



ENVIRONMENTAL SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF AN IRRIGATION DAM, EGG-LAYING BATTERIES, AND INTENSIVE SHEEP FARMING, WITHIN VREEDE 4317/HS FARM IN NEWCASTLE LOCAL MUNICIPALITY, UNDER AMAJUBA DISTRICT MUNICIPALITY; KWAZULU-NATAL.

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SAZI Environmental Consulting cc.

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Indemnity

This report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken. The findings, results, observations, conclusions, and recommendations given in this report are based on the author's best scientific and professional knowledge as well as information available at the time of the study. Therefore, the author reserves the right to modify aspects of the report, including the recommendations, if and when new information may become available from ongoing research or further work in this field, or pertaining to this investigation.

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EXECUTIVE SUMMARY

I. INTRODUCTION

Sazi Environmental Consulting cc was appointed by Rust en Vreede Farming (Pty) Ltd to obtain an Environmental Authorisation and Water Use Licence in support of the proposed development of an irrigation dam, egg-laying batteries, and intensive sheep farming, within Vreede 4317/HS farm in Newcastle Local Municipality, under Amajuba District Municipality; KwaZulu-Natal. The EIA process is being undertaken in accordance with the requirements of the National Environmental Management Act (NEMA; Act No. 107 of 1998).

Scoping is an important part of the EIA process, as it helps to ensure that the impact assessment is appropriately focussed. The main objectives of the Scoping process are:

- To engage with stakeholders at an early stage of the development so that they may contribute their views with regards to the proposed project'
- To identify potential issues and impacts associated with the proposed development.
- To define the scope of the Environmental Impact Assessment (EIA).
- To define the methodology that is required for the EIA.
- To describe the plan of study for the EIA.

II. SITE DESCRIPTION

The proposed development is located within the Vreede 4317/HS farm in Newcastle Local Municipality, under Amajuba District Municipality, KwaZulu-Natal. The site is boarded by Newcastle town to the North-East, Dannhauser to the South-East, Cecelia to the South, and Memel to the North West (Figure 1). The site is within Ward 1 of the Newcastle Local Municipality. Access to the site can be obtained through an existing road; P39-1, and internal roads. The Vreede 4317/HS farm is approximately 660.3618 hectares in extent. The development site is located in an area zoned for agricultural purposes as per Newcastle Local Municipality Spatial Development Framework (SDF and IDP; 2012 TO 2017).

III. ENVIRONMENTAL REGULATORY FRAMEWORK

The legislative requirements that will be considered as part of the proposed project in compliance with environmental requirements (NEMA; EIA regulations 2017) include the following:

- ❖ *GNR 327, April 2017– Activity 5, 12, and 19*
- ❖ *GNR 325, April 2017– Activity 15 and 16*

❖ GNR 324, April 2017– Activity 14

A water-use license in terms of the National Water Act, 1998 (Act No 36 of 1998) will also be required since there will be a construction of an instream-dam within the property and other development within the 500m radius of watercourses.

Section 21

- ❖ *s21(a); taking water from a water resource.*
- ❖ *s21 (b): storing of water.*
- ❖ *s21 (c): impeding or diverting the flow of water in a watercourse.*
- ❖ *s21 (i): altering the bed, banks, course, or characteristics of a watercourse.*
- ❖ *S21(g): disposing of waste which may detrimentally impact on a water resource.*

IV. SPECIALIST STUDIES

- ❖ Aquatic Assessment.
- ❖ Biodiversity Assessment.
- ❖ Geohydrology Studies.
- ❖ Geotechnical Studies.
- ❖ Heritage Assessment.
- ❖ Palaeontological Studies.
- ❖ Wetland Assessment And Delineation.

V. PUBLIC PARTICIPATION PROCESS

The public participation process is conducted in line with Chapter 6 of the National Environmental Management Act (Act No. 107 of 1998) EIA requirements (2014, *as amended*); engagement through consultation with relevant authorities and interested and affected parties from the community by a form of; public meetings (Focus group meetings), site notices, newspaper advertisement which is published to inform the public about the EIA process.

The following parties have been identified as the key stakeholders:

- ❖ The Department of Agriculture, Land Reform, and Rural Development (DALRRD).
- ❖ The Department of Economic Development, Tourism, and Environmental Affairs KwaZulu-Natal Province (DEDTEA).
- ❖ The Department of Water and Sanitation.
- ❖ Ezemvelo KwaZulu-Natal Wildlife.

- ❖ Amafa (SAHRA; Provincial Heritage Resources Authority)
- ❖ Amajuba District Municipality.
- ❖ Newcastle Local Municipality.
- ❖ The Ward Councillor (Ward 1).

VI. CONCLUSION AND RECOMMENDATIONS

The specialists have identified various key mitigation measures that could address, to some meaningful level, the significance of some of the identified impacts were assessed. Where impacts cannot be mitigated it is possible to consider trade-offs. In the event that the Applicant and Dam Engineer can effectively implement said mitigation measured and/or trade-offs through improving the dam design and management conditions, the final phase of the environmental process, namely the impact assessment phase, will see a final evaluation of the proposed activity. It is evident that the most critical aspects of the proposal revolve around the potential impact of impounding water (i.e. taking water from the system) and the loss of aquatic habitat.

Issues identified through this scoping study as being potentially associated with the proposed developments include impacts on biodiversity and ecological processes, habitat alteration and impacts to fauna, social impacts, potential impacts on heritage sites, impacts on soil, and impacts on the water resources. The majority of potential impacts identified to be associated with the construction and operation of the proposed developments are anticipated to be localised and restricted to the proposed site. A detailed sensitivity map has been compiled for with an objective to indicate areas which have been marked as potentially sensitive Rust en Vreede Farming (Pty) Ltd has provided two alternatives (the proposed site and an alternative 1) for consideration within the Scoping and EIA phase.

During the time of assessment, a number of environmental activities were identified to be triggered by the proposed development. Since the proposed development will be done in an area that is already disturbed and developed, there will be low impact and no fatal flaws caused by the proposed development. Potential environmental impacts have been identified and will be further investigated in the EIA phase.

VII. REQUIREMENT FOR AN SCOPING AND EIA PROCESS

The construction and operation of the proposed development within the Vreede farm are subject to the requirements of the Environmental Impact Assessment Regulations (2014 EIA Regulations, as amended) in terms of the National Environmental Management Act (NEMA, Act 107 of 1998, as amended). NEMA is the National legislation that provides for the authorisation of certain controlled activities known as “listed activities”. In terms of Section 24(1) of NEMA, the potential impact on the environment associated with these listed activities must be considered, investigated, assessed, and reported on to the competent authority (the decision-maker) charged by NEMA with granting of the relevant environmental authorisation.

In terms of the EIA Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998, Rust en Vreede Farming (Pty) Ltd requires authorisation from the Department of KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA), for the construction and operation of the proposed Vreede farm developments.

In order to obtain an environmental authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations. An EIA is an effective planning and decision-making tool for the project developer as it allows for the identification and management of potential environmental impacts (and indicates whether potential environmental impacts can be avoided, minimised or mitigated to acceptable levels). It provides the opportunity for the developer to be fore-warned of potential environmental issues, allows for resolution of the issues reported on in the Scoping and EIA Reports as well as facilitating dialogue with interested and affected parties (I&APs).

In accordance with the requirements of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and associated regulations, the Applicant is applying for an Environmental Authorisation from the Department of KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) for the proposed project through the undertaking an S & EIA process as prescribed in GN R. 326 of the Environmental Impact Assessment (EIA) Regulations of 2017.

In terms of NEMA, the Scoping Report is submitted to the Competent Authorities as part of the decision making process with regard to the proposed developments. The Scoping Report is also intended to provide sufficient background information to other Stakeholders, non-statutory bodies, the general public, organisations, and local communities in order to obtain their commentary an input on the proposed development. The Scoping Phase of the EIA process identifies and describes the studies required within the EIA phase of the process. The

EIA phase will assess those identified potential environmental impacts and benefits associated with all phases of the project including design/planning, construction, and operation, and will also recommend appropriate mitigation for potentially significant environmental impacts.

The Scoping Report has been drafted in accordance with the Environmental Impact Assessment Regulations (2017) and adheres to the requirements contained in Appendix 2 of GNR 326 of 07th April 2017; as noted in Table 1 below.

Table 1: Content of an EIA Report (2017; EIA Regulations)

2017 EIA Regulations	Description of EIA Regulations Requirements for EIA Reports	Location in the report
	Appendix 2 (1)- A scoping report must contain the information that is necessary for a proper understanding of the process, informing all preferred alternatives, including location alternatives, the scope of the assessment, and the consultation process to be undertaken through the environmental impact assessment process, and must include—	
Appendix 2, Section (1) (a)	details of— (i) the EAP who prepared the report; and (ii) the expertise of the EAP, including a curriculum vitae;	Section 1.1 Appendix I1
Appendix 2, Section (1) (b)	the location of the activity, including: (i) the 21 digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; and (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section 2.1
Appendix 2, Section (1) (c)	a plan which locates the proposed activity or activities applied for at an appropriate scale, or if it is— (i) a linear activity, a description, and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	Section 2.1 and Appendix A1
Appendix 2, Section (1) (d)	description of the scope of the proposed activity, including— (i) all listed and specified activities triggered; (ii) a description of the associated structures and infrastructure;	Section 4.2
Appendix 2, Section (1) (e)	a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are	Section 4

	applicable to this activity and are to be considered in the assessment process;	
Appendix 2, Section (1) (f)	a motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred Location,	Section 5
Appendix 2, Section (1) ((h)(g))	a full description of the process followed to reach the proposed preferred activity, site and location of the development footprint within the site, including--	Appendix I2
Appendix 2, Section (1) ((h)(g))	<ul style="list-style-type: none"> (i) details of all the alternatives considered; (ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; (iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; (iv) the environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (v) the impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts— <ul style="list-style-type: none"> (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated; (vi) the methodology used in identifying and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; (vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (viii) the possible mitigation measures that could be applied and level of residual risk; (ix) the outcome of the site selection matrix (x) a if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and; (xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity, 	Section 6

Appendix 2, Section (i) (h)	a plan of study for undertaking the environmental impact assessment process to be undertaken, including	
Appendix 2, Section (i) (h)	<p>(i) a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;</p> <p>(ii) a description of the aspects to be assessed as part of the environmental impact assessment process;</p> <p>(iii) aspects to be assessed by specialists;</p> <p>(iv) a description of the proposed method of assessing the environmental aspects, (including a description of the proposed method of assessing environmental aspects) including aspects to be assessed by specialists,</p> <p>(v) a description of the proposed method of assessing duration and significance,</p> <p>(vi) an indication of the stages at which the competent authority will be consulted,</p> <p>(vii) particulars of the public participation process that will be conducted during the environmental impact assessment process;</p> <p>and</p> <p>(viii) a description of the tasks that will be undertaken as part of the environmental impact assessment process</p> <p>(ix) identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored</p>	Section 6
Appendix 2, Section (1) (j) (i)	<p>an undertaking under oath or affirmation by the EAP in relation to—</p> <p>(i) the correctness of the information provided in the report;</p> <p>(ii) the inclusion of comments and inputs from stakeholders and interested and affected parties; and</p> <p>(iii) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;</p>	Appendix I1
Appendix 2, Section (1) (k) (j)	an undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment	Section I1
Appendix 2, Section (1) (l) (k)	where applicable, any specific information required by the competent authority; and	-
Appendix 2, Section (1) (m) (l)	any other matter required in terms of section 24(4)(a) and (b) of the Act.	-

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LIST OF TERMS AND ABBREVIATIONS

BID	Background Information Document
CBA	Critical Biodiversity Areas
CR	Critically Endangered
DEFF	Department of Environment, Forestry and Fisheries (DEFF)
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPr	Environmental Management Programme
EN	Endangered
ESA	Ecological Support Areas
GIS	Geographic Information System
GN	Government Notice
HIA	Heritage Impact Assessment
IAPs	Interested and Affected Parties
NEMA	National Environmental Management Act (No 107 of 1998)
NEM:BA 2004)	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEM:PA of 2003)	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
NEM:WA	National Environmental Management Waste Act (Act No. 56 of 2008)
NFEPA	National Freshwater Ecosystem Priority Areas
NT	Near Threatened
NWA	National Water Act (No 36 of 1998)
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework

DEFINITION OF TERMS

Activity (Development)

An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.

Alternatives

Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity, and the operational aspects of the activity.

Applicant/Proponent

The project proponent or developer is responsible for submitting an environmental application to the relevant environmental authority for environmental authorization.

Biodiversity

The diversity of animals, plants, and other organisms is found within and between ecosystems, habitats, and ecological complexes.

Construction

The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.

Cumulative Impact

The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Decommissioning

The demolition of a building, facility, structure, or infrastructure.

Derelict Land

Means abandoned land or property where the lawful/legal land use right has not been exercised during the preceding ten year period (Regulation R326 of NEMA, 1998 (Act No. 107 of 1998)); Direct Impact Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation, or maintenance of activity and are generally quantifiable.

Ecosystem

A dynamic system of the plant, animal (including humans), and microorganism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterized by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous

Environment

In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants, and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

Environmental Assessment

The generic term for all forms of environmental assessment for projects, plans, programme or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments, and risk assessments.

Environmental Authorization

An authorization issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.

Environmental Assessment Practitioner (EAP)

The individual was responsible for planning, management, and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.

Environmental Management

Ensuring that environmental concerns are included in all stages of development so that development is sustainable and does not exceed the carrying capacity of the environment.

Environmental Management Programme (EMPr)

A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project.

Environmental Impact

Change to the environment (biophysical, social, and/ or economic), whether adverse or beneficial, wholly or partially, resulting from an organization's activities, products, or services.

Environmental Issue

A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.

Fatal Flaw

Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment, a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means.

General Waste

Household water, construction rubble, garden waste, and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.

Groundwater

Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.

Hazardous Waste

Waste that may cause ill health or increase mortality in humans, flora, and fauna.

Hydrology

The science encompassing the behavior of water as it occurs in the atmosphere, on the surface of the ground, and underground.

Important Areas

Sites that are important for the conservation of biodiversity in Gauteng Province

Interested and Affected Party (I&AP)

Any person, group of persons or organization interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.

Mitigate

The implementation of practical measures designed to avoid, reduce, or remedy adverse impacts or enhance beneficial impacts of an action.

No-Go Option

In this instance, the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.

Public Participation Process

A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.

Rehabilitation

A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.

Sensitive Environments

Any environment identified as being sensitive to the impacts of the development.

Stakeholder Engagement

The process of engagement between stakeholders (the applicant, authorities, and I&APs) during the planning, assessment, implementation, and/or management of proposals or activities.

Watercourse

Means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, pan, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998) and a reference to a watercourse includes, where relevant, its bed and banks. (Regulation R327 of NEMA, 1998 (ACT NO. 107 OF 1998)).

1 INTRODUCTION

Sazi Environmental Consulting cc was appointed by Rust en Vreede Farming (Pty) Ltd to obtain an Environmental Authorisation and Water Use Licence in support of the proposed development of an irrigation dam, egg-laying batteries, and intensive sheep farming, within Vreede 4317/HS farm in Newcastle Local Municipality, under Amajuba District Municipality; KwaZulu-Natal.

This document provides an assessment of the potential environmental legal framework and information on the potential environmental sensitivity associated with the proposed development site. In terms of sections 24(2) and 24D of the National Environmental Management Act (Act No. 107 of 1998), as read with the Environmental Impact Assessment (EIA) Regulations of GN R. 982, as amended by GN R. 326; the proposed development triggers a listed activity for which a Scoping and Environmental Impact Assessment Process is required in order for Rust en Vreede Farming (Pty) Ltd to obtain environmental authorisation for the construction and operation of the proposed developments.

1.1 DETAILS AND EXPERTISE OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

According to Appendix 3, section 3 (1) (a) of the EIA Regulations (2017), "An Environmental Impact report must.... include details of – i. The EAP who prepared the report; and ii. The expertise of the EAP, including curriculum vitae" In fulfillment of the above-mentioned legislative requirement, as well as Chapter 3, Section 13 of the EIA Regulations (2017), which states that, "an EAP.... must have expertise in conducting environmental impact assessments or undertaking specialist work as required, including knowledge of the Act, these Regulations and any guidelines that have relevance to the proposed activity", provided below are the details of the Environmental Assessment Practitioner (EAP) who prepared this Environmental Impact Report, as well as the expertise of the individual members of the study team.

1.1.1 SAZI ENVIRONMENTAL CONSULTING CC COMPANY PROFILE

SAZI Environmental Consulting cc (SAZI) is a specialist environmental consulting company that was established to provide holistic environmental services to public and private sector clients. The company is 100% black female-owned with level 1 B-BBEE status.

SAZI Environmental Consulting (SAZI) specialises in aquatic assessments, wetland delineations, Floodline assessment and stormwater management plans, Ecological Assessments, environmental authorisations (Environmental Impact Assessments and Basic Assessments), scoping reports, waste licence applications and audits, water use licence applications and audits, environmental management system development environmental compliance auditing, integrated water, and waste management plans, surface hydrology, surface, and groundwater monitoring, remediation of contaminated land and water resources, catchment assessments and management plans, land rehabilitation and land management services.

1.1.2 DETAILS OF THE EAP

Table 2 below outlines the project EAP's details.

Table 2: Project EAP's details

EAP	Anthoneth Matlala
Qualifications	BSc Life and Environmental Science
Affiliation	South African Council for Natural Scientific Professions (SACNASP, Cand.Nat.Sci. (Practice no. 121047): Environmental Science.
Company	Sazi Environmental Consulting cc
Physical Address	02 Morris Street West, Woodmead Ext 1; Sandton, 2191
Postal Address	P O Box 201, Carlswald, 1684
Telephone	010 442 4795
Cell phone	076 872 2336
Email	amatlala@sazienvironmental.co.za

1.2 PURPOSE OF THE REPORT

This document is intended to guide the EIA process and specialist studies by:

- ❖ Providing an overview of the legal requirements with regard to the proposed project, the proposed project description and anticipated environmental and social issues and impacts that will be further investigated in the EIA; and
- ❖ Setting out the scope of the EIA process and the Terms of Reference (ToR) for specialist studies and outlining the approach and methodologies to be used in the EIA process, e.g. the proposed impact rating methodology. This report will be submitted to EDTEA for their acceptance.

2 PROJECT BACKGROUND AND DESCRIPTION

2.1 PROJECT LOCATION

The proposed development is located within the Vreede 4317/HS farm in Newcastle Local Municipality, under Amajuba District Municipality, KwaZulu-Natal. The site is boarded by Newcastle town to the North-East, Dannhauser to the South-East, Cecelia to the South, and Memel to the North West (Figure 1). The site is within Ward 1 of the Newcastle Local Municipality. Directions to the proposed development with a current location being the Newcastle CBD, one has to head southwest on Murchison Street toward Voortrekker Street (650 m), slight left onto Montague Street (200 m), turn right at the 1st cross street onto Scott Street (850 m), continue onto Boundary Street (1.8 km), continue onto P39-1 (10.3 km) and your destination will be on the left. Access to the site can be obtained through an existing road; P39-1, and internal roads. The Vreede 4317/HS farm is approximately 660.3618 hectares in extent. The development site is located in an area zoned for agricultural purposes as per Newcastle Local Municipality Spatial Development Framework (SDF and IDP; 2012 T0 2017).

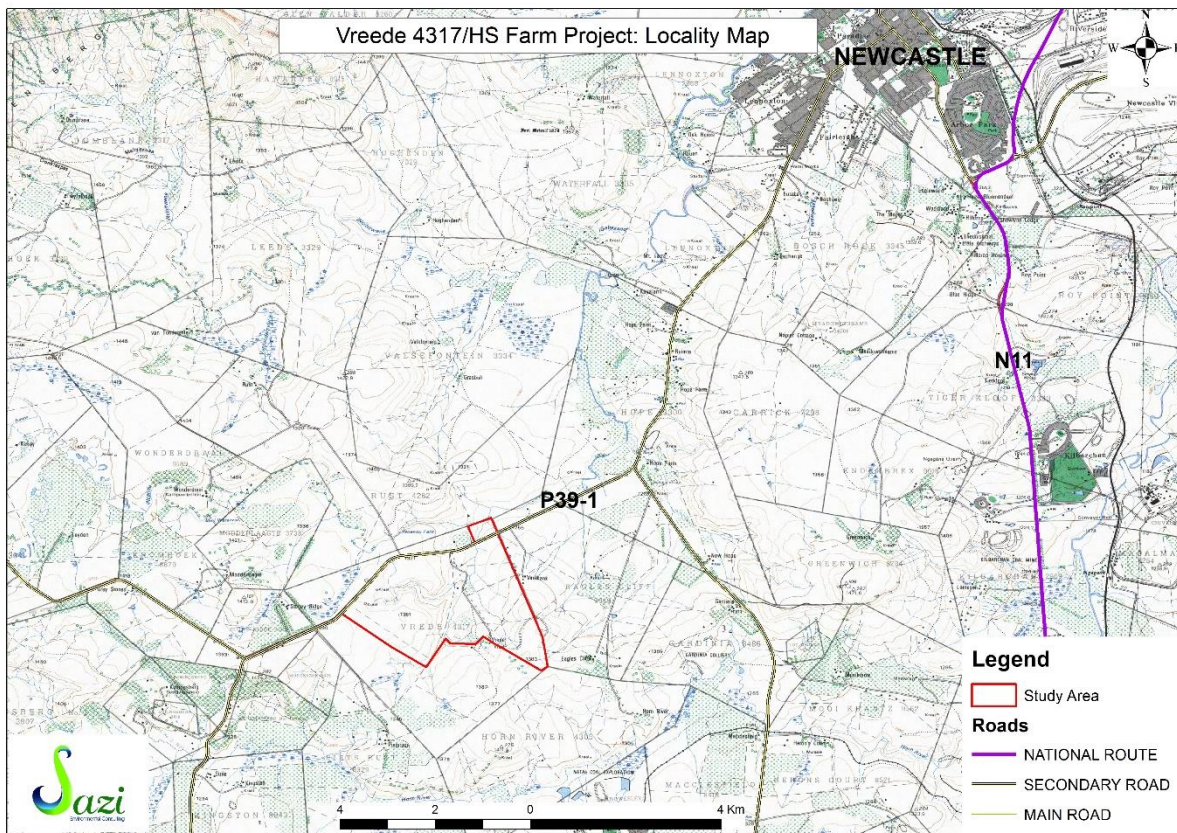


Figure 1: Locality Map of the proposed Project area.

The development site/land has been surveyed therefore there is a 21-digit Surveyor General (SG) code available for each cadastral land parcel, Table 3 below outlines some of the land descriptions within which the project will be commenced.

Table 3: Proposed development property details

Province	KwaZulu-Natal
District Municipality	Amajuba District Municipality
Local Municipality	Newcastle Local Municipality
Ward Number (s)	1
Farm Name and Number	Vreede 4317/HS
Farm Portion	0
21-digit SG Code	N0HS00000000431700000
Centre Coordinates	-27.864031° 29.852142°
Property size	660.3618 ha
Title deed	T4694/2019
Land use	Agriculture and small scale residential outlets

2.2 PROJECT DESCRIPTION

The proposed developments within the Vreede 4317/HS farm has been divided into 3 phase which includes phase 1– construction of an irrigation dam with a volume capacity of 770 000 m³, phase 2– egg-laying batteries consisting of 8 chicken sheds and phase 3– intensive sheep farming with 8 sheep feedlots.

2.2.1 PHASE 1

Phase 1 of the development will consist of an irrigation instream-dam which will have a capacity of $\pm 770\,000\text{m}^3$ in volume with a dam wall height of ~16m. Figure 2 below outlines the proposed dam development layout plan.

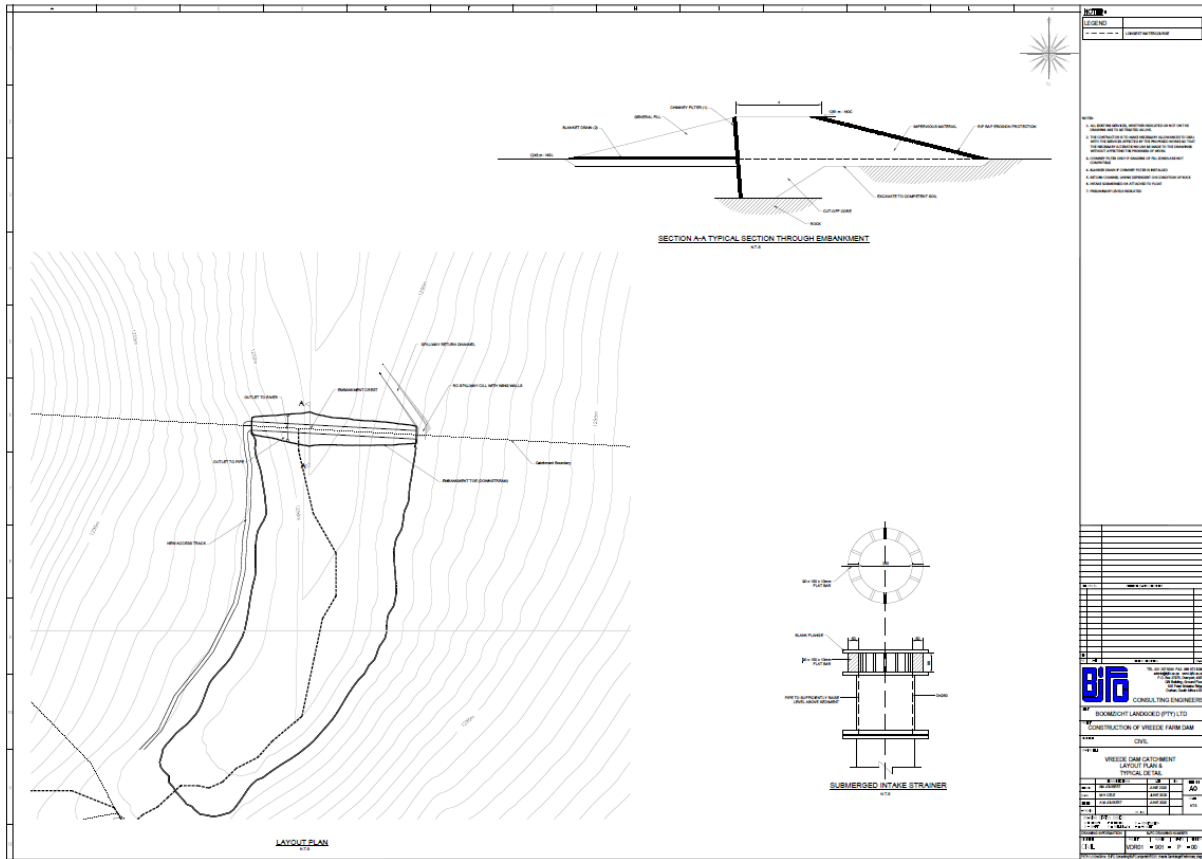


Figure 2: Proposed dam layout within Vreede 4317/HS farm

2.2.2 PHASE 2

Phase 2 of the development will include an egg-laying battery; 8 chicken sheds have been proposed and will be made of 12m X 84m X 15m each (Figure 3), housing 26 880 chickens per shed, automatic conveyor for egg transfer to the egg picking store of 18m X 20m, 2X 15 ton feed silos at each shed, water provision from the proposed farm dam, and the existing borehole. The chicken sheds will occupy approximately 4.5 hectares including the surrounding infrastructures. The development will be of upmarket design where all batteries are equipped with climate control and will eliminate the old fashioned natural-draft ventilation and associated odours, including manure. The manure handling will comprise of an air-drying unit and manure will not be stored on-site. Dried manure will be loaded by the Proponent onto a truck and delivered to Clients utilizing them for agricultural purposes within the vicinity of the proposed development area.

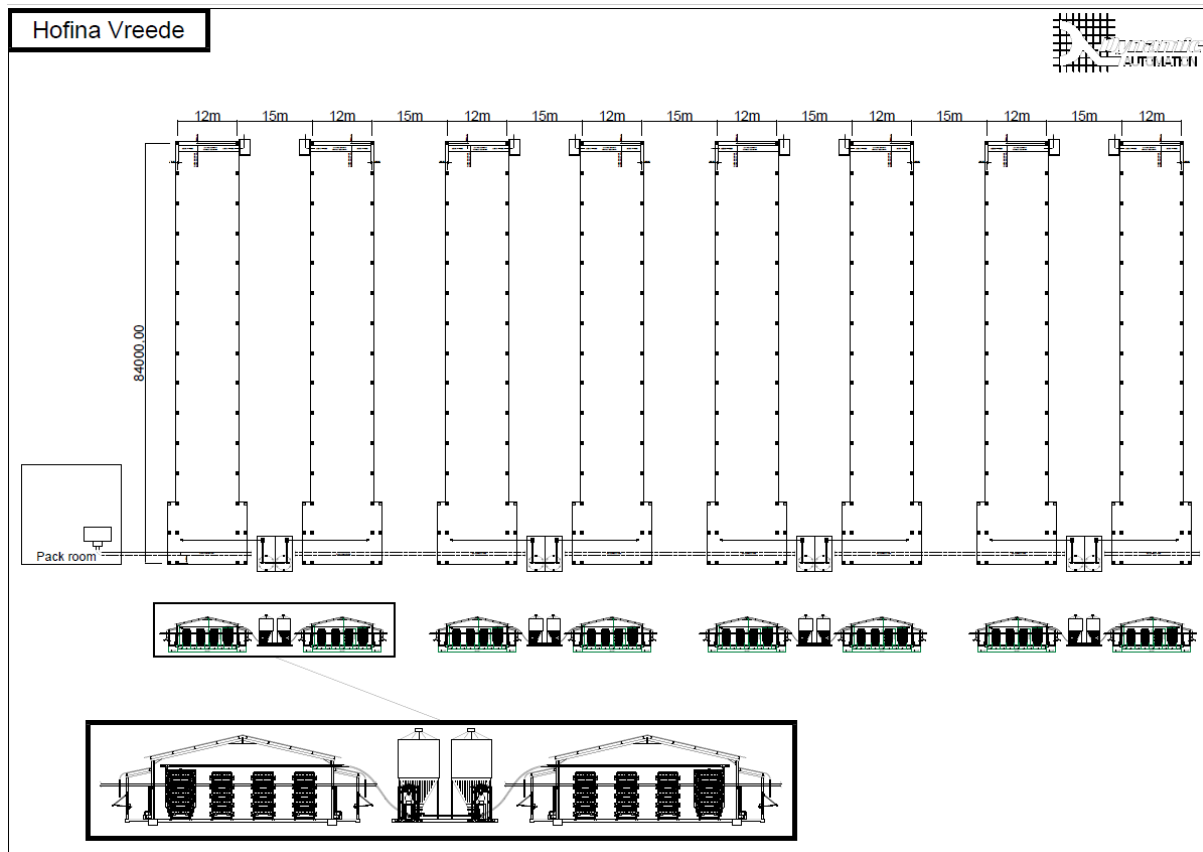


Figure 3: Layout plan of the chicken sheds

Henhouses manure management- the henhouses will be a completely “dry system” and chicken manure will be collected by means of a mechanical conveyor belt system transporting manure under the hen caged to a collection bay, from where it is then transferred onto another conveyor system at the loading bay. Irrigation farmers within the vicinity of the farm will collect the manure in trucks at the loading station from where it is transported to their crop fields as fertiliser. No storage of manure will take place on-site.

Henhouses cleaning- the rotational management system will take place approximately every fourteen (14) months that the henhouses are in use.

Henhouses water use- the volume of water consumed by the chicken will be strictly monitored with an electronic monitoring system within each house and is controlled by way of climate control. Freshwater consumption by the chickens makes up the bulk of the water.

Mortality pit- dead chickens will be disposed of in a sealed concrete chamber, designed by a professional civil engineer, that makes use of enzymes to further break down the organic matter. There will be no leaching from this sealed chamber.

Greywater and French drain- a French drain is still the most practical way of disposing of the domestic waste on farms across South Africa. Due to the potential contamination of groundwater resources, it is submitted that the Proponent will introduce an environmentally friendly enzyme to add to their domestic wastewater to assist in the breakdown of organic matter that may pose as a possible pollutant. In addition, the Proponent will be using biodegradable laundry soap and shower gels.

2.2.3 PHASE 3

Phase 3 of the development will include intensive sheep farming; 8 sheep feedlots have been proposed. The sheep houses will occupy approximately 15 hectares including the surrounding fence. The feedlot will be a phased development, starting with facilities for 1000 ewes increasing to 4000 eventually (Figure 4). All facilities will be steel structures with forced ventilation and appropriate lighting, water supply, and automatic feeding systems. The feed will be commercial rations from a feed supplier with supplementary grazing on the remainder of the farm when ewes are not lactating. The dead sheep and sick ones will be dealt with as per regulations and the manure is gathered at the feedlot in manure pits and distributed on the remaining pastures as fertilizer on the farm. There will be 1000 sheep per house in the feeding lot and the growth rate has been estimated to be 250 ewes per cycle in the lambing pens.

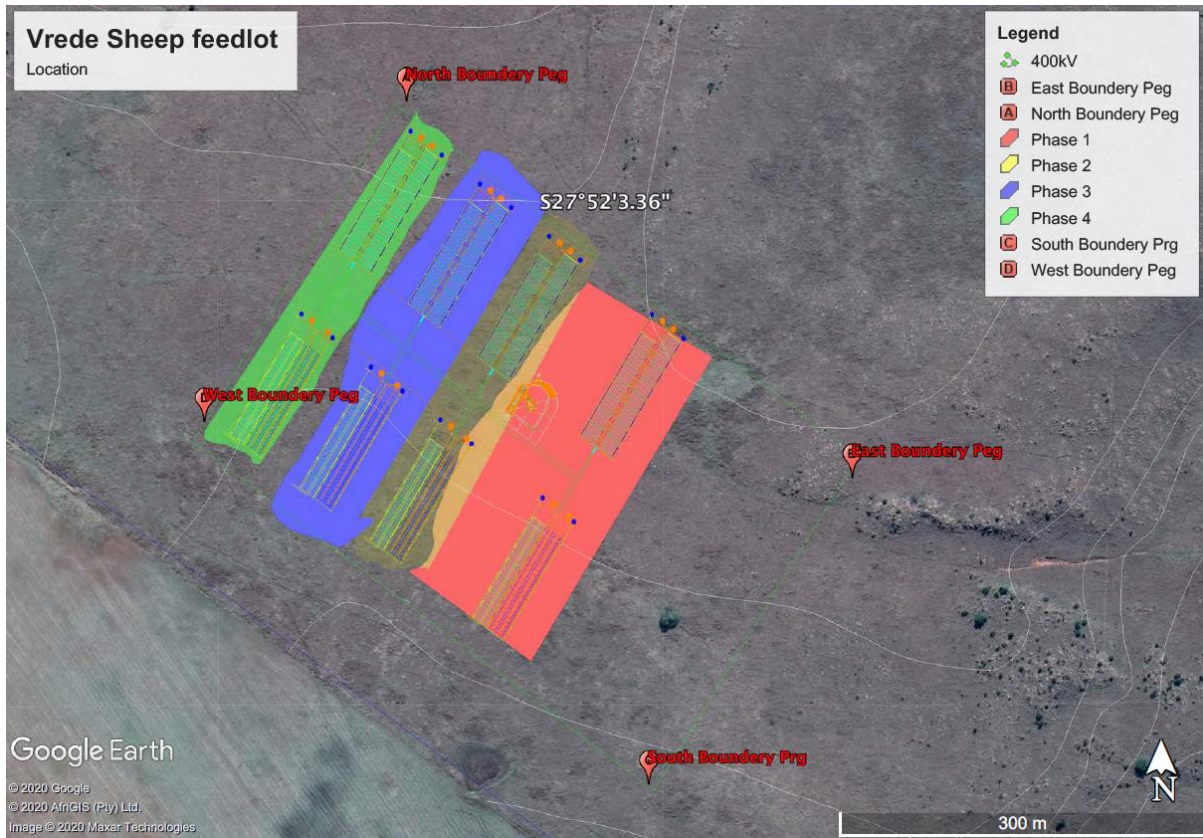


Figure 4: Proposed sheep feedlot overview map

3 DESCRIPTION OF THE BASELINE ENVIRONMENT

3.1 BIOPHYSICAL AND BIOLOGICAL ENVIRONMENT

3.1.1 INFRASTRUCTURE

- ❖ Bulk Water Supply: During construction, the existing boreholes within the property will be utilised.
- ❖ Road Access: Access to the development site can be obtained from P39-1 (Figure 5).

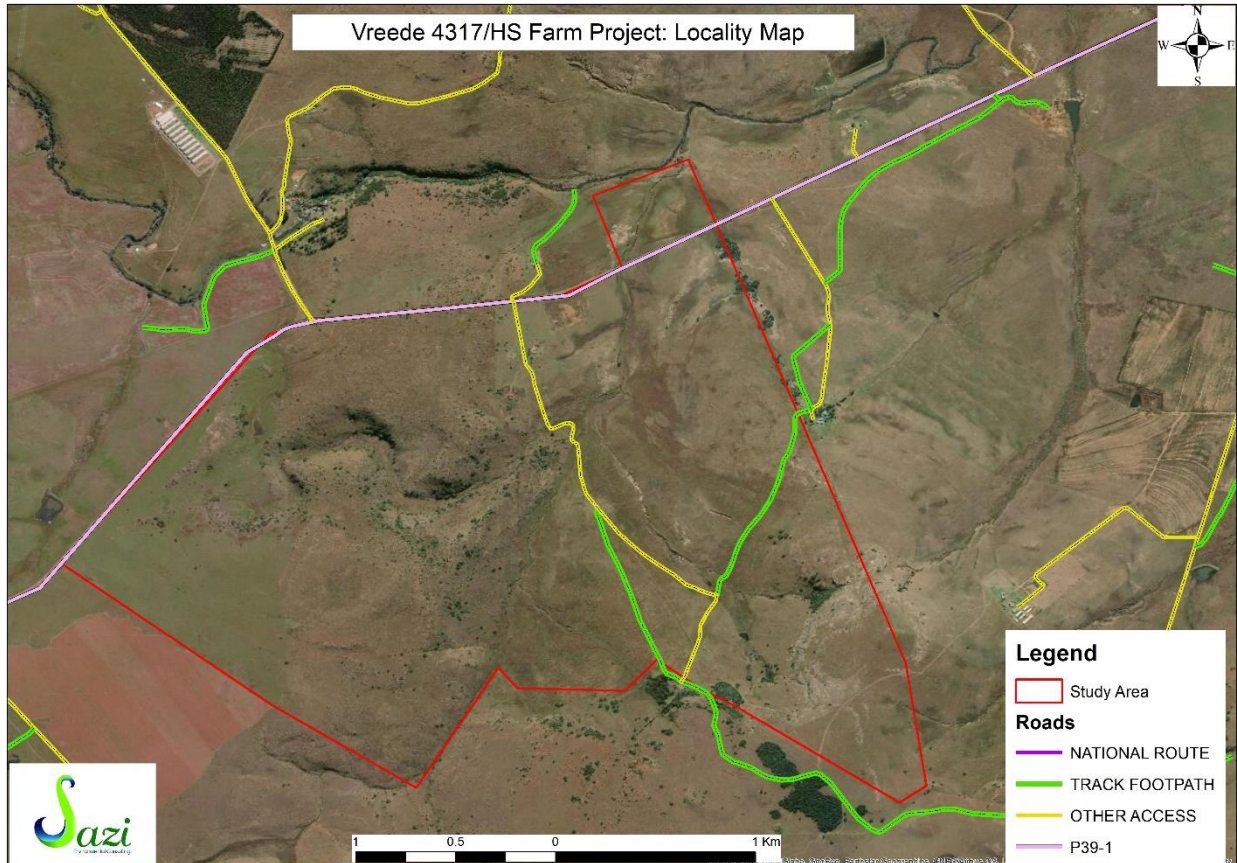


Figure 5: Proposed development Route Access Map

3.1.2 CLIMATE

Newcastle Local Municipality falls under the central KwaZulu-Natal climatic zone characterized by temperate, dry winter, warm summer. The coldest month averaging above 0 °C (32 °F), all months with average temperatures below 22 °C (71.6 °F), and at least four months averaging above 10 °C (50 °F). At least ten times as much rain in the wettest month of summer as in the driest month of winter (an alternative definition is 70% or more of average annual precipitation received in the warmest six months). Figure 7 below shows the climatic

diagram for the area, with the blue bars showing the median monthly precipitation, Upper and lower red lines show the mean daily maximum and minimum temperature respectively, (Mucina and Rutherford, 2006). The mean annual precipitation (MAP) is 836 millimetres (mm), which is mostly concentrated in the summer months (Table 4) (Figure 6). Infrequent showers occur through the course of the winter months. The least amount of rainfall occurs in June with an average of 9 mm. The greatest amount of precipitation occurs in January, with an average of 134 mm (Climate-Data.org).

Table 4: Precipitation data for Newcastle

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Precipitation (mm)	134	116	88	42	15	9	11	20	37	84	105	118

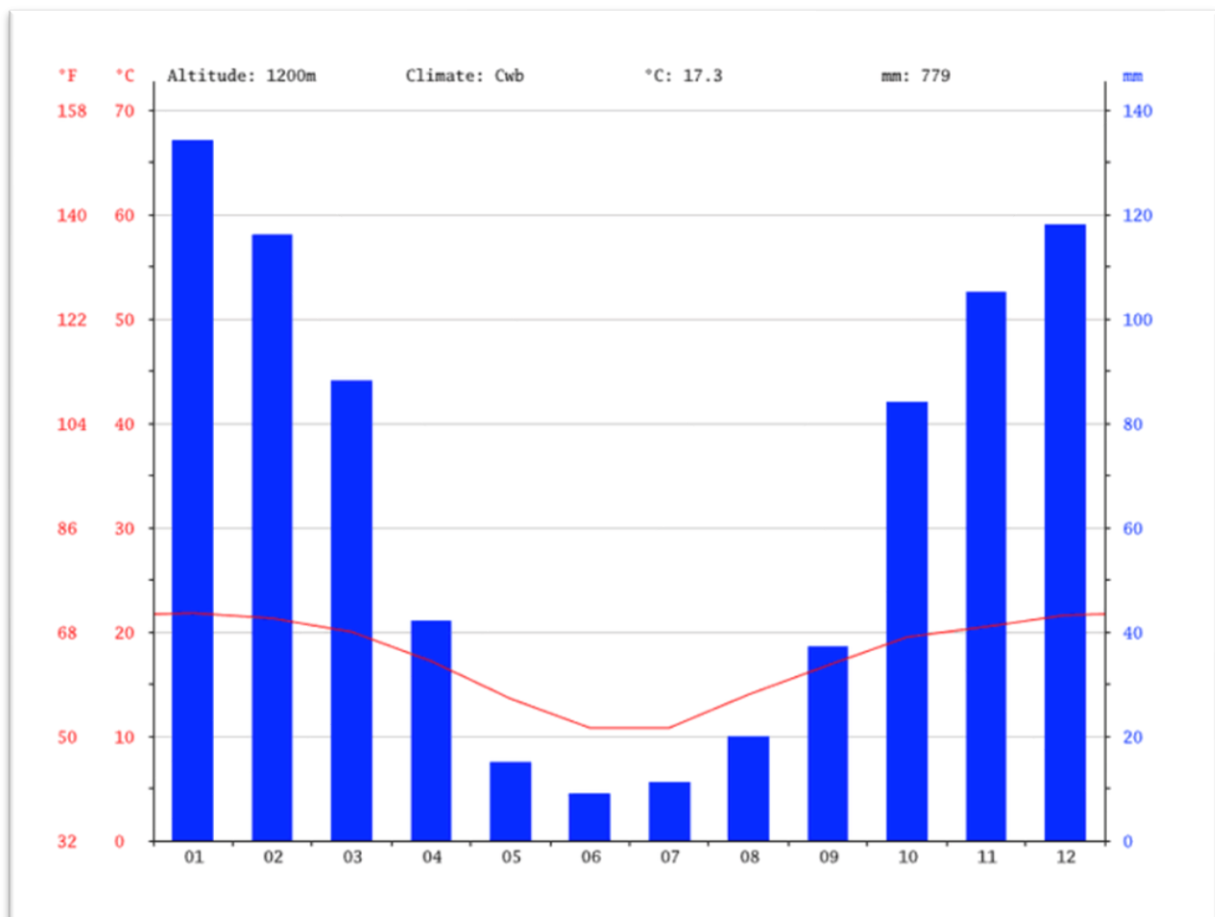


Figure 6: Newcastle climate data (Climate-Data.org)

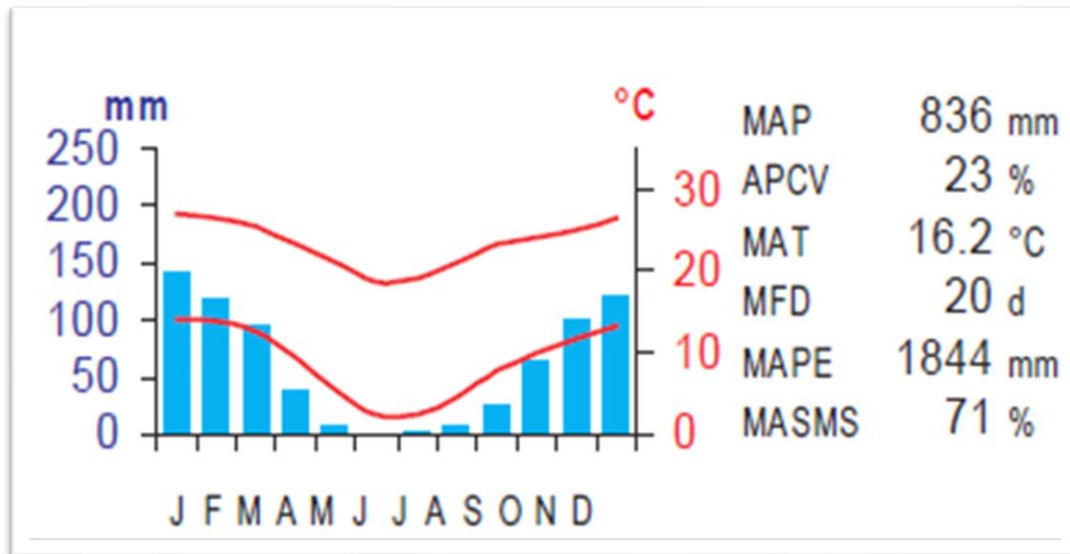


Figure 7: Climatic diagram (Mucina and Rutherford, 2006)

3.1.3 TOPOGRAPHY, GEOLOGY, AND SOILS

The geological formations underlying the Vreede Farm forms part of the coal-bearing Vryheid Formation, of the Ecca Group, which forms part of the Karoo Supergroup (see Figure 8). The Karoo Supergroup sediments were deposited in valleys and basins that existed in the pre-Karoo topography in the region. The Karoo Supergroup rocks overlie unconformably the older Waterberg Group and Transvaal Supergroup rocks (Johnson *et al.* 2009). The Vryheid formation consists of sandstone, grit, and shale which overlie the coal seams, which in turn overlies sandstone and Dwyka tillite. The thickness of the Formation can be between 300 meters (m) and 500 m (King, April 2003).

The area is characterised by the intrusion of interconnected dolerite sills. The elevated area along the western portion of the farm is associated with a dolerite sill. The dolerite sills vary in thickness from 1 m to 50 m, or more. They become thicker and more frequent in the upper portions of the succession. Generally, formations overlying dolerite sills are extensively weathered. The intrusion of the sills is thought to result in the development of fractures, thus creating contact-zone localised aquifers. Several springs are associated with the contact zone between dolerite intrusions and the sedimentary formations. These are typically the sources for streams draining the area. Dykes varying in width from 1 m to 8 m are common in the Karoo sedimentary rocks. Most dolerite dykes have a vertical dip, except in the east where they have a westward dip due to regional structure (Woodford and Chevallier, 2002).

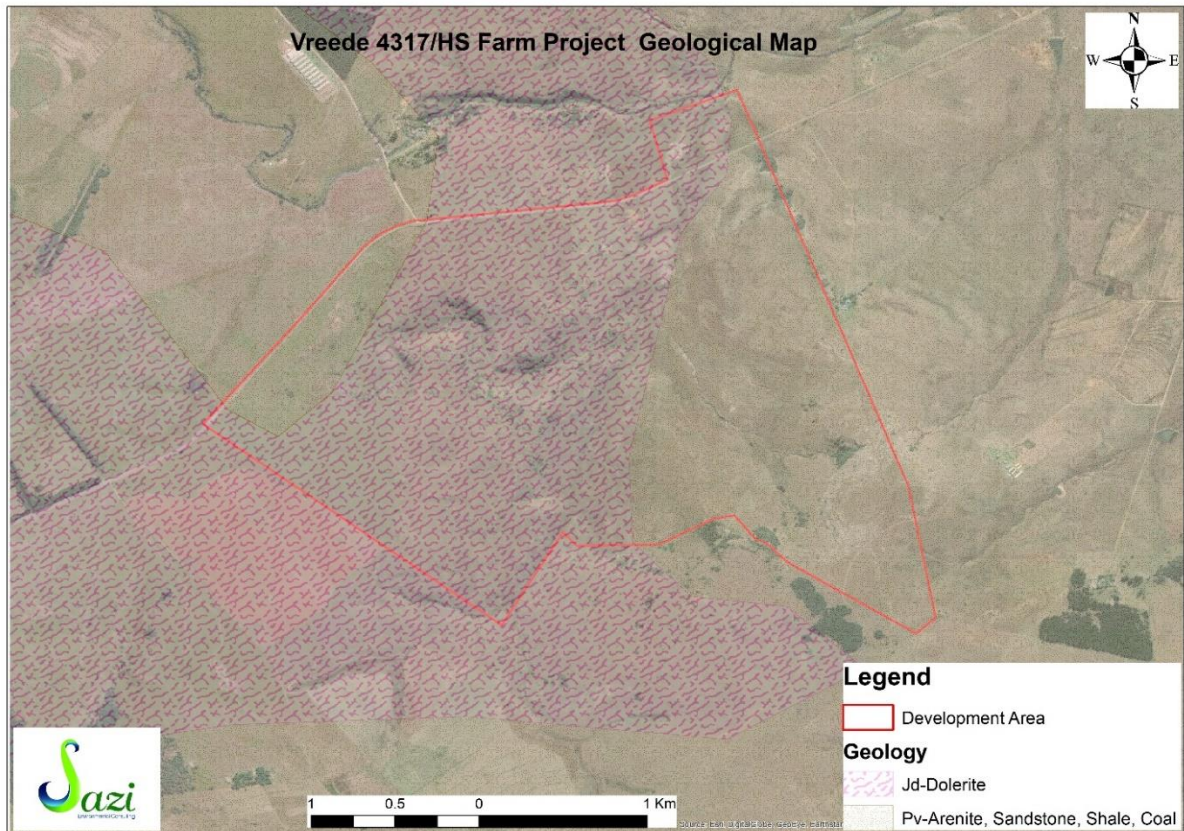


Figure 8: Geological Map of the development site

3.1.4 LAND USE

The area of concern is zoned for agricultural purposes as per Newcastle Local Municipality. Figure 9 below shows the land uses within the development area.

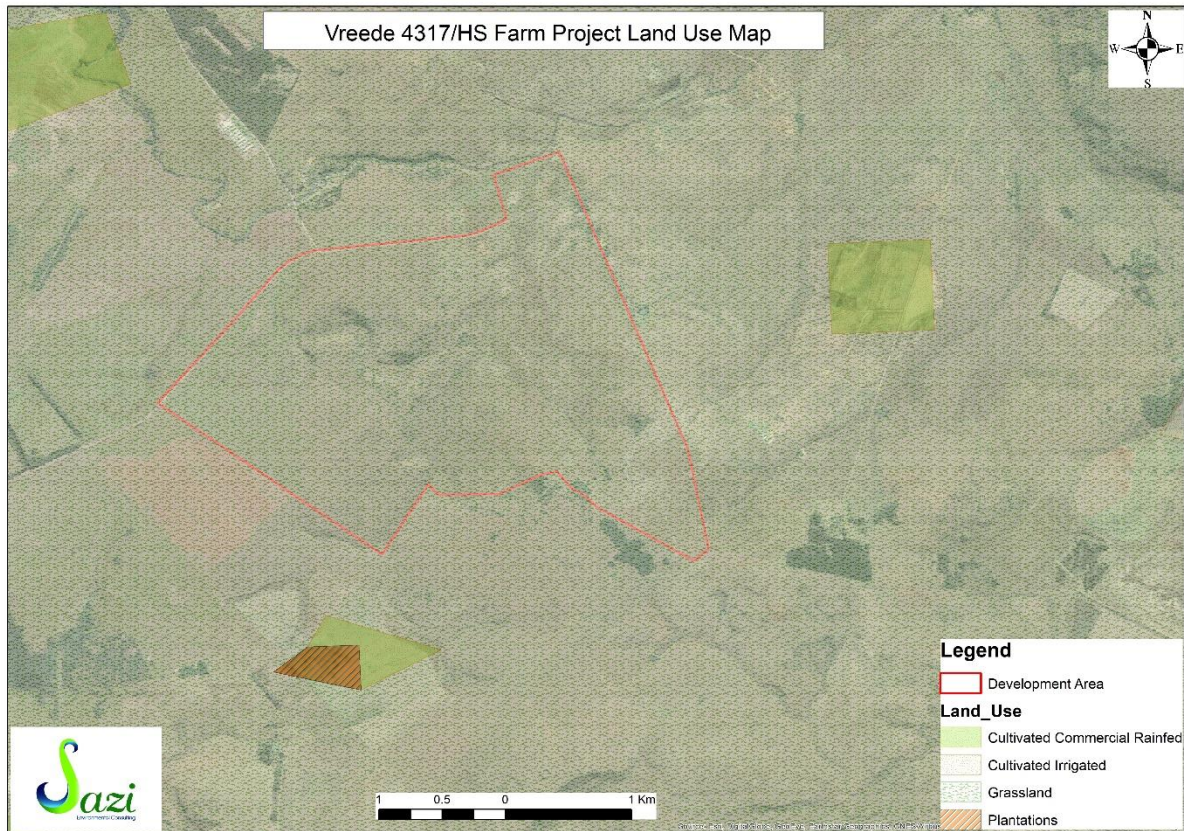


Figure 9: Proposed development of land use map

3.1.5 RIVERS AND WETLANDS (HYDROLOGY)

The proposed development area is located within 3 quaternary catchments, namely, V31F, V31H, and V31J. All the proposed development activities will occur within quaternary catchment V31J (Figure 10). The study area is within the Pongola Mtamvuna Water Management Area (WMA 4). Ncandu river is the major river system within the V31J quaternary catchment and it is supported by surface flow from the adjacent perennial stream and drainage lines. Based on current outputs of the NFEPA project (Nel et al., 2011), there are several FEPA wetlands or wetland clusters located within the study area and within several kilometers from the study area's catchment (Figure 11).

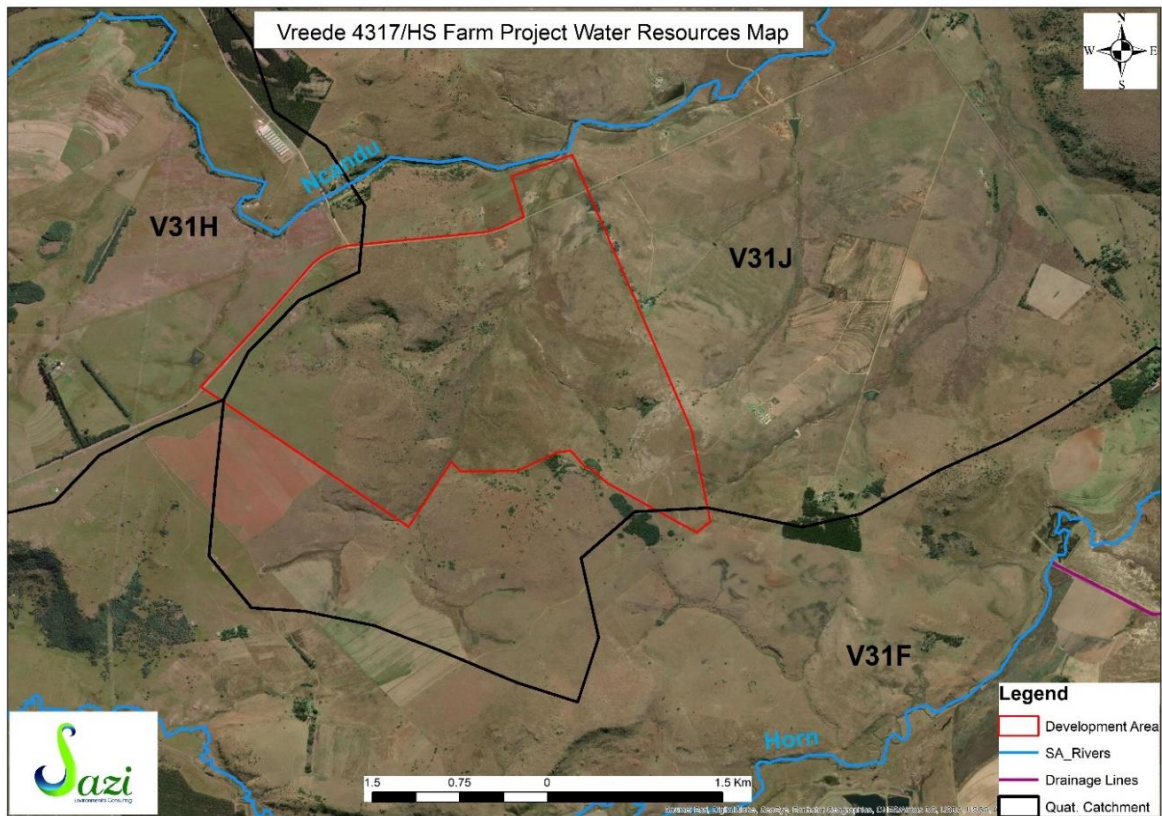


Figure 10: Water Resources Map for the proposed development

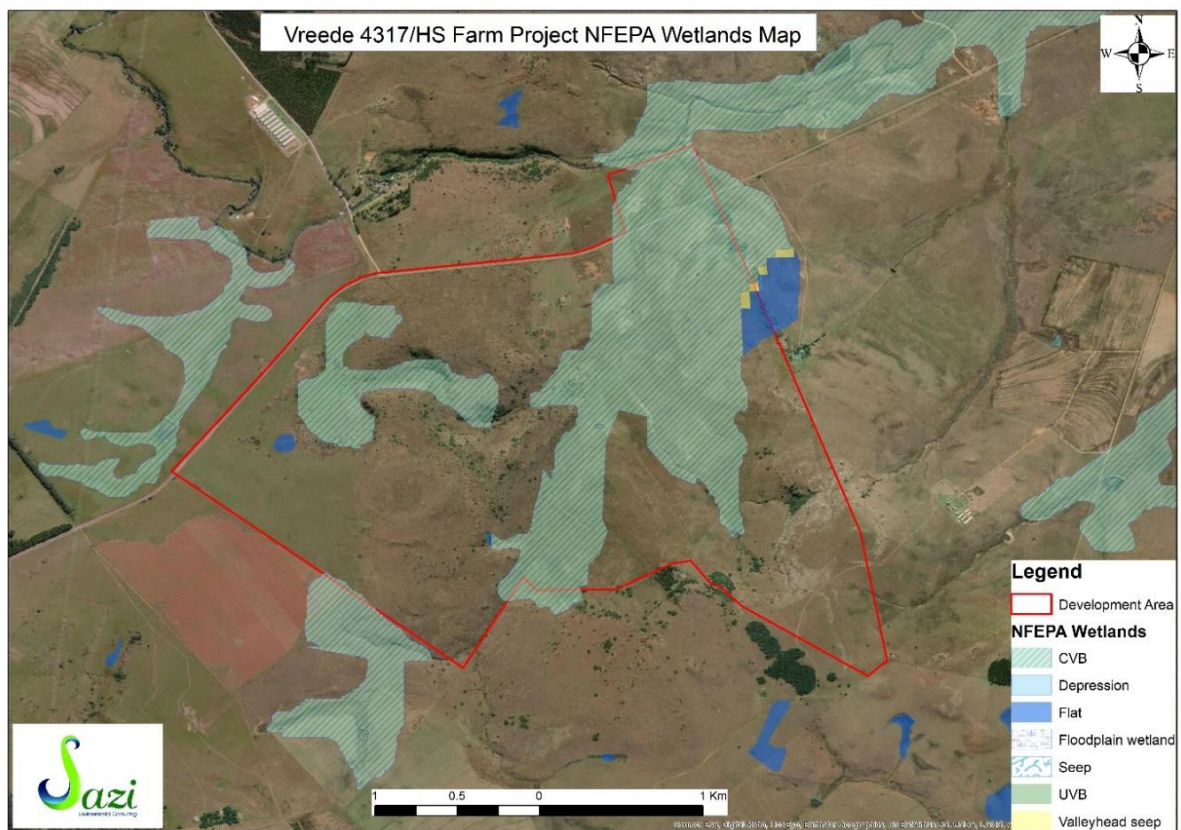


Figure 11:

3.1.6 VEGETATION AND LANDSCAPE FEATURES

The proposed development area of concern constitutes the following vegetation types (Figure 12) :

- Northern KwaZulu-Natal Moist Grassland (Gs 4)

Important taxa within the Northern KwaZulu-Natal Moist Grassland include:

Graminoids:

Alloteropsis semialata subsp. *eckloniana* (d), *Aristida congesta* (d), *Cynodon dactylon* (d), *Digitaria tricholaenoides* (d), *Elionurus muticus* (d), *Eragrostis patentissima* (d), *E. racemosa* (d), *Harporchloa falx* (d), *Hyparrhenia hirta* (d), *Themeda triandra* (d), *Tristachya leucothrix* (d), *Abildgaardia ovata*, *Andropogon appendiculatus*, *A. eucomus*, *A. schirensis*, *Aristida junciformis* subsp. *galpinii*, *Brachiaria serrata*, *Cymbopogon caesius*, *C. pospischilii*, *Cynodon incompletus*, *Digitaria monodactyla*, *D. sanguinalis*, *Diheteropogon amplectens*, *D. filifolius*, *Eragrostis chloromelas*, *E. plana*, *E. planiculmis*, *E. sclerantha*, *Festuca scabra*, *Heteropogon contortus*, *Hyparrhenia dregeana*, *Melinis nerviglumis*, *Microchloa caffra*, *Panicum natalense*, *Paspalum scrobiculatum*, *Setaria nigrirostris*, *Sporobolus africanus* (Mucina and Rutherford, 2006).

Herbs:

Acanthospermum australe (d), *Argyrolobium speciosum* (d), *Eriosema kraussianum* (d), *Geranium wakkerstroomiamum* (d), *Pelargoum luridum* (d), *Acalypha peduncularis*, *Chamaecrista mimosoides*, *Dicoma anomala*, *Euryops transvaalensis* subsp. *setilobus*, *Helichrysum caespititium*, *H. rugulosum*, *Hermannia depressa*, *Ipomoea crassipes*, *Pearsoia grandifolia*, *Pentanisia prenelloides* subsp. *latifolia*, *Sebaea grandis*, *Senecio inornatus*, *Thunbergia atriplicifolia*, *Zaluzianskya microsiphon*.

Geophytic herbs:

Chlorophytum haygarthii (d), *Gladiolus aurantiacus* (d), *Asclepias aurea*, *Cyrtanthus tuckii* var. *transvaalensis*, *Gladiolus crassifolius*, *Hypoxis colchicifolia*, *H. multiceps*, *Moraea brevistyla*, *Zantedeschia rehmannii*.

Low shrubs

Anthospermum rigidum subsp. *pumilum*, *Erica oatesii*, *Hermannia geniculata*.

Succulent Herb

Aloe ecklonis, *Lopholaena segmentata*.

Succulent Herb

Euphorbia pulvinata.

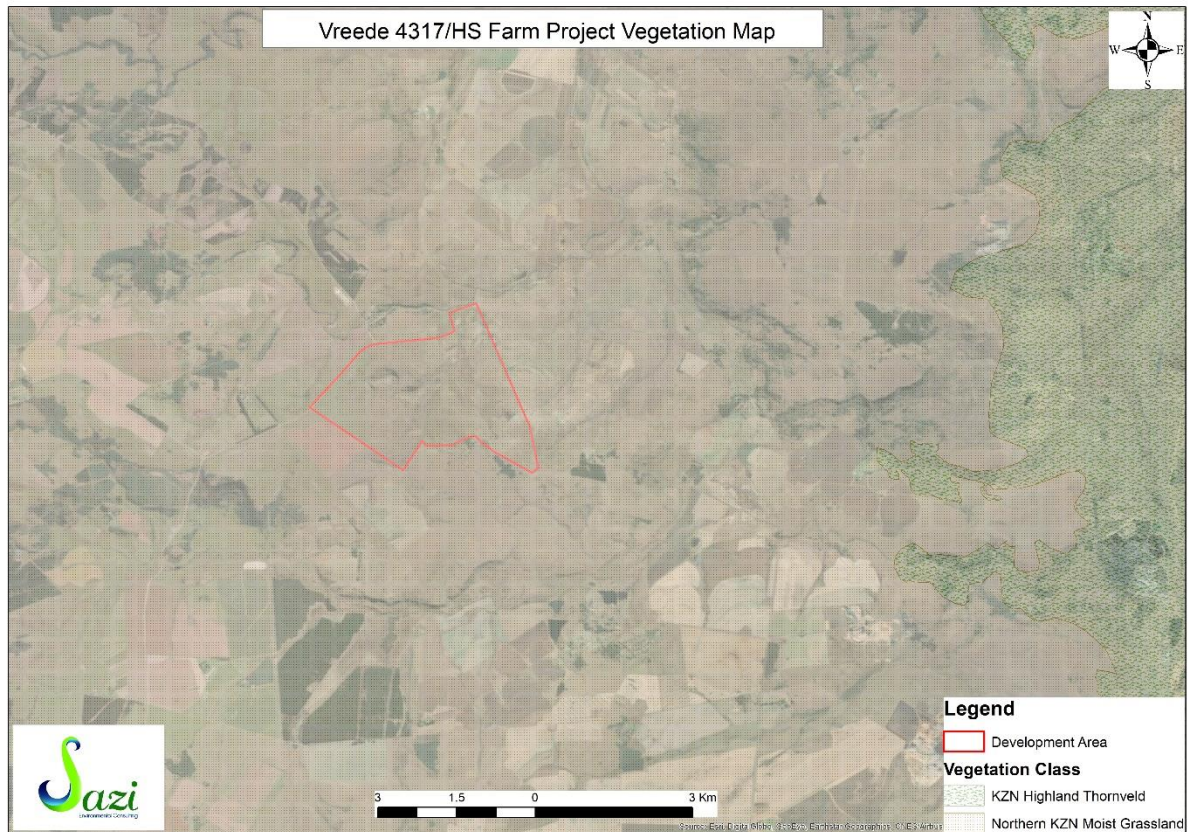


Figure 12: Proposed Development Vegetation Map

3.1.7 KWAZULU NATAL CONSERVATION PLAN

According to the KwaZulu-Natal Critical Biodiversity Areas Ecological Supported Areas (ESA) (2016), the proposed development area is not located in an Important Area or an Ecological Support Area (Figure 13). In addition based on the KwaZulu-Natal Critical Biodiversity Areas data (CBA) (2010) the site of the proposed development is not within any Critical Biodiversity Area (Figure 14).

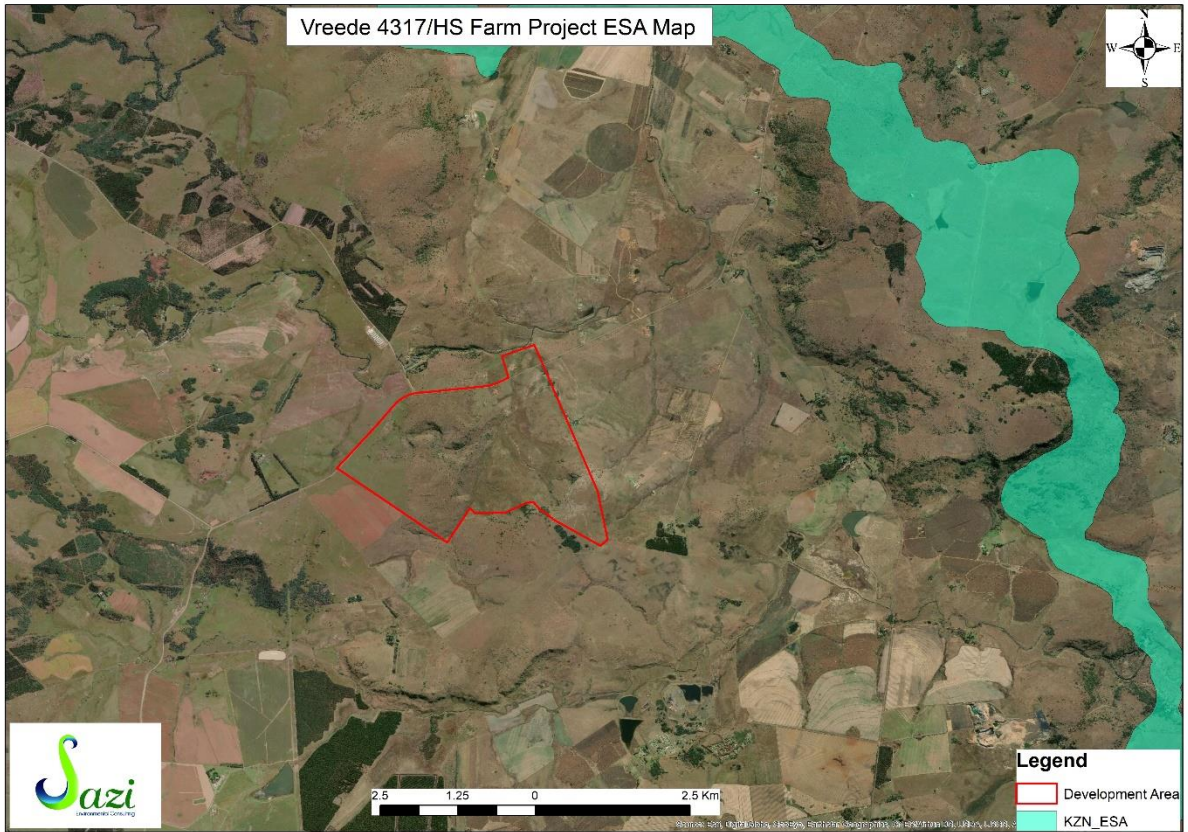


Figure 13: Proposed Development Ecological Supported Areas Map

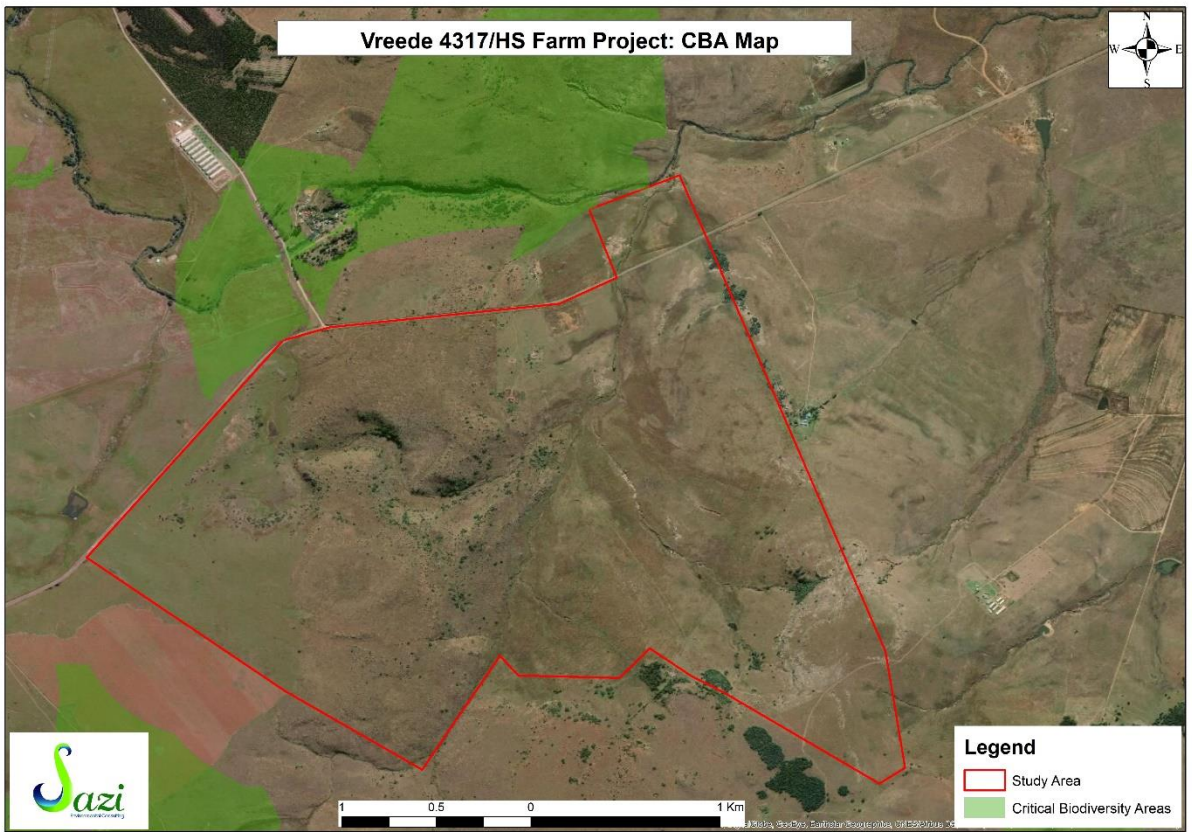


Figure 14: Proposed Development Critical Biodiversity Areas Map

3.2 SOCIAL AND ECONOMIC ENVIRONMENT

Population and Education

According to Census (2011) data indicates that the population for the Newcastle Local Municipality has risen by 0.87% from a total of 360 076 people in 2006 to 363 236 in (2011). Percentages distributed in terms of racial groups in the area entails; Africans making 91.9% of the population, Indian/Asian 3.2%, White 3.1%, and Coloured 1.8%.

Newcastle Local Municipality has an average standard of education level with about 33,1% have completed matric, and 11,2 % have some form of higher education, while 7,1 % of those aged 20 years and older have no form of schooling. The Municipality has an unemployment rate of 49,0%.

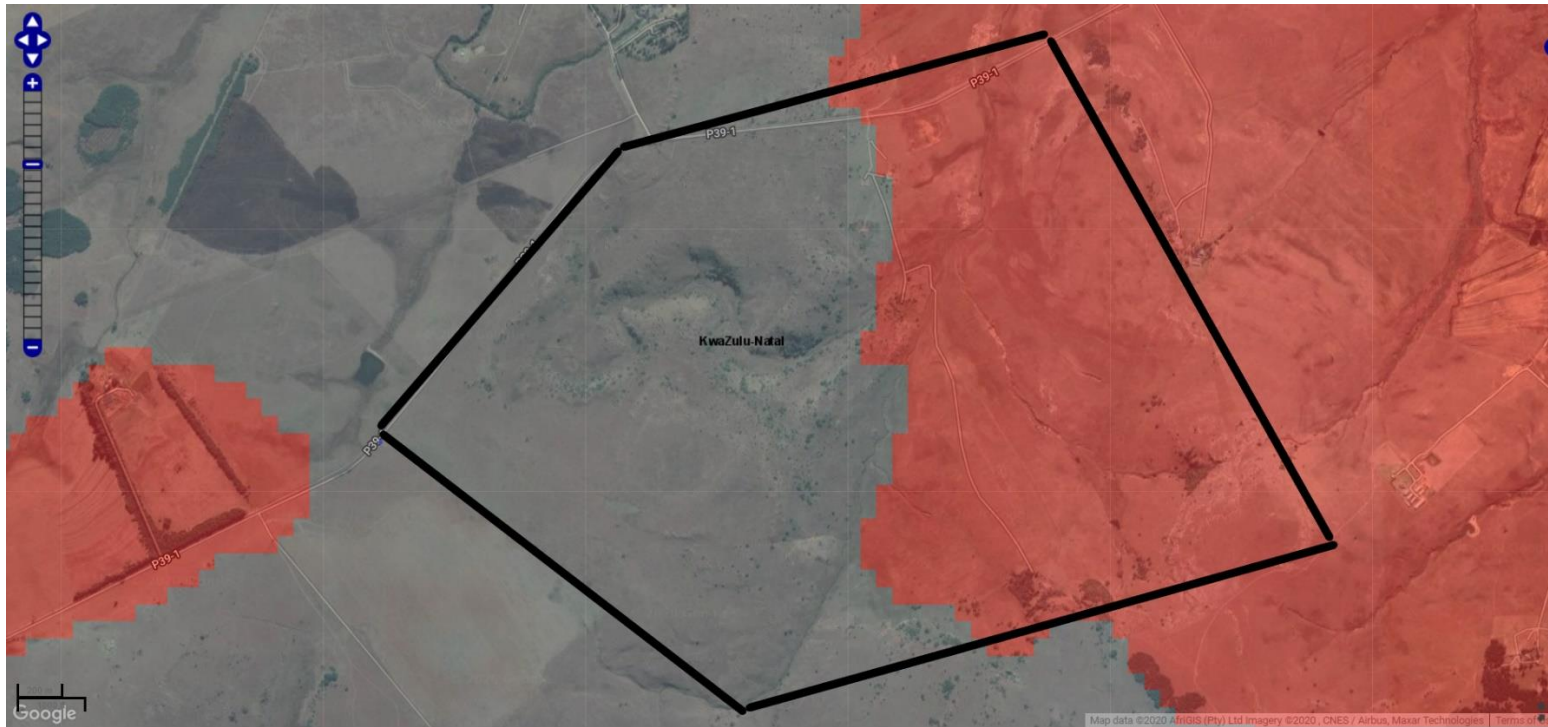
Employment and Income

100 654 economically active individuals (i.e. those who are employed or unemployed but looking for work) are unemployed. Of the 53 886 economically active youth (15–34 years) in the municipality, 49,0% are unemployed.

3.3 CULTURAL, HISTORICAL AND ARCHAEOLOGICAL RESOURCES

During a physical survey conducted by a Heritage Specialist on 29 February 2020, heritage resources were found within and outside the proposed site; that is within a 100m radius, the results are discussed in detail with the Heritage Assessment Report attached to this scoping report as Appendix G5.

The Paleontological Sensitivity Map (SAHRIS) indicate that a section of the study area partially has a very high possibility (red) of fossil remains to be found in the southern section and therefore a field assessment is required (Figure 15). A SAHRA accredited Archaeologist has been appointed to conduct a Palaeontology assessment to determine if the proposed developments would have an impact on any sites, features, or objects of Paleontological significance. The Paleontological Assessment Report has been attached to this scoping report as Appendix G6.



Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 15: Paleo-sensitivity map of the study are (adopted from; SAHRA, 2019), the black Pentagon represents the proposed development site

4 ENVIRONMENTAL REGULATORY FRAMEWORK

The legislative requirements that will be considered as part of the proposed project in compliance with environmental requirements include the following:

4.1 The REPUBLIC OF SOUTH AFRICA – CONSTITUTION (ACT 108 OF 1996)

The Constitution of South Africa Act No. 108 of 1996 provides for an environmental right (contained in the Bill of Rights, Chapter 2). In terms of Section 7, the state has an obligation to respect, promote, and fulfil the rights as defined in the Bill of Rights. The environmental right states that:

Everyone has the right –

- a) To an environment that is not harmful to their health or well-being; and
 - b) To have the environment protected, for the benefit of present and future generations,
- Prevent pollution and ecological degradation;
 - Promote conservation; and
 - Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Procurement of an Environmental Authorisation is in line with the state's obligations as outlined in the constitution in its effort to ensure sustainability.

4.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA), 1998 (ACT NO 107 OF 1998)

The NEMA Act provides for co-operative, environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith. This Act formulates a set of general principles to serve as guidelines for land development through the Environmental Impact Assessment (EIA) regulations, 2017. The EIA listing notices 1, 2, and 3 identify activities that would require environmental authorizations prior to the development commencement, they also identify competent authorities in terms of sections 24 (2), 24 (5), and 24 (D) and 44.

Environmental Impact Assessments (EIAs) are required in South Africa in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) and its' associated EIA Regulations. Developments likely to have a major impact require scoping and EIA, and those likely to have a lesser impact require a Basic Assessment.

This Act is relevant as the proposed development triggers the following listings (Table 1 below):

Table 5: Triggered listed Activities as per NEMA, (1998).

LISTED ACTIVITY	ACTIVITY DESCRIPTION	PROPOSED PROJECT DESCRIPTION
GN R983 – LISTING NOTICE 1 (REQUIRES A BASIC ASSESSMENT)		
Activity 5	<p>The development and related operation of facilities or infrastructure for the concentration of—</p> <ul style="list-style-type: none"> (i) more than 1 000 poultry per facility situated within an urban area, excluding chicks younger than 20 days; (ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days; (iii) more than 5 000 chicks younger than 20 days per facility situated within an urban area; or (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area. 	<p>Phase 2 of the proposed development will include the construction of 8 chicken sheds which will be made housing 26 880 chickens per shed, and the development site is not within an urban area and it exceeds the 25 000 requirements.</p>
Activity 12	<p>[The development of—</p> <ul style="list-style-type: none"> i. canals exceeding 100 square meters in size; ii. channels exceeding 100 square metres in size; iii. bridges exceeding 100 square metres in size; iv. dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size; v. weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size; 	<p>Phase 1 of the proposed development includes the construction of a 770 000 m³ dam with a surface area of ~4.61 ha.</p>

	<ul style="list-style-type: none"> vi. bulk stormwater outlet structures exceeding 100 square metres in size; vii. marinas exceeding 100 square metres in size; viii. jetties exceeding 100 square metres in size; ix. slipways exceeding 100 square metres in size; x. buildings exceeding 100 square metres in size; xi. boardwalks exceeding 100 square metres in size; or xii. infrastructure or structures with a physical footprint of 100 square metres or more; 	
Activity 19	The infilling or depositing of any material of more than [5] 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than [5] 10 cubic metres from [—(i)] a watercourse;	Phase 1 of the proposed development includes the construction of an instream-dam, therefore dredging of soil from the watercourse (Stream and wetlands) will be unavoidable.
GN R984 – LISTING NOTICE 2 (REQUIRES A FULL EIA)		
Activity 15	<p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—</p> <ul style="list-style-type: none"> i. the undertaking of a linear activity; or ii. maintenance purposes are undertaken in accordance with a maintenance management plan 	The proposed developments; i.e chicken sheds, sheep feedlots, and the dam will occupy approximately ~38.61 ha in extent. The Clearance of more than 20 hectares of vegetation will be inevitable.
Activity 16	The development of a dam where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 meters or higher or where the highwater mark of the dam covers an area of 10 hectares or more.	Phase 1 of the proposed development includes the construction of a 770 000 m ³ dam with a surface area of 4.61 m and a dam wall height of ~16m.
GN R985 – LISTING NOTICE 3 (REQUIRES A BASIC ASSESSMENT)		
Activity 14	<p>The development of—</p> <ul style="list-style-type: none"> i. canals exceeding 10 square metres in size; 	Phase 1 of the proposed development includes the construction of an instream

	<ul style="list-style-type: none"> ii. channels exceeding 10 square metres in size; iii. bridges exceeding 10 square metres in size; iv. dams, where the dam, including infrastructure and water surface area, exceeds 10 square metres in size; v. weirs, where the weir, including infrastructure and water surface area, exceeds 10 square metres in size; vi. bulk storm water outlet structures exceeding 10 square metres in size; vii. marinas exceeding 10 square metres in size; viii. jetties exceeding 10 square metres in size; ix. slipways exceeding 10 square metres in size; x. buildings exceeding 10 square metres in size; xi. boardwalks exceeding 10 square metres in size; or xii. infrastructure or structures with a physical footprint of 10 square metres or more;] 	dam within a sensitive area (Wetland).
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4.3 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (ACT NO 10 OF 2004)

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa’s biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed.

According to the KwaZulu-Natal Ecological Support Areas (KZN_ESA 2016), the proposed development site is not located within any ecological supported area.

4.4 NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (ACT NO. 57 OF 2003) NEMPAA)

The Act provides for the protection and conservation of ecologically viable areas. It further provides for the establishment of a national register of protected areas and the proclamation and management of these areas.

The proposed development site is not within or closer to any protected areas.

4.5 NATIONAL HERITAGE RESOURCES ACT (ACT NO 25 OF 1999)

The National Heritage Resources Act (Act 25 of 1999) was introduced to ensure the protection of South Africa's important heritage features. The protection of archaeological and paleontological sites and material is the responsibility of a provincial heritage resources authority. The NHRA covers the following areas of heritage value: Archaeology, Palaeontology, and Meteorites.

The South African Heritage Resources Agency (SAHRA) is the enforcing authority of this Act and according to Section 38 SAHRA demands that a Heritage Impact Assessment (HIA) is carried out where certain activities are proposed.

Site investigation was undertaken on the proposed site. The results have been fully discussed in the heritage report attached Appendix G5.

4.6 NATIONAL WATER ACT (ACT NO 36 OF 1998)

The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors, the following:

- ❖ Meeting the basic human needs of present and future generations,
- ❖ Promoting equitable access to water,
- ❖ Promoting the efficient, sustainable and beneficial use of water in the public interest,
- ❖ Reducing and preventing pollution and degradation of water resources,
- ❖ Facilitating social and economic development, and
- ❖ Providing for the growing demand for water use.

In terms of Section 21 of the National Water Act, the developer must obtain water use licenses if the following activities are taking place:

- a) Taking water from a water resource,
- b) Storing water,

- c) Impeding or diverting the flow of water in a watercourse,
- d) Engaging in a stream flow reduction activity contemplated in section 36,
- e) Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1),
- f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or another conduit,
- g) Disposing of waste in a manner which may detrimentally impact on a water resource,
- h) Disposing of in any manner of water which contains waste from, or which has been heated in any industrial or power generation process,
- i) Altering the bed, banks, course or characteristics of a watercourse,
- j) Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people, and
- k) Using water for recreational purposes.

Any development that takes place within 500m of a watercourse requires a Water Use Licence. The National Water Act also required that the 1:50 and 1:100 year flood line be indicated on all the development drawings that are being submitted for approval.

The proposed development requires a water use license in terms of the National Water Act, 1998 (Act No 36 of 1998) since there will be a construction of a dam within a water resource and other development within the 500m radius of watercourses. A Water use license application has been lodged with the Department of Water and Sanitation.

Section 21

s21(a); taking water from a water resource

s21 (b): storing of water

s21 (c): impeding or diverting the flow of water in a watercourse

s21 (i): altering the bed, banks, course or characteristics of a watercourse

s21(g): disposing of waste which may detrimentally impact on a water resource.

5 THE NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

South Africa is situated in a semi-arid region. The average rainfall for the country is approximately 450 mm per year, which is well below the world average of approximately 860 mm per annum and is characterized by a large in-season as well as annual variation. In global terms, South Africa is classified as “water short” and moving towards “water-stressed”.

Due to the high variability in river flow within a year and between years, storage needs to be provided to bridge low flow periods with a degree of assurance as required by the agricultural sector for the purpose of irrigation or stock. Agriculture is key to food security in many parts of the world. Making agriculture work must be a central component of policy approaches to food insecurity reduction and increasing economic growth. Increased investment in agriculture will help redress the current inequalities.

Not only will the establishment of an irrigation dam, sheep farm, and egg-laying batteries, significantly contribute to achieving food security in the country and economic growth in the region but it will be creating long term employment.

Over and above the employment opportunities and the socio-economic benefits that are likely to accrue to the families of those employed is an empowerment scheme which entails that profits from the agricultural businesses of the operating company are shared between the farmer and the farmworkers.

6 ALTERNATIVES

6.1 PROJECT ALTERNATIVE

Alternatives are the different ways in which the project can be executed to ultimately achieve its objectives. Examples could include carrying out a different type of action, choosing an alternative location, or adopting a different technology or design for the project. In accordance with the requirements of the EIA Regulations, project alternatives are being considered within the EIA process. These are detailed below:

Location Alternatives:

- ❖ Two feasible site alternatives were identified and will be considered in the Scoping and EIA process.

Activity Alternative

- ❖ Proposed developments facilities
- ❖ “No-go” alternative- retaining the proposed development at its natural state

Site Layout alternative:

- ❖ A 770 000 m³ dam or less
- ❖ 8 Chicken sheds

- ❖ 8 Sheep feedlots

Technological alternatives:

- ❖ No technological alternative will be considered as the site and development characteristics will dictate appropriate structural types.

6.2 PROPOSED SITE

As Rust en Vreede Farming (Pty) Ltd, were seeking suitable sites for the proposed irrigation dam, egg-laying batteries, and intensive sheep farming, within Vreede 4317/HS they identified suitable sites using the following drives:

- Site accessibility (avoid construction of roads)
- An environmental fatal flaw analysis (avoid sensitive areas)
- The site is owned by Rust en Vreede Farming (Pty) Ltd, therefore; this minimizes the ownership implications as well as the cost implications of buying and transferring alternative sites
- In terms of design requirements, an off-stream location requires water to be pumped to the dam vs gravity feed for an in-stream location, which implies higher electricity demand. Likewise, the costs of an off-stream option are much greater than the in-stream option due to more significant excavations and dam wall design requirements.

6.3 ALTERNATIVE 1

This site is not feasible due to the following:

- ❖ The site is likely to be impacted by contamination from other activities within the development site
- ❖ Capacity is highly limited from the proposed 770 000 m³
- ❖ Access to the site is very limited, new access routes will have to be constructed
- ❖ The design requirements costs for this site are very high

6.4 No-Go

In accordance with GN R326, consideration must be given to the option not to develop. This option is usually considered when the proposed development is envisaged to have such significant negative environmental impacts that mitigation measures cannot ameliorate the identified potential impacts effectively. The no-go option would be the option of not undertaking the proposed project but maintaining the status quo. If the status quo is maintained, it will imply that the proposed developments including the construction of an irrigation dam, egg-laying batteries, and intensive sheep farming, within Vreede 4317/HS farm are not undertaken.

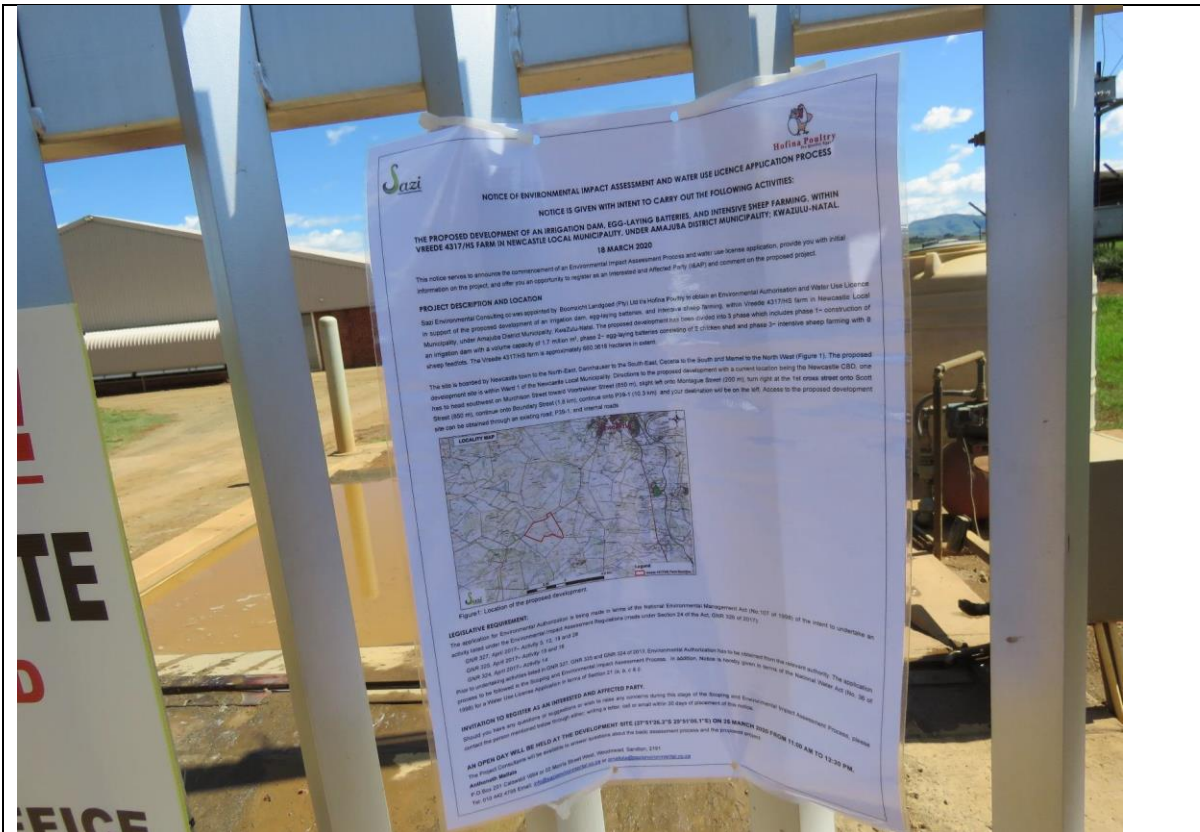
When considering the no go option, this positive socio-economic impact will not occur, storage of water for the drought season will not occur therefore resulting in lack of a basic right which is access to water. Agricultural productivity within the country will remain at current levels All the cumulative benefits of the proposed development will not occur this includes the renovation of the primary school will not, therefore, kids will still have the same lack of study material as the Proponent was proposing to renovate and provide library materials for the local Ncandu Combined school.

7 PUBLIC PARTICIPATION

As this is a Draft Scoping Report, it will be submitted for comment to the local authority and as well as to the stakeholders. Once comments have been received at the end of the 30-day review period, they will be recorded and reflected on the Final Report. To fulfill the necessary public participation required as part of the Scoping Process, the following methods of stakeholder engagement were and are in the process of being conducted by the EAP, as outlined below. A detailed Public Participation plan has been attached as Appendix E1 of this Draft Scoping.

7.1 SITE NOTICE BOARDS

The notice boards referred to the EIA Regulations i.e. GNR 326. 8 site notice placed on the 18th of March 2020 within the proposed development area (Figure 16). The purpose of the site notice was to inform neighbours and community members of the proposed development EIA process. The details of the EAP will be provided should any member of the public require additional information or wish to register as I & AP. During the EIA phase of the development, site notices will be placed again to comply with the EIA Regulations. The site notices were written in English because, most Interested and Affected parties are able to read and understand English as a mode of communication, yet for some farm workers and dwellers leaflets written in IsiZulu will be circulated to them to ensure that they are also aware of the proposed development and can provide their comments and issues.



-27.845530°, 29.835388°



-27.862156°, 29.834307°



-27.844109°, 29.873991°



-27.854475°, 29.850571°

Figure 16: Proof of Site Notices

7.2 WRITTEN NOTIFICATIONS

A register of I & APs has been compiled as per Section 42 of the EIA Regulation (2014, as amended). This included all relevant authorities, Government Departments, the Local Municipality, and relevant conservation bodies, as well as neighbouring landowners and the surrounding community (Table 6 below). This register will be regularly updated to include those I&APs responding to the newspaper advertisements, site notice boards, and Notification Letters

Table 6: Stakeholders database

ORGANIZATION / ROLE	CONTACT PERSON	TEL NO	E-MAIL	POSTAL/PHYSICAL ADDRESS
The Department of Economic Development, Tourism, and Environmental Affairs KwaZulu-Natal Province (DEDTEA): Newcastle Local Municipality	Poovi Moodley	034 328 1210 082 719 9907	Poovie.Moodley@kznedtea.gov.za	B9356 Amajuba Building, Section 1 Madadeni.
The Department of Economic Development, Tourism, and Environmental Affairs KwaZulu-Natal Province (DEDTEA) : Amajuba District Municipality	Zama Mbanjwa	033 2642898	Zama.Mbanjwa@kznedtea.gov.za	270 Jabu Ndlovu Street, Pietermaritzburg,3201
The Department of Agriculture, Land Reform and Rural Development (DALRRD)	Jeffrey Maivha	033 392 7739	jeffreyMAI@daff.gov.za	P/Bag x9029 Pietermaritzburg 3200
The Department of Water and Sanitation	Ntenga Lindokuhle	031 336 2956	NtengaL@dws.gov.za	88 Joe Slovo Southern Life Building (12th Floor- Office No. 1214) Durban 4000
Ezemvelo KwaZulu-Natal Wildlife	Ashantia Nerissa Pillay\	033 845 1999	Nerissa.Pillay@kznwildlife.com Jenny.Lonemore@kznwildlife.com	1 Peter Brown Drive, Pietermaritzburg

	Jenny Lonemore			3201
SAHRA; Provincial Heritage Resources Authority (Amafa/Heritage KwaZulu-Natal)	Bernadet Pawandiwa	033 394 6543	bernadetp@amafapmb.co.za	195 Langalibalele Str, Pietermaritzburg
The Ward Councillor (Ward 1)	Cllr XNM Dladla	082 407 5309	xolanid@amajuba.gov.za OR xolanidladla87@gmail.com	P O Box 3192 Newcastle 2940
INTERESTED AND AFFECTED PARTIES				
Farm Neighbour Landowner	Julian Philips	082 500 1234	screenitip@gmail.com	P O Box 25005 Newcastle 2940
Farm Neighbour Landowner	Dr. A Jamalodeen	072 889 2581	exportintl@aol.com	P O Box 2940 Newcastle 2940
Farm Neighbour Landowner	Cassim Patel	084 300 5232	-	Farm Rust 4282/2
Farm Neighbour Landowner	Marco Swanepoel	081 852 5451	maecoswanepoel@hotmail.com	P O Box 1789 Newcastle 2940

7.2.1 BACKGROUND INFORMATION DOCUMENT

A Background Information Document (BID) has been compiled and will be circulated to all identified I&APs by email and hand delivery. The purpose of the BID is to provide preliminary information regarding the project and its location. Furthermore, the BID invites preliminary comments from I&APs. Leaflets written in IsiZulu will be circulated to the farm dwellers and workers notifying them of the proposed development.

7.3 NEWSPAPER ADVERTISEMENT

An advert was placed in the Newcastle Advertiser newspaper on the 20th March 2020 to notify the public about the Scoping process, inviting members of the public to register as I&APs on the project's database (Figure 17 below). During the EIA phase, another newspaper will be published.

Vacancies

MEDIZONE HEALTH CARE COMPANY
Has the following positions:

15 New Consultants
To start IMMEDIATELY!!!

- No Experience Needed!!!
- Newcastle Area Only
- Salary Negotiable
- Company bonuses

For an interview SMS or Whatsapp your Name, Age & Area
To 063 628 5875

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Is seeking the services of a
PROFESSIONAL RECEPTIONIST

Candidates must have 3 years experience. Be well-spoken and fluent in English and isiZulu (Afrikaans will be an added advantage).

Key duties:

- Switchboard and dealing with the public
- Front office management
- Accurate and legible message taking
- Handling of all client request in a polite, cordial and helpful way
- Handling of all post and admin

Key requirements:

- Exceptional communication and soft skills
- Excellent administration skills
- Well presented
- Computer Literate

Candidates to email their applications to www@dbmatorneys.com

Closing date: 20 March 2020

Should you not have heard from us within one month of the closing date, please accept that your application has been unsuccessful.

ARBOR PARK PRIMARY SCHOOL
VACANCY : PRINCIPAL

Criteria:

- Language of managing and teaching: Afrikaans and English
- Seven (7) years professional/teaching experience
- Strategic Management Skills
- Strong Leadership Skills
- Administrative Skills
- Conflict handling
- Academic Training
- Community involvement
- Knowledge of education laws and regulations

Application forms: Refer to ICZN HRM 13 of 2020 and contact school at 031-0112511 for any further information.
Closing date: 4 April 2020 before 16:00 at Amajuba District office, Newcastle.
Applications should be hand delivered at the Amajuba District Office, Newcastle, No 9288 Section 5, Wapalala Road Madadeni CR alternatively mailed to: Private Bag 10011, Madadeni, 3651. No email will be accepted.

Find your dream job in the Classifieds

LOOKING FOR A JOB?
WE CAN HELP

Auction, Legals, Notices

NOTICE TO CREDITORS IN DECEASED ESTATE
DECEASED ESTATE NO: 06077/0919PMB

In the Estate of the Late: **WELGOME THULASIZWE KHUMALO**, Identity Number: 820614 5607 936, of D9951, Section 4, Madadeni, Newcastle - born 14 AUGUST 1962 and who died on 19 AUGUST 2004.

Pursuant to Section 26(1) of the Administration of Estate Act No. 66 of 1985, all persons having claims against the above Estate are hereby called upon to lodge their claims with the undersigned within 30 days from date of Publication hereof 20th March 2020.

DATED AT NEWCASTLE ON THE 24th DAY OF MARCH 2020.

TN MCHANYANA ATTORNEYS
41 SUTHERLAND STREET
SHOP NO.9
NEWCASTLE
2340
P.O. Box 910
NEWCASTLE
2340
TEL: 031 313 2337/071 9986 307
FAX: 031 615 6983
EMAIL: tnmchanyanaattorneys@gmail.com
REF No: TNWEST/06/19

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LIQUIDATION AND DISTRIBUTION ACCOUNTS IN DECEASED ESTATES LYING FOR INSPECTION

In the Estate of the Late: Surname **SCOTT**, First Name: SHARON, Estate Number: 0804220219, Identity Number: 5012290085087, Date of death: 11/10/2019. Last address: 54 IMPALA ROAD, HUTTON HEIGHTS, NEWCASTLE.

The FIRST AND FINAL Liquidation and Distribution Account in the estate will be open for inspection for a period of 21 days from 20 March 2020 at the office of the Master of the High Court PIETERMARITZBURG and the Magistrate's Office, NEWCASTLE.

Name and address of Executor or Authorized Agent:
DBM ATTORNEYS
DBM OFFICE PARK, CORNER MEMEL RD & ALLEN STREET, NEWCASTLE
Tel (031) 528 1303
Reference: EST/THUSENH07901.

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NOTICE TO CREDITORS IN DECEASED ESTATES

In the Estate of the Late: Surname **NDLOVU**.

First Name: MUZWANDILE SIMON, Estate Number: 001575/21019, Identity Number: 4307915438080, Date of death: 25/03/1994, Last address: HOUSE NO 8000 MADADENE E

All persons having claims against the above - mentioned estate are required to lodge their claims with the undersigned within 30 days after the date of publication hereof.

Name and address of Executor or Authorized Agent:
DBM ATTORNEYS
DBM OFFICE PARK, CORNER MEMEL RD & ALLEN STREET, NEWCASTLE
Reference: EST/THUSENH07905.

AUCTIONEER

CAR AUCTION
28 MARCH AT 10H30

Venue:
116 Allen Street Newcastle

On offer 60 Cars and Car parts
Pictures/ List and terms and conditions visit
www.kirklandsauctioneer.co.za

Auctioneer John Kirk
0829036019

Email:
john@kirklandsauctioneer.co.za

IN THE HIGH COURT OF SOUTH AFRICA KWAZULU - NATAL DIVISION, PIETERMARITZBURG

Case Number: 1073/2020 on the 4th day of March 2020

Before the Honourable Acting Judge K Govender

In the matter between:
ARBOR QUESTHOUSE NEWCASTLE (PTY) LTD
(Applicant)
(Registration Number: K0212/07053807)

and
DEDEKIND MEATS CO (Respondent)
(Registration Number: 1999/07301422)

HAVING read the Notice of Motion, and the other documents filed of record; and
HAVING heard Counsel for the Applicant

IT IS ORDERED THAT

1. DedeKind Meats CO (Registration Number: 1999/07301422), be and is placed under provisional liquidation in the hands of the Master of the High Court, Pietermaritzburg;
2. A rule nisi do hereby issue calling upon the Respondent close corporation and all other interested persons to show cause, if any to this Honourable Court on the 21st day of April 2020 at 10:00 why the Respondent close corporation should not be finally wound up;
3. This order be served on the Respondent close corporation at its registered office and principal place of business and that the order be published on or before the 14th day of April 2020, once in the Government Gazette and once in the Newcastle Advertiser.

BY ORDER OF THE COURT
RJ Jooste Registrar
033-3404800

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT, WATER USE LICENSE APPLICATION AND AVAILABILITY OF DRAFT SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF AN IRRIGATION DAM, EGG-LAYING BATTERIES, AND INTENSIVE SHEEP FARMING, WITHIN VREDE EITINGS FARM IN NEWCASTLE LOCAL MUNICIPALITY, UNDER AMAJUBA DISTRICT MUNICIPALITY, KWAZULU-NATAL.

Notice is hereby given in terms of the National Environmental Management Act (No. 107 of 1996) for the intent to undertake an activity listed under the Environmental Impact Assessment Regulations (Section 24 of the Act, GNR 327 (Activities 5, 12, 19 and 27), GN R.325 (Activities 15 and 16) and GN R. 324 (Activity 14) and Water Use, in terms of Section 21 (a, b, c & d) of National Water Use Act, 1998 (Act no. 36 of 1996).

Project Description
Saci Environmental Consulting was appointed by Boornzicht Landgoed (Pty) Ltd to undertake an Environmental Impact Assessment and Water Use License in support of the proposed development. The proposed development has been divided into 3 phases which include phase 1 - construction of an irrigation dam with a volume capacity of 1.7 million m³, phase 2 - egg-laying battery consisting of 6 chicken shed and phase 3 - intensive sheep farming consisting of 6 sheep feedlots. The Vrede 4217HS farm is approximately 800.3610 hectares in extent.

Prior to undertaking activities listed in EIA Regulations (2017), an Environmental Authorisation has to be obtained from the relevant competent authority.

Applicant: Boornzicht Landgoed (Pty) Ltd t/a Horne Poultry

Environmental Assessment Practitioner: SAcI Environmental Consulting cc

AN OPEN DAY WILL BE HELD AT THE DEVELOPMENT SITE (27°51'28.37"S 29°51'06.17"E) ON 25 MARCH 2020 FROM 11:30 AM TO 12:30 PM.

Invitation to register as I&AEP:

To be identified as an Interested & Affected Party please revert to us in writing, in the below address, stating your name, contact details, interests, and concerns regarding the process within 30 days of placement of this notice.

Contact: Anthonis Matlala
Address: 2 Monts Street West, Woodread Est, Sandton, 2191
Tel: 011-442 4795
Email: anthonis@sacienvironmental.co.za or info@sacienvironmental.co.za

PUBLIC NOTICE

BASIC ASSESSMENT PROCESS (BAP) (EIA) (EIA NO: DC25/00022020 NEAS: KZN/EA/00010002020) DRYCUT HOUSING PROJECT, MADADENI, NEWCASTLE LOCAL MUNICIPALITY

Notice is hereby given in terms of the regulations published in Government Notice No. GNR 30202 of December 2014 under the National Environmental Management Act (Act No. 107 of 1996) as amended, of the intent to carry out the following activity:

The Newcastle Local Municipality in collaboration with the ICZN Department of Human Settlements proposed to formalise the Drycut settlement near Madadeni, Newcastle within the Amajuba District of ICZN. In all about 1000 residential units are envisaged to be constructed. It is expected that houses will be constructed on the compounds of qualifying beneficiaries. This will also include the upgrade of internal roads and also pipelines for water reticulation.

This triggers activities within Listing Notice 1 of GNR 963, of the National Environmental Management Act (Act 107 of 1996) for which environmental authorisation is required. Key triggered activities, relate to removal of vegetation, potential crossing of watercourses by roads and pipelines.

A Basic Assessment (EIA) process is being undertaken by Bizycon (PTY) LTD and an application for authorisation for this project will be submitted to the ICZN Department of Economic Development, Tourism & Environmental Affairs (EDTEA). Further details of the proposed activity may be obtained from the contact person below.

All Interested and Affected Parties (I&AEP) are encouraged to submit their names, contact details and written interest or comments relating to the above development to the contact persons given below within 30 days of the date of publication of this advertisement.

A copy of the Draft Basic Assessment Report (BAP) is also placed in the Newcastle Library for public review and comments. If any, all interested and affected parties are encouraged to read and send their comments (if any) to the below contact persons within 30 days of the publication of this notice.

CONTACT DETAILS:
BIZYCON PTY LTD
Mr MacCarthy Gail: Tel: 072-461197 Fax: 086 776 3325, Email: bjason@bizycon.co.za

Visit Us
www.newcastleadvertiser.co.za

Figure 17: Newspaper advertisement

7.4 PUBLIC MEETING

The public meeting was supposed to be held on the 25th of March 2020 within the Vreede 4317/HS farm, yet due to the National lockdown, it was cancelled. Focus group meetings with fewer groups will be held (date to be announced). This focus group meeting will be within the proposed development area, and to adhere to the 50 people limited gathering, the meeting will be divided into segments, where the EAP and Team will hold the meeting with several people at a time. All COVID-19 safety measures will be adhered to.

7.5 COMMENTS RECEIVED

The given period for comments is 30 days, if no comments have been received after 30 days has lapsed it will be considered as no comment from stakeholder and I&AP following the publication of newspaper advertisement and distribution of BID. Once comments are received, they will be outlined in a comment sheet attached as an appendix to the final Scoping Report.

7.6 AVAILABILITY AND CIRCULATION OF DRAFT SCOPING REPORT

A copy of the Draft Scoping Report will be made available for public review for a 30-day review period at Sazi Environmental Offices at 02 Morris Street West, Woodmead Ext 1, Sandton 2191, Sazi Website: <http://www.sazienvironmental.co.za/> and also Copies of the Draft Scoping Report will be circulated to the following Key Stakeholders and IAPs for review and comment:

- ❖ The Department of Economic Development, Tourism, and Environmental Affairs KwaZulu-Natal Province.
- ❖ The Department of Agriculture, Land Reform, and Rural Development (DALRRD).
- ❖ The Department of Water and Sanitation.
- ❖ Ezemvelo KwaZulu-Natal Wildlife.
- ❖ Amajuba District Municipality.
- ❖ Newcastle Local Municipality.
- ❖ The Ward Councillor (Ward 1).

7.7 ISSUES RAISED BY I&APs

The Scoping phase serves to identify and prioritise issues for further assessment during the EIA phase. Accordingly, the comments received from authorities and I&APs during public participation as part of Scoping will be afforded due consideration and further investigation during the pending EIA stage. A Comments and Responses Report will be included in the Final Scoping report, which will summarise the salient issues raised by I&APs and the project team's response to these matters.

8 SPECIALIST STUDIES

8.1 AQUATIC ASSESSMENT

Sazi Environmental Consulting cc has undertaken the Aquatic Assessment and the assessment report has been attached in Appendix G1 and the details of the specialist who conducted it are outlined in Table 7 below. Based on the Aquatic Assessment, it was concluded that the conditions of the streams within the Vreede Farm have not been largely impacted upon. Although the sites had more taxa with high resistance to reduced water quality, there were some taxa that require good quality of water which is a good indication of the quality of water within the farm. A potential immediate high impact includes run-off from the nearby chicken waste as well as domestic waste from the surrounding homesteads. There needs to be an urgent intervention regarding the disposal of chicken waste. Improper disposal of this waste has direct implications on the quality of the water in the stream as indicated by the decreased biotic integrity at the VF3 and VF4 sites.

The proposed augmentation of water infrastructures within Vreede Farm may be authorized. However, care should be taken to consider all of the mitigation measures suggested into consideration in order to ensure that the state of the aquatic ecosystem is maintained in the same ecological state. The additional information collected should be used to supplement the mitigation measures proposed in this report.

Table 7: Aquatic Assessment Specialist Details

Specialist	Nonkanyiso Zungu
Qualifications	BSc (Honours, MSc, Ph.D. Ecology. UCT)
Affiliation	South African Council for Natural Scientific Professions (SACNASP, Pr. Nat. Sci. (Reg no.400194/10): Ecological Science Member of the Gauteng Wetland Task Group Member of WISA (Gauteng Region)
Company	Sazi Environmental Consulting cc
Physical Address	02 Morris Street West, Woodmead Ext 1; Sandton, 2191
Postal Address	P O Box 201, Carlswald, 1684
Telephone	010 442 4795
Cellphone	084 800 0187
Email	nzungu@sazienvironmental.co.za

8.2 BIODIVERSITY ASSESSMENT

Sazi Environmental Consulting cc has undertaken the Biodiversity Assessment and the assessment report has been attached in Appendix G2 and the details of the specialist who conducted it are outlined in Table 8 below. Based on the Biodiversity Assessment, it was concluded that the proposed development of an irrigation dam, egg-laying batteries, and intensive sheep farming, within Vreede 4317/HS farm is regarded as of Medium sensitivity. Although no sensitive or red data species were observed during the time of assessment, minimum destruction of the environment must be adhered to. From an ecological perspective, due care must be undertaken when developing in this area and all relevant mitigation measures implemented.

Table 8: Biodiversity Assessment Specialist Details

Specialist	Nolwazi Nxumalo
Qualifications	BSc Environmental and Resource Studies
Affiliation	Cand. Sci. Nat (Reg No. 121380)
Company	Sazi Environmental Consulting cc
Physical Address	02 Morris Street West, Woodmead Ext 1; Sandton, 2191
Postal Address	P O Box 201, Carlswald, 1684
Telephone	010 442 4795
Cellphone	073 161 9835
Email	nnxumalo@sazienvironmental.co.za

8.3 GEOHYDROLOGY STUDIES

Sazi Environmental Consulting cc has appointed Groundwater Abstract (Pty) Ltd to undertake the Geohydrology Assessment and the assessment report has been attached in Appendix G3 and the details of the specialist who conducted it are outlined in Table 9 below. Based on the Geohydrology Assessment, it was concluded that Negative impacts are not expected in the groundwater environment if excavations are limited to the zone above the groundwater table and the construction vehicles and workshop areas are well maintained and kept free from hydrocarbon contamination. Effective solid and liquid waste management will also limit negative impacts on the groundwater environment. A low to moderate risk is associated with the abstraction of groundwater from the boreholes on-site, during the various construction activities, as well as during the operational phase where the boreholes on site will be used to

supplement the water supply the various operations on site. Monitoring of the groundwater levels and abstraction volumes are recommended to effectively manage the local aquifers and ensure a sustainable groundwater environment for all to use.

Table 9: Geohydrology Assessment Specialist Details

Specialist:	Lucas Andries Smith
Qualifications and Affiliations:	MSc Geohydrology, IGS (UFS) Bloemfontein, South Africa, 2003. Baccalaureus Technology Geology, Technicon Pretoria, South Africa, 1997. National Diploma Geotechnology, Technicon Pretoria, South Africa, 1992. SACNASP (Pr.Sci.Nat; Reg No. 116693)
Company:	Groundwater Abstract (Pty) Ltd
Address:	828 20th Avenue Rietfontein Pretoria 0084
Telephone:	066 200 7589
Email:	lucas@wells.africa

8.4 GEOTECHNICAL STUDIES

Sazi Environmental Consulting cc has appointed Gondwana Geo-Solutions (Pty) Ltd (or 'GGS') to undertake the Geotechnical Study and the assessment report has been attached in Appendix G4 and the details of the specialist who conducted it are outlined in Table 10 below. Based on the Geotechnical Assessment, it was concluded that, In terms of dam construction materials, clay core materials are relatively abundant, potentially consisting of the residual dolerite soils. The shell zone materials, potentially comprising the colluvial soils, ferruginised / ferricrete material, and weathered rock materials appear less abundant. While no fatal flaws have been identified in this preliminary assessment, the most critical issues affecting the viability of this dam project comprise the following: Verification of dam wall founding conditions, and Establishment of sufficient and suitable materials for the construction of the dam wall

Table 10: Geotechnical Study Specialist Details

Specialist:	Mark Vincent Richter
Qualifications and Affiliations:	SACNASP (Pr Sci.Nat; Geological Science: Reg No. 400148/88)
Company:	Gondwana Geo-Solutions (Pty) Ltd (or 'GGS')

Address:	4 Haven Road Westville Durban 3629
Telephone:	083 461 614
Email:	mark@ggsgeotec.co.za

8.5 HERITAGE ASSESSMENT

Sazi Environmental Consulting cc has appointed Vungandze Project cc to undertake the Heritage Assessment and the assessment report has been attached in Appendix G5 and the details of the specialist who conducted it are outlined in Table 11 below. It was concluded that, based on the findings of the site survey the proposed site has social, historical value and, has medium significance from a heritage perspective. The developer can decide whether to incorporate or relocate the heritage resources found within the boundary of the proposed site. Chances of finding other burial grounds and graves on the proposed site are high given that the area was previously occupied, and the deceased was buried in the homesteads.

The proposed project may proceed provided mitigation measures and recommendations provided are adhered to and implemented. Should the developer not do as such, the project will be deemed unacceptable and in contravention of the National Heritage Resources Act 25 of 1999.

Table 11: Heritage Assessment Specialist Details

Specialist:	Makhosazana Mngomezulu
Qualifications:	BSc (Hons) Physical Anthropology (Affiliation: ASAPA & CRM)
Company:	Vungandze Project cc
Address:	Corner Sunstone & Brookhill Stone Arch Germiston, 1401
Telephone:	083 256 1292
Email:	fvungandze@gmail.com

8.6 PALAEOLOGICAL STUDIES

Sazi Environmental Consulting cc has appointed SKARAB CC to undertake the Palaeontological Impact Assessment and the assessment report has been attached in Appendix G6 and the details of the specialist who conducted it are outlined in Table 12 below.

The specialist concludes that, The region is known for its fossiliferous shales and sandstones and it is highly probable that fossils will be encountered when the intact bedrock under the soil cover and layer of eroded rock is exposed during construction.

A thick layer of soil obscures the underlying geology and outcrops of the Vryheid Formation are scarce. The rocks that were exposed at the inspection pit are weathered coarse-grained sandstone. No fossiliferous rocks were found during the site inspection.

The proposed sites for the chicken house (Site A) and sheep feedlot (Site B) are underlain by non-fossiliferous dolerite. Site C which is earmarked for the proposed dam is underlain by the highly palaeontologically sensitive Vryheid Formation.

If an exceptionally fossil-rich layer of shale or sandstone is exposed during construction, it is advised that the ECO must follow the Chance Palaeontological Find Procedure as stipulated in the Palaeontological Impact Assessment report (Section 8 of the report) and contact a palaeontologist for further advice.

Table 12: Palaeontological Impact Assessment Specialist Details

Specialist:	Dr. Francois Durand
Qualifications:	BSc Botany & Zoology (RAU), BSc Zoology (WITS), Diploma in Museology (UP), Higher Education Diploma (RAU), Ph.D. Palaeontology (WIT
Company:	SKARAB CC
Address:	P.O. Box 31517 Totiusdal, 0134 South Africa
Telephone:	083 235 7855
Email:	francois.karst@yahoo.com

8.7 WETLAND ASSESSMENT AND DELINEATION

Sazi Environmental Consulting cc has undertaken the Biodiversity Assessment and the assessment report has been attached in Appendix G2 and the details of the specialist who conducted it are outlined in Table 13 below. Based on the Biodiversity Assessment, it was

concluded that, within the study area, four HGM units were observed namely, 2 channeled valley-bottom and 2 Hillslope seepage wetlands. Of these 4 HGM units, 1 (CVB 1) will be directly impacted by the proposed dam development while the other 2 (CVB 2 and Hillslope Seepage 1) can be impacted if the buffer zones are infiltrated and the hillslope seepage 2 will not be impacted by the proposed developments. The modification of HGM units ranges from small to serious, with hillslope seep 2 being the least impacted and CVB 1 the most. It has been concluded that the impacts by the proposed dam construction will be unavoidable on CVB 1 and the proposed sheep feedlot and egg-laying batteries developments will not have impacts on the CVB 2, and Seepage 1 provided the provided buffer zones are considered a no-go area. Contingent upon the mitigation measures listed in this report, the proposed development can have limited impacts on the wetlands.

Table 13: Wetland Assessment And Delineation Specialist Details

Specialist	Anthoneth Matlala
Qualifications	BSc Life and Environmental Science
Affiliation	South African Council for Natural Scientific Professions (SACNASP, Cand.Nat.Sci. (Practice no. 121047): Environmental Science.
Company	Sazi Environmental Consulting cc
Physical Address	02 Morris Street West, Woodmead Ext 1; Sandton, 2191
Postal Address	P O Box 201, Carlswald, 1684
Telephone	010 442 4795
Cellphone	076 872 2336
Email	amatlala@sazienvironmental.co.za

9 IMPACT ASSESSMENT

9.1 IMPACT ASSESSMENT METHODOLOGY

In this Scoping report, the potential impacts are broadly identified and outlined. An assessment of the potential impacts is provided, identifying the impacts that are potentially significant, and recommending management and mitigation measures to reduce the impacts.

In general, it is recognised that every development has the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. Therefore, it is important that these possible risks are considered during the planning phase of the development.

The impacts will be assessed according to the criteria outlined in this section. Each issue is ranked according to an extent, duration, magnitude (intensity), and probability. From these criteria, a significance rating is obtained, the method and formula are described below. Where possible, mitigation recommendations have been made and are presented in tabular form.

The criteria given in the tables below will be used to conduct the evaluation. The nature of each impact was to be assessed and described in relation to the extent, duration, intensity, significance, and the probability of occurrence attached to it.

Table 14: Impact Assessment Methodology

Status of Impact	Extent of the Impact
<p>The impacts are assessed as either having a negative effect (i.e. at a `cost' to the environment), positive effect (i.e. a `benefit' to the environment), or Neutral effect on the environment.</p>	<p>(1) Site (site only), (2) Local (site boundary and immediate surrounds), (3) Regional (Municipality), (4) National, or (5) International.</p>
Duration of the Impact	Magnitude of the Impact

<p>The length that the impact will last for is described as either:</p> <p>(1) immediate (<1 year)</p> <p>(2) short term (1-5 years),</p> <p>(3) medium-term (5-15 years),</p> <p>(4) long term (ceases after the operational life span of the project),</p> <p>(5) Permanent.</p>	<p>The intensity or severity of the impacts is indicated as either:</p> <p>(0) none,</p> <p>(2) Minor,</p> <p>(4) Low,</p> <p>(6) Moderate (environmental functions altered but continue),</p> <p>(8) High (environmental functions temporarily cease), or</p> <p>(10) Very high / Unsure (environmental functions permanently cease).</p>
<p>Probability of Occurrence</p>	<p>Significance of the Impact</p>
<p>The likelihood of the impact occurring is indicated as either:</p> <p>(0) None (the impact will not occur),</p> <p>(1) improbable (probability very low due to design or experience)</p> <p>(2) low probability (unlikely to occur),</p> <p>(3) medium probability (the distinct probability that the impact will occur),</p> <p>(4) high probability (most likely to occur), or</p> <p>(5) Definite.</p>	<p>Based on the information contained in the points above, the potential impacts are assigned a significance rating (S). This rating is formulated by adding the sum of the numbers assigned to an extent (E), duration (D), and magnitude (M) and multiplying this sum by the probability (P) of the impact.</p> <p>S=(E+D+M) P</p>

9.2 ISSUES AND POTENTIAL IMPACTS

GN No 326 (April 2017) states that a scoping report must contain all of the information that is necessary for a proper understanding of the nature of issues identified during scoping, including a description of environmental issues and potential impacts, including cumulative impacts, that have been identified.

Different types of impacts may occur from the undertaking of an activity. The impacts may be positive or negative and may be categorized as being direct (primary), indirect (secondary), or cumulative impacts.

Direct impacts are impacts that are caused by the activity and generally occur at the same time and at the place than the proposed activity (e.g. noise generated by construction

activities). These impacts are usually associated with the quantifiable aspects of the application.

Indirect impacts of an activity are indirect or induce changes that may occur as a result of the activity (e.g. reduction of water in a stream that supplies water to a reservoir that supplies water to the activity). These types of impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken, or which occur at a different place as a result of the activity.

Cumulative impacts are impacts that 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 (e.g. discharge of nutrients and heated water to a river that combines to cause algal bloom and subsequent loss of dissolved oxygen that is greater than the additive impacts of each pollutant). Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.

The identification of the potential impacts of an activity on the environment should include impacts that may occur during the commencement, operation, and termination of an activity. In order to identify impacts, it is important that the nature of the proposed activity is well understood so that the potential impacts that are associated with the activity can be understood.

The process of identification and assessment of impacts includes the:

- ❖ determination of current environmental conditions in sufficient detail so that there is a baseline against which impacts can be identified and measured;
- ❖ determination of future changes to the environment that will occur if the proposed activity does not take place;
- ❖ an understanding of the activity in sufficient detail to understand its consequences; and
- ❖ the identification of impacts that are likely to occur if the activity is undertaken.

Potential environmental impacts of the proposed development have been identified during consultative processes between the consultant, the applicant, and a panel of technical specialists based upon their professional experience and judgment.

9.3 IMPACTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT

The following site-specific constraints and/or key impacts were identified by various specialists during this scoping / baseline phase of the environmental process. These constraints / key impacts will be used to further refine the proposal, as the potential impacts associated with them will become recommendations to avoid and/or mitigate impacts that are provided during the ongoing environmental process. Table 15 below discusses the potential impacts envisioned by specialists and possible mitigation measures.

Table 15: Key impacts identified by various specialists and possible mitigation measures

IMPACTS	MITIGATION MEASURES
AQUATIC ASSESSMENT	
<p>Impacts on the aquatic life in the river due to increased turbidity:</p> <ul style="list-style-type: none"> ❖ Impure water penetrating the groundwater system ❖ Disturbances to surrounding areas due to construction activities. ❖ Land pollution due to construction activities ❖ Erosion of the riverbanks ❖ Destruction of aquatic and riparian habitat through large changes in the channel morphology <p><u>Positive</u></p> <ul style="list-style-type: none"> ❖ Job creation ❖ Over flooding control 	<ul style="list-style-type: none"> ❖ Develop a long-term management plan to monitor channel morphology, and aquatic ❖ Monitoring sensitive habitats ❖ Rehabilitation of specific aquatic zones ❖ Maintain river channel flood discharge capacity ❖ Establish a long-term monitoring program ❖ Minimize activities that release fine sediment to the river ❖ Retain riparian buffer at edge of the water and against the riverbank ❖ All construction vehicles must avoid contact with sensitive aquatic ecosystems and the use of existing access roads must take priority
BIODIVERSITY ASSESSMENT	
<ul style="list-style-type: none"> ❖ Spread of alien invasive species ❖ Land pollution leading to degradation and deterioration of vegetation ❖ Soil loss/soil erosion 	<ul style="list-style-type: none"> ❖ Alien invasive species control ❖ Before the commencement of construction, an Environmental Control Officer (ECO) should be appointed to supervise the process ❖ Sensitive areas should be marked off with a fence or any other form of demarcation in order to keep vegetation destruction to a minimum and no facilities should be placed within sensitive areas ❖ Make use of existing roads (both vehicles and pedestrians)

	<ul style="list-style-type: none"> ❖ No fires should be allowed ❖ A rehabilitation plan for vegetation should be in place and implemented ❖ All contractors must undergo environmental induction prior to construction activities ❖ All hazardous spills must be cleared in an appropriate manner ❖ Construction vehicles must be confined to demarcated areas.
GEOHYDROLOGY STUDIES	
❖ Storage of fuel and chemicals on site	<ul style="list-style-type: none"> ❖ Reservoirs must be appropriately bunded. ❖ Construction vehicle service areas need to have sealed and enclosed surfaces to limit impacts from accidental spills of oils and diesel. ❖ Silt and oil traps must be well maintained to ensure effective separation of the water and contaminants. ❖ A re-fuelling plan must be in place and followed to ensure that oil and diesel are not spilled during filling. ❖ A borehole monitoring network must be in place for both water level and quality monitoring, to detect any changes in quality.
❖ Waste generation and disposal (including sewage)	<ul style="list-style-type: none"> ❖ Infrastructure must be maintained according to the engineering specifications, when and where required, or on a regular basis. ❖ Solid waste must be stored in waste bins and removed/cleaned on a regular basis to avoid overflowing bins and waste laying on the surface or being taken off-site by the wind. ❖ Leaking services must be fixed immediately.
❖ Groundwater abstraction	<ul style="list-style-type: none"> ❖ Manage the groundwater use through effective use and routine monitoring. If a continuous downward trend is observed in the borehole, rest water levels then the abstraction rate must be adjusted to retain a state of equilibrium again, or the system must be rested to allow for recovery and replenishment of the aquifers.

GEOTECHNICAL STUDIES	
<ul style="list-style-type: none"> ❖ Verification of dam wall founding conditions ❖ Establishment of sufficient and suitable materials for the construction of the dam wall 	<ul style="list-style-type: none"> ❖ Geophysics work comprising Reverse Seismic traverses using the borehole information for ground-truthing in defining the contact between the dolerite and the Vryheid Formation rocks. ❖ Test pitting to search for, investigate and sample available materials for clay core, shell and drainage materials; establishment of borrow areas elsewhere on the farm if required ❖ Test pitting along dam wall foundation area and spillway areas to allow sampling and identification of the dam foundation materials ❖ Appropriate laboratory testing: foundation indicator, proctor density, permeability, dispersity tests (double hydrometer, pinhole & crumb tests) and triaxial & shear box tests ❖ Preparation of geotechnical report on findings of the geotechnical investigation; identification of rock and soil materials quality & usage, estimation of materials reserves, shear strength parameters for the dam wall stability analysis, permeability of rock substrate horizons and subsoils beneath the dam wall; founding of dam wall. Evaluate dispersity of wall embankment materials
HERITAGE ASSESSMENT	
<ul style="list-style-type: none"> ❖ Burial grounds and stonewalling. 	<ul style="list-style-type: none"> ❖ During the construction phase, the contractor should keep within the proposed parameters of the site to avoid impacting on any heritage resources found outside of the proposed project site, this may include unknown burial grounds and graves and Ncandu Falls ❖ The contractor should induct all employees on the importance of heritage sites and resources that they should not be impacted in any way. This is to ensure that even if any heritage resources are found during the construction phase or exposed due to

	construction activities, should by no means be impacted or destroyed
PALAEONTOLOGICAL STUDIES	
❖ fossil-rich layer of shale or sandstone	❖ It is advised that the ECO must follow the Chance Palaeontological Find Procedures (Section 8 of the Paleontological Impact Assessment report) and also contact a palaeontologist for further advice.
WETLAND ASSESSMENT AND DELINEATION	
<ul style="list-style-type: none"> ❖ Loss of Wetlands (Degradation and / or destruction of wetland and riparian habitats.) ❖ Erosion and Sedimentation ❖ Contamination and toxin infiltration (Surface Water Pollution) ❖ Loss of Biodiversity ❖ Spread of Alien Invasive species 	<ul style="list-style-type: none"> ❖ Removal of vegetation should be limited to the proposed development footprint. ❖ Stockpiles should not be situated such that they obstruct natural water pathways and drainage channels. ❖ Stockpiles should be kept clear of weeds and alien vegetation by regular weeding. ❖ All cleared areas on dam walls and direct surroundings should be rehabilitated. ❖ Release of water from the dam downstream to allow normal ecosystem functioning on a regular basis. ❖ Work in rivers, streams, and riparian zones should preferably be done during the low flow season. ❖ The extent of exposed soils at any one time should be limited. ❖ No refuelling of construction vehicles or machinery should be allowed within the 100m buffer zone of the wetland. ❖ All construction machinery and vehicles should be inspected for oil and fuel leaks regularly and frequently

Cumulative impacts associated with the project will be further investigated in detail during the EIA study

10 GAPS IN KNOWLEDGE AND ASSUMPTIONS

As is standard practice, this Scoping Report is based on a number of assumptions and is subject to certain limitations, these are as follows:

Assumptions:

- ❖ All information presented to the EAP by the Applicant, Specialists, and I&APs was correct and valid at the time that it was provided.
- ❖ A detailed assessment of the potential positive and negative environmental impacts of the proposed development will only be undertaken during the Environmental Impact Assessment Phase
- ❖ Every effort was made to involve as many as possible I&APs to participate in the EA process

Gaps:

- ❖ The scope of this EIR is limited to assessing the environmental impacts associated with the construction and operational phases of the proposed development; and
- ❖ Only 2 alternatives (Preferred and the 1 alternative) were obtained for the proposed development and therefore only environmental impacts for the 2 proposed sites were assessed.

10.1 ASSUMPTIONS AND LIMITATIONS MADE BY SPECIALISTS

- ❖ The Aquatic Assessment noted the following limitations (Sazi Environmental Consulting cc, 2020):
 - Sampling followed heavy rains, which led to some flooding on the streams. This was apparently due to some debris being observed on the riverbank. The macroinvertebrate results may have some variations due to the recent flooding.
- ❖ The Biodiversity Assessment noted the following limitations (Sazi Environmental Consulting cc, 2020):
 - The major potential limitation associated with the project is the narrow temporal window allocated for sampling. Ideally, a site should be visited several times during different seasons to ensure that the full complement of plant and animal species present are captured. However, this is rarely possible due to time and

cost constraints and therefore, the representation of the species sampled at the time of the site visit should be evaluated.

- ❖ The Groundwater Basic Assessment (Geohydrological Assessment) noted the following limitations (Groundwater Abstract Pty Ltd, 2020):
 - No limitations were recorded during the assessment.
- ❖ The Geotechnical Assessment noted the following limitations (Gondwana Geo-Solutions (Pty) Ltd (or 'GGS'), 2020):
 - No limitations were recorded during the assessment
- ❖ The Heritage Impact Assessment noted the following limitations (Vungandze Project cc, 2020):
 - It was assumed based on the literature review that the study area may yield heritage resources such as burial grounds and graves and probably heritage sites. During the physical survey heritage resources were found within and outside the project area.
 - The proposed site is within a farm with restricted access. There were many access gates to the site which were not locked, except for one gate on the western end of the boundary which was locked. Apart from prior arrangements being made to access all parts of the site, the one gate restricted us to access half the portion of the site.
- ❖ The Paleontological Impact Assessment noted the following (SKARAB cc Paleontological Services, 2020):
 - It was assumed based on the literature review and according to the Palaeontological (fossil) Sensitivity Map, accessible from the South African Heritage Resources Agency (SAHRA) website that the proposed development site is within a very High palaeontological sensitivity area and may yield palaeontological resources especially the eastern site of the farm.
- ❖ The Wetland Assessment and Delineation noted the following limitations (Sazi Environmental Consulting cc, 2020):
 - Although background information was gathered, the information provided in this report was mainly derived from what was observed on the study site at the time of the field survey.
 - Description of the depth of the regional water table and geohydrological processes falls outside the scope of the current assessment.
 - Site assessment was limited to the Vreede 4317/HS farm.

- The GPS used for water resource delineations was accurate to within five meters. Therefore, the wetland delineation plotted digitally may be offset by at least five meters to either side.
- Wetland systems identified at a desktop level within 500m of the project area were considered for the identification and desktop delineation, with wetland areas within the project area being the focus for ground-truthing.
- The freshwater resource delineations as presented in this report are regarded as the best estimate of the freshwater resource boundaries based on the site conditions at the time of the assessment.
- Aquatic, wetland, and riparian ecosystems are dynamic and complex. The effects of natural seasonal and long-term variations in the ecological conditions are therefore largely unknown

Notwithstanding the above, Sazi Environmental Consulting cc is confident that these assumptions and limitations do not compromise the overall findings of this report.

11 PLAN OF STUDY FOR THE EIA

This chapter presents the Plan of Study for the EIA, which sets out the process to be followed in the EIA Phase (as required by the 2017 EIA Regulations). The plan is based on the outcomes of the Scoping Phase and provides the Terms of Reference (TOR) for the specialist studies that have been identified, the alternatives that will be considered and assessed, as well as the PPP that will be undertaken during the EIA Phase.

The purpose of the EIA is to:

- ❖ Address issues that have been identified through the Scoping Process.
- ❖ Assess alternatives to the proposed activity in a comparative manner.
- ❖ Assess all identified impacts and determine the significance of each impact.
- ❖ Recommend actions to avoid/mitigate negative impacts and enhance benefits.

The IEA Phase consists of three parallel overlapping processes:

- ❖ Central assessment process through which inputs are integrated and presented in an EIA Report that is submitted for approval to the DEA and other commenting authorities.
- ❖ Undertaking of a PPP whereby findings of the EIA Phase are communicated and discussed with I&APs and responses are documented.
- ❖ Undertaking of specialist studies that provide additional information/assessments required to address the issues raised in the Scoping Phase.

11.1 APPROACH TO UNDERTAKE THE EIA PHASE OF THE PROJECT

The following points below outline the proposed approach to undertaking the EIA phase of the project. It is believed that the proposed approach will adequately fulfil the requirements of the competent authority, the requirements of the EIA Regulations (2017), and the objectives of environmental best practice, so as to ensure transparency and to allow an informed decision regarding the project to be made.

11.1.1 AUTHORITY CONSULTATION

Consultation with EDTEA, the Newcastle Local Municipality, Ward Councilor, Neighboring farm owners, and all other authorities identified during the scoping phase of the project (and further ones that may be identified during the EIA phase) will continue throughout the duration

of the project. Authority consultation is therefore seen as a continuous process that takes place until completion of the environmental investigations.

11.1.2 SPECIALIST STUDIES

The following specialist studies will form part of the EIA process and are been undertaken and are following the EIA regulations (2017):

- ❖ Aquatic Assessment.
- ❖ Biodiversity Assessment.
- ❖ Geohydrology Studies.
- ❖ Geotechnical Studies.
- ❖ Heritage Assessment.
- ❖ Palaeontological Studies.
- ❖ Wetland Assessment And Delineation.

11.1.3 IMPACT ASSESSMENT METHODOLOGY

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability, and significance of the impacts during the EIA phase and the methodology outlined in Section 9 (9.1 and 9.2) of this report will be utilized.

11.1.4 ENVIRONMENTAL IMPACT ASSESSMENT REPORT

The Environmental Impact Assessment report will contain the following as per the EIA Regulations (2017) requirements:

- ❖ Details of the EAP who compiled the report and their expertise to carry out an EIA.
- ❖ Detailed description of the activity/ies.
- ❖ A description of the environment that might be affected by the activity and the manner in which the physical, biological, social, economic, and cultural aspects of the environment may be affected by the proposed activity.
- ❖ Details of the public participation process conducted during the Scoping Phase and the ongoing consultation during the EIA phase.
- ❖ Description of the need and desirability of the activity including advantages and disadvantages that the activity may have on the environment and the community that may be affected by the activity.

- ❖ An indication of the methodology used in determining the significance of potential environmental impacts.
- ❖ A summary of the findings and recommendations of any specialist report or report on a specialised process.
- ❖ A description of all environmental issues that were identified during the environmental impact assessment process, an assessment of the significance of each issue, and an indication of the extent to which the issue could be addressed by the adoption of mitigation measures.
- ❖ An assessment of each identified potentially significant impact, including cumulative impacts, the nature of the impact, the extent and duration of the impact, the probability of the impact occurring, the degree to which the impact can be reversed, the degree to which the impact may cause irreplaceable loss of resources and the degree to which the impact can be mitigated.
- ❖ A description of any assumptions, uncertainties, and gaps in knowledge.
- ❖ An opinion as to whether the activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation.
- ❖ An environmental impact statement contains a summary of the key findings of the environmental impact assessment and a comparative assessment of the positive and negative implications of the activity.
- ❖ A draft Environmental Management Programme (EMPr).
- ❖ Copies of any specialist reports and reports on specialised processes.

11.1.5 ENVIRONMENTAL MANAGEMENT PROGRAMME

An EMPr is being drafted and will be finalised during the compilation of the EIR, the EMPr is being compiled in accordance with the EIA Regulations (2014). The EMPr will provide the actions for the management of identified environmental impacts emanating from the project and a detailed outline of the implementation programme to minimise and/or eliminate the anticipated negative environmental impacts. The EMPr will provide strategies to be used to address the roles and responsibilities of environmental management personnel on-site, and a framework for environmental compliance and monitoring.

The EMPr will include the following:

- ❖ Details of the person who prepared the EMPr and the expertise of the person to prepare an EMPr.

- ❖ Information on any proposed management or mitigation measures that will be taken to address the environmental impacts that have been identified in the EIR, including environmental impacts or objectives in respect of operation or undertaking of the activities, rehabilitation of the environment, and closure where relevant.
- ❖ A detailed description of the aspects of the activity that are covered by the draft EMPr.
- ❖ An identification of the persons who will be responsible for the implementation of the measures.
- ❖ Where appropriate, time periods within which the measures contemplated in the draft EMPr must be implemented.
- ❖ Proposed mechanisms for monitoring compliance with the EMPr and reporting thereon.
- ❖ An environmental awareness plan.
- ❖ Procedures for managing incidents that have occurred as a result of undertaking the activity and rehabilitation measures.

11.1.6 ADVERTISING

The primary aim of adverts in the EIA phase is to provide information regarding the availability of reports for public review.

11.1.7 IDENTIFICATION OF AND CONSULTATION WITH KEY STAKEHOLDERS

The identification of I&APs and key stakeholders will continue into the EIA phase of the project as the public participation process is a continuous process that runs throughout the duration of an environmental study.

11.1.8 APs DATABASE

All I&APs information (including contact details), together with dates and details of consultations and a record of all issues raised is recorded within a comprehensive database of I&APs. This database will be updated on an on-going basis throughout the project and will act as a record of the communication/involvement process.

12.10 CONSULTATION AND PUBLIC INVOLVEMENT

Consultation with I&APs is considered to be critical to the success of any EIA process. Therefore, one-on-one consultation (via telephone calls, fax, and emails) will be undertaken. The aim of this process will be to provide I&APs with details regarding the process and to obtain further comments regarding the project. Minutes of all meetings held will be compiled and forwarded to all attendees. These minutes will also be included in the EIR.

11.1.9 ISSUE TRAIL

All issues, comments, and concerns raised during the public participation process of the EIA study will be compiled into an issue and response report and this report will be incorporated as part of the EIR.

11.1.10 PUBLIC AND AUTHORITY REVIEW OF THE CONSULTATION ENVIRONMENTAL IMPACT ASSESSMENT REPORT

The consultation EIR will be made available at public places for public review and comment. The consultation EIR will also be submitted to the Competent Authorities simultaneously. A 30-calendar day period will be allowed for this review process. An advertisement indicating the availability of this report for public scrutiny will be placed in a local newspaper. I&APs registered on the project database will be notified of the availability of this report by correspondence.

11.1.11 AUTHORITY REVIEW OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

After the public review period, all relevant comments received from the public will be considered and included into a final EIR. This final document will be submitted to the Competent Authorities for final review and decision-making on the Environmental Authorization.

11.1.12 ENVIRONMENTAL AUTHORIZATION

On receipt of the environmental authorisation for the proposed project, I&APs registered on the project database will be informed and its associated terms and conditions by correspondence.

11.2 FORMAL PROCESS

An outline of the Scoping and EIA process for the proposed developments within the Vreede farm is provided in Figure 18.

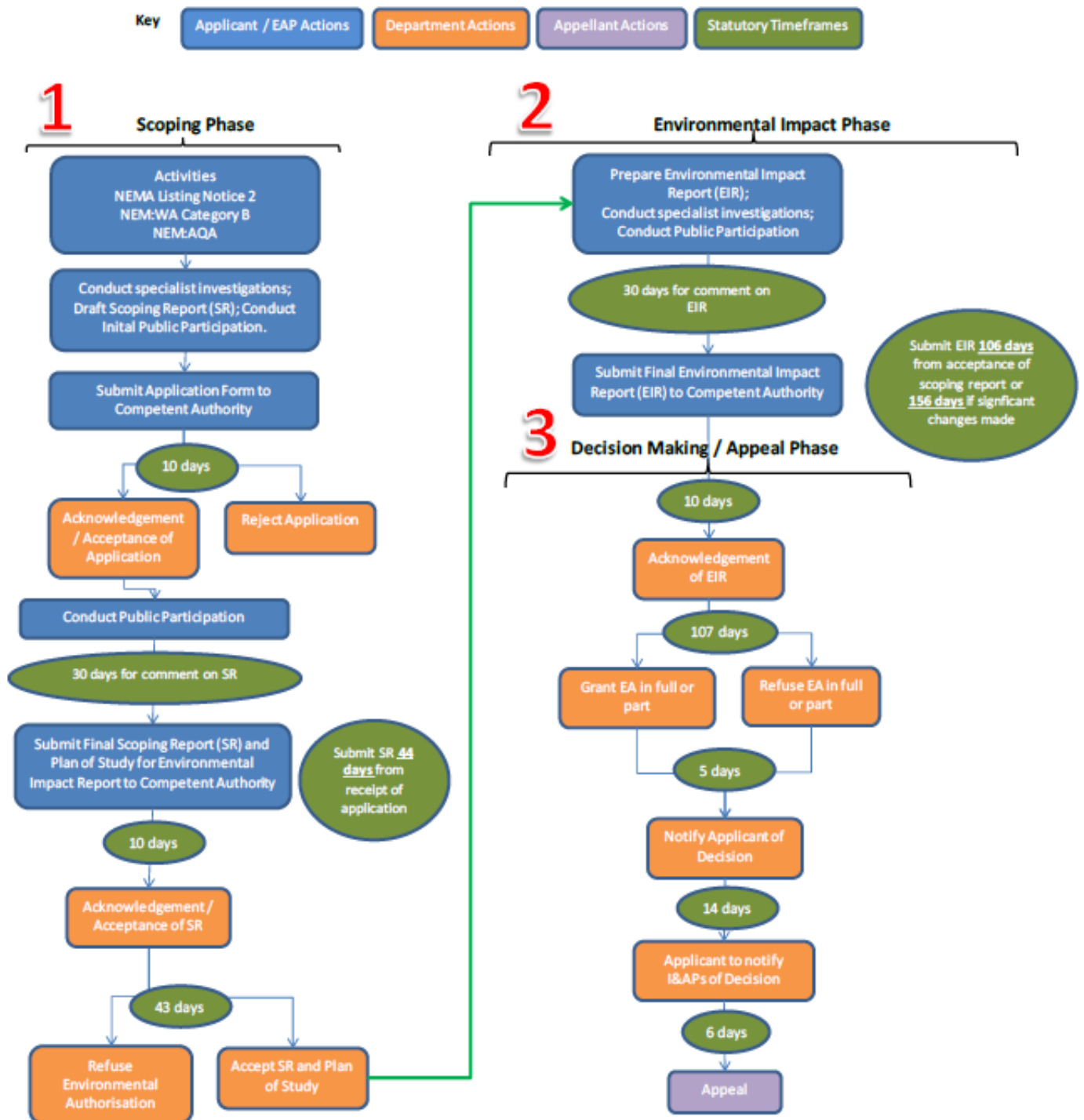


Figure 18: Flow diagram of the S&EIA process as per the 2014 Regulations

12 CONCLUSION AND RECOMMENDATIONS

The specialists have identified various key mitigation measures that could address, to some meaningful level, the significance of some of the identified impacts were assessed. Where impacts cannot be mitigated it is possible to consider trade-offs. In the event that the Applicant and Dam Engineer can effectively implement said mitigation measures and/or trade-offs through improving the dam design and management conditions, the final phase of the environmental process, namely the impact assessment phase, will see a final evaluation of the proposed activity. It is evident that the most critical aspects of the proposal revolve around the potential impact of impounding water (i.e. taking water from the system) and the loss of aquatic habitat.

Issues identified through this scoping study as being potentially associated with the proposed developments include impacts on biodiversity and ecological processes, habitat alteration and impacts to fauna, social impacts, potential impacts on heritage sites, impacts on soil, and impacts on the water resources. The majority of potential impacts identified to be associated with the construction and operation of the proposed developments are anticipated to be localised and restricted to the proposed site. A detailed sensitivity map has been compiled for with an objective to indicate areas which have been marked as potentially sensitive Rust en Vreede Farming (Pty) Ltd has provided two alternatives (the proposed site and an alternative 1) for consideration within the Scoping and EIA phase.

During the time of assessment, a number of environmental activities were identified to be triggered by the proposed development. Since the proposed development will be done in an area that is already disturbed and developed, there will be low impact and no fatal flaws caused by the proposed development. Potential environmental impacts have been identified and will be further investigated in the EIA phase.

13 REFERENCES

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