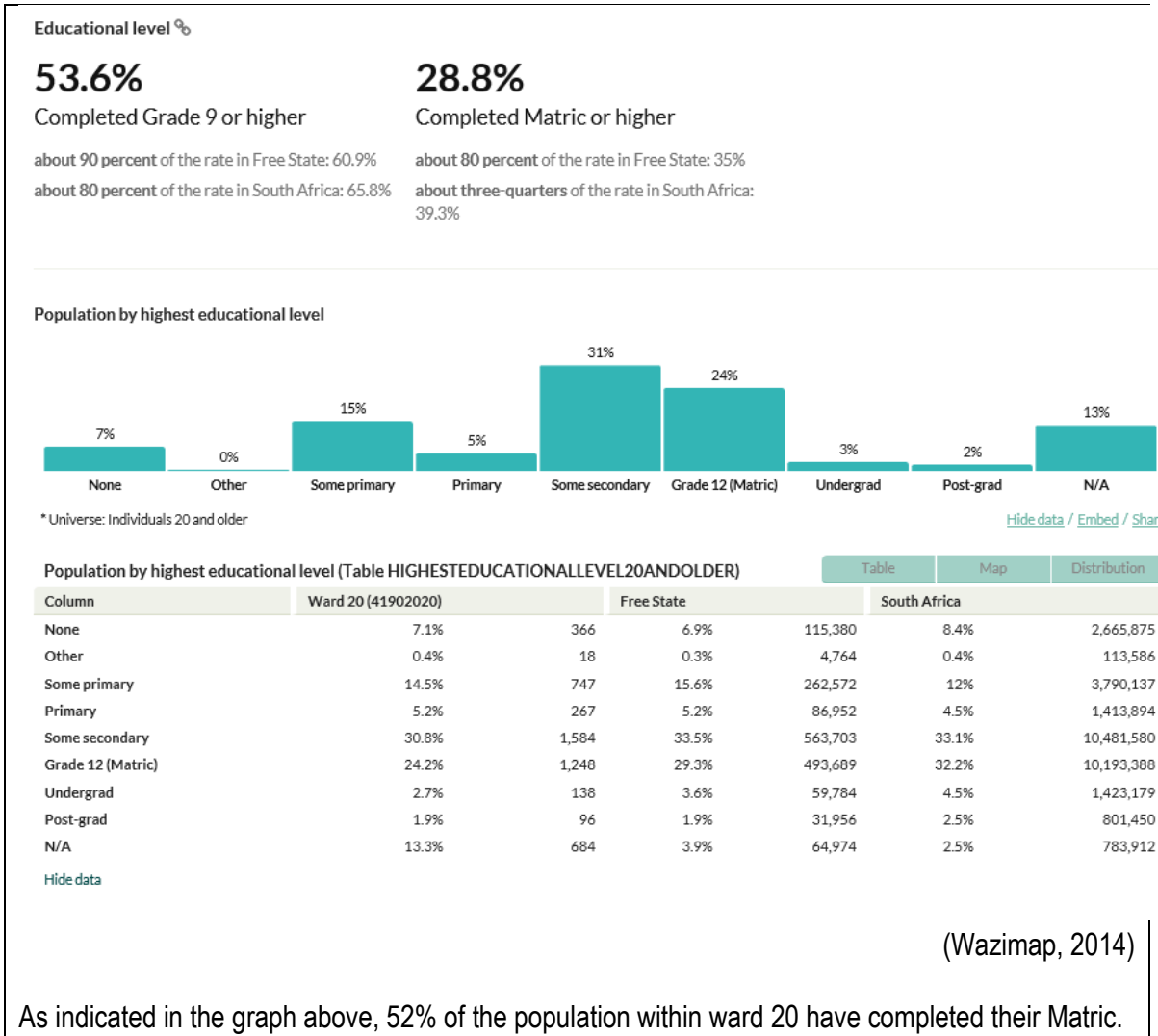
# BASIC ASSESSMENT REPORT



**Level of education:**

Dihlabeng Local Municipality – Ward 20

# BASIC ASSESSMENT REPORT



**b) Socio-economic value of the activity**

What is the expected capital value of the activity on completion?	R 108.6 million
What is the expected yearly income that will be generated by or as a result of the activity?	R 4.6 million
Will the activity contribute to service infrastructure?	YES      NO
Is the activity a public amenity?	YES      NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	260
What is the expected value of the employment opportunities during the development and construction phase?	R 21.2 million
What percentage of this will accrue to previously disadvantaged individuals?	20%
How many permanent new employment opportunities will be created during the operational phase of the activity?	6
What is the expected current value of the employment opportunities during the first 10 years?	R 15.6 million
What percentage of this will accrue to previously disadvantaged individuals?	50%

**9. BIODIVERSITY**

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or [BGIShelp@sanbi.org](mailto:BGIShelp@sanbi.org). Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

- a) **Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)**

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	CBA's and ESA's for the Free State Province have not yet been identified. The Free State Biodiversity plan is still in development. Considering that the associated vegetation is the Northern Drakensberg highlands grassland (Gd5) which is classified as Vulnerable, it is possible that it may in future be classified as a CBA, ESA or Other Natural Area. It should, however, be noted that large portions of the vegetation within the proposed development area has already been transformed (SANBI, 2015).

- b) **Indicate and describe the habitat condition on site**

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc.).
Natural	50%	The proposed area where the proposed IC will be positioned, is in a grassland area in pristine condition.
Near Natural (includes areas with low to moderate level of alien invasive plants)	30%	A few areas with a near natural state occur in the proposed development area.
Degraded (includes areas heavily invaded by alien plants)	0%	

**BASIC ASSESSMENT REPORT**

Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	20%	There is an existing caravan park with ablution facilities, access roads, and little foot paths in proximity to the proposed development area. Pioneer vegetation with weeds is scattered between the natural vegetation.
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**c) Complete the table to indicate:**

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems			
<b>Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)</b>	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary	Coastline	
	Endangered				
	<b>Vulnerable</b>				
	Least Threatened				
	YES		NO		NO

**d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)**

The following description of the vegetation type and aquatic ecosystem present on site, and information identified on site (e.g. threatened species and special habitats) were extracted from the Fauna And Flora Impact Assessment Report for the Proposed Dinosaur Interpretation Centre – Golden Gate Highlands National Park as compiled by the Ecologist, ME Daemane, of the SANParks.

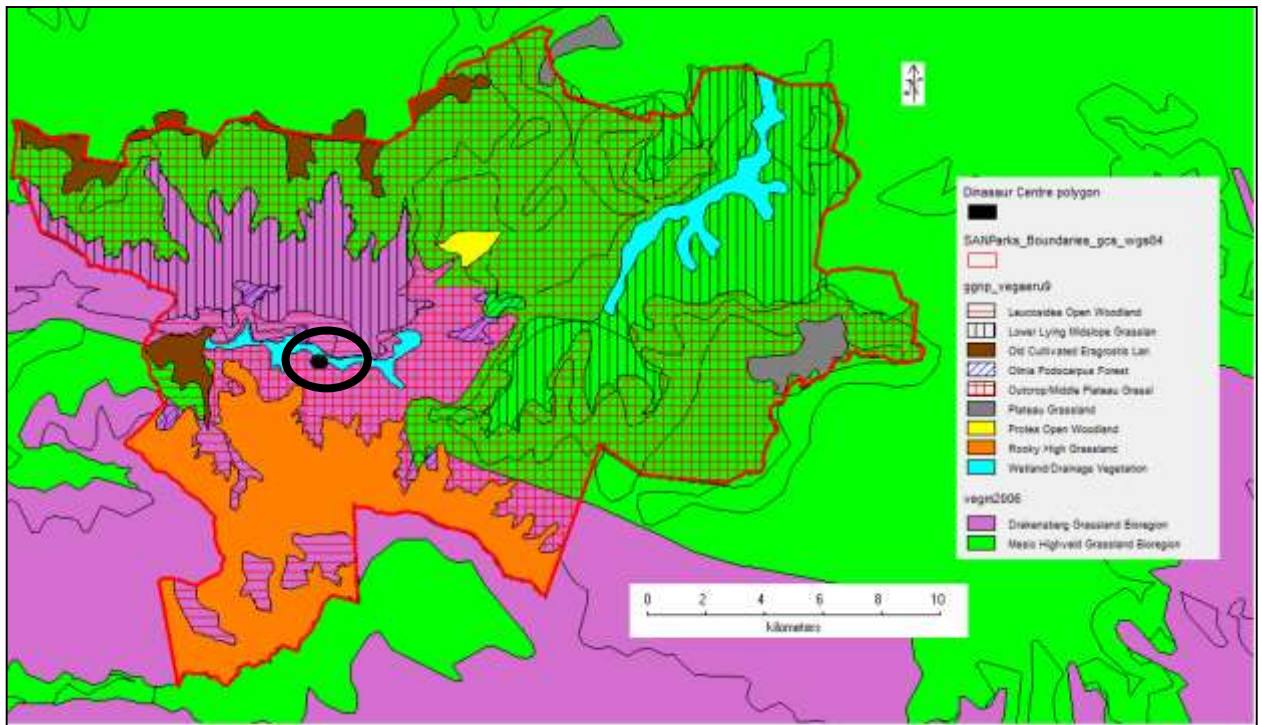
***Vegetation***

The park falls in the Grassland Biome of South Africa and is mainly dominated by the Drakensberg grassland bioregion and the Mesic highland grassland bioregion consisting of five vegetation types (Mucina & Rutherford, 2006):

- Eastern Free State sandy grassland;
- Basotho montane shrubland;
- Northern Drakensberg highlands grassland;
- Drakensberg-Amathole Afromontane fynbos;
- Lesotho highland basalt.

The proposed development is located in the Northern Drakensberg highlands grassland (Figure 1). According to Daemane & Bezuidenhout (2005), the vegetation in the study site falls within the Middle Plateau Grassland (Figure 1). This vegetation is typically found in the steep valleys and escarpment slopes at the head of rivers with small stands in stream gullies and depression (Killick 1978a, Mucina & Rutherford 2006). The most prominent shrubland elements comprise genera such as *Leucosidea sericea*, *Diospyros austro-africana*, *Artemisia afra* and several *Rhus* species. The affected area is found at the foot of Clarens sandstone cliffs in

the GGHNP. This vegetation unit is least threatened due to poor accessibility and formal protection in conservation areas such as GGHNP.



**Figure 2:** Plant communities (Daemane and Bezuidenhout 2005) showing Vegetation Bioregions (Mucina & Rutherford 2006) in the proposed area for Dinosaur Interpretation Centre in Golden Gate Highlands National Park. The proposed site is circled in black, along the Little Caledon River (Daemane, 2015).

### **Habitat Description and Fauna**

In some ecosystems it is clear that species of plants and animals do not occur evenly or randomly in space. Instead they occur in particular patches, and these patches are arranged in a regular pattern. Such regular spatial patterning in an ecosystem is referred to as zonation. The zones have a typical appearance and species composition, and the zones always occur in the same spatial relationship to each other. Vegetation plays a major role in terms of animal spatial and temporal use. The proposed area for development falls within the Drakensberg Grassland Bioregion GGHNP (Mucina & Rutherford, 2006) (Figure 1).

Classification of sensitive areas in the Golden Gate area was undertaken by using landscape features with sensitive habitats such as rocky outcrops, ridges, riverine habitats, wetlands, and special vegetation units.

### **Sensitive areas**

The only sensitive area associated with the proposed development is the Riverine habitat. The Little Caledon River, which drains towards the Orange River originate from the park and is few meters from the proposed development. Network of high altitude wetlands exist in the park and the conservation of Little Caledon habitat is thereof of national importance. Drainage lines provide movement corridors for herpetofaunal species (frogs and reptiles) and also source of water for other terrestrial animals (Daemane, 2015).

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT AND NOTICE

<b>Initial Public Participation Process (DEA Ref No: 16/3/1/1/E1/5/2059/14)</b>				
<b>Publication name</b>	Sunday Times	Volksblad	Clarens News	Free State Eastern Express
<b>Date published</b>	7 June 2015	8 June 2014	4 June 2015	10 June 2015
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>		
Site notice 1: Development site	28°30'23.22"S	28°37'5.22"E		
<b>Date placed</b>	08 June 2016			
Site notice 2: Clarens	28°30'49.49"S	28°25'17.73"E		
<b>Date placed</b>	08 June 2016			
Site Notice 3: Phuthaditjhaba	28°32'8.64"S	28°48'5.89"E		
<b>Date placed</b>	09 June 2016			
<b>New Public Participation Process (DEA Ref No: 14/12/16/3/3/1/1468)</b>				
<b>Publication name</b>	Sunday Times	Volksblad	Clarens News	Free State Eastern Express
<b>Date published</b>	30 August 2015	03 September 2015	28 August 2015	03 September 2015
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>		
Site notice 1: Development site	28°30'23.16"S	28°37'5.36"E		
<b>Date placed</b>	04 September 2015			
Site notice 2: Dihlabeng Municipal Office in Clarens	28°30'53.89"S	28°25'12.94"E		
<b>Date placed</b>	04 September 2015			
Site Notice 3: Basotho Cultural Village	28°29'19.10"S	28°44'37.20"E		
<b>Date placed</b>	04 September 2015			

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

Proof of the placement of the relevant advertisements and notices is included under Appendix E1 of this report.

### 2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733



## BASIC ASSESSMENT REPORT

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tell number or e-mail address)</b>
Dr. N. Songelwa	Managing Executive: Parks Division (SANParks)	Mvusy.Songelwa@sanparks.org
Me. Sithembile Mhlophe	Park Manager (SANParks) – Occupier of the Land	Sithembile.Mhlophe@sanparks.org
	Clarens Tourism Forum	ctf@clarensa.co.za
Gregg Mousley	Clarens Rural Conservancy	082 338 4189 gmousley@netralink.net
Rodney Wainwright	Clarens Village Conservancy (CVC)	083 680 7770 rw@icon.co.za

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

Proof that the key stakeholder received written notification of the proposed activities is included under Appendix E2.

### 3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

<b>Summary of main issues raised by I&amp;APs</b>	<b>Summary of response from EAP</b>
No Issues was raised by I&APs to date.	

### 4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 the Final BAR as Appendix E3.

Comments and Response Report is included under Appendix E3 of this report.

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### 5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Free State Department of Small Business, Economic Development, Tourism and Environmental Affairs (DESTEA)	Me. Grace Mkhosana (Deputy Director Environmental Impact Management)	(051) 400 4843	(051) 400 4842	Mkhosana@dtea.fs.gov.za	Private Bag X20801 Bloemfontein 9300
Free State Department of Water and Sanitation (DWS)	Mr. Puis Lertholi (Official Upper Orange Water Management Area)	(051) 405 9163		LertholiP@dwa.gov.za	P.O. Box 528 Bloemfontein 9300
South African Heritage Resource Agency (SAHRA)	Ms. Kathryn Smuts (SAHRA Case Official)	(021) 462 4502	(021) 462 4509	ksmuts@sahra.org.za	P.O. Box 4637 Cape Town 8000
Free State Department of Police, Roads and Transport	Mr. Robinson Thekiso (Chief Director: Roads)	(051) 409 8289			P.O. Box 119 Bloemfontein 9300
Thabo Mofutsanyane District Municipality	Ms. TPM Lebenye (Municipal Manager)	(058) 718 1036	(058) 718 1034	lorine.tm@lg.gov.za	Private Bag X810 Witsieshoek 9870
Thabo Mofutsanyane District Municipality	Ms Thembi Molota (Manager LED & Tourism)	(058) 718 1085	(058) 718 1034	thembi.tm@lg.fs.gov.za	Private Bag X810 Witsieshoek 9870
Dihlabeng Local Municipality	Mrs. MC Sepheka (Acting Municipal Manager)	(058) 303 5732	(058) 303 4703	munmanager1@dihlabeng.co.za	P.O. Box 551 Bethlehem 9700

## BASIC ASSESSMENT REPORT

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Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

Proof notification to the Authorities and Organs of State of the proposed activities is included under Appendix E4 of this report.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

### **6. CONSULTATION WITH OTHER STAKEHOLDERS**

Note that, for any activities (linear or other) 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. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

A list of registered I&APs is included under Appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

Meetings was held with the following authorities and stakeholders:

- SANParks
- Department of Economic, Small Business Development, Tourism and Environmental Affairs Free State Province (DESTEA)
- National Department of Tourism
- Park Forum

Copies of correspondence and minutes of meetings held with stakeholders is included in Appendix E6

## SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 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. 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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts 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. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

#### Impact Assessment Methodology

For each potential impact, the **DURATION** (time scale), **EXTENT** (spatial scale), **IRREPLACEABLE** loss of resources, **REVERSIBILITY** of the potential impacts, **MAGNITUDE** of negative or positive impacts, and the **PROBABILITY** of occurrence of potential impacts must be assessed. The assessment of the above criteria will be used to determine the **SIGNIFICANCE** of each impact, with and without the implementation of the proposed mitigation measures. The scales to be used to assess these variables and to define the rating categories are tabulated in **Table 1** and **Table 2** below.

**Table 1:** Evaluation components, ranking scales and descriptions (criteria).

Evaluation component	Ranking scale and description (criteria)
<b>DURATION</b>	<b>5 - Permanent</b> <b>4 - Long term:</b> Impact ceases after operational phase/life of the activity (> 20 years). <b>3 - Medium term:</b> Impact might occur during the operational phase/life of the activity (5 to 20 years). <b>2 - Short term:</b> Impact might occur during the construction phase (< 5 years). <b>1 - Immediate</b>
<b>EXTENT</b> (or spatial scale/influence of impact)	<b>5 - International:</b> Beyond National boundaries. <b>4 - National:</b> Beyond Provincial boundaries and within National boundaries. <b>3 - Regional:</b> Beyond 5 km of the proposed development and within Provincial boundaries. <b>2 - Local:</b> Within 5 km of the proposed development. <b>1 - Site-specific:</b> On site or within 100 m of the site boundary. <b>0 - None</b>
<b>IRREPLACEABLE</b> loss of resources	<b>5 – Definite</b> loss of irreplaceable resources. <b>4 – High</b> potential for loss of irreplaceable resources. <b>3 – Moderate</b> potential for loss of irreplaceable resources. <b>2 – Low</b> potential for loss of irreplaceable resources. <b>1 – Very low</b> potential for loss of irreplaceable resources. <b>0 - None</b>
<b>REVERSIBILITY</b> of impact	<b>5 – Impact cannot</b> be reversed.

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	<p>4 – <b>Low</b> potential that impact might be reversed.</p> <p>3 – <b>Moderate</b> potential that impact might be reversed.</p> <p>2 – <b>High</b> potential that impact might be reversed.</p> <p>1 – Impact <b>will be</b> reversible.</p> <p>0 – No impact.</p>
<b>MAGNITUDE of NEGATIVE IMPACT</b> (at the indicated spatial scale)	<p>10 - <b>Very high</b>: Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.</p> <p>8 - <b>High</b>: Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.</p> <p>6 - <b>Medium</b>: Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.</p> <p>4 - <b>Low</b> : Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.</p> <p>2 - <b>Very Low</b>: Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.</p> <p>0 - <b>Zero</b>: Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
<b>MAGNITUDE of POSITIVE IMPACT</b> (at the indicated spatial scale)	<p>10 - <b>Very high (positive)</b>: Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.</p> <p>8 - <b>High (positive)</b>: Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.</p> <p>6 - <b>Medium (positive)</b>: Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.</p> <p>4 - <b>Low (positive)</b>: Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.</p> <p>2 - <b>Very Low (positive)</b>: Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.</p> <p>0 - <b>Zero (positive)</b>: Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
<b>PROBABILITY</b> (of occurrence)	<p>5 - <b>Definite</b>: &gt;95% chance of the potential impact occurring.</p> <p>4 - <b>High probability</b>: 75% - 95% chance of the potential impact occurring.</p> <p>3 - <b>Medium probability</b>: 25% - 75% chance of the potential impact occurring</p> <p>2 - <b>Low probability</b>: 5% - 25% chance of the potential impact occurring.</p> <p>1 - <b>Improbable</b>: &lt;5% chance of the potential impact occurring.</p>

Evaluation component	Ranking scale and description (criteria)
<b>CUMULATIVE</b> impacts	<p><b>High</b>: The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Medium</b>: The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Low</b>: The activity is localised and might have a negligible cumulative impact.</p> <p><b>None</b>: No cumulative impact on the environment.</p>

Once the evaluation components have been ranked for each potential impact, the significance of each potential impact will be assessed (or calculated) using the following formula:

$$SP \text{ (significance points)} = (\text{duration} + \text{extent} + \text{irreplaceable} + \text{reversibility} + \text{magnitude}) \times \text{probability}$$

The maximum value is 150 SP (significance points). The unmitigated and mitigated scenarios for each potential environmental impact should be rated as per the table below.

## BASIC ASSESSMENT REPORT

Significance Points	Environmental Significance	Description
100 – 150	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
40 – 99	Moderate (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.
<40	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect, and is likely to contribute to positive decisions about whether or not to proceed with the project.

### 1.1. POTENTIAL IMPACTS DURING PLANNING, DESIGN AND CONSTRUCTION PHASES

Nature of Impact	Impact summary	Significance (before mitigation)
<b>Alternative 1 (preferred alternative)</b>		
<b>Activity:</b> Construction of the IC as a single story building.		
<b>Potential impacts on biological aspects:</b>		
Impact on vegetation and loss of species	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation.</li> <li>Impacts to sensitive sites (drainage lines) should be avoided</li> <li>All construction vehicles should be adhere to construction sites and avoid off road to minimise impact on vegetation and soil</li> <li>Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> </ul>
Transformation and loss of habitat	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Medium
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Restoration measures will be required reinstate functionality in the disturbed soil and vegetation.</li> <li>Impacts to sensitive sites (drainage lines) should be avoided</li> <li>All construction vehicles should be adhere to construction sites and avoid off road to minimise impact on vegetation and soil</li> <li>Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> </ul>
Impact on fauna	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Medium

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Nature of Impact	Impact summary	Significance (before mitigation)
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• In case of observation of any species during construction phase, an experienced person should be consulted to deal with translocation of such species. No killing or attempt to translocate species should be undertaken by contractors.</li> <li>• In case of presence of beetle species identified during the construction phase, the SANParks' entomologist (Kimberley) must be consulted to deal with the capturing and translocation</li> <li>• Fires should only be allowed within fire safe demarcated areas</li> <li>• All construction vehicles should be adhere to a low speed limit to avoid collisions with susceptible species such as snakes and frogs</li> <li>• Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> <li>• The collection, hunting or harvesting of animals at the site should be strictly forbidden (Daemane, 2015).</li> </ul>
Dust nuisance	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Implement dust suppression measures e.g. regular watering,</li> <li>• Concrete mixing to be carried out away from sensitive areas,</li> <li>• Excavations, handling and transport of erodible materials must be avoided under windy conditions or during heavy rains,</li> <li>• The speed restriction of the GGHP must be enforced and monitored on site for all construction vehicles.</li> </ul>
<b>Potential impacts on geological and physical aspects:</b>		
Erosion	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Medium
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Ensure correct drainage of areas;</li> <li>• All the areas disturbed during construction work needs to be landscaped to a standard similar or better than before on completion of the works before replacement of topsoil;</li> <li>• All spoils, soil not utilized to close the trench, should be used to increase the effectiveness of the existing drainage channels by constructing designed and appropriate cross berms, angle, height and length for the slope specific for the area;</li> <li>• Building levels shall be planned/designed adequately for surface run-off, to minimise erosion during construction. Construction, particularly the earth works portion, shall take place during the dry season if possible. Failing this, additional measures shall be taken to ensure that possible environmental damage</li> </ul>

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Nature of Impact	Impact summary	Significance (before mitigation)
		<p>is minimised. Measures may include silt trap/retention areas, erosion control mats/ hay bale barriers, and raised stream crossings, to prevent mud being washed into streams from construction vehicles, etc.;</p> <ul style="list-style-type: none"> <li>• In the event of channels or erosion occurring, the Contractor must effect repairs timeously. Restorative repairs shall include the backfilling and consolidation of eroded areas;</li> <li>• Surface/s of slope/s shall be suitably top soiled and vegetated as soon as is possible after final sloping;</li> <li>• Rehabilitate denude areas especially slopes with appropriate species and erosion protection measures i.e. geotextiles, rocks, topsoil mixtures as per specifications;</li> </ul>
Impact on surface and groundwater	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Ensure that excavation areas have a predetermined stockpile area for construction materials and excavated material,</li> <li>• Disposal of waste excavated material at appropriate waste disposal sites,</li> <li>• Contractors must use Ready-Mix concrete. Alternatively, concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose,</li> <li>• Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces,</li> <li>• Construct and operate the necessary collection facilities and storm water management systems such as diversion beams, ditches, drains, oil separation sumps, gross water ways etc. to prevent contamination of any water,</li> <li>• All spillage must be cleaned up as soon as they occur,</li> <li>• Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site,</li> <li>• Provide suitable and sufficient ablution facilities,</li> <li>• Do not locate any site toilet, sanitary convenience, septic tank or French drain within the 1:100 year flood line, or within a horizontal distance of 100m (whichever is greater) of a watercourse or drainage line,</li> <li>• Combine drinking water facilities with hand washing facilities near site toilet,</li> <li>• Vehicles and machinery must be regularly serviced,</li> <li>• No uncontrolled discharges from the site or working area to depressions must be permitted. All discharge points will require approval from the ESA,</li> </ul>



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Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>• No natural water course may be used to clean equipment, or for bathing. All cleaning operations should take place off site at a location where waste water can be disposed of correctly,</li> <li>• The discharge of any pollutants such as cement, concrete, lime, chemicals, etc. into the natural environment and the storm water system must strictly be prohibited.</li> </ul>
Waste management	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• An adequate number of scavenger proof litter bins are to be placed throughout the site at 100m intervals. Dumping of waste on site is prohibited;</li> <li>• Waste sorting and separation should form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately;</li> <li>• Keep all work sites including storage areas, offices and workshops neat and tidy;</li> <li>• Dedicate a demarcated and signposted storage area on site for the collection of construction waste;</li> <li>• All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site;</li> <li>• Care should be taken to ensure that no waste fall off disposal vehicles en-route to the landfill. If needed, a tarpaulin can be utilised;</li> <li>• The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as this is regarded as hazardous waste</li> <li>• Littering by construction workers shall not be permitted;</li> <li>• Workers from the immediate area need to be encouraged to take their waste with them at the end of each day,</li> <li>• General refuse/rubbish shall be removed from site on a weekly basis to an approved landfill site,</li> <li>• Minimise waste by sorting wastes into recyclable and non-recyclable waste,</li> <li>• Rubble and upgrading refuse shall be collected and removed weekly; and</li> <li>• A weekly litter patrol of the entire site shall be conducted by the ECO.</li> </ul>
Impact on traffic	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods;</li> <li>• Abnormal loads should not be transported after dark when visibility of mountainous routes is poor;</li> <li>• Abnormal loads and machinery should avoid movement over gravel roads during and immediately after rainfall events, so as to limit destruction of road surfaces and sedimentation of rivers/streams;</li> </ul>

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Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>• Vehicles used for the transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces;</li> <li>• All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so;</li> <li>• Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads;</li> <li>• The contractor must ensure that all damage caused to local farm roads by the construction related activities, including heavy vehicles, is repaired before the completion of the construction phase. The costs associated with the repair must be borne by the contractor;</li> <li>• Any damage to public roads is to be reported to the management authority and repaired to its original condition;</li> <li>• Signage is to be placed on vehicles at all times;</li> <li>• Traffic control measures such as flag bearers, delineators and stop and go measures should be implemented in accordance with requirements from the relevant roads authority;</li> <li>• Transport of materials should be limited to the least amount of trips possible;</li> <li>• Construction-related vehicles and machinery may not operate on the route without reflective safety signage, car-top lights and reflective personnel gear;</li> <li>• Stopping in narrow road shoulders or on bends without the presence of traffic calming or diversion measures should not be allowed.</li> </ul>
Increased risk of veld fires	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Establish and maintain fire breaks around the Work Sites if as and when specified by the ESA and as required by applicable legislation and the local authority.</li> <li>• Ensure Work Site and the contractor's camp is equipped with adequate firefighting equipment. This includes at least rubber beaters when working in veldt areas, and at least one fire extinguisher of the appropriate type irrespective of the site,</li> <li>• Workers must be adequately trained in the handling of firefighting equipment,</li> <li>• No open fires are permitted anywhere on site. Restrict contained fires for heating and cooking (i.e. in a fire drum) to designated areas on site,</li> <li>• Prevent Employees from creating fires randomly outside designated areas,</li> <li>• Do not store any fuel or chemicals under trees,</li> <li>• Do not store gas and liquid fuel in the same storage area,</li> </ul>

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Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area.</li> </ul>
<b>Potential noise impact:</b>		
Noise nuisance	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Low
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Limit working hours of noisy equipment to daylight hours;</li> <li>Fit silencers to equipment;</li> <li>Unless otherwise specified by the ESA, normal work hours will apply (i.e. from 06:30 to 16:15, Mondays to Fridays);</li> <li>Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours;</li> <li>No loud music is permitted on site or in the Camp.</li> </ul>
<b>Potential impacts on socio-economic aspects:</b>		
Job creation	<b>Direct impacts:</b>	Low (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Where reasonable and practical the contractors appointed by the proponent should appoint local contractors and implement a 'locals first' policy, especially for semi and low-skilled job categories. However, due to the low skills levels in the area, the majority of skilled posts are likely to be filled by people from outside the area.</li> <li>The recruitment selection process should seek to promote gender equality and the employment of women wherever possible, particularly for less labour-intensive work such as flag bearing and supervision;</li> <li>The ongoing presence of semi and high skilled personnel involved in the project construction phase will generate sustained clientele to a portion of the guest house industry within the vicinity of the route.</li> </ul>
Presence of construction workers in the area	<b>Direct impacts:</b>	M
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	L
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Where possible, implement a requirement for contractors to implement a local employment policy for construction jobs, particularly for semi and low-skilled job categories, thus reducing impact which foreign workers could have on local communities;</li> <li>A contractual requirement of potential contractors must be a preparation and implementation of a Code of Conduct for construction workers, identifying types of behaviour and activities which construction workers may not engage in. Workers who breach this code should be dismissed, on the grounds that such dismissals comply with South African labour legislation;</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>• The project manager responsible for contractor appointments and administration, should implement an HIV/AIDS awareness programme for all contractors and their construction workers prior to commencement of construction;</li> <li>• Contractors must manage the transport and movement of workers on and off site on a daily basis, as well as allow for the returning home of workers intermittently over weekends to limit interaction with local communities during such periods;</li> <li>• No personnel, with the exception of security officers, are permitted to stay overnight in the vicinity of the route and must be housed in a site camp.</li> </ul>
<b>Potential impact on cultural-historical aspects</b>		
Impact on fossils	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.</li> <li>• Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so has been given.</li> <li>• Under no circumstances shall any heritage material be destroyed or removed from the site.</li> <li>• Excavations must be limited to the footprint area and be maintained in a narrow corridor;</li> <li>• All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed: <ul style="list-style-type: none"> <li>○ All construction in the immediate 50 m vicinity radius of the site must cease;</li> <li>○ The heritage practitioner must be informed as soon as possible;</li> <li>○ In the event of obvious human remains to SAPS must be notified;</li> <li>○ Mitigation measures (such as refilling, etc.) must not be attempted;</li> <li>○ The area in a 50 m radius of the find must be cordoned off with hazard tape;</li> <li>○ Public access must be limited and the area must be placed under guard.</li> </ul> </li> </ul>
Discovery of any heritage resources.	<b>Direct impacts:</b>	High (positive)

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High (positive)
	<b>Proposed mitigation</b>	Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation, this must be reported to the applicable heritage authority as such discovery could have a high positive scientific value for research.
Impacts on archaeological resources	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Low
	<b>Proposed mitigation</b>	Should any archaeological resources be exposed during excavation, this must be reported to the applicable heritage authority.
Impact on trees which is part of the cultural landscape	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Low
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• The removal or destruction of trees older than 60 years will require the appropriate consent and a destruction permit from SAHRA.</li> <li>• It is advised that, as a prerequisite, specialist input is obtained from a botanist in order to ascertain the age of the trees located within the proposed impact area.</li> </ul>
<b>Potential impacts on visual aspects:</b>		
Impact on sense of place	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Treat man made surfaces to blend in with the surrounding landscape,</li> <li>• Demolition of all temporary infrastructure should be done,</li> <li>• Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare,</li> <li>• Follow surface lines that are present in the landscape such as roads, rows of trees or vegetation patterns,</li> <li>• Lighting technology that provide sufficient light where required while preventing light spillage elsewhere must be available, and must be incorporated in the lighting of entrances, roads and squares where required,</li> <li>• Employ existing vegetation to provide natural screening to structures.</li> </ul>
<b>Alternative 2</b>		
<b>Activity:</b> Construction of the IC as a double story building.		
<b>Potential impacts on biological aspects:</b>		
Impact on vegetation and loss of species	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation.</li> <li>• Impacts to sensitive sites (drainage lines) should be avoided</li> <li>• All construction vehicles should be adhere to construction sites and avoid off road to minimise impact on vegetation and soil</li> <li>• Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> </ul>
Transformation and loss of habitat	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	<b>Medium</b>
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Restoration measures will be required reinstate functionality in the disturbed soil and vegetation.</li> <li>• Impacts to sensitive sites (drainage lines) should be avoided</li> <li>• All construction vehicles should be adhere to construction sites and avoid off road to minimise impact on vegetation and soil</li> <li>• Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> </ul>
Impact on fauna	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	<b>Medium</b>
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• In case of observation of any species during construction phase, an experienced person should be consulted to deal with translocation of such species. No killing or attempt to translocate species should be undertaken by contractors.</li> <li>• In case of presence of beetle species identified during the construction phase, the SANParks' entomologist (Kimberley) must be consulted to deal with the capturing and translocation</li> <li>• Fires should only be allowed within fire safe demarcated areas</li> <li>• All construction vehicles should be adhere to a low speed limit to avoid collisions with susceptible species such as snakes and frogs</li> <li>• Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill</li> <li>• The collection, hunting or harvesting of animals at the site should be strictly forbidden (Daemane, 2015).</li> </ul>
Dust nuisance	<b>Direct impacts:</b>	<b>Low</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Implement dust suppression measures e.g. regular watering,</li> <li>• Concrete mixing to be carried out away from sensitive areas,</li> <li>• Excavations, handling and transport of erodible materials must be avoided under windy conditions or during heavy rains,</li> <li>• The speed restriction of the GGHP must be enforced and monitored on site for all construction vehicles.</li> </ul>
<b>Potential impacts on geological and physical aspects:</b>		
Erosion	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	<b>Medium</b>
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Ensure correct drainage of areas;</li> <li>• All the areas disturbed during construction work needs to be landscaped to a standard similar or better than before on completion of the works before replacement of topsoil;</li> <li>• All spoils, soil not utilized to close the trench, should be used to increase the effectiveness of the existing drainage channels by constructing designed and appropriate cross berms, angle, height and length for the slope specific for the area;</li> <li>• Building levels shall be planned/designed adequately for surface run-off, to minimise erosion during construction. Construction, particularly the earth works portion, shall take place during the dry season if possible. Failing this, additional measures shall be taken to ensure that possible environmental damage is minimised. Measures may include silt trap/retention areas, erosion control mats/ hay bale barriers, and raised stream crossings, top prevent mud being washed into streams from construction vehicles, etc.;</li> <li>• In the event of channels or erosion occurring, the Contractor must affect repairs timeously. Restorative repairs shall include the backfilling and consolidation of eroded areas;</li> <li>• Surface/s of slope/s shall be suitably top soiled and vegetated as soon as is possible after final sloping;</li> <li>• Rehabilitate denude areas especially slopes with appropriate species and erosion protection measures i.e. geotextiles, rocks, topsoil mixtures as per specifications;</li> </ul>
Impact on surface and groundwater	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Ensure that excavation areas have a predetermined stockpile area for construction materials and excavated material,</li> <li>• Disposal of waste excavated material at appropriate waste disposal sites,</li> <li>• Contractors must use Ready-Mix concrete. Alternatively, concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<p>mixed only in areas which have been specially demarcated for this purpose,</p> <ul style="list-style-type: none"> <li>• Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces,</li> <li>• Construct and operate the necessary collection facilities and storm water management systems such as diversion beams, ditches, drains, oil separation sumps, gross water ways etc. to prevent contamination of any water,</li> <li>• All spillage must be cleaned up as soon as they occur,</li> <li>• Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site,</li> <li>• Provide suitable and sufficient ablution facilities,</li> <li>• Do not locate any site toilet, sanitary convenience, septic tank or French drain within the 1:100 year flood line, or within a horizontal distance of 100m (whichever is greater) of a watercourse or drainage line,</li> <li>• Combine drinking water facilities with hand washing facilities near site toilet,</li> <li>• Vehicles and machinery must be regularly serviced,</li> <li>• No uncontrolled discharges from the site or working area to depressions must be permitted. All discharge points will require approval from the ESA,</li> <li>• No natural water course may be used to clean equipment, or for bathing. All cleaning operations should take place off site at a location where waste water can be disposed of correctly,</li> <li>• The discharge of any pollutants such as cement, concrete, lime, chemicals, etc. into the natural environment and the storm water system must strictly be prohibited.</li> </ul>
Waste management	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• An adequate number of scavenger proof litter bins are to be placed throughout the site at 100m intervals. Dumping of waste on site is prohibited;</li> <li>• Waste sorting and separation should form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately;</li> <li>• Keep all work sites including storage areas, offices and workshops neat and tidy;</li> <li>• Dedicate a demarcated and signposted storage area on site for the collection of construction waste;</li> <li>• All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site;</li> <li>• Care should be taken to ensure that no waste fall off disposal vehicles en-route to the landfill. If needed, a tarpaulin can be utilised;</li> </ul>



## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>• The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as this is regarded as hazardous waste</li> <li>• Littering by construction workers shall not be permitted;</li> <li>• Workers from the immediate area need to be encouraged to take their waste with them at the end of each day,</li> <li>• General refuse/rubbish shall be removed from site on a weekly basis to an approved landfill site,</li> <li>• Minimise waste by sorting wastes into recyclable and non-recyclable waste,</li> <li>• Rubble and upgrading refuse shall be collected and removed weekly; and</li> <li>• A weekly litter patrol of the entire site shall be conducted by the ECO.</li> </ul>
Impact on traffic	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods;</li> <li>• Abnormal loads should not be transported after dark when visibility of mountainous routes is poor;</li> <li>• Abnormal loads and machinery should avoid movement over gravel roads during and immediately after rainfall events, so as to limit destruction of road surfaces and sedimentation of rivers/streams;</li> <li>• Vehicles used for the transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces;</li> <li>• All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to the licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so;</li> <li>• Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads;</li> <li>• The contractor must ensure that all damage caused to local farm roads by the construction related activities, including heavy vehicles, is repaired before the completion of the construction phase. The costs associated with the repair must be borne by the contractor;</li> <li>• Any damage to public roads is to be reported to the management authority and repaired to its original condition;</li> <li>• Signage is to be placed on vehicles at all times;</li> <li>• Traffic control measures such as flag bearers, delineators and stop and go measures should be implemented in accordance with requirements from the relevant roads authority;</li> <li>• Transport of materials should be limited to the least amount of trips possible;</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>Construction-related vehicles and machinery may not operate on the route without reflective safety signage, car-top lights and reflective personnel gear;</li> <li>Stopping in narrow road shoulders or on bends without the presence of traffic calming or diversion measures should not be allowed.</li> </ul>
Increased risk of veld fires	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Establish and maintain fire breaks around the Work Sites if as and when specified by the ESA and as required by applicable legislation and the local authority.</li> <li>Ensure Work Site and the contractor's camp is equipped with adequate firefighting equipment. This includes at least rubber beaters when working in veldt areas, and at least one fire extinguisher of the appropriate type irrespective of the site,</li> <li>Workers must be adequately trained in the handling of firefighting equipment,</li> <li>No open fires are permitted anywhere on site. Restrict contained fires for heating and cooking (i.e. in a fire drum) to designated areas on site,</li> <li>Prevent Employees from creating fires randomly outside designated areas,</li> <li>Do not store any fuel or chemicals under trees,</li> <li>Do not store gas and liquid fuel in the same storage area,</li> <li>Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area.</li> </ul>
<b>Potential noise impact:</b>		
Noise nuisance	<b>Direct impacts:</b>	<b>Medium</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	<b>Low</b>
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Limit working hours of noisy equipment to daylight hours;</li> <li>Fit silencers to equipment;</li> <li>Unless otherwise specified by the ESA, normal work hours will apply (i.e. from 06:30 to 16:15, Mondays to Fridays);</li> <li>Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours;</li> <li>No loud music is permitted on site or in the Camp.</li> </ul>
<b>Potential impacts on socio-economic aspects:</b>		
Job creation	<b>Direct impacts:</b>	<b>Low (positive)</b>
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Where reasonable and practical the contractors appointed by the proponent should appoint local contractors and implement a 'locals first' policy, especially for semi and low-skilled job categories. However, due to the low skills levels in the area, the</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<p>majority of skilled posts are likely to be filled by people from outside the area.</p> <ul style="list-style-type: none"> <li>The recruitment selection process should seek to promote gender equality and the employment of women wherever possible, particularly for less labour-intensive work such as flag bearing and supervision;</li> <li>The ongoing presence of semi and high skilled personnel involved in the project construction phase will generate sustained clientele to a portion of the guest house industry within the vicinity of the route.</li> </ul>
Presence of construction workers in the area	<b>Direct impacts:</b>	M
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	L
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Where possible, implement a requirement for contractors to implement a local employment policy for construction jobs, particularly for semi and low-skilled job categories, thus reducing impact which foreign workers could have on local communities;</li> <li>A contractual requirement of potential contractors must be a preparation and implementation of a Code of Conduct for construction workers, identifying types of behaviour and activities which construction workers may not engage in. Workers who breach this code should be dismissed, on the grounds that such dismissals comply with South African labour legislation;</li> <li>The project manager responsible for contractor appointments and administration, should implement an HIV/AIDS awareness programme for all contractors and their construction workers prior to commencement of construction;</li> <li>Contractors must manage the transport and movement of workers on and off site on a daily basis, as well as allow for the returning home of workers intermittently over weekends to limit interaction with local communities during such periods;</li> <li>No personnel, with the exception of security officers, are permitted to stay overnight in the vicinity of the route and must be housed in a site camp.</li> </ul>
<b>Potential impact on cultural-historical aspects</b>		
Impact on fossils	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>• Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so has been given.</li> <li>• Under no circumstances shall any heritage material be destroyed or removed from the site.</li> <li>• Excavations must be limited to the footprint area and be maintained in a narrow corridor;</li> <li>• All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:               <ul style="list-style-type: none"> <li>○ All construction in the immediate 50 m vicinity radius of the site must cease;</li> <li>○ The heritage practitioner must be informed as soon as possible;</li> <li>○ In the event of obvious human remains to SAPS must be notified;</li> <li>○ Mitigation measures (such as refilling, etc.) must not be attempted;</li> <li>○ The area in a 50 m radius of the find must be cordoned off with hazard tape;</li> <li>○ Public access must be limited and the area must be placed under guard.</li> </ul> </li> </ul>
Discovery of any heritage resources.	<b>Direct impacts:</b>	High (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	High (positive)
	<b>Proposed mitigation</b>	Should any heritage resources (including but not limited to fossil bones, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and other built features, rock art and rock engravings) be exposed during excavation, this must be reported to the applicable heritage authority as such discovery could have a high positive scientific value for research.
Impacts on archaeological resources	<b>Direct impacts:</b>	Medium
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Low
	<b>Proposed mitigation</b>	Should any archaeological resources be exposed during excavation, this must be reported to the applicable heritage authority.
Impact on trees which is part of the cultural landscape	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Low
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• The removal or destruction of trees older than 60 years will require the appropriate consent and a destruction permit from SAHRA.</li> <li>• It is advised that, as a prerequisite, specialist input is obtained from a botanist in order to ascertain the age of the trees located within the proposed impact area.</li> </ul>

## BASIC ASSESSMENT REPORT

Nature of Impact	Impact summary	Significance (before mitigation)
<b>Potential impacts on visual aspects:</b>		
Impact on sense of place	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• Treat man made surfaces to blend in with the surrounding landscape,</li> <li>• Demolition of all temporary infrastructure should be done,</li> <li>• Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare,</li> <li>• Follow surface lines that are present in the landscape such as roads, rows of trees or vegetation patterns,</li> <li>• Lighting technology that provide sufficient light where required while preventing light spillage elsewhere must be available, and must be incorporated in the lighting of entrances, roads and squares where required,</li> <li>• Employ existing vegetation to provide natural screening to structures.</li> </ul>

### 1.2. POTENTIAL IMPACTS DURING OPERATIONAL PHASE

Activity	Impact summary	Significance (before mitigation)
<b>Alternative 1 (preferred alternative)</b>		
<b>Activity:</b> Construction of the IC as a single story building.		
<b>Potential impacts on socio-economic aspects:</b>		
Impact on job creation	<b>Direct impacts:</b>	Medium (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Equitable employment opportunities with a preference for locally-skilled persons would ensure that jobs opportunities benefit persons from neighbouring communities and towns.
Increase on human capital	<b>Direct impacts:</b>	Medium (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Medium (positive)
	<b>Proposed mitigation</b>	N/A
<b>Potential impacts on geological and physical aspects:</b>		
Flood risk	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>• The appointment of a surveyor to delineate the 1:100 year floodline of the river. This will however not reduce the significance of the impact;</li> <li>• Identify another site location for the proposed staff accommodation;</li> </ul>

## BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance (before mitigation)
		<ul style="list-style-type: none"> <li>Design structures to be raised above ground level and flood attenuation measures adopted.</li> </ul>
<b>Potential impacts on biological aspects:</b>		
Habitat fragmentation	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	No mitigation is proposed to minimise this impact, since the fragmentation of habitat will have occurred during the construction phase.
Proliferation of invasive alien species	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Implementation of the GGHNP Alien Species programme to control invasive alien species
Road mortality of fauna	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Road users are to drive within the speed limit of the GGHNP
Introduction of artificial habitat for some species	<b>Direct impacts:</b>	Low (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	N/A
<b>Potential impacts on visual aspects:</b>		
Impact on the sense of place	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	N/A
<b>Alternative 2</b>		
<b>Activity:</b> Construction of the IC as a double story building.		
<b>Potential impacts on socio-economic aspects:</b>		
Impact on job creation	<b>Direct impacts:</b>	Medium (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Equitable employment opportunities with a preference for locally-skilled persons would ensure that jobs opportunities benefit persons from neighbouring communities and towns.
Increase on human capital	<b>Direct impacts:</b>	Medium (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	Medium (positive)
	<b>Proposed mitigation</b>	N/A
<b>Potential impacts on geological and physical aspects:</b>		
Flood risk	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-

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Activity	Impact summary	Significance (before mitigation)
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	<ul style="list-style-type: none"> <li>The appointment of a surveyor to delineate the 1:100 year floodline of the river.</li> <li>Design structures to be raised above ground level and flood attenuation measures adopted.</li> </ul>
<b>Potential impacts on biological aspects:</b>		
Habitat fragmentation	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	No mitigation is proposed to minimise this impact, since the fragmentation of habitat will have occurred during the construction phase.
Proliferation of invasive alien species	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Implementation of the GGHNP Alien Species programme to control invasive alien species
Road mortality of fauna	<b>Direct impacts:</b>	Low
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	Road users are to drive within the speed limit of the GGHNP
Introduction of artificial habitat for some species	<b>Direct impacts:</b>	Low (positive)
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	N/A
<b>Potential impacts on visual aspects:</b>		
Impact on the sense of place	<b>Direct impacts:</b>	High
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	The theme of the project design concept should, as much as possible, clearly reflect the following aspects: <ul style="list-style-type: none"> <li>Surrounding environment (must blend with the landscape)</li> <li>Uniqueness of the Golden Gate Highlands National Park Area</li> </ul>

### 1.3. NO-GO OPTION

Activity	Impact summary	Significance (before mitigation)
No impact will occur as the development activities will not take place.	<b>Direct impacts:</b>	-
	<b>Indirect impacts:</b>	-
	<b>Cumulative impacts:</b>	-
	<b>Proposed mitigation</b>	N/A

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

A complete impact assessment in terms of Regulation 19(3) of GN 733 is included under Appendix F of this report.

## 2. 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.

Due to the nature of the study area and the fact that the design alternative is the only eminent alternative, the impacts for each proposed alternative are relatively equal.

Design Alternative 1 entails the development of a single story building that will serve as the IC, against Design Alternative 2 that entails the development of a double story building. On assessment of the proposed location for this alternatives, the specialists determined the following:

### ***Ecologist***

- Loss of Flora – there will be direct impact on vegetation during construction and loss of species is highly expected.
- Loss of Faunal Habitat – Transformation and loss of habitat will have a negative effect on resident fauna due to loss of natural vegetation and soil disturbance within the construction footprint.
- Direct Faunal Impacts – Fauna will be directly impacted as a result of construction activities and human presence at the site
- Increased erosion risk – Increased erosion risk as a result of soil disturbance and loss of vegetation cover associated with the development as well as access road (Daemane, 2015).

By implementing mitigation measures, the impacts will be significantly reduced to moderate (loss of flora), low (habitat loss and direct impact) and minor impact for erosion and sedimentation risks. In summary, the proposed development carries high risks at a local scale but this can be minimised by undertaking mitigation measures. No Red Data species are anticipated to be encountered in the proposed site and therefore the development will carry a moderate to low impact on the habitat and surrounding ecosystem.

### ***Palaeontologist***

It is highly likely that the proposed development will result in the discovery of vertebrate fossils. It is essential that these fossils are examined by a trained palaeontologist *in situ*, so that their significance can be assessed and so that, if necessary, they can be excavated for further study. This will mitigate the potential threat to heritage resources effectively, as well as potentially provide fossil material and exposure for the proposed development.



The potential threat to these heritage resources posed by the proposed development can be mitigated by having a palaeontologist on site to examine *in situ* vertebrate fossils uncovered by earthworks, and if necessary rapidly excavate them (Choiniere, 2015).

**Archaeologist**

It is unlikely that the proposed development will result in any significant archaeological impact at the site. The terrain is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C). The project design concept is intended to blend in with the landscape of the surrounding environment and the uniqueness of the GGHNP Area. Thus, the cultural landscape should not be negatively affected by the proposed development (Rossouw, 2015).

The significance of the visual impact for Design Alternative 1 is evidently lower than those of Design Alternative 2, due to the height of the building and the sense of place of the surrounding landscape. The visual impact were the only significant outlier between all other potential impacts.

All other potential impacts on biological, geological and physical, noise, socio-economic and cultural-heritage aspects range from a high to low significance without mitigation and management thereof, however it can all be mitigated to an acceptable low significance rating with implementation of the mitigation measures and strictly complying with the EMPr.

Impacts associated with this proposed alternatives are described and the significance rating given in Section D.

Given the sensitivity of the site, Design Alternative 1 is considered to be the preferred alternative.

**Alternative 1 (Preferred Alternative)**

Activity	Impact summary	Significance (after mitigation)
Planning, design and construction of a single story building that will serve as the IC	<b>Potential impacts on biological aspects:</b>	
	Impact on vegetation and loss of species	Medium
	Transformation and loss of habitat	Medium
	Impact on fauna	Low
	Dust nuisance	Low
	<b>Potential impacts on geological and physical aspects:</b>	
	Erosion	Low
	Impact on surface and ground water	Low
	Waste management	Low
	Impact on traffic	Low
Increased risk of veld fires	Low	

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	<b>Potential noise impact:</b>	
	Noise nuisance	Low
	<b>Potential impacts on socio-economic aspects:</b>	
	Job creation	Low (positive)
	Presence of construction workers in the area	Medium
	<b>Potential impacts on cultural-historical aspects:</b>	
	Impact on fossils	Low
	Discovery of heritage resources	High (positive)
	Impacts on archaeological resources	Low
	Impacts on trees which is part of the cultural landscape	Medium
	<b>Potential impacts on visual aspects:</b>	
	Impact on the sense of place	Low
	Operation of the proposed IC	<b>Potential impacts on socio-economic aspects:</b>
Impact on job creation		Medium (positive)
Increase on human capital		Medium (positive)
<b>Potential impacts on geological and physical aspects:</b>		
Flood risk		Medium
<b>Potential impacts on biological aspects:</b>		
Habitat fragmentation		Low
Proliferation of invasive alien species		Low
Road mortality of fauna		Low
Introduction of artificial habitat for some species		Low (positive)
<b>Potential impacts on visual aspects:</b>		
Impact on the sense of place		Low

### Alternative 2

Activity	Impact summary	Significance (after mitigation)
Planning, design and construction of a double story building that will serve as the IC	<b>Potential impacts on biological aspects:</b>	
	Impact on vegetation and loss of species	Medium
	Transformation and loss of habitat	Medium
	Impact on fauna	Low
	Dust nuisance	Low
	<b>Potential impacts on geological and physical aspects:</b>	
	Erosion	Low

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	Impact on surface and ground water	Low
	Waste management	Low
	Impact on traffic	Low
	Increased risk of veld fires	Low
	<b>Potential noise impact:</b>	
	Noise nuisance	Low
	<b>Potential impacts on socio-economic aspects:</b>	
	Job creation	Low (positive)
	Presence of construction workers in the area	Medium
	<b>Potential impacts on cultural-historical aspects:</b>	
	Impact on fossils	Low
	Discovery of heritage resources	High (positive)
	Impacts on archaeological resources	Low
	Impacts on trees which is part of the cultural landscape	Medium
	<b>Potential impacts on visual aspects:</b>	
Impact on the sense of place	Low	
Operation of the proposed IC	<b>Potential impacts on socio-economic aspects:</b>	
	Impact on job creation	Medium (positive)
	Increase on human capital	Medium (positive)
	<b>Potential impacts on geological and physical aspects:</b>	
	Flood risk	Medium
	<b>Potential impacts on biological aspects:</b>	
	Habitat fragmentation	Low
	Proliferation of invasive alien species	Low
	Road mortality of fauna	Low
	Introduction of artificial habitat for some species	Low (positive)
	<b>Potential impacts on visual aspects:</b>	
Impact on the sense of place	High	

**No-go alternative (compulsory)**

Should the development not take place, the status quo will prevail, and no positive or negative biophysical or socio-economic impacts will occur. However, the needs and desirability for the proposed development will be negated.

Given that the preferred alternative carries an overall significance rating of low negative, no adverse impacts would result as a consequence of the development, and as such, the no-go alternative is not

preferred. The benefits of the proposed development outweighs the potential negative impacts on the environment.

## 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

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.

### ***Recommendations of the Ecological Specialist***

The following recommendations were obtained from the Fauna And Flora Impact Assessment Report for the Proposed Dinosaur Interpretation Centre – Golden Gate Highlands National Park as compiled by the Ecologist, ME Daemane, of the SANParks.

- In case of observation of any species during construction phase, an experienced person should be consulted to deal with translocation of such species. No killing or attempt to translocate species should be undertaken by contractors.
- In case of presence of beetle species identified during the construction phase, the SANParks' entomologist (Kimberley) must be consulted to deal with the capturing and translocation.
- Fires should only be allowed within fire safe demarcated areas
- All construction vehicles should be adhere to a low speed limit to avoid collisions with susceptible species such as snakes and frogs
- Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill
- The collection, hunting or harvesting of animals at the site should be strictly forbidden (Daemane, 2015)

### ***Recommendations of the Palaeontologist***

The following recommendations were obtained from the Palaeontological Impact Assessment Phase 1: Desktop Study for the Proposed Dinosaur Interpretation Center, Golden Gate Highlands National Park, Free State as compiled by the Palaeontologist, Dr. Jonah Choiniere, of the Evolutionary Studies Institute, University of the Witwatersrand.

- A palaeontologist must be on site to examine in-situ vertebrate fossils uncovered by earthworks, and if necessary rapidly excavate them.

- The palaeontologist assigned to this task will need a valid collection permit from the South African Heritage Resources Agency.
- All work would have to conform to international best practice standards for palaeontological fieldwork and the resulting study should adhere to the minimum standards for Phase 2 paleontological impact assessments recently laid out by SAHRA in 2013 (Choiniere, 2015).

### ***Recommendations of the Archaeologist***

The following recommendations were obtained from the Phase 1 Archaeological Impact Assessment for the proposed development of a Dinosaur Interpretation Centre within Golden Gate Highlands National Park, FS Province as compiled by the Archaeologist, Dr. Lloyd Rossouw, of the National Museum Bloemfontein.

It is unlikely that the proposed development will result in any significant archaeological impact at the site. The proposed site is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C).

A grove is indicated on the survey diagram of the area when it was previously registered as Melsetter 327 in 1917 (Fig. 8). Trees associated with historical settlements or farmsteads, that are older than 60 years old, are generally protected as heritage sites with cultural significance. Their removal or destruction will require the appropriate consent and a destruction permit from SAHRA. While many of the planted trees currently located within the proposed impact zone allocated for parking (current camping terrain) appear to be younger than 60 years old, the age of several specimens may well be older. It is advised that, as a prerequisite, specialist input is (Rossouw, 2015).

### ***General Recommendations of the EAP***

- The use of designated roads should be maintained under all circumstances, except under exceptional circumstances where existing roads cannot be used;
- Disturbed areas should be rehabilitated as soon as possible after the construction and decommissioning periods;
- The facility and compliance with the EMPr should be monitored intermittently during the operational phase of the project;
- All wetland areas must be demarcated and those areas must be avoided, especially during the construction phase;
- If any development will take place within 500m of a water body (e.g. wetlands), a Water Use License should be obtained from the Department of Water and Sanitation within the specific management area.
- All mitigation measures recommended by the various specialists should be strictly implemented.
- The EMPr should be approved by the DEA prior to construction and its implementation should form part of the conditions of the Environmental Authorisation.

### ***Conclusion***

## BASIC ASSESSMENT REPORT

The contents of this report has sought to identify and assess key issues relating to the proposed development of the IC and associated infrastructure on the Remaining Extent and Portion 1 of the Farm Glen Reenen No. 1361, Bethlehem, Free State province.

In consolidation thereof, no environmental fatal flaws were identified to be associated with the proposed facility. The majority of impacts identified were of a medium to low significance and can be suitably mitigated to acceptable levels, provided that specifications are stipulated in the EMPr are followed and adhered to.

It is thus the opinion of the EAP, supported by the findings of specialist determinations that the development of the proposed IC, with the guidance of the EMPr, be authorised for construction and operation.

Is an EMPr attached?

YES

The EMPr must be attached as **Appendix G**.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as **Appendix H**.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in **Appendix I**.

Any other information relevant to this application and not previously included must be attached in **Appendix J**.

**Adél Groenewald**

NAME OF EAP



SIGNATURE OF EAP

08 October 2015

DATE

## **SECTION F: APPENDIXES**

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix E1: Proof of the placement of the relevant advertisements and notices

Appendix E2: Proof of written notification received by key stakeholder

Appendix E3: Comments and Responses Report

Appendix E4: Proof of written notification received by the Authorities and Organs of State

Appendix E5: List of registered I&APs

Appendix E6: Copies of correspondence and minutes of any meetings held

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

## REFERENCES

- Choiniere, D. J. (2015). Palaeontological Impact Assessment Phase 1: Desktop Study Proposed Dinosaur Interpretation Center, Golden Gate Highlands National Park, Free State. Johannesburg.
- Daemane, M. (2015). Fauna and Flora Impact Assessment Report: Proposed Dinosaur Interpretation Centre – Golden Gate Highlands National Park. Kimberley.
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- Media Monitoring Africa & Code for South Africa. (2014, May). Retrieved from Wazimap: <http://wazimap.co.za/profiles/ward-41902020/>
- National Department of Rural Development & Land Reform. (2013). Free State Province Provincial Spatial Development Framework (PSDF). Phase 1 Report.
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