

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
<p>Nature of impact:</p>	<p>The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").</p> <p>No development to take place within 32m of the any watercourse. Oorlogskloof River is approximately 120m south of the proposed site.</p> <p>The proposed development is therefore expected to have no direct impacts on any watercourse or freshwater ecosystems.</p>
<p>Extent and duration of impact:</p>	<p>N/A</p>
<p>Probability of occurrence:</p>	<p>N/A</p>
<p>Degree to which the impact can be reversed:</p>	<p>N/A</p>
<p>Degree to which the impact may cause irreplaceable loss of resources:</p>	<p>N/A</p>
<p>Cumulative impact prior to mitigation:</p>	<p>N/A</p>
<p>Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)</p>	<p>N/A</p>
<p>Degree to which the impact can be mitigated:</p>	<p>N/A</p>
<p>Proposed mitigation:</p>	<p>N/A</p>
<p>Cumulative impact post mitigation:</p>	<p>N/A</p>
<p>Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)</p>	<p>N/A</p>

Potential impact on biological aspects:	Potential impact on Groundwater Resources
<p>Nature of impact:</p>	<p>The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia</p>

	<p>Wastewater Treatment Plant (“WWTP”).</p> <p>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.</p>
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.

<p>Potential impacts on socio-economic aspects:</p>	<p>The project as proposed does not require construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant (“WWTP”).</p>
Nature of impact:	N/A. Please see the operation phase.
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 cultural-historical / archaeological heritage aspects:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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 noise impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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 solid waste impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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 wastewater / effluent impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste and wastewater will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
---	---

Nature of impact:	N/A. Please see the operation phase.
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 odour impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste and wastewater will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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 dust impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered
--------------------------------	--

	irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste and wastewater will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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 loss of vegetation impacts:	The project as proposed does not require 'construction activities to take place, as such the potential impacts thereof is considered irrelevant. This EIA application is for the expansion and related operation of facilities for the slaughter of animals where the daily product throughput 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 to 1000 sheep/goats per day (167 Units). Quantities of solid waste and wastewater will be produced during the operational phase. The amount of wastewater from the abattoir will also be increased. The wastewater produced by the abattoir gets discharged at Calvinia Wastewater Treatment Plant ("WWTP").
Nature of impact:	N/A. Please see the operation phase.
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.

Operational phase:

Potential impacts on 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:	High
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)	Low - Negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<ul style="list-style-type: none"> • 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. • The area where the where condemned carcasses / material and solid blood gets buried (in trenches) is properly fenced off and has an access control gate for safety and security purposes and to prevent easy access to pickers or scavengers, putrid odour and vermin nuisance conditions. The burial site (trenches) is clearly marked and locked for safety and security reasons. • All operational activities must be undertaken in accordance with an approved operational phase Environmental Management Programme ("EMPr"). • Two groundwater monitoring boreholes were drilled on both sides of the burial site (trenches), each approximately 40m deep. The one borehole is located at the south-western corner of the burial site and has the following co-ordinates: 31°28'19.08"S ; 19°45'36.50"E and other borehole is located to the west of the burial site with the following co-ordinates: 31°28'15.68"S ; 19°45'40.54"E. There are no water present in both the groundwater monitoring boreholes. Both boreholes had no water at the time of drilling. Groundwater monitoring on the two boreholes will be done twice a year, during the winter months and during the summer months. <p>The control of waste water, any polluted water and/or stormwater must be properly controlled, as per the EMPr.</p>

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

Potential impact on biological aspects:	<p>Potential Impact on groundwater resources</p> <p>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.</p>
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:	High
Degree to which the impact may cause irreplaceable loss of resources:	Very Low - Negative
Cumulative impact prior to mitigation:	Negligible
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:	High
Proposed mitigation:	<ul style="list-style-type: none"> • 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. • Two groundwater monitoring boreholes were drilled on both sides of the burial site (trenches), each approximately 40m deep. The one borehole is located at the south-western corner of the burial site and has the following co-ordinates: 31°28'19.08"S ; 19°45'36.50"E and other borehole is located to the west of the burial site with the following co-ordinates: 31°28'15.68"S ; 19°45'40.54"E. • There are no water present in both the groundwater monitoring boreholes. Both boreholes had no water at the time of drilling. Groundwater monitoring on the two boreholes will be done twice a year, during the winter months and during the summer months. • 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:	Negligible

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

Potential impacts on 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, during the operational phase
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. However, local residents will be employed.
Cumulative impact post mitigation:	Low – Medium Positive
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low – Medium Positive

Potential impacts on cultural-historical / archaeological heritage aspects:	Loss of cultural-historic / archaeological heritage 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:	High
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)	Low – Negative
Degree to which the impact can be mitigated:	Limited
Proposed mitigation:	<ul style="list-style-type: none"> 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

	<p>informed.</p> <ul style="list-style-type: none"> Please refer to Appendix D2 for the Heritage Screener.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential noise impacts:	Noise impacts during the operational phase
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 and during the operational phase
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Negligible
Cumulative impact prior to mitigation:	Very 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:	High
Proposed mitigation:	<p>The following measures should be implemented amongst others:</p> <ul style="list-style-type: none"> 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:	Very Low - Negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible

Potential solid waste impacts:	Solid waste produced at the abattoir
Nature of impact:	<p>Waste from the abattoir and lairages (animal holding areas) will be collected and removed daily and disposed in trenches with a minimum depth of more than 1.5m, just west of the abattoir.</p> <p>All water used at the abattoir; this includes the slaughter floor and pens/krale, gets pumped through a separator where to solids gets separated from the liquid waste produced by the abattoir.</p> <p>Blood gets separated when head is removed, then the blood flows into a 2500L storage tank. In storage tank blood and water gets mixed to prevent coagulation.</p> <p>After this the wastewater gets treated with chemicals to stabilize /solidify blood and break down the remaining solids. After this, wastewater than gets pumped through a pipeline to the municipality's oxidation dams / Calvinia Wastewater Treatment</p>

	<p>Plant ("WWTP"), and any other remaining solid waste than also gets buried in the 1.5m deep trenches on site.</p> <p>The area where the where condemned carcasses / material and solid blood gets buried (in trenches) is properly fenced off and has an access control gate for safety and security purposes and to prevent easy access to pickers or scavengers, putrid odour and vermin nuisance conditions.</p> <p>The burial site (trenches) is clearly marked and locked for safety and security reasons.</p> <p>The control of solid waste, wastewater, any polluted water and/or stormwater must be properly controlled, as per the EMPr.</p>
Extent and duration of impact:	Local, Permanent and during the operational phase
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Very Low - Negative
Cumulative impact prior to mitigation:	Low-Negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-Medium Negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Waste from the abattoir and lairages (animal holding areas) will be collected and removed daily and disposed in trenches with a minimum depth of more than 1.5m, just west of the abattoir.</p> <p>All water used at the abattoir; this includes the slaughter floor and pens/krale, gets pumped through a separator where to solids gets separated from the liquid waste produced by the abattoir.</p> <p>Blood gets separated when head is removed, then the blood flows into a 2500L storage tank. In storage tank blood and water gets mixed to prevent coagulation.</p> <p>After this the wastewater gets treated with chemicals to stabilize /solidify blood and break down the remaining solids. After this, wastewater than gets pumped through a pipeline to the municipality's oxidation dams / Calvinia Wastewater Treatment Plant ("WWTP"), and any other remaining solid waste than also gets buried in the 1.5m deep trenches on site.</p> <p>The area where the where condemned carcasses / material and solid blood gets buried (in trenches) is properly fenced off and has an access control gate for safety and security purposes and to prevent easy access to pickers or scavengers, putrid odour and vermin nuisance conditions.</p> <p>The burial site (trenches) is clearly marked and locked for safety and security reasons.</p> <p>The control of solid waste, wastewater, any polluted water and/or stormwater must be properly controlled, as per the EMPr.</p>
Cumulative impact post mitigation:	Very Low-Negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-Negative
Potential wastewater / effluent impacts:	Wastewater / effluent discharged at Calvinia Wastewater Treatment Works

Nature of impact:	Wastewater / effluent discharged at Calvinia Wastewater Treatment Works
Extent and duration of impact:	Local, during the operational phase
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Very-Low Negative
Cumulative impact prior to mitigation:	Low-Negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low-Medium Negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>All water used at the abattoir; this includes the slaughter floor and pens/krale, gets pumped through a separator where to solids gets separated from the liquid waste produced by the abattoir.</p> <p>Blood gets separated when head is removed, then the blood flows into a 2500L storage tank. In storage tank blood and water gets mixed to prevent coagulation.</p> <p>After this the wastewater gets treated with chemicals to stabilize /solidify blood and break down the remaining solids. After this, wastewater than gets pumped through a pipeline to the municipality's oxidation dams / Calvinia Wastewater Treatment Plant ("WWTP"), and any other remaining solid waste than also gets buried in the 1.5m deep trenches on site.</p> <p>Ramskop abattoir installed a flowmeter on their pipeline at the inlet of the municipality's WWTP (where the abattoir's pipeline terminates), and monthly water quality samples gets taken at the WWTP's inlet and provided to the municipality and Gert Meiring at BVI Consulting Engineers.</p> <p>Ramskop Abattoir's employees as well as the municipality's employees will take the water quality samples at the same place (WWTP's inlet) for analysis.</p> <p>The area where the where condemned carcasses / material and solid blood gets buried (in trenches) is properly fenced off and has an access control gate for safety and security purposes and to prevent easy access to pickers or scavengers, putrid odour and vermin nuisance conditions.</p> <p>The burial site (trenches) is clearly marked and locked for safety and security reasons.</p> <p>Two groundwater monitoring boreholes were drilled on both sides of the burial site (trenches), each approximately 40m deep. The one borehole is located at the south-western corner of the burial site and has the following co-ordinates: 31°28'19.08"S ; 19°45'36.50"E and other borehole is located to the west of the burial site with the following co-ordinates: 31°28'15.68"S ; 19°45'40.54"E.</p> <p>There were no water present in both the groundwater monitoring boreholes. Both boreholes had no water at the time of drilling. Groundwater monitoring on the two boreholes will be done twice a year, during the winter months and during the summer months.</p> <p>The control of waste water, any polluted water and/or stormwater must be properly controlled, as per the EMPr.</p>
Cumulative impact post mitigation:	Very-Low Negative

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

Potential odour impacts:	
Nature of impact:	Odours resulting from the abattoir burial site
Extent and duration of impact:	Local, during the operational phase
Probability of occurrence:	Likely
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Negligible
Cumulative impact prior to mitigation:	Very-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:	High
Proposed mitigation:	<p>Domestic waste must be stored in approved proof containers (e.g. bins with removable lids).</p> <p>All condemned carcasses to be buried in the demarcated burial site, with trenches that's 1.5m deep, located west of the abattoir.</p> <p>Condemned carcasses / material gets neutralised with lime and immediately covered with soil.</p> <p>The trench gets closed immediately after the lime was added.</p> <p>The control of solid waste, wastewater, any polluted water and/or stormwater must be properly controlled, as per the EMPr.</p>
Cumulative impact post mitigation:	Very-Low Negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative

Potential dust impacts:	Dust impacts during the operational phase
Nature of impact:	<p>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.</p> <p>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.</p>
Extent and duration of impact:	Local, during the operational phase
Probability of occurrence:	Probable
Degree to which the impact can be reversed:	High
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)	Low Negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Dust repression measures will be implemented together with the Operational EMPr.
Cumulative impact post mitigation:	Very Low - Negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Very Low - Negative

Potential loss of vegetation impacts:	Loss of vegetation at the site where condemned material gets buried. However, the site is completely transformed from its natural state due to past activities on the property.
Nature of impact:	Loss of vegetation Direct loss of vegetation type and associated habitat due to operational activities.
Extent and duration of impact:	Local, during the operational phase
Probability of occurrence:	Unlikely
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	Unlikely
Cumulative impact prior to mitigation:	Negligible, Insignificant
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<ul style="list-style-type: none"> • All invasive alien plant species encountered on the property should be removed responsibly during the operational phase. • The implementation of the EMPr.
Cumulative impact post mitigation:	Insignificant
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Negligible, Insignificant

Decommissioning:

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