

**BASIC ASSESSMENT REPORT IN TERMS OF
THE NATIONAL ENVIRONMENTAL
MANAGEMENT ACT, 1998 (ACT 107 OF 1998)
AS AMENDED**

**Proposed expansion of a feedlot for cattle on
Portion 4 of the farm Vlaknek 472JP,
Ditsobotla Local Municipality, North West
Province**

NWP/EIA/53/2018

**NOVEMBER 2018
(DRAFT FOR COMMENT)**



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Provincial Reference Number:
NEAS Ref 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 and is meant to streamline applications.
2. This report format is current as of **December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. The use of "not applicable" in the report must be done with circumspection. An incomplete report or that does not meet the requirements in terms of Regulation 19 of the NEMA EIA Regulations, 2014, will be rejected to be revised and be resubmitted.
6. The report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The signature of the Environmental Assessment Practitioner (EAP) on the report must be an original.
9. The report must be compiled by an independent EAP.
10. 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.
11. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
12. 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.
13. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
14. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

1. PROJECT DESCRIPTION

a) Describe the project in association with the listed activities applied for

Project title: Proposed expansion of a feedlot for cattle on Portion 4 of the farm Vlaknek 472JP, Ditsobotla Local Municipality, North West Province.

Feedlot: A feedlot is a type of animal feeding operation, which is used in intensive animal farming for finishing livestock such as cattle, prior to slaughter. Refer to photographs.

A small feedlot (300 - 500 cattle) currently exists on the property and the owner wants to expand the existing feedlot and operate it to accommodate 5 000 cattle (Government Notice Regulation (GNR) 983 of 4 December 2014 as amended in 2017 in GNR 327, Activity 39).

In order to expand the feedlot, an area of more than 300m² of indigenous vegetation will be cleared in an area classified as a Critical Biodiversity Area (CBA) 1 and Ecological Support Area (ESA) 1 in certain sections (GNR 985 of 4 December 2014 as amended in 2017 in GNR 324, Activity 12). Each head of cattle requires 10m², therefore the expansion will be ±45 000m² with 200 head of cattle / kraal.

The R53 cuts through the property and the portion of the property to the west of the R53 is used for maize farming. The borehole (25° 56' 07.1" South; 26° 35' 37.3" East), which supplies water to the farm and operations, is also located west of the R53. Cattle require 7 litres of water / head of cattle / day (12 775m³/annum requirement). All other structures and operations, including the existing feedlot, are located east of the R53.

There are no wastewater dams and dry manure is used for fertilizing agricultural fields and donated for garden fertilizing (high demand). There are therefore limited quantities of manure on site at any point in time (refer to photographs).

Except for the feedlot no further structures will be built and existing farm structures (house, workers accommodation, stores, workshop etc.) will remain.

Construction phase activities that may occur on-site include:

- Clearance of natural vegetation (loss of biodiversity);
- Minimal levelling;
- Delivery of construction equipment and material to the site;
- Movement of construction workers and equipment on site; and
- Expansion of feedlot.

Operational phase activities that may occur on-site include:

- Concentration of cattle in the area and movement of cattle;
- Feeding of cattle;
- Livestock watering (groundwater abstraction);
- Maintaining cattle's health (dipping, vaccinations, veterinary visits etc.);
- Birthing of calves as part of the breeding programme (outside feedlot);
- Accumulation of manure from cattle (soil, water and air pollution by nitrogen and phosphorus); and



- Loading and removal of cattle to abattoir (located in Koster) to be slaughtered.

Specialist studies:

The following specialist studies were undertaken as part of the project:

- Exemption from the Provincial Heritage Resources Agency (PHRA) in terms of the National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999) since the character of the site will not be changed.
- Ecology study by Iggdrasil Scientific Services, 2018 due to location in CBA1.
- Geohydrology study by Geo-logic Hydrogeological Consultants CC due to groundwater contamination risk as well as use of groundwater as water supply source.

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

Listed activity as described in GN R.983, 984 and 985	Description of project activity
Example: <i>GN R.983 Activity 12(iii): The development of a bridge exceeding 100 square metres where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such development will occur within existing roads or roads reserve.</i>	<i>A bridge measuring 10m in length, 12 metres wide will be built over the Crocodile river</i>
GNR 983 4 December 2014 as amended in 2017 in GNR 327, Activity 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 units per facility.	The intention is to expand the current feedlot and operate a cattle feedlot (large stock) for 5 000 cattle.
GNR 985 4 December 2014 as amended in 2017 in GNR 324, Activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. h. North West iv. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority.	More than 300m ² indigenous vegetation will be cleared on the site, which is identified as Critical Biodiversity Area (CBA) 1 and Ecological Support Area (ESA) 1 in areas.



c) **Property description/physical address**

Province	North West Province
District Municipality	Ngaka Modiri Molema District Municipality (NMMDM)
Local Municipality	Ditsobotla Local Municipality (DLM)
Ward Number(s)	17
Farm name and number	Vlaknek 472JP
Portion number	Portion 4
21 digit Surveyor General Code	T0JP00000000047200004

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

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 EIA Regulation, 2014 Appendix 1(h) . 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.

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 using the Hartebeeshoek94 WGS84 co-ordinate system.



a) Site alternatives

List alternative sites, if applicable.

Site Alternatives	Description
Alternative Site 1 (preferred or only site alternative)	The preferred site alternative is Portion 4 of the farm Vlaknek 472JP, Ditsobotla Local Municipality, North West Province. The property belongs to the applicant and is conveniently located in proximity to its abattoir in Koster (30km) and butcheries in the North West Province. The property has an existing feedlot and the intention is to expand it.
Alternative Site 2	Portion 7 of the farm Vlaknek 472JP, Ditsobotla Local Municipality, North West Province bordering Portion 4 to the south also belongs to the applicant. This property does not have an existing feedlot and a new feedlot will have to be established. The property is much smaller at 172ha compared to Portion 4 with a size of 408ha. This alternative was therefore not further considered due to its smaller size and space requirements and also because the expansion of an existing facility is a better option than the establishment of a new facility. The applicant also has farm portions on farms Klipbank, Kruidfontein and Geyerspan but these are used for other purposes – studs etc.
Alternative Site 3	

Site Co-ordinates

	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only site alternative)	25°	56'	12.45"	26°	36'	17.44"
Alternative S2 (if any)	0	'	"	0	'	"
Alternative S3 (if any)	0	'	"	0	'	"

In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only route alternative)						
• Starting point of the activity	0	'	"	0	'	"
• Middle/Additional point of the activity	0	'	"	0	'	"



- End point of the activity

o	'	"	o	'	"
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Alternative S2 (if any)

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

o	'	"	o	'	"
o	'	"	o	'	"
o	'	"	o	'	"

Alternative S3 (if any)

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

o	'	"	o	'	"
o	'	"	o	'	"
o	'	"	o	'	"

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 metres 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.

b) Lay-out alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	The layout and expansion is guided by the location of the existing feedlot on the property. The expansion will be adjoining to the existing feedlot and to the north of it.
Alternative 2	No alternative layout has been considered since it is the expansion of an existing feedlot.
Alternative 3	

c) Technology alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	<u>Handling of manure:</u> Manure is manually removed from feedlots and reused as a fertiliser. Status quo and preferred alternative.
Alternative 2	<u>Handling of manure:</u> Manure is washed down from feedlots and wastewater created is stored in wastewater dams. This results in the contamination of clean water and increases the groundwater contamination risk due to wastewater storage. This option was therefore not considered further.
Alternative 3	



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

Alternatives	Description
Alternative 1 (preferred or only alternative)	None.
Alternative 2	
Alternative 3	

e) No-go alternative

The no-go alternative will result in the property remaining as is with limited capacity at the feedlot.

f) Please motivate for preferred site, activity and technology alternative

Portion 4 of the farm Vlaknek 472JP, Ditsobotla Local Municipality, North West Province is the preferred site for the expansion of the feedlot. The property belongs to the applicant and is conveniently located in proximity to its abattoir in Koster (30km) and butcheries in the North West Province. The property has an existing feedlot and the intention is to expand it. The size of the property (408ha) lends itself to potential expansion. The property is zoned for agricultural use.

The manual removal and reuse of the manure is the best practicable and environmental option.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Size of the activity:

Alternative A1¹ (preferred activity alternative)

45 000m ²
m ²
m ²

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)

m
m

Alternative A2 (if any)



Alternative A3 (if any)

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

Alternative:

Size of the site/servitude:

Alternative A1 (preferred activity alternative)

4 080 832 m ²

Alternative A2 (if any)

m ²

Alternative A3 (if any)

m ²

4. SITE ACCESS

Does ready access to the site exist?

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

	m
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Describe the type of access road planned:

Access will be from the existing R53 which cuts through the western portion of the property.
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Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP – SEE APPENDIX A

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); **From site: Koster is 29km East North East; Swartruggens is 33km North East; Lichtenburg is 45km West South West, Ventersdorp is 46km South East; Coligny is 50km South South West; Groot Marico is 55km North West; Mahikeng is 96km West.**
- the accurate indication of the site in relation to closest protected environments or national parks (i.e. within 2.5 km)
- road access from all major roads in the area; **R53 provides access**



- 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, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system)

6. LAYOUT/ROUTE PLAN – SEE APPENDIX D

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix B 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; **See surrounding properties map in Appendix A.**
- the current land use as well as the land use zoning of the site; **Agriculture**
- the current land use as well as the land use zoning each of the properties adjoining the site or sites; **Agriculture**
- 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.

7. SENSITIVITY MAP – SEE APPENDIX B

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; **Wetlands further than 500m away**
- the 1:100 year flood line (where available or where it is required by Department of Water and Sanitation);
- ridges;
- for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas and ecological support area. **CBA 1 & ESA 1; ESA not part of development area**
- protected areas (e.g Magaliesberg Protected Environment, Pilanesberg National Park etc.)

The sensitivity map must also cover areas within 100m of the site and must be part of Appendix B.

8. SITE PHOTOGRAPHS – SEE APPENDIX C

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 C to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.



9. FACILITY ILLUSTRATION – SEE APPENDIX D

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix D 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.

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	NO	Please explain
The current zoning for the proposed project area / property is agricultural land use. The concentration of cattle and the expansion of the existing feedlot are agricultural activities. The property is surrounded by farming (agricultural) activities.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
Economic growth and sustainable development.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
The property is located in an agricultural (rural) area outside the urban edge as expected.			



(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?).	YES	NO	Please explain
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Table: Appropriate Land Uses per Biodiversity Category

Zones	Type of Land Use	Protected Area	Critical Biodiversity Area 1	Critical Biodiversity Area 2	Environmental Sensitive Area	No Natural Area
1	Conservation Management	Y	Y	Y	Y	Y
2	Extensive Game Farming	Y	Y	Y	Y	Y
3	Extensive Livestock Production	R	Y	Y	Y	Y
4	Rural Recreational Development	R	N	R	R	Y
5	Rural (Communal) Settlement	N	N	R	R	R
6	Dry Land Crop Cultivation	N	N	N	R	Y
7	Intensive Animal Farming	N	N	N	R	Y
8	Irrigated Crop Cultivation	N	N	N	R	Y
9	Timber Production	N	N	N	N	R
10	Urban and Business Development	N	N	N	N	R
11	Major/Extensive Development Projects	N	N	N	R	R
12	Linear Engineering Structures	N	R	R	R	R
13	Water Projects & Transfers	N	N	R	R	R
14	Underground Mining	N	N	R	R	Y
15	Surface Mining, Dumping & Dredging	N	N	N	R	R

(Source: PSDF Final Report – September 2008)

The DLM Integrated Development Plan (IDP, 2017-2018) indicates extensive livestock production to be an appropriate land use in CBA but not intensive animal farming.

(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
The project area is within an agricultural (rural) area.			



<p>(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?)</p>	YES	NO	Please explain
<p>This application will not compromise the integrity of the existing environmental management priorities for the area. The Magaliesberg Protected Environment (MPE) is a priority in the province. The MPE EMF is only applicable to the MPE and the MPE does not stretch into the DLM - it is mainly located in the Rustenburg Local Municipality with a small stretch in the west extending into the Kgetleng River Municipality.</p>			
<p>(f) Any other Plans (e.g. Guide Plan)</p>	YES	NO	Please explain
<p>Other plans generated by authorities (local, district and provincial) were considered and the proposed expansion will not contravene these. The following were considered:</p> <ul style="list-style-type: none"> • MPE EMF • North West Biodiversity Sector Plan, 2015 • Ngaka Modiri Molema District Municipality (NMMDM) Integrated Development Plan (IDP) 2017 – 2018. • Ditsobotla Local Municipality (DLM) IDP 2017/8. 			
<p>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)?</p>	YES	NO	Please explain
<p>The land use planned is agriculture and the property is zoned for agricultural use.</p>			
<p>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.)</p>	YES	NO	Please explain
<p>Job creation in the agricultural sector as well as food production is required. The property is zoned and used for agricultural purposes. Land use is compatible with land zoning, surrounding land use and rural nature of the area.</p>			



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 E.)	YES	NO	Please explain
Municipal services are not available in the area. Electricity is supplied by Eskom. Solid waste management is handled by the property owner. Wastewater (sewage) for household (small quantity for six (6) workers living on the property) is handled in a septic tank and French drain. Water supply is from a borehole on the property.			
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.)	YES	NO	Please explain
The proposed expansion of a feedlot on agricultural land and agricultural activities are not addressed as part of infrastructure planning of the municipality. It has no implication or bearing on the municipal infrastructure planning.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
Expansion of a feedlot on a farm is not part of a national programme.			
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.)	YES	NO	Please explain
The property is zoned for agricultural use and surrounded by other agricultural uses.			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The site is zoned for agricultural use in an agricultural land use area and is currently used as such. The expansion of the feedlot will be on a property, which is already used for this purpose.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
If mitigation is applied as suggested, the positive impacts will outweigh the potential negative impacts. The vegetation unit (CBA 1) within the property has already been disturbed by agricultural activities (game and studs) and the property has no conservation value from an ecological perspective.			



11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
The area is an agricultural area already.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
There is no predicted violation of any person's rights based on the scope of the project.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
Project is located outside the urban edge as is the case with agricultural activities.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?	YES	NO	Please explain
SIP includes the unlocking of economic opportunities in the North West Province. Although this project is not listed directly, it does contribute to the socio-economic structure.			
15. What will the benefits be to society in general and to the local communities?			Please explain
Food production for society in general and job creation for the local community.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
Market need for additional production.			
17. How does the project fit into the National Development Plan for 2030?			Please explain
The proposed project will create employment and lead to economic growth, which is in line with the National Development Plan.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA as amended have been taken into account.			
Environmental tools such as impact assessments have been used to ensure integrated environmental management.			
19. Please describe how the principles of environmental management as set out in Section 2 of NEMA as amended have been taken into account.			
All environmental and socio-economic impacts have been taken into account, including the associated consequences and alternatives to mitigate predicted negative impacts.			



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
<p>Constitution of South Africa, 1996 (Act 108 of 1996)</p>	<p>Section 24 states that: Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."</p> <p><i>The Environmental Management Programme (EMP) will minimise pollution and ecological degradation and ensure ecological sustainable development and use of natural resources.</i></p>	<p>Department of Justice and Constitutional Court</p>	<p>1996</p>



Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) as amended	<p>Government Notice Regulations (GNR) 982, 983, 984 & 985 of 4 December 2014 as amended in GNR 324, 325, 326 and 327 of 7 April 2017 contain the regulations pertaining to EIA under sections 24(5), 24M and 44 of the NEMA.</p> <p><i>The project falls under the listed activities of GNR983 as amended in GNR327 Activity 39 and GNR985 as amended in GNR324 Activity 12.</i></p>	Provincial - NW READ	1998
Conservation of Agricultural Resources Act (CARA), 1983 (Act 43 of 1983)	<p>The aim of the Act is to provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants.</p> <p><i>The project area is zoned as agricultural land and will be used as such.</i></p>	Department of Agriculture, Forestry and Fisheries (DAFF)	1983
National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999)	<p>Aspects concerning the conservation of cultural resources are dealt with in this Act and need to be considered to determine if there are any sites of heritage value that require protection/mitigation.</p> <p><i>The character of the site is not changed and therefore a heritage impact assessment is not required. An exemption application was made.</i></p>	South African or Provincial Heritage Resources Agency (PHRA)	1999



Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management: Biodiversity Act (NEMBA), 2004 (Act 10 of 2004)	<p>One of the objectives of this Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and to ensure the sustainable use of indigenous biological resources. Part 2 of NEMBA provides for listing of species that are threatened or in need of protection.</p> <p>Alien and Invasive Species are listed under GNR 599 (1 August 2014).</p> <p><i>Alien species as identified in the specialist ecology study, need to be controlled as per regulations.</i></p>	DEA & NW READ	2004
North West Biodiversity Sector Plan, 2015	<i>Since the project is located within CBA1. Intensive livestock farming is allowed in CBA1.</i>	NW READ	2015
Ngaka Modiri Molema District Municipality (NMMDM) Integrated Development Plan (IDP) 2017 – 2018.	<i>Planning on a district municipality level.</i>	NMMDM	2017
Ditsobotla Local Municipality (DLM) IDP 2017/8.	<i>Planning on a local municipality level.</i>	DLM	2017



12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	NO
	1 000m ³

If YES, what estimated quantity will be produced per month? **Minimal once off**

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

Biodegradable/organic waste will include:

Soil and vegetation cover that will be removed during the construction phase (vegetation clearance will be minimal) for the expansion of the feedlot resulting in garden type biodegradable waste.

General waste will include:

Waste generated by people on site (food containers, plastic, paper etc.) as is currently the case (on-going).

All non-biodegradable solid waste will be removed from site and disposed of at the licensed local municipal waste disposal facility in Koster. The waste will be collected in bags/skips and transported to the waste disposal site by the contractor/owner. No special handling or disposal methods will be required and landfill/ landbuild is adequate due to the wide-ranging general nature of waste produced. Biodegradable waste can be taken to a composting facility of left on site to degrade.

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

Koster Landfill Site.

Will the activity produce solid waste during its operational phase?

YES	NO
	100 m ³

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

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



Solid waste generated during the operational phase, will be mainly cattle manure with small quantities typical household type waste from residents/workers.

The cattle manure is stockpiled (less than 2 weeks) and then removed off-site to be used as fertilizer (reuse).

General household type waste will be removed from the site and transported by the owner to a licensed municipal waste disposal site in Koster. The general type solid waste mainly consists of the following:

Domestic waste (for possible recycling off site ensure separation on site) including:

- Glass;
- Plastics;
- Paper;
- Metals (cans);

Biodegradable waste including:

- Food waste; and
- Vegetation waste.

Small quantities of hazardous waste diluted in the waste stream including:

- Chemicals (mainly household chemicals used for cleaning purposes);
- Fuel / oil spillages due to vehicles collecting cattle.

This waste will feed into the municipal waste stream. Therefore, it will be stored in bags, which will be removed by the owner for disposal to the local municipal landfill site in Koster. The waste can be classified as a general type of waste and therefore no special handling or disposal methods are required and normal landfilling or landbuilding type disposal will be acceptable. The hazardous solid waste quantities will be minimal and diluted within the general stream as is the case in all municipal waste streams. Recycling should be encouraged.

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

The Koster Waste Disposal Facility

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

Waste will feed into the municipal waste stream.

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? YES NO

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



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

YES	NO
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If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

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

YES	NO
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If YES, what estimated quantity will be produced per month?

m ³	
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Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	NO
-----	----

If YES, describe the type of effluent and the disposal mechanism/method

Sewage from household will be treated in septic tank and French drain.

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

YES	NO
-----	----

If YES, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

c) Emissions into the atmosphere

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

YES	NO
-----	----

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

YES	NO
-----	----

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:

During the construction and operational phases of the activity, emissions may be expected from:

- Exhausts of construction / delivery / collection vehicles.
- Dust generation as a result of ground clearance (removal of vegetation), cattle and vehicle movement (dust roads).
- Methane gas (CH₄) and odour from cattle manure.



d) **Waste Licence/Registration**

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

YES	NO
-----	----

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

e) **Generation of noise**

Will the activity generate noise?

YES	NO
YES	NO

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

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.

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

Cattle grazing and minimal people.

13. **WATER USE**

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

Municipal	Water board	Groundwater	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:

1 million litres	
YES	NO

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

If YES, please provide proof that the application has been submitted to the Department of Water and Sanitation. **See Appendix**

14. **ENERGY EFFICIENCY**

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

No energy efficiency measures considered since the activity is not energy consuming in terms of electricity.

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

No alternative energy sources considered since the activity is not energy consuming in terms of electricity.

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

YES	NO
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix F.



SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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, as it appears on the Site Plan.
- Paragraphs 1 - 6 below must be completed for each alternative.

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

Agriculture

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

Is a change of land-use or a consent use application required?

YES NO

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat 1:49	1:50—1:20	1:20—1:15	1:15—1:10	1:10—1:7,5	1:7,5—1:5	Steeper than 1:5
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Alternative S2 (if any):

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

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

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

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



3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

4. GROUNDCOVER

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

Natural veld – good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure existing structures	Bare soil – current access road, patches

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

5. SURFACE WATER

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

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE



Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE

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

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

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

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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:

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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:

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

Critical Biodiversity Area (as per provincial conservation plan) CBA1	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix B (as part of sensitivity map). **SEE APPENDIX B.**

7. 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. 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 B to this report.

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA) - on property but not development area	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	Unclear.



- b) Indicate and describe the habitat condition on site – This is specific to the expansion area only and not the entire 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	98 %	
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	2 %	Structures/buildings.

- 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		
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)		
	Endangered			
	Vulnerable			
	Least Threatened			
		YES	NO	UNSURE



- 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)

A biodiversity (fauna and flora) specialist study by Iggdrasil Scientific Services, found the following:

- o Development area is located within CBA1 based on NW Biodiversity Sector Plan;
- o Property is located within the Grassland Biome - Carletonville Dolomite Grassland (Gh15), which has a conservation status of *Vulnerable*;
- o The conservation target for the Carletonville Dolomite Grassland is 24% with only a small extent currently protected and 23% considered to be transformed, mostly by cultivation (17%), urbanization (4%), forestry (1%) and mining (1%);
- o Though indicated as being located within the Grassland Biome, the site was found to rather represent Savanna vegetation;
- o Vegetation can be split into three (3) vegetation units namely: Savanna (*Ehretia rigida* - *Vachellia karroo* savannah), rocky grasslands and transformed areas.

According to the 2011 National List of Threatened Terrestrial Ecosystems for South Africa, the Carletonville Dolomite Grassland vegetation unit is not a listed threatened terrestrial ecosystem as per GN 1002 (GG 34809 of 9 December 2011) published under the NEM:BA.

- Flora: No expected species of conservation concern (SCC) but there were however seven (7) species that were Not Evaluated (NE).
- Birds: Nine (9) SCC of which seven (7) are rated as having a very low likelihood of occurrence, and two (2) are rated as having a low likelihood of occurrence. Two (2) secretary birds (vulnerable) were found in an area adjacent to the development area. Other birds species found were common and abundant.
- Mammals: Eleven (17.4%) are listed as being SCC on a regional or global basis; five (5) are rated as having a low likelihood and six (6) as very low. The European fallow deer (*Dama dama*) is a Category 2 alien invasive species and requires a permit. No SCC were recorded during the survey and the relatively low mammal diversity was attributed to the transformed nature of the surrounding area, as well as the relatively high human density in the area.
- Reptiles: No SCC are expected and none were found.
- Amphibians: One (1) SCC, *Pyxicephalus adspersus* (Giant bullfrog) is listed as potentially occurring in the project area; likelihood of occurrence of this species was rated as low.

8. CULTURAL/HISTORICAL FEATURES

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

YES	NO
Uncertain	



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

- Exemption application with PHRA.

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

YES	NO
YES	NO

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

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

9. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

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

Level of unemployment:

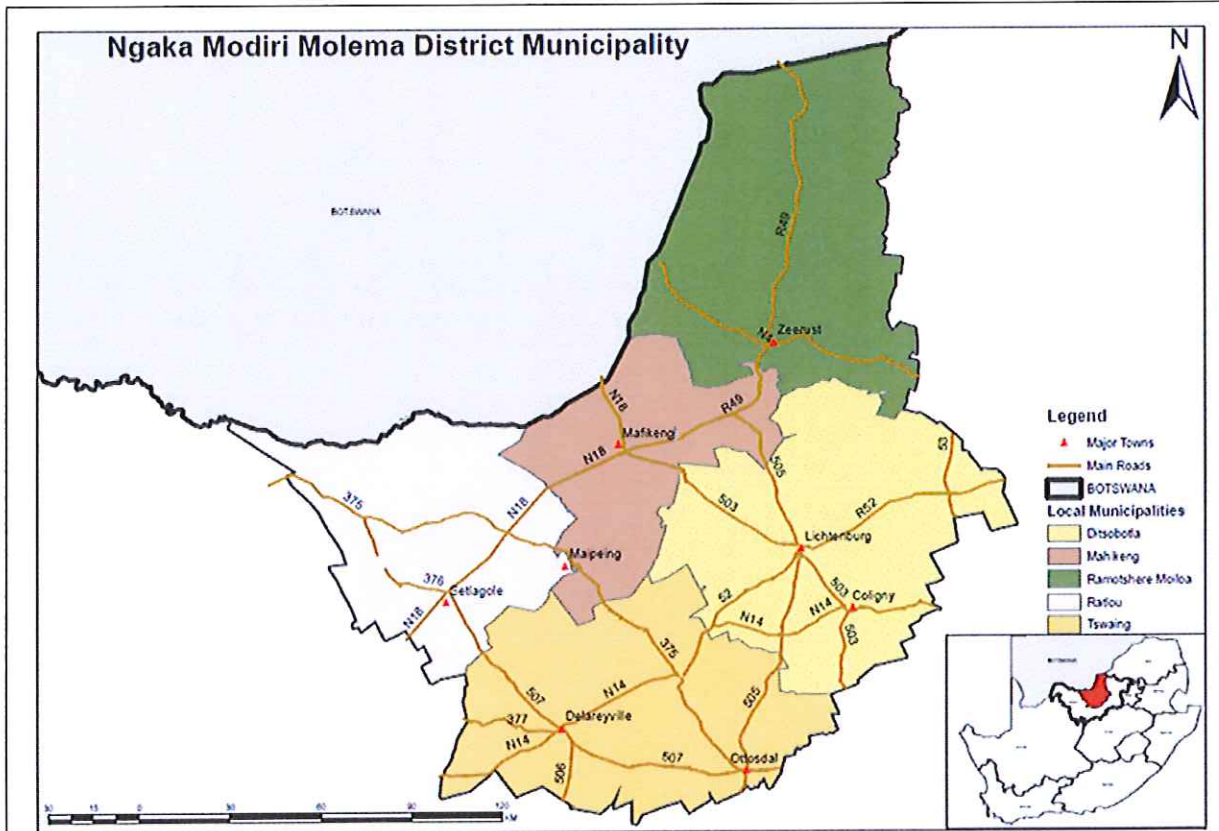
No official figures are given for DLM. For NMMDM, the unemployment rate was 33.7% and the youth (15 – 34) unemployment rate was 44.1% in 2016.

As per the NMMDM IDP, "Local Economic Development (LED) as an approach to development is one of the most important ways of poverty alleviation. LED aims at creating jobs by stimulating growth of the local economy."

Economic profile of local municipality:

NMMDM is one (1) of the four (4) districts in the North West Province. It stretches across 28 206km² and has a population of 889 108 people. It includes the local municipalities of Ratlou, Tswaing, Mafikeng, Ditsobotla, Ramotshere Moiloa.





Demographics:

	2016 NMMDM	2016 DLM
Population:	889 108	181 865
< 15	27%	27%
15 – 64	67.8%	68.3%
> 65	5.2%	4.8%
Dependency ratio (per 100)	47.6	46.5
Sex ratio (males per 100 females)	97.6	105.6
Population growth (per annum)	1.22%	1.94%
Households:	269 977	54 154
Average household size	3.3	3.4
Female headed households	41.2%	33.5%
Formal dwellings	82.7%	80.5%
Housing owned	72.8%	64.2%
Services		
Flush toilet connect to sewer	30%	55%
Weekly refuse removal	37.4%	36.5%
Piped water inside dwelling	19.5%	31.8%
Electricity	89.4%	88.1%

Main industries: Agricultural; mining and quarrying; manufacturing; wholesale and retail trade; financial; insurance, real estate and business.



Financial situation	2016/7	2017/8
Total revenue	420 807	532 562
Expenditure	472 211	380 212
Surplus / deficit	(51 404)	152 350
Surplus / deficit (including capital transfer & contributions)	1 505	189 483
Community wealth	n/a	754 787

Level of education:

The education levels are as follows (> 20 years of age):			
	NMMDM 2016	DLM 2016	DLM 2011
No schooling	11.6%	8.9%	14.4%
Matric	25.7%	25.4%	20.3%
Higher education	7.1%	5.9%	6.5%

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 20 million
What is the expected yearly income that will be generated by or as a result of the activity?	R 3 million
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	30
What is the expected value of the employment opportunities during the development and construction phase?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	90 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	10
What is the expected current value of the employment opportunities during the first 10 years?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	90 %

10. SPECIALIST(S) CONSULTATION

Has a specialist been consulted to assist with the completion of this section?	YES	NO
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix F. All specialist reports must be contained in Appendix G and must meet the requirement in Appendix 6 of EIA Regulations, 2014.



SECTION C: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
CONSTRUCTION: Biodiversity	<i>Direct impacts:</i> <ul style="list-style-type: none"> • Loss of faunal habitat. • Loss of foral species and floral habitat (especially to the east of the expansion area). • Increase in invasive plant species. • Loss of critical biodiversity habitat (CBA1). 	Moderate Low	<ul style="list-style-type: none"> • No harming, trapping, capturing or poaching of fauna species encountered. If any faunal species including snakes or scorpions are encountered during site clearing, relocate these to the surrounding (buffer) area. • Limit activities and clearance of vegetation to the extent of the expansion area (project footprint) to limit disturbances to surrounding areas (wildlife habitat). Communicate all no-go areas. • Plan roads in transformed area to limit fragmentation within the landscape and additional loss of vegetative cover.



Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> • Keep area to the east of the feedlot expansion area intact to maintain the remaining corridor. • Minimise the removal of large indigenous trees in the feedlot area to provide shade to the cattle. • Minimise the removal of large indigenous trees, shrubs and understorey vegetation as far as practically possible in the area surrounding the feedlot. • Undertake an alien invasive vegetation eradication programme and clear all alien invasive vegetation species, in particular Category 1b species identified during the specialist investigation, from the property as required by legislation. Implement this immediately as it takes at least three (3) years to break the cycle of regeneration (remove seedling & saplings, prevent spread of seeds). • Vehicles and equipment as well as construction material to be free from plant material. • Discard faecal matter and remaining feed in transformed areas such as existing pastures and agricultural fields.



Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> Appoint an Environmental Control Officer (ECO) to ensure mitigation measures are implemented.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	Insignificant	Footprint is small and site has been extensively utilised and transformed
CONSTRUCTION: Waste management	<p><i>Direct impacts:</i> Poor solid waste management practises can lead to contamination (soil and water) and unsightly areas as well as pests/vermin and odours with associated health issues. Waste streams include:</p> <ul style="list-style-type: none"> Solid construction waste generated through building activities (minimal). Biodegradable waste due to vegetation clearance, food waste, excretions. Hazardous waste in the event of a spillage/leak (equipment or vehicles). General waste produced by workers (biodegradable and non-biodegradable). 	Low	<ul style="list-style-type: none"> Prevention of waste: Storage– Storage areas should be safe, secure and weatherproof to prevent damage, resulting in waste generation. Reduction / minimisation of waste: Reduce waste quantities and disposal costs through a reduction in the materials ordered. "Take-back" schemes – setting up schemes with suppliers to take back surplus materials. Collect waste in suitable containers (drums/skips/bins on site). Engage with the supply chain to supply products and materials that use minimal packaging. Reuse / recycling of waste: Separate / sort waste for recycling. Manure generated in the feedlot by the cattle will be removed, stored next to the storage building and then removed and reused in agricultural



Activity	Impact summary	Significance	Proposed mitigation
			<p>fields or donated to households as garden fertiliser.</p> <ul style="list-style-type: none"> • <u>Waste handling on site:</u> <ul style="list-style-type: none"> ○ Separate / sort waste. ○ Waste containers must have covers to prevent rainwater infiltration. ○ Ensure sufficient containers are available for storage of waste prior to removal off site to prevent overflow and littering on the site and surroundings. ○ Ensure no litter, refuse, waste and rubble generated on the premises be placed, dumped or deposited on this farm, adjacent or surrounding properties. ○ Arrange litter patrols to collect and remove windblown litter. ○ Manure to be stored in a dedicated area next to (north of) the storage building. • <u>Waste removal & disposal:</u> <ul style="list-style-type: none"> ○ Remove manure and reuse in agricultural fields or donate to households as garden fertiliser. ○ Remove other



Activity	Impact summary	Significance	Proposed mitigation
			<p>waste from site for disposal to the local licensed municipal landfill / waste management facility on a regular basis. Responsibility of owner.</p> <ul style="list-style-type: none"> • Documentation: <ul style="list-style-type: none"> ○ Report on the quantities of different waste streams managed (landfill, reuse, recycling, energy recovery). ○ Ensure copies of all waste manifests (safe disposal certificates) are kept, showing responsible handling, transport and disposal.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	-	-
<p>CONSTRUCTION: Soil, surface water & groundwater</p>	<p><i>Direct impacts:</i> Pollution due to:</p> <ul style="list-style-type: none"> • Incorrect handling of waste (see above). • Incorrect handling of spillages (concrete and hydrocarbons). 	<p>Low</p>	<ul style="list-style-type: none"> • Refer to waste management section above. • Ensure that all materials are effectively stored and managed to prevent contamination. • Vehicles / equipment / machinery maintenance should be undertaken in the workshop if it is emergency repairs in which case drip trays and absorbent material should be used to capture and contain



Activity	Impact summary	Significance	Proposed mitigation
			hydrocarbon spillages. <ul style="list-style-type: none"> Planned maintenance should be conducted off-site. In the unlikely event of a spillage, sufficient clean-up procedures must be carried out immediately. > 500m between potential pollution sources and water supply borehole. Groundwater monitoring to detect impacts and take remedial action.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	-	-
OPERATION: Biodiversity	<i>Direct impacts:</i> <ul style="list-style-type: none"> Loss of faunal habitat. Loss of foral species and floral habitat (especially to the east of the expansion area). Increase in invasive plant species. Loss of critical biodiversity habitat (CBA1). 	Moderate Low	As per construction phase.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i> Loss of connectivity between habitats. Spread of alien invasive species.	Negligible	Avoid impacts on and degrading of surrounding untransformed areas by keeping within the development footprint.
OPERATION: Air quality and waste management	<i>Direct impacts:</i> Poor solid waste management practises can lead to contamination (soil and water) and unsightly areas as well as pests/vermin and odours with associated health	Low	As per construction phase.



Activity	Impact summary	Significance	Proposed mitigation
	<p>issues. Waste streams include:</p> <ul style="list-style-type: none"> • Solid construction waste generated through building activities (minimal). • Biodegradable waste due to vegetation clearance, food waste, excretions (methane gas). • Hazardous waste in the event of a spillage/leak (equipment or vehicles). • General waste produced by workers (biodegradable and non-biodegradable). 		
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	-	-
<p>OPERATION: Soil, surface water and groundwater</p>	<p><i>Direct impacts:</i> Pollution due to:</p> <ul style="list-style-type: none"> • Incorrect handling of waste (see above). • Incorrect handling of spillages (concrete and hydrocarbons). <p>Contamination of soil and surface water (rain water and runoff) can result in groundwater contamination.</p>	Low	<ul style="list-style-type: none"> • As per construction phase. • Medium percolation rate (2.44m/d) of soil and silty sand act as a filter system to potential contamination to the groundwater aquifer. • The top soil layer further has a high capacity to create an effective barrier to the movement of biological contaminants further reducing the risk of organic or microbiological contamination of the groundwater aquifer. • The sand however has a minimal capacity to absorb chemical contaminants (nitrates (NO₃) and phosphates



Activity	Impact summary	Significance	Proposed mitigation
			(PO ₄)). <ul style="list-style-type: none"> Analyze groundwater sample bi-annually.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	-	-
OPERATION: Groundwater availability	<i>Direct impacts:</i> Reduction in groundwater availability to all water users in the catchment area due to overabstraction by this operation.	Moderate Low	<ul style="list-style-type: none"> Requirement (35m³/day) is only 4.8% of the recharge (726.58 m³/day) Requirement (35m³/day) is only 45% of the recommended abstraction rate (77.8m³/day). Measure abstraction volumes.
	<i>Indirect impacts:</i>	-	-
	<i>Cumulative impacts:</i>	-	-
Alternative 2			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
Alternative 3			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		



Activity	Impact summary	Significance	Proposed mitigation
No-go option			
Socio-economic	Direct impacts: No additional jobs. No financial gain. Not meeting food production need.	Moderate High	Continuation of the proposed project.
	Indirect impacts:		
	Cumulative impacts:		

A complete impact assessment which include process undertaken to identify, assess and rank the impacts, the activity will impose on the site through the life of the activity in terms of EIA Regulation 2014, Appendix 1(i) and (j) of GN R.982 must be included as Appendix H. **SEE APPENDIX J.**

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)

Impact significance and mitigation measures: All impacts are of a moderately low to low significance before mitigation and low with the implementation of the mitigation measures as suggested in the EMP (see Appendix J).

Biodiversity: An area of the property and the area where the expansion of the feedlot is planned was assigned CBA1 status due to the presence of critical patches (North West Biodiversity Sector Plan, 2015). Though Carletonville Dolomite Grassland was expected, the vegetation was found to resemble savannah upon site inspection. The savanna vegetation is in primary condition, with moderate to low levels of disturbance. No species of conservation concern were expected or found within the study area. The area does link to a larger corridor of largely primary savanna vegetation to the east of the study / expansion area and this is likely the reason why the area was assigned CBA1 status. The patch of intact primary vegetation to the east of the expansion area is quite significant, due to rocky areas, which prevented the utilisation of this area for agricultural fields and pastures and should be left intact.

Water supply: An application for a Water Use License (WUL) will be lodged with the Department of Water and Sanitation (DWS) in terms of the National Water Act (NWA), 1998 (Act 36 of 1998) for a Section 21 (a) water use (abstraction of groundwater) upon finalisation of the review period of the draft BAR (December 2018). DWS received a copy of the draft BAR as well (November 2018). The abstraction volumes (35m³/day) will however, not impact on other water users.



Alternative C

No-go alternative (compulsory)

If the project does not proceed, the potential impacts on the socio-economic environment will be of a moderately high significance.



SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Noordwester Newspaper	
Date published	12 October 2018 – page 7	
Site notice position	Latitude (S)	Longitude (E)
	25° 56' 22.8"	26° 35' 42.8"
	25° 56' 14.4"	26° 36' 00.2"
Date placed	9 October 2018	

Include proof of the placement of the relevant advertisements and notices in Appendix I1.

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 R.982. **SEE APPENDIX I.**

Key stakeholders (other than organs of state) identified in terms of Regulation 40(2)(d) of GN R.982:

Legal entity Name & surname	Property
Fahari Property Investments (Pty) Ltd (2000/020869/07) Marthinus de Jager (631013 5042 00 7) (Applicant)	Portions 4 & 7 of the farm Vlaknek 472JP (site and south of site)
Henlie Boerdery CC (1996/009645/23) Hendrik B Pretorius (630613 5005 08 5)	Portions 9 & 14 of the farm Vlaknek 472JP (north of site) Portion 3 of the farm Kruidfontein 470JP (north north east of site)
Japie Liebenberg Boerdery CC (1986/020949/23) HL Liebenberg (600117 0002 08 5)	Portion 1 of the farm Geyerspan 477JP (south west of site)
Johannes Jacob Liebenberg (600505 5165 08 1)	Portion 12 of the farm Vlaknek 472JP (south of site) Portion 0 of the farm Kruidfontein 470JP (south south east of site)
Roelof Petrus Campher (360615 5002 08 3)	Portions 1 and 21 of the farm Kruidfontein 470JP (east of site)
Kruidfontein Boerdery CC (2007/218808/23) Johannes J Pretorius (771014 5064 08 2)	Portion 13 of the farm Kruidfontein 470JP (north east of site)



Legal entity Name & surname	Property
W.J. Rivers	Farm Rietpan
Ben Snyman	Indicated as the Geyerspan farm
Adolf Churr	
Johan Theart	

Include proof that the key stakeholder received written notification of the proposed activities as Appendix I2. 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. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

No issues raised.

Comments received:

- Neighbour (Ben Snyman): No objection, good thing
- DWS (George Nel): Requested copy of BAR

4. COMMENTS AND RESPONSE REPORT

The practitioner must make report (s) available to I&APs record all comments received from I&APs and respond to each comment before 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 I3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders. Key stakeholders identified in terms of Regulation 7(1) and (2) and Regulation 40(2) (a)-(c) of GN R.982:

Local Municipality: Ditsobotla Local Municipality (DLM)	
Name:	Department / Section:
Martin Clark	Parks & Cemeteries Waste



Office of the Speaker Mr Hendrik Mokoso	Ward Councillor: Ward 17
Elsje de Villiers (Ronel)	Noordwester Newspaper
District Municipality: Ngaka Modiri Molema District Municipality (NMMDM)	
Name:	Department / Section:
Ms Merriam Kgomotso Mahlobo (Senior Manager) Cllr. Molefe Morutse (MMC)	IDP, Planning and Development
Ms Selebatso Mavis Nkadimang (Senior Manager) Cllr. Priscilla Kwanaite (MMC)	Community Services
Provincial Government: North West Department of Rural, Environmental and Agricultural (NW READ)	
Name:	Department / Section:
Ms Portia Krisjan	Director: Environmental Quality Control
Ms Ellis Thebe	Associate Director: Environmental Quality Control
Mr Kgahliso Makoli	Officer assigned with application Reference: NWP/EIA/53/2018
Department of Agriculture, Forestry and Fisheries (DAFF)	
Name:	Department / Section:
N.V Maumela	Land Use and Soil Management
Ms Raesibe N. Mashiane Mr Mpho Gumula	Land Use and Soil Management
Department of Environmental Affairs (National)	
Name:	Department / Section:
Mr Albi Modise	National Department of Environment (DEA)



Department of Water and Sanitation	
Name:	Department / Section:
Dr Tseliso Ntll George Nel	DWS Middle Vaal Catchment
Other	
Name:	Department / Section:
Ms Natasha Higgitt	NW Provincial Heritage Resources Agency (PHRA)

Include proof that the Authorities and Organs of State received written notification and draft reports of the proposed activities as Appendix I4.

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 I5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix I6.



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

NO

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

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

In general, all the mitigation measures recommended in the EMP should form part of the authorisation process.

The EMPs that meet the requirements of EIA Regulation, 2014, Appendix 4, must be attached as Appendix J.

Is an EMP attached?

YES

NO

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 K

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

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

SECTION F: AFFIRMATION BY EAP

I, Paulette Jacobs (name of person representing EAP) of HydroScience (name of company) declare that the information provided is correct and relevant to the activity/ project and that, the information was made available to interested and affected parties for their comments. All specialist (s) reports are relevant for the competent authority to make informed decision.


SIGNATURE OF EAP

2018-11-05
DATE



SECTION F: APPENDICES

The following appendices must be attached:

Appendix A: A3 Locality Map

Appendix B: Layout Plan and Sensitivity Maps

Appendix C: Photographs

Appendix D: Facility illustration(s)

Appendix E: Confirmation of services by Municipality (servitude and infrastructure planning)

Appendix F: Details and expertise of Specialist and Declaration of Interest

Appendix G: Specialist reports (including terms of reference)

Appendix H: Impact Assessment

Appendix I: Public Participation

Appendix J: Environmental Management Programme (EMPr)

Appendix K: Details of EAP and expertise

Appendix L: Any other Information

Appendix M: Financial Provision (if applicable)

Appendix N: Closure Plan (where applicable) as described in Appendix 5 of EIA Regulations, 2014

