



**KARAN BEEF-PROPOSED EXTENSION AND CONSTRUCTION OF A  
NEW FEEDLOT ON PORTION 3 OF THE FARM WANGANELLA NO.  
994, ALIWAL NORTH, FREE STATE PROVINCE**

**Final Basic Assessment Report**

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Prepared for:



Mr Johann van Niekerk  
Thirstland2@gmail.com  
083 324 0470

Prepared by:

Marius Venter  
marius@enviroworks.co.za  
051 436 0793

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## EXECUTIVE SUMMARY

### **Introduction and Background**

Karan Beef (The Applicant) appointed Enviroworks, an Independent Environmental Assessment Practitioner (EAP), to undertake the required Basic Assessment (BA) Process for the proposed construction and extension of a feedlot (hereafter referred to as the Proposed Project) on Portion 3 of the farm Wanganella No. 994 near Aliwal North, Mohokare Local Municipality, Free State.

### **Coordinates**

Longitude: 30° 38' 34.14" E

Latitude: 26° 43' 59.12" S

The proposed project is a listed activity in terms of Sections 24(2) and 24(d) of the National Environmental Management Act, 1998 (Act No. 107 of 1998)(NEMA)(as amended). The Environmental Impact Assessment (EIA) Regulations, 2017 promulgated in terms of Chapter 5 of the NEMA provide for the control of certain activities that are listed in Government Notice Regulation (GN R.) No. 327, 325 and 324. Activities listed in these notices must comply with the regulatory requirements listed in GN R. 326, which prohibits such activities until written authorisation is obtained from the Competent Authority (CA). Such Environmental Authorisation (EA), which may be granted subject to conditions, will only be considered once there has been compliance with the EIA Regulations of 2017. GN R. No. 326 sets out the procedure and documentation that need to be compiled with undertaking a Basic Assessment Report.

The proposed project is aimed at increasing the current amount of cattle as found on site at Karan Beef Aliwal North which is currently 800 cattle to 3800 cattle. Therefore the proposed feedlot will accommodate for an extra 3000 cattle on the farm.

The proposed 'new feedlot' will accommodate 2000 heads of cattle while an additional 1000 cattle will be inserted together with the existing 800 heads of cattle within the already existing feedlot.

### **Project Description**

Karan Beef proposes the development of a new feedlot as well as an extension of the already existing feedlot at the site situated next to the N6, approximately 8.8km from Aliwal North. Additionally to the feedlot a road and a dam are also proposed. The site is situated on the border between Free State and the Eastern Cape. The locality map can be seen in Figure 1.

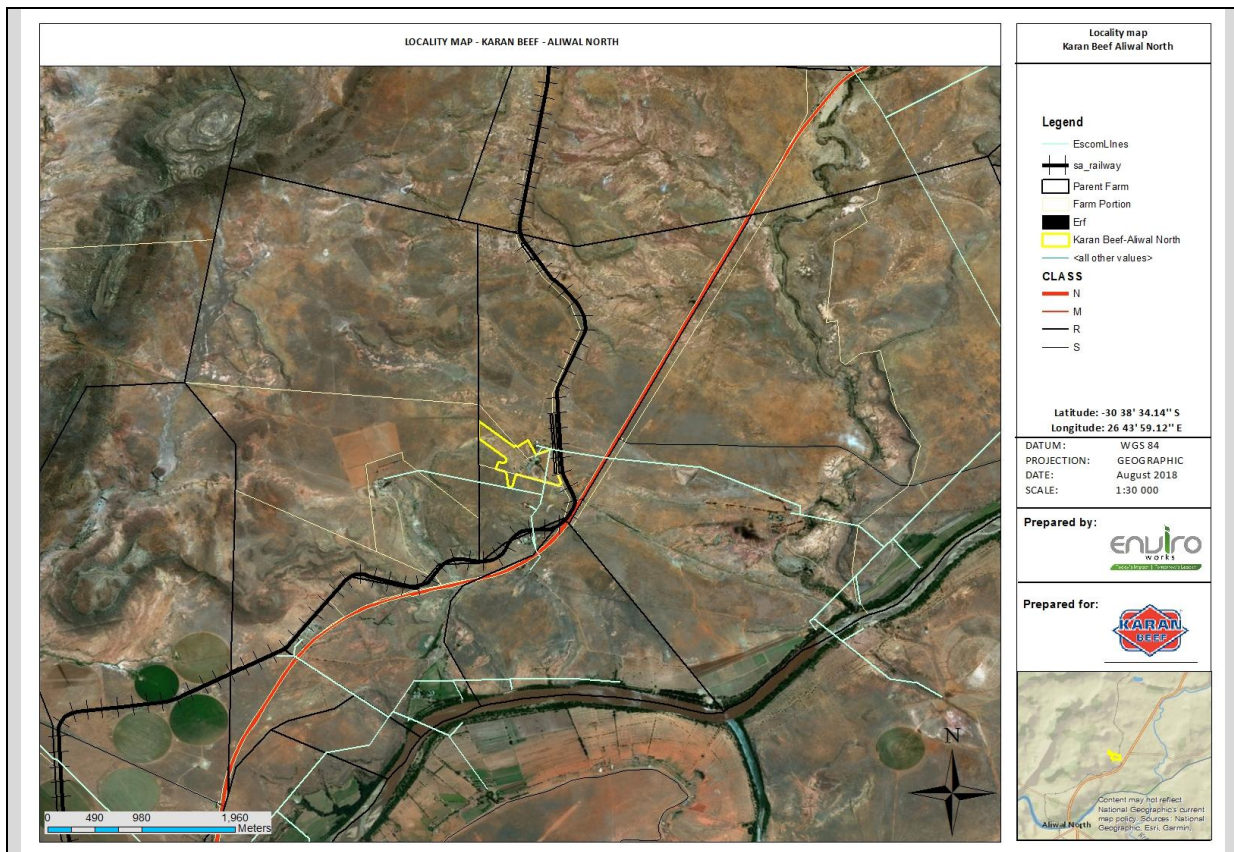


Figure 1: Locality map of Karan Beef

The proposed development will have a development footprint of one point three five hectares (1.35 ha) situated on a parcel of land with a combined footprint of approximately twenty one and a quarter hectare (21.25 ha). Therefore the feedlot will have a coverage of approximately 13 500m<sup>2</sup>. The already existing feedlot will receive an additional 1000 heads of cattle to the 800 that are already present.

This project will entail the clearing of vegetation where after construction of the feedlot will commence. The feedlot will be constructed in a North Western / South Eastern direction, adjacent to an already existing feedlot. In Figure 2 the layout of the existing feedlot area can be seen in blue while the proposed expansion can be seen in black. Additional to the above, more cattle will be inserted into the already existing feedlot which leads to the expansion of the currently existing feedlot.

The proposed project entails the development of the following infrastructure and activities:

- Development of feedlot pens: The proposed feedlot will accommodate 2000 cattle. The development footprint of the proposed project are +- 13 500m<sup>2</sup>.
- 1000 additional heads of cattle will be inserted into the already existing feedlot
- A road of approximately 200 metres in length and wider than four (4) metres are proposed
- The construction of a manure dam (5000m<sup>3</sup>) are proposed.

The expected water use after completion of the proposed project are 3800 (cattle) × 50 (litres) = 190 000 litres per day = approximately 5 7000 000 litres per month. The effluent that will be created will lead to a total of 3m<sup>3</sup> per year and 3-4 Kilograms of manure per day, per head of cattle.

### Legislative Context

The proposed project constitutes the following listed activities of the NEMA:

Government Notice 327 of 2017: Listing Notice 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

#### Activity 4:

The development and related operation of facilities for the concentration of animals in densities that will exceed—

(i) 20 square metres per large stock unit, and more than 500 units per facility

27) The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—

(i) the undertaking of a linear activity; or

(ii) maintenance purposes undertaken in accordance with a maintenance management plan.

39) The expansion and related operation of facilities for the concentration of animals in densities that will exceed—

(i) 20 square metres per large stock unit, where the expansion will constitute more than 500 additional units

Government Notice 324 of 2017: Listing Notice 3 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

#### Activity 4:

The development of a road wider than 4 metres with a reserve less than 13.5 metres

Outside urban areas:

(aa) A protected area identified in terms of NEMPAA, excluding disturbed areas;

(bb) National Protected Area Expansion Strategy Focus areas;

(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;

(dd) Sites or areas identified in terms of an international convention;

(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;

(ff) Core areas in biosphere reserves; or (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas.

### Report Structure

This report is set out as followed:

- **Section A: Activity Information** provides an overview of the development proposal and listed activities which are triggered in terms of listing notices GN R. 327 and 324 of the EIA Regulations, 07 April 2017.
- **Section B: Site/Area/Property Description** provides detail on the affected landscape in its present state. A range of aspects relating to the biophysical (e.g. geology, soil surface and sub-surface water and biodiversity), socio-economic and historic and cultural character of the immediate route and surrounding area are described herein, whilst applicable

legislation, policy and guidelines considered are recognised.

- **Section C: Public Participation** describes the consultation component of this study between the EAP and Interested or Affected Parties (I&APs) and organs of state. Regulatory requirements of this process are discussed, with a summary of consultation made with state departments and comments and response given. Comment periods were afforded to parties, with an initial registration period provided to parties.
- **Section D: Impact Assessment, Management, Mitigation and Monitoring Measures**, describe how the proposed development may impact on the geographical and physical, biodiversity, socio-economic and historical and cultural aspects of the receiving environment. Resource uses of the proposed development phases, attributed to waste and emissions, water use, power supply and energy efficiency are further discussed.
- **Section E: Recommendation of the EAP** provides, based on such findings as various site surveys, impact assessment, investigation of alternatives and the review of strategic policy to consider the needs and desirability, the outgoing opinion of the EAP is detailed. Any noteworthy recommendations emanating from the study are described here.
- **Section F: Appendices** lists all supportive documents enclosed with this report, after which declarations of the Applicant, EAP and Specialist Parties are given.

### Alternatives

#### Layout Alternative

Two Layout alternatives have been considered for the project. There is not a big difference between the two layouts as seen below (Figure 2 and 3). The main difference is the direction in which the proposed feedlot will be situated. This means that a large part of the proposed feedlot area will overlap when the two alternatives are compared. However, the layout as seen in Figure 2 (Preferred Alternative) must be preferred. This is due to the nearest point of the proposed feedlot will be further away from the hill, as opposed to Alternative option 2. The vegetation found on the hill is more intact and undisturbed than the vegetation found on the proposed site itself (Appendix 1). Differences between the two alternatives may also include impacts on the hydrology in the sense that water flow may be increased more significantly by alternative one than the preferred alternative which may lead to alternative one causing the inflow of manure into the existing dam. Faster water flow may also lead to erosion which can cause an influx of soil into the proposed dam.

#### Preferred Layout Alternative

##### Preferred Alternative include the following advantages:

- Consideration has been given to the layout of infrastructure to ensure minimum disturbance on vegetation as well as on the watercourse (proposed and existing dam) when considering the flow.
- Where possible infrastructure is placed on degraded areas, keeping vegetation intact enhancing the visual absorption capacity.
- As per the findings of the Heritage Specialist it is ensured that no development will occur within fifty metres (50m) from a Heritage Sensitive area as there is no evidence of historical structures in the demarcated area.

##### The Preferred Alternative has the following disadvantage:

- In order to ensure minimal vegetation clearance, degraded areas as found on the site should rather be disturbed than areas of indigenous vegetation that can be found in small patches on the site.
- The proposed development is situated relatively close to a hill which might cause drainage problems with heavy rains

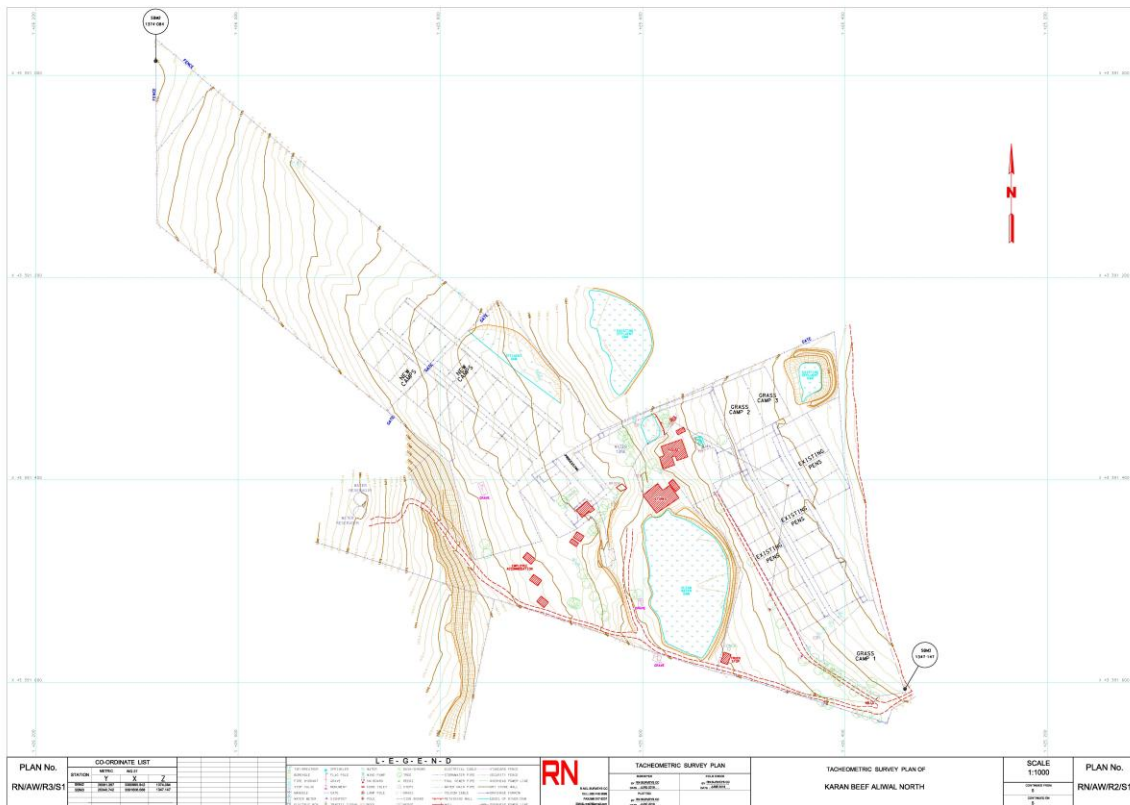


Figure 2: Preferred layout alternative

### Layout Alternative 1

Alternative 1 is considered as a feasible and reasonable layout alternative.

- Consideration has been given to the layout of infrastructure to ensure minimum disturbance on vegetation as well as on the watercourse when considering the flow.
- Where possible infrastructure is placed on degraded areas, keeping vegetation intact enhancing the visual absorption capacity.
- As per the findings of the Heritage Specialist it is ensured that no development will occur within fifty metres (50m) from a Heritage Sensitive area as there is no evidence of historical structures in the demarcated area.

### Alternative 1 has the following disadvantage:

- In order to ensure minimal vegetation clearance degraded areas as found on the site should rather be disturbed than areas of indigenous vegetation that can be found in small patches on the site.
- The proposed development is situated relatively close to a hill which might cause problems with heavy rains
- The direction of this alternative may cause water flow to be faster which may lead to erosion and manure leading into the proposed dam.

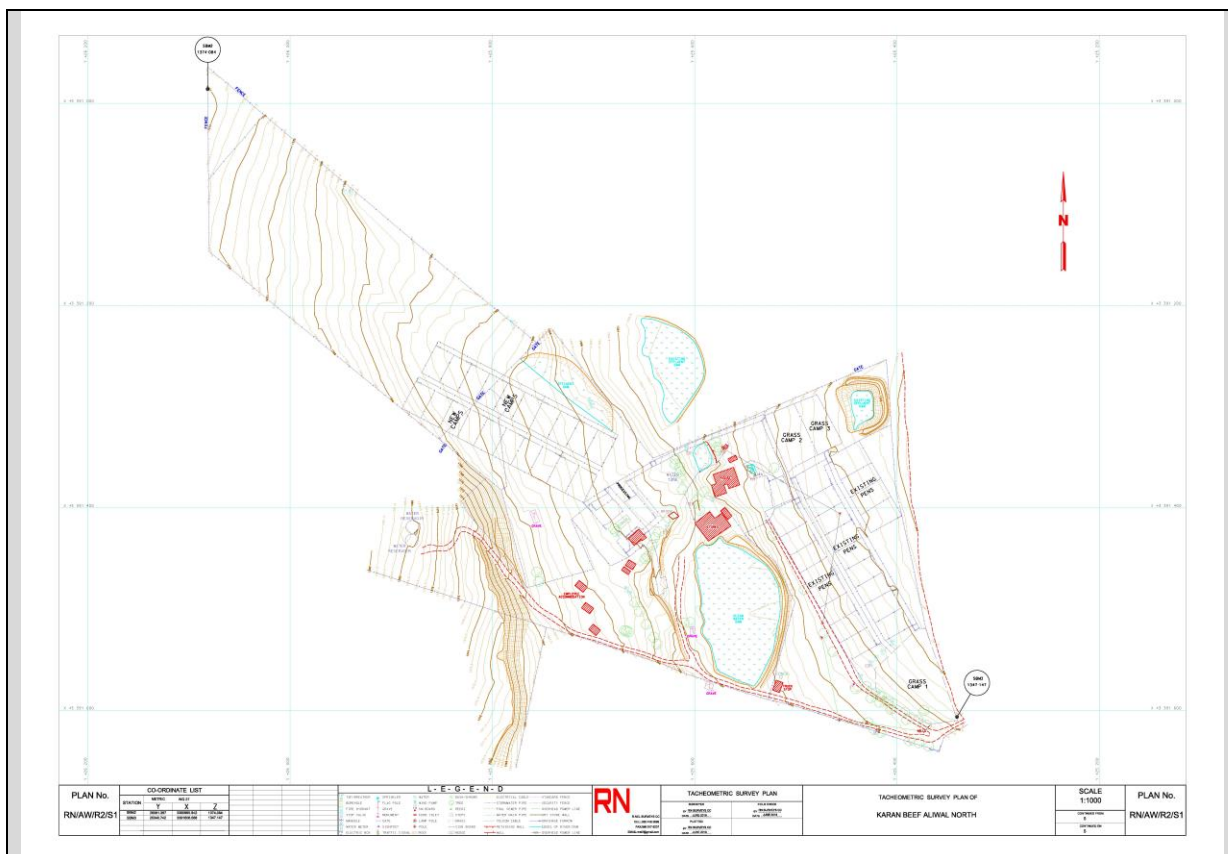


Figure 3: Layout alternative 1

### Public Participation Process

A comprehensive **Public Participation** will be undertaken to engage stakeholders and Interested and Affected Parties on the development proposal. I&AP's will be informed of the Basic Assessment Process through an advertisement in one (1) local newspaper and poster notices will be erected at strategic locations. The surrounding landowners will be informed of the proposed project by means of the distribution of comment forms and the Basic Assessment Report (BAR), as well as relevant Organs of State.

This BAR will be made available for a thirty (30) day comment period from 22 February 2019. The BAR will be made available on Enviroworks website ([www.enviroworks.co.za](http://www.enviroworks.co.za)) and a link to the Enviroworks website will be sent via email to all relevant Stakeholders and Organs of State.

### Specialist Findings

On assessment of the proposed location for alternatives, the specialist determined the following:

#### Ecological Impact Assessment

The Ecological Impact Assessment was conducted by Enviroworks on 17 September 2018. The Specialist recommended that the following mitigation measures need to be incorporated into the Environmental Management Plan.

- An Environmental Control Officer (ECO) must be appointed to oversee that the aspects stipulated in the Environmental Authorisation be carried out properly;
- The areas to be cleared as well as the construction area should be clearly demarcated;
- All construction vehicles should adhere to clearly defined and demarcated roads;
- Dust suppression and erosion management should be an integrated component of the

construction approach;

- No dumping of building waste or spoil material from the development should take place on areas other than a licensed landfill site;
- All hazardous materials should be stored appropriately to prevent contamination of the project site. Any accidental chemical, fuel and oil spills that occur at the project site should be cleaned up appropriately as related to the nature of the spill

### Flora:

- There should be a preconstruction walk-through of the development footprint / project site in order to locate individual plant species such as Aloes, and must also be relocated to a suitable and similar habitat where these plants can grow without any disturbance.
- Permits may be needed from DAFF to remove the individuals found on site such as *Aloe maculate* and *A. broomii* var. *broomii*. The contractor must apply for these permits in a phased manner.
- Weeds and alien invasive control measures must be applied to eradicate the category 1b species on disturbed areas.

### **Heritage Impact Assessment**

The site is located on previously degraded (developed) terrain primarily underlain by Tarkastad Subgroup sediments where no fossils or fossil exposures were observed. Quaternary sediments (unconsolidated overburden) around the study area is made up of thin residual and previously disturbed soils that are not considered to be fossiliferous. The foot survey revealed no evidence of intact Stone Age localities or artefacts distributed as surface scatters on the landscape. There are also no indications of prehistoric structures or remains within or in the immediate vicinity of the survey area. There is no evidence of historical structures in the demarcated area.

Due to the degraded condition of the study area potential palaeontological impact with regard to the feedlot footprint is considered to be negligible. Installation of pipelines along sections 1 and 2 will largely impact degraded Tarkastad Subgroup sediments and overburden as a result of previous farming activities. Installation of pipelines along section 3 (approximately 460 m) may affect intact Tarkastad Subgroup sediments. However, potential for impacting on in situ fossils is considered low given the relatively small (linear flat and shallow) footprint that will be affected.

A small, fenced-off graveyard covering about fifty square metres (50 m<sup>2</sup>), is located within the study area. The cemetery will not be impacted by the proposed development. Impact on potentially intact Stone Age archaeological remains, rock art, prehistoric and historical structures or graves is considered unlikely. The terrain in general is regarded as of low archaeological significance and is assigned a rating of Generally Protected C (GP.C).

### **Recommendations of the EAP**

The following mitigation measures need to be included:

- Induction and Environmental Awareness training must be done periodically over the duration of the project.
- All activities must be conducted where reasonable and possible during the drier months.
- A periodic photo journal must be kept in order to document the condition of the work areas over the duration of the project.



- A master plan must be kept on site. The master plan must indicate temporary and permanent infrastructure, diversions, no-go areas, demarcated areas, sensitive areas, stockpiles, material lay down areas, rest & eat area, access, parking, offices and storerooms.
- An incident register must be kept on site and updated regularly.
- Where temporary toilers are to be provided it must be emptied regularly well in advance of filling up.
- Mitigation measures as described in the EMP must be adhered to strictly.
- No open fires will be allowed on site, and demarcated smoking areas must be set out and indicated on the site layout plan.
- No vegetation may be removed/moved without the relevant footprint.
- Vegetation clearance must be limited to the development footprint only.
- Where possible use existing access roads, should new ones need to be developed it must cross the shortest distance.
- No chemicals or hazardous substances may be stored within 100 metres of a watercourse.
- Drip trays to be placed beneath all stationary equipment and used during refuelling.
- No animals may be killed, should snakes be discovered a trained person must be called upon to move them.
- A Stormwater Management Plan must be implemented for the whole site in order to prevent flooding and to direct water to certain areas.

## BASIC ASSESSMENT REPORT CONTENT REQUIREMENTS

Content Requirements of a Basic Assessment Process	Section in the Report
(a) details of – (i) the EAP who prepared the report, and (ii) the expertise of the EAP, including a curriculum vitae;	(i)
(b) the location of the activity, including: (i) the 21 digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section B
(c) a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale;	Appendix C
(d) a description of the scope of the proposed activity, including – (i) all listed and specified activities triggered and being applied for; and (ii) a description of the activities to be undertaken including associated structures and infrastructure;	Section A
(e) a description of the policy and legislative context within which the development is proposed including –	Section A

## BASIC ASSESSMENT REPORT

<p>(i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to <b>this</b> activity and have been considered in the preparation of the report; and</p> <p>(ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools framework, and instruments;</p>	
<p>(f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;</p>	Section A 1.10
<p>(g) a motivation for the preferred site, activity and technology alternative;</p>	Section A 1.2.1
<p>(h) a full description of the process followed to reach the proposed preferred alternative within the site, including:</p> <ul style="list-style-type: none"> <li>(i) details of all the alternatives considered;</li> <li>(ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;</li> <li>(iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;</li> <li>(iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;</li> <li>(v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts – <ul style="list-style-type: none"> <li>(aa) can be reversed;</li> <li>(bb) may cause irreplaceable loss of resources; and</li> <li>(cc) can be avoided, managed or mitigated;</li> </ul> </li> <li>(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risk associated with the alternatives;</li> <li>(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;</li> <li>(viii) the possible mitigation measures that could be applied and level of residual risk;</li> <li>(ix) the outcome of the site selection matrix;</li> <li>(x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and</li> <li>(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity;</li> </ul>	Section A 1.2.1
<p>(i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including –</p> <ul style="list-style-type: none"> <li>(i) a description of all environmental issues and risk that were identified during the environmental impact assessment process; and</li> <li>(ii) an assessment of the significance of each issue and risk and an</li> </ul>	Appendix F

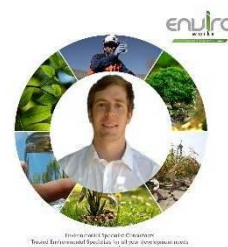
BASIC ASSESSMENT REPORT

indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	
(j) an assessment of each identified potentially significant impact and risk, including- (i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impacts and risk occurring; (iv) the probability of the impact and risk occurring; (v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be avoided, managed or mitigated;	Appendix F
(k) where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulation and an indication as to how these findings and recommendations have been included in the final report;	Appendix F
(l) an environmental impact statement which contains – (i) a summary of the key findings of the environmental impact assessment; (ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the proposed site indicating any areas that should be avoided, including buffers; and (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	Section B
(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMP’r;	Appendix G
(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Section E
(o) a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;	-
(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Section E
(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	N/A
(r) an undertaking under oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected	Section F

## BASIC ASSESSMENT REPORT

parties and any responses by the EAP to comments or inputs made by interested and affected parties; and	
(s) where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	N/A
(t) any specific information that may be required by the competent authority; and	Appendix J
(u) any other matters required in terms of section 24(4)(a) and (b) of the Act.	N/A

### DETAILS OF THE EAP



<b>Name:</b>	Marius
<b>Surname:</b>	Venter
<b>Highest qualification:</b>	BSc Conservation Ecology and Entomology (SU)
<b>IAIA registered:</b>	No. 10458590
<b>SACNASP Candidate Scientist:</b>	No. 117708
<b>Postal address:</b>	Enviroworks Suite 116 Private Bag X01 Brandhof 9324
<b>Physical address:</b>	103 Donald Murray Avenue Park West Bloemfontein 9301
<b>Cell phone:</b>	072 286 6683
<b>E-mail:</b>	marius@enviroworks.co.za

#### Relevant qualifications

- BSc Conservation Ecology and Entomology (SU)

#### Work experience

- January 2017- July 2017: Research assistant, University of the Free State (UFS)
- July 2018- current: Environmental Consultant and Legal Assistant at Enviroworks

### **Key project experience**

- I am currently completing my MSc in Environmental Management at the University of the Free State (2017-2018).
- Experience in 1) Compilation of documentation and report writing 2) Legal compliance and notices 3) Conducting ecological studies and reviews 4) Environmental Audits 5) Environmental Authorisations.

### **Ecological Impact Assessment Specialist Report Experience**

- Ecological Impact Assessment: The proposed development of an oil recycling plant, near Lakeview, Mangaung, Free State
- Ecological Impact Assessment: Supreme Poultry, Bloemfontein, Free State
- Ecological Impact Assessment Karan Beef near Aliwal North, Mohokare, Free State
- Review Ecological Studies: 8 Ecological Studies reviewed for establishment of borrow pits for road construction by SANRAL

### **Wetland Delineation**

Wetland delineation and risk assessment for water use license application for the proposed Zachtevlei dam and bulk conveyance infrastructure, Lady Grey, Eastern Cape.

### **Legal Queries and Site Inspections**

- The construction of a 9 km steel pipeline for irrigation at Witbank, Namakwa District Municipality, Northern Cape
- Proposed development of a Waste Water Treatment Works and associated pipeline on the remaining extent of Erf no 424, Britstown, Northern Cape Province
- Request for conformation that the existing Carpe Diem farm operations is lawful / or not and if a section 24G rectification application will be required, Northern Cape Province
- Environmental subservices for the improvement of National Route 7 Section 2 between Roodraai (km 7.49) and Moorreesburg (km 33.90)
- Environmental subservices for the improvement of National Route 7 Section 3 between Piketberg (km 31.53) and Piekenierskloof Pass (km 65.3)
- The construction of a pipeline to pump water from a river into two dams at the Krugers Post Farm
- Proposed development of a security village and associated infrastructure on erf 3952 & 3975, Hartswater, Northern Cape Province

- 8 (eight) development option reports for Phunga Consulting Engineers in the Northern Cape Province

**ECO - Environmental audits**

- Mission Point Mine – Free State Province
- The construction of a 132kV powerline between Tweespruit and Driedorp, Free State Province

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## ACRONYMS AND ABBREVIATIONS

<b>BA</b>	–	Basic Assessment
<b>BAR</b>	–	Basic Assessment Report
<b>CBA</b>	–	Critical Biodiversity Area
<b>DEA</b>	–	Department of Environmental Affairs
<b>EAP</b>	–	Environmental Assessment Practitioner
<b>ECO</b>	–	Environmental Compliance 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>GN R</b>	–	Government Notice Regulation
<b>I&amp;AP</b>	–	Interested & Affected Party
<b>IDP</b>	–	Integrated Development Plan
<b>LED</b>	–	Local Economic Development
<b>LM</b>	–	Local Municipality
<b>NDT</b>	–	National Department of Tourism
<b>NEM:WA</b>	–	National Environmental Management: Waste Act
<b>NEMA</b>	–	National Environmental Management Act
<b>NHRA</b>	–	National Heritage Resources Agency
<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 Agency
<b>SDF</b>	–	Spatial Development Framework

# BASIC ASSESSMENT REPORT



**destea**

department of  
economic, small business development,  
tourism and environmental affairs  
FREE STATE PROVINCE

(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.

## 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 as amended 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 **07 April 2017**. 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.

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

# 1 SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES	
X	

If YES, please complete the form entitled “Details of specialist and declaration of interest” for the specialist appointed and attach in Appendix I.

## 1.1 Project Description

### 1.1.1 Describe the project associated with the listed activities applied for:

Karan Beef currently operates a feedlot on Portion 3 of the Farm Wanganella No. 994 near Aliwal North, Mohokare, Free State.

Karan Beef is officially the largest producer of beef in Africa and accommodates roughly 150 000 head of cattle. With an ever growing demand for meat and the implications of drought on the agricultural sector, Karan Beef proposes to construct a new feedlot as well as expanding an already existing feedlot in order to prevent the break in change of demand. The site is situated next to the N6, approximately 8.8km from Aliwal North. The proposed development site is situated close to the border between Free State and the Eastern Cape. The locality map can be seen in Figure 1.

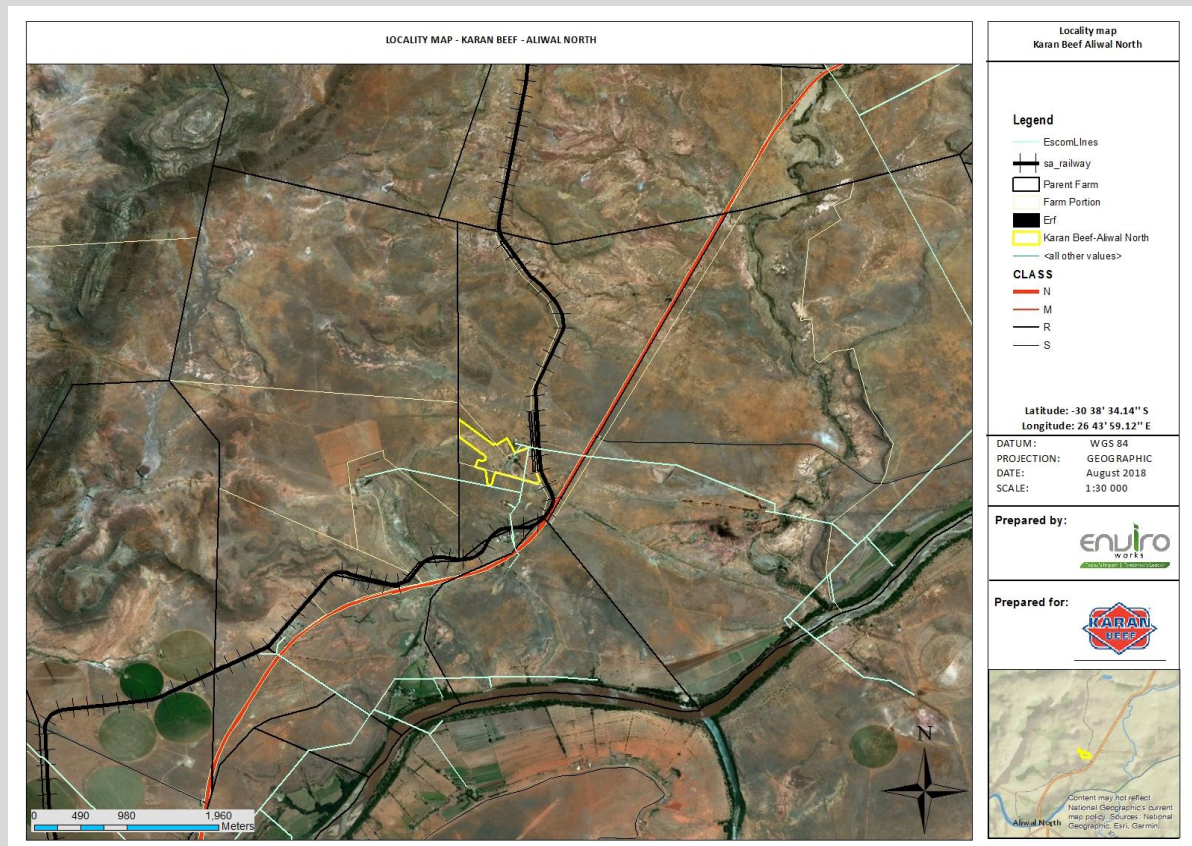


Figure 1: Locality map of Karan Beef

The proposed development will have a development footprint of one point three five hectares (1.35 ha) situated on a parcel of land with a combined footprint of approximately twenty one and a quarter hectare (21.25 ha). Therefore the feedlot will have a coverage of approximately 13 500m<sup>2</sup>. The already existing feedlot will receive an additional 1000 heads of cattle to the 800 that are already present.

This project will entail the clearing of vegetation where after construction of the feedlot will

commence. The proposed feedlot will be constructed in a North Western / South Eastern direction, adjacent to an already existing feedlot. In Figure 2 the layout of the existing feedlot area can be seen in blue while the proposed expansion can be seen in black.

The proposed project entails the development of the following infrastructure:

- Development of feedlot pens: The proposed feedlot will accommodate 2000 cattle. The development footprint of the proposed project are +- 13 500m<sup>2</sup>.
- In the extension, an additional 1000 heads of cattle will be added to the 800 heads of cattle already in the feedlot.
- A road of approximately 200 metres in length and wider than four (4) metres are proposed
- The construction of a manure dam (5000m<sup>3</sup>) are proposed.

### **Existing Operations at the Site**

Karan Beef operates a cattle feedlot on the farm Wanganella No. 994 near Aliwal North, Mohokare, Free State Province. Currently, approximately 800 cattle are confined in pens where they are fed with a balanced grain-fed diet to prepare them for slaughtering. Another 1000 cattle will be added to the existing feedlot which will cause the extension. The cattle are brought into the feedlot system from six months old, are fed in the system for two weeks where after they are taken to the Heidelberg feedlot.

Apart from the basic water and food requirements needed by the cattle, care is also taken of the animal health, dust control, run-off management and the regular removal of dung.

Additional operations :

- The new Feedlot will accommodate 2000 cattle and will cover an area of 1.35 hectares.
- Extension of 1000 cattle in the already existing feedlot
- A proposed manure flow of dam of 5000m<sup>3</sup>
- A proposed road of approximately 200 metres and wider than 4 metres

### **Environmental Management:**

Karan Beef is an ISO 14001 accredited company, which implicates that a self-regulatory environmental management system is implemented and maintained to comply with all Environmental Legislation and their own policy towards environmental issues.

The International Organization for Standardization (ISO) is a federation of international standards institutes from 140 countries. These institutes work in partnership with governments; industry, business, and consumer representatives to establish universally accepted quality standards for industry to manage their environmental impacts to acceptable standards. If the environmental management system of an organisation is structured as such that compliance with environmental demands is highly likely, the organisation is accredited to the ISO 14001 standard. The introduction of an ISO 14001 EMS is not a legal requirement although it facilitates compliance with environmental legislation.

For ISO 14001 accreditation as a point of departure, Karan Beef had to define its environmental policy and sets out what the organisation intends to achieve. The policy is a public document that includes undertakings to comply with legal requirements, and confirmed its commitment to continual improvement.

The commitment towards good environmental management principles is therefore demonstrated by management's decision to embark on the ISO 14001 Environmental Management system. The ISO 14001 accreditation is also proof whereby it is publicly and formally confirmed that the defined

environmental policy is achieved.

In a world that is, becoming increasingly globalised the ISO 14001 certification provides proof to national and international law enforcement authorities and investors that Karan Beef operates in line with international sustainable development requirements. An increasingly large number of industries require their trade partners to be ISO 14001 accredited before they are prepared to trade with them.

The implemented ISO environmental management system is a flexible and effective management tool that helps Karan Beef to manage its activities in line with legal, society and customer requirements. An efficient environmental management system enables management to set and meet environmental standards and to assess whether the organisation's environmental objectives are being achieved. Internal and external audits are performed on a regular basis as a management tools to measure compliance to relevant legislation and environmental management objectives.

**1.1.2 Provide a detailed description of the listed activities associated with the project as applied for:**

<b>Listed activity as described in GN 327,325 and 324</b>	<b>Description of project activity</b>
<p><b>GN R327 (LN 1), Activity 4:</b></p> <p>The development and related operation of facilities or infrastructure for the concentration of animals in densities that exceed—</p> <p>(i) 20 square metres per large stock unit and more than 500 units per facility;</p>	<p>As the proposed feedlot will constitute of 2000 cattle confined in an area of 13 500m<sup>2</sup> this activity will be triggered.</p>
<p><b>GN R327 (LN 1), Activity 27:</b></p> <p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>As confirmed by the Ecological Impact Assessment, there are Indigenous plant species found on site. The proposed feedlot will consist of an area approximately 1.35 hectares of which the vegetation on the proposed site will be cleared.</p>
<p><b>GN R327 (LN 1), Activity 39:</b></p> <p>The expansion and related operation of facilities for the concentration of animals in densities that will exceed—</p> <p>(i) 20 square metres per large stock unit, where the expansion will constitute more than 500 additional units</p>	<p>The addition/extension of the already existing feedlot, 800 cattle, with another 1000 heads of cattle will trigger this activity.</p>
<p><b>GN R324 (LN 3), Activity 4:</b></p> <p><u>Activity 4:</u></p>	<p>The proposed project includes the construction of a road of approximately 200 metres and</p>

<p>The development of a road wider than 4 metres with a reserve less than 13.5 metres</p> <p>Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding disturbed areas;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an international convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(ff) Core areas in biosphere reserves; or (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas</p>	<p>wider than 4 metres. As for this reason this activity was included per request of the client.</p>
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## 1.2 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) of GN 326, Regulation 2014 as amended. 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.

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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.

### 1.2.1 Site Alternatives

<b>Preferred Alternative</b>			
Description	Lat (DDMMSS)	Long (DDMMSS)	
<b>Proposed feedlot:</b> The current preferred site is approximately 1.35ha in size. Due to the farm being the owners land this was the only site alternative for the proposed construction site as this area is located best to fit in with already existing construction on site.	Middle point: 30° 38' 34.14''	Middle point: 26° 43' 59.12''	
	Corner A: 30° 38' 30.14''	Corner A: 26° 43' 48.57''	
	Corner B: 30° 38' 28.41''	Corner B: 26° 43' 50.29''	
	Corner C: 30° 38' 34.09''	Corner C: 26° 43' 53.97''	
	Corner D: 30° 38' 32.34''	Corner D: 26° 43' 55.67''	
	<b>Alternative 2</b>		
	Description	Lat (DDMMSS)	Long (DDMMSS)
N/A			
<b>Alternative 3</b>			
Description	Lat (DDMMSS)	Long (DDMMSS)	
N/A			

In the case of linear activities:

**Alternative:**

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

**Latitude (S):**

**Longitude (E):**

N/A
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Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

N/A
-----

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

N/A
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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.

### 1.2.2 Lay-out Alternatives

<b>Preferred Alternative</b>			
Description	Lat (DDMMSS)	Long (DDMMSS)	
<p>The layout as seen in Figure 2 (Preferred Alternative) are preferred. This is due to the nearest point of the proposed feedlot will be further away from the hill, as opposed to Alternative option 2. The vegetation found on the hill are more intact and undisturbed than the vegetation found on the proposed site itself (Appendix A). As informed by the client, differences between the two alternatives may also include impacts on the hydrology in the sense that water flow may be increased more significantly by alternative one than preferred alternative which may also lead to alternative one causing the inflow of manure into the existing dam.</p> <p><b>Preferred Alternative include the following advantages:</b></p> <ul style="list-style-type: none"> <li>• Consideration has been given to the layout of infrastructure to ensure minimum disturbance on vegetation as well as on the watercourse when considering the flow.</li> <li>• Where possible infrastructure is placed on degraded areas, keeping vegetation intact enhancing the visual absorption capacity.</li> <li>• As per the findings of the Heritage Specialist it is ensured that no development will occur within fifty metres (50m) from a Heritage Sensitive area as there is no evidence of historical structures in the demarcated area.</li> </ul> <p><b>Preferred Alternative has the following disadvantage:</b></p> <ul style="list-style-type: none"> <li>• In order to ensure minimal vegetation clearance degraded areas as found on the site should rather be disturbed than areas of indigenous vegetation that can be found in small patches on the site.</li> <li>• The proposed development are situated relatively close to a hill which might cause drainage problems with heavy rains</li> </ul>	Middle point: 30° 38' 34.14"	Middle point: 26° 43' 59.12"	
	Corner A: 30° 38' 30.14"	Corner A: 26° 43' 48.57"	
	Corner B: 30° 38' 28.41"	Corner B: 26° 43' 50.29"	
	Corner C: 30° 38' 34.09"	Corner C: 26° 43' 53.97"	
	Corner D: 30° 38' 32.34"	Corner D: 26° 43' 55.67"	
	<b>Alternative 1</b>		
	Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 1 is considered as a feasible and reasonable layout alternative.	Middle point: 30° 38' 34.14"	Middle point: 26° 43' 59.12"	

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<ul style="list-style-type: none"> <li>• Consideration has been given to the layout of infrastructure to ensure minimum disturbance on vegetation as well as on the watercourse when considering the flow.</li> <li>• Where possible infrastructure is placed on degraded areas, keeping vegetation intact enhancing the visual absorption capacity.</li> <li>• As per the findings of the Heritage Specialist it is ensured that no development will occur within fifty metres (50m) from a Heritage Sensitive area as there is no evidence of historical structures in the demarcated area.</li> </ul> <p><b>Alternative 1 has the following disadvantage:</b></p> <ul style="list-style-type: none"> <li>• In order to ensure minimal vegetation clearance degraded areas as found on the site should rather be disturbed than areas of indigenous vegetation that can be found in small patches on the site.</li> <li>• The proposed development are situated relatively close to a hill which might cause problems with heavy rains</li> <li>• The direction of this alternative may cause water flow to be faster which may lead to erosion and manure leading into the proposed dam.</li> </ul>	Corner A: 30° 38' 30.87"	Corner A: 26° 43' 48.14"
	Corner B: 30° 38' 28.84"	Corner B: 26° 43' 49.42"
	Corner C: 30° 38' 33.74"	Corner C: 26° 43' 54.46"
	Corner D: 30° 38' 31.68"	Corner D: 26° 43' 55.69"
	<b>Alternative 3</b>	
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

**1.2.3 Technology Alternatives**

<b>Preferred Alternative</b>
N/A
<b>Alternative 1</b>
N/A
<b>Alternative 3</b>
N/A

**1.2.4 Other Alternatives (e.g. scheduling, demand, input, scale and design alternatives)**

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

**1.2.5 No-go Alternative**

The no-go alternative will result in the proposed development not taking place. This will result in the area retaining its current state as it is situated within an Ecological Support Area. Biodiversity within the area will also remain as is.

Should the proposed project not go ahead, the potential additional income source for farmers will not be realised. The potential job opportunities as well as the potential impacts will also not be realised.

The aim of the proposed feedlot is to promote agriculture in the Mohokare Municipality as it will offer a range of activities and benefits to the local industry for example promoting the local economy. Furthermore, more employment opportunities will arise from the development. Should the development not be approved these advantages will not occur.

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

### 1.3 PHYSICAL SIZE OF THE ACTIVITY

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

**Alternative:**

Alternative A1<sup>1</sup> (preferred activity alternative)  
 Alternative A2 (if any)  
 Alternative A3 (if any)

**Size of the activity:**

13 500m <sup>2</sup>
13 500m <sup>2</sup>
N/A

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)  
 Alternative A2 (if any)  
 Alternative A3 (if any)

**Length of the activity:**

N/A
N/A
N/A

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

**Alternative:**

Alternative A1 (preferred activity alternative)  
 Alternative A2 (if any)  
 Alternative A3 (if any)

**Size of the site/servitude:**

N/A
N/A
N/A

### 1.4 SITE ACCESS

Does ready access to the site exist?

YES x	
----------	--

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

N/A
-----

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

Describe the type of access road planned:

Although an existing access road are already constructed, an additional road with specifications of  $\pm 200$  metres and wider than four metres are proposed to improve access to specific areas of the farm. Due to this reason the listed activity was included in the application.

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.

## 1.5 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.

**Please refer to Appendix A**

## 1.6 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.

**Please refer to Appendix C**

## 1.7 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.

Please refer to Appendix A

## 1.8 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.

Please refer to Appendix B

## 1.9 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.

Please refer to Appendix C

## 1.10 ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES x	
The proposed feedlot will be located within close proximity of the existing feedlot on the same farm. The area is already used for cattle farming.		

<b>2. Will the activity be in line with the following?</b>		
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	YES x	
The Free State Spatial Development Framework 2014 under section B 12.1 states that the agricultural sector contributes approximately 7% to the provincial GDP while 14% of South Africa's agricultural GDP is generated in the Free State. Approximately 14.5% of South Africa's commercial farming takes place in the province. The Free State supports and gives effect to the objectives of the Comprehensive African Agricultural Development Programme (CAADP) which aims to combat Food insecurity caused by structural poverty and inequality. It further states that improved food security relies on efficient government policies and sustainable agricultural practices that integrate the food economy into a rapid economic growth strategy which, in turn, manifests in enhanced benefit distribution. The proposed development will create job opportunities during the operational phase which might play a positive role in the economy of the area.		
<b>(b) Urban edge / Edge of Built environment for the area</b>		NO x
The project are proposed on the property that falls outside the urban edge of Aliwal North.		
<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 X	
<p>According to the Mohokare Locality Municipality IDP 2017/2018, with reference to the agricultural sector, general factors underlying the comparative advantage for Mohokare Municipality agriculture include, amongst others:</p> <ul style="list-style-type: none"> <li>• livestock farming tends to be relative "stable" in terms of income</li> <li>• favourable current wool prices</li> <li>• farmers next to Orange and Caledon rivers can irrigate which complement and stabilise income</li> </ul> <p>"There is a need to: Develop the agricultural sector in order to increase employment generation in this sector". In other words agriculture plays an important role in the economy of Mohokare Locality Municipality and the main aim is to generate jobs in the community and also contribute to the LED of the area; therefore the proposed project is in line with the Municipal's IDP, the community is going to benefit a lot from the proposed project as jobs will be created both in the construction phase and the operational phase of the project.</p>		
<b>(d) Approved Structure Plan of the Municipality</b>	YES x	
The activity falls within the area which has been allocated for agricultural purposes.		
<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 X	
No Environmental Management Framework could be obtained for Mohokare Local Municipality.		
<b>(f) Any other Plans (e.g. Guide Plan)</b>		NO X
There are no other municipal or provincial plans associated with this activity.		

<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>	<p>YES X</p>	
<p>It is imperative to align IDP with the National Development Plan (NDP), NDP's priorities of vision 2030 highlights the promotion of social and economic development.</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>	<p>YES X</p>	
<p>The activity is a need to the community as it will improve the socio economic dimension of the area and nation through its' significant contribution to the GDP of the country while creating job opportunities to residents of the Mohokare Local Municipality. The Mohokare Municipality currently has an unemployment figure of 31.4% (Statistics SA). The community and the area needs the activity as it will contribute to job creation, food security and Local Economic Development.</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>	<p>YES X</p>	
<p>The activity is an addition to similar existing activities within the same farm. Therefore additional capacity will be created because of the construction of one more feedlot and expansion of the existing one.</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>		<p>NO X</p>
<p>Although this is not a municipal project, impacts may be associated with municipality infrastructure if effluent are diverted into the municipal systems and waste lines. It is proposed that all effluent generated on the site flows into already existing and a proposed dam and that manure are removed by farmers while waste generated are dumped into the local landfill site.</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 x</p>	
<p>Though this is not a government project, it does address some issues as highlighted in the IDP of Mohokare Municipality such as improving the socio economic of the municipality. The proposed development would contribute to job creation within the Mohokare Municipality area as well as provide meat on a national level. NDP views agriculture as having the potential to create close to 1 million new jobs by 2030, an important part to the overall employment target.</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 x</p>	
<p>The activity is a supplementary of the currently similar activities already in place around the area as in the surrounding area various agricultural activities takes place. Therefore this activity will be in line with the existing land use within the area, the location factors do favour the land use associated with the activity.</p>		
<p><b>9. Is the development the best practicable environmental option for this land/site?</b></p>	<p>YES x</p>	
<p>As the proposed project is situated an Ecological Support Area, the best practicable environmental option would be to leave the development area as is. However, taking into account factors such as design measures, local economic development due to an escalation of meat production, job creation and the relatively degraded state of the development area, the proposed development may be considered as a favourable development. If adherence is given to mitigation measures set out in the Impact Assessment Report and the Environmental Management Plan the impact on the receiving environment will be reduced significantly. As the area is already partly degraded, no significant degradation are foreseen with the construction of the proposed feedlot.</p>		
<p><b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b></p>	<p>YES x</p>	
<p>Benefits of the proposed project include employment creation and improving socio economic dimension of the area. Environmentally the area is already relatively disturbed as per Ecological and Heritage reports. Therefore the benefits will outweigh negative impacts.</p> <p>The main aim of the Environmental Impact Assessment and Environmental Management Plan is to minimise the negative impacts as far as possible to an extend of avoiding them at all, and to enhance the positive impacts. There will be job creation and an increase in the LED of the community.</p>		
<p><b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b></p>	<p>YES x</p>	
<p>The proposed activity already falls within the agricultural/ farming area, thus it is an addition to similar activities and possible future activities.</p>		
<p><b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b></p>		<p>NO x</p>
<p>According to Section 27 of South African constitution, everyone has right to sufficient food, therefore as a result of this activity no one will be negatively affected. A comprehensive Public Participation Process will be undertaken to ensure that all concerns raised from adjacent landowners as well as the public are adequately addressed.</p>		
<p><b>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b></p>		<p>NO x</p>
<p>The proposed activity is outside the urban edge of Aliwal North and will definitely fit into the rural/ farming of the area. There will not be any negative impact on the rural landscaping of the area and the area is already used for similar activities.</p>		



<p><b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?</b></p>		<p>NO x</p>	
<p>This activity does not form part of the SIPs (Strategic Integrated Projects).</p>			
<p><b>15. What will the benefits be to society in general and to the local communities?</b></p>			
<p>The project will create job opportunities both during construction phase and operational phase as well as Local Economic Development.</p>			
<p><b>16. Any other need and desirability considerations related to the proposed activity?</b></p>			
<p>None.</p>			
<p><b>17. How does the project fit into the National Development Plan for 2030?</b></p>			
<p>The National Development Plan for 2030 priorities include NDP's, the promotion of social and economic development.</p>			
<p><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></p>	<p>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 form part of the process, whilst mitigation measures and the need and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such Integrated Environmental Management were accounted for.</p>		
<p><b>19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.</b></p>	<p>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 a public participation process and specialist investigations formed part of this basic assessment process, whilst mitigation measures and the needs and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for as follow:</p> <p><i>(2) 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> <p>The goal of this BA is to identify and mitigate potential socio-economic impacts in order to meet the terms of Section 24 of the Constitution.</p> <p><i>(3) Development must be socially, environmentally and economically sustainable.</i></p> <p>The overall goal of this BA 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.</p> <p><i>(4)(a) Sustainable development requires the consideration of all relevant factors including the following:</i></p> <ul style="list-style-type: none"> <li><i>i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;</i></li> <li><i>ii. that pollution and degradation of the environment are avoided, or, where they</i></li> </ul>		

- 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 non-renewable 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 risk averse 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.*

An Environmental Management Program Report (EMP-r) was 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 minimise 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.*

A Public Participation Process (PPP) will be undertaken in terms of Section 41 of the NEMA EIA Regulations (GN R. 982), which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given 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 the activity.

*(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 PPP will be undertaken in terms of Section 41 of the NEMA EIA Regulations (GN R. 982), which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given 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 Department of Environmental Affairs (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.*

Where feasible efforts should be made to employ local contractors that are compliant with Broad Based Black Economic Empowerment (BBBEE) criteria. Furthermore, the proposed project will contribute to community education as well as raise environmental awareness through information boards.

*(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 be taken into account during all phases of the proposed 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 give effect to Section 32 of the Constitution. I&AP's will be notified of the decision in terms of the requirements as set out in Section 41 of the NEMA EIA Regulations (GN R. 982), 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 provide their inputs on the project.

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

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.*

*(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.*

Through the appointment of various specialists, mitigation measures have been drawn up to

ensure that the proposed project does not harm the environment. Architectural plans were designed according to South African Norms and Standards. An Ecologist as well as a Heritage Specialist were appointed to provide the EAP with mitigation measures to ensure impacts remain as low as possible.

*(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 was compiled in order to prevent or minimise 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 the 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.*

The recruitment selection process should seek to promote gender equality and the employment of woman wherever possible, particularly for less labour intensive work.

*(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 Sensitivity map containing all vulnerable vegetation, watercourses and ecosystems were prepared in order to determine that the proposed project will have no negative impact thereon. An Ecologist was appointed to conduct a study to determine the impacts on vegetation, wetlands and streams. All mitigation measures provided to the EAP are included within the EMP'r (Please refer to **Appendix G: EMP'r**).

### 1.11 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:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
The Constitution of South Africa (No 108 of 1996)	Protection of human rights and environment of the study area.	National	1996
National Environmental Management Act (No 107 Of 1998)	Protection of the environment of the study area and surroundings.	The Department of Economic, Small Business Development, Tourism and Environmental Affairs	2014
National Heritage Resources Act (No 25 of 1999)	Protection of heritage	South African Heritage	1999

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	<p>resources surrounding the study area and those uncovered during the development phase by reporting to the nearest heritage authority.</p> <p>The development area will exceed five thousand square metres (5000m<sup>2</sup>).</p>	Resources Agency (SAHRA)	
National Environmental Management: Biodiversity Act (10 of 2004)	Protection of biodiversity features and where not possible relevant permits will need to sort by the Contractor. Translocation of plants might also be needed as stated within the ecological impact assessment.	The Department of Economic, Small Business Development, Tourism and Environmental Affairs	2004
National Water Act ( Act No 36 of 1998)	Protection of water resources and where not possible relevant permits/licences will need to sort by the Contractor.	South African Department of water affairs (DWA)	1998
Occupational Health and Safety Act (No 85 of 1993)	Protection of workers on site through provision of Personal Protective Equipment's; Training and other health and safety amenities	National	1993
Environmental Impact Assessment Regulations (GN R. 327, R. 325 & 324) of 7 April 2017	The proposed project triggers listed activities as listed in GN R. 327 and GNR. 324	National Department of Environmental Affairs (DEA)	2014
South African National Biodiversity Institute Geographical Information Systems	BGIS is an online portal used for the distribution of Biodiversity Data for each province within South Africa.	National Department of Environmental Affairs (DEA)	2017
National Development Plan 2030	This document offers the long term perspective for development in South Africa	National Planning Commission	2030
Mohokare Municipality Integrated Development Plan	The project is situated within the Mohokare Municipality. It must be ensured as far as possible that the proposed development is in Line with the IDP.	Mohokare Municipality	2018-2019
Free State Province Provincial Spatial Development Framework.	Within the National Development Plan certain Sectors are described responsible for ensuring the LED of South Africa.	National Planning Commission	2030

## 1.12 Waste, effluent, emission and noise management

### 1.12.1 Solid Waste Management

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

YES	
X	

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

T.B.C
-------

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

All recyclable material will be disposed of at a Local Recycler. All non-recyclable waste will be disposed of at the Municipal landfill site in Aliwal North.

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

Waste will be disposed of at the Maletswai Landfill site, which is classified as a G:C:B- landfill. The Permit Reference number of the landfill site is 12/9/11/P131.

Will the activity produce solid waste during its operational phase?

YES	
x	

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

T.B.C
-------

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

Recycling will take place on site as per the waste classification system. All recyclable material will be disposed of at a Local Recycler. All non-recyclable waste will be disposed of at Municipal landfill site in Aliwal North namely Maletswai Landfill site. Mortalities will be removed from the feedlot by the beneficiary, on a daily basis, and stored in a cooling room for a maximum of 48 hours, where after they can be sold to lion farmers and use as feed.

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

Waste will be disposed of at the Maletswai Landfill site, which is classified as a G:C:B- landfill. The Permit Reference number of the landfill site is 12/9/11/P131.

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

- Manure: Kept in pens and removed to neighbouring farmers for soil incorporation  $\pm 3m^3$  per year;
- Mortalities: Stored in a cooling room and sold to lion farmers; and
- Domestic waste: Maletswai Landfill site

*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 x
--	---------

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 x
--	---------

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.

**1.12.2 Liquid Effluent**

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

	NO x
--	---------

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

N/A	
-----	--

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

	NO x
--	---------

*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?

	NO x
--	---------

If YES, provide the particulars of the facility:

<b>Facility name:</b>	N/A		
<b>Contact person:</b>			
<b>Postal address:</b>			
<b>Postal code:</b>			
<b>Telephone:</b>			
<b>E-mail:</b>	<b>Fax:</b>		

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

N/A
-----

**1.12.3 Emissions into the Atmosphere**

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

YES x	
----------	--

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

	NO x
--	---------

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:

Emission that could possibly be generated during the  
**Construction Phase:**  
 Emissions that could possibly be generated during the construction phase are small amounts of dust and exhaust emissions from construction vehicles and machinery.

Emission that could possibly generated during the  
**Operation Phase:**  
 Emission will be released in the form of methane from the cattle and cattle manure. Since the manure might not be stored on the site, minimal impact is anticipated.

**1.12.4 Waste Permit**

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

	NO x
--	---------

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

**1.12.5 Generation of Noise**

Will the activity generate noise?

YES x	
	NO x

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

Describe the noise in terms of type and level:

Noise impacts will mainly be limited to the construction phase. The level of noise generated will be temporary and is anticipated to be insignificant.  
 The sources of noise include:

- Establishment of the construction camp site;
- Delivery of materials to the construction camp site;
- Movement of heavy construction vehicles; and,
- Presence of construction personnel working on site

Noise will be generated during the operational phase due to the following:

- Movement of vehicles for feeding purposes and collection and bringing of cattle from the farm; and,
- Presence of cattle.

**1.13 WATER USE**

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

Municipal x	Water board	Groundwater x	River, stream, dam or lake	Other	The activity will not use water
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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:

Total water usage of 5 700 000 litres per month, both Municipal and Groundwater



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

YES	<input type="checkbox"/>
X	<input checked="" type="checkbox"/>

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

### 1.14 ENERGY EFFICIENCY

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

Currently the existing operations are dependent on electricity supply from Eskom. The additional feedlot capacity and operations will also feed from the electricity stream provided by Eskom.

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

Depending on the availability of funds, there is proposed solar panel development as means of alternative energy; however this proposal is not part of the current development.

## 2 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 Province
	<b>District Municipality</b>	Xhariep District Municipality
	<b>Local Municipality</b>	Mohokare Local Municipality
	<b>Ward Number(s)</b>	Ward Number 2
	<b>Farm name and number</b>	Wanganella No. 994
	<b>Portion number</b>	3
	<b>SG Code</b>	F02900000000099400003

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.

<b>Current land-use zoning as per local municipality IDP/records:</b>	Agriculture
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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?  NO  YES

## 2.1 GRADIENT OF THE SITE

Indicate the general gradient of the site.

### Alternative S1:

Flat	1:50 – 1:20 x	1:20 – 1:15 x	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 x	1:20 – 1:15 x	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
------	-------------	-------------	-------------	--------------	-------------	------------------

## 2.2 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 checked="" 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 type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

## 2.3 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 x	NO x	YES	NO
Dolomite, sinkhole or doline areas	NO x	NO x	YES	NO
Seasonally wet soils (often close to water bodies)	NO x	NO x	YES	NO
Unstable rocky slopes or steep slopes with loose soil	NO x	NO x	YES	NO
Dispersive soils (soils that dissolve in water)	NO x	NO x	YES	NO
Soils with high clay content (clay fraction more than 40%)	NO x	NO x	YES	NO
Any other unstable soil or geological feature	NO x	NO x	YES	NO
An area sensitive to erosion	NO x	NO x	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.

## 2.4 GROUND COVER

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).

Natural veld - good condition <sup>E</sup> x	Natural veld with scattered aliens <sup>E</sup> x	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 x

If any of the boxes marked with an “<sup>E</sup>” 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.

## 2.5 SURFACE WATER

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

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

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

As per the Ecological Impact Assessment, the sensitivity map indicated an NFEPA wetland to be present on site (Figure 4). The standard indicators for wetland delineation were applied. No evidence could support the claim that the watercourse was a natural wetland. Therefore no natural watercourses occur on site. Soil was excavated to construct dams as verified during the site visit. Soil was historically piled to form about a 3 meter high bank wall. Water is canalled downstream to reach an “Artificial dam” downstream. The development footprint is water affected, with evidence of artificial storm water canals draining the development footprint. The dam is situated on the farms premises, but note this it is not within the direct vicinity of the proposed feedlot.

## 2.6 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:

Natural area x	Dam or reservoir x	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 x
Retail commercial & warehousing	Old age home	River, stream or wetland x
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup> x	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	Sport facilities	Archaeological site
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:

Although the proposed feedlot area being within 500 metres from the railway line, there will be no foreseen impact on the railway line.

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 x
Core area of a protected area?	NO x
Buffer area of a protected area?	NO x
Planned expansion area of an existing protected area?	NO

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		x
Existing offset area associated with a previous Environmental Authorisation?		NO
		x
Buffer area of the SKA?		NO
		x

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

### 2.7 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:		NO
		x
Uncertain		
N/A		

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:

Dr Lloyd Russouw from the Bloemfontein National Museum conducted the field assessment. The following section are extracted from the Heritage Impact Assessment:

#### **Impact Statement and Recommendations:**

Due to the degraded condition of the study area potential palaeontological impact with regard to the feedlot footprint is considered to be negligible. Installation of pipelines along sections 1 and 2 will largely impact degraded Tarkastad Subgroup sediments and overburden as a result of previous farming activities. Installation of pipelines along section 3 (approximately 460 m) may affect intact Tarkastad Subgroup sediments. However, potential for impacting on in situ fossils is considered low given the relatively small (linear flat and shallow) footprint that will be affected. Impact on potentially intact Stone Age archaeological remains, rock art, prehistoric and historical structures or graves is considered unlikely. The terrain in general is regarded as of low archaeological significance and is assigned a rating of Generally Protected C (GP.C).

Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	
	x	

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

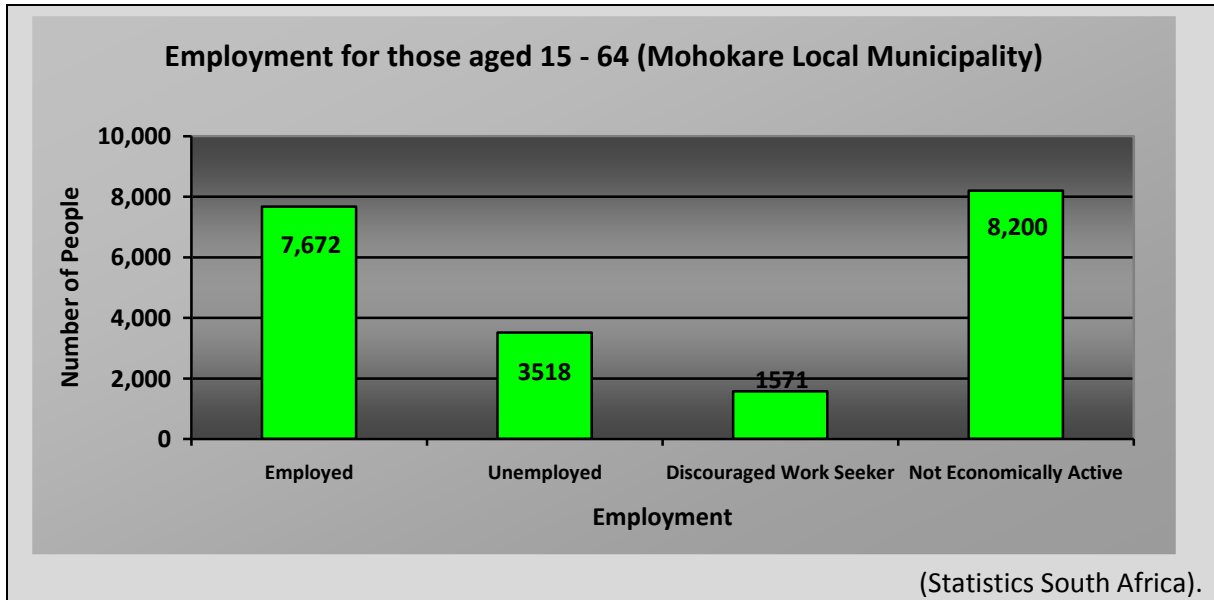
### 2.8 SOCIO-ECONOMIC CHARACTER

#### 2.8.1 Local Municipality

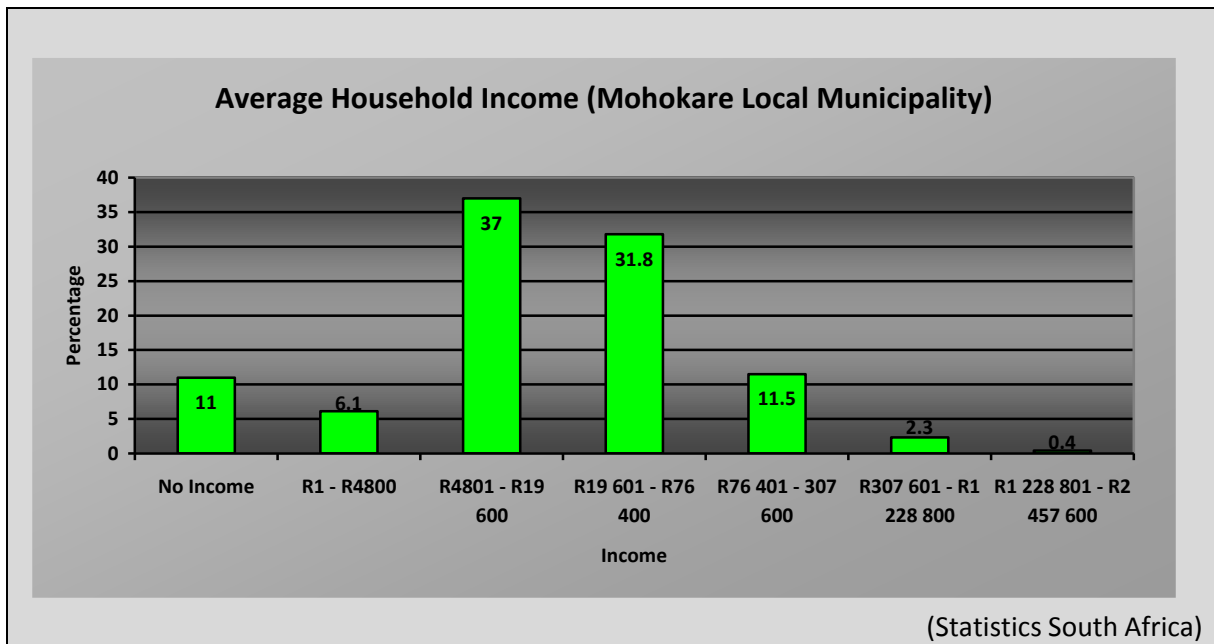
Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

31.4% of individuals of the community within the Mohokare Local Municipality are unemployed, while only 36.6% of the community are employed.

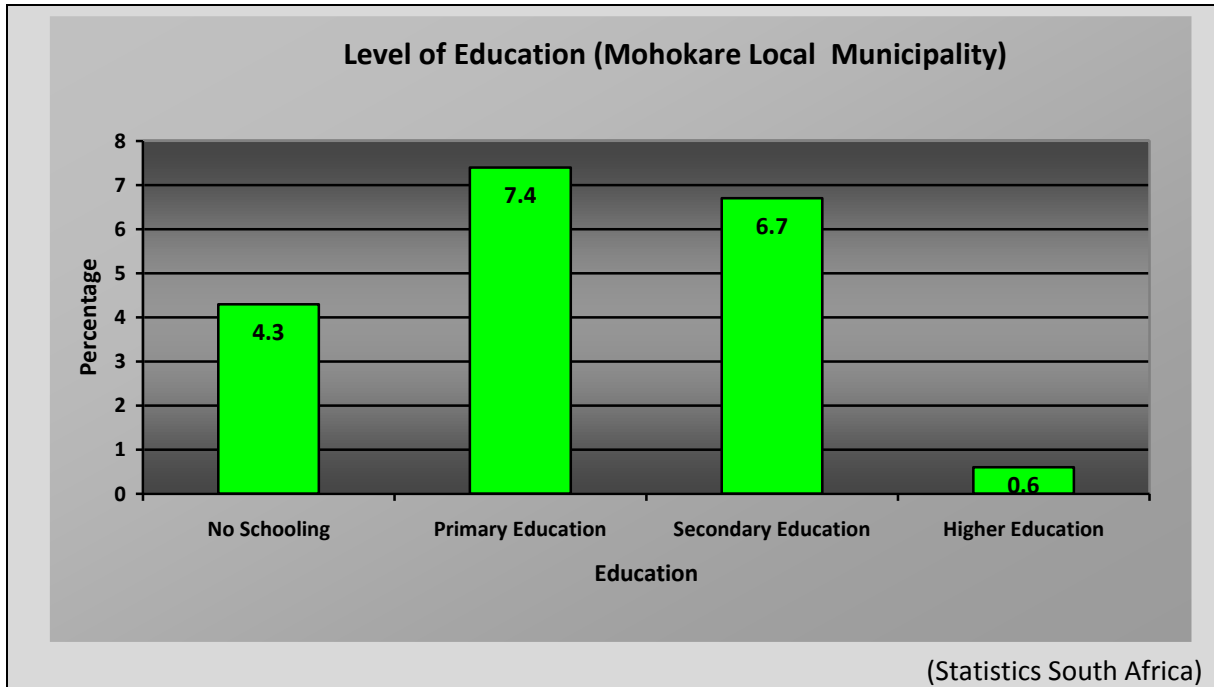


Economic profile of local municipality:



Level of education:

The population figures estimates that there are 34 146 people that live in the Mohokare Local Municipality. The education figures are as follow:



**2.8.2 Socio-economic value of the Activity**

- What is the expected capital value of the activity on completion?
- What is the expected yearly income that will be generated by or as a result of the activity?
- Will the activity contribute to service infrastructure?
- Is the activity a public amenity?
- How many new employment opportunities will be created in the development and construction phase of the activity/ies?
- What is the expected value of the employment opportunities during the development and construction phase?
- What percentage of this will accrue to previously disadvantaged individuals?
- How many permanent new employment opportunities will be created during the operational phase of the activity?
- What is the expected current value of the employment opportunities during the first 10 years?
- What percentage of this will accrue to previously disadvantaged individuals?

R 5 000 000.00
R 2 000 000.00
NO x
NO x
10
R 100 000.00
80%
10
R 3 600 000.00
80%

**2.9 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
	Ecological Support Area (ESA)	<p>The entire proposed construction area forms part of an area classified as an Ecological Support Area 2. The site area is not typically representative of an Ecological support area 2. The reason for this is due to the fact that degraded and bare soil areas are present on the proposed site.</p> <p>An 'Ecological Support Area' is an area that must retain its ecological processes in order to:</p> <ul style="list-style-type: none"> <li>• meet biodiversity targets for ecological processes that have not been met in Critical Biodiversity Areas (CBAs) or protected areas;</li> <li>• meet biodiversity targets for representation of ecosystem types or species of special concern when it is not possible to meet them in CBAs;</li> <li>• support ecological functioning of a protected area or CBA (e.g. protected area buffers);</li> <li>• or a combination of these.</li> </ul>

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	15%	These areas contain indigenous vegetation and have not been modified or degraded.
Near Natural (includes areas with low to moderate level of alien invasive plants)	30%	Moderately modified. Loss and change of natural habitat and biota have occurred, but the basic ecosystem functions are still predominantly unchanged
Degraded (includes areas heavily invaded by alien plants)	20%	Largely modified. A large loss of natural habitat, biota and basic ecosystem functions has occurred.
Transformed	35%	Critically / Extremely modified. Modifications have

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(includes cultivation, dams, urban, plantation, roads, etc)		reached a critical level and the system has been modified completely with an almost complete loss of natural habitat and biota. In the worst instances the basic ecosystem functions have been destroyed and the changes are irreversible. This also includes the areas with bare soil.
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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>		Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)		Estuary	Coastline
	Least Threatened x		YES x	NO x	NO x

**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 are extracted from the Ecological Impact Assessment:**

The study area and project site is situated within the Grassland Biome and Dry Highveld Grassland bioregion. The proposed project area forms part of both the (Gh2) Aliwal North Dry Grassland and (Gh 3) Xhariep Karroid Grassland vegetation (Mucina & Rutherford, 2006). The area has been degraded in the past. Due to the total transformation in the surrounding areas and land cover, the likelihood of the area restoring to an important ecological functioning unit is unlikely.

The distribution of the Aliwal North Dry Grassland vegetation type are limited to the Eastern Cape and Free State Provinces and can mainly be found at altitudes of 1320-1660m. This vegetation type has been described by Mucina and Rutherford (2009) as broken terrain and irregular plains supporting open grassland with patches of dwarf karroid shrubs (similar to Gh3). The dominance of grasses *Themeda triandra* and *Tetrachne dregei* is notable.

The geology of the Aliwal North Dry Grassland consists of alternating layers of mudstone and sandstone of the Tarkastad Subgroup (Beaufort Group, Karoo Supergroup) dominate the undulating topography. In areas protected from erosion, a sandy layer also covers the clayey subsoils. In this land type the dominant soil forms are Escourt, Rensburg and Oakleaf forms.

Dominant land type Db, followed by Da.

The vegetation type is situated in areas with rainfall peaks in Summer with mean annual precipitation (MAP) of about 510mm. Important taxa include *Aristida adscensionis*, *A. congesta*, *Cymbopogon pospischilii*, *Themeda triandra*, *Digitaria eriantha*, *Sporobolus fimbriatus*, *Gazania krebsiana subsp. Felicia muricata* to only name a few. This grassland is also prone to karoo-bush encroachment when overgrazed. According to Mucina and Rutherford (2006) the Aliwal North Dry Grassland vegetation type has a small patch of statutorily conserved area. Some 12% are transformed, mainly due to cultivation and building of dams. The conservation status is classified as Least Threatened.

The distribution of the the Xhariep Karroid Grassland (Gh 3) vegetation type is limited to the Free State and very slightly into the Northern Cape Province and can mainly be found at altitudes of 1260-1560m. This vegetation type has been described by Mucina and Rutherford (2006) as extensive, even or slightly undulation bottomland flats forming a matrix of large landscape patches interrupted by high dolerite sills, koppies and conspicuous ring dykes, open grassland intermingled with small patches of dwarf karroid shrubs. The grass element becomes more visible, especially in summer. Low cover of grasses such as *Themeda Triandra*, *Cymbopogon pospischilii* and *Digitaria eriantha* is indicative of the relatively low rainfall. In years of low precipitation, dwarf karroid shrubs become more prominent and barren patches of soil become more visible, especially during the winter months and early spring.

Geology of the Xhariep Karroid Grassland consists of alternating layers of mudstone and sandstone mostly of the Permian Adelaide Subgroup. Part of the area is covered with soils with diagnostic pedocutanic and prisma-cutanic B-Horizons and belongs to soil forms such as Escourt, Rensburg and Oakleaf. The entire area has been classified as Da or Db land types.

This vegetation type is situated in areas with rainfall peaks in early autumn with MAP of 410mm. Some localities can reach MAP of up to 580mm. Average temperature in this region is about 15 degrees Celsius with prominent winter frost present. Important taxa include *Aristida adscensionis*, *A. canescens*, *A. congesta*, *Eragrostis chloromelas*, *Digitaria eriantha*, *Gazania krebsiana subsp.*, *Moraea pallida*, *Filicia filifolia*, *Lycium cinerum* to name only a few. Endemic taxa include *Manulea flanaganii*, *Phyllobolus rabiei* and *Ruschia calcarea*. This grassland is also prone to encroachment of low, unpalatable karroid shrubs when overgrazed. According to Mucina and Rutherford (2006) the Xhariep Karroid Grassland vegetation type has a small patch of statutorily conserved area, about 2.5%. Some 4% are already transformed, mainly due to cultivation and building of dams. The

conservation status is classified as Least Threatened.

As per the Ecological Impact Assessment, the sensitivity map indicated an NFEPA wetland to be present on site (Figure 4). The standard indicators for wetland delineation were applied. No evidence could support the claim that the watercourse was a natural wetland. Therefore no natural watercourses occur on site. Soil was excavated to construct dams as verified during the site visit. Soil was historically piled to form about a 3 meter high bank wall. Water is canalled downstream to reach an “Artificial dam” downstream. The development footprint is water affected, with evidence of artificial storm water canals draining the development footprint. The dam is situated on the farms premises, but note this it is not within the direct vicinity of the proposed feedlot.

### 3 SECTION C: PUBLIC PARTICIPATION

#### 3.1 Advertisement and Notice

<b>Publication name</b>	Volksblad	
<b>Date published</b>	22 February 2019	
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>
<b>Aliwal North Library</b>	29° 7'9.00"S	26°10'52.47"E
<b>Site Notice at Karan Beef</b>	30°38'41.21"S	26°44'7.07"E
<b>Maletswai Local Municipality</b>	30°41'13.83"S	26°42'33.87"E
<b>Date placed</b>	22 February 2019	

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

#### 3.2 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 326

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
Michael le Roux	Digteby	082 496 1980 lerouxmj@skcm.co.za
Johan Kieck	Nieuwejaarspruit	051 004 0330 cholla@nokwi.co.za
A Froneman	Woonplaas	0824961980/0824462169/0827747613 fronies@absamail.co.za
M.C Myanginisimbi	Wanganella Portion 2	0820667140/0833732038 qnyangintsimbi878@gmail.com

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.

#### 3.3 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>
Please Refer to Appendix E – PPP report	

### 3.4 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.

### 3.5 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
Xhariep District Municipality (Local Government Support)	Mr.Tshepo Moselesele	078 095 3536	-	<a href="mailto:tmos118@yahoo.com">tmos118@yahoo.com</a> / <a href="mailto:tloselesele@environment.gov.za">tloselesele@environment.gov.za</a>	P.O Box 110, Trompsburg, 9913
Xhariep District Municipality (Municipal Manager)	Mr Martin Kubeka	051 713 9300	051 713 0461	<a href="mailto:martyr@xhariep.gov.za">martyr@xhariep.gov.za</a>	Private Bag X136, Trompsburg, 9913
Mohokare Local Municipality (Town Planner)	E.E Meades	064 251 3776	086 5855 458	<a href="mailto:emmerentiam@gmail.com">emmerentiam@gmail.com</a>	-
Mohokare Local Municipality (Municipal Manager)	Mr Selby Selepe	051 673 9600	-	-	PO Box 20, Zastron, 9950
Department of Economic Small Business Development, Tourism and Environmental Affairs	Grace Mkhosana	051- 400 4812	051 400 4842	<a href="mailto:mkhosana@detea.fs.gov.za">mkhosana@detea.fs.gov.za</a>	Private Bag X 20801, Bloemfontein 9300
Department of Water and Sanitation, Free State	Dr TP Ntili	(051) 405 9000/ 072 303 7301	(051) 430 8146	<a href="mailto:ntilit@dws.gov.za">ntilit@dws.gov.za</a>	PO Box 528 Bloemfontein 9300
Department of Agriculture Free State	Mr Peter Thabethe	051 861 8509	051 861 8452	<a href="mailto:pacomm@agric.fs.gov.za">pacomm@agric.fs.gov.za</a>	Private Bag X02, BLOEMFONTEIN, 9300
Heritage Free State	Ntando PZ Mbatha	051 410 4750 /	086 401 0431	<a href="mailto:mbatha.npz@sacr.fs.gov.za">mbatha.npz@sacr.fs.gov.za</a>	Private Bag X20606,

	(Heritage Coordinator)	066 479 2067			Bloemfontein , 9300
Department of Rural Development and Land Reform	Ms Makwadi Moloji	082 827 5988	-	Makwadi.Moloji@drdlr.gov.za	136 Charlotte Maxeke St, Bloemfontein Central, Bloemfontein , 9301

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

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

### 3.6 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.

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

## 4 SECTION D: IMPACT ASSESSMENT

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

### 4.1 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 **EXTENT** (Spatial scale), **MAGNITUDE** (degree of the impact), **DURATION** (time scale), **PROBABILITY** (occurrence), **IRREPLACEABILITY** (loss of resources) and the **REVERSIBILITY** (degree to which the proposed impact can be reversed) will be assessed by the EAP as well as the Specialists. 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 scale to be used to assess these variables and to define the rating categories are tabulated in **Table 1** and **Table 2** below.

Evaluation component	Ranking scale and description (criteria)
<b>MAGNITUDE of NEGATIVE IMPACT</b> (at the indicated spatial scale)	<p><b>10 - Very high:</b> Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.</p> <p><b>8 - High:</b> Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.</p> <p><b>6 - Medium:</b> Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.</p> <p><b>4 - Low :</b> Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.</p> <p><b>2 - Very Low:</b> Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.</p> <p><b>0 - 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><b>10 - Very high (positive):</b> Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.</p> <p><b>8 - High (positive):</b> Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.</p> <p><b>6 - Medium (positive):</b> Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.</p> <p><b>4 - Low (positive):</b> Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.</p> <p><b>2 - Very Low (positive):</b> Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.</p> <p><b>0 - Zero (positive):</b> Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
<b>DURATION</b>	<p><b>5 - Permanent</b></p> <p><b>4 - Long term:</b> Impact ceases after operational phase/life of the activity &gt; 60 years.</p> <p><b>3 - Medium term:</b> Impact might occur during the operational phase/life of the activity – 60 years.</p> <p><b>2 - Short term:</b> Impact might occur during the construction phase - &lt; 3 years.</p> <p><b>1 - Immediate</b></p>
	<b>5 - International:</b> Beyond National boundaries.



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<b>EXTENT</b> (or spatial scale/influence of impact)	<p><b>4 - National:</b> Beyond Provincial boundaries and within National boundaries.</p> <p><b>3 - Regional:</b> Beyond 5 km of the proposed development and within Provincial boundaries.</p> <p><b>2 - Local:</b> Within 5 km of the proposed development.</p> <p><b>1 - Site-specific:</b> On site or within 100 m of the site boundary.</p> <p><b>0 - None</b></p>
<b>IRREPLACEABLE</b> loss of resources	<p><b>5 – Definite</b> loss of irreplaceable resources.</p> <p><b>4 – High</b> potential for loss of irreplaceable resources.</p> <p><b>3 – Moderate</b> potential for loss of irreplaceable resources.</p> <p><b>2 – Low</b> potential for loss of irreplaceable resources.</p> <p><b>1 – Very low</b> potential for loss of irreplaceable resources.</p> <p><b>0 - None</b></p>
<b>REVERSIBILITY</b> of impact	<p><b>5 – Impact cannot</b> be reversed.</p> <p><b>4 – Low</b> potential that impact might be reversed.</p> <p><b>3 – Moderate</b> potential that impact might be reversed.</p> <p><b>2 – High</b> potential that impact might be reversed.</p> <p><b>1 – Impact will be</b> reversible.</p> <p><b>0 – No impact.</b></p>
<b>PROBABILITY</b> (of occurrence)	<p><b>5 - Definite:</b> &gt;95% chance of the potential impact occurring.</p> <p><b>4 - High probability:</b> 75% - 95% chance of the potential impact occurring.</p> <p><b>3 - Medium probability:</b> 25% - 75% chance of the potential impact occurring.</p> <p><b>2 - Low probability:</b> 5% - 25% chance of the potential impact occurring.</p> <p><b>1 - Improbable:</b> &lt;5% chance of the potential impact occurring.</p>
<b>Evaluation component</b>	<b>Ranking scale and description (criteria)</b>
<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>

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

Significance Points	Environmental Significance	Description
125 – 150	Very high (VH)	An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.
100 – 124	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.
75 – 99	Medium-high (MH)	If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked.
40 – 74	Medium (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.

**Table 2: Definition of significance ratings (positive and negative).**

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 (Significance Points) = (Magnitude + Duration + extent + irreplaceability + reversibility) x probability.**

The maximum value is 150 SP (Significance Points). The unmitigated and mitigated scenarios for each potential environmental impact should be rated as per **Table 2** above.

A complete impact assessment in terms of Regulation 19(3) of GN 326 must be included as Appendix F.

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Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS :</b>					
<b>Nature of impact:</b> Negative impact of haphazard placement of infrastructure on the environment.	<b>Activity:</b> The establishment of a main site office and storage site during the construction period will ensure that the poor placement of materials and infrastructure will be avoided. This could also result in the damage or pollution to surrounding areas caused by construction activities.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	L	L	L	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Draw up and submit for approval a Site Layout Master Plan. This plan must show the final positions and extent of all permanent and temporary site structures and infrastructure;</li> <li>• The planning for layout must be done in consultation on-site with the Environmental Control Officer (ECO);</li> <li>• The Contractor may not deface, paint, damage or mark any natural features situated in or around the site for survey or other purposes;</li> <li>• The Contractor must ensure that all construction personnel, labourers and equipment remain within the demarcated construction sites at all times;</li> <li>• No servicing of vehicles may be permitted on site, unless for emergency purposes;</li> <li>• Stockpiles may not be situated in such a manner that they obstruct pathways;</li> <li>• Location of storage area must take into account prevailing winds, distance to water bodies and general on-site topography;</li> <li>• Place infrastructure as far as possible on sites that have already been transformed;</li> <li>• Facilities may not be used as staff accommodation;</li> <li>• The Contractors camp layout must take into account availability of access for deliveries and services and any future works;</li> <li>• The Contractors camp must be of sufficient size to accommodate the needs of all sub-contractors that may work on the project; and,</li> <li>• The Contractor must implement the following as required:                             <ul style="list-style-type: none"> <li>➢ Suitable sanitation facilities, adequate for the number of staff on site (1 for every 15 personnel and 1 for each gender); and,</li> <li>➢ Facilities for solid waste collection.</li> </ul> </li> </ul>				N/A
<b>Nature of impact:</b> Topsoil Removal and Soil Erosion	<b>Activity:</b> The clearing of topsoil and excavation for the establishment of building foundations may result in the destruction of fertile topsoil.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	MH	L	MH	L	-

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Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>Cumulative impact:</b>	L	L	L	L	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Remove topsoil approximately 300mm deep from establishment area and stockpile areas;</li> <li>• Topsoil stockpiles to be kept free from weeds;</li> <li>• Stormwater management should prevent excessive sediment to be carried into the existing dams;</li> <li>• Construction should take place during the low flow months (winter) in order to minimise the risk to the hydrology of the system and to prevent excessive sediment and debris being washed downstream;</li> <li>• Correct site reinstatement and landscaping following any disturbances will abate channel and gulley formation;</li> <li>• Disturbed areas, that will not form part of the operational footprint but which were disturbed as part of the construction activities, should be rehabilitated and re-vegetated using site-appropriate indigenous vegetation and/or seed mixes;</li> <li>• Sheet runoff from cleared areas, paved surfaces and access roads needs to be curtailed;</li> <li>• Topsoil stockpiles to be placed on a levelled area and measures to be implemented to safeguard the piles from being washed away in the event of heavy rain/storm water;</li> <li>• Topsoil need to be stored on designated areas only. This need to be planned and indicated in the site-layout plan;</li> <li>• Ensure that topsoil is not mixed with subsoil and/or any other excavated material;</li> <li>• Provide containment and settlement facilities for effluents from concrete mixing and washing facilities;</li> <li>• Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan;</li> <li>• Provide spill containment facilities for hazardous materials like fuel and oil; and,</li> <li>• Topsoil must be used in all rehabilitation activities, and may not be compacted to ensure that its plant support capacity remain of high quality.</li> </ul>				N/A
<b>Nature of impact:</b> Surface and groundwater contamination due to construction activities such as the use of hazardous materials on site e.g. fuel and oil.	<p><b>Activity:</b> Spills could possibly occur on site and lead to the contamination of soil and groundwater.</p>				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Concrete must 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 (preferable where no natural vegetation occur);</li> <li>• Concrete mixing to be carried out away from sensitive areas and on impermeable surfaces;</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>Material Safety Data Sheets (MSDSs) must be available on site for all chemicals and hazardous substances to be used on-site, including information on their ecological impacts and how to minimise the impacts in case of leakage;</li> <li>All spillage must be cleaned up immediately after they have occurred;</li> <li>Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bio-remediation 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>Do not locate any ablution facilities, 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>Vehicles and machinery must be regularly serviced to avoid leakages;</li> <li>At the work site the Contractor must maintain strict surveillance to ensure that no spills occur;</li> <li>No water courses may be used to clean equipment, or for bathing. All cleaning operations must 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> <li>Fuel and chemical storage must be done within a designated area only, which is properly bund and able to contain 110% of the capacity of fuel or chemicals stored within;</li> <li>Construction vehicles must be inspected every morning before work commence to ensure that no leakages do occur;</li> <li>All personnel must receive induction on how to report spillages, contain them and treat them accordingly;</li> <li>Spill kits must be available at each working station;</li> <li>Drip trays must be placed beneath all construction equipment that are stationary on site or within the site camp; and,</li> <li>Hazardous waste must be stored in bins with a lid in a demarcated waste area, and must be disposed of at a hazardous treatment facility with records on file.</li> </ul>				
<b>Nature of impact:</b> Handling of general waste materials on the development site.	<b>Activity:</b> The presence of personnel and construction operations on site will increase the likelihood of littering and the dumping of solid waste.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</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. Two waste bins at least must be present, one (1) for hazardous waste and one (1) for non-hazardous waste at each working site. Dumping of waste on site is prohibited;</li> <li>Waste sorting and separation must form part of the environmental induction and awareness programme, to encourage</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<p>personnel to collect waste paper, glass and metal waste separately;</p> <ul style="list-style-type: none"> <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 as mentioned in the Basic Assessment Report;</li> <li>• Care must be taken to ensure that no waste fall off disposal vehicles on-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>• General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity;</li> <li>• Minimise waste by sorting wastes into recyclable and non-recyclable waste;</li> <li>• Ablution facilities must be serviced by a registered service provider, cleaned at least once a week, and safe disposal slips must be on file at the site office;</li> <li>• A bi-weekly (twice a week) litter patrol of the entire site shall be conducted by the designated Environmental Site Agent (ESA);</li> <li>• Hazardous waste must be sorted from non-hazardous waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept; and,</li> <li>• A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office.</li> </ul>				
<p><b>Nature of impact:</b> Increased risk of veld fires.</p>	<p><b>Activity:</b> Due to the presence of construction personnel in natural areas, fires can occur if not managed to the correct standard.</p>				<p>No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.</p>
<b>Significance rating:</b>	MH	L	MH	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• The Contractor shall take all reasonable and precautionary steps to ensure that fires are not started as a consequence of the activities on site;</li> <li>• Ensure the 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, and can include but not limited to: <ul style="list-style-type: none"> <li>➤ Regular fire prevention talks and drills; and,</li> </ul> </li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>➤ Posting of regular reminders to staff;</li> <li>• No open fires are permitted anywhere on site;</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 (Hazardous substances to be stored in accordance with SANS);</li> <li>• Any fires that occur on site shall be reported to the ECO immediately and then to the relevant Authorities;</li> <li>• In the event of a fire, the Contractor shall immediately employ such plant and personnel as is at his disposal and take all necessary action to prevent the spread of the fire and bring it under control;</li> <li>• Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area. A designated smoking area must be established on site; and,</li> <li>• All construction vehicles must be fitted with at least one fire extinguisher.</li> </ul>				
<b>Nature of impact:</b> Traffic impacts associated with the movement of construction vehicles on site.	<b>Activity:</b> The movement of vehicles on site may result in the destruction of biodiversity, compaction of valuable topsoil and mortalities of fauna on site.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• During construction create designated turning areas and strictly prohibit any off-road driving or parking of vehicles and machinery outside designated areas;</li> <li>• Monitor the establishment of (Alien) Invasive Species and remove as soon as detected, before regenerative material can be formed;</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 downhill rivers/streams;</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>• Signage is to be placed on vehicles at all times;</li> <li>• All construction vehicles must adhere to construction sites and avoid off road to minimise impact on vegetation and soil;</li> <li>• After decommissioning, if access roads or portions thereof will not be of further use to the landowner, remove all foreign material and rip area to facilitate the establishment of vegetation, followed by a suitable revegetation program, and</li> <li>• Construction-related vehicles and machinery may not operate on site without reflective safety signage, car-top lights and</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	reflective personnel gear.				
<b>Nature of impact:</b> Traffic impacts associated with the movement of construction vehicle.	Activity: The movement of vehicles in the vicinity of the construction site may cause damage to road surfaces as well as increase in the traffic volume of National Route Six (N6).				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	M	L	M	L	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Abnormal loads must 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>Vehicles used for transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces;</li> <li>Any damage to public roads is to be reported to the management Authority and repaired to its original condition;</li> <li>Transport of materials should be limited to the least amount of trips possible; and,</li> <li>Abnormal loads may not be transported after dark.</li> </ul>				N/A

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS:</b>					
<b>Nature of impact:</b> Direct impact on vegetation during construction and loss of species.	Activity: The construction of several permanent structures on site will result in the loss of vegetation due to foundation excavation.				No impact will occur as the development activities will not take place. Vegetation and habitat features of the proposed development site will remain unaffected.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>It is recommended that a botanical walkthrough be conducted prior to the commencement of the project during the flowering period of most species (spring). This will ensure that no protected or significant species have potentially been omitted;</li> <li>All disturbed and compacted soils need to be ripped, re-profiled and reseeded and/or replanted with indigenous species;</li> <li>Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated foundation footprint area;</li> <li>Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction</li> </ul>				N/A



## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMP'r, if possible; <ul style="list-style-type: none"> <li>Indigenous vegetation unique to the area must be used during landscaping activities;</li> <li>There should be a pre-construction environmental induction for all construction staff on site to ensure that basic environmental biodiversity principles are adhered to;</li> <li>Restoration measures will be required to reinstate functionality in the disturbed soil and vegetation;</li> <li>Impacts to sensitive sites (drainage lines) must be avoided;</li> <li>No vegetation may be gathered for the purpose of creating fire; and,</li> <li>Areas to be cleared should be agreed and demarcated before the start of the clearing operations.</li> </ul>				
<b>Nature of impact:</b> Dust nuisance generated by the operation of machinery and vehicles.	<b>Activity:</b> The construction activities of the proposed project could potentially result in fugitive dust emissions due to vegetation removal. Dust could spread into the surrounding areas. The significance of this potential impact will likely; however, be only temporary.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	L	L	L	L	-
<b>Cumulative impact:</b>	L	L	L	L	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Implement suitable dust management and prevention measures during the construction phase;</li> <li>Ensure all vehicles remain on designated roads and avoid the opening of detour or by-pass tracks;</li> <li>Vehicles delivering or removing soil must be covered to reduce spills and windblown dust;</li> <li>Any complaints received by the Contractor regarding dust will be recorded and communicated to the ECO; and,</li> <li>Areas around the proposed project footprint must be adequately rehabilitated to prevent significant dust emissions.</li> </ul>				N/A
<b>Nature of impact:</b> Fauna and Flora will be directly impacted as a result of construction activities and human presence at the site.	<b>Activity:</b> The construction of facilities will result in some habitat loss for resident fauna, as some species will occur within the affected areas. In addition, increased levels of noise, pollution, disturbance and human presence during construction will be detrimental to resident fauna. Sensitive and shy fauna may move away from the area during the construction phase as a result of the noise and human activities present, while some slow-moving species (such as mole rats or blind snakes) would not be able to avoid the construction activities and might be killed.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	L	L	L	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>No hunting, snaring, shooting, nest raiding or egg collection by the construction staff may be allowed;</li> <li>Holes and trenches must not be left open for extended periods of time and should only be dug when needed for immediate construction. Trenches that may stand open for some days should have places where the loose material has been returned to the trench to form an escape ramp present at regular intervals to allow any fauna that fall in to escape;</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>Fires should only be allowed within fire safe demarcated area;</li> <li>Construction workers should be educated on sensitive species likely to be found in the area and posters should be put up of species of conservation concern. If any of these species are found during construction, they will be advised to contact the ECO immediately in order to prevent harm to these species and their habitats;</li> <li>Keep the facility neat, tidy and clean in order not to attract scavenging animals such as rats and mice;</li> <li>Ensure that the construction area is fenced off from adjacent areas which may harbour wild animals;</li> <li>Do not store building materials and excess stockpiled soils within riparian zones or within areas where natural vegetation occur; and</li> <li>Should any fauna be discovered it should be relocated to an area outside the development footprint by a trained professional.</li> </ul>				
<b>Nature of impact:</b> Spread and establishment of Alien and Invasive Species	Activity: Soil disturbances from construction will enhance the encroachment of Alien and Invasive vegetation that will out compete indigenous counterpart species for resources, displace and reduce faunal and flora biodiversity. Clearing current Invasive Alien species will increase the risk of spreading species if not properly removed and safety transported.				No impact will occur as the development activities will not take place. Vegetation and habitat features of the proposed development site will remain unaffected.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Alien plant material removed during construction and eradication efforts should be contained and disposed of properly to limit accidental spread;</li> <li>Construction activities must be limited to the smallest possible area;</li> <li>Designated authorised service roads must be used by all Construction Vehicles; and,</li> <li>Ongoing Alien and Invasive vegetation removal should take place in and around the development footprint.</li> </ul>				N/A
<b>Nature of impact:</b> Water quality of run-off water.	Activity: The drainage line can potentially be at risk to increased surface runoff due to change in surface texture and effluent from the proposed development.				No impact will occur as the development activities will not take place. Vegetation and habitat features of the proposed development site will remain unaffected.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Provision of adequate on-site sewerage management;</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>• Sewerage and sanitation facilities should be regularly maintained and checked;</li> <li>• An integrated waste management programme must be developed for the development;</li> <li>• Sufficient waste receptacles should be placed around the development in order to encourage people to use them;</li> <li>• The principle of reduce; re-use and recycle should be followed;</li> <li>• The Construction site should be kept clean and tidy;</li> <li>• Any waste should be disposed in a registered landfill and not be allowed to be dumped in the surrounding landscape;</li> <li>• All surfaces used for waste storage and loading areas should have an impermeable surface;</li> <li>• Avoid the use of concrete lined channels for stormwater management as this can increase the speed of water. This in turn increases erosion potential that can cause erosion on site and in riverbanks and increase siltation downstream. If concrete-lined channels are used, they should end in silt traps;</li> <li>• Structures must be inspected regularly for the accumulation of debris, blockages, instabilities and erosion with continual remedial and maintenance actions;</li> <li>• Regular inspections will be undertaken of any access roads and stormwater management drains for signs of erosion and sedimentation;</li> <li>• Regularly inspect all construction vehicles for leaks. Re-fuelling of vehicles must take place on a sealed surface area surrounded by berms to prevent ingress of hydrocarbons into topsoil;</li> <li>• No dumping of waste or any other materials is allowed within any stormwater canals or the irrigation canal;</li> <li>• If any spills occur, they should be immediately cleaned up;</li> <li>• Spill kits must be stored on site. In case of accidental spills of oil, petroleum products etc., good oil absorbent materials must be on hand to allow for the quick remediation of the spill. The kits should be well marked and all personnel should be educated to deal with the spill. Vehicles must be kept in good working order and leaks must be fixed immediately on an oil absorbent mat. The use of a product such as Sunisorb is advised;</li> <li>• Removed soil and stockpiling of soil must occur outside the extent of canals and water affected areas to prevent siltation and increased runoff during construction; and,</li> <li>• Proper ablution facilities must be available during the construction and decommissioning phases. The impact of human waste on the system is immense. Chemical toilets must be provided which should always be well serviced and spaced as per the occupational health and safety laws, and placed outside one hundred meters (100 m) from any watercourses.</li> </ul>				

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS:</b>					

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>Nature of impact:</b> Occupational Health and Safety.	<b>Activity:</b> During the construction phase, accidents, occupational diseases, ill health and damage to property can occur if pre-cautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, construction workers and vehicle operators.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Ensure that PPE is available to Personnel;</li> <li>Adhere to the Occupational Health and Safety Act;</li> <li>Keep the first aid kit stocked;</li> <li>Issue all workers with necessary health and safety items;</li> <li>Potentially hazardous areas must be demarcated with danger tape;</li> <li>Appropriate signage must be placed to caution Employees and contractors not to enter certain structures without Authorisation;</li> <li>Regular safety inspections must be conducted to ensure that participants are equipped with necessary safety equipment; and,</li> <li>All construction personnel to wear hard hats and reflector jackets at all times.</li> </ul>				N/A
<b>Nature of impact:</b> Construction activities may have a positive impact on the local and regional socio economic conditions.	<b>Activity:</b> During the construction phase of the project the construction process may have a positive impact on the local and regional socio-economic conditions by means of job creation.				The proposed development will not take place and as such no socio-economic benefits will be derived from this construction period. The impact will thus be a negative one.
<b>Significance rating:</b>	L+	-	L+	-	L
<b>Cumulative impact:</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 "Local First" policy, especially for semi and low-skilled job categories;</li> <li>Where feasible, efforts should be made to employ Local Contractors that are compliant with Broad Based Black Economic Empowerment (BBBEE) criteria;</li> <li>Trench bedding material (sand) should be sought locally;</li> <li>Prior to construction phase the proponent and its Contractors should meet with representatives' from the Local Municipality to establish the existence of a skills database for the area. If such a database exists it should be made available to the Contractors appointed for the construction phase; and,</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>The recruitment selection process should seek to promote gender equality and the employment of women where possible, particularly for less labour-intensive work such as supervision.</li> </ul>				

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON CULTURAL-HISTORICAL ASPECTS:</b>					
<b>Nature of impact:</b> Damage and destruction of vertebrate fossils during excavation activities.	<b>Activity:</b> Excavation activities can result in the discovery of cultural and historical artefacts beneath the earth surface. Damage or loss can occur if the correct procedures are not followed.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	L	L	L	L	-
<b>Cumulative impact:</b>	-	-	-	-	-

<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 South African National Resources Agency;</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>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 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; and,</li> </ul> </li> <li>Public access must be limited and the area must be placed under guard.</li> </ul>				N/A
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Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL VISUAL IMPACTS:</b>					
<b>Nature of impact:</b> Impact on the sense of place for surrounding users.	<b>Activity:</b> The movement of construction vehicles, machinery and personnel on site shall result in a visual impact on surrounding users. Furthermore to this, the storage of materials and excavation shall result in disturbance and an unsightly character.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Access roads are to be kept clean and dust suppression techniques should be implemented to minimise impacts of vehicle movement;</li> <li>• Site offices and structures should be limited to one location and carefully situated to reduce visual intrusions. Roofs should be grey and non-reflective;</li> <li>• Construction camps as well as development areas must be screened with netting;</li> <li>• Lights within the construction camp must face directly down (angle of 180°);</li> <li>• Minimum vegetation may be removed to ensure the visual absorption capacity remain high;</li> <li>• Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact; and,</li> <li>• Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare.</li> </ul>				N/A

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON NOISE ASPECTS:</b>					
<b>Nature of impact:</b> Noise nuisance generated by construction works, vehicles and personnel.	<b>Activity:</b> The operating of vehicles and machinery on site results in the generation of noise disturbing users of the surrounding area.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Should multiple activities result in the excessive generation of noise, it must be strived to coordinate the incidence of these at the same time;</li> <li>• Fit machinery with silencers;</li> <li>• All stationary noisy equipment such as compressors and pumps must be contained behind acoustic covers, screens or sheds where possible;</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Planning, design and construction phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>The regular inspection and maintenance of equipment must be undertaken to ensure that all components function optimally;</li> <li>Vehicles must avoid the use of their reverse gear as far as possible so as to avoid the sounding of sirens. This must not be considered for temporary access routes as disturbance of adjacent vegetation is to be avoided;</li> <li>Where recurrent use of machinery is frequent, machines must be shut down during intermediate periods;</li> <li>Unless otherwise specified by the DEO, normal working hours will apply (i.e. from 07H00–18H00, Mondays to Fridays);</li> <li>No loud music is permitted on site or in the Camp;</li> <li>Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during working hours and after hours; and,</li> <li>Vehicles are to abide by speed restrictions on access roads and limit trip generation so as to minimise disturbance to surrounding land users.</li> </ul>				

(b) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>					
<b>Nature of impact:</b> Handling of general waste materials on the development site.	<b>Activity:</b> Waste will be generated on site, if not disposed of correctly it will become a nuisance within the area.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Waste must not be stored on site in excess of ninety (90) days;</li> <li>All general waste must be disposed of at a registered landfill site as mentioned in the Basic Assessment Report;</li> <li>Carcasses will be stored on site for a period of forty eight hours (48 h); where after, it will be sold to lion farmers within the area;</li> <li>Manure emanating from the proposed development will be collected from the dams and distributed to grain farmers within the study area;</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>An adequate number of scavenger proof litter bins are to be placed throughout the site. Two waste bins at least must be present, one (1) for hazardous waste and one (1) for non-hazardous waste at each working site. Dumping of waste on site is prohibited;</li> <li>Waste sorting and separation must 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 waste;</li> <li>All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site as mentioned in the Basic Assessment Report;</li> <li>Care must be taken to ensure that no waste fall off disposal vehicles on-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 personnel shall not be permitted;</li> <li>General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity;</li> <li>Minimise waste by sorting wastes into recyclable and non-recyclable waste;</li> <li>Hazardous waste must be sorted from non-hazardous waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept; and,</li> <li>A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office.</li> </ul>				
<b>Nature of impact:</b> Traffic impacts associated with the movement of vehicles within the area.	Activity: The regular movement of residents and business clients within the area would increase traffic flow and impede vehicle movement.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	L	L	L	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>A stop sign must be placed at the exit of the complex to ensure that residents take other motorist into consideration;</li> <li>Adequate parking must be provided for residents, visitors and business clients to ensure that vehicles are not parked within the road reserve;</li> <li>All speed limits need to be adhered to; and,</li> <li>U-turns within Conroy Street and in front of the complex will be prohibited.</li> </ul>				N/A
<b>Nature of impact:</b>	Activity:				No operational phase impacts are



## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Surface and groundwater contamination from the Feedlot Facilities.	Surface and groundwater can become contaminated due to operation of the feedlot facilities.				associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• Measures must be implemented to prevent the contamination of clean run-off from the site in order to protect the degradation of the drainage areas;</li> <li>• Stormwater must be conducted in a manner which prevent soil erosion (i.e natural areas must be landscaped in order to ensure energy is removed from run-off);</li> <li>• Drip trays must be placed beneath all stationary operational equipment;</li> <li>• Hazardous substances must be stored within a bund area able to contain 110% of the volume of the substance stored within;</li> <li>• Water samples must be taken from the nearest borehole and be tested for any pollution;</li> <li>• Should a spill occur on an impermeable surface such as cement or concrete, the surface spill must be contained using oil absorbent materials;</li> <li>• Infrastructure and manure dams to contain run-off from the feedlot area to contain contaminated run-off currently in place on the premises must be used; and,</li> <li>• The run-off should be channelled along grassed filter channel to the manure dams;</li> <li>• Surface run-off from the feedlot should be collected in a drainage channel, with a sufficient cross-section. To prevent effluent being washed into a watercourse, all contaminated flow should be directed to stabilisation ponds for treatment;</li> <li>• The effluent dams should be monitored regularly for leaks and should be repaired accordingly.</li> </ul>				N/A
<b>Nature of impact:</b> Soil Compaction	Activity: Erosion and degradation of soil surrounding the feedlot.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• The layout of the area should be optimised to limit the erosion potential;</li> <li>• Rehabilitate denude areas especially slopes with appropriate species and erosion protection measures (i.e. geo-textiles; rocks; topsoil mixtures as per specifications);</li> <li>• Limit the overcrowding in feedlots;</li> <li>• The manure dams should be monitored after rainfall to ensure that it does not flood.</li> </ul>				N/A
<b>Nature of impact:</b>	Activity:				No construction phase impacts are

## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Increased risk of veld fires.	Due to the presence of construction personnel in natural areas, fires can occur if not managed to the correct standard.				associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>• The Applicant shall take all reasonable and precautionary steps to ensure that fires are not started as a consequence of the activities on site;</li> <li>• Ensure the work site 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, and can include but not limited to:                             <ul style="list-style-type: none"> <li>➤ Regular fire prevention talks and drills; and,</li> <li>➤ Posting of regular reminders to staff;</li> </ul> </li> <li>• No open fires are permitted anywhere on site;</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 (Hazardous substances to be stored in accordance with SANS);</li> <li>• Any fires that occur on site shall be reported to the ECO immediately and then to the relevant Authorities;</li> <li>• In the event of a fire, the Contractor shall immediately employ such plant and personnel as is at his disposal and take all necessary action to prevent the spread of the fire and bring it under control;</li> <li>• Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area. A designated smoking area must be established on site; and,</li> <li>• All construction vehicles must be fitted with at least one fire extinguisher.</li> </ul>				N/A

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON BIOLOGICAL ASPECTS:</b>					
<b>Nature of impact:</b> Infestation of the area with Alien and Invasive Species	Activity: Implementation of an Alien and Invasive Management Plan in order to control and eradicate Alien and Invasive Species.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<i>Clearing and Guiding Principles</i>				N/A

## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	<ul style="list-style-type: none"> <li>• Alien control programs are long-term management projects and should include a clearing plan which includes follow up actions for rehabilitation of the cleared area;</li> <li>• The lighter infested areas should be cleared first to prevent seed build-up;</li> <li>• Pre-existing dense areas should be left for last, as they probably will not increase in density or pose a greater threat than they are currently; and,</li> <li>• All clearing actions should be monitored and documented to keep track of which are due for follow-up clearing.</li> </ul> <p><b>Clearing Methods</b></p> <ul style="list-style-type: none"> <li>• Different species require different control methods such as manual, chemical or biological methods or a combination of the two;</li> <li>• Care should be taken to ensure that the clearing methods used do not encourage further invasion. As such, regardless of the methods used, soil disturbance should be kept to a minimum. The vegetative stage of the plants should also be considered before clearing;</li> <li>• Fire is not a natural phenomenon in the area and should not be used in general for alien control or vegetation management at the site. Only <i>Cylindropuntia sp</i> should be destroyed by burning after removal, since these plants can spread vegetatively as well as with seed; and,</li> <li>• The best-practice clearing method for each species identified should be used. The preferred clearing methods for most alien species can be obtained from the Department of Water and Agricultural Affairs (DWAF) Working for Water website: <a href="http://www.dwaf.gov.za/wfw/Control/">http://www.dwaf.gov.za/wfw/Control/</a>.</li> </ul> <p><b>Use of Herbicides for Alien Control</b></p> <p>Although it is usually preferable to use manual clearing methods where possible, such methods may create additional mechanical disturbance which may stimulate alien invasion and may also be ineffective for many woody species which resprout. Where herbicides are to be used , the impact of the eradication program on the natural environment should be minimised by observing the following:</p> <ul style="list-style-type: none"> <li>• Area contamination must be minimised by careful, accurate application with a minimum amount of herbicide to achieve good control;</li> <li>• Care must be taken to prevent contamination of water bodies. This includes special care in storage, application, cleaning equipment and disposal of containers, product and spray mixtures;</li> <li>• Equipment should be washed where there is no danger of contaminating water sources and washings carefully disposed of in a suitable place;</li> <li>• To avoid damage to indigenous or other desirable vegetation, herbicides that would have the least effect on the indigenous vegetation should be used;</li> <li>• Droplet nozzles with a course spray pattern should be fitted to avoid drift of herbicides onto neighbouring</li> </ul>				

## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
	vegetation; and, <ul style="list-style-type: none"> <li>The appropriate health and safety precautions should be followed regarding the storage, handling and disposal of herbicides.</li> </ul>				

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON SOCIO-ECONOMIC ASPECTS:</b>					
<b>Nature of impact:</b> Operation Activities may have a positive impact on the local and regional socio economic conditions.	<b>Activity:</b> During the operational phase of the proposed development will create employment opportunities for individuals from the Local Community.				Should the proposed development not take place, users within the area will continue to experience weak signal and dropped calls.
<b>Significance rating:</b>	M (+)		M (+)		M
<b>Cumulative impact:</b>	-		-		-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Mitigation measures are not applicable as the impact is positive.</li> </ul>				N/A
<b>Nature of impact:</b> Occupational Health and Safety.	<b>Activity:</b> During the operation phase, accidents, occupational diseases, ill health and damage to property can occur if pre-cautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, construction workers and vehicle operators.				No construction phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	M	L	M	L	-
<b>Cumulative impact:</b>	-	-	-	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Ensure that PPE is available to Personnel;</li> <li>Adhere to the Occupational Health and Safety Act;</li> <li>Keep the first aid kit stocked;</li> <li>Issue all workers with necessary health and safety items;</li> <li>Potentially hazardous areas must be demarcated with danger tape;</li> <li>Appropriate signage must be placed to caution Employees and contractors not to enter certain structures without Authorisation;</li> <li>Regular safety inspections must be conducted to ensure that participants are equipped with necessary safety equipment; and,</li> <li>All construction personnel to wear hard hats and reflector jackets at all times.</li> </ul>				N/A

## BASIC ASSESSMENT REPORT

Operational Phase	Layout Alternative 1		Layout Alternative 2		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON NOISE:</b>					
<b>Nature of impact:</b> Noise nuisance generated by site operations.	<b>Activity:</b> Noise nuisance that may be created by the operation and maintenance work.				No operational phase impacts are associated with the no-go alternative thus no assessment has been undertaken.
<b>Significance rating:</b>	L	L	L	L	-
<b>Cumulative impact:</b>	L	-	L	-	-
<b>Proposed Mitigation:</b>	<ul style="list-style-type: none"> <li>Limit working hours of noisy equipment to daylight hours;</li> <li>The body corporate must implement a curfew for loud music. Should residence not adhere to the curfew, they must pay a fine. The amount will be determined by the body corporate; and,</li> <li>Ensure that Employees and maintenance staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.</li> </ul>				N/A

- (c) **Impacts that may result from the decommissioning and closure phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.**

The activity will not be decommissioned in the future and therefore the proposed impacts therefore were not assessed.

## 4.2 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.

### Alternative A (preferred alternative)

During the construction phase impacts prior to mitigation will range between Low and Medium High. Vegetation will be cleared for the construction of the pens which can increase erosion on site; however, if all mitigation measures are implemented the impact will be low. Due to drainage lines within the study area hazardous substances can possibly pollute water resources. Alternative One will have a lower possibility of ground contamination during the operational phase as less water will traverse the area. In order to ensure no erosion occurs on site, stormwater management must be adequately addressed as mentioned in the Environmental Management Plan. Noise pollution will be low as limited observers are situated within the immediate vicinity of the development area. From a Socio-Economic perspective the proposed development will create employment opportunities for members from the Local Community as well as ensure food security within the Free State Province.

The proposed development will not have significant impacts on the environment should the Applicant implement all mitigation measures as listed.

### Alternative B

Alternative B consist of a different layout than that of Alternative A. The impact will all be the same except for erosion as Alternative B will experience higher volumes of water flowing across the terrain after rainfall events. However, given the aforementioned if all mitigation measures are implemented the impact will be low on the receiving environment.

### Alternative C

N/A

### No-go alternative (compulsory)

The no-go option will result in the non-construction of the proposed development. The erven currently serves no ecological function and is considered to be degraded. The proposed development will provide employment opportunities to the Local Community and contribute to food security within the Free State Province. Should the development not be authorised these opportunities will be lost and the site will remain in its current state.

## 5 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	
X	

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).

N/A

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.

### Conclusion

The contents of this report have sought to identify and assess key issues relating to the proposed construction of the feedlot as well as the extension of a feedlot, road and dam.

In consolidation thereof, no environmental fatal flaws were identified to be associated with the proposed facilities. 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 EMP-r are followed and adhered to.

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

As per comments received the following mitigation measures need to be included:

- Induction and Environmental Awareness training must be done periodically over the duration of the project.
- All activities must be conducted where reasonable and possible during the drier months.
- A periodic photo journal must be kept in order to document the condition of the work areas over the duration of the project.
- A master plan must be kept on site. The master plan must indicate temporary and permanent infrastructure, diversions, no-go areas, demarcated areas, sensitive areas, stockpiles, material lay down areas, rest & eat area, access, parking, offices and storerooms.
- An incident register must be kept on site and updated regularly.
- Where temporary toilers are to be provided it must be emptied regularly well in advance of filling up.
- Mitigation measures as described in the EMP must be adhered to strictly.
- No open fires will be allowed on site, and demarcated smoking areas must be set out and indicated on the site layout plan.

## BASIC ASSESSMENT REPORT

- No vegetation may be removed/moved without the relevant footprint.
- Vegetation clearance must be limited to the development footprint only.
- Where possible use existing access roads, should new ones need to be developed it must cross the shortest distance.
- No chemicals or hazardous substances may be stored within 100 metres of a watercourse.
- Drip trays to be placed beneath all stationary equipment and used during refuelling.
- No animals may be killed, should snakes be discovered a trained person must be called upon to move them.
- A Stormwater Management Plan must be implemented for the whole site in order to prevent flooding and to direct water to certain areas.

Is an EMPr attached?

YES	
X	

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.

Marius Venter  
NAME OF EAP

Marius Venter

\_\_\_\_\_  
SIGNATURE OF EAP

12 April 2019  
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 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