In terms of Regulation 19(3) of GN 326 of the NEMA Environmental Impact Assessment Regulations, 2014, as amended on 07 April 2017, the impact assessment for the proposed expansion of Calvinia Ramskop Abattoir, Erf 3562, Calvinia, is as follows:

Construction phase:

Potential impacts on geographical and physical aspects:	**Potential impact on freshwater ecosystems** The project as proposed does not require construction activities to take place, as such the potential impacts is therefore considered irrelevant. Ramskop Abattoir Calvinia is an existing facility and physical construction activities is proposed. This EIA application is for the expansion and related operation of facilities for the slaughter of animals, where the daily product throughput capacity will be increased. Ramskop Abattoir is currently registered to slaughter 600 sheep/goats per day (100 Units). It is proposed that the slaughter capacity be increased from 600 t0 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of waste water produced by the abattoir will also increase.
Nature of impact:	N/A
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Potential impact on biological aspects:	
Nature of impact:	**Groundwater resources** - Ramskop Abattoir upgrade is not considered to have an impact on groundwater resources in the area, and it will not impact on the groundwater quality of the production borehole on site or neighbouring farms. A high level of confidence is associated with this conclusion. Please see Appendix D1 for the Geohydrological Impact Assessment.
Extent and duration of impact:	N/A. Please see the operation phase.
Probability of occurrence:	N/A. Please see the operation phase.
Degree to which the impact can be reversed:	N/A. Please see the operation phase.
Degree to which the impact may cause irreplaceable loss of resources:	N/A. Please see the operation phase.
Cumulative impact prior to mitigation:	N/A. Please see the operation phase.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A. Please see the operation phase.
Degree to which the impact can be mitigated:	N/A. Please see the operation phase.

Proposed mitigation:	N/A. Please see the operation phase.
Cumulative impact post mitigation:	N/A. Please see the operation phase.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A. Please see the operation phase.

Potential impacts on socio-economic aspects:	
Nature of impact:	**Temporary jobs will be created in the construction industry during the construction phase.**
Extent and duration of impact:	Local. During the construction phase of the activity
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	NA. This is a positive impact
Degree to which the impact may cause irreplaceable loss of resources:	NA
Cumulative impact prior to mitigation:	Low - positive
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - positive
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	No mitigation measures are required. Temporary were created during the construction phase.
Cumulative impact post mitigation:	Low - positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - positive

Potential impacts on cultural-historical aspects:	
Nature of impact:	**The loss of cultural or historic aspects during construction**
Extent and duration of impact:	Local, during construction phase
Probability of occurrence:	Highly unlikely, no cultural or historic aspects of significance were identified on site.
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	Highly Unlikely
Cumulative impact prior to mitigation:	Very Low – Negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Very low – Negative
Degree to which the impact can be mitigated:	Limited
Proposed mitigation:	• If any archaeological remains (including but not limited to fossil bones and fossil shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during construction they must immediately be reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA. • Should any human remains/burial or archaeological material be disturbed, exposed or uncovered during construction, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer are also to be informed.
Cumulative impact post mitigation:	Negligible

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential noise impacts:	
Nature of impact:	**Noise impact from machinery and plant on the neighbouring properties during construction**
Extent and duration of impact:	Local, Duration of operational phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Negligible
Cumulative impact prior to mitigation:	Low-negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low – negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	The following measures should be implemented amongst others: • The Contractor shall endeavour to keep noise generating activities to a minimum. • Construction only to take place during normal working hours. • Compliance with the appropriate legislation with respect to noise shall be mandatory.
Cumulative impact post mitigation:	Low – negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low – negative

Potential visual impacts:	The project as proposed does not require construction activities to take place, as such the potential impacts is therefore considered irrelevant. Ramskop Abattoir Calvinia is an existing facility and physical construction activities is proposed. This EIA application is for the expansion and related operation of facilities for the slaughter of animals, where the daily product throughput capacity will be increased. Ramskop Abattoir is currently registered to slaughter 600 sheep/goats per day (100 Units). It is proposed that the slaughter capacity be increased from 600 t0 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of waste water produced by the abattoir will also increase.
Nature of impact:	N/A
Extent and duration of impact:	N/A
Probability of occurrence:	N/A
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Operational phase:

Potential impacts on the geographical and physical aspects:	**Potential Impact on surface freshwater resources**
Nature of impact:	Contamination of surface freshwater resources
Extent and duration of impact:	Local, during the operational phase
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Unlikely
Cumulative impact prior to mitigation:	Very-low negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Very-low negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• Condemned material to be disposed of at an existing fenced off burial area on site, west of the abattoir. • No development to take place within 32m of the any watercourse. Oorlogskloof River is approximately 120m south of the proposed site. • Existing access roads to be used and no new roads to be constructed. • All operational activities must be undertaken in accordance with an approved operational phase Environmental Management Programme ("EMPr"). The control of waste water, any polluted water and/or stormwater must be properly controlled, as per the EMPr.
Cumulative impact post mitigation:	Very-low negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential impacts on the geographical and physical aspects:	**Potential Impact on groundwater resources** Ramskop Abattoir Calvinia expansion is not considered to have an impact on groundwater resources in the area and it will not impact on the groundwater quality of the production borehole on site or neighbouring farms. A high level of confidence is associated with this conclusion. Please see appendix D1 for the Geohydrological Impact Assessment.
Nature of impact:	Contamination of groundwater resources
Extent and duration of impact:	Local, during operational phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Unlikely
Cumulative impact prior to mitigation:	Very-low negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Very-low negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	• The holding pens and washing zones area within cement

	bunding walls. • The effluent water is channelled into a storage tank where after it is transferred to via an existing pipeline network to the municipal Waste Water Treatment Works (oxidation dams). • Animal remains that are unusable for human consumption are disposed of at a burial area on site. The remains are buried in trenches with a depth of more than 60cm, just west of the abattoir. • All operational activities must be undertaken in accordance with an approved operational phase Environmental Management Programme ("EMPr"). • The control of waste water, any polluted water and/or stormwater must be properly controlled, as per the EMPr.
Cumulative impact post mitigation:	Ver-low negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential impacts on the geographical and physical aspects:	**Abattoir waste**
Nature of impact:	• Waste from the abattoir and lairages will be collected and removed daily and mortality disposal in trenches (burial site) with a depth of more than 60cm, just west of the abattoir. • Waste generated within the holding pens and washing zones. • Effluent water is channelled into a storage tank where after it is transferred via an existing pipeline to municipal waste water treatment works (Oxidation dams). • The number of waste water/effluent as well as the amount of solid waste will be increased.
Extent and duration of impact:	Local, Permanent
Probability of occurrence:	Highly probable
Degree to which the impact can be reversed:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Highly Unlikely
Cumulative impact prior to mitigation:	Low-negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	The control of waste water, any polluted water and/or stormwater will be properly controlled as per the Operational EMPr.
Cumulative impact post mitigation:	Low-negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very Low negative

Potential impact biological aspects:	
Nature of impact:	**No biological aspects are expected to be impacted during the operational phase**
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable	

loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impacts on the socio-economic aspects:	**Socio-economic impact (positive)**
Nature of impact:	• 20 new permanent jobs will be created during the operational phase.
Extent and duration of impact:	Local, Permanent
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	NA
Degree to which the impact may cause irreplaceable loss of resources:	NA, the impact is a positive impact.
Cumulative impact prior to mitigation:	NA
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	NA
Degree to which the impact can be mitigated:	NA, the impact is a positive impact.
Proposed mitigation:	No mitigation measures are required.
Cumulative impact post mitigation:	Low - Positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - Positive

Potential impacts on the cultural-historical aspects:	**Loss of cultural or historic aspects**
Nature of impact:	**No cultural or historic impacts are expected during the operational phase of this activity.**
Extent and duration of impact:	Local, during construction phase
Probability of occurrence:	Highly unlikely, no cultural or historic aspects of significance were identified on site.
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	Highly Unlikely
Cumulative impact prior to mitigation:	Very Low – Negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Very low – Negative
Degree to which the impact can be mitigated:	Limited
Proposed mitigation:	• If any archaeological remains (including but not limited to fossil bones and fossil shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during construction and operational phase they must immediately be reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA.

	• Should any human remains/burial or archaeological material be disturbed, exposed or uncovered during construction, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer are also to be informed.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential noise impacts:	**Noise Impact**
Nature of impact:	**No significant noise impacts are expected during the operational phase for this activity.**
Extent and duration of impact:	Local (Site-specific), permanent
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Negligible
Cumulative impact prior to mitigation:	Low negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Very-Low negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	The following measures should be implemented amongst others: • The Contractor shall endeavour to keep noise generating activities to a minimum. • Operating hours restricted to normal working hours (07:30 – 17:30). • An acceptable noise level (45dBA during the day) as specified by the SABS 10103 Code of Practise will be maintained). • Compliance with the appropriate legislation with respect to noise shall be mandatory. • The Operational EMPr will be implemented.
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Potential dust impacts:	**Dust Impact**
Nature of impact:	**Noise generated within the abattoir and lairages (animal holding areas).** The abattoir is currently registered to slaughter 600 sheep on full capacity and is now proposing to increase expand the slaughter capacity to 1000 sheep a day. This means that the number of vehicles used to transport the animal to the abattoir could possible result in an increase in local road traffic. This could lead to an increase in dust generation within the immediate vicinity of the site. However, this impact is low-negative and is of low significance. This could be attributed to the fact that the nearest residential dwelling is approximately 610m southeast of the proposed site. Dust repression measures will be implemented together with the Operational EMPr.
Extent and duration of impact:	Local, permanent
Probability of occurrence:	Highly probable
Degree to which the impact can be reversed:	Very low

Degree to which the impact may cause irreplaceable loss of resources:	Low, negative
Cumulative impact prior to mitigation:	Low - Negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium - Low Negative
Degree to which the impact can be mitigated:	low
Proposed mitigation:	Dust repression measures will be implemented together with the Operational EMPr.
Cumulative impact post mitigation:	Low - Negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low - Negative

Decommissioning:

The project as proposed does not require 'decommissioning' or 'closure', as such the potential impacts thereof is considered irrelevant.