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DRAFT BASIC ASSESSMENT REPORT

The Proposed Establishment of a Rendering Facility and Authorisation of Proposed and Existing Waste Management Activities on site of the Ambleside Meats Property, Remainder of Farm B of Lot 50 Winterton Settlement No. 11565, Kwazulu-Natal.

PREPARED FOR:
Ambleside Meats CC

DATE:
2 February 2022

DEDTEA REFERENCE NO.:
Pending

Residential
Commercial
Industrial
Agriculture
Linear
Service

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INTERNAL REVIEW

	NAME	DATE	SIGNATURE
REPORT COMPILED BY	Tarryn Frankland	27 January 2022	
REVIEW BY	Sasha-Ann Naidoo	28 January 2022	
REPORT REVIEWED BY	Rebecca Bowd	31 January 2022	

EXECUTIVE SUMMARY

The Applicant, Amleside Meats CC, is proposing to establish a Rendering Facility and to authorise existing and proposed waste activities within the Ambleside Meats Property, Remainder of Farm B of Lot 50 Winterton Settlement No. 11565, Winterton, Okhahlamba Local Municipality, KwaZulu-Natal.

The applicable waste activities on site include the operation of an existing Composting Facility (-28° 48' 22.09'' S 29° 32' 28.23''E) and the establishment and operation of a proposed Rendering Facility (-28° 48' 22.22''S 29° 32' 25.32''E) within an existing warehouse. Both these facilities are and will be located within the existing and transformed Ambleside Meats property and are intended to support the pork production process associated with the Ambleside Meats abattoir. The property which is owned by the Applicant comprises of existing agricultural areas (pastures and cultivation areas), the Ambleside Meats abattoir, two (2) slurry dams, old piggery facilities (no longer in use), the existing Composting Facility, office facilities, farm houses and staff accommodation. The site falls outside of any town planning scheme.

The site which is situated between Bergville and Colenso can be accessed via the security gate located along the Main P11 Road (R74) and P294 Road. It is surrounded by commercial agricultural lands and pasture lands, small residential areas and the town of Winterton. The property extent is approximately 21 ha, however, the proposed Rendering Facility will be housed in an existing warehouse which is 540 m^2 in extent, and the existing Composting Facility has an extent of approximately 2 500 m^2. Therefore, the existing and proposed waste activities only comprise 1.41 % of the overall property extent and are located within transformed areas.

The Composting Facility is located approximately 76 m to the east of the existing Ambleside abattoir and > 100 m from the Little Tugela River. Abattoir solid waste from the abattoir on site, as well as the Ambleside Dalton abattoir, is taken to the Facility and placed into composting wind rows and left to biodegrade. The Facility also takes in garden refuse from the maintenance of the farm which is added to the wind rows to enhance biodegradation. The resultant compost is then sold to neighbouring farms. All surface runoff and ground seepage from the Facility is captured in a drain and tank at the bottom of the compost wind rows. This runoff and wastewater from the slurry dams is collected and re-irrigated back onto the compost wind rows via a closed piping system. Irrigation assists in reducing potential odour and emissions and aids in decomposition. If the Rendering Facility is implemented, solid waste from the abattoirs will no longer be composted at the Facility, only garden refuse. Consequently, the Composting Facility will only be retained as a contingency for emergencies, and to take in the farming garden refuse.

The proposed Rendering Facility is located approximately 30 m to the northeast of the abattoir, 45 m to the west of the Composting Facility, and > 100 m to the south of the Little Tugela River. The Rendering Facility will comprise two (2) 11-ton/day Rendering Plants which will allow the Facility to process approximately 22 tons of abattoir solid waste per day. The Rendering Facility will re-process abattoir solid waste into tallow and carcass meals for later incorporation into the dog feed industry. The Facility will require water to operate to generate steam for the cookery/dryer. All emissions and potential odours will be captured and condensed; the condensate will be disposed of in the existing slurry dams on site. The Rendering Facility is the best environmental and economically practicable alternative to the Composting Facility as it carries significantly lower environmental risks and will provide employment and skills development opportunities.

In terms of the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA) a Waste Management License (WML) will be applied for to authorise these existing and proposed waste management activities on site. This is being undertaken through a Basic Assessment Process.

Minimal issues were raised, however the following has been noted:

- The need for appropriate and approved disposal of effluent / wastewater;

- The need to prevent pollution of water resources;
- Potential offensive odours which will need to be managed;
- Potential risks of rodent infestations and the need for a Rodent Control Programme;
- The need to comply with NEM:WA, the National Water Act (Act No. 36 of 1998) (NWA) and the National Building Regulations and Buildings Standards (Act 103 of 1977);
- No objections were received from Eskom;
- No objections were received from Transnet;
- No objections were received from AMAFA; and
- No objections were received from I&APs.

The requirement for specialist studies was limited given that the proposed Rendering Facility will only require the establishment and operation of rendering plant machinery within an existing warehouse, and the existing Composting Facility is already established with protection and mitigation measures in place. The following Specialist Study has been undertaken as part of the Basic Assessment Process:

- Aquatic Assessment.

The findings of the above specialist study support the existing and proposed waste management activities. The specialist has provided recommendations to guide undertaking these waste management activities in the most environmentally sound manner. The main recommendation is the continuance of SANS 241 Water Quality Monitoring by the Applicant occurs.

This report concludes that the existing Composting Facility and the proposed Rendering Facility will result in positive socio-economic and environmental impacts (employment opportunities, local economic stimulation and more effective re-processing of waste into profitable products), there is sufficient demand for the proposed Rendering Facility to be feasible, and adequate mitigation measures have been proposed in this report, the Environmental Management Programme (EMPr) and Specialist Report, to ensure that any identified negative impacts will be minimal to none.

The Environmental Assessment Practitioner (EAP) concludes that no fatal-flaws have been identified during the Basic Assessment Process, and, provided that the EMPr and recommendations made in this Report and Specialist Reports are strictly adhered to, there should be no significant, detrimental impacts on the environment. In fact, there are many positive impacts predicted to occur.

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1. PROJECT & ACTIVITY DESCRIPTION

1.1 PROJECT TITLE

The proposed establishment of a Rendering Facility and authorisation of proposed and existing waste management activities on site of the Ambleside Meats property, located on Remainder of Farm B of Lot 50 Winterton Settlement No. 11565, Okhahlamba Local Municipality, KwaZulu-Natal.

1.2 LISTED ACTIVITIES

In terms of the National Environmental Management: Waste Act (Act No. 59 of 2008) (NWA) a Waste Management License (WML) will be required to authorise existing and proposed Waste Management activities on site.

It is anticipated that the existing and proposed waste management activities will trigger the following Listed Waste Activities:

NEM:WA (No. 59 of 2008)		
Listed Activity	**Activity Description**	**Applicability**
Category A, Activity (3)	*The recycling and recovery of waste –* *The recycling of general waste at a facility that has an operational area in excess of 500 m², excluding recycling that takes place as an integral part of an internal manufacturing process within the same premises.*	Applicable for: • The recycling of abattoir solid waste into tallow and carcass meals, using the proposed Rendering Facility machinery. The proposed Rendering Facility operational area is 540 m². • The current and proposed continued recycling of abattoir solid waste and / or garden waste and refuse from the farming activities and wheat harvesting in the existing Composting Facility which has an operational area of 2 500 m². Note that if the Rendering Facility is established, abattoir solid waste will no longer be composted and such inputs will only be received in emergency situations and after all contingencies have been implemented.
Category A, Activity (6)	*The treatment of general waste using any form of treatment at a facility that has the capacity to process in excess of 10 tons but less than 100 tons.*	Applicable for: • The operation of the existing Composting Facility and the proposed Rendering Facility which will change the physical, biological and / or chemical composition of waste inputs.

The Listed Waste Activities above have been confirmed with the Department of Economic Development, Tourism and Environmental Affairs (DEDTEA) following an on-site meeting; refer to Appendix B1 and B2. The above-mentioned Waste Management Activities trigger the need for a **Basic Assessment Process**, for Environmental Authorisation from the DEDTEA. The Applicant has appointed Green Door Environmental as the Environmental Assessment Practitioner (EAP) to conduct the process.

The Application Form for the proposed project is included Appendix C.

1.3 LIST OF LEGISLATION, POLICIES AND/OR GUIDELINES THAT ARE RELEVANT TO THE APPLICATION

Title of legislation, policy or guideline	Administering authority	Date
Final Okhahlamba Integrated Development Plan	Okhahlamba Local Municipality	2021-2022
uThukela Integrated Development Plan	uThukela District Municipality	2020-2021
Uthukela District Municipality Draft Environmental Management Framework	uThukela District Municipality	2014
Fertiliser, Farm Feeds, Agriculture Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947) – Proposed Amendment of Regulations Relating to farm Feeds.	Department of Agriculture, Forestry, and Fisheries Notice 70 of 2019.	2019
Meat Safety Act (Act 40 of 2000, as amended).	Department of Agriculture and Rural Development, 2000	2000 (as amended)
Guideline Manual for the Management of Abattoirs and Other Waste of Animal Origin, 2009.	Department of Agriculture and Rural Development, 2009.	2009
The Municipal Systems Act (Act No. 32 of 2000)	South African Government	2000
The National Environmental Management Act (NEMA, Act No. 107 of 1998)	Department of Environmental Affairs (DEA)	1998
The Constitution of South Africa (Act No. 108 of 1996)	Department of Justice and Constitutional Development (DOJCD)	1996
Environmental Impact Assessment (EIA) Regulations promulgated under the NEMA	DEA	2021
Integrated Environmental Management (IEM) Information Series	DEA	2010
The National Water Act (NWA, Act No. 36 of 1998)	Department of Water and Sanitation (DWS)	1998
Water Services Act (Act No. 108 of 1997)	DWS	1997
National Heritage Resources Act (NHRA, Act 25 of 1999)	South African Heritage Resources Authority (SAHRA)	1999
KwaZulu-Natal Heritage Resources Act (Act No. 10 of 1997)	SAHRA	1997
National Road Traffic Act (Act No. 93 of 1996)	Department of Transport (DoT)	1996
The National Environmental Management: Waste Act (NEM:WA, Act No. 59 of 2008)	DEA	2008
The National Environmental Management: Waste Amendment Act (NEM:WAA, Act No. 26 of 2014)	DEA	2014
The Hazardous Substances Act (Act No. 15 of 1973)	South African Government	1973
The Occupational Health and Safety Act (OHSA, Act No. 85 of 1993)	South African Government	1993
The Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	South African Government	2002
The South African National Standard (SANS, 10103:2008): The measurement and rating of environmental noise with respect to annoyance and speech communication	SANS	2008
The National Environmental Management: Air Quality Act (NEM:AQ, Act No. 39 of 2004)	DEA	2004
The National Environmental Management: Biodiversity Act (NEM:BA, Act No. 10 of 2004)	DEA	2004

Title of legislation, policy or guideline	Administering authority	Date
The National Environmental Management: Protected Areas Act (NEM:PAA, Act No. 53 of 2003)	DEA	2003
The Biodiversity Policy	South African National Biodiversity Institute (SANBI)	2021
KwaZulu-Natal Nature Conservation Management Act (Act No. 9 of 1997)	Centre for Environmental Rights (CER)	1997
The National Forests Act (NFA, Act No. 84 of 1998)	South African Government	1998
The National Veld and Forest Fire Act (Act No. 101 of 1998)	South African Government	1998
EIA Guideline and Information Document Series: Guideline on Alternatives	Provincial Government of the Western Cape: Department of Environmental Affairs and Development Planning (DEA&DP)	2010
EIA Guideline and Information Document Series: Guideline on Public Participation	Provincial Government of the Western Cape: DEA&DP	2011
EIA Guideline and Information Document Series: Guideline on Need and Desirability	Provincial Government of the Western Cape: DEA&DP	2010
EIA Guideline and Information Document Series: Information Document on Generic Terms of Reference for EAPs and Project Schedules	Provincial Government of the Western Cape: DEA&DP	2010
Integrated Environmental Guideline: Guideline on Need and Desirability	DEA	2017
Public Participation Guideline in terms of the NEMA (1998) and the EIA Regulations (2017)	DEA	2017
Protection of Personal Information Act (POPIA, Act No. 14 of 2013)	South African Government	2013

1.4 SG 21 DIGIT CODE(S) OF THE PROPERTIES

N	0	G	S	0	0	0	0	0	0	0	1	1	5	6	5	0	0	0	0	0

1.5 PHYSICAL ADDRESS & FARM NAME

Address	Ambleside Meats Abattoir, Springfield Road, Winterton.
Farm Name	Remainder of Farm B of Lot 50 Winterton Settlement No. 11565
Town	Winterton
Postal Code	3230

1.6 COORDINATES OF THE BOUNDARY OF THE PROPERTY

Corner / Position	Latitude (S)	Longitude (E)
Central Location	-28° 48’ 23.96”	29° 32’ 24.09”
Proposed Rendering Facility	-28º 48’ 22.22’’	29º 32’ 25.32’’
Ambleside Meats Abattoir	-28º 48’ 24.22’’	29º 32’ 23.74’’
Composting Facility	-28º 48’ 22.09’’	29º 32’ 28.23’’
Old Piggery Buildings	-28º 48’ 21.84’’	29º 32’ 19.90’’
Slurry Dams	-28º 48’ 19.52’’	29º 32’ 19.65’’
Private Entrance Gate	-28º 48’ 47.42’’	29º 32’ 08.50’’
Main Entrance Gate	-28º 48’ 30.99’’	29º 32’ 36.54’’
Northern Corner	-28º 48’ 17.82’’	29º 32’ 28.45’’

Corner / Position	Latitude (S)	Longitude (E)
Southern Corner	-28° 48' 47.15''	29° 32' 08.44''
Eastern Corner	-28° 48' 32.12''	29° 32' 15.12''
Western Corner	-28° 48' 28.30''	29° 32' 10.31''

1.7 DETAILED PROJECT DESCRIPTION OF THE ACTIVITIES TO BE UNDERTAKEN

The Applicant, Ambleside Meats CC, is proposing to establish a Rendering Facility within an existing warehouse located on the Ambleside Meats property in Winterton, and to authorise associated existing and proposed waste activities. These activities include operation of the existing Composting Facility, and establishment and operation of a proposed Rendering Facility.

Site Description

The site is located on Remainder of Farm B of Lot 50 Winterton Settlement No. 11565, Winterton, Okhahlamba Local Municipality, uThukela District Municipality, KwaZulu-Natal. The applicable waste activities on site include the operation of an existing Composting Facility (-28° 48' 22.09'' S 29° 32' 28.23''E) and the establishment and operation of a proposed Rendering Facility (-28° 48' 22.22''S 29° 32' 25.32''E) within an existing warehouse; refer to Figures 2, 3 and 4. The existing Composting Facility (Plate 4 and 5) and the existing warehouse (Plates 2 and 3) in which the proposed Rendering Facility will be installed, are located within the existing and transformed Ambleside Meats Property. The property is owned by the applicant and has existing pasturelands and cultivation lands, the Ambleside Meats Abattoir (Plate 1), two (2) slurry dams (Plate 6), old piggery facilities (no longer in use), the existing Composting Facility, office facilities, farmhouses and staff accommodation. The site falls outside of any town planning scheme.

The site which is situated between Bergville and Colenso can be accessed via the security gates located along the P294 Road and Main P11 Road (R74) (refer to Figure 3), the latter being a private residential access point. The site is surrounded by commercial agricultural lands and pasture lands, small residential areas and the town of Winterton. The property extent is approximately 21 ha, however, the proposed Rendering Facility will be housed in an existing warehouse which is 540 m^2 in extent, and the existing Composting Facility has an extent of approximately 2 500 m^2. Therefore, the existing and proposed waste activities only comprise 1.41 % (3040 m^2) of the overall property extent.

Under natural conditions, the dominant vegetation type present within the property would have comprised Northern KwaZulu-Natal Moist Grassland (UVc2) which falls under the Sub-Escarpment Grassland bioregion. However, due to the property already being modified and transformed by agricultural and related activities, the proposed development site is no longer representative of this vegetation type. There are no Critical Biodiversity Areas (CBAs) which intersect the site.

The property falls within the Pongola-Mtavuma Management Area (WMA) and the V13D quaternary catchment. The northern and western boundaries of the site are bordered by the Little Tugela River. The Situlwane River joins the Little Tugela River approximately 1 km to the north of the site.

The site does not intersect with any Protected Areas (PA). The closest PA is Spioenkop Nature Reserve which is situated more than 10 km to the northwest of the site. No official Environmental Management Framework (EMF) or Strategic Environmental Assessment (SEA) has been developed for the local Municipality, however the district Strategic Development Framework (SDF) and Integrated Development Plan (IDP) do not identify any areas of conservation or biodiversity significance within the site.

Background of Previous Environmental Applications

Ambleside Meats CC is owned by two ex-pig farmers who have provided a service for all pig farmers through continuous market for their pigs and operations. The purpose of Ambleside Meats abattoir in Winterton, which forms a key part of the Ambleside Meats CC operations, is to add value to the farmer's pigs and to have more control over the selling of livestock. Ambleside Meats is regularly audited by Abattoir Hygiene and animal welfare experts and state officials which ensure that the products are of exceptional quality and value. The piggery adheres to guidelines from the Agency for Food Safety and Quality (AFSQ) which regulates the classification, packaging and marking of processed meat products for sale in South Africa. Ambleside Meats CC is ZA accredited (ZA-380).

Ambleside Meats CC received authorisation in 1999 for a D Grade Abattoir, allowing for the slaughter of 90 pigs per day, which, under approval from the Veterinary Services Department, increased incrementally to 150 pigs per day. In 2010, the abattoir underwent a Basic Assessment Process to increase the throughput from 150 to 240 pigs per day. The process included minor changes to the structures of the abattoir, the addition of a cold room on site and alterations to the lairages and ramps. The building footprint, however, did not need to be increased. This was approved in 2011 (Reference No.: DC23/0002/2011 – refer to Appendix D) and the abattoir has been operating at this capacity ever since.

Since the issuing of the EA, the abattoir has operated in accordance with the EA and EMPr.

Composting Facility

Currently, solid waste from the Ambleside Winterton abattoir is taken to the existing Composting Facility (2 500 m^2) on site for decomposition; refer to Plates 4 and 5. After several months of turning and managing the compost windrows, the final composted product is distributed to neighbouring farmers as well as being ploughed into the cultivation lands at the Ambleside Farm. This existing Composting Facility is well managed with the required protection measures in place including a drain which captures all surface runoff and seepage from the compost windrows. The captured runoff and seepage is then re-irrigated back onto the compost windrows through a closed piping system to reduce odour, emissions and to assist with decomposition. The Composting Facility has been well located to minimise any potential environmental contamination and limit nuisance to nearby Winterton residents. There has been no direct evidence of any environmental contamination occurring as a result of the Composting Facility, and no complaints received from local residents regarding unpleasant odours, re-iterating that the Composting Facility is indeed well managed. The Composting Facility will remain in operation and is proposed to be authorised under this Waste Management License (WML) application. However, given the changes associated with the proposed Rendering Facility, the Composting Facility will only receive garden waste and refuse from the farming activities and wheat harvesting on site, and in emergency situations it may receive small volumes of abattoir solid waste (i.e. only when all other contingency alternatives are not available).

Proposed Rendering Facility

Whilst the Composting Facility has been well managed thus far, a Rendering Facility is now being proposed as an option to improve operations. The main purpose of the Rendering Facility will be re-process abattoir solid waste into products such as tallow and various carcass and blood meals. There are fewer environmental and human health risks associated with a Rendering Facility when compared to a Composting Facility. Furthermore, it is considered as a more environmentally viable and economically sound option, given that it allows the abattoir solid waste to be reprocessed into economically profitable products such. All abattoir solid waste is currently composted at the Composting Facility and whilst produced compost can mainly be used on the local farm (as a low-value product), the carcass meals produced from the proposed Rendering Facility

can be sold to the dog feed industry and the tallow can be sold to several other industries, which expands the existing abattoir's economic network opportunities
There has been an increase in the demand for pork abattoirs in KwaZulu-Natal due to the Glencoe Facility and Baynesfield Rendering Plant running at low capacities, and the Estcourt Bacon Factory shutting down. Additionally, there is a high concentration of pig farmers in the uThukela area due to grain feed being readily available. This confirms that there is already an established need and demand from farmers in the area to increase pork-processing related facilities. Thus, the establishment of a Rendering Facility, which allows for more efficient abattoir operations, would assist Ambleside Meats in meeting current and future demand. This both contributes to the local economic conditions by diversifying the economic conditions and network and will provide employment opportunities and skills development to the local Winterton community.

The establishment of a Rendering Facility will follow international best practice and South African Regulations and Guidelines where applicable (refer to section 1.3) by addressing waste generated from the abattoir in an efficient and environmentally suitable manner.

The Rendering Facility will be able to process a maximum of 22 tons / day of abattoir solid waste from the Winterton Ambleside Meats abattoir on site, the Dalton Ambleside Meats abattoir and surrounding abattoirs. Given the high processing capacity of the Rendering Facility, the need for composting would become negligible and most likely only be required in the case of unexpected emergencies, when other contingency options have not been successful. This re-iterates the positive environmental impact the Rendering Facility is likely to have.

A Rendering Facility produces little waste, and the only anticipated output which cannot be directly re-utilised, is gas from the process which will be dealt with by being captured and condensed through a vapour recovery system and directed to the slurry dams. The Rendering Facility will also be powered through alternative Photovoltaic Solar power, and will be supplemented by rainwater from rainwater harvesting tanks.

The establishment of a Rendering Facility on site will not only ensure that abattoir waste is reduced significantly on site, but will also provide employment opportunities and will support the growth of the local Winterton economy. Overall, the proposed Rendering Facility will have positive socio-economic and environmental impacts.

Rendering Plant Design
The proposed waste management activity constitutes the installation and operation of a rendering machine within an existing warehouse on site. The existing warehouse in which the Rendering Plant will be situated is approximately 540 m^2; refer to Plates 2 and 3. There will only be minor alterations to the existing infrastructure, such as bricking up the sides of the warehouse, door, window and ventilation installations, and the sealing of the existing concrete floor; however the footprint of the existing building will not change.

In addition to the above, a 'reefer' (12 metre cold storage container) will be procured for daily storage of waste between abattoirs and the proposed Rendering Facility. This will provide extra cold storage space over and above the existing cold room storage space on site. The reefer is proposed to be located on a hardened, impermeable surface adjacent to the existing warehouse within which the Rendering Facility will be placed.

The rendering plant will comprise of two (2) 11 ton / day Mavitec Red Meat Porcine Protein and Fat Recovery Plant machines, which will result in a total daily capacity of 22 tons; refer to Figure 1 and 5 below. The Mavitec Recovery Plant can be adjusted for pork rendering as well as red meat reprocessing, however, in this case it will be used entirely for pork rendering. The building size required for the plant equipment is approximately 17 m (L) x 3 m (W) x 6 m (H). The cooker / dryer will be fitted with a steam boiler plant and is approximately 5 m (L) x 5 m (W) x 7 m (H). The height of the boiler chimney will fit within the height of the existing warehouse.

The plant will run at approximately 65 % and motors will start on a star delta (max 3 500 at 30 Kw) configuration. The steam boiler is 5.5 Kw and will also run at 65 % capacity.

Rendering Plant Process

The process of the recovery plant is described below, and illustrated in Figure 1 and Appendix E:

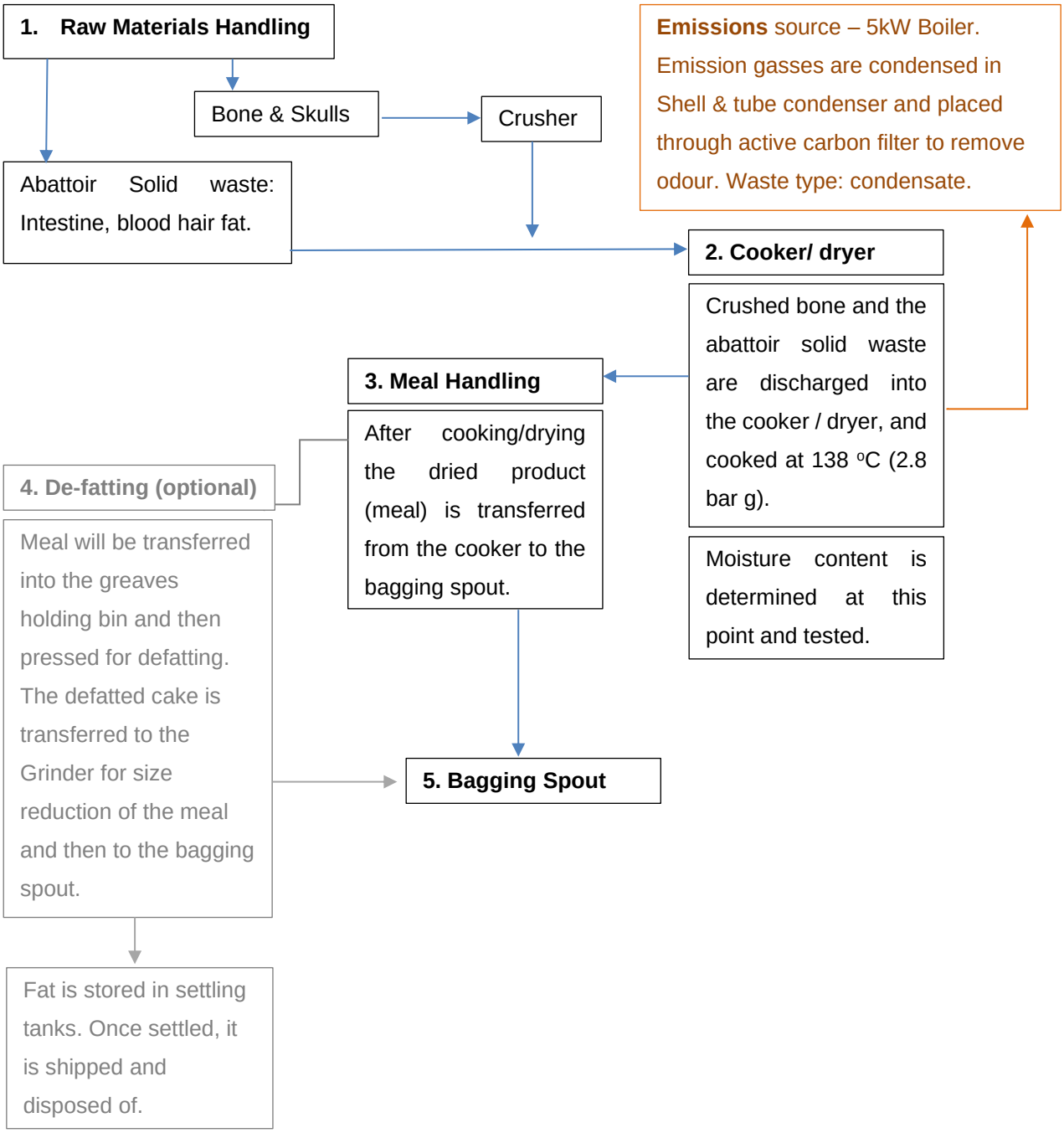


Figure 1: A summarised flow chart of the rendering process.

Raw Materials

- Raw materials originating from the pork abattoir on site comprise of the following: one (1) ton blood,

intestines, some bone and some hair composition, and will have the following composition: 67 % water, 22 % solids, and 11 % fat.
- A total of 3.4 tons of raw material is anticipated to be supplied from the Winterton Ambleside Meats abattoir alone.
- Approximately six (6) tons per week of raw material will be supplied from the Dalton Ambleside Meats abattoir and / or other abattoirs as the opportunity becomes available.

Processing
- The average daily processing capacity will be 10 tons per day per plant machine. The maximum daily processing capacity is 11 tons per day per plant machine.
- The raw materials will be processed in 3.5 litre batch cookers in a nine (9) hour shift.
- Processing will be completed in approximately nine (9) hours daily, including loading and unloading.
- The expected end products will include:
    - Without defatting: 1 210 kg of meat, bone meal, hair and blood meal in with an expected residual fat of 23 % (based on a nine-hour processing period).
    - With defatting, two (2) end products will be produced: 977 kg / day in meat, bone, hair and blood meal with an expected residual fat content of 14 %; and 233 kg / day of fat and porcine.

Raw Materials Handling and Feed Section
- The bones and skull material will go through a standalone crusher.
- Bones in sizes of 2.5 cm or smaller will drop into a crusher bin and, thereafter be added to a Hopper Conveyer for raw materials including intestines, blood, hair etc.
- The agitated blood collection tank will receive the raw blood from the abattoir for further processing.

Processing: cooker, dryer, sterilising, hydrolysation, drying
- Once the cooker / dryer is full, the dome cover will be closed.
- With full steam pressure available and the vapour valve closed, sterilization and hydrolysation of the product will occur. This will be achieved by raising the pressure inside the cooker to 2.8 bar (g), which is equivalent to a temperature of 138^{o}C.
- The steam pressure in the jacket will be maintained at a constant level during the batch time, until the final point moisture content is reached. The moisture content will be monitored by an automatic controller.
- On reaching the predetermined moisture content, an optical and audible alarm will be activated.
- To ensure the correct end point moisture content required, product samples will be regularly checked on the testing unit provided.

Meal Handling (de-fatting option)
- After processing, the dried fat laden product will be discharged from the cooker / dryer into the receiving conveyor which will transfer the product towards the bagging spout.
- *Optional: de-fatting and fat handling section*
    - *From the receiving conveyor the dried product can be transferred into the greaves holding bin from where it can be measured out to the press for defatting. The defatted cake can be transferred to the grinder for size reduction of the meal and then into bags via the bagging spout.*
    - The fat extracted by the press can be pumped into the settling tank for settling of the solids. Once sufficient settling has taken place, the cleared fat can be pumped into the fat storage tank for shipping.

Vapour Handling (shell and tube condensing)
- Vapours arising from the cooking-drying process pass via the vapour piping system and vapour trap, towards the shell and tube condenser where vapours are condensed.

- Cold water will be pumped through to aid the condensation process.
- The cooling water has no direct contact with the vapour condensate in the shell and tube and is therefore not contaminated.
- The non-condensable gasses are to be drawn off by a fan to the odour filter. The fan will be installed behind the odour filter to provide a degree of odour control by inducing a negative pressure in the cooker / dryer during charging and discharging; thereby, drawing the worst of the odours through the condensing system to provide an improved working environment.
- This system utilises water as the cooling agent to allow the vapour to condensate (the cooling water does not come into contact with the condensate).
- The condensate will then be captured and taken to the existing slurry dams on site.

Odour Filter

- Odourless non-condensable gases will be drawn off of the condenser unit through an active carbon filter, in order to remove the typical offensive odours before air is released into the ambient environment.

Services and Access

Stormwater and Rainwater

There is existing stormwater infrastructure on site. The stormwater infrastructure is designed to dissipate and direct flows via various pipes and drains. 'Clean' stormwater is directed via pipes to natural drainage systems on site, whilst 'dirty water' from abattoir operations (e.g. wash water from cleaning trucks, cleaning equipment and the abattoir) is drained separately via 'dirty water' drains which extend into the slurry dams. The 'dirty water' in the slurry dams is allowed to evaporate and any excess water is utilised to irrigate the compost windrows. The dams have sufficient capacity to maintain a freeboard of 0.5 metres, and there as an overflow pit installed as an additional precautionary measure. No dirty or clean stormwater is directed into the Little Tugela River and the stormwater infrastructure in place allows for protection thereof. Furthermore, the Applicant is currently engaging in rainwater harvesting on site, to supplement water supplies.

Given that there will be a reduction in composting windrows formed from abattoir solid waste, there may potentially be excess water in the slurry dams, which could contribute to overflows. However, composting windrows formed from harvesting waste material will still be maintained and these will be irrigated with excess water from the slurry dams. Further, continued irrigation with water from slurry dams of Ambleside cultivation areas will occur. Further to this, the 'dirty' stormwater volumes entering the slurry dams will be minimised by ensuring that all feeding 'dirty water' drains are adequately covered, preventing ingress of excess stormwater during rainfall events.

The Composting Facility is bunded by a concrete drain which runs along the bottom of the composting area and captures surface runoff, seepage and stormwater runoff. A large bunded catchpit is established at the end of the drain to collect the seepage and flows. Pipes and hoses are kept within the area to pump water from the catchpit and irrigate it onto compost windrows. This closed system recycles the water throughout the system and does not intersect with the other stormwater systems on site, nor does it impact upon the Little Tugela River downslope.

Wastewater

Wastewater is currently generated on site and is anticipated to be generated by the proposed Rendering Facility.

Currently, wastewater is generated from two (2) sources; abattoir related operations and from the office and abattoir ablution facilities. Wastewater from abattoir operations which comprises 98 % water, some dung

(from washing piggery delivery trucks) and some blood (from abattoir operations), is managed using the on-site slurry dams. Wastewater from ablution facilities is managed through and septic tanks and soakaways.

Wastewater from the proposed Rendering Facility is anticipated to collect in the shell and tub condenser where gas from the vapour recovery system is condensed. However, this water will be recycled within the system, via a cooling system which will both reduce water demand and reduce the volume of water being directed towards the on-site slurry dams. Similarly, wastewater from the steam cooker / dryer will be recycled back into the system, however if necessary, some wastewater will be released into the slurry dams via the respective drains. All the wastewater outputs from the Rendering Facility are anticipated to be re-used within the system in this manner.

The two (2) on-site concrete slurry dams were initially developed to have sufficient capacity to accommodate the 6 000 sow piggery (i.e. able to receive 28 800 ℓ of wastewater per day). Each slurry dam is lined and has a capacity of 3 260 m^3. Given that the piggery has since been decommissioned, the capacity of the slurry dams is in excess of the current requirements, and as such minimises pollution risks significantly. The wastewater in the slurry dams is aerated by means of a pump to activate bacteria that dissolves solids and reduces odour. The slurry dams are more than 30 m from the Little Tugela River. There are monthly inspections to check for leaks, assess the integrity and functioning of structures and monitor levels.

As mentioned, water from the slurry dams is and will continue to be used to irrigate composting windrows and on-site cultivation areas. A Water Use License Process is being undertaken for authorisation of this water uses and any other water uses requiring authorisation for the site.

There existing septic tanks and soakaways for the office and abattoir will continue to be used to dispose of wastewater from these facilities. It must be noted that no additional staff ablution facilities will be established for the proposed Rendering Facility, as the existing ablution facilities associated with the offices are sufficient. No bulk municipal sewer infrastructure or connections are available.

Water

Both ground and surface water sources are used as supplies for the site. No municipal water supply connections are available. Potable water is supplied via an existing borehole. Water abstracted from the Little Tugela River is primarily utilised for the irrigating of pastures. Rainwater harvesting occurs to supplement water supplies. The proposed Rendering Facility will also be supplemented by rain water harvesting.

The water demand for the shell and tube condenser is anticipated to be 50 m^3 / hour at peak demand. This water can be returned back to the effluent stream as it will not be contaminated in any way. This water will move through the shell and tube system to cool the vapour (odour) to enable it to condense and will not come into contact with the odour particles. This water can be recycled within the cooling system, therefore reducing water demand. Rainwater, which has been filtered and is free from solids and chemicals and has been cooled to 20^{o}C – 23^{o}C, can be utilised for this system. The exact quantity of water required for the system, apart from the rate of use (50 m^3 / hr) is unknown as yet as this will be determined by the manufacturers and the applicant and will be based on projections of daily processing quantities. However, the actual water consumption will be much lower as the water will be recycled through the system several times.

Waste

The only solid general waste generated on site is from domestic activities from operations which is collected by the municipality. However, most of the recyclable waste is recycled via a recycling service provider. Any domestic waste from the Rendering Facility will be addressed using the same procedures i.e. recycled or collected by the municipality.

Electricity

Electricity on the property is currently supplied by Eskom and substituted by alternative Solar Photo Voltaic power; refer to Figure 6 below.
There are two (2) overhead lines which traverse the site near the warehouse for the proposed Rendering Facility: the Driel / Willowford 1 22kV Line and the Winterton NB2 11kV line. However, neither of these lines intersect above or below the proposed site for the Rendering Facility. Should any lines be intersected during installation of the Rendering plant equipment, the Applicant will cease operations immediately and notify Eskom.

The total electrical power demand for the proposed Rendering Facility is 35 kWh, which will be supplied by the Eskom NB211kV Winterton Line and the Driel / Willowford 1 22kV Line and supplemented with alternative Solar Power through a grid-tied configuration. The start-up of the plant will require power solely from the Eskom line, however, once the plant is established alternative power will become the sole energy input and, therefore, no additional power demand will be placed on the existing electrical infrastructure on site.

Access
The site is accessed via the P294 Road and the P11 (R74) main road; refer to Figure 3.

Monitoring
Ambleside Meats currently undertakes water quality monitoring of the boreholes, and will continue as such with the monthly microbio water quality monitoring to ensure compliance with the EMPr and to monitor any potential impacts on the Little Tugela River adjacent to the property. Some of the aspects to be monitored, as guided by the Aquatic Assessment undertaken, are provided below:

- All irrigation piping and the bunded wall drain servicing the Composting Facility must be checked regularly for leaks, cracks and or discharges.
- Wastewater must not be combined with stormwater runoff and must be appropriately disposed of in the two (2) slurry dams on site.
- The external drain which directs wash water to the slurry dams must be covered. It is recommended that metal sheets are utilized; refer to Plate 7.
- All wash-water / wastewater must not be discharged into the natural environment or the Little Tugela River.
- Stormwater must be controlled on site through appropriate stormwater infrastructure.
- Any water to be discharged directly into the Little Tugela River must be authorised through a Water Use License Application.
- All water that leaves the site must, at a minimum, meet the required water quality for the receiving environment according to the South African Water Quality Guidelines for Aquatic Ecosystems, or according to the Water Use License Requirements.

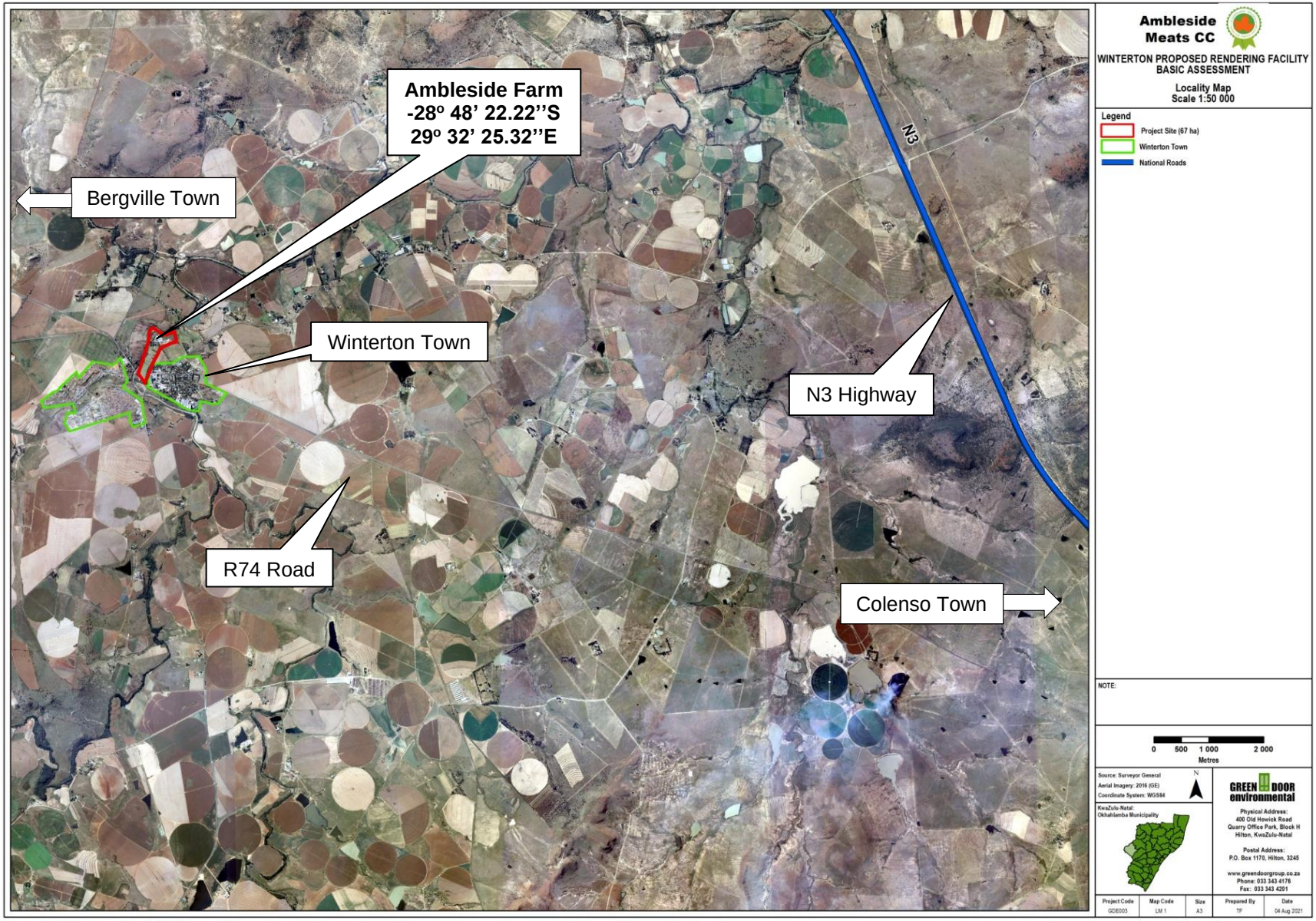


Figure 2: Locality Map showing the project site for the proposed Rendering Facility, Winterton, KwaZulu-Natal.

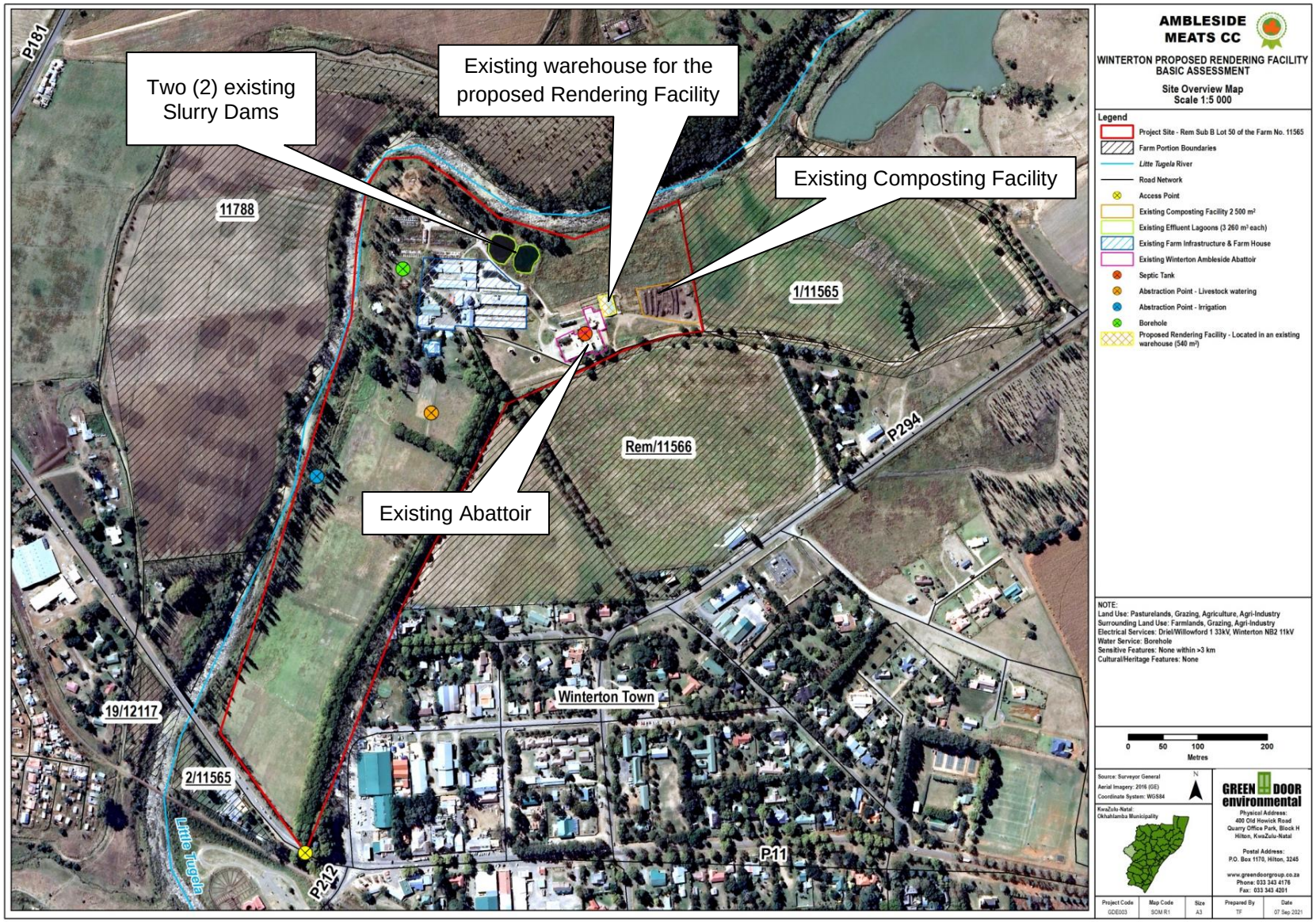


Figure 3: Overview Map showing the location of the activities on site.

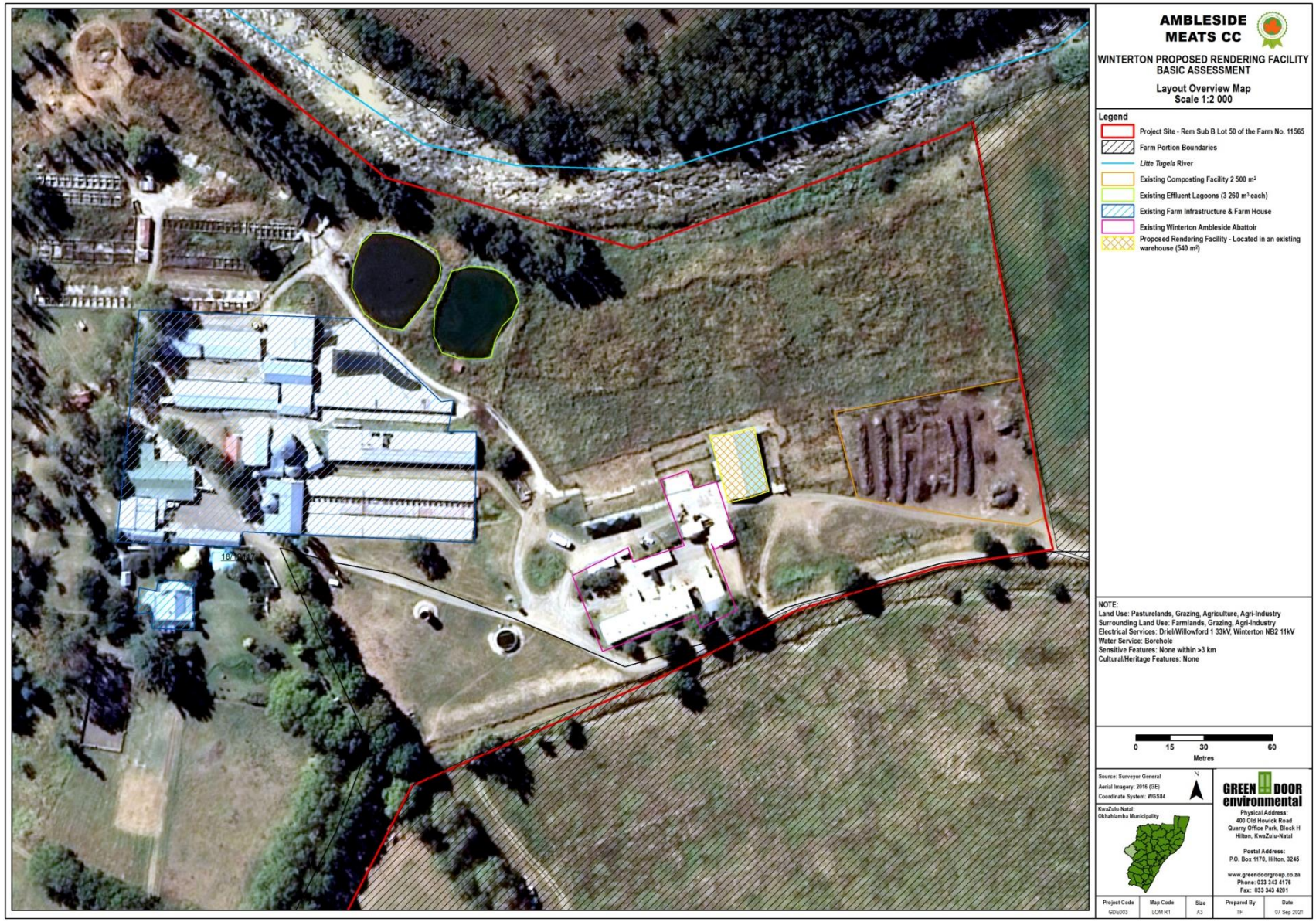
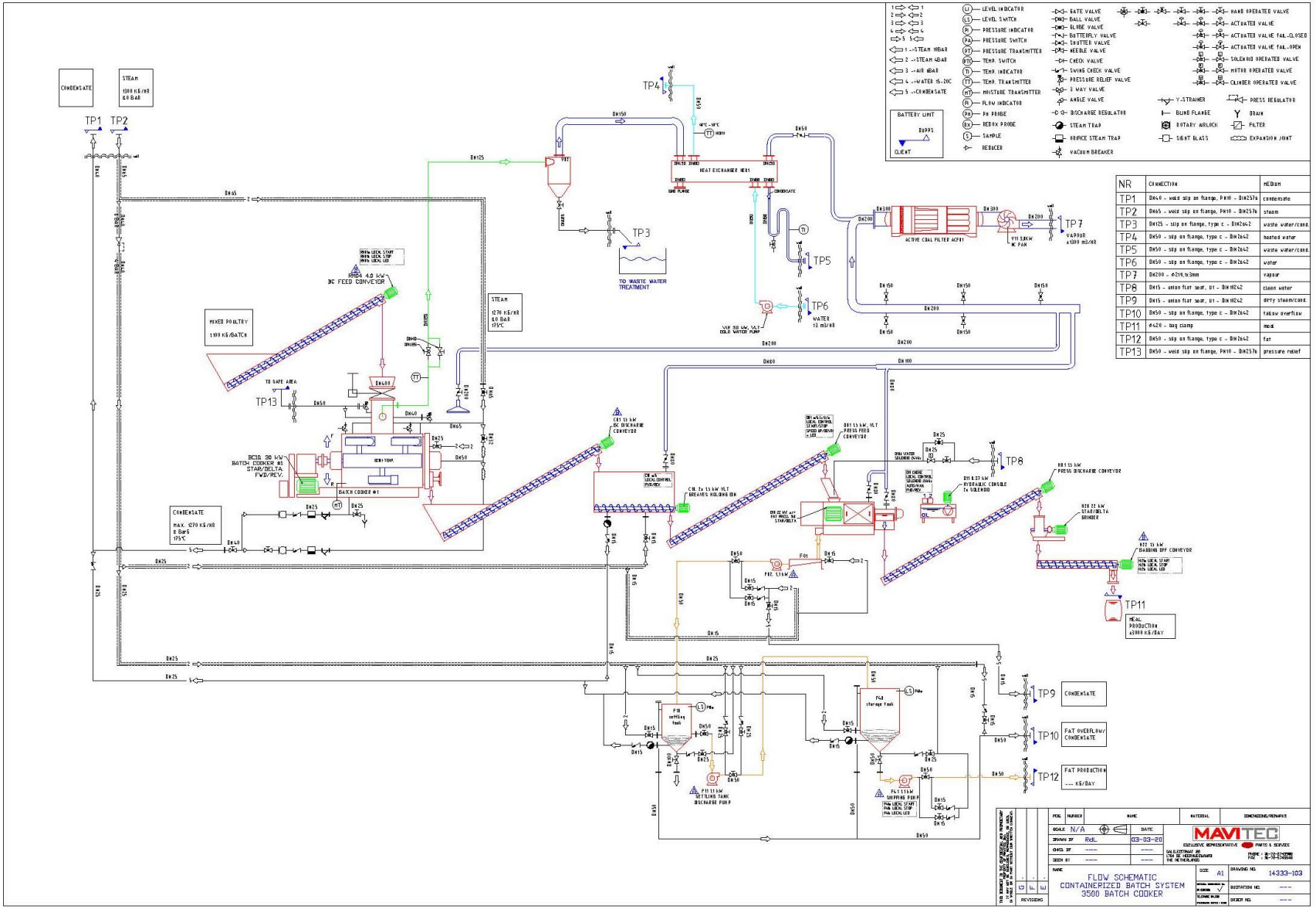


Figure 4: Layout overview map showing the existing and proposed infrastructure on site.



NR	CONNECTION	NEDom
TP1	Dn40 - weld stp on flange, PN10 - DIN2576	condensate
TP2	Dn65 - weld stp on flange, PN10 - DIN2576	steam
TP3	Dn125 - stp on flange, type c - DIN2642	waste water/cond.
TP4	Dn50 - stp on flange, type c - DIN2642	heated water
TP5	Dn50 - stp on flange, type c - DIN2642	waste water/cond.
TP6	Dn50 - stp on flange, type c - DIN2642	water
TP7	Dn200 - ø219,1x3mm	vapour
TP8	Dn15 - union flat seat, D1 - DIN11C42	clean water
TP9	Dn15 - union flat seat, D1 - DIN11C42	dirty steam/cond.
TP10	Dn50 - stp on flange, type c - DIN2642	tallow overflow
TP11	ø420 - sag clamp	meal
TP12	Dn50 - stp on flange, type c - DIN2642	fat
TP13	Dn50 - weld stp on flange, PN10 - DIN2576	pressure relief

Figure 5: Layout and process diagram for the Rendering Plant equipment (Source: Mavitec Pty Ltd). See Figure 1 for a summary.

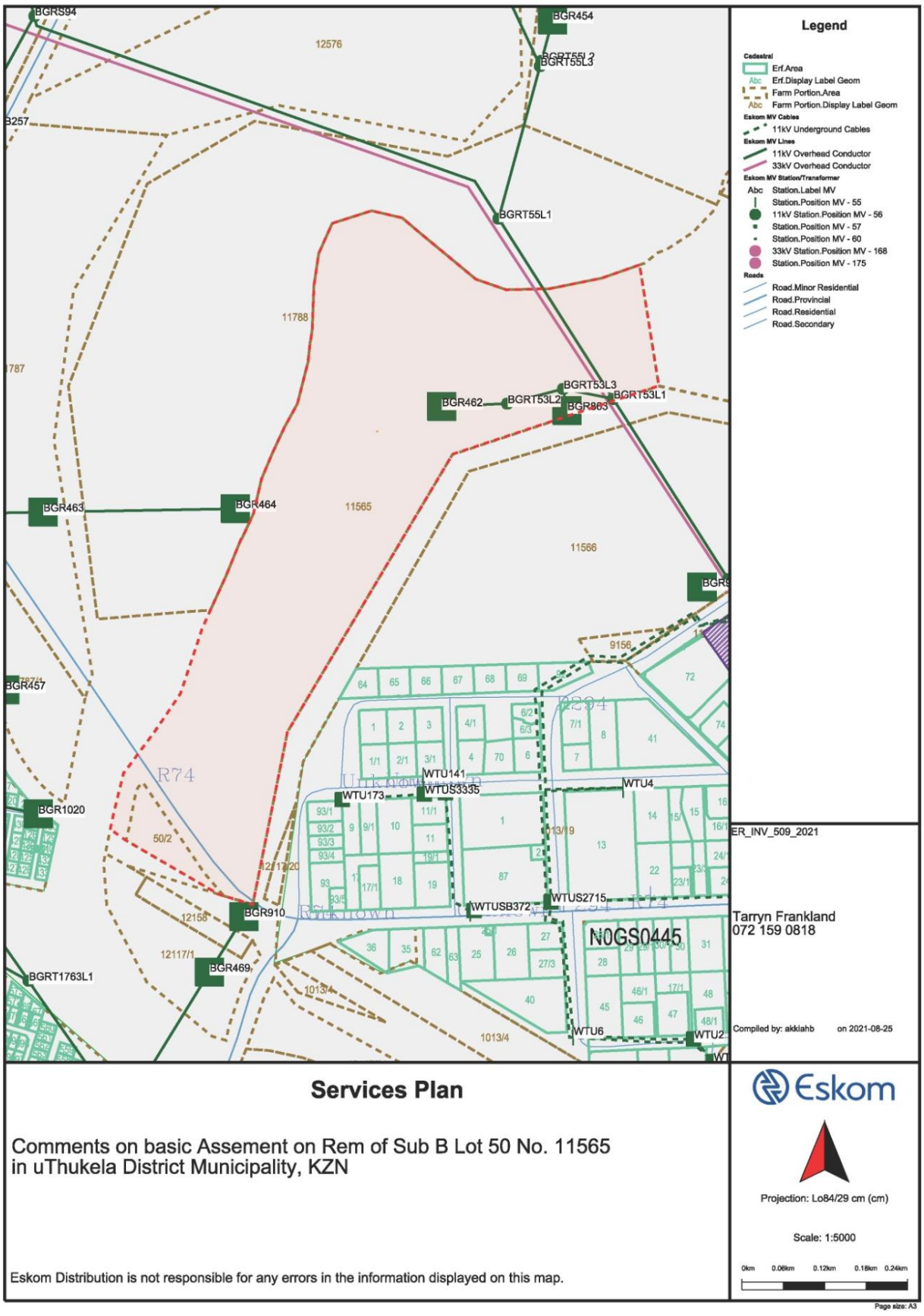


Figure 6: Eskom overhead powerline servitudes in relation to the site. The proposed location for the Rendering Facility is not intersected by any servitudes.

Site Photographs

Plate 1: The existing Ambleside Meats abattoir on site.

Plate 2: The existing warehouse proposed to house the Rendering Facility machinery. The warehouse already has solar panels installed on the roof.

Plate 3: The inside of the warehouse showing an existing concrete floor and some old piggery infrastructure, the latter of which will be removed.

Plate 4: Windrows of the existing Composting Facility on site.

Plate 5: The concrete bunded drain below the Composting Facility which captures runoff from the compost windrows and attenuates it within the bunded catchpit at the end of the drain extent. Water from the catchpit is re-irrigated back onto the composting windrows.

Plate 6: The two (2) existing slurry dams on site which receive wastewater from the abattoir operations and will receive a very small volume of wastewater from the proposed Rendering Facility.

Plate 7: Wash water from washing of piggery delivery trucks is directed towards and captured in a well maintained separated 'dirty water' drain which transfers wastewater directly to the slurry dams. All surfaces are concreted and have a gradient which diverts runoff to the drain and not towards bare soil.

2. NEED AND DESIRABILITY

Motivate and explain the need and desirability of the activity.

The following section makes use of the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) Guideline on Need and Desirability (August 2011) and the Department of Environmental Affairs (DEA), Integrated Environmental Management Guideline Series 9: Guideline on Need and Desirability (2014).

1. Is the activity permitted in terms of the property's existing land use rights?

Yes. The site falls outside of the town planning scheme (edge of Winterton town and agricultural use areas). However, current site activities are centred around pork processing activities and agricultural related activities and have been for a number of years. The existing Composting Facility and the proposed Rendering Facility are both in keeping with the current land uses and congruent to nearby land uses.

2. Will the activity be in line with the Provincial Spatial Development Framework (PSDF)?

The National Spatial Development Framework (NSDF) promotes rapid economic growth that is sustained and inclusive and is a prerequisite for the achievement of other policy objectives, among which poverty alleviation is key. The Provincial Spatial Development Framework (PSDF), takes as it's starting point, the goal of sustainable development. Development is only acceptable and in the public interest if it is ecologically justifiable, socially equitable and economically viable, i.e. environmentally sustainable. This means that the development needs of present generations should be met without compromising meeting the needs of future generations. The proposed Rendering Facility will meet the goals of environmental sustainability through reduction of waste needing to be composted at the Composting Facility, reduced water use through rainwater harvesting, and reduced energy demand through the incorporation of solar energy; refer to Figure 7.

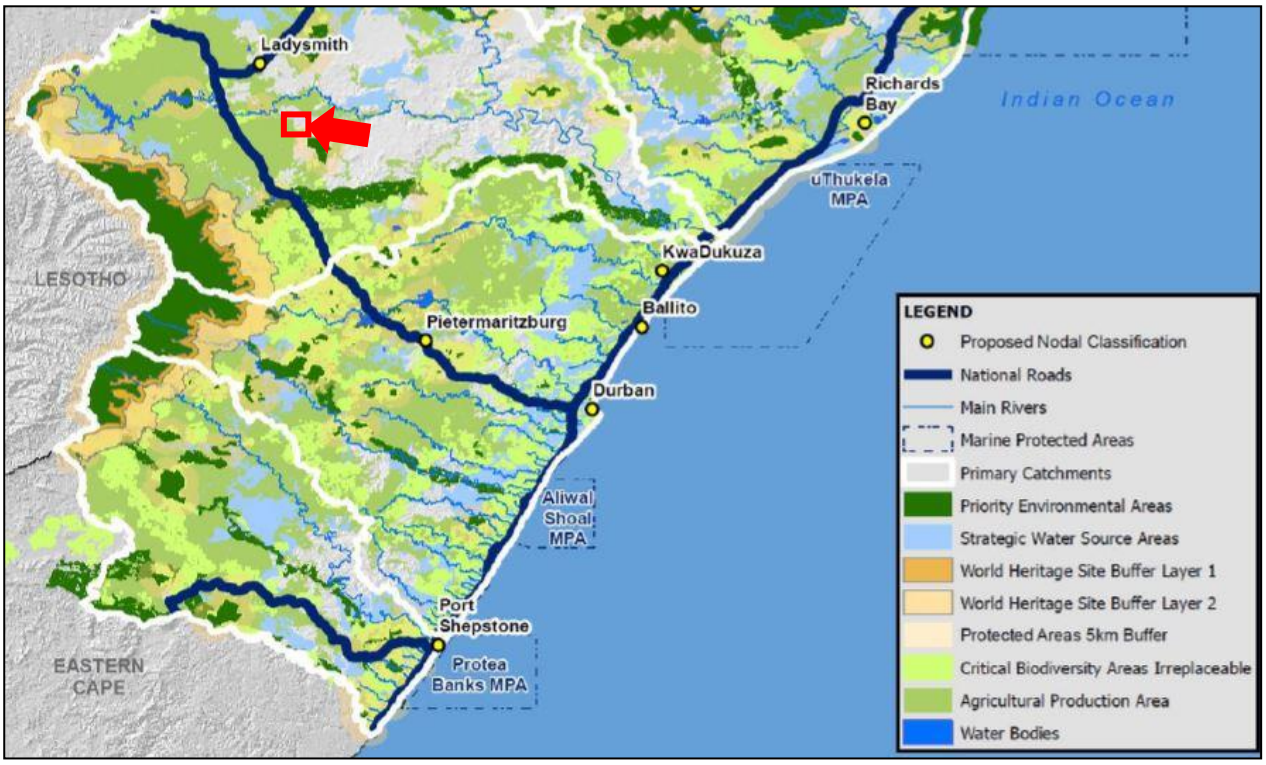


Figure 7: Provincial Spatial Development Framework (PSDF) showing areas of natural eesources. Winterton is approximately located at the red arrow and red square.

3. Will the activity be in line with the Urban Edge / Edge of Built Environment for the area?

Not applicable.

4. Will the activity be in line with the Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the local Municipality; would the approval of this application compromise the integrity of the existing approved and credible Municipal IDP and SDF?

In terms of the Municipal Systems Act (Act No. 32 of 2000), every Municipality in South Africa is obliged to develop an Integrated Development Plan (IDP) to realise the constitutional mandate of local government. The IDP is a strategic management tool, which aims to guide and align all planning, budgeting and operational decisions of the Municipality and other spheres of governments. It is a legally binding document that is developed at local government level.

The 2021-2022 Okhahlamba Local Municipality IDP outlines six (6) key strategic objectives:

1. Good governance and public participation;
2. Basic service delivery and infrastructure;
3. Municipal transformation and organizational development;
4. Local economic and social development;
5. Financial viability and management, and;
6. Cross-cutting interventions.

At a local municipal level, no Environmental Management Framework (EMF), Strategic Environmental Assessment (SEA) or Spatial Development Framework (SDF) was available. The district spatial framework does not highlight intersections with any areas of environmental sensitivity or importance.

The area is semi-rural in character and relies heavily on economic contributions from the agricultural sector. The Ambleside Meats abattoir is one (1) of the largest abattoir facilities in the uThukela area and one (1) of the primary suppliers of pork products in the Municipality. By expanding its operations to include a Rendering Facility, surrounding communities and their families will benefit economically, as well as local businesses and suppliers through increased demand of pork products, diversification of value-added products, and employment opportunities. This in turn has the potential to have positive impacts on poverty, malnourishment and food insecurity rates. The establishment of the Rendering Facility will help towards achieving the majority of the Okhahlamba Local Municipality's IDP objectives, specifically, with points 2, 4 and 5 above.

Overall, the proposed development is in line with the district level SDF and the local municipal Framework Plan and will have positive impacts on the socio-economic environment, whilst meeting the needs of both the district and local IDP goals.

5. Will the activity be in line with an approved Structure Plan of the Municipality?

Yes. The existing Composting Facility and the proposed Rendering Facility are in line with the Structure Plan for the municipal area. There is already an existing demand from surrounding abattoirs for a Rendering Facility to take in their waste. The systems and services required to maintain the existing Composting Facility will remain the same. These municipal plans re-iterate the need for economic investment and diversification and skills development for the local Municipality and the pursuit of sustainability goals.

6. Will the activity be in line with an Environmental Management Framework (EMF) adopted by the Department; would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?

An EMF for the Okhahlamba Local Municipality has not been developed yet. However, to realise local municipal goals and visions, the Local Municipality has included environmental management policies and principles in its IDP, to emphasize the Municipality's commitment to conserving its natural resources and ensure that the principles of the National Environmental Management Act (Act 107 of 1998) (NEMA) are realised.

The approval of this application would not compromise the integrity of the existing environmental management priorities for the area. This is especially since the waste management activities are contained within already transformed areas in the local Framework Plans. Furthermore, both the local Framework Plans and the District SDF confirm that no areas of conservation or biodiversity significance intersect the property or are located within close proximity to the site. Despite this, all the necessary mitigation measures to limit any and all potential environmental impacts associated with the activities will still be implemented. The facility already substitutes its power demand with alternative Photovoltaic solar power, and recycles waste. The proposed Rendering Facility will also supplement its power with solar power, and additional rainwater harvesting tanks will be installed to supply the Rendering Facility and existing abattoir so as to reduce any impact on municipal bulk water supply. The proposed Rendering Facility will be installed within an existing warehouse (540 m^2) on site which reduces the chance of negative environmental impacts through excavation, stormwater erosion, ground pollution and water pollution during construction.

7. Will the activity be in line with any other plans (e.g. Guide Plan)?

Yes, the development is in line with the following:

- The uThukela District Municipality IDP and SDF;
- The Okhahlamba Local Municipality IDP and Framework Plan;
- Environmental Impact Assessment Regulations, Section 24(5) and 44 of the NEMA;
- Guideline on Need and Desirability; and
- Integrated Environmental Management Guideline Series: Companion to the EIA Regulations 2010 and Public Participation 2010.

8. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?

Yes. Refer to question 4 above. The proposed project is in line with the IDP and Framework Plan for the Okhahlamba Local Municipality and associated timeframes.

9. Does the community / area need the activity and the associated land use concerned (is it a societal priority)? This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate?).

The benefits of the proposed activities and associated expanded business would accrue to the local Winterton community and local Municipality. The proposed Rendering Facility is indeed appropriate for the local region, given the high and increasing demand for value-added products and the treatment of abattoir waste from abattoirs in the surrounding and areas. Furthermore, establishing strong local and more diverse supply networks through the addition of value-added products from the proposed Rendering facility, minimises the

need for reliance on imports, and instead stimulates local growth of the sector. In addition to the above, the activities will indirectly help in addressing poverty and contribute towards meeting food security needs.

10. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?

There are currently adequate bulk and electrical services for the proposed Rendering Facility. The slurry dams are constructed according to regulations and guidelines and can accommodate a piggery of 6 000 pigs (which is not in operation) in addition to the abattoir operations. The proposed Rendering Facility will also supplement its electrical supply with alternative solar energy. Furthermore, rainwater harvesting tanks will be installed to and will supply the Proposed Rendering Facility and existing abattoir. It is likely that this rainwater supplement will supply almost all the water needs of the proposed Rendering Facility. If the proposed Rendering Facility does not go ahead, these benefits will not be realised. Therefore, the addition of the Rendering Facility will be adequately catered for by the slurry dams and existing bulk services.

11. Is this development provided for in the infrastructure planning of the Municipality, and if not, what will the implication be on the infrastructure planning of the Municipality (priority and placement of services and opportunity costs)?

The site and the region in which the site is located is still heavily reliant on independent service infrastructure, given that there is a lack of bulk service infrastructure available. This is mainly due to being located within a rural and agricultural landscape. The proposed site operations will continue to rely on the same sources and supplies that current operations rely on (i.e. septic tanks, soakaways, slurry dams, surface water abstraction, borehole abstraction, internal stormwater infrastructure). The only services supplied externally includes electricity from Eskom (supplemented with solar power) and waste removal by the local municipality and local waste service providers.

As such, the activities will not have any impact on the infrastructure planning of the municipality. If and when more bulk municipal infrastructure and services become available, the site will still be capable of operating independently, allowing for service capacities to rather be directed to users in greater need of these services.

12. Is this project part of a national programme to address an issue of national concern or importance?

As the proposed project is a private sector development, it is not part of a national programme to address an issue of national concern or importance. However, the proposed project will help address issues of unemployment, poverty, and food security.

13. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context).

Yes. Zoning information is not available for the site, however, the existing abattoir is operational and so the proposed Rendering Facility will fall under the same land-use as the abattoir. This is further re-iterated by the complementary surrounding land uses (i.e. commercial agricultural lands, pasturelands, and maize production), and the fact that the agricultural sector is the largest economic contributor in the local Municipality.

14. Is this project part of a national programme to address an issue of national concern or importance?

Yes, the proposed Rendering Facility is the best practicable environmental option for the site. The potential environmental impacts associated with the site are minimal given the already transformed state of the site and that the proposed Rendering Facility is to be installed in an existing warehouse. Nevertheless, any and all environmental impacts will still be further mitigated provided the mitigation measures outlined in the EMPr are implemented.

Currently waste from the abattoir is being treated through a Composting Facility onsite which can pose an environmental risk to the surrounding natural environment and river (Little Tugela River). The establishment of the Rendering Facility will significantly reduce all solid waste needing to be taken to the Composting Facility for treatment. The proposed Rendering Facility helps improve the overall Life Cycle Process, by re-purposing waste products into profitable products, and significantly reducing the overall waste volumes associated with the pork production process. The Rendering Facility will improve the overall life cycle of the pork production line, by significantly reducing waste outputs, and instead repurposing waste into profitable products.

15. Will the benefits of the proposed land use / development outweigh the negative impacts of it?

Yes. Refer to point 14 above. The proposed project will have minimal negative impacts on the surrounding environment, while improving the environmental viability of the existing abattoir pork production process. Nevertheless, any and all environmental impacts will still be further mitigated provided the mitigation measures outlined in the EMPr are implemented.

16. Will the proposed land use / development set a precedent for similar activities in the area (local Municipality)?

The establishment of a Rendering Facility will diversify the market and economic networks through which the abattoir, pig farmers and pork-related industry can operate. This will have positive feedback into the surrounding economies and society in the form of job creation and economic stability and diversification.

17. Will any person's rights be negatively affected by the proposed activity/ies?

No.

18. Will the proposed activity/ies contribute to any of the 18 Strategic Integrated Projects (SIPS)?

As the proposed project is a private development, the project does not contribute towards any of the 18 Strategic Integrated Projects (SIPS) directly. However, the proposed project will indirectly contribute to the 18 SIPS through the generation of employment opportunities, skills development, income generation, improved quality of life and standards of living. This is turn has the potential to have positive impacts on poverty, malnourishment and food insecurity rates.

Strategic Integrated Projects	X = Yes
Green Economy + "Green" and energy-saving industries	
Infrastructure – electricity (generation, transmission & distribution)	
Biofuels	
Basic Services (local government) – electricity and electrification	
Basic Services (local government) – area lighting	
Infrastructure – transport (roads, land strips)	
Basic services (local government access roads)	
Basic services (local government) – public transport	
Infrastructure – water (bulk and reticulation)	
Basic services (local government) – sanitation	
Basic services (local government) – waste management	
Agricultural value chain + agro-processing (linked to food security and food pricing imperatives)	**X**
Infrastructure – information and communication technology	
Tourism + strengthening linkages between cultural industries and tourism	
Basic services (local government) – public open spaces and recreational facilities	

19. What will the benefits be to society in general and to the local communities?

The proposed activities will result in the generation of employment opportunities, skills development, income generation, improved quality of life and standards of living for the local community. These areas thus have positive impacts on poverty, malnourishment and food insecurity rates in the country.

20. Any other need and desirability considerations related to the proposed project?

Not Applicable. Refer to point 19 above.

21. How does the project fit into the National Development Plan (NDP) for 2030?

The proposed project addresses Point 1 of the National Development Plan for 2030, through the generation of employment opportunities.

National Development Plan	X = Yes
1. Unemployment	**X**
2. The quality of school education for black people is poor	
3. Infrastructure is poorly located, inadequate and under-maintained	
4. Spatial divides hobble inclusive development	
5. The economy is unsustainably resource intensive	
6. The public health system cannot meet demand or sustain quality	
7. Public services are uneven and often of poor quality	
8. Corruption levels are high	
9. South Africa remains a divided society	

22. Please describe how the general objectives of Integrated Environmental Management as set out in Section 23 of the NEMA have been taken into account.

This Basic Assessment Report covers the objectives set out in Section 23 of the NEMA. Refer to Section 8 of the Report. Specialist studies have been undertaken and consulted as part of the process. Mitigation measures have been developed to address the potential environmental impacts identified by the specialists and mitigation measures are included in the EMPr. Participation of key I&APs has been facilitated.

23. Please describe how the principles of environmental management as set out in Section 2 of the NEMA have been taken into account.

Section 2 of the NEMA states that “environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably”. The disturbance of ecosystems has been minimised and rehabilitation guidance is included in the EMPr.

3. ALTERNATIVES

3.1 "Alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to —

(a) The "do nothing" option of not implementing the activity:

The "do nothing" option would mean that the proposed project will not be undertaken and the Rendering Facility and authorisation of waste management on site will not occur.

The authorisation of the existing Composting Facility will help ensuring that it is managed and monitored within a regulatory and governing framework of NEM:WA, thereby minimising the potential for adverse environmental impacts which can arise from operation of the Composting Facility with inputs of abattoir solid waste. The authorisation of the proposed Rendering Facility will result in the generation of employment opportunities, skills development, income generation and improved quality of life and standards of living. This in turn will have positive impacts on poverty, malnourishment and food insecurity rates in KwaZulu-Natal in general. Additionally, the Rendering Facility will improve the overall environmental viability of the entire pig production process and contribute to reducing the existing environmental risks associated with the production process, by reducing the volume of waste generated and instead repurposing waste into profitable products. The facility as a whole, will also be more economically resilient due to diversification of activities. This in turn increases job security for those who are currently employed.

If the "do nothing" option is selected, none of the above mentioned positive socio-economic and environmental benefits will be realised and the area will remain in its current state, with limited new economic opportunities for the area. As such, the 'do nothing' option will result in negative socio-economic impacts locally. It is likely that the waste generated from the abattoir will exceed the capacity of the Composting Facility's ability to store and treat the waste. Moreover, the abattoir will likely not be able to expand its production and job creation will likely not occur. This could potentially force piggeries and pork-related facilities to downscale or find alternative abattoir facilities that can handle the waste. The long-term negative impacts could be detrimental to the abattoir facility, the affordability of pork products, the surrounding communities through unemployment and a general decrease in the economic productivity. A shortage of pork products also has the potential to result in pork products being imported from abroad which has far-reaching effects on the local economy. The adverse environmental impacts and risks associated with current operations will not be reduced, and use of procedures and processes which are not deemed best practice will continue.

(b) The property on which or location where it is proposed to undertake the activity:

No alternative properties or locations for the existing Composting Facility and the proposed Rendering Facility have been identified or investigated as part of the project. The Applicant owns the property on which the existing Composting Facility and the proposed Rendering Facility is to be located and the site is already fully equipped with the necessary service infrastructure required to support the development. The costs of purchasing another property, which may also require development of service infrastructure, would make the sustainability of the facility economically unviable.

Furthermore, the locations of the existing Composting Facility and the proposed Rendering Facility are the most logistically suitable locations for these facilities, given that they need to be located as close as possible to the abattoir. Their proximity minimises risk by limiting potential pollution pathways. Additionally, maintaining the Composting Facility at the current location, and the proposed Rendering Facility in the already existing warehouse, avoids increasing any footprint of impact on site. The site also has existing systems to manage and mitigate any contamination in place, in the form of separated drainage for dirty and clean water, containment drains and catchpits and the slurry dams.

Thus for these reasons, no alternative properties have been investigated in the Basic Assessment Process.

(c) The type of activity to be undertaken:

The type of activity involves the expansion of existing abattoir operations by including a Rendering Facility to complete the life cycle of pork production on site, and the continued operation of the existing Composting Facility. The proposed project is specifically for the expansion and diversification the abattoir operations and to provide alternative sources of income by utilizing waste produced by the abattoir. The abattoir facility has been operational for many years, and currently helps towards meeting the pork product demand in the area. The Applicant also has both the experience and expertise in this profession. Investigating and pursuing alternative activity types has the potential to require the retrenchment of a number of labour. Furthermore, the addition of a Rendering Facility into the Life Cycle Process is considered to be the best practicable option, and overall improves the socio-economic and environmental viability of the process as a whole. As such, no alternative activity types were assessed as part of the Basic Assessment Report.

(d) The layout or design of the activity:

The existing Composting Facility is located within an existing transformed area which is equipped with measures to manage the Composting Facility effectively, limit pollution and protect the environment. Similarly, the proposed Rendering Facility will be located in an existing warehouse, therefore avoiding the need to add a new impact area to the development footprint. As mentioned above, both facilities are also ideally located in close proximity to the existing abattoir, for the most logistically feasible operations. Since this layout has the least amount of environmental impact, and is the most logistically feasible, no alternative layouts have been investigated. The EAP is of the opinion that to waste resources investigating alternative activity layouts would be futile, and that the currently proposed layout is adequate in terms of keeping potential negative environmental and ecological impacts to a minimum, and beneficial economic impacts to a maximum.

(e) The technology to be used in the activity:

The proposed project comprises state of the art, and new ‘best practice’ technology to ensure that the rendering process is as efficient and streamlined as possible with the least environmental impacts. The rendering technology proposed to be installed will ensure that water use is continuously minimized (through recycling water through the process). The lighting and machinery proposed to be installed will be energy efficient. Ultimately, the Applicant wishes to utilise alternative power to run the majority of the plant so as to reduce any potential demand of electrical services and supply. The EAP is of the opinion that due to the need to ensure an efficient operation, installing outdated technology will result in detrimental impacts to the operation of the Rendering Facility, and thus adverse knock-on effects for the Applicant as a whole.

The manufacturer of the Rendering Facility plant equipment, Mavitec, has provided some design alternatives in the form of optional or additional operational facilities which the Applicant can choose from. These alternatives do not change the daily input capacity of abattoir solid waste, or any parameters which would change the nature of the Waste Management License.

As such, the technology proposed for the Rendering Facility is considered the most suitable and viable environmental and economic option.

(f) The operational aspects of the activity:

The proposed Rendering Facility will allow for additional eight to nine-hour shift. During this shift, a maximum of 22 tons of raw material can be processed / rendered. The 22-ton Rendering Facility will comprise of two (2) 11-ton Rendering plants. During an eight to nine hour shift, a maximum of 22 tons of abattoir The two (2) plants are separate but identical and will make up the whole 22-ton Rendering Facility and will fall within the footprint of the existing warehouse. Only one (1) Plant will be operational at first, with the second proposed for future expansion. Operation will be according to the specifications of the manufacturer as this is best

practice and the most environmentally viable option. The processing of the abattoir solid waste will run in two (2) batches which take 4.5 hour each, making up the 9-hour shift including loading and unloading. These operational times have been calculated by the manufacturer as being the most energy efficient and thus economically efficient. Given the positive impacts associated with the state of the art, and new ‘best practice’ technology, alternative activity operational aspects have not been assessed as part of the Basic Assessment Process.

4. PUBLIC PARTICIPATION PROCESS

A Public Participation Process was undertaken according to the most relevant and recent COVID-19 (Corona Virus) Guidelines and Regulations; Regulation 39 to 44 of the EIA Regulations as promulgated under the NEMA; and the Protection of Personal Information Act (Act No. 14 of 2013) (POPIA). A Public Participation Plan was drawn up and submitted during the enquiry phase; refer to Appendix F.

The Protection of Personal Information Act (POPIA, Act No. 14 of 2013) came into effect on 01 July 2021 and aims to promote the protection of personal information. In terms of the POPIA, personal information refers to 'the name of the person if it appears with other personal information relating to the person or if the disclosure of the name itself would reveal information about the person'. The EIA Regulations require, inter alia, transparent disclosure of registered Interested and Affected Parties (I&APs) and their comments. I&APs who submit comment, attend a Public Information Session or request registration in writing for the Basic Assessment Process are deemed registered I&APs who must be added to the list of I&APs. By registering, I&APs are deemed to give their consent for relevant information to be processed and disclosed, in fulfilment of the requirements of the EIA Regulations.

For the purposes of this Basic Assessment Process and in terms of the requirements of the POPIA, only the names, affiliation and comments of I&APs have been included in this Report. Should additional personal information be required by the Department of Economic Development, Tourism and Environmental Affairs (DEDTEA), consent to share this personal information will be obtained from the I&AP first.

4.1 NOTIFICATION OF THE PROPOSED DEVELOPMENT

Notification of the proposed project was undertaken through the publication of newspaper adverts in English and Zulu (Ladysmith Gazette) on 19th August 2021 (Refer to Appendix G). The adverts informed the public of the project and the associated Basic Assessment Process and invited them to register their interest in the project as I&APs.

Site posters were placed along access roads to the site to notify the local public of the proposed project. The site posters were in English and Zulu and included details of the proposed project and associated application, its nature and location, the assessment procedure in terms of the Regulations and details of the EAP. These were placed along access roads to the facility on 23rd August 2021 (Refer to Appendix H).

4.2 INTERESTED AND AFFECTED PARTIES

A register of I&APs was compiled at the outset of the project. This includes names and contact details of Authorities, Government / Municipal Departments, Non-Governmental Organisations (NGOs), local interest groups and surrounding neighbours. This Register will not be included in the circulation of this DBAR to remain compliant with the POPI Act. The Register will be made available to the Applicant and Authorities only. The list of I&APs has been continually updated to include persons responding to the newspaper adverts and site posters; refer to Appendix I. The I&AP list will not be included in the DBAR to remain compliant with the POPI Act.

4.3 BACKGROUND INFORMATION DOCUMENT

Written notification in the form of a Background Information Document (BID) was circulated from 25th August 2021 to all registered I&APs (Refer to Appendix J). The BID was circulated by email to all I&APs and comments on the BID, site posters and adverts were captured (refer to Appendix J).

Comments received and responses provided following circulation of the newspaper adverts, site posters and BID are presented in Table 1 below. Please note that additional information has been provided where it has become available.

Table 1: Comments received from the I&APs, public and authorities and responses provided following circulation of the newspaper adverts, site posters and the BID.

I&AP	COMMENT	RESPONSE
Eskom	Eskom provided comments on the BID for the proposed Rendering Facility: • The project site intersects two (2) Eskom Overhead Lines: Driel/Willowford 1 33 kV line and the Winterton NB2 11 kV line. • Eskom required an indemnity form to be signed by the Applicant. • Eskom has no objections to the proposed project, however, should any underground lines be discovered, Eskom are to be contacted immediately as per the procedure outlined in the response letter.	• Noted, photographs taken to confirm that the lines do not intersect the warehouse and Composting Facility (please see **Plates 1 – 7**). • Noted and form completed submitted. • Noted, Applicant is aware of requirements.
AMAFA	• Thank you for informing us about the proposed development. You are required to furnish us with an official application and supporting documents including the NEMA triggered documents as per guidelines on the Form J. Please visit the KwaZulu Natal Amafa and Research Institute website and download Form J on the following link: https://amafainstitute.org.za/forms/	• Noted, form J was submitted to the SHARIS website on 25 October 2021 along with the BID and all other required documents. • The Application was considered by the Provincial Heritage Authority (Amafa) on 19 January 2022; refer to Appendix K. • The committee confirmed that an Heritage Impact Assessment (HIA) and Paleo Impact Assessment (PIA) were not necessary. • The Committee has no objection with regards to the proposed development. • The following requirements are to be adhered to: a. The KwaZulu-Natal Amafa and Research Institute should be contacted if any heritage objects are identified during earth-moving activities and all development should cease until further notice. b. No structures than sixty years or parts thereof are allowed to be demolished, altered, or extended without a permit from the KwaZulu-Natal Amafa and Research Institute. c. Under no circumstances may any heritage material be destroyed, inundated, collected, or removed from site unless under direction of the KwaZulu-Natal and Amafa Research Institute and a heritage specialist. d. Should any remains be found on site that are potentially human remains, the South African Police Service (SAPS) should also be contacted. No SAPS official may disturb or exhume such remains, without the necessary permission from the KwaZulu-Natal Amafa and Research Institute. e. No activities are allowed within 50m of a site, which contains rock art. f. Sources of all-natural materials (including topsoil, sands, natural gravels, crushed stone, asphalt etc.) must be

I&AP	COMMENT	RESPONSE
		obtained in a sustainable manner and in compliance with the heritage legislation.
Ward Councillor	I have no objection to the proposed development, subject to the following: • Water and Sanitation o An adequate supply of running potable water must be provided. o Water must be compliant with the provisions of SANS 241 microbiology standards for drinking water. o Premises must comply with the requirements of the National Water Act (Act No. 36 of 1998) with regards to prevention of pollution of water resources. o Approved Sanitary facilities should be provided as prescribed in the National Building Regulations and Buildings Standards Act 103 of 1977. o Effluent must be disposed of in an approved manner: i.e. (i) connected to municipal sewage system, (ii) septic tank, and (iii) private waste-water treatment plant. • Waste: Premises must comply with the requirements of Section 26 of the National Environmental Management Waste Act (Act No. 59 of 2008) with regards to the storage, treatment, processing and disposal. • Vector Control: A rodent control programme must be in place to minimise the risk of rodents on the premises. • Smell: Measures must be taken to prevent offensive smell.	• The facility will utilise existing bulk water on site. • The Applicant conducts monthly SANS 241 and microbiology Water Quality Assessments and will continue to do so. • The proposed Facility will direct all wastewater and wash water to the existing slurry dams on site. Clean stormwater is directed away from the wastewater catchment drains and away from the Little Tugela River. Stormwater infrastructure will be continually maintained to ensure no debris is blocking the stormwater inlets and outlets. The Composting Facility has a concrete containment drain along its entire extent, with a catchpit on one (1) end to capture and contain runoff from the Composting Facility. There protection measures allow for compliance with the NWA. • The proposed Rendering Facility will utilise existing approved ablution facilities which are adequate to service the additional potential employees. • Effluent will be disposed of into the existing septic tank on site, which too has the capacity to accommodate the proposed Rendering Facility. • Solid domestic and business waste is collected by the municipal waste collection services and / or a private waste collection service provider. Abattoir solid waste will be managed through the existing Composting Facility and the proposed Rendering Facility, which are being applied for authorisation through this Basic Assessment Process, to comply with NEM:WA. • Refer to EMPr which contains a Pest Control Plan. • The proposed Rendering Facility will ensure a significant reduction in odour potential on site, as less solid waste will be composted at the Composting Facility. It must be noted, however, that the Composting Facility is well managed, and no complaints have been received from

I&AP	COMMENT	RESPONSE
		neighbours, public or I&APs regarding odours in the past or currently. Regardless, the Rendering Facility is still the best environmental option and is best practice for the management of abattoir solid waste. Furthermore, the Rendering Facility has manufactured odour control mechanisms in place to reduce any potential odour from being emitted to atmosphere. All potential odour vapours will be condensed and the wastewater disposed of in the slurry dams.

4.4 PRE-APPLICATION MEETING

A Pre-application meeting was held on 25th May 2021 with the DEDTEA. Comments received and responses provided during the Pre-application meeting are presented in Tables 2 and 3 below. Refer to Appendix B1 for the Pre-application meeting agenda and minutes. Please note that additional information has been provided where it has become available.

Table 2: Comments received, and responses provided during the Pre-application meeting with DEDTEA.

COMMENT	RESPONSE
A Contingency Plan must be developed to address actions to be undertaken in the event of a breakdown of rendering equipment.	A Contingency Plan (refer to Appendix P) has been developed which addresses potential breakdowns and plant shutdown time. Some recommendations include the use of cold storage (which is being adopted), removal of solid waste to another Rendering Facility, or composting of waste as a last option and provided it comprises a small volume. The applicant is to select the most viable option on a case-by-case basis, ensuring that the most environmentally and logistically practicable option is utilised.
DEDTEA raised a concern regarding the Composting Facility remaining in use as a "back-up" waste treatment method, in the event of a breakdown or shutdown of the Rendering Facility.	See above.
DEDTEA suggested that within five (5) years of the Rendering Facility being established, that the composting treatment method of abattoir solid waste be reduced.	See above. It must be noted that the Composting Facility will continue to be operated, however, with 'farm-waste', garden refuse and only in emergency situations when all other contingency alternatives are not available will the Facility receive small volumes of abattoir solid waste.
DEDTEA enquired on the end use of the produced compost.	Compost is utilised on-site and ploughed into cultivation land son site and is also sold to neighbouring farms.
DEDTEA confirmed that a Public Meeting will still be required as part of the Public Participation Process.	A Public Information Session Meeting was held on 19th October 2021.
DEDTEA confirmed that a response letter would be provided confirming the scope of the application that must be submitted and the relevant waste management activities for both the existing Composting Facility and the proposed Rendering Facility, that needs to be applied for.	A Response Letter has not been received, however, comments were given by DEDTEA in the Pre-Application meeting and are available for reference in Appendix B2
DEDTEA requested that the following be submitted for perusal: • Equipment design specifications for the proposed Rendering Facility; • Any correspondence of documents which may provide clarity regarding previous environmental processes undertaken which may have a bearing on DEDTEA decisions.	• Mavitech design specification document submitted to DEDTEA on 26 May 2021. • Given the changeover in staff and electronic devises over time, not much information could be found. The existing EA's are however available (Refer to Appendix D). DEDTEA was informed of such and their response letter received thereafter (Appendix B2).

4.5 PUBLIC INFORMATION SESSION

A Public Information Session (PIS) invitation was issued to all registered I&APs via email and / or phone on 6th October 2021.

The PIS was held on 19 October 2021, between 10:00 am and 12:00 pm at the proposed development site. The purpose of the Public Information Session was to provide information to I&APs of the proposed project, present the major concerns raised to date and give I&APs the opportunity to raise any additional issues which they feel must be addressed during the Environmental Authorisation Process.

A handout was provided to all I&APs in attendance. The handout included information regarding the existing Composting Facility and the proposed Rendering Facility and the associated waste management activities to be authorised. No comments were received during the PIS meeting.

Documents relating to the PIS are attached in Appendix L. The register of the PIS Meeting has not been included in the Draft Basic Assessment Report (DBAR) to remain compliant with the POPI Act. The register will only be issued to the authorities and Applicant.

4.6 CIRCULATION OF THE DRAFT BASIC ASSESSMENT REPORT

Copies of the Draft Basic Assessment Report are being circulated to the following I&APs for review and comment:

- Nerissa Pillay – Ezemvelo KZN Wildlife;
- Bernadet Pawandiwa – Amafa Heritage KwaZulu-Natal;
- Lwandle Sibango – Department of Water and Sanitation;
- Nandipha Sontangane – Department of Forestry, Fisheries and the Environment;
- Bayo Pawandiwa – Department of Agriculture and Rural Development;
- Dankie Buthelezi – Department of Economic Development, Tourism and Environmental Affairs;
- Sanele Zikalala – uThukela District Municipality;
- Samke Msibi – Okhahlamba Local Municipality;
- E.N.N Bengu (Ward 1 Councilor) – Okhahlamba Local Municipality
- Judy Reddy – Department of Transport;
- Yuza Chabalala – Transnet Freight Rail;
- Eskom – The DBAR will not be sent to an individual person anymore, but will be sent to a dedicated email address: KZNOU-L&R@eskom.co.za;
- Henri Goosen – Irrigation Board, and;
- Jaco Dowling – Winterton Farmers Association.

The DBAR will be circulated to all I&APs for a 30-day comment period. All I&APs have been notified of the availability of the Report and their opportunity to provide comment. Due to the Corona Virus (COVID-19) pandemic and associated Regulations, electronic copies of the DBAR have been made available to all I&APs on request.

Comments received following circulation of the Draft Basic Assessment Report will be included and responded to in the Final Basic Assessment Report which will be submitted to the DEDTEA for decision. All I&APs will be notified of this decision.

5. POTENTIAL IMPACTS ON THE SOCIAL AND ECONOMIC ENVIRONMENTS

5.1 LOCAL ECONOMY AND EMPLOYMENT OPPORTUNITIES

Description:

The primary source of income for the local Winterton community is through the agricultural and commercial sectors. Ambleside Meats CC contribute to both the agricultural and commercial aspects of the local economy. The inclusion of the proposed Rendering Facility will allow the Applicant to increase their sustainability and profitability as an enterprise, which will, in turn, benefit their existing and prospective employees through job security, service providers, existing customers and secondary service providers through increased supply.

During the internal feasibility analysis undertaken by the applicant in relation to the establishment of the proposed Rendering Facility, the following was noted:

- The CAPEX value of the proposed Rendering Facility is anticipated at R 8 million.
- Anticipated income per annum: R 3 million – R 4 million.
- The project is in line with current and predicted future pork product demands.
- The enterprise will stimulate local economic activity by expanding and improving operations within the pork production industry which is currently in high demand.
- The proposed project will provide access into new markets such as the dog feed industry through the production of carcass meals; and the food, industrial and pharmaceutical industries through the production of tallow.
- Economies in surrounding areas such as: Ladysmith, Newcastle, Dundee, will also indirectly benefit as several small and medium size enterprises are reliant on the supplies from Ambleside Meats CC for their business operations.
- The abattoir facility currently employs 30 labour. With the proposed project, potentially two (2) additional permanent and potentially five (5) semi-skilled labour will be employed, provide a total of seven (7). This, however, is still to be confirmed by the Applicant. Approximately 13 skilled (permanent) and semi-skilled maintenance and repair contractors will potentially be required for the upkeep, maintenance, and repair of the facility. The exact sub-contractor requirements are also unknown at this stage. Given that the proposed Rendering Facility is a small operation and that the local Winterton population is small, the number of job opportunities being generated are considered significant.
- In KwaZulu-Natal, on average, one (1) job supports seven (7) people, thus, with the proposed project, a total of 140 people (based on the total 20 potential jobs which can be created) are likely to benefit from employment opportunities provided by the Rendering Facility;
- Some of the staff currently employed by the abattoir will also be afforded opportunities for further skills development as they are integrated into the Rendering Facility operations.
- The expansion will allow for all levels of skills development given that opportunities are being provided to skilled, semi-skilled and unskilled individuals.
- Large majority of the employment opportunities (90 %) will go to previously disadvantaged individuals.
- Both temporary and permanent jobs will be created during the planning, installation, and operational phase of the proposed project.
- The indirect benefits cannot be fully predicted but are likely to come through the expanded opportunities provided to local businesses and service providers for maintenance and transportation. As the Rendering Facility becomes more established these opportunities will grow even further and be able to have positive impacts within the Municipality.
- The existing Composting Facility has neither a negative or positive impact on the local economy.

Implication / Risk / Impact:

If the proposed Rendering Facility is approved, no adverse economic and employment impacts are expected, but the following positive impacts are anticipated:

- Stimulation of the local economy through the expansion of the Ambleside Meats CC enterprise through diversification of the local economy;
- Directly and indirectly provide local job opportunities and skills development for skilled, semi-skilled and unskilled individuals;
- Provision of business opportunities for enterprises in the dog feed industry, tallow industry, pork production industry, maintenance, and transportation both local and from surrounding towns and Districts;

Mitigation / Recommendations:
The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended:

- Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities; and
- Local businesses, contractors, suppliers and service providers in the immediate area must be considered first, for required supplies and services. services from further afield.

5.2 NEED AND DESIRABILITY

Description:
The establishment of the Rendering Facility will provide a competitive advantage within the sector and overall contributes to growing the local economy. The proposed Rendering Facility will allow the abattoir to access more diverse markets whilst creating employment and business opportunities, locally and in surrounding areas. The proposed Rendering Facility, which is also considered the best practicable environmental option, will improve the life cycle of the pork production process, by reducing potential environmental impacts and waste volumes generated from the process and creating value-added products to the Ambleside Meats enterprise. The composting of solid abattoir waste is not considered as an environmentally viable option for the long-term, has greater risks associated with it and requires more time-consuming management and maintenance. Thus, the proposed Rendering Facility is the best environmental option for waste treatment on site.

Implication / Risk / Impact:
If the proposed Rendering Facility is approved, the following positive needs and desirability impacts are expected, no adverse impacts are anticipated:

- Improvement and stimulation of the local economy through expansion of the Ambleside Meats enterprise;
- Directly provision of local job opportunities for skilled, semi-skilled and unskilled individuals;
- Skills development of current and future employees;
- Provision of business opportunities for enterprises in maintenance, transportation, pork product sales both locally and further away;
- Sustainable use of and protection of water resources and environmental features in and around the site will be ensured and regulated through issued authorisations,
- Sustainable utilisation of energy through the installation of alternative solar photovoltaic power; and
- Waste minimization and recycling and re-use of waste will be promoted.

Mitigation / Recommendations:
The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended:

- Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities;
- Local businesses, contractors, suppliers and service providers in the immediate area must be considered first;

- Compliance to conditions contained within any issued Environmental Authorisation, Waste Management Licenses, Water Use licenses or General Authorisations must be ensured trough on-going implementation and monitoring;
- Detailed waste records from the abattoir must be maintained; and
- Water quality monitoring of boreholes water by the Applicant must continue.

5.3 PLANNING INITIATIVES

National Spatial Development Perspective (NSDP)

The Policy Coordination and Advisory Services introduced a National Spatial Development Perspective (NSDP), which was then endorsed by the Cabinet in March 2003. The NSDP works in conjunction with different Departmental and Provincial spatial and development strategies. The four (4) principles of the NSDP are as follows:

- Economic growth is a prerequisite for achievement of policy objectives;
- Government spending should concentrate on fixed investment, focusing on localities of economic growth and/or economic potential;
- Efforts to address the past and current inequalities should focus on people not on places; and
- To overcome spatial distortions of apartheid, future settlement and economic development opportunities should be channeled into nodes adjacent to the main growth centers.

To distinguish between localities, the NSDP uses two (2) concepts as methodological tools, which are 'Potential' and 'Poverty Gap'. These two (2) concepts will assist the NSDP in providing a coarse-grained analysis from a national perspective, which will be supplemented by a more finely, grained analysis at Provincial and Local Government level.

In defining potential, the NSDP has drawn on recent tradition of 'institutional economics' a field that has come to dominate both developmental economics and regional planning. The institutional approach suggests that beyond the usual sources of comparative advantage, the institutional adequacy of a locality will help determine whether development is sustainable or not. The NSDP therefore uses concepts of potential that rely strongly on the presence of institutional capacity to realize the developmental impact of other resources.

In summary, the NSDP will have a role to play as an instrument that informs the respective development plans of the three (3) spheres of government i.e. IDP, Provincial Growth and Development Strategy (PGDS) and the Medium Term Strategic Framework (MTSF).

Accelerated Services on Growth Initiative South Africa (ASGISA)

The mandate was for government to halve poverty by 2021. To do this the country needs a growth rate of 5 % on average. Because of backlogs in infrastructure, investment, inadequate planning, and in some cases, market structures that do not encourage competition, the price of moving goods and conveying services over distance is higher than it should be. In South Africa, which is a large country, with considerable concentration of production inland, and which is some distance from all major industrial markets, deficiencies in logistics are keenly felt. This is the main reason why beneficiation processes need to be encouraged in the development of the local economy and is in close proximity to the areas where products are produced.

Those parts of the legacy of Apartheid most difficult to unwind are the deliberately inferior system of education and the irrational patterns of population settlement. In a period of growth, it is evident that we lack sufficient skilled professionals, managers and artisans, and that the uneven quality of education remains a contributory factor. In addition the price of labour of the poor is pushed up by the fact that many live a great distance from their places of work.

Certain weaknesses in the way government is organised, in the capacity of key institutions, including some of those providing economic services, and insufficiently decisive leadership in policy development and implementation all negatively impact on the country's growth potential. Countering these constraints entails

a series of decisive interventions. These interventions amount not to a shift in economic policy so much as a set of initiatives designed to achieve our objectives more effectively.

In developing responses to the binding constraints, certain measures to counter the constraints were developed:

- Macroeconomic issues;
- Infrastructure programmes;
- Sector investment strategies (or industrial strategies);
- Skills and education initiatives,
- Second economy interventions; and
- Public administration issues.

Provincial Growth and Development Strategy (PGDS)

Inequalities exist in our economy and there is a legacy of inequitable spatial development. This has had a negative impact on public sector investment as highlighted by the NSDP. This is evident in the lopsided economic and social costs for poor communities in locations far from employment and other opportunities. The PGDS is a vehicle to address the legacies of the apartheid space economy, to promote sustainable development and to ensure poverty eradication and employment creation.

Government has a mandate to restructure the process of development and service delivery in the province. This is to be achieved through the three (3) spheres of government, the different government sectors, and the various strategic frameworks. The key challenges it faces is to effectively align and harmonise these structures towards this end; and to harness and align fiscal, financial, and human resources at its disposal towards eradicating poverty, creating employment, and laying the foundations for accelerated economic growth.

The PGDS offers a tool through which provincial government can direct and articulate its strategy and similarly for local government to reflect the necessary human, financial and fiscal support it needs to achieve these outcomes. It facilitates proper coordination between different spheres of government and aims to prevent provincial departments from acting out of concert with local municipalities. It enables intergovernmental alignment and guides activities of various role players and agencies (provincial sector departments, parastatals, district, and local municipalities). The PGDS will enhance service delivery.

It is a framework for public and private sector investment, indicating areas of opportunities and development priorities. It addresses key issues of implementation blockages whilst providing strategic direction. The PGDS implies a developmental approach to government. This implies a proactive and facilitative approach to development and not one based of formulating and applying regulations and restrictions. The PGDS on the one hand, involves preparing policies, strategies, and guidelines and on the other hand, it involves preparing mechanisms to align and facilitate the implementation, monitoring and evaluation of key growth and development priorities.

Millennium Development Goals (MDGs)

Looking ahead to 2022 and beyond, the Municipality believes they can achieve the overarching goal: to put an end to poverty.

The Millennium Development Goals (MDGs) represent a global partnership that has grown from the commitments and targets established at the world summits of the 1990s. Responding to the world's main development challenges and to the calls of civil society, the MDGs promote poverty reduction, education, maternal health, gender equality, and aim at combating child mortality, HIV/AIDS, and other diseases.

Set for the year 2022, the MDGs are an agreed set of goals that can be achieved if all actors work together and do their part. Poor countries have pledged to govern better and invest in their people through health care and education. Rich countries have pledged to support them, through aid, debt relief, and fairer trade.
The uThukela District Municipality, as part of the globalised community, is playing its part in ensuring that it provides the necessary infrastructure to help reduce poverty and hunger. Working together with all the relevant stakeholders the Municipality is committed to reaching the target as are the rest of the developing countries.

Alignment with Municipal Goals and Objectives
The 2021-2022 uThukela District Municipality IDP stresses the importance of economic expansion, diversification and sustainability in the Okhahlamba Local Municipality. The Ambleside Meats abattoir is one (1) of the largest abattoir facilities in the uThukela area and one (1) of the primary suppliers of pork products in the Municipality. The existing abattoir has an important contribution to the generation of employment opportunities, skills development, income generation, improved quality of life and standards of living. By expanding the abattoir operations to include a Rendering Facility, surrounding communities and their families will also benefit economically, as well as local businesses and suppliers through the increased demand for pork products. This in turn has the potential to have positive impacts on poverty, malnourishment and food insecurity rates. The proposed project is thus in line with the uThukela District IDP and its goals.

The 2021-2022 Okhahlamba Local Municipality IDP outlines six (6) key strategic objectives:
- Good governance and public participation;
- Basic service delivery and infrastructure;
- Municipal transformation and organizational development;
- Local economic and social development'
- Financial viability and management, and;
- Cross-cutting interventions.

The establishment of the Rendering Facility will help towards the majority of the Municipality's IDP objectives.

At a local municipal level, no Environmental Management Framework (EMF), Strategic Environmental Assessment (SEA) or SDF was available, likely as these have not been fully developed or approved as yet. Both the local and district spatial frameworks do not highlight intersections with any areas of environmental sensitivity or importance.

Overall, the proposed development is in line with the district level SDF and the local municipal Framework Plan and will have positive impacts on the socio-economic environment, whilst meeting the needs of both the district and local IDP goals.

Implication / Risk / Impact:
- No adverse social or socio-economic impacts are anticipated from the proposed Rendering Facility;
- The facility complies with all of the Planning Initiatives, most notably job creation, skills development and economic and environmental sustainability. In addition, the proposed development will directly support the objectives of the eThekwini Metro's Eight Point Plan; and
- The location of the proposed development is in line with the eThekwini Metro's IDP and SDF, which reflect the development goals and objectives of the abovementioned Planning Initiatives.

Mitigation / Recommendations:
- None.

5.4 CULTURAL, HISTORICAL AND ARCHAEOLOGICAL RESOURCES

Description

Amafa KwaZulu-Natal, the authority responsible for the Province's heritage resources, has been notified of the proposed activity via the submission of an Application Form to the SAHRIS website on 25 October 2021. Comments were received on 19 January 2022, please kindly see Appendix K and Table 1 (line item 2) for further details. Amafa had no objects to the development.

A Heritage Impact Assesment was not compiled for the proposed project as the Government Screening Tool, refer to Appendix M, identified that the site falls within a 'very low' archaeological potential area. The site is already 100% modified and transformed, therefore fossils which may be present will have a low ranking in terms of their significance and importance. Furthermore, the proposed Rendering Facility will be placed within an existing warehouse on site, thus, no land clearance or disturbance to soil through excavation works will be required. The Screening Tool assessment did not identify any heritage sites, features or graves, and the area is not part of any known cultural landscape.

According to the SAHRIS Palaeo-sensitivity Map, the site is classified as 'Insignificant / Zero' and does not require any paleontological investigations to be undertaken.

The only historic feature in this area is the original bridge built over the Little Tugela River in the early 1900s. The bridge, however, is more than 1 km away from the proposed Rendering Facility warehouse and thus the establishment of the Rendering Facility within the warehouse will have no impact on the bridge in any way. Any potential additional traffic associated with the proposed facility will also not impact the bridge as the bridge is located after the main entrance to the site, and transport trucks would not need to cross it on their route to the N3.

Implication / Risk / Impact:

- The proposed Rendering Facility will be installed within an existing warehouse on site and so there will be no disturbance to the soil or surrounding land scape. No digging or excavarions will be required;
- The proposed site is no longer in a natural state but has instead undergone decades of transformation through the piggery, abattoir and associated farm operations, which has been in operation for over 50 years. As such potential heritage impact are minimal to none, as confirmed through the Desktop Screening Assessments;
- As the site is already modified and transformed and because the Rendering Facility will be placed within an existing warehouse, the presence of fossils is highly unlikely. However, if fossils are found on site, it is likely that they will have a low ranking in terms of their significance and importance; and
- No heritage sites, features or graves were identified on the property, and the area is not part of any known cultural heritage.

Mitigation / Recommendations:

- Attention is drawn to the National Heritage Resources Act (Act No. 25 of 1999) which requires that projects that expose archaeological or historical remains must cease immediately, pending evaluation by the Provincial Heritage Resources Authority; and
- Installation and operational activities must cease immediately should excavation of alluvial sediments reveal paleontological material, and a Palaeontologist must be contacted to conduct a site visit.

5.5 SURROUNDING LANDUSE AND AESTHETICS

Description:

The existing Composting Facility and the proposed Rendering Facility are located within the Ambelside Farm property, off of the P11 (R74) and P294, between Bergville and Colenso. This site is approximately 21 ha in extent, and completely transformed by Kikuyu lands, buildings, hardened surfaces, the existing abattoir facility, warehouses, pasturelands, croplands, residential and labour accommodation and two (2) slurry dams. The proposed site for the Rendering Facility is an existing 540 m^2 warehouse, located near the abattoir.

The site is similar to its surrounds, with agri-industrial, commercial agricultural lands, pork production, livestock farming and pasturelands being the predominant surrounding land uses. The rural agricultural town of Winterton is also located nearby to the south of the site.

Implication / Risk / Impact:

- The proposed project is to take place on a property with existing land uses such as the existing abattoir facility, farming activities, farming infrastructure, grazing lands, two (2) slurry dams, sheds, and housing. Thus, the site and surrounding land is already greatly modified and transformed;
- The proposed Facility will not alter the sense of place associated with the site as the ;
- The facility will be located within an existing warehouse on site, therefore, no additional building will be required, there will be no change to land use, and the aesthetics of the site; and
- The site is surrounded by pasturelands, livestock farming and agri-industrial related industries and therefore will not represent a change compared to the surrounding land uses.

Mitigation / Recommendations:

- The proposed development must adhere to the design and installation plan and remain within the footprint of the existing warehouse;
- All lighting at the Rendering Facility must be facing downwards and inwards to minimise impacts on surrounding landowners;
- Removal of alien invasive vegetation, and rehabilitation and revegetation of bare and disturbed areas must be ongoing;
- The planting of non-indigenous vegetation must be prohibited; and
- Noise, dust, air quality and odour nuisances must be controlled, as is stipulated in the EMPr and the manufacturer guidelines in the design specification sheet.

5.6 TRAFFIC, ROADS AND ACCESS

Description:

The site is accessed off Springfield Road (P11) and P294 road. Trucks and delivery vehicles currently use the P294 as the primary access point and will continue to do so. An average of four (4) trucks per day access the site to supply (live animal delivery) or be supplied (meat trucks) by the abattoir. Any additional trucks for the Rendering Facility will be easily accommodated by the access point and internal roads, due to the project site's historic design to accommodate a 6 000 pig piggery. Furthermore, Winterton is a low-density area with minimal traffic, allowing for any additional traffic to be easily accommodated.

The proposed Rendering Facility will result in a marginal increase of vehicles entering the site utilising the P294 and P11. However, since the abattoir initially housed a piggery on site, the access points and internal haul routes are built to accommodate several 12-ton trucks per day. Since the piggery was decommissioned and the abattoir became the primary operation on site, large vehicles moving on and off the site reduced substantially. The proposed marginal increase in traffic on site, will likely originate from the additional staff and labour required. Given the above, a Traffic Impact Assessment was not compiled as the anticipated trip threshold is below the threshold for a Traffic Impact Assessment to be commissioned (50 vehicle trips / hour). The exact number of light and heavy vehicles required is unknown at this stage, however, the final number will be much lower than the intended initial design of the historic piggery and abattoir.

There will be no additional traffic associated with the existing Composting Facility and abattoir on site.

Implication / Risk / Impact:

- Increased use of these roads and access roads within the property may result in accelerated deterioration of the roads; however, the proposed project will result in an insubstantial increase in the number of vehicles utilising the P11 and P294 to access the Facility on a daily basis; and
- Excessive speed poses a threat to both road users and animals, therefore, speed control measures on site must be adhered to.

Mitigation / Recommendations:

- Warning signage must be erected to warn motorists of slow moving vehicles;
- Speed limits along the access roads to the abattoir facility and within the property must be adhered to at all times;
- Maintenance of the access roads and within the property must be undertaken;
- If needed, dust suppression measures must be implemented during dry and windy conditions (i.e. spraying of water or applying Dustex); and
- Vegetation along the access roads must be regularly mowed to improve visibility.

5.7 NOISE, DUST, AIR QUALITY AND ODOUR NUISANCES

Description:

Noise

The waste management activities being applied for are not considered a 'high noise impact' operations. However, the following potential noise may be generated on site:

- Noise from machinery (crusher for bones, boiler, generator);
- Noise from increased traffic associated with the new Rendering Facility and potential increased production; and
- Noise from the slaughter of pigs supplying the abattoir.

However, none of the above are anticipated to have significant adverse impacts on the receiving environment for the following reasons:

- The rendering process is predominantly baking / drying and does not generate noise;
- The part of the machinery which crushes bones and skulls is within an enclosed system which buffers noise;
- The distance of any public or roadside areas from the proposed location of the Rendering Facility acts as an additional buffer; and
- Increased traffic volumes are anticipated to be low.

Therefore, all noise generated is anticipated to still remain within the SANS noise level guidelines.

The Composting Facility currently has a marginal impact on noise. Potential noise sources are trucks and tractors which are used to maintain the Facility. With the reduction of the Composting Facility size and the need for it not to be utilized to compost abattoir waste anymore, an even further reduction in noise generation is anticipated. This arises from the fact that less tractors and trucks will be required to operate at the Facility on a daily basis.

Dust

Both the Composting Facility and the proposed Rendering Facility will produce little to no dust. Less vehicles will be required to maintain and operate the Composting Facility which results in reduced dust generation. Dust generation associated to the operations of the existing abattoir and proposed Rendering Facility will likely be form delivery, service and transport vehicles utilising the internal gravel roads. These roads however, are mostly gravel roads or graded roads and dust generation is limited. The anticipated increased traffic volumes associated with the proposed Rendering Facility are very low and the roads are well maintained.

Air Quality & Odour

Existing air quality is good and current operations of the abattoir has little to no impact on the air quality.

The existing Composting Facility is a source of odour given the biological breakdown of organic matter which takes place. However, given that the composting of solid abattoir waste will be significantly reduced, and that the primary composting will be of 'harvesting waste', unpleasant odour is anticipated to be less. Even with reduced odour, a Composting Facility will always have an odour which can affect surrounding properties and

areas. However, given the central location of the Composting Facility within the site, and the large 'buffer' areas, the impact is reduced. Therefore, the overall ambient air quality on site is expected to improve.

Air Quality Impacts associated with the proposed Rendering Facility are considered to be minimal to low. Given that the proposed Rendering Plant will only have a boiler which has a low power capacity between 10 Kw and 15 Kw (much lower than the regulated 10 MW), an Air Emissions License (AEL) is not required, as confirmed with the Okhahlamba Local Municipality Air Quality Directorate (refer to Appendix N). Furthermore, the plant is designed to capture, contain and condense all vapours and odours which may be generated through the process. However, should any breakdown of machinery occur, temporary odour may be generated.

Implication / Risk / Impact:

- Minimal noise impacts are expected from the proposed Rendering Facility;
- Dust from the graded internal access road on site may occur;
- Odour can be generated during breakdown of rendering machinery;
- Odour from the Composting Facility has the potential to impact surrounding areas, however odour from this facility is anticipated to be reduced as inputs (waste volumes and type) are being changed. Furthermore, the Composting Facility is well managed and no complaints have been received from neighbours in the past regarding odours, nor was this raised an issue during engagement with neighbours and I&APs; and
- No air quality impacts are associated with the existing abattoir.

Mitigation / Recommendations:

- Noise must be reduced at the source wherever possible;
- Noise from the Crusher will be controlled and likely have no impact as the machinery is enclosed within a machine guard which buffers noise;
- The existing Composting Facility and abattoir and the proposed Rendering Facility are located 425 m from the nearest house and the Winterton Town;
- The Rendering Plant machinery must be maintained in good working order, run according the prescribed and approved Standard Operating Procedures and serviced and maintained regularly. This will ensure that it will not generate excessive noise, air pollution or waste;
- Traffic must be controlled on site according to recommendation in the section above;
- Speed limits along the access roads to the abattoir facility and within the property must be adhered to at all times;
- If needed, dust suppression measures must be implemented during dry and windy conditions (i.e. spraying of water or applying Dustex);
- Both the Composting Facility and the proposed Rendering Plant must remain located according to the approved Layout Plan.
- There must be a purposeful movement away from composting of solid abattoir waste, and a movement to composting 'harvesting waste' instead.
- Masking agents must be used to inhibit or neutralise odour nuisances from the Composting Facility if required; and
- The Rendering Facility has built in odour and vapour control mechanisms which prevent the emission of potential odour and air pollution to the atmosphere.

5.8 SECURITY

Description:

The property is surrounded by a security fence and there are two entrances with controlled access. There may be an increase in the presence of personnel on site during the installation phase and the sourcing new staff, which can pose a security risk. This impact will only be temporary and is easily controlled by screening those entering the site. The on-going and continued screening of those entering the site allows for protection

of staff on site, the premises itself, assets and information. Other security risks are associated with unpredictable protest action or looting which can take place. The existing security fencing and controlled access can reduce this risk to some extent.

Implication / Risk / Impact:
- Potential trespassing of employees onto surrounding properties;
- Potential for employees / outsiders to cause damage to the property and surrounding properties during any protest action;
- Potential for illegal trespassing onto site and illegal occupation of the site, and;
- Potential risks associated with unpredictable looting and vandalism.

Mitigation / Recommendations:
- Strict security measures must be put in place and remain in place throughout the project lifespan;
- Access onsite and offsite must be controlled be a screening process and register system to protect employees, the premises, assets and information;
- Employees must be prohibited from any unauthorised entry of surrounding properties;
- Trespassing onto the site and the surrounding properties by unauthorised personnel must be prohibited;
- Lawful disciplinary action must be undertaken for any unlawful protest action and subsequent damage to property, and
- New employees must be adequately screened prior to being employed.

5.9 CORONA VIRUS (COVID-19) PANDEMIC

Description:
The Corona Virus (Covid-19) pandemic is far more than a health crisis. It is not only affecting societies but economies at their core. Although the impact of the pandemic will vary from country to country, the extent of its impacts are not yet known. However, it will most likely increase poverty and inequalities on a global scale. As such, there is and will be a continuous need for countries to be self-sufficient whereby food is grown and produced locally to feed expanding populations.

Implication / Risk / Impact:
- COVID-19 will likely affect the ability to source external skills, suppliers and contractors for the Rendering Facility due restrictions on travel, meeting attendee limits and accessibility to suppliers.
- Employees who may contract the virus would need to quarantine for 10 days and receive medical attention. In cases where the individual does not get better, hospitalization is required.
- Exposure to an individual who has tested positive for the virus would require all exposed individuals to isolate for 10 days; this will disrupt work hours and shifts as well as operational activities and the operational activities of contractors.
- If these impacts can be avoided and correctly managed, if approved, the proposed project will have a significant positive impact on the local socio-economic environment:
    - improvement and stimulation of the local economy through expansion of the Ambleside Meats enterprise;
    - direct provision of local job opportunities for skilled, semi-skilled and unskilled individuals;
    - skills development of current and future employees;
    - provision of business opportunities for enterprises in maintenance, transportation, pork product sales both locally and further away, and;
    - provision of more affordable pork products locally.
- As such, although the pandemic has been and will continue to be widespread, the proposed project will play a beneficial role in alleviating its impacts within the surrounding area.

Mitigation / Recommendations:
The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended:

- The screening of all employees and contractors coming on to site must continue though the duration of the pandemic;
- Registers of all employees and contractors entering the site must be kept for tracking purposes should an employee or contractor test positive for the virus;
- Social distancing, the wearing of masks and sanitizing must continue on site for all employees and contractors;
- Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities to reduce the need to source labour form far places, which brings increased risks associated with the virus; and
- Similarly, local businesses, contractors, suppliers, and service providers in the immediate area must be considered first for any required supplies and services.

6. POTENTIAL IMPACTS ON THE BIOPHYSICAL ENVIRONMENT

6.1 TOPOGRAPHY

Description:

Indicate the general gradient of the site:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

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

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front

Ground Cover:

Natural veld - good condition	Natural veld with scattered aliens	Natural veld with heavy alien infestation	Veld dominated by alien species	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

Topographically, the southern and western portion of the property is defined by relatively flat rolling pasturelands, similarly with the furthest north-eastern portion of the farm. The western farm boundary is defined by the Little Tugela River Channel. The general elevation for the site ranges between 1 008 m to 1 028 m above sea level. The lowest elevation points are located within and adjacent to the Little Tugela River in the western area of the site.

The site is already significantly transformed and therefore holds no significance for biodiversity conservation. From previous specialist studies, exotic vegetation found within the riparian area include Poplar (*Populus sp.*), Syringa (*Melia azedarach*), black wattle (*Acacia mearnsii*), and planted pasture (kikuyu – *Pennisetum clandestinum*). Alien invasive management is currently implemented on the farm, and this must be continued. No natural forests or protected trees are present on or near the site in accordance with the National Forests Act (Act No 84 of 1998).

Implication / Risk / Impact:

- The downwards slope of the general topography towards the Little Tugela River may potentially result in the channeling of uncontrolled stormwater and pollutants down towards the river.

Mitigation / Recommendations:

- All stormwater systems must be adequately maintained; and
- The irrigation piping system and drain of the Composting Facility must be monitored regularly for leaks and cracks to ensure that no runoff or seepage from the Composting Facility is reaching the Little Tugela River.

6.2 CLIMATE

Description:

The property falls within the Pongola Mtamvuma Water Management Area (WMA) and V13D quaternary catchment. There are four (4) perennial rivers which flow nearby, namely the Lindequespruit, Little Tugela, Njesuthi and Sterkspruit Rivers. The northern and western boundaries of the site are bordered by the Little Tugela River. The Situlwane River joins the Little Tugela River approximately 1 km to the north of the site.

Total wetland coverage for the UVc2 BRU is 2 981 ha, however, no wetlands have been identified on site, apart from the Little Tugela Floodplain and two (2) artificially created effluent slurry dams on site.

The climate capability rating is C5 which is described as moderately restricted growing season due to low temperatures, frost and / or moisture stress. The area experiences a Mean Annual Precipitation (MAP) of 709 mm and an evaporation of 1 891 mm. The average annual temperature is 15.9°C, with February being the hottest month of the year. The proposed development site is situated within a warm temperature area. The average annual temperature is 18.2°C, ranging from 9.5°C (average annual minimum) to 26.9°C (average annual maximum). (Refer to Figure 8 and 9). Seasonal temperature variations range from 8.8°C in July (austral winter) to 20.7°C in January (austral summer).

Under natural conditions, the dominant vegetation type present within the property would have comprised Northern KwaZulu-Natal Moist Grassland (UVc2) which falls under the Sub-Escarpment Grassland bioregion. However, due to the property already being completely modified and transformed, the proposed development site is no longer representative of this vegetation type. There are no Critical Biodiversity Areas (CBAs) which intersect the site. The closest CBA 1 area is located approximately 3.6 km to the southwest.

Soils are shallow, duplex and poor drainage soils with a moderate erosion hazard if not managed correctly. In addition, 7.8% of the more gently sloping areas of the BRU are too rocky to cultivate.

Implication / Risk / Impact:

- None.

Mitigation / Recommendations:

- None.

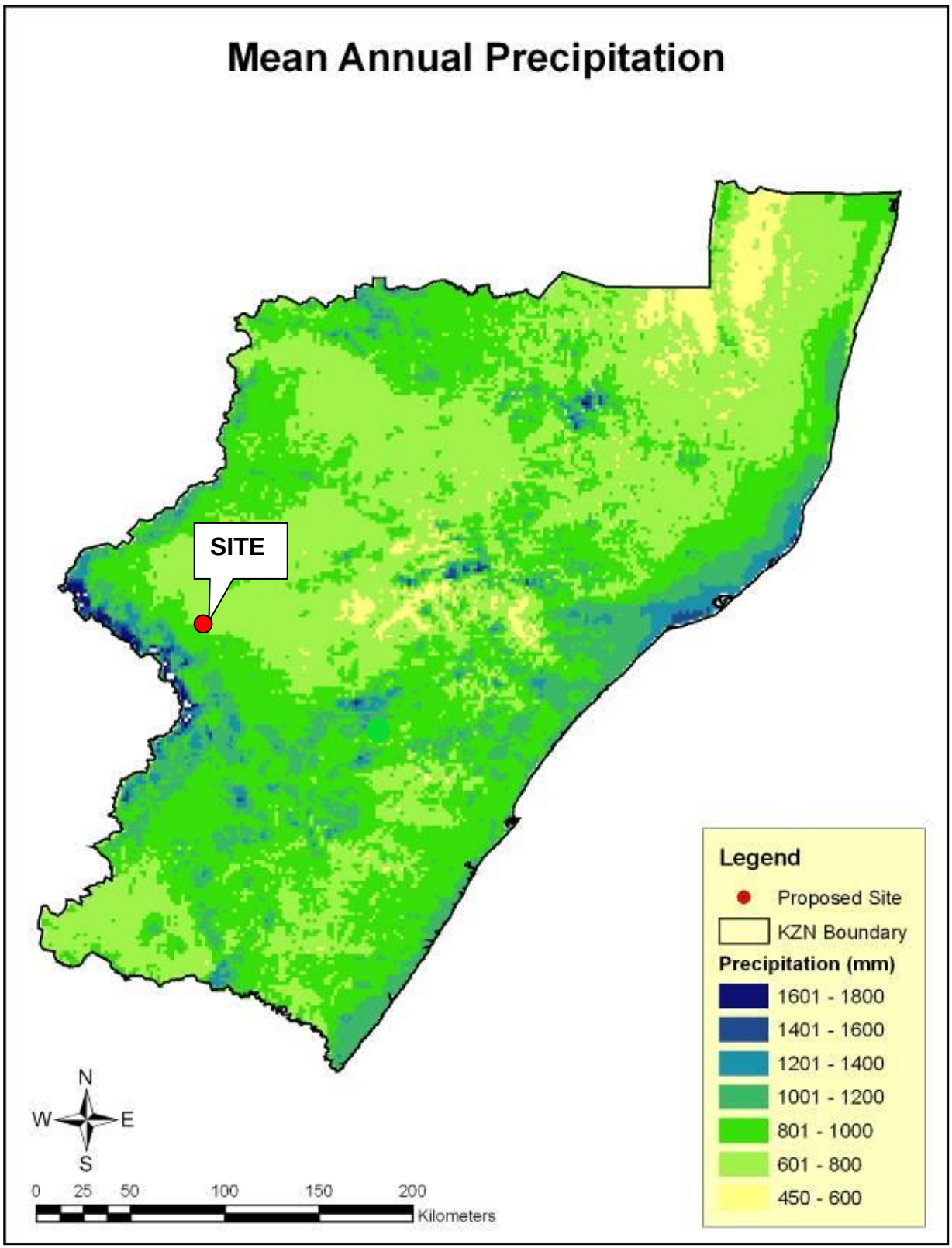


Figure 8: Mean Annual Precipitation for KwaZulu-Natal.

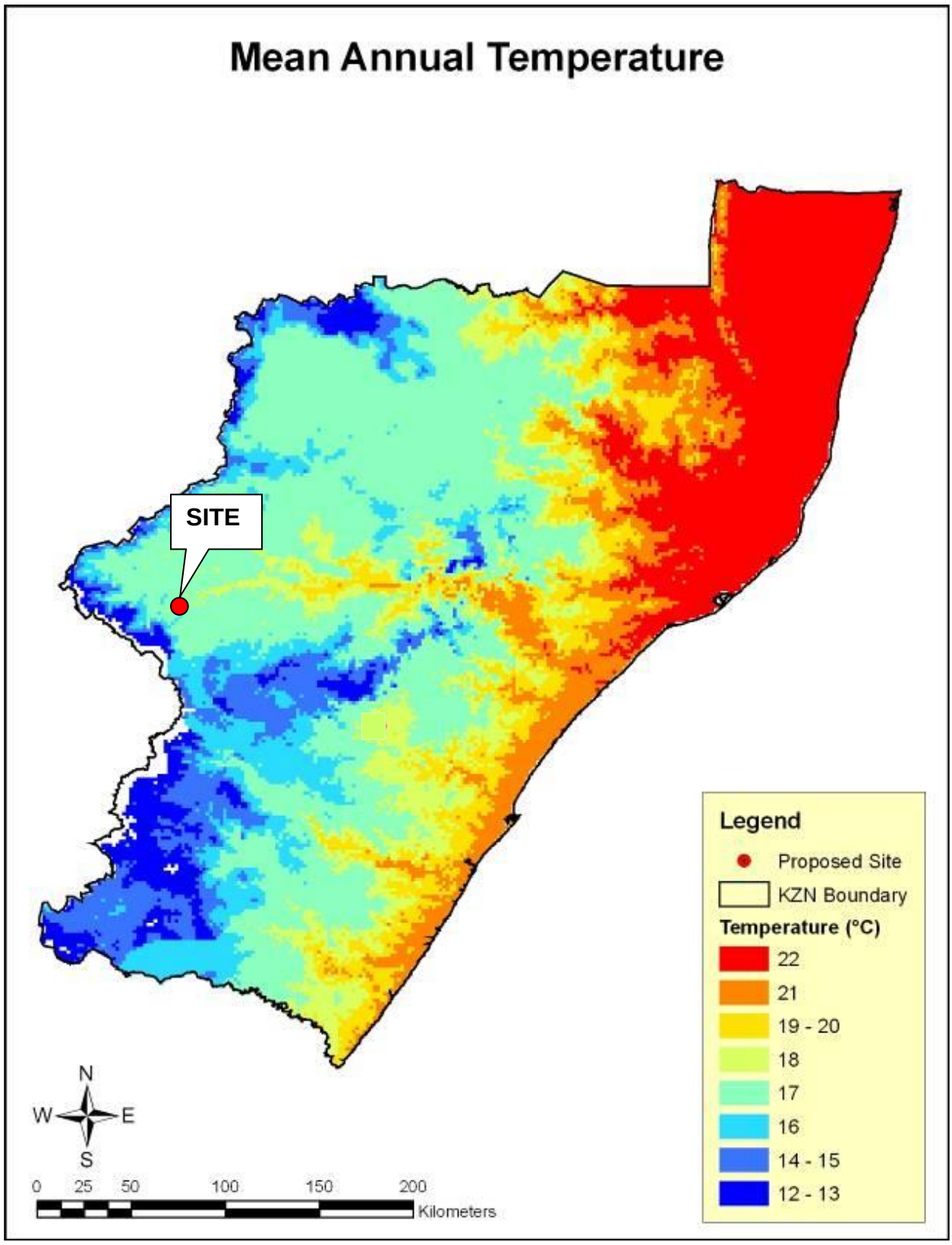


Figure 9: Mean Annual Temperature for KwaZulu-Natal.

6.3 CLIMATE CHANGE

Description

Climate change is a global challenge, which is both impacted by development activity and which has effects on development and activities. In South Africa, the effects of climate change are increasing, with more frequent heatwaves, droughts, flood events and severe weather conditions. These conditions are especially challenging considering the water scarcity in the country and the high fire danger in many areas. Simultaneously, South Africa is challenged with the great need to promote development as a developing country, with the high-impact mining sector and linked electricity generation sector being predominant contributors to economic growth, whilst also being a predominant contributor to climate change.

To ensure sustainable development is achieved and that contributions to climate change are minimised, it is imperative that all development, transformative and resource-utilising activities take cognisance of climate change. At the same time, it is important to note that part of the response to climate change includes adapting to its effects and promoting development and activities which allows the population to become more resilient to the impacts of climate change. This may include ensuring delivery of basic services (water, sanitation and electricity), improving food security and enhancing economic security.

To appropriately respond to climate change, all developments and activities should consider the following:

- How does the development / activity affect climate change?
- What effect does climate change have on the development / activity?
- What climate change adaptation responses are required for the development / activity?
- What pro-active climate change mitigation measures can be implemented for the development / activity?

Implication / Risk / Impact

- The proposed activity plays an important role in building socio-economic resilience to climate change by improving food security and creating employment opportunities;
- The proposed development may contribute to climate change to a minor extent and at a local scale through energy usage, water usage and waste generation during the installation and operational phases. These impacts are anticipated to be very small; and
- The proposed activity may be impacted by flood events, drought, extreme weather events and temperature changes.

Mitigation / Recommendations

- All development infrastructures must promote the efficient use of energy, water and limit wastage of resources:
    - The proposed activity plays an important role in mitigating climate change by utilising alternative Solar Power, thereby reducing the volume of greenhouse gases in the general region. Alternative power will be used to supplement the proposed Rendering Facility energy demand. The system is already set up and is powering the abattoir on site, the Rendering Facility will simply be connected to this existing system;
    - Rainwater harvesting and the installation of JoJo tanks will be incorporated into the Rendering Facility and existing abattoir to supplement water demand on site. Rainwater harvesting is a cost effective and environmentally sustainable option for water supply and will be suited to the Rendering Facility water demand needs on site;
    - Water resource usage has been ensured to remain within the allowed values for the catchment as outlined by the Department of Water and Sanitation;
    - Recycling will continue on site which will reduce the potential for ground, water and air pollution through wind blown debris;
- Waste generation must be minimised and waste must be managed in an environmentally responsible manner and in accordance with the waste management hierarchy. The EMPr outlines specific waste management mitigation measures which comply with the waste management hierarchy;

  - Ambleside Meats currently recycle all their general / municipal waste on site which is then collected by a service provider;
  - All abattoir solid waste is currently composted at the Composting Facility. With the addition of the Rendering Facility, no solid waste will need to be taken to the Composting Facility as it will be rendered / reprocessed into value-added products such as tallow and carcass meals;
  - The Rendering Facility produces little to no waste from its operations. The only waste anticipated will be the generation of wastewater from the vapour recovery system. This wastewater will be collected and taken to the existing slurry dams on site;
- The proposed development / activity / infrastructure must be implemented in accordance with approved layout plans which have been planned and assessed to ensure that locations and layouts of least environmental impact and risk are utilised;
- The proposed development / infrastructure / activity must ensure that they are duly authorised through a Water Use License, and Waste Management License;
- All relevant conditions and monitoring requirements associated with these authorisations must be complied with;
- The proposed development / activity / infrastructure must ensure the protection of on-site environmental features which thereby protects ecological infrastructure important for building climate change resilience:
  - This will be achieved by not developing within the 1:100 year floodline or 32 m buffer. The Rendering facility will also be installed within an existing warehouse on site; therefore, no additional areas will need to be disturbed.

6.4 GEOLOGY AND SOILS

Description:
No Geotechnical Assessment was conducted for the proposed Rendering Facility. A desktop analysis however was undertaken and correlated with underlying soils and geology extracted from the BRU UVc2 and ArcGIS layers. It was found that the proposed Rendering Facility is located within the Estcourt Formation, Beaufort Group and unconsolidated layered sediments of the Masotcheni Formation. The predominant underlying geology is Dolerite, shale, siltstone and sandstone. Soil types are red-yellow apedial, freely drained soils and red-yellow dystrophic and mesotrophic soils.

Implication / Risk / Impact:
- Since the proposed Rendering Facility will be established within an existing warehouse and the fact that the Composting Facility is already existing, disturbances to underlying soils and geology are not anticipated.

Mitigation / Recommendations:
NA

6.5 SURFACE WATER AND WETLAND SYSTEMS

Description:

An Aquatic Assessment was compiled for the proposed project (Refer to Appendix O). The property falls within the Pongola Mtamvuma WMA, V13D quaternary catchment. No dams or wetland systems are present on site. There is a floodplain and riparian habitat which forms part the Little Tugela River.

The results of the Aquatic Assessment show that the River is generally in good condition and that the current activities are having a minor impact on the riparian system. The assessment classified the Little Tugela River with a Habitat Integrity C and B which are described as ‘Moderately modified’ and ‘Largely natural’. The Assessment found that the downstream sample site, downstream of the Composting Facility, *E. coli* counts were high indicating faecal input. The Composting Facility was put forward as a possible cause, however,

further assessment and confirmation is required. Therefore, the installation of the proposed Rendering Facility will initially reduce the amount of abattoir solid waste being composted, and ultimately the need for this entirely. This will reduce any potential impact the Composting Facility may have on the Little Tugela River. Composting Facilities are still an adequate method for treating abattoir solid waste in accordance with the Guideline Manual for the Management of Abattoirs and Other Waste of Animal Origin, 2009 (DARD, 2009) and the Meat Safety Act (Act 40 of 2000 as amended). Therefore, the Composting Facility will remain on site, however, as last resort during emergency situations for taking in abattoir solid waste when all other contingency plans have been exhausted. The Facility will be managed and operated in accordance with the EMPr which aims to reduce and mitigate all existing and potential environmental impacts. The impacts and mitigation measures below refer to the overall potential impacts of the Rendering Facility and Composting Facility on riparian habitat and Little Tugela River.

Implication / Risk / Impact:

- The Aquatic assessment found that the overall state of the Little Tugela River was 'Good' with pulses of contaminants entering the River from activities upstream of the site and potentially from the site. This was further confirmed by an In-stream integrity class rating of C and B which are indicative of 'Moderately modified' and 'largely Natural'. However, considering the extensive infrastructure put in place to capture stormwater, wash-water, the 2x slurry dams and drainage capture system for the Composting Facility, the impact is likely coming from a combination of activities along the River bank and from upstream activities of the town and farmlands.
- Some impacts likely to be linked to the continued use of the Composting Facility were evident:
    - the Aquatic Assessment found dense riparian vegetation and bright green filamentous algae growth on the river bank slightly downstream of the Composting Facility and in the deep pool below this point. These indicate the potential input of faecal-rich particles from the Composting Facility through ground water seepage. Other sources could be pasturelands and grazing lands on the opposite bank, and the application of manures and fertilisers on lands and banks bordering the Little Tugela.
- Negative impacts associated with the Rendering Facility:
    - potential for introduction of hazardous materials into the surrounding water resources through leaking wash-water systems from the Rendering Facility;
    - Potential for incorporation of pollution into stormwater runoff;
- Positive impacts associated with the Rendering Facility:
    - Reduce environmental impact should the Rendering Facility be approved and installed and abattoir waste is Rendered rather than composted;
    - The Ambleside Dalton and surrounding abattoirs will also benefit from positive environmental impacts as the proposed Rendering Facility will take in solid waste from the Dalton abattoir and surrounding abattoirs;
    - Improved stormwater management specifically around the wash-down area and warehouse within which the Rendering Facility will be established;
    - Improved water quality of the Little Tugela River and the riparian habitat.

Mitigation / Recommendations:

- Ponding and excessive runoff of at the Composting Facility must be avoided. The closed piping irrigation system should continue to be used as well as maintained to ensure no runoff is directed towards the Little Tugela River.
- All stormwater and wash-water must be diverted away from the Little Tugela River.
- No non-indigenous vegetation is to be planted on site.
- The riparian margin of the Little Tugela River should be checked frequently for inputs of pollutants from leaking pipes or infrastructure associated with the existing Composting Facility and abattoir and the proposed Rendering Facility.
- Any Water to be discharged directly into the Little Tugela River must be authorised through a Water Use license Application.

The Applicant must continue their monthly SANS 241 water quality testing on site.

6.6 FLORA

Description:
A Biodiversity Assessment was not compiled for the proposed development. Previous specialist vegetation studies for previous Environmental Authorisations for the site identified that due to the site being almost completely transformed, it holds no significance for biodiversity conservation. As a result, it is highly unlikely that floral species of conservation significance will be located within the property. An Aquatic Assessment was compiled for the proposed project (Refer to Appendix O). Under natural conditions, the dominant vegetation type present within the property would have comprised Northern KwaZulu-Natal Moist Grassland which falls under the Sub-Escarpment Savanna and Highveld Alluvial Vegetation bioregion. Due to the property already being modified and transformed, the proposed development site is no longer representative of this vegetation type. The current vegetation on site is predominantly a Kikuyu pastureland. No natural forests or protected tress were identified on site in accordance with the National Forest Act (Act No. 84 of 1998). Alien plants were found growing on the site and the riparian edge. Exotic vegetation found within the riparian area included Poplar (*Populus sp.*), Syringa (*Melia azedarach*), black wattle (*Acacia Mearnsii*, and planted pastures (Kikuyu – *Pennisetum clandestinum).* Alien invasive management is currently implemented on site and this must be continued.

Implication / Risk / Impact:
- No floral species of conservation concern were identified within the proposed development site and it is unlikely that any would occur within the property due to it already being modified and transformed;
- Bare and disturbed areas may result in the infestation of alien invasive vegetation; and
- If alien invasive vegetation removal does not take place on a regular basis, these vegetation species will more than likely invade the area again.

Mitigation / Recommendations:
- The lawns of kikuyu grass must be mowed and maintained on a regular basis;
- Removal of alien invasive vegetation, and rehabilitation and re-vegetation of bare and disturbed areas must be ongoing; and
- The planting of non-indigenous vegetation must be prohibited.

6.7 FAUNA

Description:
A Biodiversity Assessment was not compiled for the proposed development. The proposed development site is already modified and transformed. As a result, it is highly unlikely that floral species of conservation significance will be located within the property. The Government Screening Tool as well as an ArcGIS desktop study confirmed that the site does not intersect any sensitive or endangered faunal species.

Implication / Risk / Impact:
- No faunal species of conservation concern were identified within the proposed development site and it is unlikely that any would occur within the property due to it already being modified and transformed.

Mitigation / Recommendations:
- There is potential for the riparian system associated with the Little Tugela River to support faunal species of conservation concern. Thus, the recommended mitigation measures included in the EMPr (Appendix P) and Aquatic Assessment (Appendix O) must be adhered to. Furthermore, monthly water quality monitoring of the borehole must continue (Refer to Appendix Q).

7. SPECIALIST STUDIES: KEY FINDINGS AND RECOMMENDATIONS

The following Specialist Study has been undertaken as part of the Basic Assessment Process:

- Aquatic Assessment (Appendix O).

7.1 Aquatic Assessment

Key Findings:

An Aquatic Assessment was compiled for the proposed project (Refer to Appendix O). The aim of the assessment was to determine the ecological health and condition of the Little Tugela River adjacent to the Property. This was conducted utilising the several biological and water quality indicators at one (1) upstream and one (1) downstream site. The location of the sample sites were chosen with the purpose of assessing water quality above the existing Abattoir and proposed facility, and downstream of the facility. The sample location points can be viewed in the attached specialist report (Appendix O). The impacts of the current activities at the Abattoir were assessed relative to the results of the chemical and biological assessment performed.

Since the 2011 baseline assessment, there have no major changes to the landscape on site nor the surrounding landscape. The catchment upstream from the site is largely irrigated pasturelands and intensive commercial croplands. Immediately upstream of the site is the semi-urban settlement of Winterton. Water abstraction, erosion, agricultural return flows, urban effluents and run-off have impacted on in-stream integrity. Thus, the riparian habitat has been affected primarily by water abstraction, erosion, and changes to water quality.

All water quality parameters were within the quality range for aquatic ecosystem health according to DWAF (1996). pH and temperature were slightly elevated, however, this was attributed to low flow conditions and thus less dilution which is characteristic of the winter months. The majority of chemical concentrations were Below Detectable Limits (BDL), and where results were available, remained within acceptable limits (DWAF, 1996). The only exception being Nitrate levels where were higher than the target range value. The elevated results likely reflect the nutrient levels and high algal growth observed on site.

Total Kjeldahl nitrogen and *E. coli levels* were higher than previous assessments, and higher downstream than upstream, indicating an input of faecally contaminated material between the two (2) sample points. Potential sources include grazing and pasture lands on the opposite bank, the application of manures and fertilisers on lands and banks of the Little Tugela, and potential input from the Composting Facility through sub-surface seepage. However, sub-surface seepage is very unlikely given the distance between the Facility and the river and the mitigation measures in place to prevent surface and ground seepage.

SASS5 results showed that both the upstream and downstream sites were in a ‘Poor’ health class, i.e. ‘Seriously Modified’, which is similar to results found in the 2011 baseline assessment. Vegetation was lacking at the site due to low water levels. The only vegetation available for SASS5 sampling was filamentous algae, which is species-poor in terms of supporting aquatic invertebrates. Consequently, aquatic invertebrates expected in this biotope were absent from the sampling medium which could have contributed to the low scores. Conversely, diatom results showed the site to be in ‘Good’ condition. Thus, the overall state of the river between the sample points can be classified as ‘Good’ with pulses of contaminants due to land use activities upstream and surrounding banks and agricultural activities. This is further confirmed by an In-stream integrity class rating of C and B which are indicative of ‘Moderately modified’ and ‘Largely natural’ state for the riparian margin.

Recommendations:

- To determine any potential sources of contamination entering the river from the abattoir, the riparian margin of the Little Tugela River and activities and structures at Ambleside Meats should be regularly inspected for leaks and discharges, or any evidence of such. If any leaks, discharges or damaged pipes are identified they must be rectified as soon as reasonably practicable;

- Wash water and wastewater may not be freely discharged to the Little Tugela River, riparian environment, or the natural environment surrounding the site;
- At a minimum, all water leaving the site must meet the required water quality for the receiving environment, that is, as per the South African Water Quality Guidelines for Aquatic Ecosystems (DWAF, 1996), or as stipulated in the conditions of the Water Use License;
- Wastewater must not be combined with stormwater run-off, and must be appropriately treated where necessary and disposed of;
- Stormwater run-off must be adequately controlled so as not to cause erosion of the landscape and / or banks of the Little Tugela River;
- Any water to be discharged directly to the Little Tugela River must be authorised through a Water Use License Application;
- Any by-product, residual solid, or semi-solid waste material from the Rendering Facility must be suitably contained until it can be appropriately disposed of (e.g. impermeable containment or designated lined facility). This area must be located above the flood line / outside of the riparian margin to prevent any risk of direct contamination or run-off to the Little Tugela River; and
- Water quality monitoring - Ambleside Meats CC currently monitor the water quality (SANS 241 every month. It is recommended that this be continued to assess the impact on the water quality of the Little Tugela River. Furthermore, that the sampling point be located downstream of the abattoir, proposed Rendering Facility warehouse and Composting Facility.

8. ASSESSMENT OF ENVIRONMENTAL IMPACTS

To assess potential environmental issues associated with the proposed project, each aspect addressed in Section 5 and 6 have been given a qualitative rating in relation to its environmental impact; refer to Tables 3 and 4. Each aspect has been divided into a number of different classes, each of which has been assigned various criteria.

Where relevant, the following methods have been used to predict the characteristics of identified impacts:

- Professional judgement;
- Quantitative mathematical models;
- Experiments and physical models;
- Physical or visual simulations or maps (including GIS tools);
- Case studies; and
- Past experience.

Table 3: Summary of aspects used for assessing environmental impacts

ASPECT	CLASS	CRITERIA
NATURE OF IMPACT	Positive	The impact on the environment will be positive.
	Negative	The impact on the environment will be negative.
	Direct	The impact is caused directly by the activity and generally occurs at the same time and at the place of the activity.
	Indirect	The impact induces changes that may occur as a result of the activity.
	Cumulative	The impact is a result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities.
OCCURRENCE OF IMPACT	Installation	The impact will happen during installation
	Operation	The impact will happen during operation.
	Decommissioning	The impact will happen during decommissioning.
	Immediate	The impact will happen immediately
	Delayed	There will be a delay in the impact occurring.
PROBABILITY OF IMPACT OCCURRING (with mitigation)	Definitely	The impact will definitely occur even with mitigation (100%).
	Likely	It is likely that the impact will occur (60%-99%).
	Fair	There is a fair chance that the impact will occur (30% -59%).
	Unlikely	It is unlikely that the impact will occur (0% - 29%)
REVERSIBILITY (with mitigation)	Possible	It is possible to reverse the impact.
	Partly	It is partly possible to reverse the impact.
	Not possible	It is not possible to reverse the impact.
EXTENT OF IMPACT (with mitigation)	Site	The impact will be limited to the site.
	Local	The impact will affect the local area (within a radius of 40km).
	Provincial	The impact will affect areas beyond the site but within the

ASPECT	CLASS	CRITERIA
	National	boundaries of KwaZulu-Natal. The impact will affect areas beyond the Province but within the boundaries of South Africa.
DURATION (with mitigation)	Short-term Medium-term Long-term Permanent	0-5 years (Installation phase). 5-40 years (operation). (>40 years). Permanent damage to the environment.
SIGNIFICANCE OF IMPACT WITHOUT MITIGATION	Low Medium High	Small impact / disturbance. Moderate impact / disturbance expected. Significant impact / disturbance expected.
SIGNIFICANCE OF IMPACT POST-MITIGATION	Low Medium High	Small impact / disturbance. Moderate impact / disturbance expected. Significant impact / disturbance expected.

Table 4: Assessment of potential impacts associated with the proposed project:

DESCRIPTION OF IDENTIFIED ENVIRONMENTAL IMPACT		MITIGATION	NATURE OF IMPACT	DEGREE TO WHICH IMPACT CAN BE MITIGATED	PROBABILITY OF IMPACT OCCURRING		REVERSIBILITY OF IMPACT		EXTENT OF IMPACT		DURATION OF IMPACT		SIGNIFICANCE OF IMPACT WITHOUT MITIGATION	SIGNIFICANCE OF IMPACT WITH MITIGATION
					WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION		
CORONA VIRUS (COVID-19) PANDEMIC	• COVID-19 will likely affect the ability to source external skills, suppliers and contractors due restrictions on travel, meeting attendee limits and accessibility to suppliers. • Employees who may contract the virus would need to quarantine for 10 days and receive medical attention. In cases where the individual does not get better, hospitalization is required. This can affect work-hours and shifts and availability of staff and potential employees or contractors. • Exposure to an individual who has tested positive for the virus would require all exposed individuals to isolate for 10 days; this will disrupt work hours and shifts as well as operational activities and the operational activities of contractors. • As such, although the pandemic has been and will continue to be widespread, the proposed project will play a beneficial role in alleviating its impacts within the surrounding area. • If these impacts can be avoided and correctly managed, if approved, the proposed project will have a significant positive impact on the local socio-economic environment: • improvement and stimulation of the local economy through expansion of the Ambleside Meats enterprise; • direct provision of local job opportunities for skilled, semi-skilled and unskilled individuals; • skills development of current and future employees; • provision of business opportunities for enterprises in maintenance, transportation, pork product sales both locally and further away, and; • provision of more affordable pork products locally.	The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended: • The screening of all employees and contractors coming on to site must continue through duration of the pandemic; • Registers of all employees and contractors entering the site must be kept for tracking purposes should an employee or contractor test positive for the virus; • Social distancing, the wearing of masks and sanitizing must continue on site for all employees and contactors; • Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities to reduce the need to source labour from far places which bring increased risks associated with the virus; and • Similarly, local businesses, contractors, suppliers and service providers in the immediate area must be considered first, for any required supplies and services.	Negative Direct & Indirect	Likely	Definitely	Definitely	Unlikely	Partly	Site & Local	Site & Local	Medium-term	Short-term	Low	Low

LOCAL ECONOMY AND EMPLOYMENT OPPORTUNITIES	• If the proposed Rendering Facility is approved, no adverse economic and employment impacts are expected, but the following positive impacts are anticipated: • Stimulation of the local economy through expansion of the Ambleside Meats enterprise through diversification of the local economy; • Directly and indirectly provide local job opportunities for skilled, semi-skilled and unskilled individuals; • Skills development of current and future employees; • Provision of business opportunities for enterprises in maintenance, transportation, pork product sales both locally and further away, and; • Provision of more affordable pork products locally.	• The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended: • Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities. • Local businesses, contractors, suppliers and service providers in the immediate area must be considered first, for required supplies and services. services from further afield.	Positive Direct	Highly Likely	Likely	Definitely	-	-	Local & Provincial	Local & provincial	Short term	Long term	High Positive	High - Positive
NEED AND DESIRABILITY	If the proposed Rendering Facility is approved, the following positive needs and desirability impacts are expected, no adverse impacts are anticipated: • Improvement and stimulation of the local economy through expansion of the Ambleside Meats enterprise; • Directly provision of local job opportunities for skilled, semi-skilled and unskilled individuals; • Skills development of current and future employees; • Provision of business opportunities for enterprises in maintenance, transportation, pork product sales both locally and further away; • Provision of more affordable pork products locally; • Sustainable use of and protection of water resources and environmental features in and around the site will be ensured and regulated through issued authorisations, and; • Waste minimization and recycling and re-use of waste will be promoted.	The proposed Rendering Facility appears to overall offer positive socio-economic benefits. However, for these benefits to be fully realized, the following is recommended: • Where possible, employment opportunities required at the proposed Rendering Facility must include labour from surrounding local communities; • Local businesses, contractors, suppliers and service providers in the immediate area must be considered first, for required supplies and services. services from further afield; • Compliance to conditions contained within any issued Environmental Authorisations, Waste Management Licenses, Water Use Licenses or General Authorisations must be ensured through on-going implementation and monitoring; • Detailed waste records must be maintained; and • Water Quality Monitoring by the Applicant must continue.	Positive Direct and Indirect	-	Definite	Definite	-	-	Local	Local	Long Term	Long Term	High Positive	High - Positive

PLANNING INITIATIVES	• The facility complies with all of the Planning Initiatives, most notably job creation, skills development and economic and environmental sustainability. In addition, the proposed development will directly support the objectives of the eThekwini Metro's Eight Point Plan. • The location of the proposed development is in line with the eThekwini Metro's IDP and SDF, which reflect the development goals and objectives of the abovementioned Planning Initiatives. • No adverse social or socio-economic impacts are anticipated from the proposed Rendering Facility.	• None.	Positive Direct and Indirect	-	Definite	Definite	-	-	Local & Provincial	-	Medium-term	Medium-term	High Positive	High - Positive
CULTURAL AND HISTORICAL RESOURCES	• The proposed Rendering Facility will be installed within an existing warehouse on site and so there will be no disturbance to the soil or surrounding land scape. No digging will be required; • The proposed site is no longer in a natural state but has instead undergone decades of transformation through the piggery, abattoir and associated farm operations, which has been in operation for over 50 years. As such potential heritage impact are minimal to none, as confirmed through the Desktop Screening Assessments; • As the site is already modified and transformed and because the Rendering Facility will be placed within an existing warehouse, the presence of fossils is highly unlikely. However, if fossils are found on site, it is likely that they will have a low ranking in terms of their significance and importance; and • No heritage sites, features or graves were identified on the property, and the area is not part of any known cultural heritage.	• Attention is drawn to the National Heritage Resources Act (Act No. 25 of 1999) which requires that projects that expose archaeological or historical remains must cease immediately, pending evaluation by the Provincial Heritage Resources Authority; and • Installation and operational activities must cease immediately should excavation of alluvial sediments reveal paleontological material, and a Palaeontologist must be contacted to conduct a site visit.	Negative Direct	Highly likely	Unlikely	Unlikely	Possible	Possible	Site & Local	Site & Local	Medium-term	Medium-term	Medium	Low
SURROUNDING LANDUSE AND AESTHETICS	• The proposed project is to take place on a property with existing land uses such as the existing abattoir facility, farming activities, farming infrastructure, grazing lands, two (2) slurry dams, sheds, and housing. Thus, the site and surrounding land is already greatly modified and transformed; • The proposed Facility will not alter the sense of place associated with the site as the ; • The facility will be located within an existing warehouse on site, therefore, no additional building will be required, there will be no change to land use, and the aesthetics of the site; and • The site is surrounded by pasturelands, livestock farming and agri-industrial related industries and therefore will not represent a change compared to the surrounding land uses.	• The proposed development must adhere to the design and installation plan and remain within the footprint of the existing warehouse; • All lighting at the Rendering Facility must be facing downwards and inwards to minimise impacts on surrounding landowners; • Removal of alien invasive vegetation, and rehabilitation and revegetation of bare and disturbed areas must be ongoing; • The planting of non-indigenous vegetation must be prohibited; and • Noise, dust, air quality and odour nuisances must be controlled, as is stipulated in the EMPr and the manufacturer guidelines in the design specification sheet.	Negative Direct & Indirect	Partly	Likely	Fair	Not Possible	Possible	Site & Local	Site & Local	Long-term	Medium-term	Medium	Low

TRAFFIC, ROADS AND ACCESS	• Increased use of these roads and access roads within the property may result in accelerated deterioration of the roads; however, the proposed project will result in an insubstantial increase in the number of vehicles utilising the P11 and P294 to access the Facility on a daily basis; and • Excessive speed poses a threat to both road users and animals, therefore, speed control measures on site must be adhered to.	• Warning signage must be erected to warn motorists of slow moving vehicles; • Speed limits along the access roads to the abattoir facility and within the property must be adhered to at all times; • Maintenance of the access roads and within the property must be undertaken; • If needed, dust suppression measures must be implemented during dry and windy conditions (i.e. spraying of water or applying Dustex); and • Vegetation along the access roads must be regularly mowed to improve visibility.	Negative Direct	Partly	Definitely	Fair	Partly	Possible	Site & Local	Site & Local	Short-term & Medium-term	Short-term & Medium-term	Medium	Low
NOISE, DUST, AIR QUALITY AND ODOUR NUISANCES	• Minimal noise impacts are expected; • Minimal noise impacts are expected; • Dust from the graded internal access road on site may occur; • Dust on the vegetation bordering internal dust roads has the potential to reduce the efficacy of certain pesticides and this their effectiveness in controlling pests is reduced; • Odour can be generated during the Rendering process itself as well as from the breakdown of Rendering equipment and machinery; • Odour from the Composting Facility has the potential to impact surrounding areas. However, odour from this facility is anticipated to be reduced as inputs (waste volumes and type) will be changed; Furthermore, the Composting Facility is well managed and no complaints have been received in the past regarding odour, nor was this raised as an issue during engagement with neighbours and the I&APs.	• Noise must be reduced at the source wherever possible; • Noise from the Crusher will be controlled and likely have no impact as the machinery is enclosed within a machine guard which buffers noise; • The existing Composting Facility and abattoir and the proposed Rendering Facility are located 425 m from the nearest house and the Winterton Town; • The Rendering Plant machinery must be maintained in good working order, run according the prescribed and approved Standard Operating Procedures and serviced and maintained regularly. This will ensure that it will not generate excessive noise, air pollution or waste; • Traffic must be controlled on site according to recommendation in the section above; • Speed limits along the access roads to the abattoir facility and within the property must be adhered to at all times; • If needed, dust suppression measures must be implemented during dry and windy conditions (i.e. spraying of water or applying Dustex); • Both the Composting Facility and the proposed Rendering Plant must remain located according to the approved Layout Plan. • There must be a purposeful movement away from composting of solid abattoir waste, and a movement to composting 'harvesting waste' instead. • Masking agents must be used to inhibit or neutralise odour nuisances from the Composting Facility if required; and The Rendering Facility has built in odour and vapour control mechanisms which prevent the emission of potential odour and air pollution to the atmosphere.	Negative Direct	Partly	Definitely	Fair	Partly	Partly	Site &Local	Site & Local	Short Term	Short Term	Med	Low

SECURITY	• Potential trespassing of employees onto surrounding properties; • Potential for employees / outsiders to cause damage to the property and surrounding properties during any protest action; • Potential for illegal trespassing onto site and illegal occupation of the site, and; • Potential risks associated with unpredictable looting and vandalism.	• Strict security measures must be put in place and remain in place throughout the project lifespan; • Access onsite and offsite must be controlled be a screening process and register system to protect employees, the premises, assets and information; • Employees must be prohibited from any unauthorised entry of surrounding properties; • Trespassing onto the site and the surrounding properties by unauthorised personnel must be prohibited; • Lawful disciplinary action must be undertaken for any unlawful protest action and subsequent damage to property, and • New employees must be adequately screened prior to being employed.	Negative Direct	Partly	Fair	Unlikely	Partly	Possible	Site	Site	Short-term	Short-term	Medium	Low
TOPOGRAPHY	• The downwards slope of the general topography towards the Little Tugela River (west) may potentially result in the channelling of uncontrolled stormwater and pollutants down towards the river.	• All stormwater system must be adequately maintained; and • The irrigation piping system and drain of the Composting facility must be monitored regularly for leaks and cracks to ensure that no runoff or seepage from the Composting Facility is reaching the Little Tugela River.	Negative Direct and Indirect	Likely	Fair	Unlikely	Partly	Possible	Site & local	Site	Medium-term	Short-term	Med	Low
CLIMATE	• None.	• None.	-	-	-	-	-	-	-	-	-	-	-	-

CLIMATE CHANGE	• The proposed activity plays an important role in building resilience to climate change by improving food security and creating employment opportunities; • The proposed development may contribute to climate change to a minor extent and at a local scale through energy usage, water usage and waste generation during the installation and operational phases. These impacts are anticipated to be very small; and • The proposed activity may be impacted by flood events, drought, extreme weather events and temperature changes.	• All development infrastructures must promote the efficient use of energy, water and limit wastage of resources: • The proposed activity plays an important role in mitigating climate change by utilizing alternative Photovoltaic Solar Power, thereby, reducing the volume of greenhouse gases in the general region. Alternative power will be used to supplement the Rendering Facility's energy demand. • The system is already set up and is powering the abattoir on site, the Rendering Facility will simply be connected to the existing system. • Rainwater harvesting and the installation of JoJo tanks will be incorporated into the Rendering Facility and existing abattoir to supplement water demand on site. Rainwater harvesting is a cost effective and environmentally sustainable option for water supply and will be suited to the Rendering Facility's water demand needs on site. • Water resource usage has been ensured to remain within the allowed values for the catchment as outlined by the Department of Water and Sanitation (DWS). • Waste generation must be minimized and waste must be managed in an environmentally responsible manner and in accordance with the waste management hierarchy. The EMPr outlines specific waste management mitigation measures which comply with the waste management hierarchy: • Ambleside Meats CC currently recycle their general / municipal waste on site which is then collected by a service provider. • All abattoir solid waste is currently composted at the Composting Facility. With the addition of the Rendering Facility, no solid waste will need to be taken to the Composting Facility as it will be rendered / re-processed into value-added products such as tallow and carcass meals. • The Rendering Facility produces little to no waste from its operations. The only waste anticipated will be the generation of wastewater from the vapour recovery system. This wastewater will be collected and taken to the two (2) existing slurry dams on site. • The proposed development / activity / infrastructure must be implemented in	Negative Direct & Indirect	Partly	Likely	Fair	Partly	Possible	Site & Local	Site & Local	Medium-term	Medium-term	High	Low

		accordance with approved layout plans which have been planned and assessed to ensure that locations and layouts of the least environmental impact and risk are utilized. • The proposed development / activity / infrastructure must ensure that they are duly authorized through a Water Use license and Waste Management License. • All relevant conditions and monitoring requirements associated with these authorisations must be complied with. • The proposed development / activity / infrastructure must ensure the protection of on-site environmental features which thereby protects ecological infrastructure important for building climate change resilience. • This will be achieved by not developing within the 1:100 year floodline or 32 m buffer. The Rendering facility will also be installed within an existing warehouse on site, therefore, no additional areas will need to be disturbed.											
GEOLOGY AND SOILS	• Since the proposed Rendering Facility will be established within an existing warehouse and the fact that the Composting Facility and abattoir are already existing, disturbances to soils and geology are not anticipated.	• Stormwater must be adequately managed; and • Runoff from the Composting Facility must be well managed.	Negative Direct and Indirect	Partly	Definitely	Unlikely	Partly	Possible	Site & Local	Site	Medium-term	Short-term	Med	Low

SURFACE WATER	• Some impacts likely to be linked to the Composting Facility were evident: the Aquatic Assessment found dense riparian vegetation and bright green filamentous algae growth on the river bank slightly downstream of the Composting Facility and in the deep pool below this point. These indicate the potential input of faecal-rich particles from the Composting Facility through ground water seepage. Other sources could be pasturelands and grazing lands on the opposite bank, and the application of manures and fertilisers on lands and banks bordering the Little Tugela. • The Aquatic assessment found that the overall state of the Little Tugela River was 'Good' with pulses of contaminants entering the River from activities upstream of the site and potentially from the site. This was further confirmed by an In-stream integrity class rating of C and B which are indicative of 'Moderately modified' and 'largely Natural'. However, considering the extensive infrastructure put in place to capture stormwater, wash-water, the 2x slurry dams and drainage capture system for the Composting Facility, the impact is likely coming from a combination of activities along the River bank and from upstream activities of the town and farmlands. • Potential for introduction of hazardous materials into the surrounding water resources through leaking wash-water systems from the Rendering Facility; • Potential for incorporation of pollution into stormwater runoff; • Reduce environmental impact should the Rendering Facility be approved and installed and abattoir waste is Rendered rather than composted; • The Ambleside Dalton and surrounding abattoirs will also benefit from positive environmental impacts as the proposed Rendering Facility will take in solid waste from the Dalton abattoir and surrounding abattoirs; • Improved stormwater management specifically around the wash-down area and warehouse within which the Rendering Facility will be established; • Improved water quality of the Little Tugela River and the riparian habitat.	• Ponding and excessive runoff of at the Composting Facility must be avoided. The closed piping irrigation system should continue to be used as well as maintained to ensure no runoff is directed towards the Little Tugela River. • All stormwater and wash-water must be diverted away from the Little Tugela River. • No non-indigenous vegetation to be planted on site. • The riparian margin of the Little Tugela River should be checked frequently for inputs of pollutants from leaking pipes or infrastructure associated with the existing Composting Facility and abattoir and the proposed Rendering Facility. • Any Water to be discharged directly into the Little Tugela River must be authorised through a Water Use license Application. • The Applicant must continue their monthly SANS water quality testing on site. The sample site for the SANS water quality testing must be moved further downstream to incorporate the abattoir, Composting Facility and proposed Rendering Facility operations.	Negative Direct and Indirect	Likely	Likely	Fair	Partly	Possible	Site & local	Site	Long-term	Medium-term	High	Low

FLORA	• No floral species of conservation concern were identified within the proposed development site and it is unlikely that any would occur within the property due to it already being modified and transformed; • Bare and disturbed areas may result in the infestation of alien invasive vegetation; and • If alien invasive vegetation removal does not take place on a regular basis, these vegetation species will more than likely invade the area again.	• The lawns of kikuyu grass must be mowed and maintained on a regular basis; • Removal of alien invasive vegetation, and rehabilitation and re-vegetation of bare and disturbed areas must be ongoing; and • The planting of non-indigenous vegetation must be prohibited.	Negative Direct and Indirect	Fair	Fair	Unlikely	Partly	Possible	Site & Local	Site & Local	Medium-term	Short-term	Medium Negative	Low
FAUNA	• No faunal species of conservation concern were identified within the proposed development site and it is unlikely that any would occur within the property due to it already being modified and transformed.	• There is potential for the riparian system associated with the Little Tugela River to support faunal species of conservation concern. Thus, the recommended mitigation measures included in the EMPr and Aquatic Assessment (Refer to Appendix O) must be adhered to. Furthermore, monthly water quality monitoring of the borehole must continue (Refer to Appendix Q).	Negative Direct and Indirect	Fair	Partly	Unlikely	Partly	Possible	Site	Site	Medium-term	Short-term	Short Negative	Low

9. ENVIRONMENTAL MANAGEMENT PROGRAMME

In terms of the Regulations stated in Chapter 8 of the NEMA an EMPr (Refer to Appendix P) has been compiled which contains guidelines for ensuring that all activities associated with the proposed project are carried out in an environmentally responsible and acceptable manner. Specific management objectives and mitigation measures have been specified for the entire duration of the development.

The EMPr is based on the principles of the NEMA as well as the recommendations made in this Report. It identifies roles and responsibilities of management personnel on site, and will be used as a framework for environmental compliance monitoring and reporting, should the proposed project be authorised.

An EMPr is a legally-binding document that contains guidelines with which Applicants must comply, and which must be strictly implemented and regularly monitored. If this is done, it is likely that the majority of the potentially adverse impacts associated with proposed project can be minimised or prevented. An ECO must be appointed by the Applicant to ensure compliance with the EMPr during the installation phase and operational phase. Should non-compliance occur, this must be brought to the attention of the DEDTEA, who will conduct the required prosecution procedure.

Specific management objectives and mitigation measures are specified in the EMPr for the entire duration of the operation, including the following stages:

- Installation activities;
- Operation of the activity;
- Rehabilitation of the environment; and
- Closure (decommissioning), where relevant.

10. POSITIVE AND NEGATIVE IMPLICATIONS OF THE PROPOSED PROJECT

POSITIVE SUMMARY:

- Both temporary and permanent jobs will be created during the planning, installation and operational phase of the proposed project;
- The proposed Rendering Facility will ensure the long-term sustainability of the abattoir facility and farm, and the job security of the labour employed at the abattoir facility;
- The Rendering Facility will diversify the economic reach of the existing abattoir and spin-off economic benefits are anticipated from this diversification through value-added products;
- It will result in the generation of employment opportunities, skills development, income generation, improved quality of life and standards of living. This has the potential to have positive impacts on poverty, malnourishment and food insecurity rates in KwaZulu-Natal;
    - The abattoir facility currently employs 30 labour. With the proposed project, an additional two (2) permanent and five (5) semi-skilled labour will be employed. A minimum of 20 (seven (7) direct and 13 indirect) skilled and semi-skilled maintenance and repair contractors will be required for the upkeep of the facility;
    - In KwaZulu-Natal, on average, one (1) job supports seven (7) people, thus, with the proposed project, a total of 140 people are likely to benefit from employment opportunities provided by the Rendering Facility;
- The potential for odour nuisance will be reduced as waste will be rendered rather than composted.
- The Rendering Facility will have a significant positive impact on the surrounding environment, ecosystems and riparian system. It is anticipated that with the addition of the Rendering Facility, the potential *E.coli* effect currently occurring on the Little Tugela River (although minor), will be resolved.
- Rainwater harvesting will be established on site to supplement majority of the Facility's water demand. This water can also be utilised for the existing abattoir on site, thus, reducing water demand even further.
- Additional alternative solar Photovoltaic capacity will be installed on site which will allow other farming activities on site to be supplied by alternative power rather than depending on solely on Eskom supplies. This will reduce the overall energy consumption by a significant amount (unknown at this stage);
- The proposed Rendering Facility will fall under the existing Waste Management Plan which recycles all domestic waste on site. This waste is collected by a certified service provider;
- The existing abattoir will experience a full life cycle of its production supply chain, as solid waste will now be re-processed (rendered) into new economically viable products such as tallow and carcass meals.
- No heritage sites, features or graves were identified on the property, and the area is not part of any known cultural heritage;
- The site is already modified and transformed, therefore fossils which may be present will have a low ranking in terms of their significance and importance;
- No floral species of conservation concern were identified within the proposed site and it is unlikely that any would occur within the property due to it already being modified and transformed.
- No sensitive faunal species were identified on site and will not be impacted by the proposed Rendering Facility.

NEGATIVE SUMMARY:

- There is potential for the proposed project to impact on the Little Tugela River water quality if not managed properly, however, specialists studies have proven this to be a very small probability, and rather that the water quality will improve;
- Potential for crime in the area to increase as a result of labour trespassing onto surrounding properties and potential job seekers seeking employment at the abattoir facility if not properly policed;
- The proposed project will result in a minimal, if any, increase in the number of vehicles utilising the main Springfield Road to access the abattoir facility and Rendering Facility on a daily basis;
- Sediment rich stormwater runoff has the potential to enter into the Little Tugela River and thus negatively

impacting on this system if not managed correctly; and

10.1 POSITIVE AND NEGATIVE IMPLICATIONS OF THE IDENTIFIED ALTERNATIVES

For this project, a variety of different alternative types were investigated.

DO-NOTHING

The “do-nothing” option would mean that the proposed Rendering Facility will not be established and the Ambleside Meats Abattoir will remain in its present state.

POSITIVE

- The potential negative impacts that may result from the proposed project will not apply.

NEGATIVE

- The “do nothing” option would result in negative economic impacts in terms of loss of job opportunities and local goods and services utilization, and associated impacts, such as low-income generation, loss of improved quality of life and standards of living etc.;
- Reduced sustainability of existing operations on site,
- Environmental impacts will continue to occur, although minor;
- Potential for job losses for existing employees;
- The diversification of the market the abattoir operates in will not occur, which means that the Okhahlamba Local Municipality will likely not receive any benefits;
- It could also result in pork facilities seeking alternative pork abattoirs; and
- The availability and profitability of locally produced pork products will decrease.

ALTERNATIVE PROPERTY OR LOCATION

No alternative properties or locations were assessed as part of the Basic Assessment Process.

POSITIVE

- Far less costs than constructing an additional abattoir facility and associated infrastructure on an alternative property; and
- The necessary technology, equipment, cold storerooms, machinery, access roads, effluent treatment ponds etc. are currently in place.

NEGATIVE

N/A.

ALTERNATIVE TYPE OF ACTIVITY

No alternative activity types were assessed as part of the Basic Assessment Report.

POSITIVE

- The proposed project is specifically for the establishment of the proposed Rendering Facility and authorisation of existing waste management and water uses on site;
- The existing pork abattoir has been operational for many years, and currently helps towards meeting the pork product demand in Winterton and the surrounds, and the proposed Rendering facility will further aid that operation; and
- The Applicant also has both the experience and expertise in this profession.

NEGATIVE

N/A

ALTERNATIVE LAYOUT OR DESIGN

Layout:

No alternative layouts were assessed as part of the Basic Assessment Process.

POSITIVE

- The preferred layout is considered optimal;
- The proposed project is to take place on previously disturbed area, comprising hardened areas, warehouse infrastructure and roads;
- The proposed Facility will be connected to the existing abattoir facility;
- Most of the services are currently in place to allow for the proposed expansion; and
- Any waste water from the proposed Facility will be taken to the existing slurry dams on site.

NEGATIVE

N/A

Design:

No alternative designs were assessed as part of the Basic Assessment Process.

POSITIVE

- The 'preferred design is considered optimal;
- The proposed project is to take place on previously disturbed area, comprising hardened areas, roads and an existing warehouse;
- The proposed expansion will be connected to the existing abattoir facility; and
- Most of the services are currently in place to allow for the proposed expansion.

NEGATIVE

N/A

ALTERNATIVE TECHNOLOGY

The manufacturer, Mavitech, of the Rendering Facility equipment have provided some design alternatives in the form of optional or additional operational facilities which the Applicant can choose from. These alternatives do not change the daily input capacity of abattoir solid waste, or any parameters which would change the nature of the Environmental Authorisation.

POSITIVE

- The proposed project comprises state of the art, and new 'best practice' technology to ensure that the rendering process is as efficient, stream-lined, water conscious and environmentally friendly as possible;
- The technology proposed to be installed will ensure that water use is continuously minimised and monitored;
    - Water for the vapour recovery system will be recycled and reused within the system so as to reduce water consumption; and
- The lighting and machinery proposed to be installed will be energy efficient. Due to the need for the abattoir solid waste to be kept either cold or frozen, alternative solar power is proposed to be installed in case of power outages as well as to supplement daily energy consumption.

NEGATIVE

N/A

ALTERNATIVE OPERATION ASPECTS

No alternative operational aspects have been assessed as part of the Basic Assessment Process.

POSITIVE

- The proposed Rendering Facility will allow for an additional eight-to-nine-hour shift. During this shift, a maximum of 22 tons of raw material can be processed / rendered if both 11 ton / day plants are operational. The Facility will start with the processing of 11 tons of abattoir waste per day and will increase to 22 tons per day as the Facility becomes more established. The operation of the Rendering Facility will be according to the specifications of the manufacturer as this is environmentally best practice and the most efficient method of running the Facility. The processing of the raw material will run in two (2) batches during the 4.5 hour turnaround time per charge, nine (9) hours in total including loading and unloading. These operational times have been calculated by the manufacturer as being the most energy efficient and economically efficient. Given the positive impacts associated with the state of the art, and new 'best practice' technology, alternative activity operational aspects have not been assessed as part of the Basic Assessment Process.

NEGATIVE

N/A

11. EAP RECOMMENDATIONS & CONCLUSION

The EAP wishes to reiterate that the information provided in this report is true and based on factual information provided by the Specialists and I&APs.

Signed: Date: 8 February 2022

Signed:  Date: 8 February 2022

The EAP is of the opinion that the proposed activity should be authorised, provided the following activities are made conditions of the Environmental Authorisation:

Watercourses

- The riparian margin of the Little Tugela River and activities and structures at Ambleside Meats should be regularly inspected for leaks and discharges, or any evidence of such, to determine any potential sources of contamination entering the river from the abattoir.
- Wash water / wastewater may not be freely discharged to the natural environment.
- Wastewater must not be combined with clean stormwater runoff and must be appropriately disposed of / treated.
- Stormwater runoff must be adequately controlled so as not to cause any erosion of the landscape and / or banks of the Little Tugela River.
- Any water to be discharged directly to the Little Tugela River must be authorised through a Water Use License Application.
- At a minimum, all water leaving the site must meet the required water quality for the receiving environment, that is, as per the South African Water Quality Guidelines for Aquatic Ecosystems (DWAF, 1996), or as stipulated in the conditions of the Water Use License.
- Any by-product, residual solid, or semi-solid waste material from the Rendering Facility must be suitably contained until it can be appropriately disposed of (e.g., impermeable containment or designated lined facility). This area must be located above the flood line / outside of the riparian margin to prevent any risk of direct contamination or run-off to the Little Tugela River.
- Continued monthly monitoring of microbio parameters must continue. The sampling site must be located downstream of the abattoir, Composting Facility and proposed Rendering Facility.

General

- The EMPr must be strictly enforced.
- No waste management activities must take place outside of the approved development footprint.
- During the construction phase, the installation and associated activities should be monitored monthly by an independent Environmental Control Officer (ECO).
- During the operational phase, the activities must be monitored monthly by an appointed representative, responsible for enforcing compliance with the EA, EMPr and any other relevant standards or licenses.
- The construction of the Rendering Facility must be in accordance with the approved design and layout and specifications.
- Local businesses and unemployed people in the immediate area must be considered first, before employing labour and services from further afield.
- During operation, waste registers and records must be maintained.

CONCLUSION

This report concludes that the authorisation of the existing Composting Facility and the proposed Rendering Facility will result in positive socio-economic impacts and minimise environmental risks associated with the

pork production processes. Overall there is sufficient current and predicted future demand for these activities to be considered as feasible and adequate mitigation measures have been proposed in this report to ensure that the identified potential negative impacts will be minimal to none.

The EAP would like to highlight the following:

- The Ambleside Meats CC abattoir is one (1) of the primary abattoir facilities and supplier of pork products in the area and surrounds. Their continuation is essential to the economy of the Okhahlamba Local Municipality;
- The incorporation of the Rendering Facility into the abattoir will promote job creation, skills transfer, and will diversify the markets in which the abattoir currently operates as new suppliers and buyers will enter the supply chain;
- Furthermore, the Rendering Facility is the best environmental option for the abattoir as it will ensure that the negative impacts associated with the Composting Facility are minimized and ultimately negated;
- The authorisation of existing and proposed waste activities on site will ensure that all resources are conserved and utilised in a sustainable manner;
- The proposed project is in line with the current and predicted future demand for pork products;
- The proposed project will benefit surrounding communities and their families, as well as local businesses and suppliers through the increased demand for pork products. This in turn has the potential to have positive impacts on poverty, malnourishment and food insecurity rates;
- The proposed project will ensure the long-term sustainability of the abattoir facility, and the job security of the labour already employed at the abattoir facility;

The EAP concludes that no fatal-flaws have been identified during the Basic Assessment Process, and, provided that the EMPr and recommendations made in this report are strictly adhered to, there should be no significant, detrimental impacts on the environment, in fact numerous positive impacts will be realized as a consequence of the proposed development.

12. APPENDICES