Glossary of terms and acronyms

BAR	Basic Assessment Report
DM	District Municipality
DEDECT	Department of Economic Development, Environment, Conservation and Tourism
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly, or partially resulting from a development and or the operation thereof.
GNR	Government Notice Regulation
I&AP	Interested and affected party
IDP	Integrated Development Plan
JBMLM	JB Marks Local Municipality
Mitigate	Activities designed to lessen/compensate for unavoidable environmental impacts.
NEMA	National Environmental Management Act No. 107 of 1998
NWA	National Water Act No. 36 of 1998
PSDF	Provincial Spatial Development Framework
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SDF	Spatial Development Framework

1. Introduction

1.1. Document purpose:

Soetvelde Feedlot PTY has appointed Environmental Management Group (Pty) Ltd as the independent environmental assessment practitioner to undertake the Basic Assessment (BA) for the proposed cattle feedlot in Vereeniging, Gauteng Province. The BA Report process is being undertaken in accordance with the requirements of the EIA Regulations of 2014 (as amended), promulgated in terms of the National Environmental Management Act (NEMA: Act No. 107 of 1998).

This Draft Basic Assessment (BA) Report forms part of a series of reports and information sources provided during the BA Process for the proposed expansion of a cattle feedlot in Ventersdorp, North-West Province. In accordance with the 2014 NEMA EIA Regulations (as amended), the purpose of the BA Report is to:

- determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- identify the alternatives considered, including the activity, location, and technology alternatives;
- describe the need and desirability of the proposed alternatives;
- through the undertaking of an impact and risk assessment process, inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine—
    - the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
    - the degree to which these impacts—
        - can be reversed;
        - may cause irreplaceable loss of resources; and
        - can be avoided, managed or mitigated; and
- through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—

    identify and motivate a preferred site, activity and technology alternative;

    - identify suitable measures to avoid, manage or mitigate identified impacts; and
    - identify residual risks that need to be managed and monitored.

The Draft BA Report is available to all stakeholders for a 30-day review period. All comments on the Draft BA Report (submitted within the 30-day review period) will be considered in the preparation of the finalised BA Report. Environmental Management Group (Pty) Ltd. will then submit the Final BA Report to the North West Department of Economic Development, Environment, Conservation, and Tourism (DEDECT) in accordance with Regulation 19 (1) of the 2014 NEMA EIA Regulations for decision-making in terms of Regulation 20 of the 2014 NEMA EIA Regulations (as amended).

1.2. The Environmental Assessment Practitioner:

According to Appendix 1, Section 3 (1), of the 2014 EIA Regulations (as amended in 2017), a Basic Assessment Report must include

"(a) details of—

(i). the EAP who prepared the report; and
(ii). the expertise of the EAP, including a curriculum vitae."

Environmental Management Group (PTY) Ltd. (EMG) is an active company working in conjunction with other private companies, government departments, municipalities and parastatals to promote sustainable development and sound environmental management principles. EMG was appointed by the applicant to facilitate the environmental authorisation process for the proposed expansion of a cattle feedlot. The lead environmental assessment practitioner (EAP) for the proposed development is Mr. SE van Rooyen.

A detailed curriculum vitae (CV) of the lead EAP is presented in Appendix I. Refer to the bellow summary for a brief overview of qualifications, registrations and associations held by the lead EAP.

Table 2:Summary of associations, registrations and qualifications held by the lead EAP.

Lead EAP name	Mr. S.E. van Rooyen
Contact information	+27 51 412 6350/ 083 678 3032 ✉ svr@envmgp.com
Company	Environmental Management Group (Pty) Ltd.
Role(s)	Director, and Senior Environmental Assessment Practitioner
Qualifications	BSc Environmental and Biological Sciences
Professional registrations	EAPASA: 2019/309; SACNASP: 116554; IAIA 5901

1.1. The team of experts:

The compilation of this BAR required the expertise and knowledge of various specialists in the fields of terrestrial ecology and palaeontology. Experts in these fields were appointed for the compilation of specialist reports which reported on the in-situ condition of the receiving environment and the anticipated impacts associated with the proposed development. Specialists were commissioned to undertake the relevant assessments to identify and assess

impacts and propose appropriate mitigation and management measures for the identified impacts. The specialist assessments, that were commissioned include the following:

Table 3: Summary of relevant qualifications and registrations held by the team of experts.

Specialist member	Type of Assessments	Qualifications and registrations
Mr. Lloyd Rossouw	Phase one Heritage Impact Assessment	• B.A. (Hons.) Archaeology • M.Sc. Quaternary Vertebrate Palaeontology (cum laude) • Ph.D. Plant Sciences, Dept. of Plant Science • Member of Association for South African Professional Archaeologists (ASAPA) • Member of Palaeontological Society of Southern Africa (PSSA)
Mr. Ricus Nel	Terrestrial Ecological Assessment (Co-author)	• (SACNASP) in Ecological Science (Cand. Sci. Nat. 144943) • BSc. Honours majoring in Botany (Vegetation Ecology) • BSc. Majoring in Botany and Zoology
Ms. Emma Ferreira	Terrestrial Ecological Assessment	• BSc. Hons Botany • BSc. Botany and Zoology

2. Project introduction

2.1. Project Background

The proposed development comprises of the expansion of an existing cattle feedlot operating on site. The small-scale agricultural holding hosts approximately 490 cattle in total, with six existing pens of approximately 1 200m^2 in size per pen, which can accommodate 100 LSU per pen. The proposed development site is located on Farm Klipplaatdrift 224 RE, Ventersdorp in the North West Province.

2.2. Project Description:

The proposed development entails the expansion of the existing cattle feedlot that currently hosts approximately 490 cattle for commercial production on the farm Klipplaatdrift 224 RE, Ventersdorp, North West. The expansion will comprise of the increase of stock density from 490 large stock units to 3 000 large stock units. The increase in stocking density will have to be accommodated by construction 24 additional feedlot pens of similar size to the existing feedlot pens (1200 m^2 per feedlot pen). On completion, the cattle feedlot will include 30 pens (6 existing feedlot pens, 24 new feedlot pens). The physical footprint of the expansion will comprise of approximately 6 ha (Figure 1).

The site is situated within the Klipplaatdrift region on farm Klipplaatdrift 224 RE, Ventersdorp in the North West Province. The development site approximately 15 km South-West of Ventersdorp and falls under the jurisdiction of the JB Marks Local municipality.

The proposed feedlot facility will be secured via an existing perimeter fence and be accessed via an existing road and gate already installed. The following associated infrastructure will be included:

- Feedlot pens to accommodate 3 000 cattle at 1 000 – 1 200 m^2 per pen;
- Manure lagoons and stockpile area;
- Feed trough and aprons, water trough and shades;

Feedlot water management

The supply of cool, clean, good-quality water is essential for high-density cattle production. The water requirement for cattle is calculated as: 20 litre per LSU per day: 20 litre x 3000 x 365 days = 21 900 m3 / year.
Drinking water will be supplied in a trough and placed off the ground. This ensures keeping the water clean and free of livestock secretions. Water abstracted from one existing borehole will satisfy the water supply need. The operational activities for the proposed feedlot facility will require authorisation in terms of Section 21 of the National Water Act. The proponent is in the proses of submitting a water use licenses application to the Department of Water and Sanitation (DWS). Mortalities will be immediately removed from the feedlot and trenches will

be dug where they will be buried (Appendix J).

Feedlot waste management:

Organic waste produced by the proposed development's operation will be a mixture of manure and soil, forming a biodegradable by-product. According to Font-Palma (2019), healthy feedlot cattle produce manure equivalent to 5-6% of their body weight per day. The proposed cattle feedlot production scheme aims to introduce new cattle every four months with a starting weight of 250 kg and an exit weight of 500 kg. Calculated as the average between the two weight classes, each LSU will produce 562.5 kg manure per month. The concentrated quantities of manure resulting from high-density livestock farming often lead to the proliferation of unwanted pest insects such as flies. To mitigate this, probiotics will be introduced into the livestock feed and will be sprayed onto the feedlots to limit the proliferation of unwanted pests.

The feedlots will be cleaned each month which involves the mechanical removal of manure. The collected waste will be transported to a temporary storage/drying area lined by an impenetrable material, preventing seepage into the ground. Manure stockpiles will be covered with a 50% shade net until dry. The dried manure will be used as fertiliser on the surrounding cultivated fields.

Stormwater management:

A stormwater layout plan has been compiled and is attached (see Appendix J). The mentioned stormwater management plan will conform to industry best practice design. The stormwater network will redirect runoff from the feedlots into a sedimentation pond, trapping solid waste before entering the evaporation pond (waste lagoon). Both the sedimentation pond and waste lagoon will be lined by an impenetrable material, preventing seepage. The accumulated solids within the sedimentation pond will be cleaned when it reaches 70% capacity. Waste from the sedimentation pond will be transported to the temporary waste storage area to dry out and eventually used as fertiliser. The water within the evaporation pond (waste lagoon) will dry naturally and eventually be used as fertiliser in the surrounding cultivated fields.

Dimensions of the sedimentation pond and waste lagoon are as follows:

Sedimentation pond: (W)16.1 m x (L)39.5 m x (D)1.5 m.
Waste lagoon: (W)48.1 m x (L)158.7 m x (D)1 m.

2.1. Project locality:

The site is situated within the Klipplaatdrift region on farm Klipplaatdrift 224 RE, Ventersdorp in the North West Province. The development site approximately 15 km South-West of Ventersdorp and falls under the jurisdiction of the JB Marks Local municipality (figure 2).

The proposed feedlot facility will be secured via an existing perimeter fence and be accessed via an existing road and gate already installed

This report deals with the establishment of the expansion of a cattle feedlot in Ventersdorp, North West. The development area is surrounded by already established, still to be established and ongoing agricultural developments.

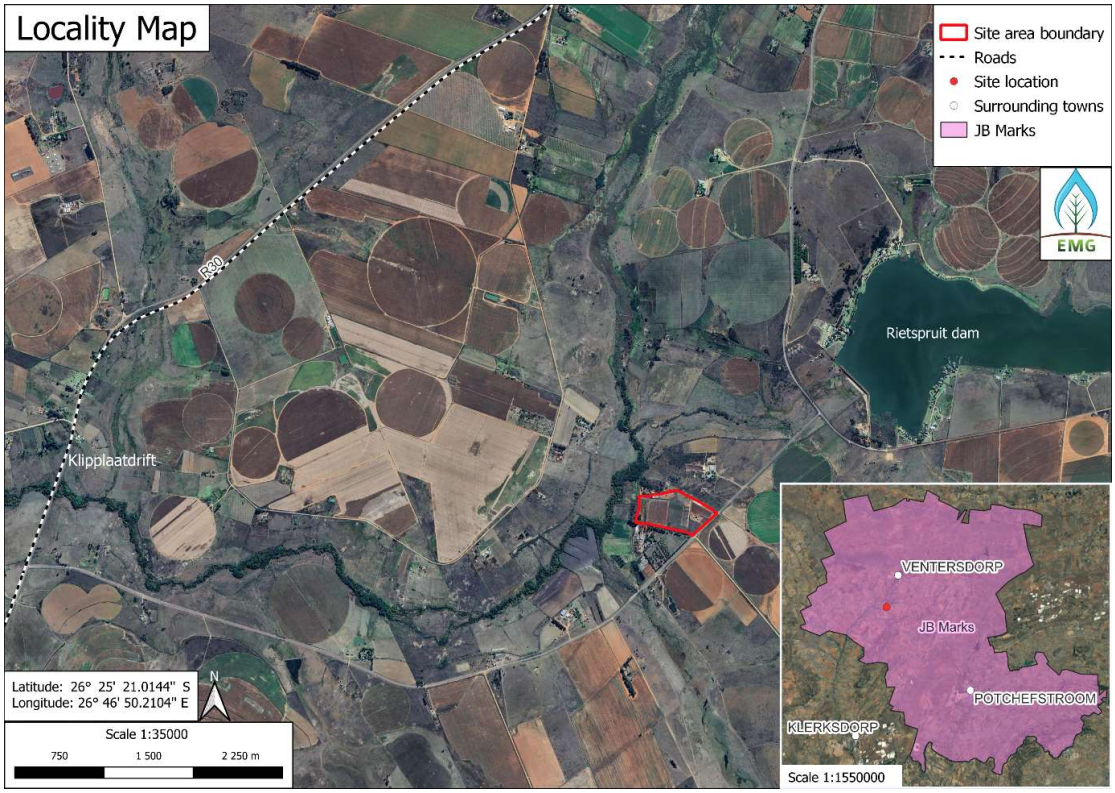

Figure 2: Site location of the proposed expansion of cattle feedlot on farm Klipplaatdrift 224 RE, Ventersdorp