

Triple A Beef

DRAFT Section 24G Assessment Report



DC22/S24G/0006/2022

Prepared by

The Independent Environmental Advisor
March 2023

This Section 24G application report is submitted as prescribed for an application for environmental rectification or condonation in terms of the National Environmental Management Act, 1998 and follows the process and activities of the s24G Regulations, 2017. It was completed in March 2023 and was prepared by:

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Ref no.	DC22/s24G/0006/2022

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EXECUTIVE SUMMARY

Purpose:

Triple A Beef (TAB) on behalf of Caine Farming (Pty) Ltd has made application for environmental authorisation under reference DC22/s24G/0006/2022 for the existing expansion of the Triple A Beef feedlot and abattoir with associated infrastructure over various contiguous properties in the Albert Falls area, uMshwathi Local Municipality. This application is to regularise the current activities of TAB and does not consider any future expansion or change to activities.

Background:

Caine Farming Pty Ltd, trading as Triple A Beef (TAB), operates a feedlot and abattoir in the Albert Falls Dam area over 13 adjacent properties with a total extent of 946ha.

TAB is located in a predominantly agricultural rural area to the south east of the village of Albert Falls and south of the Mpolweni settlement area. Mpolweni has few basic services and few economic opportunities other than sugar cane and beef farming opportunities.

The first property (Ptn 8 Shallow Drift) was bought in 1980 to establish a feedlot. As time passed, additional adjacent properties were purchased to enable the expansion of the feedlot and associated infrastructure such as cattle handling facilities (including loading and offloading facilities), transition paddocks, hospital facilities for sick animals, feed preparation, workshops and offices, abattoir, fodder production, and common services for the feedlot and abattoir.

The impetus for each acquisition came from events such as an outbreak of foot and mouth disease and the closure of the nearby CRAFCOR feedlot and ABACOR abattoir at Cato Ridge, as well as the need to treat and dispose of wastewater from the abattoir, and then the need to grow as much of the feedlot ration on site as possible thereby reducing reliance on external farming operations.

The closure of the ABACOR abattoir at Cato Ridge necessitated the establishment of the TAB abattoir on site. It provided the benefit that cattle diseases could be better managed and controlled with appropriate quarantine protocols to ensure animal health and meat safety. Moreover, onsite facilities provided the opportunity for vertical integration and to dispose of wastewater beneficially by irrigating fodder to produce animal feed onsite.

As each property was acquired, worker accommodation was consolidated and amenities provided in consultation with the workers. All amenities and infrastructure required by Triple A Beef are in place, including:

- Administration
- Feed production sheds
- Abattoir and associated cold- and freezer rooms, processing carcasses to primal cuts with deboning facilities, hide preparation, offices, wastewater treatment ponds
- Feedlot pens with feed and water troughs

- Raw water abstraction points (x4) from the Umngeni River with pipelines to raw water storage dams (off channel) and reticulation to feedlot pens and other infrastructure
- Wastewater dams runoff from the feedlot pens and wash water from within the cattle drinking facilities (off channel).
- Housing for workers (separate for feedlot and farm staff, and for abattoir workers)
- Internal roads and farm tracks
- Manure storage area
- There is a rendering plant that was constructed in 2005 to treat bloods, tissue and paunches from the abattoir to tallow and other secondary products, however, use of the rendering plant was discontinued in late 2016.

As additional properties were added to the TAB operations, relevant existing infrastructure was either retained (internal farm access, dams) or removed (nursery infrastructure, poultry houses, farm worker accommodation of poor quality).

Project description:

The Triple A Beef Feedlot was established in 1981 prior to the requirement for environmental authorisation, with guidance at the time from the Department of Agriculture and the Department of Water and Forestry. The onsite abattoir was established in 2001 under environmental authorisation granted EIA/1429.

The development of the feedlot and abattoir included the establishment of:

- cattle handling facilities;
- feedlot pens with their drinking and feeding troughs;
- agri-industrial buildings for reception, administration, feed processing and production, staff facilities;
- abattoir including slaughter, processing, offices, staff facilities, cold- and freezer rooms. A rendering plant was constructed however it has not been in use since 2016;
- off-channel raw water storage dams; and
- wastewater treatment dams for the feedlot and abattoir.

Limited quantities of general waste would have been produced during the construction phases. Most of this waste would have been rubble, empty cement bags, wood off cuts and fencing material.

There are a number of waste streams associated with the operational phase of the TAB activities:

- Office/domestic
This includes waste paper, ink cartridges, obsolete or broken office furniture and equipment which is largely removed to municipal landfill.
- Feedlot:
This includes empty medicine vials, used syringes and needles which are removed by a company specialising in medical waste removal (Rent-O-Kill). Manure and urine are washed down. Manure is removed to a central collection point and mixed with paunch content from the abattoir to be spread on the lands or sold to surrounding farmers as

fertilizer. Urine and wash water from the feed and drinking troughs is directed to treatment ponds (either Triple Dams on the southern side of the feedlot, or D73 dams on the northern side), and then pumped into the 2nd of 10 maturation ponds that treat abattoir effluent.

- Abattoir:
Other than office/domestic waste described above, the only solid waste is paunch content which is mixed with the manure from the feedlot to either apply to TAB lands or sold to nearby farmers as fertilizer.
- Farm
Empty agri-chemical containers are disposed of in accordance with manufacturer specifications (they are removed from site by suppliers) while used oil is collected by Ndlekangco Oil Collections for treatment off-site.

The capacity of TAB has grown to a herd of average 30 000 to 32 000 cattle and an average throughput of 500 cattle per day five days a week in the abattoir with a maximum of 550 cattle per day allowed by Veterinary Public Health certificates.

Runoff from the feedlot pens is directed to either the four D73 off-channel storage dams (total capacity 60 013m³) on the northern side of the feedlot or to the three off-channel Triple Dams (total capacity 60 260m³) on the southern side of the feedlot. Each dam gravity feeds to the dam below. Water from the lowermost dam is pumped to the 2nd maturation pond (AWW2). See the plan below.

Effluent from the abattoir is directed to the first of a series of ten off-channel maturation ponds (not immediately visible in the plan below due to vegetation growth). The first five ponds are anaerobic and the second five are aerobic. Treated water from the tenth dam is pumped to Back Dam (near the R614) and Rookery Nook Dams (adjacent to the D73 near the former poultry farm), or directly to lands for irrigation.

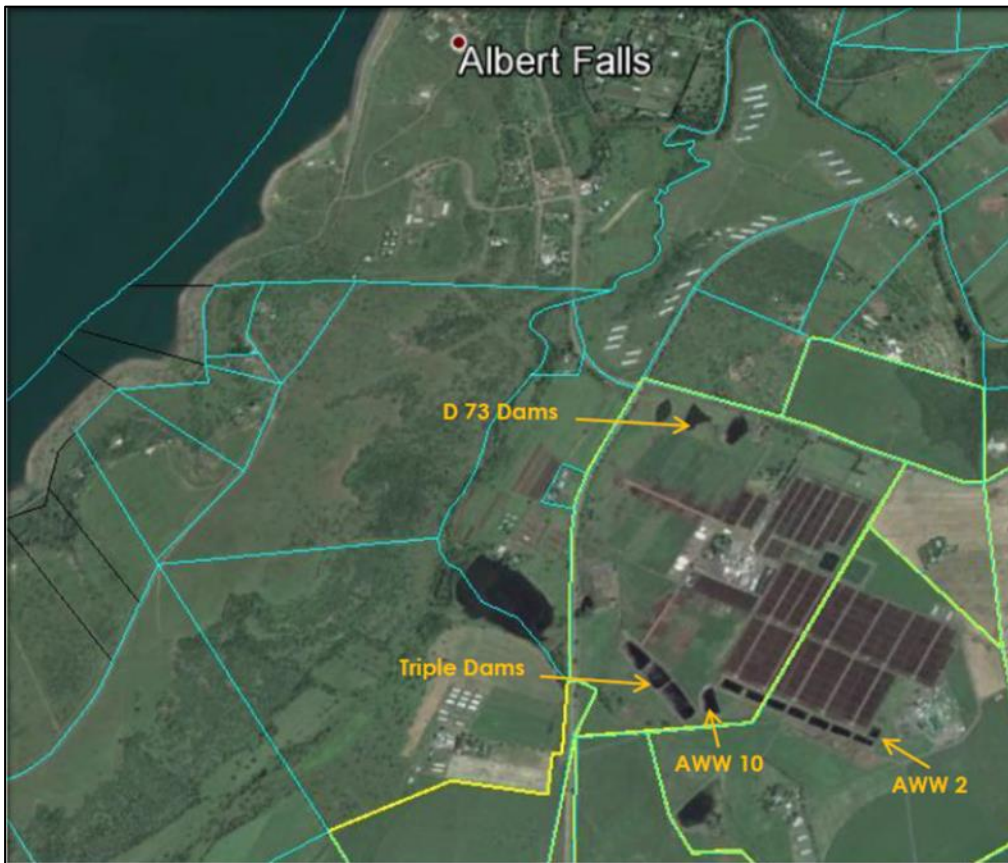


Figure 1: Triple A Beef wastewater dams

New and existing employees are given training to equip them with improved technical skills including cattle handling, abattoir functions, meat processing, administration, workshop/mechanical, machinery operation, and general farming methods with specialisation in irrigation and wastewater disposal to land.

Legislation:

Environmental Authorisation following a Basic Assessment process was required for the expansion of the feedlot and abattoir as the following National Environmental Management Act, 1998, (NEMA) EIA listed activities (2010 – present) were triggered:

- expansion of the feedlot through the construction of new pens, activities 4(i) and 39(i);
- expansion of the abattoir, activities 38(ii) and 43;
- consolidation of fuel storage, activity 51; and
- expansion of wastewater maturation ponds, activity 56.

The construction of the rendering plant in 2005 fell under the Environment Conservation Act, 1989 (ECA) EIA regulations (activity 9) as an interpreted Schedule II activity under the Atmospheric Pollution Prevent Act, 1965. Use of the rendering plant was discontinued in late 2016 and hence this report only considers the construction of the plant, not the operation thereof.

Section 24G of the National Environmental Management Act, 1998, recognises that there are instances when developments may not have the necessary prior authorisation and provides a mechanism whereby post-facto environmental authorisation may be granted after following a regulated process. Regulations to provide for the procedure to be followed and criteria to be considered in the determination of a fine pursuant to an application submitted in terms of section 24G of the Act and any matters incidental thereto came into effect on 20 July 2017.

Any person who started and/or completed an activity or activities listed in the EIA or waste management regulations that required prior environmental authorisation may apply for environmental authorisation of those activities in terms of s24G. The competent authority (Department of Economic Development, Tourism and Environmental Affairs – the Department/EDTEA) may direct the applicant to cease, remedy, prevent, modify, or control the activity/ies while the application process is underway. Once the assessment report is submitted the Department may refuse the application or issue an environmental authorisation (usually with conditions) that is effective from the date of issue. The applicant must pay an administrative fine.

Public Participation:

The application for retrospective environmental authorisation and availability of the Background Information Document (BID) was advertised in the Witness and Umgungundlovu Eyethu newspapers on 13 October 2022, allowing at least a 20-day comment period until 3 November 2022.

Posters to notify the general public of the application were erected at the entrance to Triple A Beef along the D73 district road and at strategic intersections in the area.

Neighbours were informed by email with a copy of the Background Information Document (BID) attached to the email, where email addresses were available or, if email addresses were not available, the BID was attached to their gate. State entities and known Interested and Affected Parties were informed by email.

The BID was available for public scrutiny at the TAB Reception, D73. Electronic copies were also available on request.

A number of neighbours and State entities provided comment on the application and were responded to.

Key concerns raised included:

- Possible further expansion
- Flies and odours
- Quality of runoff water

The decision of EDTEA to authorise or refuse the application will be advertised and registered Interested and Affected Parties will be informed directly. Should any party be aggrieved by the decision, an appeal may be submitted within 20 days of notification of the decision.

Impacts associated with the expansion of TAB:

The feedlot was expanded through the addition of new pens over lands previously transformed to crops and secondary veld, as was the abattoir. Lands have been established with contours and soil conservation measures in place. These have proved sufficient to prevent erosion during the heavy rain events of April and May 2022 and the more recent December 2022-January 2023 rains. Lands are set back from wetlands and streams thereby ensuring the integrity of the buffers. These measures are regarded as adequate to prevent or minimise erosion and alien plant encroachment into pastures and hay lands.

The impacts associated with the expansion of the feedlot and abattoir may include noise, nuisance such as odours and flies, socio-economic, possible water contamination, and biodiversity. These are summarised below.

Impacts are assessed using a standard matrix of:

Duration: Short term (0-6 months) – Medium term (6 months – 3 years) – Long term (3 years or more)

Extent: Site – local – regional – provincial – national – international

Intensity: Low – medium – high

Frequency: Occasional – temporary – seasonal – permanent/ongoing

Reversibility: Unlikely – possible

Possible Impacts	Significance rating of impacts after mitigation (Low, Medium, Medium-High, High, Very High):
<p>Biodiversity TAB activities have been established on already transformed lands. Wetland and stream buffers are maintained. Hay lands and green fodder production attract and support endangered species such as oribi, grey crested cranes and blue cranes, southern bald ibis, amongst others. (long term; regional; low; ongoing; unlikely)</p>	<p>Low – medium (positive for cranes and oribi)</p>
<p>Socio-economic TAB provides housing and training for employees. There are many subsidiary businesses that are reliant on TAB, either in the supply of goods to TAB or the sale and distribution of products from TAB, all of which have numerous employees. TAB provides very high quality products: Hides for leather products Beef products for food security By-products for animal feed production (long term; national; high; ongoing; possible)</p>	<p>High – Very High positive</p>

Possible Impacts	Significance rating of impacts after mitigation (Low, Medium, Medium-High, High, Very High):
<p>Sense of Place/heritage There are no known heritage resources on or near TAB operations. The visual screen of Johannesburg gold trees along the R33 reduces the intrusion of the feedlot into viewsheds as motorists pass by. (long term; local; low; ongoing; possible)</p>	Low negative
<p>Pollution/environmental degradation TAB has been established and expanded over existing lands and transformed ground. Pollution risks are associated with runoff from the feedlot pens and effluent from the abattoir, however the system of maturation ponds and disposal to lands as liquid fertilizer has proved adequate to prevent pollution of downstream water bodies and erosion during heavy rainfall events such as the April and May 2022 events. Any pollution event would be of short duration and quickly remedied by mitigation measures as the reputational risk to TAB is too great to compromise. (short term; site-local; medium; occasional; possible)</p>	Low-medium negative
<p>Nuisance Hygiene is critical to the continued viability of the feedlot and abattoir. Fly traps are positioned to ensure minimal flies disturb the cattle in the feedlot. Manure is removed from the pens regularly as it provides substrate for diseases which would otherwise affect the health of the herd. The pens are continuously monitored for flies and herd health which reduces the nuisance to surrounding properties. (long term; local; low; ongoing; possible)</p>	Low negative

Conclusion:

It is concluded that the activities as applied for may be authorised subject to implementation of the Environmental Management Programme and submission of annual environmental audits. Particular attention must be paid to water quality monitoring (surface and ground water) and measures implemented to reduce background *E.coli* levels.

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1 PROJECT BACKGROUND AND LOCATION

The Independent Environmental Advisor (TIEA) - Sarah Allan, was appointed as the independent environmental assessment practitioner to complete a Section 24G application for rectification or condonation of unlawful expansion of the Triple A Beef feedlot and abattoir. Barry James has been subcontracted to assist with compiling this Impact Assessment Report and to take responsibility as the primary registered Environmental Assessment Practitioner.

Triple A Beef (TAB) on behalf of Caine Farming (Pty) Ltd has made application for environmental authorisation under reference DC22/s24G/0006/2022 for the existing expansion of the Triple A Beef feedlot and abattoir with associated infrastructure over various contiguous properties in the Albert Falls area, uMshwathi Local Municipality. This application is to regularise the current activities of TAB and does not consider any future expansion or change to activities.

A description of the properties on which Triple A Beef is located is provided in Table 2 below.

1.1 Background

Caine Farming Pty Ltd, trading as Triple A Beef (TAB), operates a feedlot and abattoir in the Albert Falls Dam area over 13 adjacent properties with a total extent of 946ha.

TAB is located in a predominantly agricultural rural area to the south east of the village of Albert Falls and south of the Mpolweni settlement area. Mpolweni has few basic services and few economic opportunities other than sugar cane and beef farming opportunities in the area.

The first property (Ptn 8 Shallow Drift) was bought in 1980 to establish a feedlot. As time passed, additional adjacent properties were purchased to enable the expansion of the feedlot and associated infrastructure such as cattle handling facilities (including loading and offloading facilities), transition paddocks, hospital facilities for sick animals, feed preparation, workshops and offices, abattoir, fodder production, and common services for the feedlot and abattoir.

The impetus for each acquisition came from events such as an outbreak of foot and mouth disease and the closure of the nearby CRAFCOR feedlot and ABACOR abattoir at Cato Ridge, as well as the need to treat and dispose of wastewater from the abattoir, and then the need to grow as much of the feedlot ration on site as possible thereby reducing reliance on external farming operations.

The closure of the ABACOR abattoir at Cato Ridge necessitated the establishment of the TAB abattoir on site. It provided the benefit that cattle diseases could be better managed and controlled with appropriate quarantine protocols to ensure animal health and meat safety. Moreover, onsite facilities provided the opportunity for vertical integration and to dispose of wastewater beneficially by irrigating fodder to produce animal feed onsite.

As each property was acquired, worker accommodation was consolidated and amenities

provided in consultation with the workers. All amenities and infrastructure required by Triple A Beef are in place, including:

- Administration
- Feed production sheds
- Abattoir and associated cold and freezer rooms, processing carcasses to primal cuts with deboning facilities, hide preparation, offices, wastewater treatment ponds
- Feedlot pens with feed and water troughs
- Raw water abstraction points (x4) from the Umngeni River with pipelines to raw water storage dams (off channel) and reticulation to feedlot pens and other infrastructure
- Wastewater dams runoff from the feedlot pens and wash water from within the cattle drinking facilities (off channel).
- Housing for workers (separate for feedlot and farm staff, and for abattoir workers)
- Internal roads and farm tracks
- Manure storage area
- Hay and fodder production lands
- There is a rendering plant that was constructed in 2005 to treat bloods, tissue and paunches from the abattoir to tallow and other secondary products, however, use of the rendering plant was discontinued in late 2016 and hence this report only considers the construction of the plant, not the operation thereof.

As additional properties were added to the TAB operations, relevant existing infrastructure was either retained (internal farm access, dams) or removed (nursery infrastructure, poultry houses, farm worker accommodation of poor quality).

1.2 Description of Triple A Beef

The Triple A Beef Feedlot was established in 1981 prior to the requirement for environmental authorisation (EIA requirements were first gazetted in September 1997), with guidance at the time from the Department of Agriculture and the Department of Water and Forestry. The onsite abattoir was established in 2001 under environmental authorisation granted EIA/1429.

The development of the feedlot and abattoir included the establishment of:

- cattle handling facilities;
- feedlot pens with their drinking and feeding troughs;
- agri-industrial buildings for reception, administration, feed processing and production, staff facilities;
- farm offices;
- bulk fuel storage (three locations);
- hay and fodder production lands;
- abattoir including slaughter, processing, offices, staff facilities, cold- and freezer rooms. A rendering plant was constructed however it has not been in use since 2016;
- off-channel raw water storage dams; and
- wastewater treatment dams for the feedlot and abattoir.

Limited quantities of general waste would have been produced during the construction phases. Most of this waste would have been rubble, empty cement bags, wood off cuts and fencing material.

There are a number of waste streams associated with the operational phase of the TAB activities:

- Office/domestic
This includes waste paper, ink cartridges, obsolete or broken office furniture and equipment which is largely removed to municipal landfill
- Feedlot:
This includes empty medicine vials, used syringes and needles which are removed by a company specialising in medical waste removal (Rent-O-Kill). Manure and urine are washed down. Manure is removed to a central collection point and mixed with paunch content from the abattoir to be spread on the lands or sold to surrounding farmers as fertilizer. Urine and wash water from the feed and drinking troughs is directed to treatment ponds (either Triple Dams on the southern side of the feedlot, or D73 dams on the northern side), and then pumped into the 2nd of 10 maturation ponds that treat abattoir effluent.
- Abattoir:
Other than office/domestic waste described above, the only solid waste is paunch content which is mixed with the manure from the feedlot to either apply to TAB lands or sold to nearby farmers as fertilizer.
- Farm
Empty agri-chemical containers are disposed of in accordance with manufacturer specifications (they are removed from site by suppliers) while used oil is collected by Ndlekganco Oil Collections for treatment off-site.

The capacity of TAB has grown to a herd of average 30 000 to 32 000 cattle and an average throughput of 500 cattle per day five days a week in the abattoir with a maximum of 550 cattle per day allowed by Veterinary Public Health certificates.

Runoff from the feedlot pens is directed to either the four D73 off-channel storage dams (total capacity 60 013m³) on the northern side of the feedlot or to the three off-channel Triple Dams (total capacity 60 260m³) on the southern side of the feedlot. Each dam gravity feeds to the dam below. Water from the lowermost dam is pumped to the 2nd maturation pond (AWW2). See Figure 1.

Effluent from the abattoir is directed to the first of a series of ten off-channel maturation ponds (not immediately visible in Figure 1 due to vegetation growth). The first five ponds are anaerobic and the second five are aerobic. Treated water from the tenth dam is pumped to Back Dam (near the R614) and Rookery Nook Dams (adjacent to the D73 near the former poultry farm), or directly to lands for irrigation (see Figure 1).

New and existing employees are given training to equip them with improved technical skills including cattle handling, abattoir functions, meat processing, administration, workshop/mechanical, machinery operation, and general farming methods with specialisation in irrigation and wastewater disposal to land.

1.3 Location

Location maps are contained in Appendix 1. The 1:50,000 topographical sheet which contains Triple A Beef is 2930AD Albert Falls. Site photographs are attached in Appendix 2.

The Triple A Beef landholdings are largely located between the R33 and R614 provincial roads and the uMngeni River. The main entrance to Triple A Beef is off the D73, whereas the main access to the abattoir is off the R614.

Table 1: Property details.

Schedule of Properties					
Albert Falls, uMthshwathi Local Municipality, Umgungundlovu District Municipality					
Year of Purchase	Property Description	SG Code	Latitude Deg, Min, Sec	Longitude Deg, Min, Sec	Extent ha
1980	Ptn 8 of Shallow Drift No 15565 (changed from 2051)	N0FT00000001556500008	29°27'40.90"S	30°26'28.38"E	129,183
1991	Ptn 28 of Shallow Drift No 15565 (changed from 2051)	N0FT00000001556500028	29°28'4.07"S	30°26'53.62"E	125,1149
1995	Ptn 1 of Binchester Grange No 14258	N0FT00000001425800001	29°28'39.75"S	30°26'55.09"E	125,6206
2007	Ptn 25 of Shallow Drift No. 15565	N0FT00000001556500025	29°28'27.92"S	30°26'25.45"E	55,4986
2008	Ptn 20 of Wagenbeejes Draai No. 875	N0FT00000000087500020	29°27'36.18"S	30°28'33.79"E	144,8455
2009	Ptn 46 of Wagenbeejes Draai No. 875	N0FT00000000087500046	29°27'28.03"S	30°27'52.87"E	104,4855
2009	Ptn 7 of Shallow Drift No. 15565	N0FT00000001556500007	29°27'20.49"S	30°26'48.77"E	32,161
2009	Ptn 1 of Linchester No. 15875	N0FT00000001587500001	29°28'39.14"S	30°27'17.79"E	59,6988
2014	Ptn 9 of Shallow Drift No. 15565	N0FT00000001556500009	29°27'38.76"S	30°26'58.32"E	20,4641
2014	Ptn 10 of Shallow Drift No. 15565	N0FT00000001556500010	29°27'44.92"S	30°27'10.86"E	25,5255
2014	Ptn 11 of Shallow Drift No. 15565	N0FT00000001556500011	29°28'1.88"S	30°27'21.97"E	46,1611
2014	Ptn 12 of Shallow Drift No. 15565	N0FT00000001556500012	29°27'38.93"S	30°27'21.61"E	20,476
2015	Ptn 51 of Zeekoegat No. 1173 (also known as Ptn 1 (of 18) of Zeekoegat No. 15565)	N0FT00000000117300051	29°28'25.44"S	30°26'1.34"E	56,8348
				TOTAL	946,0694

NB: Ptn 8 Shallow Drift and Ptn 51/Ptn 1 Zeekoegat were consolidated in 2015 to Rem of Shallow Drift. For ease of reference regarding what activities have taken place where, the properties are referred to by their portion descriptions prior to consolidation in this report.

Albert Falls is within the uMshwathi Local Municipality and Umgungundlovu District Municipality.

1.4 Physical size of the activity

The combined TAB landholdings is 946 ha as per Table 1 above.

The extent of the different aspects of TAB operations is as follows:

Abattoir	5.1 ha
Feedlot pens	70 ha

Admin and feed processing	5.3 ha
Farm (with irrigated pastures)	766 ha
Total area	846,4 ha

There is a further 99.6 ha on the steep west side of the Umngeni River that is undeveloped veld and bush.

Appendix 1, Map 2 shows the Site Layout Plan.

Table 2: Alternatives.

Alternative	Size of the activity
Alternative A1 (preferred activity alternative)	Total disturbed area: 846,4ha
Alternative A2 (if any)	No alternative.
Or, for linear activities: Not Applicable	
Alternative:	
Alternative A1 (preferred activity alternative)	Total area.
Alternative A2 (if any)	No alternative.

1.5 Facility illustration

The photographs in Appendix 2 illustrate various views of the TAB operations.

1.6 Land-use character of surrounding area

The following table gives land uses and/or prominent features that currently occur within a 500 m radius of the site and give a description of how this influences the application or may be impacted upon by the application:

Table 3: Land use character of surrounding area.

Land use character	Yes	No	Description
Natural area	Yes		.
Low density residential	Yes		TAB is located within a generally low density rural agricultural area.
Medium density residential		No	
High density residential		No	
Informal residential	Yes		There is an informal settlement on Ptn 6 Shallow Drift that has grown since 2006. Residents have taken occupation in the full knowledge that TAB feedlot is across the D73 district road from Ptn 6 Shallow Drift.
Retail commercial & warehousing		No	
Light industrial		No	
Medium industrial		No	
Heavy industrial		No	
Power station		No	
Office/consulting room		No	
Military or police base/station/compound		No	
Spoil heap or slimes dam		No	
Quarry, sand or borrow pit		No	
Dam or reservoir	Yes		• across the R33 spanning Ptn 18 Zeekoegat and Ptn 23 Shallow Drift

			<ul style="list-style-type: none"> across the D73 on Ptn 5 Shallow Drift (ex-crocodile now fish farm) across the D73 on Ptn 45 Wagenbeetjes Draai across the R614 on Ptn 1 Highthorn/Rem Biggs (two dams) See discussion of wastewater treatment (section 9)
Hospital/medical centre		No	
School/creche		No	
Tertiary education facility		No	
Church		No	
Old age home		No	
Sewage treatment plant		No	
Train station or shunting yard		No	
Railway line		No	
Major road (4 lanes or more)		No	
Airport		No	
Harbour		No	
Sport facilities		No	
Golf course		No	
Polo fields		No	
Filling station		No	
Landfill or waste treatment site		No	
Plantation		No	
Agriculture	Yes		TAB is an intensive agricultural animal production operation in an agricultural landscape. Adjacent agricultural landuses include livestock sales, poultry and fish farms, and game farm
River, stream or wetland	Yes		<ul style="list-style-type: none"> uMngeni River streamline with wetlands flowing south to west 5 drainage lines flowing west to east into uMngeni River
Nature conservation area		No	The Msinsi Bon Accorde concession of the Albert Falls Dam is approximately 1,5km west of TAB properties
Mountain, hill or ridge		No	
Museum		No	
Historical building		No	
Protected area		No	
Graveyard		No	
Archaeological site		No	
Other land uses (describe)	Yes		Ovaflo Resort, camping and fishing recreational facility on the west bank of the uMngeni River
		No	

Table 4: 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 palaeontological sites, on or within 20 m of the site?		No
If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment report must be attached as an appendix to this report.		
Briefly explain the recommendations of the specialist:	A desktop heritage assessment was conducted by Umlando Heritage Practitioners due to the extent of disturbance (more than 300m ²) supplemented by a desktop palaeontological assessment by Dr Alan Smith. It was concluded that no further heritage mitigation is required as the chances of finding any fossils in the area are very low, and any disturbance or damage of possible heritage resources (graves, buildings) occurred prior to acquisition of the properties by TAB. The original homestead on Ptn 8 Shallow Drift is older than 60 years	

	and would require prior permission from Amafa Institute if any alteration or demolition is contemplated.
Will any building or structure older than 60 years be affected in any way?	No
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)	No
If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.	Not Applicable

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2 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS

Barry James

Brousse-James & Associates was jointly owned by Mr Barry Mark James and Mrs Danielle Brousse James and operated from 1997 to 2019 when the James family moved to Canada. All professional work was conducted by Barry James, with Danielle James assisting with report writing, field work and administration. When required, specialist sub-consultants were subcontracted. Since 1997, the business was involved in a variety of projects, ranging from wildlife management plans, environmental journalism, specialised computer programming for biological and conservation applications, environmental impact assessments, specialist biodiversity assessments, writing of rehabilitation plans and environmental management programmes, and Barry James has also acted as environmental control officer for a number of projects. Since leaving South Africa, Barry James has been assisting Sarah Allan, from time-to-time, with report writing.

Expertise to undertake Environmental Assessment Process

Qualifications and memberships:

- **MSc** (Natal University - 1998); Project Title - Succession and soil properties following the removal of pine plantations on the Eastern Shores of Lake St Lucia, South Africa.
- **BSc (Hons)** (Potchefstroom University - 1995); Stress Physiology (Distinction); Soil Degradation (Distinction) Plant Ecology and Management; Analytical Procedures in Ecology; Reclamation Ecology; Soil Classification; Taxonomy; Modern Systematics; Statistics (Distinction). Project Title - Numerical analysis of the vegetation, its distribution and relation to major environmental gradients in the south-western portion of Umfolozi Game Reserve.
- **BSc** (UNISA - 1994); Majors: Zoology and Botany. Distinctions in Plant Ecology and Animal Physiology.
- **Pr.Sci.Nat.** - Registered with the South African Council for Natural Scientific Professions in the field of Ecological Science (Registration No. 400263/06).
- **MSAIE&ES** - Professional member of the Southern African Institute of Ecologists and Environmental Scientists.
- **EAPASA** - Certified Environmental Assessment Practitioner.
- **RPBio** (Registered Professional Biologist in British Columbia, Canada).
- **Numerous Natal Parks Board In-Service Courses**
- **Short Courses of relevance to the EIA Process:**
 - Geographic Information Systems (GIS) - (Natal University, 1998)
 - Integrated Environmental Management (IEM) - (Natal University, 1998)
 - Crash course in Environmental Auditing - (Eagle Environmental, 1999)
 - Soil Classification and Land Capability - (Cedara, 1999)
 - Environmental Impact Assessment - (Rhodes University, 2006)

Applicable Experience:

A comprehensive list of projects undertaken by Brousse-James & Associates is available as required.

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The Independent Environmental Advisor cc

Specialist in Environmental Impact Assessment and Related Matters

*Sarah Allan (B.Sc, HDE) Cert Sci Nat
Abbreviated Curriculum Vitae*

Profession

Environmental Consultant

Current Positions

Senior Member and Director

Date of Birth

12 May 1963

Established TIEA

October 2011
CK2011/063274/23

Nationality

South African

Academic Qualifications

Matriculation – Amanzimtoti High School
B Sc (Zoo, Biochem) Univ of Natal
HDE Univ of Natal
Numerous environmental short courses

Professional Registration

SACNASP *Cert.Sci Nat* No
116616
IAIAsa No 34
Environmental Law Association of SA
EAPASA 2019/1664 in progress

Languages

English, Afrikaans

Synopsis of Employment Experience:

- 1985-1988 educator
- 1989-1993 public relations practitioner
- 1993-2011 environmental regulator
- 2011-present environmental consultant

Contact Details

Mobile: +27 71 975 4865
+27 76 578 2941

E-mail :

sarah.wine@iuncapped.co.za

Fax: +27 86 242 2646

Postal: PO Box 586, Howick, 3290

Key Experience as Environmental Regulator

- review of environmental policies, strategy and legislation
- strategic direction for the environmental component of Department
- extensive experience in the Environmental Impact Assessment regulations including:
 - initiating systems to implement EIA regulations from original promulgation in 1997
 - reviewing and evaluating Basic Assessment and Environmental Impact Assessment reports
 - preparing records of decision in the form of Environmental Authorisations.
- experience in the implementation of the Waste Management Regulations and preparation of Waste Management Licences.
- guide staff in the preparation of various environmental compliance documents including:
 - pre-compliance notices,
 - compliance notices, and
 - National Environmental Management Act s24G environmental authorizations for activities commenced without full compliance to EIA or other requirements
- facilitate environmental awareness and education programmes, encourage partnerships with non-governmental organizations
- maintain highest levels of personal honesty and integrity acting in interests of environment and Department

Key Experience as Environmental Consultant (2011 – present) Providing impartial advice to clients based on knowledge and understanding of environmental prescripts:

- external review of draft Scoping Reports and Environmental Impact Assessment Reports
- prepare Basic Assessment Reports in support of greenfields and brownfields applications for environmental authorization and waste management licenses
- prepare waste management license S24G submissions seeking condonation for commencing listed activities prior to receiving requisite waste management license.
- resolve compliance with conditions of authorization between authorization holder and competent authority
- Environmental Control Officer (ECO) for projects in construction and post construction

List of related projects available on request

3 POLICY AND LEGISLATIVE CONTEXT

There are a number of statutes relevant to the establishment of a feedlot, cultivation of virgin land, or land that has not been worked during the preceding 10-year period, abattoirs, and activities that may affect watercourses (including wetlands). Legislation relevant to the activities of TAB include:

Statute	Administering Authority	Date	Relevance
Constitution of SA, 1996	All spheres of Government	1996	Bill of Rights to protect the environment; Allocation of responsibilities to spheres of Government
Environment Conservation Act (Act 73 of 1989)(ECA) & EIA Regulations ito s21 (1997 as amended 2002)	DFFE/EDTEA	1989	ECA was the first statute focussed on protecting the environment with consequences for offences
National Environmental Management Act (Act 107 of 1998)(NEMA) & EIA Regulations ito Chapter 5 (2006/2010/2014 as amended 2017 & 2021)	DFFE/EDTEA	1998	NEMA provides the overarching framework for environmental management in SA and empowers the Minister and MECs to determine activities deemed to be detrimental to the environment; prior environmental authorisation is required for listed activities
NEM: Biodiversity Act (Act 10 of 2004)(NEMBA)	DFFE	1984	Provides for the protection of biodiversity
Heritage Resources Act (Act 25 of 1999)	Amafa aKwaZulu-Natali	1999	Provides protection of historical, archaeological and cultural artefacts
KwaZulu-Natal Amafa and Research Institute Act (Act 5 of 2018)		2018	
KwaZulu Nature Conservation Act (Act No. 29 of 1992).	Ezemvelo KZN Wildlife	1992	Provides specific protection for biodiversity in KwaZulu-Natal and guidance for management of protected conservation areas
Natal Nature Conservation Ordinance (Act No. 15 of 1974).		1974	
National Water Act (Act No. 36 of 1998)	DWS	1998	Provides for the management of water resources

There are three statutes that need to be considered for this application for retrospective environmental authorisation by Triple A Beef, viz:

1. Environment Conservation Act, Act 73 of 1989 (ECA)
2. National Environmental Management Act, Act 107 of 1998 (NEMA), and
3. National Waste Management Act, Act 59 of 2008 (NEM:WA).

There were Environmental Impact Assessment (EIA) regulations promulgated under the ECA and NEMA. The first set of EIA Regulations under the ECA (1997 – 2002) did not apply to TAB as there was no provision for expansion of existing activities and TAB sought the requisite permission to establish the abattoir.

The ECA EIA Regulations were amended in 2002. These regulations remained in force until July 2006 when they were repealed and replaced by the first iteration of EIA Regulations under s24 of NEMA. The NEMA EIA regulations were amended in August 2010, substantially revised in December 2014, and subsequently amended in April 2017. There have been further amendments to the NEMA EIA Regulations however these are minor and inconsequential to the business of TAB.

In parallel to the EIA Regulations, there were activities identified as needing a waste management license (WML) in Waste Regulations promulgated under the NEM:WA. The first waste regulations were promulgated in 2009, amended in 2013, and amended again in 2017.

Applications for environmental authorisation for the various expansions of the feedlot and abattoir and associated infrastructure were not lodged under the relevant iterations of the EIA Regulations as they were supposed to be. EDTEA has therefore accepted that an integrated section 24G application, supported by an Impact Assessment Report (this report), be made by Triple A Beef as the following activities were triggered by the unlawful expansions:

Table 5: Contraventions of EIA Listed Activities

ECA EIA Contraventions : Between 08 September 1997 end of day 09 May 2002	
Activities unlawfully commenced with on or after 08 September 1997 and before end 09 May 2002: EIA Regulations promulgated in terms of the ECA, Act No 73 of 1989, as amended	
Listed Activity(ies)	Details of Activity(ies)
N/A	The feedlot (activity 3: concentration of livestock in a confined structure for the purpose of mass commercial production) was established in 1981 prior to the promulgation of the ECA EIA Regulations in September 1997. The regulations did not include the expansion of an existing activity.
N/A	The abattoir (activity 2d: change of landuse from grazing to other agricultural activity) was authorised under EIA/1429 dated 25 August 2000. Effluent from the abattoir was channelled to the highest of Triple Dams (off-channel ponds approximately 300m from the nearest drainage line/minor stream). There was no expansion activity specified in the regulations.
ECA EIA Contraventions : Between 10 May 2002 and before end of day 02 July 2006	
Activities unlawfully commenced with on or after 10 May 2002 and before end 02 July 2006: EIA Regulations promulgated in terms of the ECA, Act No 73 of 1989, as amended	
Listed Activity(ies)	Details of Activity(ies)
N/A	The feedlot (activity 3: concentration of livestock, aquatic organisms, poultry and game in a confined structure for the purpose of commercial production) was established in 1981 prior to the promulgation of the ECA EIA Regulations in September 1997 and the subsequent amendment in May 2002. There was no expansion activity specified in the regulations.
N/A	The abattoir (activity 2d: change of landuse from grazing to other agricultural activity) was authorised under EIA/1429 dated 25 August 2000. Effluent from the abattoir was channelled to the highest of Triple Dams (off-channel ponds approximately 300m from the nearest drainage line/minor stream). There was no expansion activity specified in the regulations.
9	A blood drying plant was built in 2005 and upgraded to a rendering plant which is an interpreted activity under Schedule II of APPA (Activity 69: Animal matter reduction process). Use of the plant was discontinued in 2016, hence the s24G application is only concerned with the construction of the plant.

NEMA EIA Contraventions : Between 03 July 2006 and before end of day 01 August 2010	
Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 03 July 2006 and before end of day 01 August 2010	
Government Notice No. R386 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
Not Applicable: 1	The activities below (1g to 1s) only refer to greenfields construction (no provision for expansion was included in the Regulations) of facilities or infrastructure, including associated structures or infrastructure, for the following:
1(g)	Slaughter of animals >10 000kg per year (more than 25 cattle per year)
1(h)(i)	Concentration of livestock (cattle) <20m ² per unit and an increase >500 units per year
1(j)	Agri-industrial facilities >1000m ² outside industrial areas
1(s)	Treatment of effluent/wastewater/sewage >2000m ³ <15 000m ³ per year: the volume of effluent exceeds this threshold
1(n)	Off-stream storage of water >50 000m ³ : Although raw water storage capacity was developed on Ptn 28 Shallow Drift for use in the abattoir in 2006, the capacity was less than 50 000m ³ (19 090m ³). The combined capacity of raw water storage exceeds 50 000m ³ .
25	Expansion or changes to an existing facility which requires an amendment of an existing permit or license governing the release of emissions, effluent, pollution: a blood drying plant constructed in 2005 (under ECA EIA Regulations) was re-developed as a rendering plant to treat additional abattoir by-products during this period (2006 – 2020), however use of the rendering plant was discontinued in 2016, hence the s24G application is only concerned with the construction of the plant.
Government Notice No. R387 Activity No(s):	Details of Activity(ies) requiring a Scoping Report and EIA
1(p)	The construction of facilities or infrastructure, including associated structures or infrastructure, for - (p) the treatment of effluent, wastewater or sewage with an annual throughput capacity of 15 000 cubic metres or more: 10 interconnected maturation ponds were constructed during 2009-2010 to treat effluent from the abattoir, with the first five ponds in an anaerobic state and the second 5 are aerobic. The throughput of the ponds in 2010/2011 exceeded 15 000m ³ . Although there have been subsequent increases to the throughput of the abattoir, there have been no increases to the size of the ponds as they are capable of treating the additional effluent volumes to a satisfactory quality for irrigation to lands.
NEMA EIA Contraventions : On or after 02 August 2010 until 7 December 2014	
Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 02 August 2010 until 7 December 2014	

NEMA EIA Contraventions : On or after 02 August 2010 until 7 December 2014	
Government Notice No. R544 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
	Activities 3, 4, and 8 below are not relevant as they refer to greenfields or new construction, not expansion of existing activities (the 2010 iteration of the Regulations introduced expansion activities), 12 is below threshold
3(ii)	Abattoir for >6 red meat units per day
4(i)	New feedlot pens <20m ² per animal and >500 animals
8	Agri-industrial facilities >2000m ² : the shed/s for feed production have been in use since pre-2006 (approx. 7500sqm) and subsequent increases have been about 750 sqm at each distinct increase which is below the thresholds.
12	Off-stream storage of water >50 000m ³ : irrigation dams were established: 1 st Rookery Nook dam 2010; 2 nd Rookery Nook Dam built 2012; however their combined capacity is 26 096m ³ which is below the threshold
13	Storage of dangerous goods (fuel) >80m ³ <500m ³ : There is storage of fuel in 3 sites on TAB landholdings: <ul style="list-style-type: none"> • Admin/Feed sheds/Workshops: 46kl • Farm offices: 36kl • Abattoir: 46kl Total: 128kl
30(ii)	Expansion of abattoir >6 red meat units per day: The footprint of the abattoir and the throughput of the abattoir have increased incrementally as the processing has been de-bottlenecked, and additional handling or processing facilities have been included. The throughput capacity of the abattoir has grown from 100 units per day to the current 550 units/day.
31(i)	Expansion of feedlot: Additional pens for the feedlot were constructed to accommodate more than an additional 500 cattle at less than 20m ² per animal

NEMA EIA Contraventions : On or after 8 December 2014	
Activities unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 8 December 2014	
Government Notice No. R983 Appendix 1 Activity No(s):	Details of Activity(ies) requiring Basic Assessment
27	Clearance of >1ha <20ha indigenous vegetation:

NEMA EIA Contraventions : On or after 8 December 2014	
	Construction of additional feedlot pens (~4,5-5ha) and establishment of pastures requiring the transformation of >1ha but less than 20ha indigenous vegetation (possible but not probable as most areas were previously disturbed by other infrastructure (eg nursery) or kikuyu paddocks)
38(ii)	Increase in throughput of abattoir by more than 6 units per day: Debottlenecking of abattoir to slaughter up to 550 cattle per day
39(i)	Expansion of feedlot by more than 500 units and less than 20m ² per unit: The stocking rate of feedlot averages approx. 12m ² per animal and number increased by more than 500 to present total capacity of approx. 32 000 cattle; additional 4,5-5ha pens in 2016
43	Additional buildings (agri-industrial facilities) increased by more than 2000m ² over time to accommodate feed production, workshops and abattoir
56	Expansion of facilities for treatment of effluent by more than 15 000m ³ per day and increase of footprint by greater than 1000m ² through construction of additional wastewater dams however no new effluent treatment dams have been constructed since ~2010

Waste Management Activities Contraventions: On or after 3 July 2009 up to end of day 28 November 2013	
Activities unlawfully commenced with in terms of GNR 718 of 3 July 2009 published under the National Environmental Management Waste Act 59 of 2008	
Listed Activity(ies)	Details of Activity(ies)
Cat B activity 4(7)	Effluent maturation ponds (not similarly listed in 2013): The system of 10 interconnected maturation ponds for the treatment of effluent from the abattoir and final polishing of runoff from the feedlot pens (primary treatment in D73 and Triple Dams) was constructed in 2009-2010.

Waste Management Activities Contraventions : On or after 29 November 2013	
Activities unlawfully commenced with in terms of GNR 921 of 29 November 2013 published under the National Environmental Management Waste Act 59 of 2008	
Listed Activity(ies)	Details of Activity(ies)
	Nil

Whilst there have been oversights in seeking environmental authorisations for the expansion of TAB feedlot and abattoir and associated infrastructure, TAB have ensured compliance with Veterinary Public Health and other requirements as set out in Table 6 below.

Table 6: List of authorisations and approvals held by TAB

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorization/comment	DATE (if already obtained):
EIA Regulations, 1997	KZN Environmental Affairs	Authorisation EIA/1429 abattoir	25 August 2000
Town Planning Ordinance, 1949	KZN COGTA	PTB 2000/462(II) abattoir	14 March 2001
National Water Act, Act 36 of 1998	Dept Water & Sanitation	IWUL	14 December 2020, amended 5 & 25 October 2021 and 17 February 2023
Meat Safety Act, Act 40 of 2000	KZN Dept Agriculture, VPH	Certificate of Registration	28 Aug 2012 (Renewed every 3 years, current valid to 31 March 2024)
Red Meat Regulations, 2004	KZN Dept Agriculture, VPH	Certificate of Veterinary Approved Facility, source of hides/skins for export	Renewed annually, current certificates valid to 05-04-2023
GN 638 of 2018	uMgungundlovu DM Community Services	Certificate of Acceptability of Food Premises (packing and transport)	Issued 15 October 2020
Spatial Planning & Land Use Management Act	uMshwathi LM	Zoning Certificate	22 June 2022

The completed signed S24G application form was submitted to KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) on 14 September 2022 by The Independent Environmental Advisor cc (TIEA), and the acknowledgement with reference number DC22/s24G/0006/2022 was received on 23 September 2022. The associated public participation report detailing the responses to the application and background information document was submitted on 1 December 2022.

Registered I&APs will be notified of the availability of this Draft Section 24G Assessment Report, allowing a minimum of 30 day comment period.

The final Section 24G Assessment Report, including all comments, and responses to those comments, will then be submitted to EDTEA for consideration. The decision of EDTEA to authorise or refuse the application will be made available to registered Interested and Affected Parties.

There were no environmental restrictions at the time that the feedlot was established in 1981. Having been advised at the outset of construction of the onsite abattoir what was required from an environmental perspective, TAB was under the impression that all was covered. TAB did update all their licence/certification requirements with Veterinary Public Health and still do.

The failure to submit amendments to specific environmental authorisations emanated from unknowingness, and the fact that the operations started well before NEMA and NEMWA were promulgated.

Even during the Water Use Licence Application (WULA) no mention was made of the specific environmental authorisations included in this document.

In summary, the issues under review are:

- a. Expansion of the feedlot activity – Cognisance must be taken that when the feedlot commenced there were no environmental regulations. As the feedlot expanded the different regulations came into being.
- b. Rendering Plant – interpreted activity under Schedule II of APPA. This operation ceased in 2016, some 6 years ago, and all by-products are used off site in the manufacture of pet food by a third party.
- c. Expansion of abattoir - initially authorised under EIA/1429.
- d. Fuel Storage – was deemed authorised under separate properties under prior owners, however being grouped together for this application needs authorisation as the quantity of fuel exceeds the threshold.
- e. Additional agri-industrial facilities – sheds were erected for feed production and storage of hay.
- f. Stocking rate – whilst the number of cattle in the feedlot has increased the stocking rate remains within the limits of the certified abattoir capacity (max 550 animals per day).
- g. Wastewater treatment expansion – the anaerobic and aerobic pond system was developed in 2009-2010 to improve efficiency and accommodate increased

volumes from the abattoir and feedlot, however there has been no expansion of the maturation ponds since 2010.

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4 NEED AND DESIRABILITY

TAB is located in a predominantly agricultural rural area to the south east of the village of Albert Falls and south of the Mpolweni settlement area in uMshwathi Local Municipality. Mpolweni, like much of the uMshwathi Local Municipality rural settlement areas, has few basic services and few economic opportunities other than sugar cane, timber and beef farming opportunities.

TAB is the biggest private commercial feedlot in KwaZulu-Natal with its own on-site abattoir which makes TAB a major economic driver in the uMshwathi Local Municipality. It is central to the continued supply of red meat (beef) products to consumers in KwaZulu-Natal particularly, but also to neighbouring provinces as it is able to continue to produce even during times of disease because of the stringent biosecurity protocols in place and the size of the herd.

The workforce of TAB has grown over the years to direct employment for 715 employees currently which makes TAB a significant employer in uMshwathi Local Municipality. It provides continuity of employment in subsidiary enterprises as mentioned below.

The feedlot herd is drawn mainly from beef farmers in KwaZulu-Natal and Free State thereby providing these farmers with an assured income for their cattle provided that they maintain their herds' health with appropriate health and safety protocols in place to meet the stringent ISO food safety standards. TAB uses a system of growers to provide cattle for the feedlot encouraging small and emerging beef farmers to improve their production standards and herd quality.

Customers (particularly butcheries, supermarkets and other stores with respect to meat products) are local, provincial, and national. Other customers include the leather industry that processes the hides, and pet food producers.

TAB ensures food security through the supply of red meat and value-for-money products such as offal and heads. It also supports a range of upstream and downstream businesses and industries such as vehicle fleet, packaging, beef farmers, distribution agencies, leather production and pet food production.

Each of the 715 employees supports a number of dependents with approximately 90% of its employees drawn from the neighbouring communities. Employees are provided with training and opportunities to advance or improve their position within the company. TAB also supplies local butcheries thereby facilitating the growth of these enterprises and ensuring food security for the local community.

TAB is a primary economic activity in KZN as the largest commercial feedlot in the province. The on-site abattoir facilitates continuity of availability of red meat for consumers across KZN, particularly in times of disease restrictions such as foot and mouth disease. TAB enables a wide variety of downstream industries in addition to wholesale and retail enterprises, and distribution/transport businesses. There is a network of suppliers providing goods and services to TAB, including vehicles and fleet maintenance, materials for the feedlot pens, packaging

and cleaning materials for an average slaughter rate of 500 cattle per day (allowed up to 550 per day under veterinary certificates). TAB is a key client for these suppliers, some of whom would not continue to be in business if it were not for TAB.

The direct workforce has grown from 110 in 2001 to 538 employees in 2017 and currently 715 employees with each employee supporting an average of 5-10 dependants. The majority of the workforce is drawn from Mpolweni. Employment opportunities are largely secured by previously disadvantaged individuals who are trained for internal succession and improvement.

New and existing employees are given training to equip them with improved technical skills including cattle handling, abattoir functions, meat processing, administration, workshop/mechanical, machinery operation, and general farming methods with specialisation in irrigation and wastewater disposal to land. TAB also provides housing for employees.

TAB has invested heavily in the development of the feedlot, abattoir, land and infrastructure with a capital investment of the order of R200 million (value in 2018), excluding the distribution fleet:

- Farms, feedlot, staff housing, wastewater treatment and irrigation: R100m
- Farming and feedlot equipment, implements and farm/feedlot vehicles: R30m
- Abattoir buildings: R32m
- Abattoir cold and freezer rooms, equipment and vehicles: R38m

The costs of production and distribution of products to consumers is such that TAB is ideally located in KZN to ensure equitable costs across KZN, particularly with ease of access from the primary corridors of R614 and R33 to the N3. Although the preferred primary transport corridor is along the R33 to Pietermaritzburg and onto the N3, there is the option to utilise the R614 to Verulam and onto the N2 south to Durban or north to Richards Bay in the event of major blockages along the N3.

TAB contributes to the conservation of Threatened or Protected Species (TOPS) such as blue and grey crested cranes, southern bald ibis, and oribi as these species actively utilise the fodder and hay lands for foraging and shelter. The TAB landholdings form part of the strategic biodiversity corridor of the Umngeni ecological infrastructure framework and biosphere plan.

The TAB fodder production lands are set back from wetlands and streams thereby ensuring the integrity of the buffers and providing corridors for the movement and refuge of oribi and young cranes particularly. These measures are regarded as adequate to prevent or minimise erosion and alien plant encroachment into pastures and hay lands.

The fodder and hay lands of approximately 760ha represent a carbon sink as the pastures are continuously cut, particularly in summer. Through photosynthesis the pasture and grasses remove or sequester atmospheric carbon dioxide and fix it as organic matter which is then eaten by the cattle.

TAB is an agricultural enterprise in an agricultural area providing job opportunities in an area where these are very limited.

5 METHODOLOGY OF ASSESSMENT

The property and developments thereon have been inspected by Mrs Allan with meetings held between Mrs Allan and:

- EDTEA
- Mr Caine, Mr Sidey, and members of the professional team

Mr James has reviewed the documents prepared and edited where deemed necessary.

Use has been made of the National Environmental Screening Tool, KZN Vegetation Types data set, Google Earth Pro, and historical imagery of the individual properties as close to the date of purchase of the property in order to determine the various triggers for environmental authorisation and waste management license identified in section 4.

The determination of impacts has been made through review of the specialist reports and water use license (as amended), in no particular order:

1. TAB Geohydrological Assessment, Oct 2017, Geomeasure
2. TAB Pipeline Abstraction Assessment, NatureStamp, Oct 2018
3. TAB EMP, Dec 2017, NatureStamp (not just the abattoir)
4. Waste Management Plan, Dec 2017, Mottram & Assoc
5. Emergency Contingency Plan, Dec 2017, Mottram & Assoc
6. TAB Freshwater Ecosystems Assessment, Dec 2017, Eco-Pulse
7. TAB Water Balance Assessment, Jul 2019, NatureStamp
8. January 2019 public participation report, Mottram & Assoc
9. TAB Floodline Report, Oct 2017, NatureStamp
10. TAB SWMP report, Dec 2017, NatureStamp

The following specialist reports were specifically commissioned for this application:

1. Biodiversity Desktop Assessment, Dec 2022, Barry James
2. Heritage Assessment, Sept 2022, Umlando

These specialist reports are summarised in the relevant sections.

6 DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1 Climate

The property lies in a summer rainfall area, with some rain in the winter and infrequent frost. The annual average rainfall for Pietermaritzburg is about 695mm, most of which falls from early to late summer with the lowest volume usually in mid-winter (June, July) and the highest in January. The area is subject to intense storms accompanied by high winds and heavy rainfall which are predicted to become more severe and longer periods without rain between storms with climate change.

The average daily maximum temperatures range from 20,5°C in June to 27°C in February while corresponding minimum temperatures are 7°C in June and 16°C in February.

6.2 Geology and soils

The property is situated on shallow sandy soils derived from Natal Group Sandstones with shale in the upper layer and compact clayey soils of the Dwyka diamictites of the Karoo supergroup along the uMngeni River Valley. Soil types supported by these geological features include Glenrosa and Mispah forms. Erosion potential is typically low to moderate.

The main topographical unit within the study area consists of moderately undulating plains.

6.3 Freshwater ecosystems

There are a number of ephemeral streams and wetlands on or adjacent to the TAB landholdings that have been identified and described in the freshwater ecosystems assessment prepared by Eco-Pulse. The western area of the properties drains into a minor tributary that discharges into the uMngeni River upstream of the TAB landholdings in the vicinity of Albert Falls. The eastern part of the property drains directly to the uMngeni River via a number of small ephemeral streams. A number of dams have been constructed on the properties, both in-channel and off-stream.

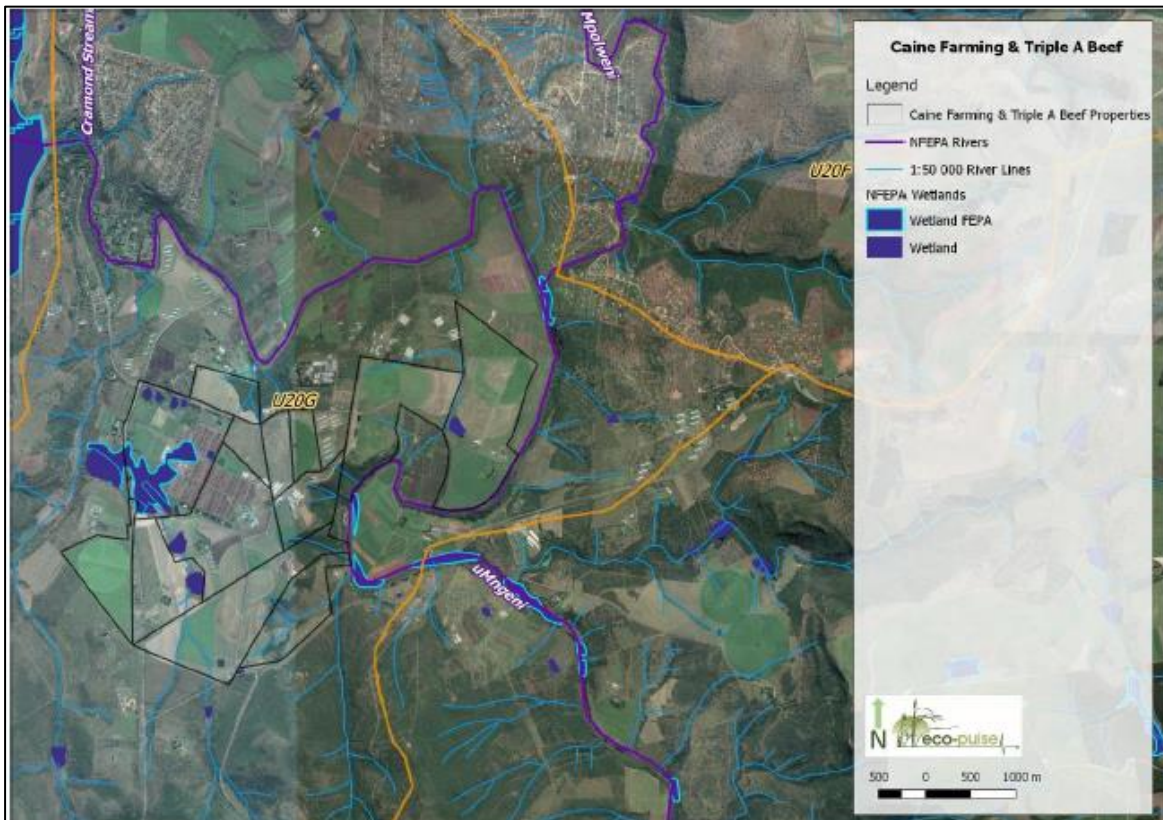


Figure 2: Watercourses in the vicinity of TAB (source: Eco-Pulse)

Wetland areas are largely unchanneled valley bottoms associated with the stream draining to the west bordered by pasture and fodder crops. Eco-Pulse remarked that there is no baseline against which to determine the degree of transformation or disturbance of the wetlands as this occurred historically by previous landowners as part of their agricultural endeavours, and instead focussed on the present ecological state and functionality of the wetlands. It was concluded that there is a slight increase in sedimentation as a result of runoff from the neighbouring lands with localised scouring around under-roads pipes.

There is some evidence of elevated *E.coli* levels in the groundwater around the feedlot that is being monitored in compliance with the water use license conditions.

Flood lines have been determined by NatureStamp as shown in Figure 3 below. The heavy rainfall events of April-May and December 2022 confirmed the veracity of the determination.

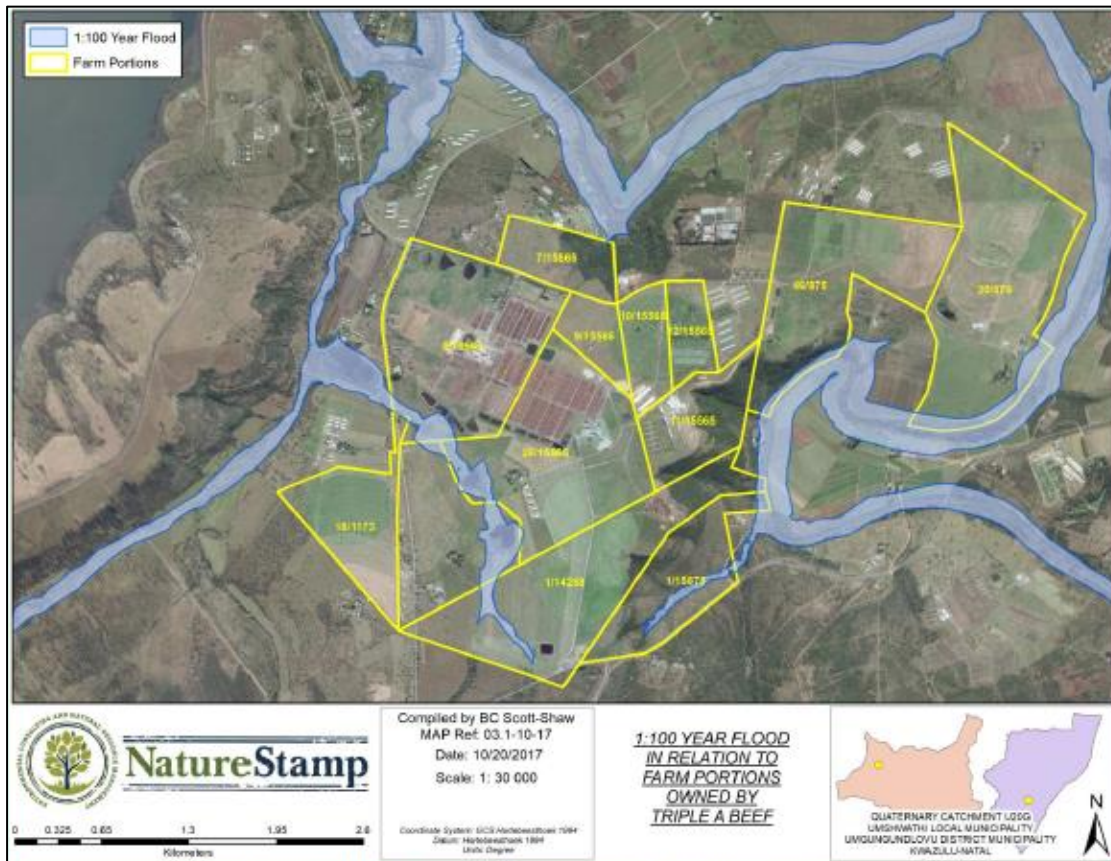


Figure 3: Floodlines in and around TAB landholdings

6.4 Vegetation

The majority of the properties fall within the savannah vegetation type in KwaZulu-Natal Hinterland Thornveld, while there is a small area of Eastern Valley Bushveld on the steeper slopes above the uMngeni River. Both vegetation types are listed as Least Threatened.

Eighteen sensitive plant species were flagged as possibly present on the TAB landholdings by the National Environmental Screening Tool, of which 10 were regarded as possibly present by the ecologist, Barry James.

Table 7: Sensitive Plant Species

Species	Key facts and likelihood of presence
<i>Asclepias bicuspis</i>	Critically Endangered – habitat destruction by agriculture. Grows only in Midlands Mistbelt Grassland between 1200-1500 m. Highly unlikely.
<i>Disperis woodii</i>	Vulnerable SA Endemic - Orchard. Widespread but rare. Currently known only from four extant locations. Mainly coastal areas. Highly unlikely.

Species	Key facts and likelihood of presence
<i>Eugenia simii</i>	Vulnerable. Known from fewer than 10 locations in E. Cape & KZN, on rocky banks of rivers. Possible
<i>Helichrysum pannosum</i>	Endangered SA Endemic. Coastal and further inland to Pinetown and Camperdown. Highly Unlikely.
<i>Hermannia sandersonii</i>	Vulnerable SA Endemic. Grows in general area but known from less than 10 locations. Steep slopes in silty sand in Valley Bushveld. Possible.
<i>Hydrostachys polymorpha</i>	Vulnerable KZN Endemic, habitat specialist. Grows on submerged rocks in clear, fast-flowing perennial streams, rapids and waterfalls. In several rivers in KZN. Possible in the Umngeni.
<i>Prunus africana</i>	Vulnerable but widespread tree, due to bark harvesting. Possible on wet slopes in forest patches.
<i>Thunbergia venosa</i>	Rare SA Endemic, sparsely distributed. Possible.
Sensitive species 1076	Vulnerable SA Endemic <i>Euphorbia</i> due to over exploitation for traditional medicine. Possible.
Sensitive species 1248	Least Concern. Found in Northern Cape. Highly Unlikely.
Sensitive species 1251	Rare and Vulnerable. Overexploitation for traditional medicine. Only occurs in forest patches close to the coast. Highly Unlikely.
Sensitive species 1252	Vulnerable. Overexploitation for traditional medicine. Grows in wooded and mesic areas. Possible
Sensitive species 1260	Vulnerable SA Endemic. Possible.
Sensitive species 191	Rare & Vulnerable. Sought after medicinal plant. Unlikely
Sensitive species 313	Extremely Rare & Endangered. Unlikely.
Sensitive species 461	Vulnerable range-restricted Aloe. Property is within range. Possible.

The buffers along the western-draining stream and the undeveloped eastern steep slopes provide important refugia for the sensitive plant species possibly occurring on the properties.

6.5 Fauna

A wide range of animal species are predicted to occur on the properties, ranging from mammals such as oribi and serval, to reptiles such as rock python, to birds including all three types of cranes found in South Africa, and invertebrates including numerous butterflies and dragonflies.

The hay lands and green fodder production attract and support endangered species such as oribi, grey crested cranes (breeding) and blue cranes, southern bald ibis, amongst others. The buffers along the western-draining stream and the undeveloped eastern steep slopes provide important refugia for the sensitive animal species occurring on the properties while the security services assist in minimising unlawful hunting or depredation.

6.6 Socio-economic

TAB is located in a predominantly agricultural rural area to the south east of the village of Albert Falls and south of the Mpolweni settlement area. Mpolweni has few basic services and few economic opportunities other than sugar cane and beef farming opportunities.

The direct workforce has grown from 110 in 2001 to 538 employees in 2017 and currently 715 employees with each employee supporting an average of 5-10 dependants. The majority of the workforce is drawn from Mpolweni. Employment opportunities are largely secured by previously disadvantaged individuals who are trained for internal succession and improvement.

New and existing employees are given training to equip them with improved technical skills including cattle handling, abattoir functions, meat processing, administration, workshop/mechanical, machinery operation, and general farming methods with specialisation in irrigation and wastewater disposal to land. TAB also provides housing for employees.

The heritage assessment concluded that there are no known heritage resources on or near TAB operations, however the homestead on Ptn 8 of Shallow Drift (now Rem of Shallow Drift) enjoys general protection under the heritage legislation. The visual screen of Johannesburg Gold trees (*Melaleuca bracteata*, an ornamental shrub of Australian origin) along the R33 reduces the intrusion of the feedlot into viewsheds as motorists pass by.

7 ALTERNATIVES

The TAB landholdings are located in an agricultural landscape. The various subdivisions were previously cultivated as either maize or sugar cane, or established poultry production or agricultural nursery.

Under the circumstances, no other alternatives have been considered as there is no interest or desire on the part of TAB to change away from the current endeavours.

It is the considered opinion of the author that the best option is to mitigate impacts arising from the feedlot and abattoir.

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8 PUBLIC PARTICIPATION

8.1 Description of public participation process

The application for retrospective environmental authorisation and availability of the Background Information Document (BID) was advertised in the Witness and Umgungundlovu Eyethu newspapers on 13 October 2022, allowing at least a 20-day comment period until 3 November 2022.

Posters to notify the general public of the application were erected at the entrance to Triple A Beef along the D73 district road and at strategic intersections in the area.

Neighbours were informed by email with a copy of the Background Information Document (BID) attached to the email, where email addresses were available or, if email addresses were not available, the BID was attached to their gate. State entities and known Interested and Affected Parties were informed by email.

The BID was available for public scrutiny at the TAB Reception, D73. Electronic copies are also available on request.

A number of neighbours and State entities provided comment on the application and were responded to as summarised in Table 1 below.

This public participation report and all comments were made available to TAB prior to submission to the KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA). Additional comments from TAB are included in Table 1 in yellow highlights.

The Assessment Report, including all comments and responses to those comments and an Environmental Management Programme, will be submitted to EDTEA for consideration and decision making.

The decision of EDTEA to authorise or refuse the application will be advertised and registered Interested and Affected Parties will be informed directly. Should any party be aggrieved by the decision, an appeal may be submitted within 20 days of notification of the decision.

Virtual meetings with I&APs via Zoom were available to be held on request or such other arrangements as agreed. One-on-one site meetings were held with two neighbours, Mrs Classens (Ovaflo Resort, Ptn 1 Lindlea), and Ms Nkanyiso Katleho (Dukathole Farm/Golden Valley, Ptn 39 & 45 Wagenbeetjes).

The Public Participation report was provided to EDTEA on 1 December 2022 and circulated to registered I&APs.

Table 8: List of Interested and Affected Parties (I&APs).

TRIPLE A BEEF NEIGHBOURS							
Property		Ownership		e-Mail address	Contact details	Address	Delivered
Portion	Name and Number	Owner	Representative				
4	Shallow Drift 16665	Umgeni Nursery Trust - Trustees	Mr Brandon Pentolfe	brandon@sacomtrade.com	824696924	P O Box 49, Cramond	email
5	Shallow Drift 16665	Southern African Comodity Traders (Pty) Ltd	Mr Brandon Pentolfe	brandon@sacomtrade.com	824696924	0335691543	email
6	Shallow Drift 16665	Log On Trading cc	Mr. Rajesh Lutchma	logontrading@mweb.co.za	tel 03303425825; 027-333-979969	12 Salford Road, Pietermaritzburg	gate & email
13	Shallow Drift 16665	National Chicks	David Stock	David.Stock@natchix.co.za			email
14	Shallow Drift 16665	Dr Velaphi Mkhize	Ms Nozipho Mvulane	nozipho@rajarammvulane.co.za / umsamo56@gmail.com	0671095700 / 072 4895825	Lot 14 of Farm 15565 Shallow Drift, Cramond	email
15	Shallow Drift 16665						gate
20	Shallow Drift 16665	William V F York	York Seedlings cc	loriyork56@gmail.com	0714135223 / 079-528 3871	P O Box 55, Cramond	email
21	Shallow Drift 16665	P R Ramjathan	S Ramjathan		0335691634 / 033 004 0116		gate
23	Shallow Drift 16665	Stonecap Trading 53 (Pty) Ltd	Mr Tazz	nhf@mweb.co.za		763 Chota Motala Road, Raisethorpe	gate & email
24	Shallow Drift 16665	R Moosa	Ideall Sands	idealcartage786@gmail.com	799490546		gate
11	Wagenbeetjes Draai 875	National Chicks	David Stock	David.Stock@natchix.co.za	+27 (0) 12 667 5468		email
16	Wagenbeetjes Draai 875	Truter Farm Trust	Costamint Farming CC	truter@costamint.co.za	0335031069 / 082-806 1258	P O Box 109, Wartburg	email
18	Wagenbeetjes Draai 875	Indhlovu Family cc / Indlovu Family		sales@indlovupoultry.co.za		P O Box 121, Liberty Mall, Msunduzi Post	email
39	Wagenbeetjes Draai 875	Golden Valley Farm cc / Dukathole Farm	Ms Nkanyiso Ngubane / Ms Nothando Shangase	nkanyisokatleho@gmail.com / nothandofanele1504@gmail.com	725388190	P O Box 31050, Mayville, 4058	gate
41	Wagenbeetjes Draai 875	Truter Farm Trust	Costamint Farming CC	truter@costamint.co.za	0335031069 / 082-806 1258	P O Box 109, Wartburg	email
45	Wagenbeetjes Draai 875	Golden Valley Farm cc / Dukathole Farm	Ms Nkanyiso Ngubane	nkanyisokatleho@gmail.com	725388190	P O Box 31050, Mayville, 4058	gate
1	Lindlea 13790	C P Claasens	Ovaflo Resort	ovafloresort@gmail.com	834959248		email
2	Lindlea 13790	E P Viljoen					gate
0	Highthorn 17989	Crouch Footwear cc		crouch@sai.co.za	0333979519	P O Box 60, Luxmi, Pietermaritzburg	email
1	Highthorn 17989						gate
0	Biggs 18388	Surrey Road Property Trust	Premrajh Karthilall	nhf@mweb.co.za	837777880		email
0 / 8	Retief 884	Neil Raw Family Trust	Mrs Priscilla Dent	windyridge@futurenet.co.za / neilrawfamilytrust@gmail.com / tambotitrading@gmail.com	828046408	P O Box 151, Wartburg, 3233	email
em of 1	Zeekoegat 1173	Mayes Natal Investments cc	Mayes Natal Investments (Pty) Ltd	jamesandmiche@edelnat.co.za	0339400451 / 082-784 2905	P O Box 11726, Dorpspruit	email
17 / 22	Zeekoegat 1173		Premrajh Karthilall	nhf@mweb.co.za	837777880		email
Rem	14762						gate

8.2 Issues raised by I&APs

Key concerns raised included:

- Further expansion
- Flies and odours
- Disposal of carcasses
- Quality of runoff water
- Contamination of ground water resources

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Table 9: Interested and Affected Parties: Summary of Comments and Responses.

	I&AP	Issue	Response
1	Bongumusa Mkhize, telecon 24 October 2022 tel 081 063 2442 Braj & Timber Pty Ltd	Offered services if there is any construction required	Thanked for offer however the application is to regularise existing development with no further development planned
2	Mr Tazz 18 October 2022 nhf@mweb.co.za	Mr Tazz owns an adjoining property and requested a copy of application information	Forwarded a copy of the Background Information Document and requested contact info for neighbours Ramjathan and Moosa
		19 October 2022 BID acknowledged, will endeavour to find contact information requested	Thanked for the effort
3	Thandekile Nxumalo 20 October 2022 KZN DARD	Acknowledged receipt of BID	Thanked
		7 November 2022 Acknowledge contribution of TAB to agriculture in KZN; Concerned regarding potential environmental impact of wastewater generated by feedlot and abattoir on fresh and ground water resources; Recommend detailed study on quality of surface and ground water of the receiving environment around the feedlot and abattoir.	20 November 2022 Regret delay in responding; Corrected errors of fact in para 2.3, 3.3 and 3.7; explained wastewater management flows & assured KZN DARD that conditions of WULA re monitoring surface and ground water quality are in hand. (acknowledgement of receipt received 21 Nov 2022)

	I&AP	Issue	Response
4	Tazz (Thasvir Premrajh) 28 October 2022 nhf@mweb.co.za	Requested registration as I&AP as an adjoining neighbour, all documents to delivered and signed for at an address in Raisethorpe	Thanked for mail noting that Mr Tazz is already registered in the name of Stonecap Trading; Requested confirmation of property details and interest in the s24G application; Explained all documents will be served electronically due to safety concerns
5	Nandipha Sontangane 28 October 2022 DFFE Forestry Regulation	No objection; however recommend clearing of invasive alien vegetation and replanting with locally appropriate indigenous plants, and landscaping with indigenous plants.	Thanked for comments; Alien invasive plant control will be included in Environmental Management Programme (EMPr)
6	Sandile 29-30 October 2022 Pietermaritzburg Service provider	W/app re services available	Noted
7	Brandon Pentolfe 1 November 2022 Southern African Commodity Traders	No objection and welcome expansion; Own croc farm next door and have issues in the past with runoff from blood/compost spread on the lands; Is expansion of feedlot onto Ptn 7 Shallow Drift contemplated ; Acknowledged mail, on Ptns 4&6	Thanked for mail, assured no further expansion at this time but regularising existing activities from environmental perspective.
8	Mrs Moosa 2 November 2022 Sub 24 of Shallow Drift	Register as I&AP; No concerns noted	Thanked for email and contact information

	I&AP	Issue	Response
9	R Lutchman Log On Trading 2 November 2022 Ptn 6 Shallow Drift	Owner of Ptn 6 Shallow Drift where the squatter camp is; Will new development provide worker accommodation as TAB workers are squatter on Ptn 6	3 November 2022: thanked for mail, confirmed no further expansion is planned nor applied for, application is to correct oversights and regularise existing activities.
10	Rajaram Mvulane Attorneys representing Ptn 14 Shallow Drift 2 November 2022 noziph@rajarammvulane.co.za	Requested copy of documents to ascertain if client (neighbour to TAB) needed to comment 3 November 2022 Submitted completed registration form with concerns regarding flies and odours	Responded that there is no expansion, TAB are regularising present extent of activities, requested completion of registration form. 18 November 2022: thanked for registration & comments, noted location of Dr Mkhize in agricultural area with livestock of his own, however Triple A Beef have identified a site further down the D73 from Dr Mkhize but can only utilise it with agreement of KZN Environmental Affairs.
11	Prem 2 November 2022 nhf@mweb.co.za	Director of Surrey Road Property Trust that owns The Farm Biggs No.18358, and Morning Tide Investments that owns portion 2 of the Zeekoegat No. 17216; requested registration as I&AP; Confirmed full name: Premrajh Kanthilall	Thanked for registration and requested full name for public participation record; Thanked for the information

	I&AP	Issue	Response
12	Elize Claasens 2 November 2022 Ovaflo Resort	Registered concerns of water pollution, flies, odours, disposal of offal that attracts raptors as the raptors drop smelly meat on their premises, link to facebook video. Opposed to any expansion.	<p>16 November 2022: called and left message</p> <p>18 November 2022: w/app conversation: requested that the location of the video be marked on a Google Earth image, Mev Claassens prefers site meeting; confirmed meeting at 9.30am on Mon 21 Nov 2022 at Ovaflo.</p> <p>18 November 2022: email: to confirm no expansion of TAB, requested confirmation of site meeting on Mon 21 Nov 2022 and time;</p> <p>20 Nov 2022: email to confirm meeting Mon 21 Nov 2022 09h30.</p> <p>21 Nov 2022: confirmed the location of the video as the minor stream and noted TAB had excavated a trench around the main manure heaps to prevent uncontrolled discharge during storm events. Explained the numerous fly controls stations in place (pallets treated with chemicals under shelters) to manage flies as infestations of flies are a business risk to TAB. TAB is aware of unlawful hunting with dogs and works with their security service providers to prevent and respond to incidents.</p>

	I&AP	Issue	Response
13	Nkanyiso Ngubane 2 November 2022 Dukathole Farm (PTY) LTD (Golden Valley)	Concerned that slurry affects their dam, floods their fields and affects the river, can't use dam water for irrigation	18 November 2022: teleconversation with Nkanyiso to confirm property and dams affected, Golden Valley Farm below Ptn 46 & 20 of Wagenbeetjes; will meet on Mon 21 Nov 2022 to confirm location of allegations. 21 November 2022: noted dam with variety of waterfowl. Ms Ngubane took occupation early 2022; during/after the heavy rain event of April 2022 water was pumped from the lower dam on Wondervale/Wagenbeetjes which caused the dam on Golden Valley to overflow the wall which was a problem because it cut off access to the pump and lands that were under cultivation. TAB to discuss release of water from Wondervale with Golden Valley prior to release in future.
14	Priscilla Dent 4 November 2022 Telecon & w/app obo Neil Raw Family Trust	Difficulties with wifi delayed registration; no objection; 2 nd email address details	Noted, can send picture of registration by WhatsApp; acknowledged receipt of w/app and address information

9 IMPACTS

Impacts may be considered to the effects or changes brought about as the result of an activity or development. In the case of TAB, the nature of the changes is as follows.

In the ordinary course of events, it is usual to consider the mitigation hierarchy (depicted below) as part of the assessment of the potential changes that an activity or development may have on the environment and seek to reduce the negative impacts as far as possible in advance of the activity or development commencing. However, TAB is an existing intensive agricultural operation that is well established therefore the emphasis is on what impacts have been realised as a result of the operation and measures that may be implemented to minimise any residual impacts.

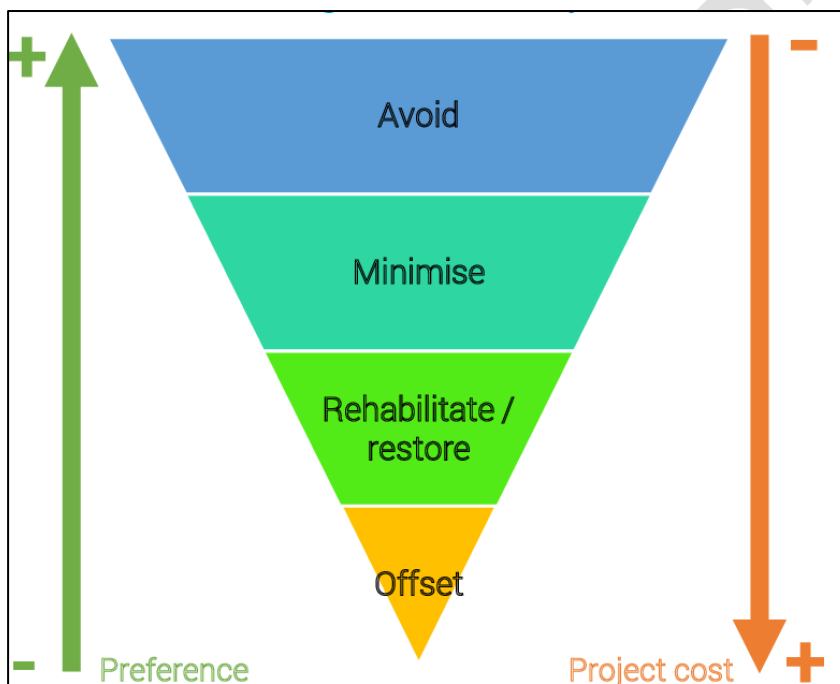


Figure 4: Mitigation Hierarchy (after Proteus Partners, 2018¹)

The feedlot was expanded through the addition of new pens over previously transformed lands increasing the capacity of the herd in feedlot pens to the present average of 30 000 to 32 000 animals over approximately 70ha.

The abattoir was similarly expanded over transformed lands to a current footprint of approximately 5,1ha. This includes the floor area of the abattoir, the associated processing and chiller facilities, offices and staff facilities, loading and access aprons, and the building in which the now-defunct rendering plant was established.

¹ <https://www.proteuspartners.org/content/uploads/2020/04/Green-and-blue-carbon.pdf>

Lands for fodder production have been established over lands previously cultivated to maize or sugar cane or transformed to nursery and poultry production houses with contours and soil conservation measures in place. These have proved sufficient to prevent erosion during the heavy rain events of April and May 2022 and the more recent December 2022-January 2023 rains. Lands are set back from wetlands and streams thereby ensuring the integrity of the buffers. These measures are regarded as adequate to prevent or minimise erosion and alien plant encroachment into pastures and hay lands.

Previous bulk-to-farmer fuel tanks have been consolidated to three areas, viz. farm offices, abattoir and admin/feed sheds/workshops with a total combined volume of 128 000l diesel fuel.

Sheds were erected for feed production and storage of hay.

Runoff from the feedlot pens is directed to either the four D73 off-channel storage dams (total capacity 60 013m³) on the northern side of the feedlot or to the three off-channel Triple Dams (total capacity 60 260m³) on the southern side of the feedlot. Each dam gravity feeds to the dam below. Water from the lowermost dam is pumped to the 2nd maturation pond (AWW2). See Figure 1.

Effluent from the abattoir is directed to the first of a series of ten off-channel maturation ponds (not immediately visible in the plan below due to vegetation growth) constructed over the period 2009-2010. The first five ponds are anaerobic and the second five are aerobic. Treated water from the tenth dam is pumped to Back Dam (near the R614) and Rookery Nook Dams (adjacent to the D73 near the former poultry farm), or directly to lands for irrigation.

The impacts associated with the expansion of the feedlot and abattoir may include noise, nuisance such as odours and flies, socio-economic, possible water contamination, and biodiversity. These are summarised below and further encapsulated in Table 10: Magnitude of potential impacts.

Impacts are assessed using a standard matrix of:

Duration: Short term (0-6 months) – Medium term (6 months – 3 years) – Long term (3 years or more)

Extent: Site – local – regional – provincial – national – international

Intensity: Low – medium – high

Frequency: Occasional – temporary – seasonal – permanent/ongoing

Reversibility: Unlikely – possible

as also described in Table 11: Impact magnitude conventions.

9.1 Identified impacts

Public participation highlighted the following impacts:

- **Further Expansion**

It was emphasised that no further expansion by Triple A Beef is planned at this time. The application for environmental authorisation serves to regularise previous expansion of the feedlot and abattoir and associated infrastructure. Although the feedlot and abattoir are compliant with veterinary public health requirements and received a Water Use License, there were unwitting oversights of the requirements for environmental authorisation for the previous expansion of the feedlot and abattoir.

- **Odours**

There are odours of an agricultural nature from the feedlot, which are accentuated during wet and hot conditions, particularly when manure is removed from the feedlot pens after rain. Depending on the wind direction and strength, downwind neighbours may experience nuisance odours.

It is noted that the entire agricultural district has intensive animal farming activities which all emit odours, eg, chicken houses.

It is acknowledged that the dry manure heap on Ptn 46 Wagenbeetjes (Rookery Nook) is in close proximity to Dr Mkhize's premises, Umsamo Institute. Triple A Beef will remove the manure.

- **Flies**

It is noted that TAB is surrounded by various agricultural properties and that many of the neighbours are intensive chicken and egg farms, as well as cattle, goat and pig farms and trading stations, which all contribute to the fly load. The life cycle of black flies depends on flowing water for the larvae to develop and pupate. The female flies lay eggs on rocks and other substrates in flowing water. The larvae hatch from the eggs, remaining in water to become pupae. Adult flies emerge from the pupae to fly, feed and mate. High numbers of flies are often noticeable in spring and early summer, particularly in pastures along streams and rivers².

TAB regards flies as a business risk as they pose a hygiene risk to the abattoir and distract the cattle in the feedlot from converting feed to mass. Consequently, TAB puts a great deal of effort into managing the fly load with numerous fly bait stations, particularly around the wet manure heaps/drying area, the feedlot pens and abattoir.

Fly bait stations are shelters (or "afdakkies") with stacks of wooden pallets treated with fly bait under shelter. Flies are attracted to the fly bait and get stuck when they land on the treated pallets. Fly bait stations are treated regularly and more frequently in spring and summer.

- **Runoff Water quality**

The runoff from the **feedlot** is directed to the upper of the D73 dams in the north and Triple Dams in the south. Each runoff/wastewater dam is interconnected by pipes which drain by gravity to the next dam. Water from the lowermost dam of the D73 and Triple Dams is pumped

² <http://www.kznhealth.gov.za/environ/vector/blackfly.htm>

to the second wastewater treatment dam labelled AWW2 and follows the maturation process of the ten (10) wastewater treatment dams (ponds). See Figure 1 and Appendix 1: Maps.

Effluent from the **abattoir** is directed to the first wastewater treatment dam/pond (above AWW2, ringed in red) and gravity feeds through the waste-water treatment dams/ponds undergoing anaerobic maturation in the first 5 ponds and aerobic maturation in the final 5 ponds. The final effluent from AWW10 is pumped to Back Dam (near the abattoir entrance off the R614 on Ptn 1 Binchester Grange) and to Rookery Nook Dams on Ptn 46 Wagenbeetjes Draai for irrigation of the fodder production lands.

The level of the D73, Triple Dams and wastewater treatment dams is closely monitored, particularly during rain events such as experienced in April and May 2022, and more recently in December 2022 and January 2023. If the levels are too high, then water is pumped to Rookery Nook and Back Dams and fields are irrigated despite the rainfall, to ensure that there is no overflow into the stream and across the R33 into the western dam off TAB landholdings.

The quality of the treated wastewater irrigated on the pastures is regularly sampled to ensure that there is no undue nutrient loading of the soils. Boreholes for bi-annual water sampling in compliance with the Water Use License issued by the Department of Water and Sanitation on 14th December 2020 and amended on 5th and 21st October 2021, have been drilled and sampled, the most recent results of which are awaited. Triple A Beef is complying with the conditions of the previously mentioned Water Use License.

TAB excavated a trench around the wet manure heaps/drying area to prevent uncontrolled discharge during storm events, particularly if such storm events occur soon after manure has been removed from the feedlot pens.

The dam off the TAB landholdings across the R33 to the west of the feedlot and abattoir, does not receive runoff from the feedlot or abattoir.

Additional impacts associated directly with the contraventions of EIA-listed activities are:

- **Expansion of feedlot pens**

Each pen in the feedlot is approximately 40m x 50m on average. Each pen is lined with compacted shale sourced from the private borrow pit on Ptn 8 Shallow Drift and provided with drinking and feed troughs. There are currently 212 production pens and 30 reception and adaptation pens over approximately 70,1ha. Numbers of cattle vary however, the feedlot can accommodate approximately 30 000 to 32 000 head of cattle at any one time.

The feedlot is on a gentle slope to facilitate drainage of manure, urine and wash down water. Each block of pens drains via wastewater drains to either the Triple dams immediately south of the feedlot pens or the D73 dams north of the feedlot. Manure is scraped up and removed to a manure drying area by tractor and trailer.

The new pens were established over lands previously cultivated to pastures, maize or sugar

cane as shown in historical imagery included in Appendix 2: Photographs.

- **Expansion of abattoir**

The 1978 photograph of Ptn 28 Shallow Drift shows that the property was extensively transformed to cultivated lands and a large dam. The south east corner of Ptn 28 of Shallow Drift appears to be untransformed KZN Hinterland Thornveld, however, this may be *Dichrostachys cinerea*, or sicklebush. The area was cleared of trees by 2006 and a large centre pivot was established in 2010.

The initial construction of the abattoir was authorised by the then-Department of Agriculture and Environmental Affairs. Expansions of the abattoir were over already transformed lands as noted above with little impact on biodiversity. The system of 10 interconnected wastewater treatment ponds were built in 2009-2010 to treat the increased volumes of effluent from the abattoir and runoff from the feedlot pens. The treated effluent is used to irrigate the fodder production lands and has been authorised by the Department of Water and Sanitation under Water Use License 11/U20G/BCEGHI/10207 issued on 14 December 2020 and amended on 5 and 25 October 2021, and more recently on 17 February 2023.

- **Construction of rendering plant**

A blood drying plant constructed in 2006 was re-developed as a rendering plant to treat additional abattoir by-products, however use of the rendering plant was discontinued in 2016. The rendering plant was constructed on the same footprint as the blood-drying plant which was constructed on previously transformed land as noted above within the present abattoir footprint.

- **Consolidation of fuel storage**

A number of the subdivisions purchased by TAB had bulk-to-farmer fuel storage tanks existing on them, however TAB consolidated these to three areas, viz. farm offices, admin/feedlot/workshop, and abattoir for ease of management and improved access control. All three areas are appropriately bunded with restricted access.

- **Transformation of natural veld**

Although the majority of TAB activities have taken place over previously transformed lands, there has been limited transformation of KZN Hinterland Thornveld such as the south east corner of Ptn 28 of Shallow Drift for the establishment of fodder production under centre pivot.

- **Contingency Measures for Disease Outbreaks**

Every effort is made to ensure that no infected animals enter the TAB feedlot through rigorous record keeping and due diligence of suppliers. All animals entering TAB are screened by veterinarians for obvious signs of disease or injuries. Where animals need to be euthanised the carcasses are removed under contract by pet food manufacturers. In times of disease outbreaks such as foot and mouth disease, animals are tested under supervision by the Veterinary Public Health officials of the Department of Agriculture and Rural Development. An area on Ptn 1 Binchester Grange has been identified for burial if/when it is necessary to dispose of infected carcasses on site. Trenches are dug using a TLB and lime is added under supervision of Veterinary Public Health, Water Quality, and Environmental Affairs officials prior to covering the carcasses on a daily basis, or more frequently, if required.

In summary, the expansion of the feedlot pens, abattoir, and wastewater treatment ponds has had the following effects:

Biodiversity

- Limited transformation of natural veld.
- Limited erosion.
- Limited loss of animal habitat.

Waste Management

- Construction waste/rubble that has been used as inert fill
- Limited quantities of domestic/office general waste removed to landfill
- Empty medicine vials, used syringes and needles are removed under contract. Deaths are taken to the post mortem room and frozen after the cause of death has been investigated. Frozen carcasses are removed from the post mortem facility under contract.
- Treated effluent from the feedlot pens and abattoir is used to irrigate and fertilize the fodder production lands.

9.2 Measures to prevent or mitigate against impacts

Activities of TAB have been assessed against the mitigation hierarchy to identify possible measures to reduce or minimise the impacts of TAB operations and to remediate impacts where possible.

The key measures identified are as follows:

Biodiversity

- Alien plant control, particularly in the area of Eastern Valley Bushveld above the uMngeni River.
- Maintaining corridors of natural veld along the drainage lines and wetlands between fodder production lands to facilitate animal movement.
- Maintaining the security presence to deter unlawful hunting and removal of wild animals and indigenous plants.

Pollution

- Control over storage of fuel and oil and any other chemicals used for maintenance of vehicles.
- Maintain the wastewater treatment ponds to ensure the integrity of the pond walls.
- Monitor quality and quantity of treated effluent for irrigation of fodder production lands as per the Water Use License.

- Monitor the levels in the D73, Triple Dams, Back Dam and Rookery Nook Dams during rainfall events and implement irrigation to reduce volumes when necessary.
- Lime must be applied to any carcasses disposed on site under supervision of Veterinary Public Health, Water Quality, and Environmental Affairs officials.

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Table 10: Magnitude of potential impacts.

Impact magnitude given with [WM] and without [NM] mitigation. Magnitude conventions described in Table 11.
Impacts and mitigation relative to the Operational (O) phases.

Description		Nature	Extent	Duration	Intensity	Frequency	Probability	Reversibility	Irreplaceable Loss of Resources	Significance	Confidence	Mitigation
Biodiversity Destruction of natural veld and proliferation of alien invasive plants in disturbed areas.	NM	Negative	Local	Long-term	Low	Ongoing	Definite	Low	Yes	Low	High	<ul style="list-style-type: none"> Maintain hay and fodder production lands as support for endangered species including oribi, grey crested cranes, blue cranes and southern bald ibis, amongst others. Maintain wetland and stream buffers. Alien plant control in disturbed areas.
	WM	Positive	Regional	Long-term	Low	Ongoing	Definite	Medium	Yes	Low	High	
Socio-economic	NM	Positive	Regional	Long-term	Medium	Ongoing	Probable	High	No	Medium	High	<ul style="list-style-type: none"> Housing and training for employees Support subsidiary and downstream businesses
	WM	Positive	Regional	Long-term	Medium	Ongoing	Probable	High	No	Medium	High	
Pollution • Surface water quality	NM	Negative	Local	Long-term	High	Ongoing	Definite	Low	Yes	Medium	High	<ul style="list-style-type: none"> Monitor surface water quality regularly Monitor and manage levels in wastewater treatment dams Prevent overflow of wastewater treatment dams into streams and wetlands
	WM	Negative	Local	Long-term	High	Ongoing	Probable	Low	Yes	Low	High	
Pollution • Ground water quality	NM	Negative	Local	Long-term	Low	Ongoing	Possible	High	No	Low	High	<ul style="list-style-type: none"> Use monitoring boreholes to check for contamination Effluent treatment dams to be lined using bentonite if necessary
	WM	Negative	Local	Long-term	Low	Ongoing	Improbable	Low	No	Low	High	
Pollution • Contamination of soil and groundwater by fuel and oil.	NM	Negative	Local	Short-term	Low	Occasional	Improbable	Low	No	Low	High	<ul style="list-style-type: none"> Fuel storage is adequately bunded. Oil changes and maintenance to take place over drip trays. Spill kits to be available on site always.
	WM	Negative	Local	Short-term	Low	Occasional	Improbable	Medium	No	Low	High	
Nuisance • Flies • Odours	NM	Negative	Local	Permanent	Low	Intermittent	Probable	Low	No	Medium	High	<ul style="list-style-type: none"> Maintain fly traps to minimise flies in the feedlot, around manure heaps and around the abattoir Regular removal of manure from pens, preferably under dry conditions Manure removal under wet conditions to only be done during the week (Mon – Fri) when possible
	WM	Negative	Local	Permanent	Low	Intermittent	Possible	Low	No	Low	High	
Disease Outbreaks • On disposal of condemned carcasses	NM	Negative	Local	Medium-term	Medium	Occasional	Possible	Low	No	Medium	High	<ul style="list-style-type: none"> Confirm area for disposal with Veterinary Public Health, Water Quality, and Environmental Affairs officials Trench, lime and cover condemned carcasses under advice from Veterinary Public Health, Water Quality, and Environmental Affairs officials
	WM	Negative	Local	Medium-term	Medium	Occasional	Possible	Medium	No	Low	High	

Table 11: Impact magnitude conventions.

Notation	Description
Nature	An impact is either positive or negative. Even after mitigation, few negative impacts become positive. Most negative impacts will remain as negative impacts. However, after mitigation, significance should reduce.
Extent	Describes the spatial scale of the impact: <ul style="list-style-type: none"> • Site – limited to TAB landholdings • Local – limited to the immediate area(s) around the project site. • Regional – extends over a larger area that would include a major portion of an area or province. • National/International – an even wider area that would have national or international implications.
Duration	Provides a prediction of whether the duration of the impact would be: <ul style="list-style-type: none"> • Short-term (0 to 6 months) – or confined to the construction period. • Medium-term (6 months to 3 years). • Long-term (3 years or more).
Intensity	This provides an order of magnitude of whether or not the intensity (magnitude/size/frequency) of the impact would be negligible (no impact), low, medium or high.
Frequency	This provides a description of any repetitive, continuous or time-linked characteristics of the impact(s) as: <ul style="list-style-type: none"> • Occasional (occurring from time to time, without specific periodicity) • Temporary • Seasonal • Permanent/ongoing
Probability	This provides a description of the probability of the impact actually occurring as: <ul style="list-style-type: none"> • Improbable (very low to low likelihood). • Probable (distinct possibility). • Highly probable (most likely). • Definite (the impact would occur regardless of prevention or mitigation measures).
Reversibility	This describes the ability of the impacted environment to return to its pre-impacted state once the cause of the impact has been removed as: <ul style="list-style-type: none"> • Unlikely/Low (impacted natural, cultural or social functions and processes will never return to their pre-impacted state). • Possible (impacted natural, cultural or social functions and processes will return to their pre-impacted state within the short to long term).
Irreplaceable Loss of Resources	This describes whether an irreplaceable resource is impacted upon or not: <ul style="list-style-type: none"> • Yes. • No.
Significance	The significance of the identified impacts on components of the affected environment (and, where relevant, with respect to potential legal infringement) will be described as: <ul style="list-style-type: none"> • Low; where the impact will not have a significant influence on the environment and, thus, will not be required to be significantly accommodated in the project design. • Medium; where it could have an adverse influence on the environment, which would require modification of the project design or alternative mitigation actions. • High; where it could block the project regardless of any possible mitigation.
Confidence	Provides a measure of confidence in the assessment expressed as low, medium or high.

10 ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

The state of the veld prior to the development of the feedlot and abattoir is not known with certainty, however, it is known that there was extensive cultivation over most of the properties and intensive poultry production over some of the properties as per historical imagery obtained from the Office of the Surveyor General and Google Earth history.

The monitoring boreholes required by the Water Use License were sunk late 2022 with only preliminary groundwater quality results available which precludes the certainty regarding possible contamination of groundwater.

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11 ENVIRONMENTAL IMPACT STATEMENT & EAP RECOMMENDATIONS

The Triple A Beef feedlot was established on what was then Ptn 8 of Shallow Drift in 1981³ prior to any requirement for environmental record of decision or authorization. The Department of Agriculture provided advice and support at the time to minimize any impacts on agricultural resources.

A Record of Decision for the initial development of the abattoir on Ptn 28 of Shallow Drift was obtained from the then-Department of Agriculture and Environmental Affairs in 2000 however, no environmental authorization was for the expansion of the abattoir nor the construction of the now defunct rendering plant.

The feedlot and abattoir were developed over previously transformed lands as shown in the historical imagery contained in Appendix 2 Photographs. The majority of the fodder production lands were similarly established over previously transformed or cultivated areas with an exception of approximately 16ha in the south east corner of Ptn 28 of Shallow Drift that was established to fodder between 2010 and 2012.

The issues associated with the development of the **feedlot** revolve around manure management, flies and odours. Manure is regularly scraped from the feedlot pens and removed to manure drying heaps for use as fertilizer either on TAB fodder production lands or sale to nearby farmers. Odours are largely associated with the removal of wet manure following rain events. Flies represent a hygiene risk to the business of TAB with rigorous efforts to minimize and control the proliferation of flies using fly traps particularly around the feedlot pens, manure drying heaps and abattoir.

Runoff from the feedlot pens was initially only directed to the D73 and Triple Dams wastewater dams, however with the addition of the ten wastewater treatment dams for the **abattoir** in 2009-2010 final water from the D73 and Triple Dams was pumped to the second wastewater treatment dam for further anaerobic and aerobic maturation prior to use as irrigation water for the fodder production lands. There is no connection between the wastewater treatment dams and the lower lying watercourses as treated effluent is pumped to Back and Triple Dams and directly to irrigation.

The loss of a relatively small area of KZN Hinterland Thornveld is regarded as low significance against the net gain in breeding pairs of oribi as well breeding populations of grey crested and blue cranes and feeding opportunities for southern bald ibis with security services to control unauthorized access to TAB landholdings and remove any snares.

The Department of Water and Sanitation has authorized the use of treated effluent for irrigation as liquid fertilizer on the fodder production lands under Water Use License 11/U20G/BCEGHI/10207 issued on 14 December 2020 and amended on 5 and 25 October

3 NB: Ptn 8 Shallow Drift and Ptn 51/Ptn 1 Zeekoegat were consolidated in 2015 to Rem of Shallow Drift

2021 and more recently on 17 February 2023. There are a number of conditions to the license as amended that require ongoing water quality monitoring of surface and ground water.

There are buffer areas adjacent to the watercourses and wetlands on the TAB landholdings which are periodically mown and occasionally burnt that provide corridors and refugia for animals such as the oribi and chameleons.

Greater emphasis needs to be placed on a structured alien plant control with spot control of bramble, lantana and bugweed particularly in the hay and fodder production lands, and systematic treatment of invasive alien plants in the area of Eastern Valley Bushveld above the uMngeni River.

It is understood that there may be outbreaks of disease from time to time that may affect TAB operations, irrespective of the stringent bio-security measures in place. This may require the slaughter and disposal on site of affected animals. Contingency protocols are included in the Environmental Management Programme, however, these require the consent of EDTEA, DWS and Veterinary Public Health prior to implementation, such consent may be verbal immediately and confirmed in writing later.

It is concluded that the activities as applied for may be authorised subject to implementation of the Environmental Management Programme and submission of annual environmental audits. Particular attention must be paid to water quality monitoring (surface and ground water for parameters such as ammonia, chemical oxygen demand, electrical conductivity, nitrates/nitrites, orthophosphate, suspended solids and pH) and measures implemented to reduce background *E.coli* levels.

12 REFERENCES

Geomeasure Group. October 2017. Desktop Study and Geohydrological Investigation undertaken at Triple A Beef, Albert Falls area, Umgungundlovu District Municipality

NatureStamp. October 2017. Flood Line Report for the properties associated with Triple A Beef

NatureStamp. December 2017. Stormwater Management Plan for the properties associated with Triple A Beef

NatureStamp. December 2017. Environmental Management Programme for the properties associated with Triple A Beef

Mottram & Associates. December 2017. Waste Management Plan for Triple A Beef

Mottram & Associates. December 2017. Emergency Contingency Plan for Triple A Beef

Eco-Pulse Environmental Consulting Services. December 2017. Specialist Freshwater Habitat Assessment for Triple A Beef

NatureStamp. October 2018. Pipeline Abstraction Assessment for Caine Farming (Triple A Beef)

NatureStamp. July 2019. Water Balance Assessment for the properties associated with Triple A Beef

Mottram & Associates. January 2019. Public Participation Report for Caine Farming Integrated Water Use License Application

NatureStamp. September 2022. Revised Flood Line Assessment for the properties associated with Triple A Beef

Department of Water and Sanitation:
Water Use License 11/U20G/BCEGI/10207 issued 14 December 2020
plus three amendments dated 5 October 2021, 25 October 2021, and 17 February 2023

13 APPENDICES

Appendix 1: Maps and illustrations

Appendix 2: Photos

Appendix 3: Public Participation Report

Appendix 4: Desktop Biodiversity Assessment

Appendix 5: Heritage Assessment

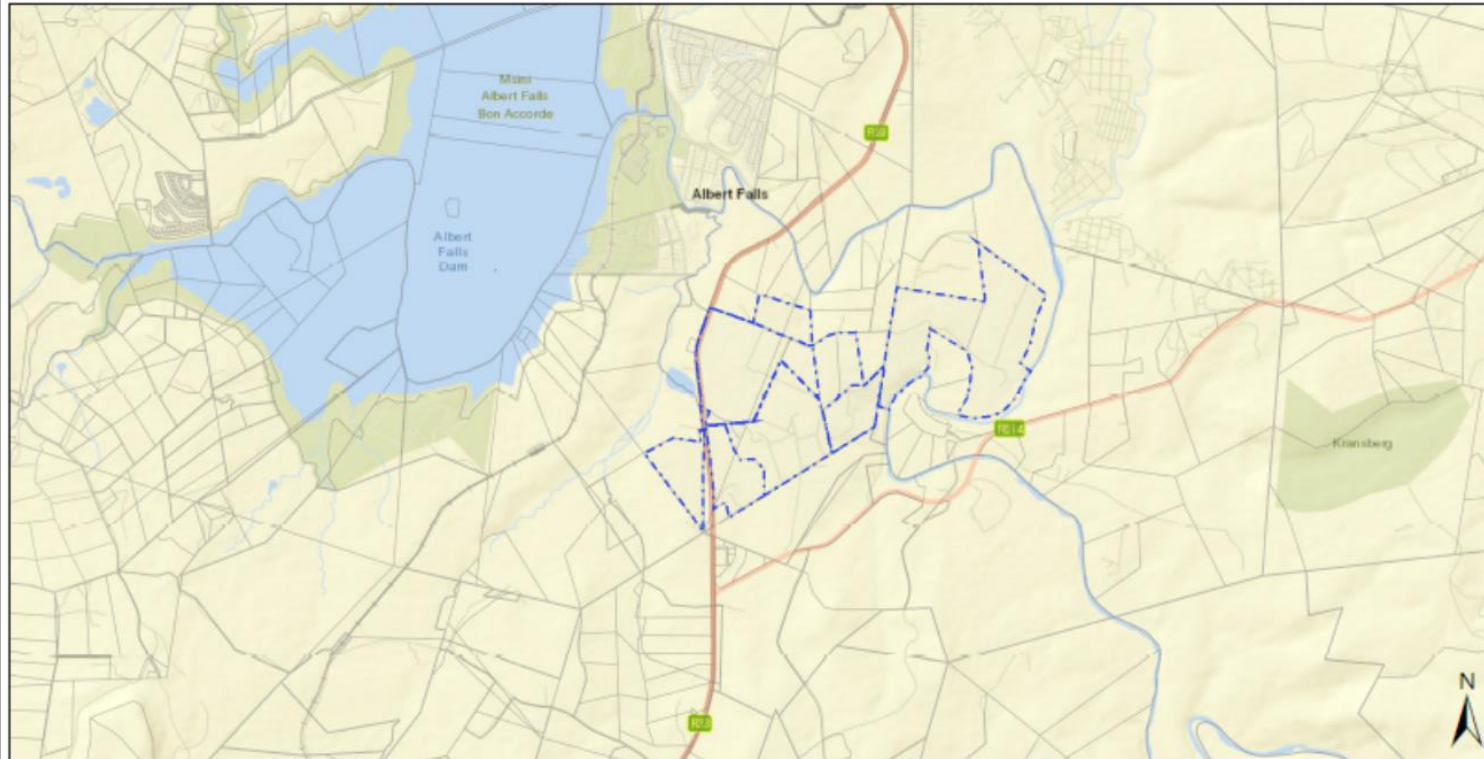
Appendix 6: Integrated Water Use License Application

Appendix 7: EMPr

Appendix 1

Maps and Illustrations

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12 September 2022

Legend

- | | | |
|---------------------------------------|------------------|--------------|
| EIA.Application Development Footprint | Cadastral | Public Place |
| EIA.Application Site | Erven | Farm Portion |
| National Jurisdiction Area | Farm | Agri Holding |

0 2.75 5.5 km
Sources: sat, HERE, Garmin, Mapbox, IGN, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Swi Holo, Swi (Taiwan), NGCC, © OpenStreetMap contributors, and the GIS User Community

Copyright: 2022
National Department of Environmental Affairs,
Government of South Africa

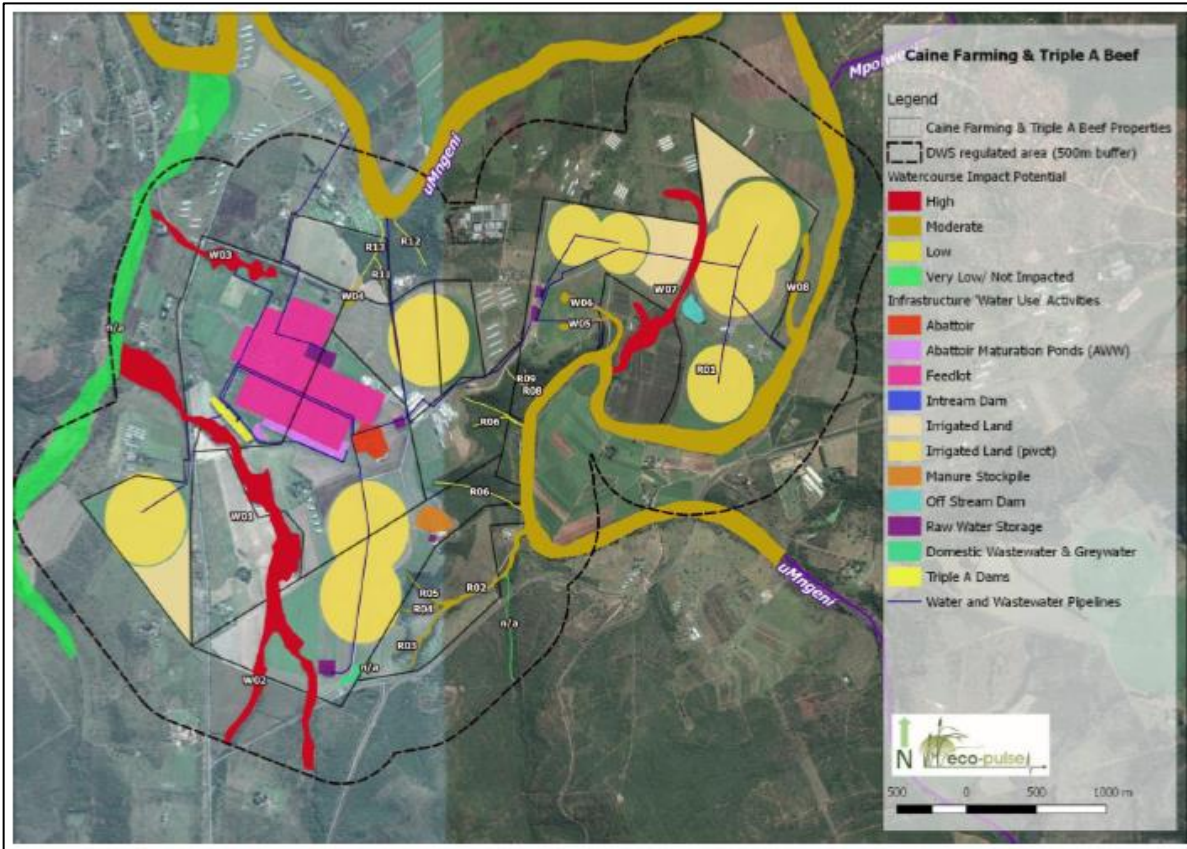
Map 1: Location TAB Landholdings, Albert Falls, Umshwati Local Municipality



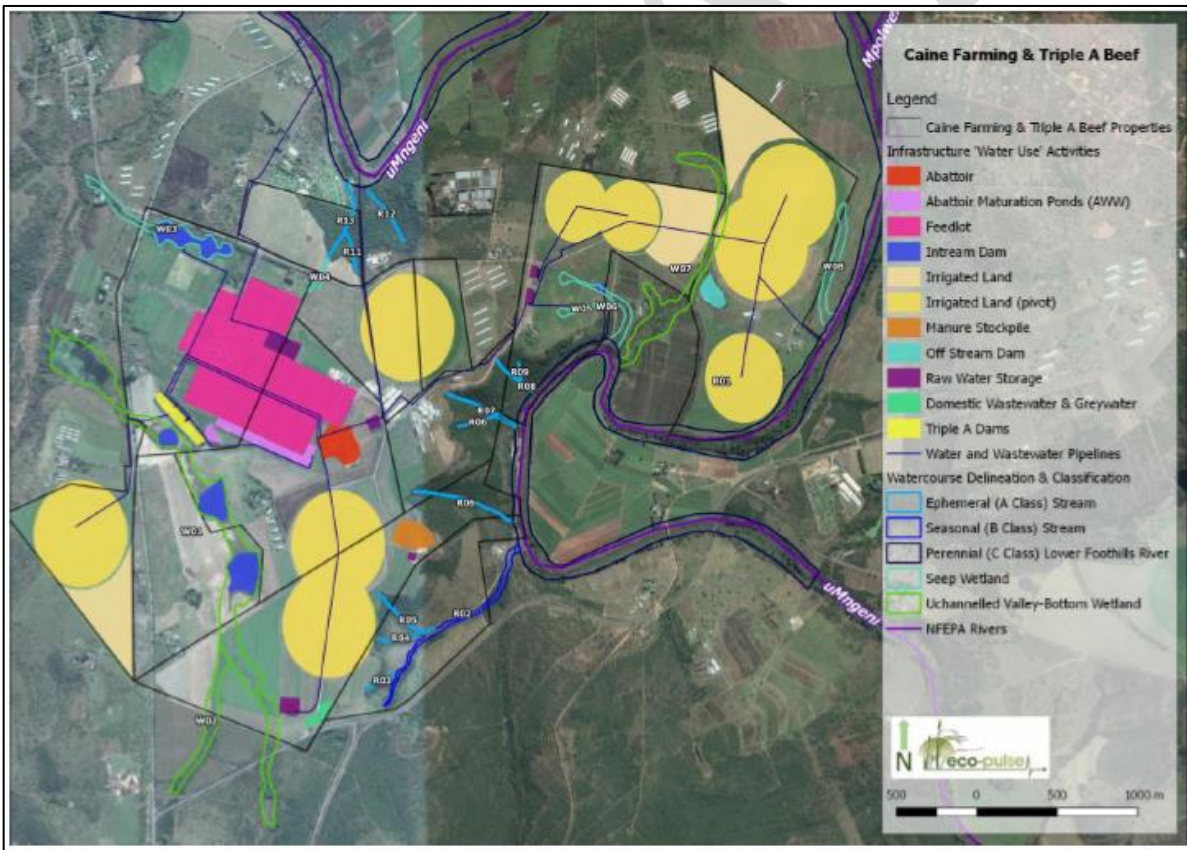
No. in figure	Description	Order of Purchase	Year of Purchase
1	Ptn 1 of 18 of the farm Zeekoegat 1173	13	2015
2	Ptn 8 of the farm Shallow Drift 15565	1	1980
3	Ptn 25 of the farm Shallow drift 15565	4	2007
4	Ptn 1 of the farm Binchester Grange 14258	3	1995
5	Ptn 28 of the farm Shallow Drift 15565	2	1991
6	Ptn 9 of the farm Shallow Drift 15565	9	2014
7	Ptn 7 of the farm Shallow Drift 15565	7	2009
8	Ptn 10 of the farm Shallow Drift 15565	10	2014
9	Ptn 12 of the farm Shallow Drift 15565	12	2014
10	Ptn 11 of the farm Shallow Drift 15565	11	2014
11	Ptn 1 of the farm Linchester 15875	8	2009
12	Ptn 46 of the farm Wagenbeetjes Draai 875	6	2009
13	Ptn 20 of the farm Wagenbeetjes Draai 875	5	2008

Map 2: Google Earth image of TAB landholdings⁴

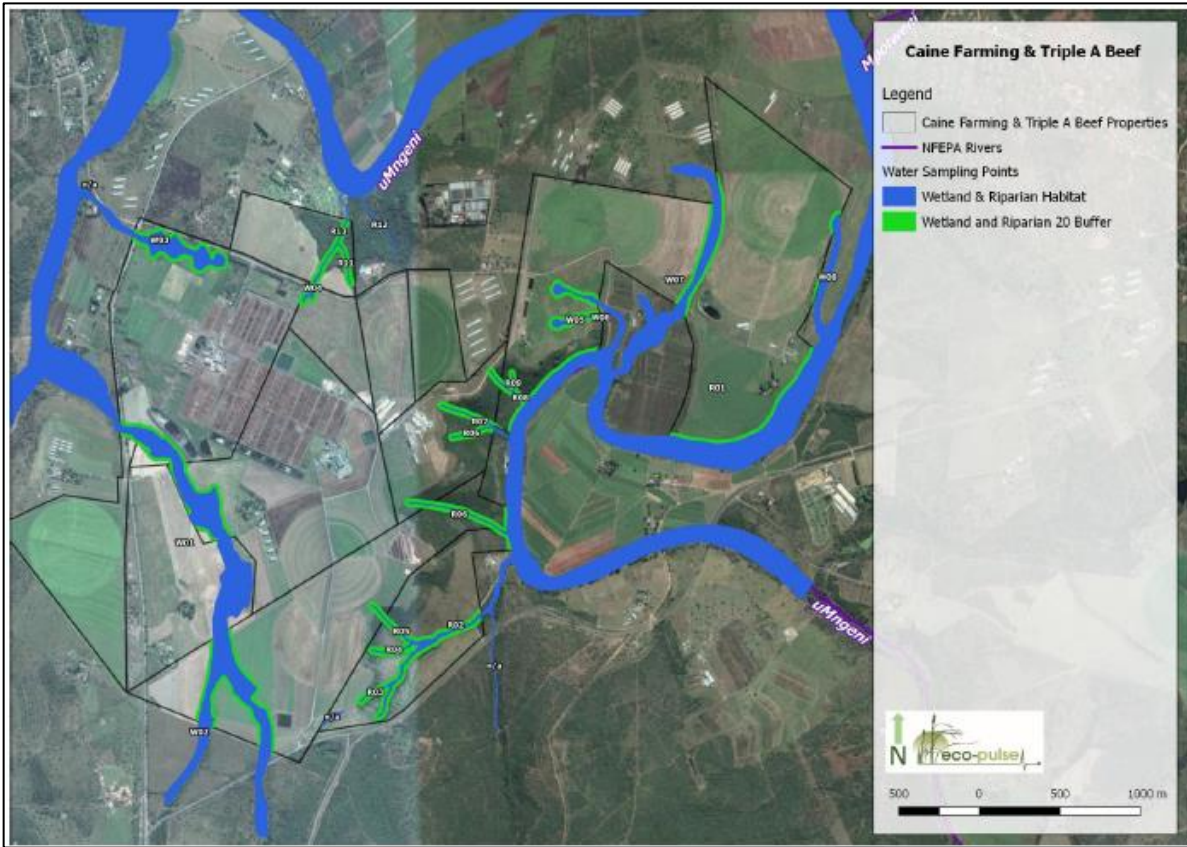
⁴ Ptn 8 Shallow Drift and Ptn 51/Ptn 1 Zeekoegat (Properties 1 & 2) were consolidated in 2015 to Rem of Shallow Drift



Map 3: Location, extent and impact potential for watercourses within 500m of TAB landholdings, source Eco-Pulse, 2017



Map 4: Location, extent and classification of watercourses potentially affected by TAB operations, source Eco-Pulse 2017



Map 5: Buffers around wetland and riparian zones within TAB landholdings, source Eco-Pulse 2017

Appendix 2

Photographs

(insert App 2)

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Appendix 3

Public Participation Report

(insert PP report)

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Appendix 4

Desktop Biodiversity Assessment

Appendix 5

Heritage Assessment

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Appendix 6

Integrated Water Use License Application

Appendix 7

Environmental Management Programme