



Emvelo Quality and Environmental consultant (PTY) Ltd

38 Jacaranda Street, Arboretum, Richards Bay, 3900.

P.O. Box 101672, Meerensee, 3901

Tel: 035 789 0632 1 8760, Cell: (078) 2849 332 Fax: 086 577 5220,

## **BACKGROUND INFORMATION**

**The proposed Construction of Earth Filled Dam for KZN Department of Agriculture and Rural Development, at ERF No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality within Harry Gwala District.**

**07 SEPTEMBER 2022**

**Prepared By:**

**Emvelo Quality and Environmental Consultant  
(PTY) Ltd**



**Prepared For:**

**KwaZulu Natal Department of Agriculture and  
Rural Development**



**KWAZULU-NATAL PROVINCE**  
AGRICULTURE AND RURAL DEVELOPMENT  
REPUBLIC OF SOUTH AFRICA

## INTRODUCTION/BACKGROUND

Emvelo Quality and Environmental Consultant has been appointed by KwaZulu Natal Department of Agriculture and Rural Development (KZN DARD), for the proposed construction of Earth Filled Dam for KZN DARD, at ERF No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality within Harry Gwala District.

KZN DARD owns and manages the Kokstad Research Station. The Kokstad Research Station operates three research components, namely crop production, animal science and grassland science, with farm services as the support component. The farming activities in this area are concentrated mainly on dairy production and extensive to semi-intensive cattle and sheep production, and crops production.

In response to the growing urgency to secure adequate and sustainable water supply for the Kokstad Research Station, the KZN DARD proposes the construction of Earth Filled Dam. Currently, the Kokstad Research Station abstract water from the nearby spring and water is then stored in the reservoir within the farm. The water from spring is currently not sufficient for agricultural use and consumption, as sometimes the spring dries out during the dry periods, as a result

the farm experience the water yield only during wet seasons (summer months).

The proposed earth filled dam will increase the capacity of water supply to Kokstad Research Station throughout the year, thus improve capability of research station to conduct its activities for future planned research programmes.

Consequently, an environmental impact assessment (EIA) has commenced, assisting the KZN DARD (applicant) in identifying all potential adverse environmental consequences of the project, their extent, significance and to ensure that the environmental management requirements are adequately implemented.

The purpose of this Background Information Document (BID) is to provide you, as an Interested or Affected Party (I&AP), with a brief description of the EIA process to be undertaken and to obtain comments and contributions from I&AP's with regards to the potential impacts to the environment by the proposed project.

## PROJECT DESCRIPTION

The proposed earth filled dam, is mainly a small stock watering dam which entails the following features:

- 1) In-channel dam to un-named stream
- 2) Area occupied by a dam is 1.6ha
- 3) The capacity of the dam is approximately 50 000m<sup>3</sup>
- 3) Two Spillways (Spillway A= Levelled Spillway & B= Natural Spillway).
  - Levelled spillway A width of 35.8m and Freeboard of 1,4 m
  - Natural spillway B width of 89.6m
- 4) Distance overland flow is 80m
- 5) Core trench width of 14.1m
- 6) Core Trench Volume of 808. 69m<sup>3</sup>
- 7) Base Water Side of 27.18m
- 8) Base Dry Side of 18.62m
- 9) Earth banks height of 8.56m
- 10) Bank Volume of 13 752.43m<sup>3</sup>

There will be no infilled materials that will be imported for the construction of the earth filled dam as all the infill material will be excavated from the dam basin, to form an earth filled dam.

The project also entails construction of 200m(600mmø) abstraction pipeline (dam outlet pipeline) which will join the existing pipeline at (30°30'41.82"S, 29°25'15.14"E) coming from raw water

reservoir to Kokstad Research Station WTW.

## PROJECT LOCATION

The project will take place within Erf 1069, Portion 0, Kokstad Research Station, Ward 6 of Kokstad Local Municipality.

The project area is within Quaternary Catchment T32C of Pongola-Mtamvuma Catchment Management Area.

The site co-ordinates are as follows:

Instream Inlet to Earth filled Dam	
Inlet corner	30°30'33.42"S, 29°25'10.66"E
Western Bank of Earth filled Dam	
1 <sup>st</sup> Point	30°30'33.42"S, 29°25'10.66"E
2 <sup>nd</sup> Point	30°30'34.39"S, 29°25'10.24"E
3 <sup>rd</sup> point	30°30'34.64"S, 29°25'8.20"E
4 <sup>th</sup> Point	30°30'35.06"S, 29°25'7.47"E
5 <sup>th</sup> Point	30°30'35.37"S, 29°25'6.00"E
6 <sup>th</sup> Point	30°30'36.85"S, 29°25'5.93"E
7 <sup>th</sup> Point	30°30'37.96"S, 29°25'5.11"E
Southern Bank of Earth filled Dam	
1 <sup>st</sup> Point	30°30'37.96"S, 29°25'5.11"E
Middle	30°30'38.55"S, 29°25'9.07"E
End Point	30°30'38.93"S, 29°25'12.41"E
Natural Spillway	30°30'39.73"S, 29°25'12.41"E
Eastern Bank of Earth filled Dam	
Spill Way Corner	30°30'38.93"S, 29°25'12.41"E
Levelled Spillway	30°30'38.20"S, 29°25'11.91"E

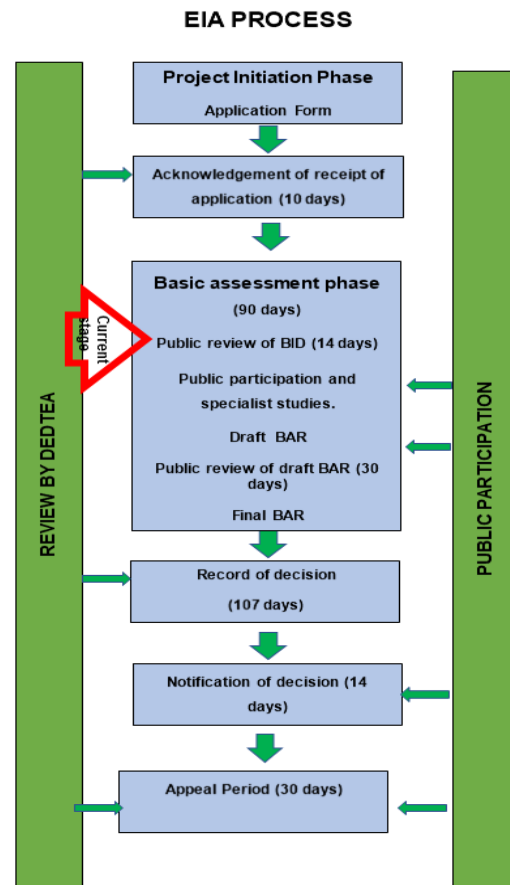
<b>Middle</b>	30°30'36.62"S, 29°25'10.23"E
<b>End Point</b>	30°30'33.42"S, 29°25'10.66"E
<b>200m(600mmØ) abstraction pipeline</b>	
<b>Abstraction point (Start)</b>	30°30'38.01"S, 29°25'9.62"E
<b>Connection to existing pipeline (End)</b>	30°30'41.81"S, 29°25'15.10"E

## WHAT IS AN ENVIRONMENTAL IMPACT ASSESSMENT?

An Environmental Impact Assessment (EIA) is an effective planning and decision-making tool, which allows for the identification of potential adverse environmental consequences of a proposed project, and its management through the planning process.

In terms of the National Environmental Management Act, 1998 (Act No.107 of 1998), as read with the Environmental Impact Assessment (EIA) Regulations of 2014 as amended in 2017, an Environmental Authorization must be obtained from the relevant decision-making authority, the Department of Forestry, Fisheries and the Environmental (DFFE) prior to the commencement of any of the listed activities that may result in potential negative impacts on the environment. Thus, an environmental impact assessment is required. A Basic assessment that includes the public participation process will be performed.

## ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



**Figure 1: EIA process**

In terms of the Environmental Impact Assessment (EIA) regulations, an independent Environmental Assessment Practitioner (EAP) must be appointed to conduct the EIA. Therefore, Emvelo Consultant has been appointed by KwaZulu Natal Department of Agriculture and Rural Development to conduct the EIA.

Emvelo Consultant will identify and assess the potential environmental impacts associated with the proposed activity by conducting an objective and independent EIA in which all the relevant information and opinions of Interested and Affected Parties (I&APs) will be collected and passed on to the Department of Forestry, Fisheries and the Environment (DFFE) In this way, an informed decision-making process can take place.

**LISTED ACTIVITIES  
TRIGGERED BY THIS PROJECT**

The proposed project triggers the following listed activities of the EIA Listing Notices;

**Table 1: Listed Activities**

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
1	19	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from- (i)A watercourse, (ii)the seashore; (iii)the littoral active zone, an estuary or a distance of 100

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater—  but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; [or] (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		<p><b>Applicability:</b></p> <p><i>The construction of in-channel storage dam will involve excavation and removal of soil for Core Trench Volume of 808.69m<sup>3</sup>; excavation and removal of soil for Bank Volume of 13 752.43m<sup>3</sup>; and other excavation required for construction of 1.6ha earth filled dam, and exaction for construction of 200m(600mmø) abstraction pipeline (dam outlet pipeline). Therefore, the activities will involve in excavation of soil material of more than 5m<sup>3</sup> within the unnamed stream, and 32m watercourse regulated area. As well as infilling of spoils and soils within 32m watercourse coverage for formation of earth filled dam.</i></p>
1	27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		<p>vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p><b>Applicability:</b></p> <p><i>The proposed dam will cover the surface of 16 032m<sup>2</sup> in size. Therefore, construction of earth dam will result in clearance of 16 032m<sup>2</sup> (1.6ha) area overlain by vegetation related to East Griqualand Grassland.</i></p>
3	12	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p><b>d. KwaZulu-Natal</b></p> <p>v. Critical biodiversity areas as identified in</p>

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		<p>systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p><b><u>Applicability:</u></b>  <i>The proposed dam will cover the surface of 16 032m<sup>2</sup> in size. Therefore, construction of earth dam will result in clearance of 16 032m<sup>2</sup> (1.6ha) area overlain by overlain by vegetation related to East Griqualand Grassland within CBA1 &amp; CBA2 Areas.</i></p>
3	14	<p>The development of—</p> <p>[(iv) dams, where the dam, including infrastructure and water surface area exceeds 10 square metres in size; or</p> <p>(xii) infrastructure or structures with a physical footprint of 10 square metres or more;]</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</p>

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		<p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p>d. KwaZulu-Natal</p> <p>vii. Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p>

LISTING NOTICE	ACTIVITY	DESCRIPTION OF ACTIVITY
		<p><b>Applicability:</b></p> <p><i>The proposed dam will cover the surface of 16 032m<sup>2</sup> in size. The dam will be in stream (in-channel) storage dam, built within un-named stream. Furthermore, the development of earth dam will take place within CBA1 &amp; CBA2, within the farm (Kokstad Research Station).</i></p>

The NEMA, and the Environmental Impact Assessment (EIA) Regulations (2014) as amended in 2017, govern the process of applying for environmental authorization for certain developments. A provision in the EIA Regulations is made for two forms of assessment: Basic Assessment and Scoping & EIA, depending on the scope of the activity. The EIA regulations specify that: Activities identified in Listing Notice 1 and 3 (GNR 327 and 324 of 2017) requires a Basic Assessment while activities identified in Listing Notice 2 (GNR 325 of 2017) are subject to a Scoping and EIA.

The listed activity associated with the proposed development is: Listing Notice 1,

Activity 19 and 27; Listing notice 3, Activity 12 and 14 . Therefore, this application will follow a **Basic Assessment Process**, as a result mentioned Listing Notice 1 and 3 triggered.

## WHAT IS PUBLIC PARTICIPATION?

Public participation is the process that promotes information sharing, consultation and active involvement amongst stakeholders, and all interested and affected parties.

During the Public Participation Process, input from the proponent, technical experts, government authorities and the general public will be gathered to result in a better understanding of the project for all involved thus ensuring an informed decision-making throughout the process.

## REGISTRATION OF INTERESTED AND AFFECTED PARTIES.

Any person, company, authority or other entity that might be directly or indirectly affected by the proposed activity is invited to register as an I&AP, in order to assist the EAP in identifying possible environmental, economic and social impacts of the proposed



development and to make suggestions for mitigations. These comments will be included as part of the Basic assessment report which will be submitted to the Department of Forestry, Fisheries and the Environment.

Interested and affected parties (I&APs) may forward their written comments along with their contact details within 14 days from receiving the document to; **Phumzile Lembede**.

**Postal address:** P. O. Box 101672, Meerensee,3901;

**Tel:** 035 789 0632;

**Fax:** 086 577 5220,

**Email:** [Info@emveloconsultants.co.za](mailto:Info@emveloconsultants.co.za).

APPENDIX A: (LOCALITY MAP)

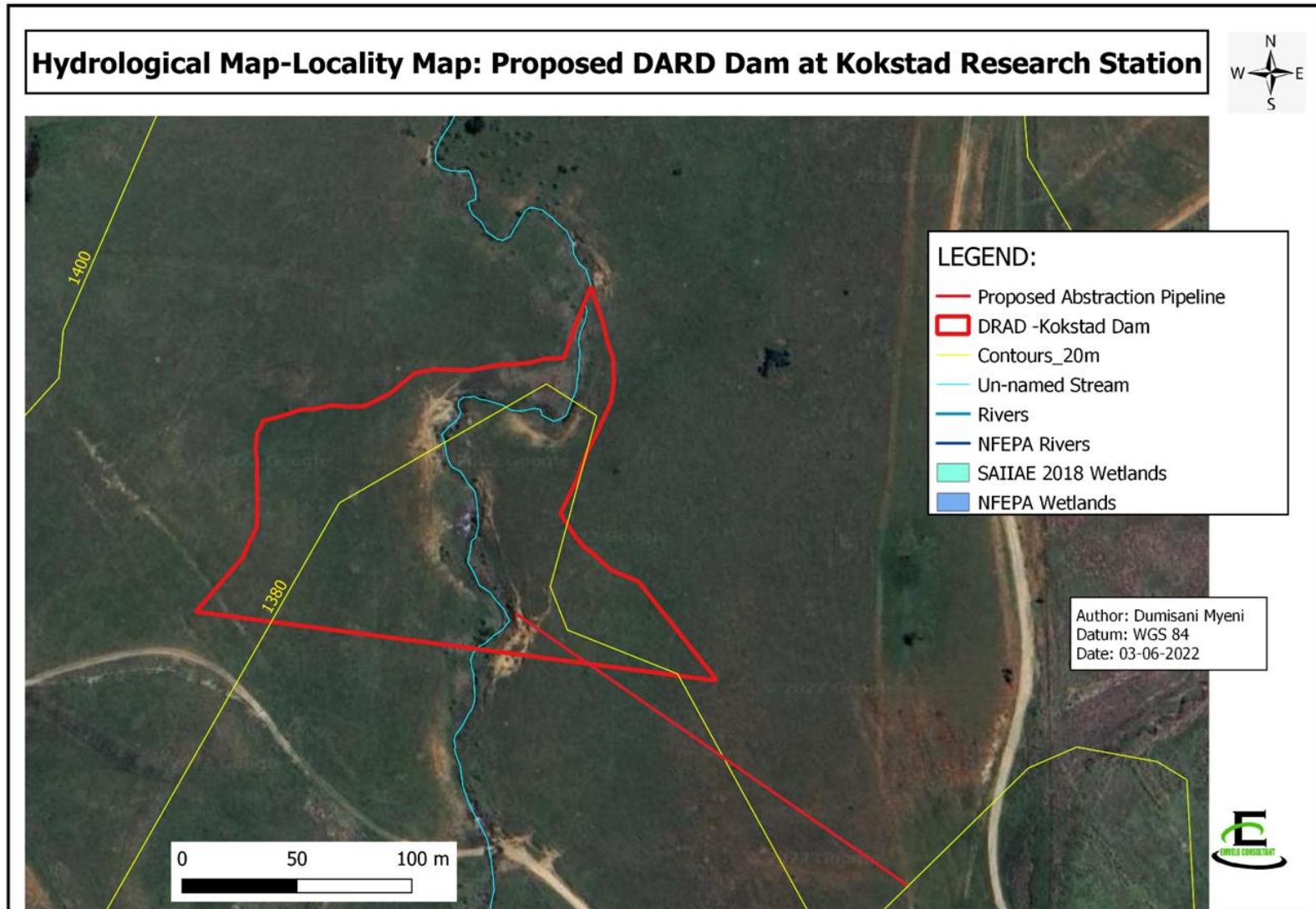
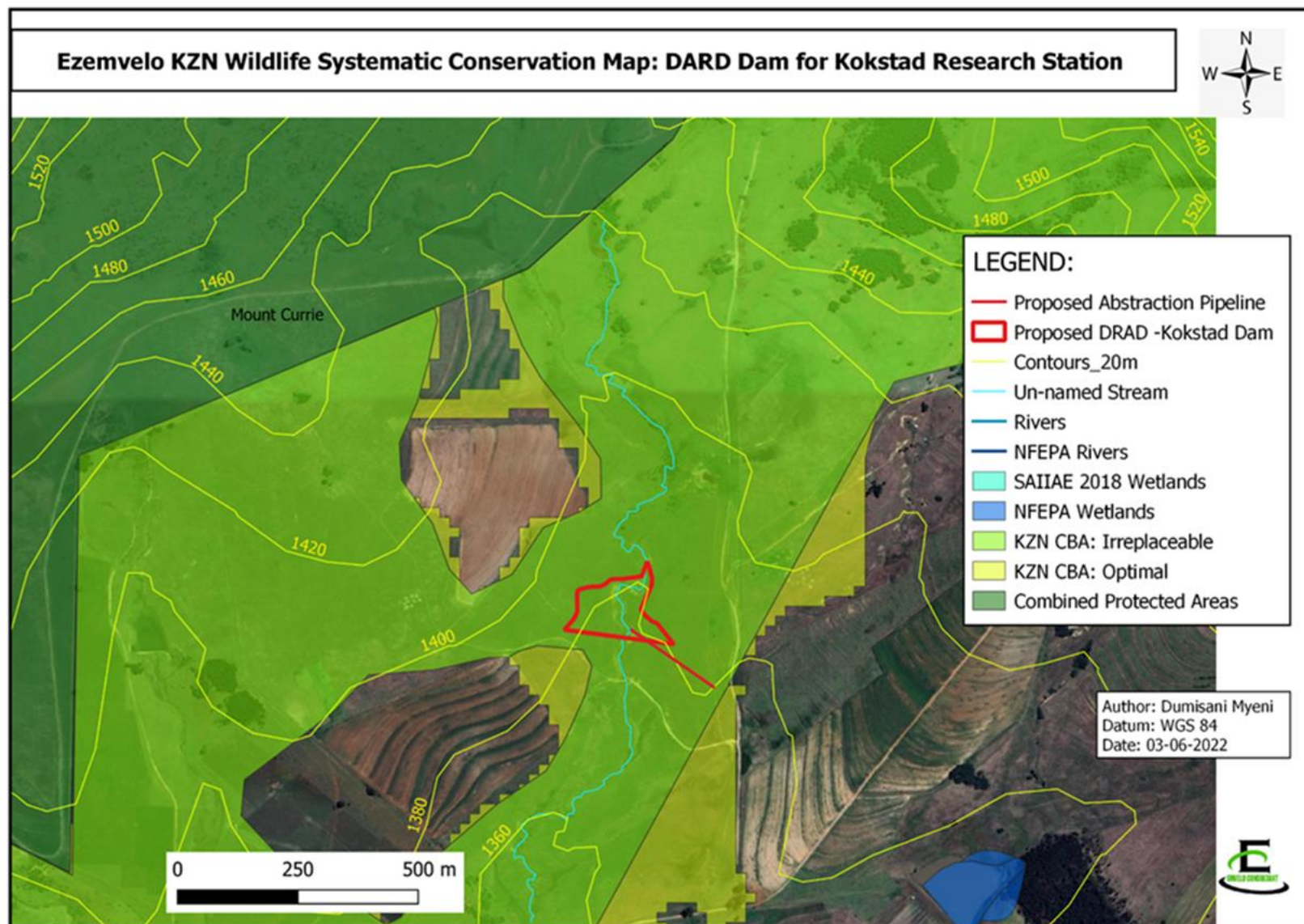


Figure 2: Map Showing Locality of proposed development



**Figure 3:** Map Showing Locality of proposed development



**Emvelo Quality and Environmental Consultant (PTY) Ltd**  
38 Jacaranda Street, Arboretum, Richards Bay, 3900.

P.O. Box 101672, Meerensee, 3901

[Info@emveloconsultants.co.za](mailto:Info@emveloconsultants.co.za)

**REGISTRATION AND COMMENT FORM**

**The Proposed Construction of Earth Filled Dam for KZN Department of Agriculture and Rural Development, At Erf No. 1069, Kokstad Research Station, Ward 6 of Kokstad Local Municipality Within Harry Gwala District.**

I wish to register as an interested and affected party and / or bring to the attention of Emvelo Consultant the following information.

<b><u>Personal Information</u></b>	
Name and Surname	
Company /organization	
Physical Address	
Postal address	
Telephone:	Cell:
Email:	
We would like you to inform us on a preferred and effective means of receiving documents and communication from us.	
<b><u>Method:</u></b>	<b><u>Address:</u></b>
<b><u>Comments</u></b>	

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date