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Application for Integrated Environmental Authorisation: Umgala & Knights Hill Waste Management License

Draft Scoping Report

Version – Draft for Public Review

September 2024

Welgedacht Exploration Company (Proprietary) Limited

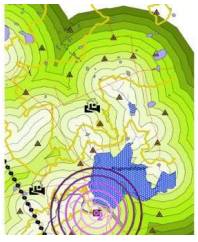
(Subsidiary of the Kangra Group)

GCS Project Number: 22-0649

DMR Reference: KZN 30/5/1/2/2/10125 MR

Client reference: Umgala & Knights Hill




GCS (Pty) Ltd. **Reg No:** 2004/000765/07 Est. 1987
Offices: **Johannesburg** (Head Office) | Durban | Gaborone | Maseru | Windhoek | Ostrava
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Environmental Group Manager	Gerda Bothma *Pr. Sci. Nat: 117348*	G Bothma	02 September 2024

EXECUTIVE SUMMARY

Project Background

The Welgedacht Exploration Company (Pty) Ltd (Welgedacht) is a subsidiary of Unyezi Coal (Pty) Ltd (Unyezi Coal) which is an affiliate company of Kangra Coal (Pty) Ltd, falls within the greater Menar group structure, is the holder of the mining right. Welgedacht has been operating in the vicinity of Utrecht since 1963, although mining activities have been prevalent in the area since 1914, and is comprised of the following mining areas:

- Aasvoëlkrans;
- Umgala / Knight's Hill;
- Utrecht; and
- Zimbutu.

Welgedacht proposes to reopen the Umgala Colliery and construct the Knight's Hill adit area. The Umgala / Knight's Hill Mining Project consists of two individual coal mining operations, namely Umgala Operation and Knight's Hill Operation, functioning under one Mining Right (MR) (KZN 30/5/1/2/2/10125 MR).

Project Description

The Umgala Coal Mine is situated at 27°42'30.25"S and 30°20'57.72"E, approximately 45km from Newcastle and 3km from Utrecht, in the Kwa-Zulu Natal Province of South Africa. More specifically, Umgala is situated south-southeast of Utrecht on the southern side of the R34 and Knight's Hill is east of Utrecht on the northern side of the R34. Umgala Mine is located within the Emadlangeni Local Municipality (ELM), ELM that was previously known as Utrecht Local Municipality, forms part of the Amajuba District Municipality. The area falls within the Buffalo River Catchment, which forms part of the Greater Tugela River Catchment.As mentioned previously, the project falls within quaternary catchments V32B and V32C in the uThukela Water Management Area (WMA) (DWS, 2016). The Umgala mining area and the related mining infrastructure are situated below the Zimbutu Mountain (approximately 5km south of Utrecht), west of the Balelesberg mountain range

Underground mining was undertaken at Umgala between 1964 and 1997. Opencast mining took place between 1997 and 2004 at Umgala, when the mine was placed under Care and Maintenance. The operation of the processing plant and disposal on the discard dump at Umgala also ceased in 2004. The old Umgala underground workings can no longer be accessed as they were closed and secured according to DMRE specifications, and backfilling of a number of the highwall areas and inclined roadways have already been completed.

It was the intention of Welgedacht to re-open and extend its mining operations at Umgala and Knight's Hill in 2006 and GCS Water and Environmental Consultants (Pty) Ltd (GCS), on behalf of Welgedacht, completed and submitted the Environmental Impact Assessment and Environmental Management Programme (EIA/EMP) in accordance with the requirements of

the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), for the Umgala / Knight's Hill Mining Project in May 2006.

Subsequently and in response to the KwaZulu-Natal (KZN) DME's request that the EIA/EMP be resubmitted and also the 2006 public participation process be re-initiated, GCS as independent consultants undertook the resubmission of the EIA/EMP and public participation process during the course of 2009. The then Department of Mineral Resources (DMR) approved the Umgala / Knight's Hill MR and associated EIA/EMP (dated February 2009) in 2013. Mining activities have however not commenced as yet.

Welgedacht now intends to recommission mining with the re-opening of the Umgala operation, Discard Dump and the construction of the Knight's Hill operation. The target coal seams will be mined via a combination of opencast (in the area where the adit will be cleared) and underground board and pillar mining. It is the intention to mine anthracite coal from Umgala and bituminous coal from Knight's Hill.

Various activities and/or infrastructure are planned for the recommissioning of the mine[1]:

Umgala / Knights Hill Mine activities/infrastructure	
Umgala Operation	**Knights Hill Operation**
Construction of facilities approved in 2009 EMPR	*Construction of facilities approved in 2009 EMPR*
Various upgrades/refurbishments/rebuilding of existing structures/infrastructure within old mine complex	Adit, adit sump & adit conveyor system
New Processing Plant (on current plant's footprint)	Access Road
Discard Dump extension	Security / Access control office
Additional Access Road	Brake test ramp
Additional Security / Access control office	Stormwater infrastructure
Additional Office complex (incl. general & bus/taxi parking areas, lamp room, change room, workshop, wash bay, ablution facilities, stores and offices)	PCD
New Fuel depot	Various overburden stockpiles
New Adit & adit sump	Hard park area (incl. parking area, wash bay, lamp room, workshop, ablution facilities, stores and offices)
New underground workings	Pipeline from Knight's Hill to Umgala plant
Various additional overburden stockpiles	
Additional Haul roads, brake test ramp & hard park area	
New sewage management system	
Additional stormwater infrastructure	
Two new PCDs	
Ericson Dam	
New RoM & Product Stockpile Areas	
Pipeline from Umgala adit to the plant	

The above intended activities/infrastructure required for the recommissioning of the mine was *inter alia* included, either as existing or planned activities/infrastructure in the approved 2009 EMPR, although it was not as clearly defined as required for full operational efficiency.

[1] Further details are provided in the EMPR.

In addition, the existing discard disposal facility was commissioned in the early 1970 and has been dormant since the beginning of 2004. Discard material was dumped at very steep angles in an uncontrolled form during the initial operations. During later years a discard buttress was formed around this dump and slurry and discard were co-disposed to the west of the initial dump. Concurrent rehabilitation took place to the outer embankments.

It is proposed to extend the discard disposal facility to the east. This will enhance the stability on the eastern side of the facility in accordance with the Department of Water and Sanitation (DWS) Standards.

The extension to the east will be utilized for the first 6 years and will be filled to the elevation of the existing facility. This will give the slurry ponds time to dry out and strengthen. Thereafter, the entire top surface of the discard disposal facility will be utilized for the life of mine. As such, in order for Welgedacht to recommission mining operations, following is required to be undertaken:

- A Part 2 Amendment application in terms of Section 31 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) to update the existing Environmental Authorisation/EMPr to make provision for the upgrading and new adit complex at Umgala, and to ensure that all proposed infrastructure at Knight's Hill is accounted for within the authorisation/EMPr; and
- Application for a WML for the Umgala Discard Facility in terms of the identified Waste Management Activities outlined in the WML Regulations (2013) published under the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEMWA); and
- Application for a Water Use License (WUL) from the Department of Water and Sanitation (DWS) for water uses triggered in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998 (NWA).

It is in this regard that GCS was appointed to provide the environmental services to manage and undertake the required environmental authorisation application process for the Umgala Discard Facility's WML, Part 2 Amendment application and WUL.

This report, the Draft Scoping Report (DSR), is submitted as part of the application for an Environmental Authorisation and Waste Management License for the Umgala Discard Facility.

Scoping and Environmental Impact Report Process

A S&EIR process has two distinct phases: The Scoping Phase and the Environmental Impact Assessment (EIA) Reporting Phase (S&EIR Process). This report, the Draft Scoping Report (DSR) identifies potential biophysical, social and health aspects and impacts of the proposed development on the receiving environment and invites comments from stakeholders in the identification of key issues and areas of concern, in order to inform the S&EIR process.

The submission of a Scoping Report to the Competent Authority (CA) for acceptance concludes the scoping phase. If accepted, the CA will instruct GCS to commence the EIR

phase. This report represents the draft version of the Scoping Report for public consultation.

As per the requirements of the NEMA EIA Regulations (2014, as amended), the DSR has been issued for public participation in terms of GNR 326, Regulation 43. All interested and affected parties (I&APs) were required to register as stakeholders to enable them to comment during the Public Participation Process (PPP). PPP provides an opportunity to comment and raise any concerns or suggestions in respect of the Umgala and Knight's Hill Projects. All comments received during the Scoping PPP will be recorded and addressed within the Scoping Comments and Responses Report (CRR), Scoping Public Participation Report (PPR); and will be further addressed as needed during the EIA phase of the project. The DSR will be made available for comment for 30 days from **4 September until 4 October 2024**, as stipulated by the NEMA EIA Regulations (2014, as amended), as follows:

Printed Copies	
Utrecht Library (55 Voor Street, Utrecht) eMadlangeni Local Municipality (34 Voor Street, Utrecht)	
Electronic Copy	
Website download	https://www.gcs-sa.biz/public-documents/

Stakeholder meetings are scheduled to be held between **16 to 20 September 2024**.

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ABBREVIATIONS AND ACRONYMS

BPEO	Best Practicable Environmental Option
CARA	Conservation of Agricultural Resources Act (Act 43 of 1983)
CA	Competent authority
CI	Conservation important
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
EI	Ecological importance
EIA	Environmental Impact Assessment,
EIA Regulations 2014	Environmental Impact Assessment Regulations, promulgated in terms of NEMA in GN 982 of GG 38282 on 4 December 2014 (as amended in 2017).
EIS	Ecological importance and sensitivity
EMPr	Environmental Management Programme
ES	Ecological sensitivity
FEPA	Freshwater ecosystem priority area
GCS	GCS Water and Environmental Consultants Proprietary Limited
HPGR	High pressure grinding rolls
IDP	Integrated Development Plan
ktpm	Kilo tonnes per month
Listing Notice 1	Environmental Impact Assessment Regulations, promulgated in terms of NEMA in GN 983 of GG 38282 on 4 December 2014 (as amended).
Listing Notice 2	Environmental Impact Assessment Regulations, promulgated in terms of NEMA in GN 984 of GG 38282 on 4 December 2014 (as amended).
Listing Notice 3	Environmental Impact Assessment Regulations, promulgated in terms of NEMA in GN 985 of GG 38282 on 4 December 2014 (as amended).
LoM	Life of Mine
I&APs	Interested and Affected Parties
masl	Metres above sea level
mbgl	Metres below ground level
MPRDA	Mineral and Petroleum Resources Development Act (Act 28 of 2002)
MR	Mining Right
Mt	Million tonnes
m/y	Metres per year
NEMA	National Environmental Management Act (Act 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Act (Act 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act (Act 10 of 2004)
NEM:WA	National Environmental Management: Waste Act (Act 59 of 2008)
ngl	Natural ground level
NWA	National Water Act (Act 36 of 1998)

PES	Present Ecological Status
PSD	Particle size distribution
ROM	Run of Mine
RWD	Return water dam
SCC	Species of Conservation Concern
SLP	Social Labour Plan
tpm	Tonnes per month

STRUCTURE AND CONTENT OF THIS REPORT

This Scoping Report has been prepared in compliance with Appendix 2 of the EIA Regulations (2014, as amended) and is divided into various chapters and appendices, the contents of which are outlined below.

CONTENTS OF THE SCOPING REPORT	RELEVANT SECTION IN THE REPORT
Details of – i. The EAP who prepared the report; and ii. The expertise of the EAP, including a curriculum vitae	Section 1.4 and Appendix B
The location of the activity, including – i. The 21 digit Surveyor General code for each cadastral land parcel; ii. Where available, the physical address and farm name; iii. Where the required information in terms of (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section 1.5
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 1.5 & 2
A description of the scope of the proposed activity, including – i. All listed and specified activities triggered; ii. A description of the activities to be undertaken, including associated structures and infrastructure;	Section 2 & 3.2
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 applicable to this activity and are to be considered in the assessment process	Section 3
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 4
A full description of the process followed to reach the proposed preferred activity, site and location within the site, including – i. Details of all alternatives to be 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 alternatives focusing on geographical, physical, biological, social, economic, heritage and cultural aspects; v. The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts - aa. can be reversed; bb. may cause irreplaceable loss of resources; and cc. can be avoided, managed or mitigated; vi. The methodology used in determining 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	Section 5

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. 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	
A plan of study for undertaking the environmental impact assessment process to be undertaken, including – i. A description of the alternatives to be considered and assessed with the preferred site, including the option of not proceeding with the activity; ii. A description of the aspects to be assessed as part of the environmental impact assessment process; iii. Aspects to be assessed by specialists; iv. A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists; v. A description of the proposed method of assessing duration and significance; vi. An indication of the stages at which the competent authority will be consulted; vii. Particulars of the public participation process that will be conducted during the environmental impact assessment process; and viii. A description of the tasks that will be undertaken as part of the environmental impact assessment process; 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	Section 8
An undertaking oath or affirmation by the EAP in relation to – i. The correctness of the information provided in the report; ii. The inclusion of comments and inputs from stakeholders and interested and affected parties; and 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 and affected parties;	Section 11 Appendix C
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 11
Where applicable, any specific information required by the competent authority; and	N/A
Any other matter required in terms of section 24(4)(a) and (b) of the Act.	N/A

1 INTRODUCTION

1.1 Background

The Welgedacht Exploration Company (Pty) Ltd (Welgedacht) is a subsidiary of Unyezi Coal (Pty) Ltd (Unyezi Coal) which is an affiliate company of Kangra Coal (Pty) Ltd, falls within the greater Menar group structure, is the holder of the mining right. Welgedacht has been operating in the vicinity of Utrecht since 1963, although mining activities have been prevalent in the area since 1914, and is comprised of the following mining areas:

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Welgedacht now intends to recommission mining with the re-opening of the Umgala operation, Discard Dump and the construction of the Knight's Hill operation. The target coal seams will be mined via a combination of opencast (in the area where the adit will be cleared) and underground board and pillar mining. It is the intention to mine anthracite coal from Umgala and bituminous coal from Knight's Hill.

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Additional Access Road	Brake test ramp
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Additional Haul roads, brake test ramp & hard park area	
New sewage management system	
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Two new PCDs	
Ericson Dam	
New RoM & Product Stockpile Areas	
Pipeline from Umgala adit to the plant	

[2] Further details are provided in the EMPR.

The above intended activities/infrastructure required for the recommissioning of the mine was *inter alia* included, either as existing or planned activities/infrastructure in the approved 2009 EMPR, although it was not as clearly defined as required for full operational efficiency.

In addition, the existing discard disposal facility was commissioned in the early 1970s and has been dormant since the beginning of 2004. Discard material was dumped at very steep angles in an uncontrolled form during the initial operations. During later years a discard buttress was formed around this dump and slurry and discard were co-disposed to the west of the initial dump. Concurrent rehabilitation took place to the outer embankments.

It is proposed to extend the discard disposal facility to the east. This will enhance the stability on the eastern side of the facility in accordance with the Department of Water and Sanitation (DWS) Standards.

The extension to the east will be utilized for the first 6 years and will be filled to the elevation of the existing facility. This will give the slurry ponds time to dry out and strengthen. Thereafter, the entire top surface of the discard disposal facility will be utilized for the life of mine.

To enable the implementation of the proposed projects, Welgedacht needs to acquire the necessary environmental approvals. It is in this regard that GCS Water and Environment (Pty) Ltd (GCS) was appointed to undertake the required environmental assessment processes, to determine the biophysical, social and economic impacts associated with undertaking the proposed projects.

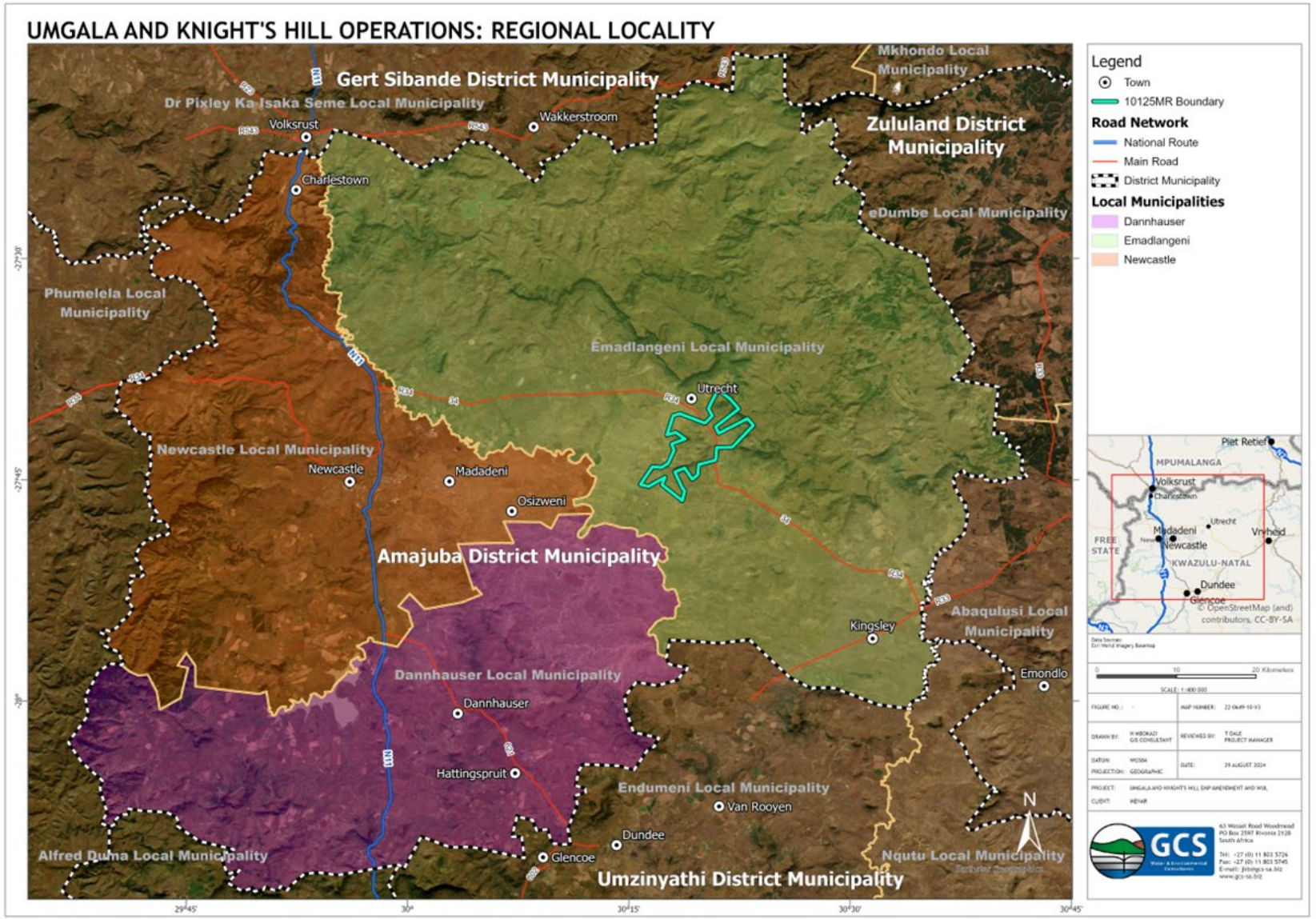

Figure 1-1: Umgala and Knight's Hill Regional Locality Map

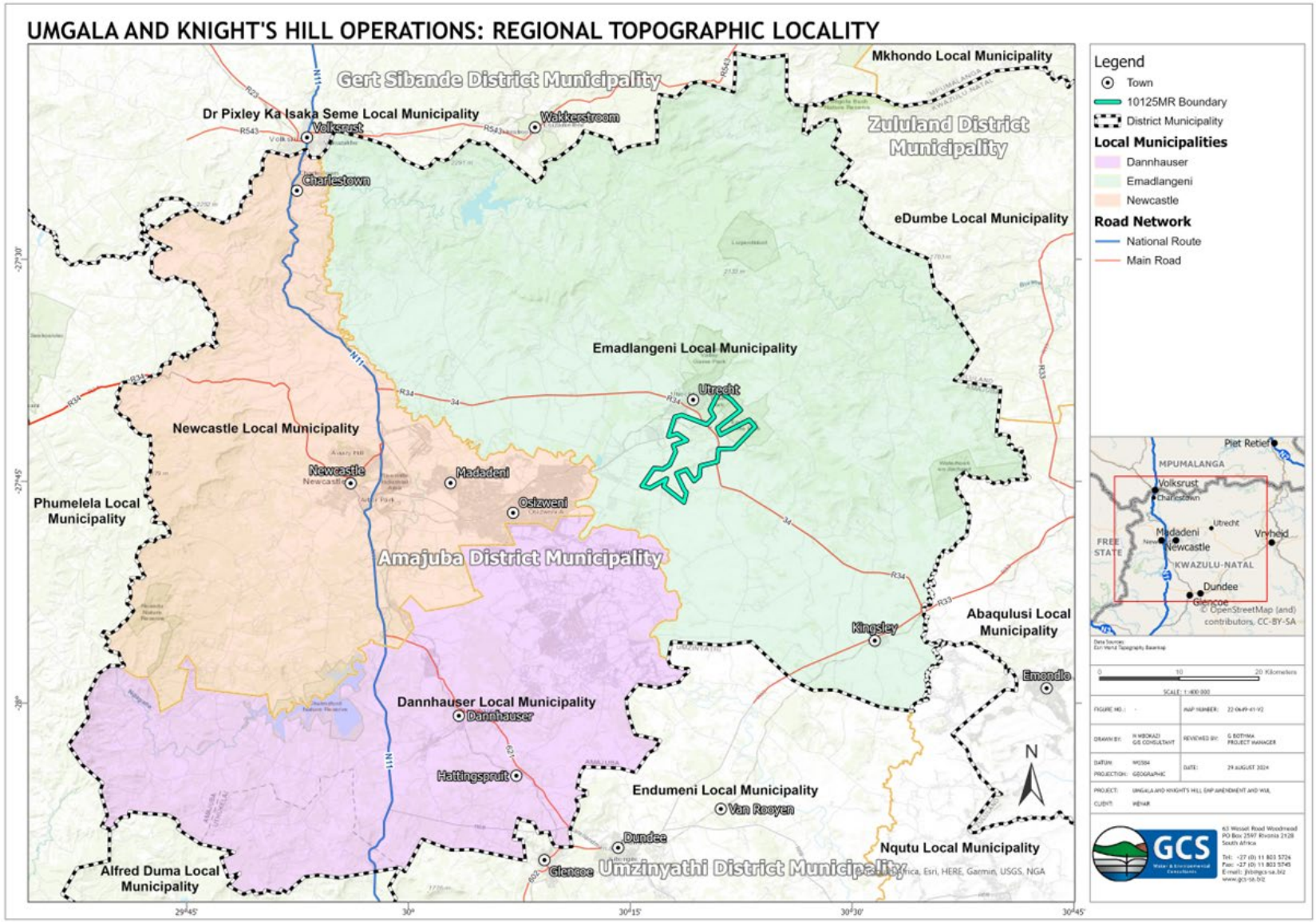

Figure 1-2: Regional Locality Topographical Map

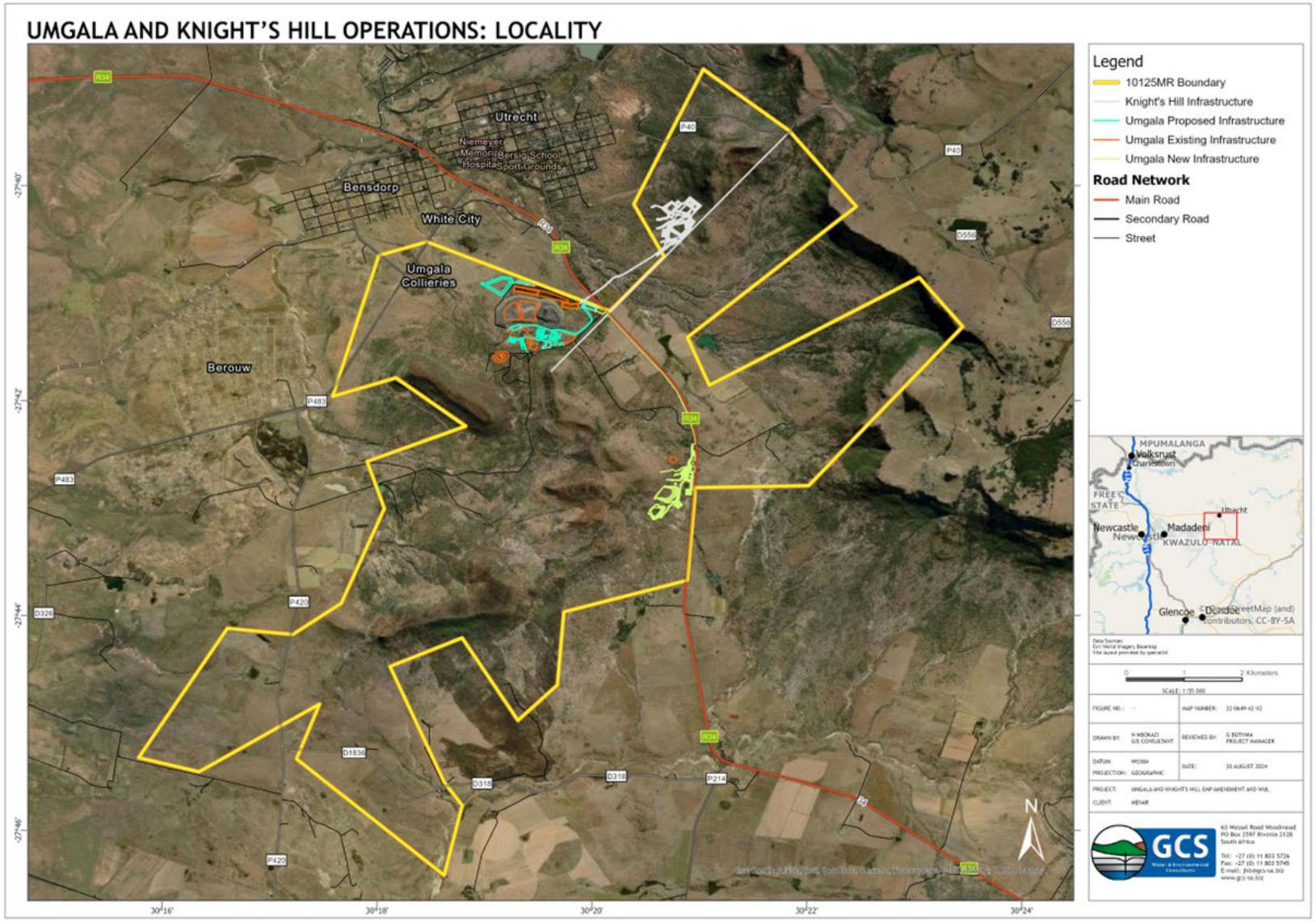

Figure 1-3: Locality Map

1.3 Authorisations Related to the Project

In order for Welgedacht to recommission mining operations, the following is required to be undertaken (Please note, other, non-related authorizations have not been included in this list):

- A Part 2 Amendment application in terms of Section 31 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) to update the existing Environmental Authorisation/EMPr to make provision for the upgrading and new adit complex at Umgala, and to ensure that all proposed infrastructure at Knight's Hill is accounted for within the authorisation/EMPr; and
- Application for a WML for the Umgala Discard Facility in terms of the identified Waste Management Activities outlined in the WML Regulations (2013) published under the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEMWA); and
- Application for a Water Use License (WUL) from the Department of Water and Sanitation (DWS) for water uses triggered in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998 (NWA).

1.4 Details of Applicant and Environmental Assessment Practitioner

1.4.1 Applicant

The details of the Applicant are provided in **Table 1-1** below.

Table 1-1: Details of the Applicant.

ITEM	DETAILS
Company Name	Welgedacht Exploration Company (Pty) Ltd
Company Representative	Sarah Wanless
Contact Person	Sarah Wanless
Telephone No.	+27 72 664 1680
Facsimile No.	N/A
E-mail Address	sw@menar.com
Postal Address	PO Box 2632 Saxonword 2132

1.4.2 Environmental Assessment Practitioner

GCS has been appointed as the independent Environmental Assessment Practitioner (EAP) by Welgedacht to undertake the environmental applications required for the proposed projects on behalf of the Applicant. The contact details of the EAP are provided in **Table 1-2** and the EAP's CV is attached as **Appendix G**.

Table 1-2: Details of the EAP.

ITEM	DETAILS
Company Name	GCS Water and Environmental (Pty) Ltd
Company Representative	Rona Schröder / Gerda Bothma
Telephone No.	+27 (0)11 803 5726
Facsimile No.	+27 (0)11 803 5745
E-mail Address	ronas@gcs-sa.biz / gerdab@gcs-sa.biz
Postal Address	PO Box 2597, Rivonia, 2128

Mrs Rona Schröder is an EAP at GCS with 10 years' experience. She forms part of the GCS Environmental Unit and has undertaken projects in the mining, municipal, farming, electricity generation, telecommunications and water industries. She has been involved with environmental projects from site screening and feasibility, environmental application, writing of Environmental Management Programes (EMPr), writing of technical reports all the through to Stakeholder Engagement Processes and completing of projects up to issuing authorisation permits and licenses.

Mrs Bothma is the Environmental Unit Manager at GCS since 2019 has over 25 years' experience within the environmental and waste management field. Mrs Bothma has been involved in several engineering projects as the EAP as well as the Environmental Control Officer during construction, working closely with the Occupational Health and Safety Officer. She also has been involved in projects where waste licensing and water use licensing processes formed an integral part of the services offered and has extensive experience in environmental auditing and compliance monitoring.

GCS has no conflict of interest related to the contents of this Report. GCS has no personal financial interests in the property and/or activity being assessed in this report. GCS has no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the property or activity, other than fair remuneration for professional services rendered for this Report to the CA. GCS declares that the opinions expressed in this Report are independent and a true reflection of their professional expertise. As such, GCS meets the requirements of an independent EAP as per the EIA Regulations 2014.

1.5 Project Location

The Umgala Coal Mine is situated at 27°42'30.25"S and 30°20'57.72"E, approximately 45km from Newcastle and 3km from Utrecht, in the Kwa-Zulu Natal Province of South Africa. More specifically, Umgala is situated south-southeast of Utrecht on the southern side of the R34 and Knight's Hill is east of Utrecht on the northern side of the R34 within the Amajuba District Municipal area. The area falls within the Buffalo River Catchment, which forms part of the Greater Tugela River Catchment.As mentioned previously, the project falls within quaternary catchments V32B and V32C in the uThukela Water Management Area (WMA) (DWS, 2016). The

Umgala mining area (Figure 1-4) and the related mining infrastructure are situated below the Zimbutu Mountain (approximately 5km south of Utrecht), west of the Balelesberg mountain range.

Table 1-3 provide further information regarding the affected properties including the Surveyor-general (SG) 21 digit site information for the parent farms.

Table 1-3: Property, SG & Ownership details

Property	SG Code	Ownership
Vergenoegd 107 HT: portions 1	N0HT00000000010700001	Welgedacht Exploration
Vergenoegd 107 HT: portions 2	N0HT00000000010700002	Welgedacht Exploration
Vergenoegd 107 HT: portions 3	N0HT00000000010700003	Marthinus Wessels Jordaan; Henning Petrus Nicolaas Jordaan; Lambertus Petrus Nel
Vergenoegd 107 HT: portions 4	N0HT00000000010700004	Welgedacht Exploration
Vergenoegd 107 HT: portions 5	N0HT00000000010700005	Welgedacht Exploration
Vergenoegd 107 HT: portions 6	N0HT00000000010700006	Welgedacht Exploration
Vergenoegd 107 HT: portions 7	N0HT00000000010700007	Welgedacht Exploration
Zandspruit 162 HT: portions 1	N0HT00000000016200001	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 4	N0HT00000000016200004	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 6	N0HT00000000016200006	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 11	N0HT00000000016200011	Zandspruit Property Trust-Trustees
Tusschenbij 167 HT: portions 1	N0HT00000000016700001	Gert Jakobus Grobler
Tusschenbij 167 HT: portions 2	N0HT00000000016700002	Gert Jakobus Grobler
Remainder of Gumtreespruit 424 HT	N0HT00000000042400000	Boshoff Davel Trust-Trustees
Townlands of Utrecht 266 HT	N0HT00000000026600000	eMadlangeni Municipality

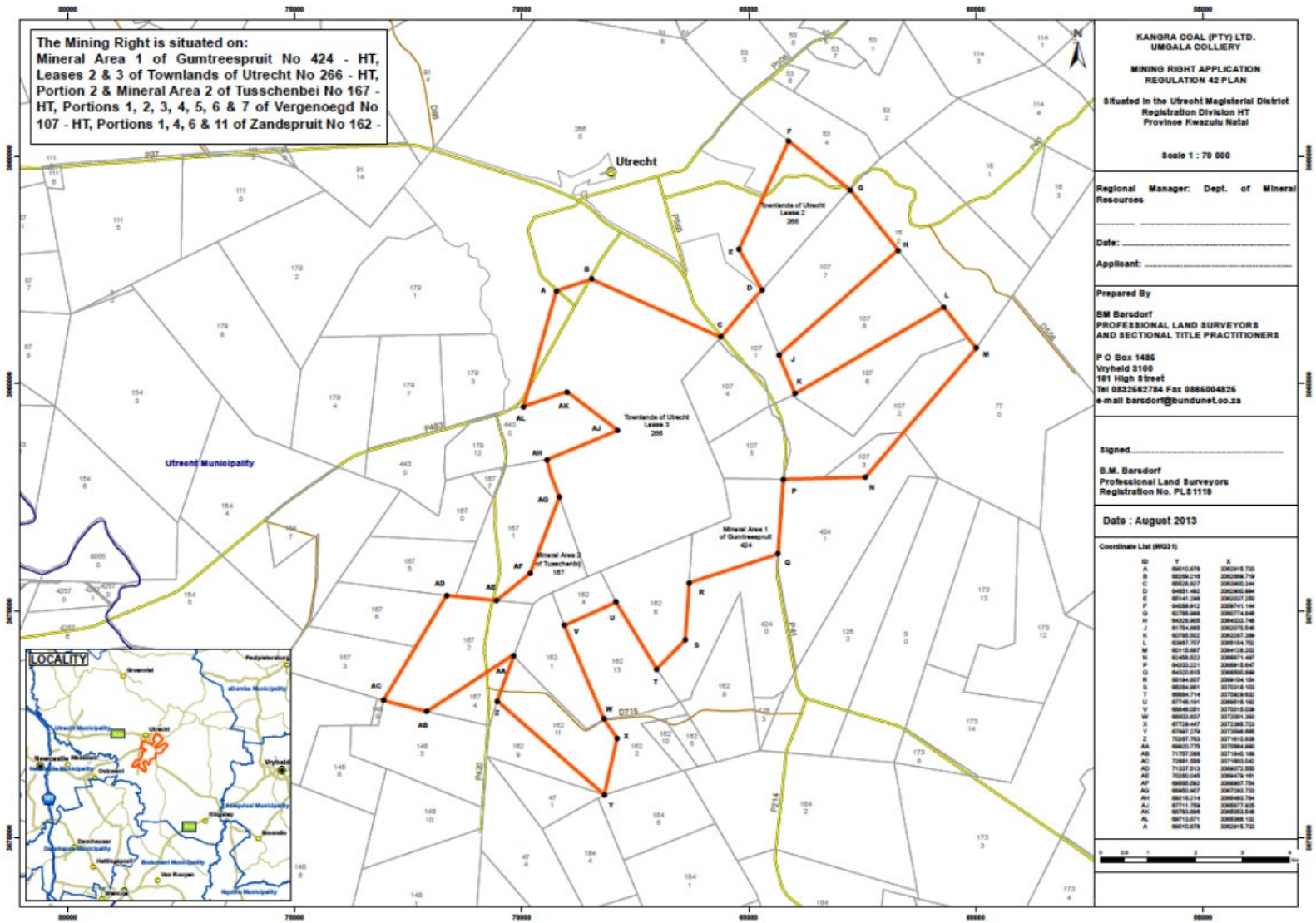

Figure 1-4: Regional Locality of the Umgala Mining Right area.

2 PROJECT DESCRIPTION

As indicated in Section 1.2, Welgedacht intends to recommission mining with the re-opening of the Umgala operation (Figure 2-1), Discard Dump and the construction of the Knight's Hill operation. The target coal seams will be mined via a combination of opencast (in the area where the adit will be cleared) and underground board and pillar mining. It is the intention to mine anthracite coal from Umgala (Figure 2-2) and bituminous coal from Knight's Hill (Figure 2-5).

Various activities and/or infrastructure are planned for the recommissioning of the mine[3]:

Umgala / Knights Hill Mine activities/infrastructure	
Umgala Operation (Figure 2-3 **and** Figure 2-4**)**	**Knights Hill Operation (**Figure 2-6**)**
Construction of facilities approved in 2009 EMPR	*Construction of facilities approved in 2009 EMPR*
*Various upgrades/refurbishments/rebuilding of existing structures/infrastructure within old mine complex (*Figure 2-3*)*	Adit, adit sump & adit conveyor system
New Processing Plant (on current plant's footprint)	Access Road
Discard Dump extension	Security / Access control office
Additional Access Road	Brake test ramp
Additional Security / Access control office	Stormwater infrastructure
Additional Office complex (incl. general & bus/taxi parking areas, lamp room, change room, workshop, wash bay, ablution facilities, stores and offices)	PCD
New Fuel depot	Various overburden stockpiles
New Adit & adit sump	Hard park area (incl. parking area, wash bay, lamp room, workshop, ablution facilities, stores and offices)
New underground workings	Pipeline from Knight's Hill to Umgala plant
Various additional overburden stockpiles	
Additional Haul roads, brake test ramp & hard park area	
New sewage management system	
Additional stormwater infrastructure	
Two new PCDs	
Ericson Dam	
New RoM & Product Stockpile Areas	
Pipeline from Umgala adit to the plant	

The above intended activities/infrastructure required for the recommissioning of the mine was *inter alia* included, either as existing or planned activities/infrastructure in the approved 2009 EMPR, although it was not as clearly defined as required for full operational efficiency.

In addition, the existing discard disposal facility was commissioned in the early 1970 and has been dormant since the beginning of 2004. Discard material was dumped at very steep angles in an uncontrolled form during the initial operations. During later years a discard buttress

[3] Further details are provided in the EMPR.

was formed around this dump and slurry and discard were co-disposed to the west of the initial dump. Concurrent rehabilitation took place to the outer embankments.

It is proposed to extend the discard disposal facility to the east. This will enhance the stability on the eastern side of the facility in accordance with the Department of Water and Sanitation (DWS) Standards.

The extension to the east will be utilized for the first 6 years and will be filled to the elevation of the existing facility. This will give the slurry ponds time to dry out and strengthen. Thereafter, the entire top surface of the discard disposal facility will be utilized for the life of mine.

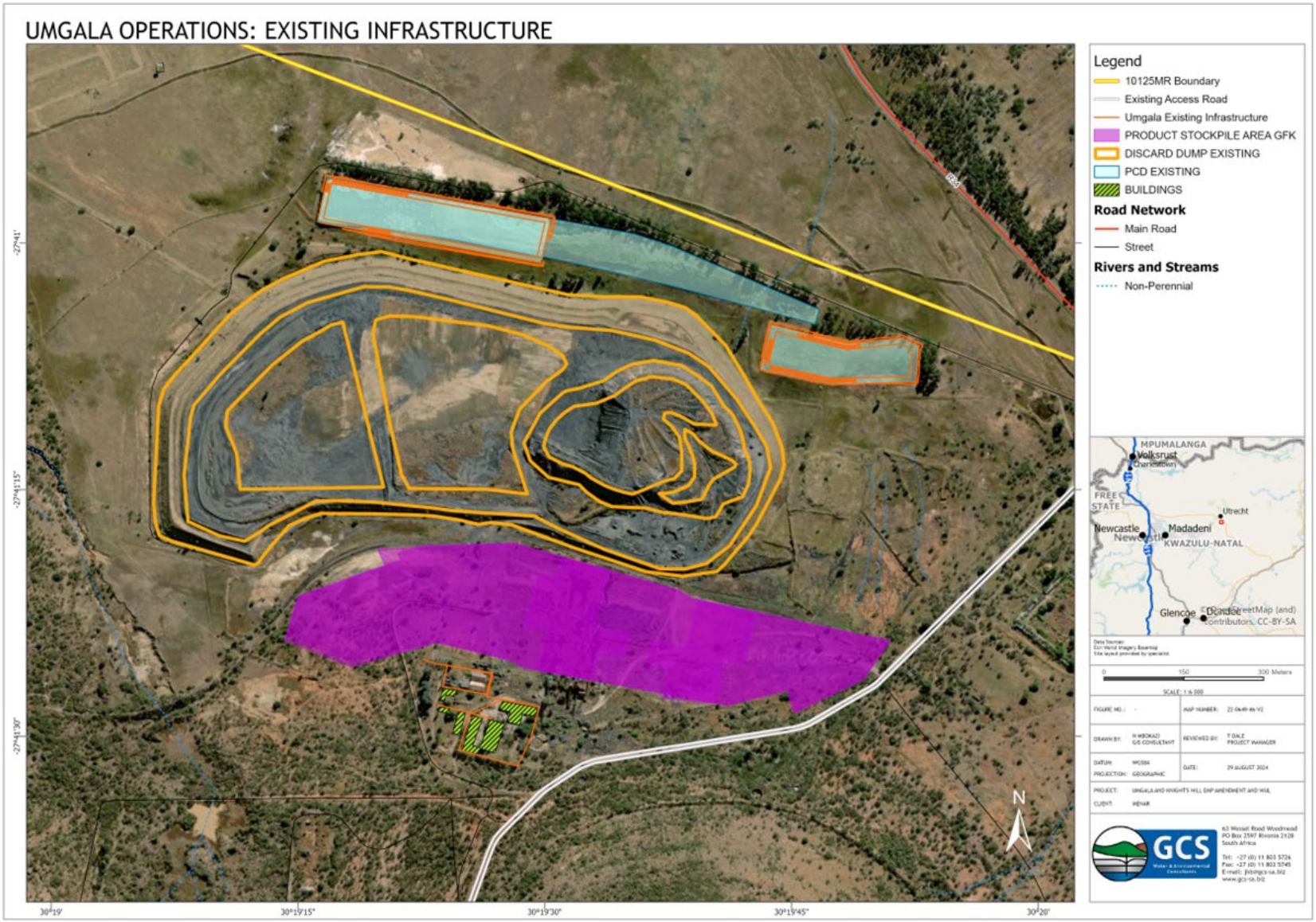

Figure 2-1: Umgala Operations: Existing Infrastructure

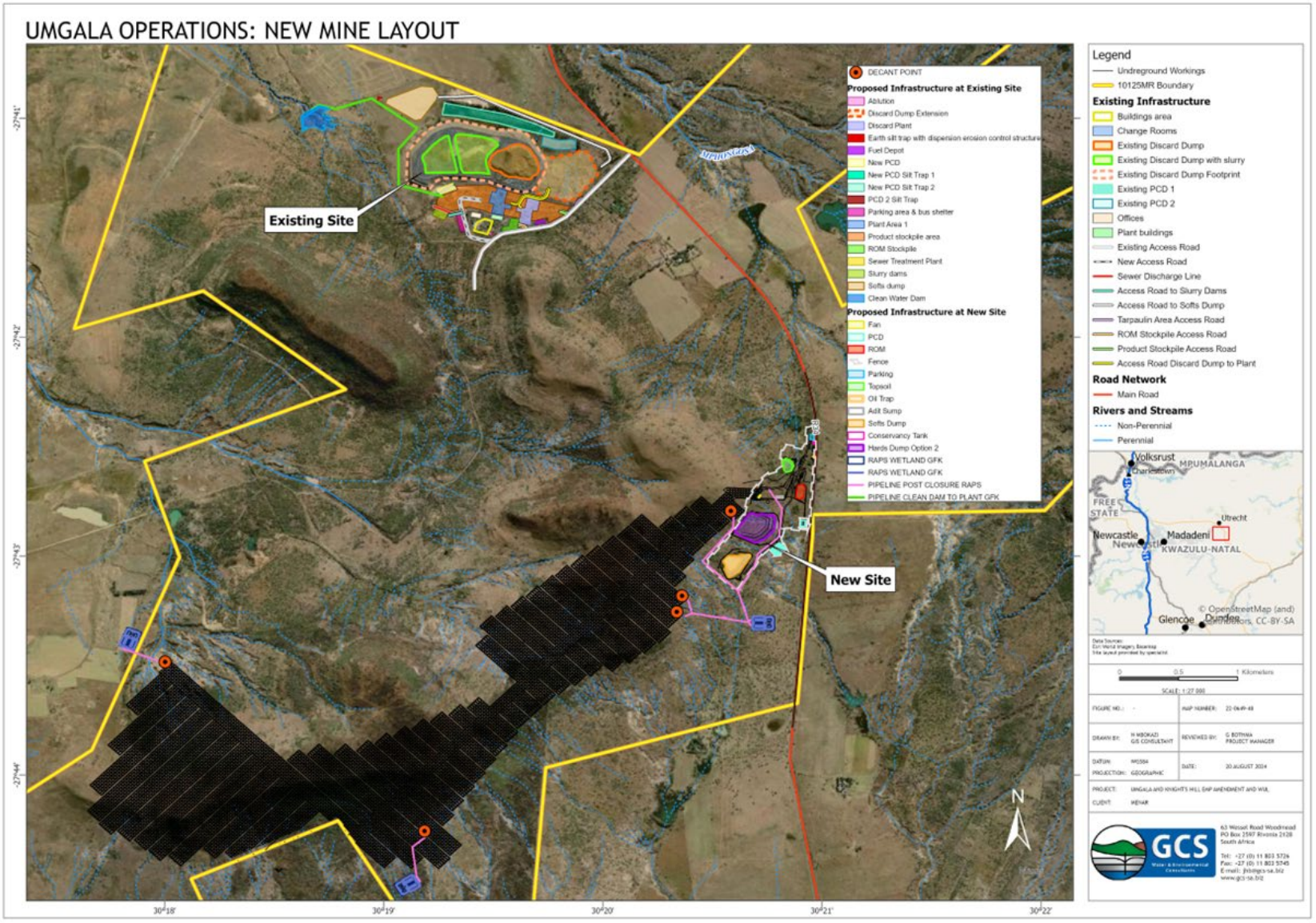

Figure 2-2: Umgala Operations: New Mine Layout

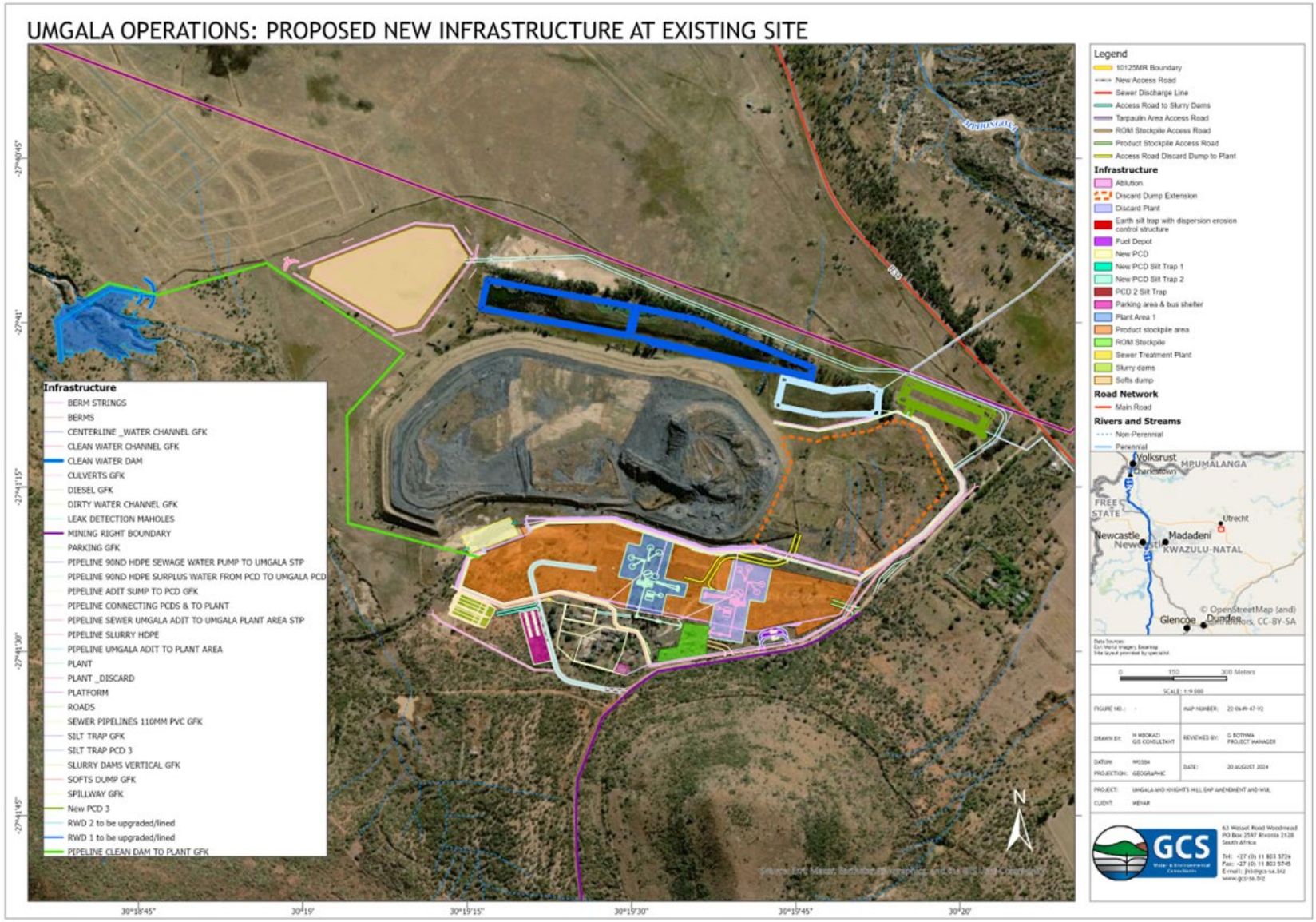

Figure 2-3: Umgala Operations: Proposed New Infrastructure at existing site

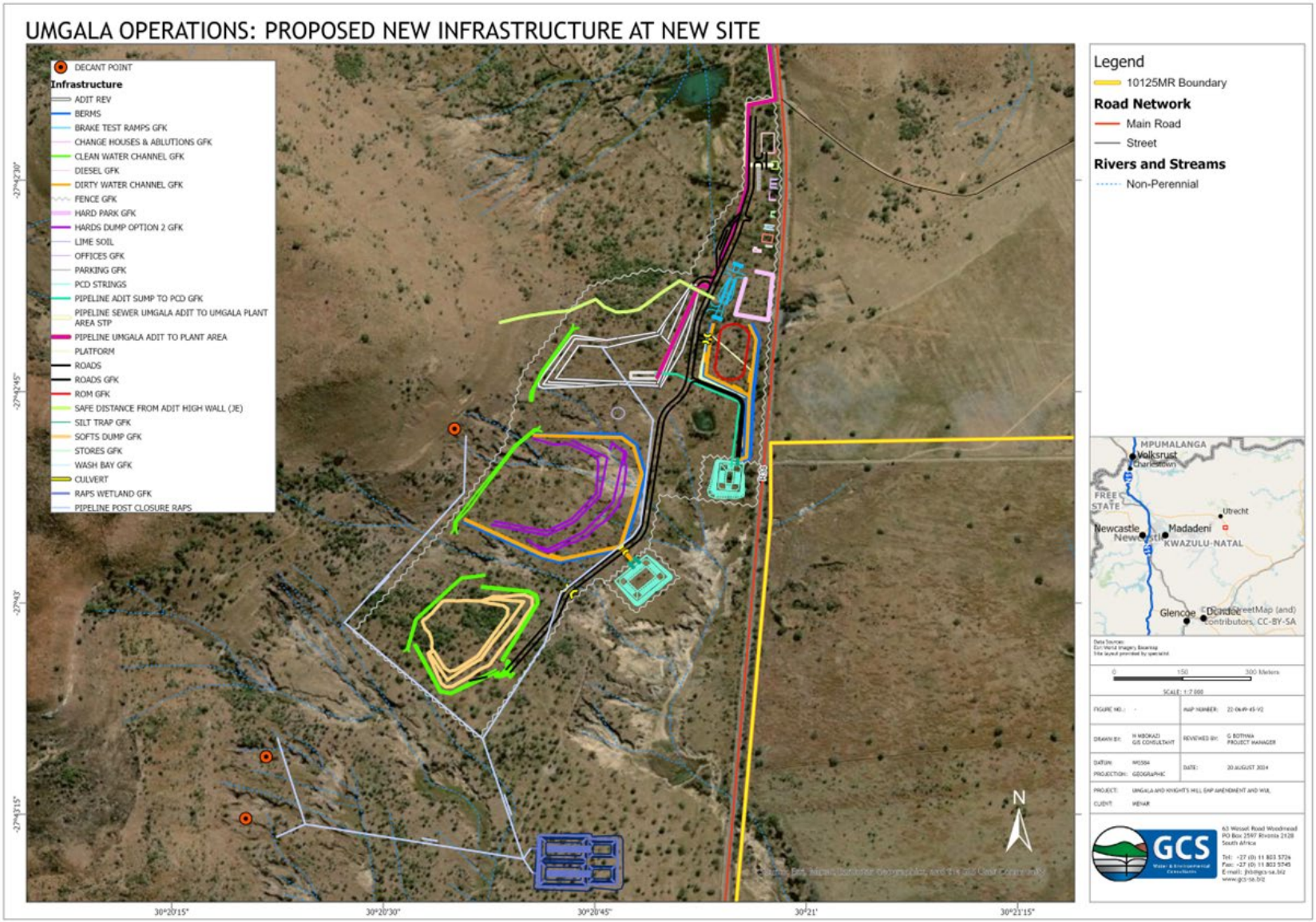

Figure 2-4: Umgala Operations: Proposed New Infrastructure at new site

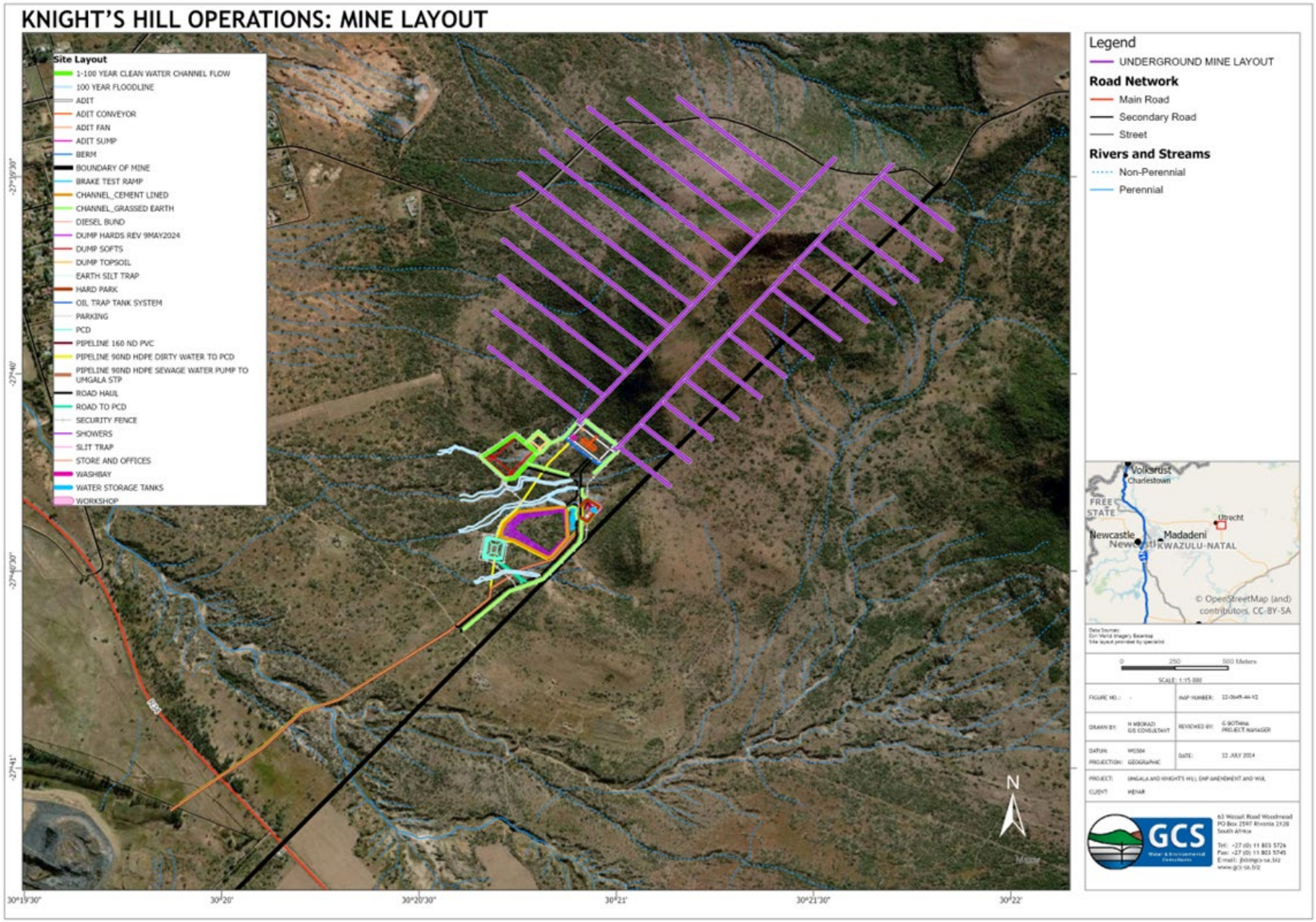

Figure 2-5: Knight's Hill Operations: Mine Layout

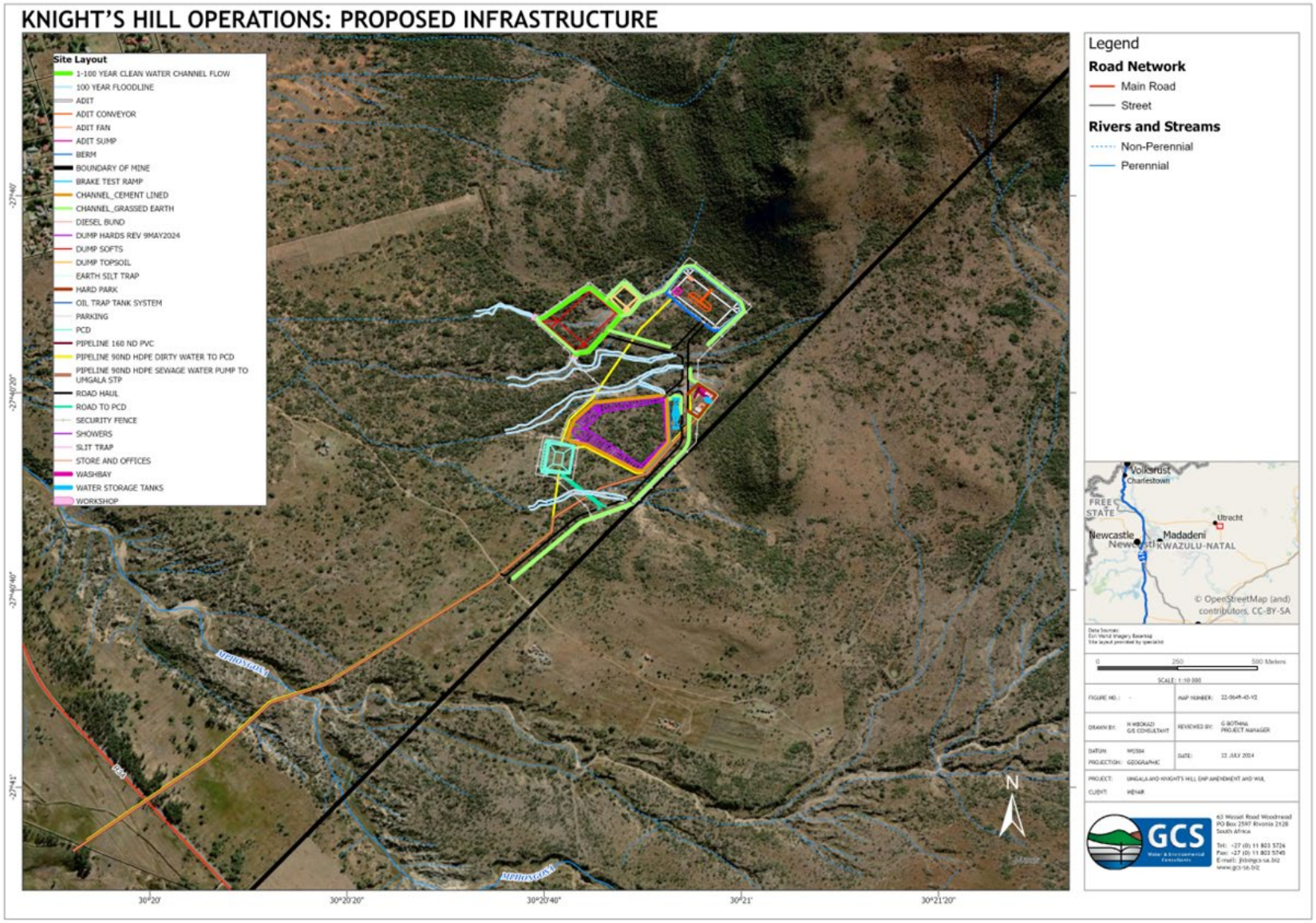

Figure 2-6: Knight's Hill Operations: Proposed Infrastructure

3 LEGAL FRAMEWORK

This chapter details applicable legal provisions and aims to provide a review of relevant national and provincial legislation and regulations, and policy documents, which apply to, or have implications for, the proposed activities.

3.1 General Overview

The policy and legislative context applicable to Umgala Mine and the Knights Hill Projects is summarised in **Table 3-1** below.

Table 3-1: Legislation applicable to Activities at Umgala Mine and Knights Hill.

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
LEGISLATION	
Constitution of the Republic of South Africa (Act 108 of 1996)	The Constitution is the supreme law governing all other legislation. Environmental legislation is shaped by the Bill of Rights set out in the Constitution. It sets out the rights for every citizen of South Africa and aims to address past social injustices. With respect to the environment, section 24 of the Constitution states that: *"Everyone has the right:* *a) To an environment that is not harmful to their health or well-being;* *b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:* *i. Prevent pollution and ecological degradation;* *ii. Promote conservation; and* *iii. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".* In fulfilment of its constitutional mandate to take reasonable legislative measures that give effect to Section 24, the government has promulgated several environmental laws. These laws provide a legal framework that embodies internationally recognised legal principles. The principal act governing activities that affect the environment is NEMA. The Constitution itself has no permitting requirements. However, the way the environmental right is applied implies that environmental impacts associated with developments should be considered separately and cumulatively. Furthermore, Section 24 includes the notion that justifiable economic and social development should be promoted, through using natural resources and ecologically sustainable development. ***Welgedacht must ensure that significant environmental impacts are avoided; and where impacts cannot altogether avoided they must be minimised and mitigated throughout the lifecycle of the Umgala and Knight's Hill Projects.***
Environmental Conservation Act (73 of 1989) (ECA), as amended	The ECA has now largely been replaced by the NEMA but certain provisions remain in force. The national Noise Control Regulations[4] (NCR) were promulgated in terms of Section 25 of the ECA, relating to noise, vibration and shock. The NCRs were revised[5] to make it obligatory for all authorities to apply the regulations. Under the ECA, the following SANS for assessing and controlling noise include: • 10328:2008 "Methods for environmental noise impact assessments"; and • 10103:2004 "The measurement and rating of environmental noise with respect to annoyance and speech communication". ***The Umgala and Knight's Hill is likely to increase ambient noise levels during the construction (temporary) and operational phases. Noise impacts are closely related to construction activities and heavy traffic volumes. The SANS published under ECA will be consider for the purposes of the noise impact assessment in the EIA and the EMPr will include mitigation measures relating to the mitigation of noise impacts.***

[4] GNR 154 in Government Gazette No. 13717 dated 10 January 1992
[5] Under GN155 of 10 January 1992

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	The SANS published under ECA will be considered for the purposes of the noise impact assessment in the EIA.
National Environmental Management Act (Act 107 of 1998) (NEMA), as amended.	NEMA is the framework law giving effect to the constitutional environmental right and for regulatory tools in respect of environmental impacts. Section 28(1) includes a statutory duty of care, providing that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment".* In terms of sections 24(2) and 24D of NEMA, the then Minister of Environmental Affairs promulgated certain listed activities that may not commence without an EA. Activities promulgated in terms of GN983 and GN9835 require a basic assessment process, while activities promulgated in terms of GN984 require that a full scoping and EIA process be conducted[6]. Section 24C(2A) of NEMA indicates that "*where listed activities are directly related to the extraction and primary processing of a mineral resource*" the Minister of Mineral Resources and Energy is the CA or official/s at the DMRE and which power he has delegated to the relevant Regional Managers (RMs). The National Environmental Laws Amendment Act 2 of 2022 (NEMA Amendment Act) was promulgated on 24 June 2022. It will introduce a major shift in South Africa's environmental legislation on a date to be fixed and proclaimed by the President (which has yet to occur). This includes: • Residue stockpiles and residue deposits (RS) will be excluded from NEMWA and will therefore no longer be regarded as waste for which a WML is required. Instead, RS and deposits will be regulated under NEMA. • The RMs will be the CA "*where the listed or specified activity is a mining activity*". ***Please refer to Table 3-4 in Section 3.2.2 for identified listed activities applicable to the Umgala and Knight's Hill Projects.*** ***Note that, should the NEMA Amendment Act commence prior to construction, Welgedacht would no longer require a WML for the Umgala Discard Dump Expansion and it would be governed under NEMA.***
NEMA EIA Regulations, 2014 (GNR 326, as amended)	Chapter 6 of the 2014 EIA Regulations provides for the requirements for public participation, which must be carried out as part of the EA and WML application process. In terms of Regulations 21 and 23, the outcome of the PPP must be reported in the FSR and EIR submitted to the CA. The PPP, "*must give all potential or registered parties (I&APs), including the CA, a period of at least 30 days to submit comments on each of the EMPR, S&EIRs, and where applicable the closure plan, as well as the report contemplated in regulation 32, if such reports or plans are submitted at different times*" (Regulation 40 (1)). PPP will be undertaken in accordance with chapter 6 of the EIA Regulations, 2014. It must: • provide access to all information that reasonably has or may have the potential to influence any decision regarding an application. • involve consultation with the CA, every state department that administers a law relating to the environment relevant to the application, all relevant organs of state, and all I&APs; and • provide opportunity for I&APs to comment on reports and plans prior to submission of an application and once an application has been submitted to the CA. The process must include:

[6] GNs 983, 984 and 985 are promulgated under NEMA in GG 38282 of 4 December 2014 (as amended).

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	• notification of the application to all I&APs, as stipulated in Regulation 41; • registration of all I&APs, as required in Regulations 42 and 43; and • a CRR and records of meetings of and with I&APs, as outlined in Regulation 44. Regulation 39 of the EIA Regulations, 2014 requires that: "*(1) If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for an environmental authorisation in respect of such activity, obtain the written consent of the landowner or person in control of the land to undertake such activity on that land.* *(2) Sub regulation (1) does not apply in respect of—* *(b) activities constituting, or activities directly related to prospecting … of a mineral …resource or extraction and primary processing of a mineral…resource."*
NEMA and MPRDA: Financial Provision (FP)	NEMA requires *inter alia* mining right holders to hold in place FP for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts. FP assessments were previously governed by the MPRDA and the quantum calculated according to the DMRE published rates. On 20 November 2015, the NEMA Financial Provisioning Regulations, 2015[7] (2015 FP Regulations) were promulgated, resulting in significant changes from the MPRDA's requirements. Five further draft updated itineration's of the 2015 NEMA FP Regulations were published by the DFEE, with the last itineration published in 2022. The 2015 FP Regulations were immediately applicable to applicants for a new mineral right but not to mineral rights holders where the right was granted before the commencement of the 2016 FP Regulations. Under the 2015 FP Regulations' transitional provisions, holders of a mineral right granted prior to the commencement of the 2015 NEMA FP Regulations (Existing Holders) were able to elect to comply either within three months of their financial year-end or 15 months from promulgation of the 2015 FP Regulations. Various extensions of this transitional period have subsequently been published, with the latest extension date being 19 September 2023. ***Welgedacht will comply with the relevant FP Regulations when required to do so.*** ***It holds the required FP for Umgala Mine and will appoint a specialist to compile and annually review the FP quantum required for the Umgala and Knight's Hill Projects. The DMRE will require that FP be provided by Welgedacht before issuing it with an EA / WML for the Umgala and Knight's Hill Projects.***
DFFE Web-Based Screening Tool	In terms of Regulation 16(1)(b)(v), read with Regulation 21 of the 2014 EIA Regulations, it is compulsory for an EIA application to include a sensitivity report generated by the national web based environmental screening tool[8] (DFFE Screening Tool). The content of specialist reports for certain of the themes is prescribed in the Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes[9] (Assessment Protocols); and Appendix 4 of the EIA Regulations will not be applicable to such themes. Two Assessment Protocols have been gazetted, in March and October 2020. ***Specialist studies have been undertaken to verify the sensitivity themes as identified in the DFFE Screening Tool. Specific requirements for the content of the EIA specialists reports are included in the Assessment Protocols and these specialist reports will comply with the aforesaid for purposes of the EIA.***

[7] GN 1147 of 20 November 2015: Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations (GG 39425)
[8] GN R960 of GG 42561, dated 5 July 2019
[9] In terms of in terms of sections 24(5)(a) and (h) and 44 of NEMA and GN R320 of GG 43110 on 20 March 2020 and GN R1150 of GG 43855 on 30 October 2020

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA), as amended	The NEMWA's purpose is to: assist in regulating waste management; ensure the protection of human health; and prevent pollution and environmental degradation through sound waste management principles and guidelines. The NEMWA defines waste broadly.[10] It furthermore provides for: • national norms and standards for regulating waste management by all spheres of government; • licensing and control of waste management activities; • remediation of contaminated land; • a national waste information system; and • provision for compliance and enforcement. The NEMWA imposes a general duty upon waste holders to take reasonable measures to avoid waste generation and, where this is impossible, to: minimise the toxicity and quantities of waste generated; reuse, reduce, recycle and recover waste; and ensure that it is treated and disposed of in an environmentally sound way. Failure to do so is a criminal offence, with a maximum fine of R10 million or imprisonment of up to 10 years, or both.
Regulations published under NEMWA in GN 921 of Government Gazette 37083 on 29 November 2013 (2013 WML Regulations)	It is necessary to hold a WML for defined waste management activities. The 2013 WML Regulations, provides that a WML is required for undertaking certain waste management activities ("Waste Listed Activities"). The Waste Listed Activities are separated into three categories, namely Category A, B and C. Category A and B Waste Listed Activities require a WML, for which either a basic assessment or an EIA process needs to be undertaken that complies with the 2014 EIA Regulations. Category C activities do not require a WML but must comply with *inter alia* the Norms and Standards for Storage of Waste, 2013.[11]
NEMWA Regulations regarding the Planning and Management of Residue Stockpiles and Residue Deposits, published in GN 632 of GG 39020 on 24 July 2015 (Residue Regulations)	The Residue Regulations provide the tools for and correspond to the statutory provision relating to managing RS in the manner prescribed in section 43A of the NEMWA. They regulate the planning, management and reporting of RS, including**:** • The assessment of impacts and analyses of risks relating to the management of RS; • Characterisation and classification of RS; • Conducting feasibility studies for the investigation and the selection of site for RS, including geotechnical & hydrological investigations, by competent persons and a registered professional civil / mining engineer;

[10] *(a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 to this Act; or*
(b) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette but any waste or portion of waste, referred to in paragraphs (a) and (b), ceases to be a waste—
(i) once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered;
(ii) where approval is not required, once a waste is, or has been re-used, recycled or recovered;
(iii) where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste; or
(iv) where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste.

[11] Published in GN 926 of GG 37088 on 29 November 2013

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	• Design of the RS;[12] • Impact management; • Duties of the holder of the right or permit; • Monitoring and reporting systems; • Dust management and control; and • Decommissioning, closure and post closure management requirements. When the NEMA Amendment Act commences, the Residue Regulations [13] will remain operational and shall be deemed to have been made under NEMA.[14]
NEMWA Waste Classification and Management Regulations (Waste Classification Regulations) and other Regulations.	Classification of certain waste streams is required in terms of the Waste Classification and Management Regulations,[15] to ensure that the correct waste management standards and disposal methods are implemented. The National Norms and Standards for the Assessment of Waste for Landfill Disposal and the National Norms and Standards for the Disposal of Waste to Landfill[16] provide the norms and standards for disposal of waste to landfill.
National Waste Information Regulations[17]	These Regulations regulate the collection of data and information to fulfil the objectives of the national waste information system, as set out in section 61 of the NEMWA, and includes reporting obligations. A registered person must keep a record of the information submitted to the SAWIS or the DFFE. ***Welgedacht will comply with these regulations.***
National Environmental Management: Air Quality Act (Act 39 of 2004) (NEM:AQA)	NEMAQA was promulgated to ensure the protection and regulation of air quality and provide measures that will prevent pollution and sustainability. Under NEMAQA, the Minister of Environmental Affairs, Forestry and Fisheries must identify substances in ambient air which present a threat to health, wellbeing or the environment and establish national standards for ambient air quality, including the permissible quantity or concentration of each substance in ambient air. The "Listed Activities and Associated Minimum Emission Standards"[18], list activities that could result in atmospheric emissions requiring an atmospheric emissions licence (AEL) before being undertaken. The "National Dust Control Regulations"[19], provide that an acceptable dust fallout rate for a non-residential area is considered more than 600mg/m2/day but less than 1200mg/m2/day (30-day average), with maximum allowable two exceedances per year, provided

[12] Including the general layout; type of deposition method used; rate of rise; design of the pollution control barrier system; stormwater control; freeboard; pooling; required factor of safety; control of decanting of excess water; retention of polluted water; design of the penstock; outfall pipe, under-drainage system and return water dams; height of the phreatic surface; slope angles and method of construction of the outer walls and their effects on shear stability; slope erosion by wind and water, and its control by vegetation, berms or catchment paddocks; and the potential for pollution.
[13] Published in Government Notice R632 in Government Gazette 39020 on 24 July 2015.
[14] Proposed by section 86 of the NEMLA IV Bill.
[15] Published in GN634 of GG 36784 on 23 August 2013
[16] Published under GN R635 and GN R636 respectively in GG 36784 of 23 August 2013
[17] Published in GN 625 of GG 35583 on 13 August 2012
[18] Published in GN 893 of GG 37054 on 22 November 2013
[19] Published in GN 827 of GG 36974 on 1 November 2013

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	these exceedances do not take place in consecutive months. Where the dust fallout rate is exceeded, a prescribed dust fallout monitoring programme must be developed and include: • the establishment of a network of dust monitoring points, using method ASTM D1739:1970 (or an equivalent standard), sufficient in number to: establish the contribution to dust fallout in residential and non-residential areas near the premises; monitor identified or likely sensitive receptor locations; and establish the baseline dust fall for the district; and • a schedule for submitting to the air quality officer dust fallout monitoring reports annually or at more frequent intervals, if requested by the air quality officer. Greenhouse gases have been declared priority pollutants under the "Declaration of Greenhouse Gases as Priority Air Pollutants"[20]. ***An AEL will not be required for the Umgala and Knight's Hill Projects; however, a duty of care should be employed during construction and operation to minimise air pollution as far as possible. Welgedacht must take all reasonable measures to minimise the generation of dust and ensure compliance with the Dust Control Regulations.***
National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEM:BA)	In line with the Convention on Biological Diversity, NEMBA aims to legally provide for biodiversity conservation, sustainable use and equitable access and benefit sharing. NEMBA creates a basic legal framework for the formation of a national biodiversity strategy and action plan and identification of biodiversity hotspots and bioregions, which may then be given legal recognition. It imposes obligations on landowners (state or private) regarding alien invasive species (AIS). NEMBA requires that provision be made by a site developer to remove any aliens which have been introduced to the site or are present on the site. The NEMBA also provides for listing of threatened or protected ecosystems in one of four categories: critically endangered, endangered, vulnerable or protected. Threatened ecosystems are listed to reduce the rate of ecosystem and species extinction, by preventing further degradation and loss of structure, function and composition of threatened ecosystems. The purpose of listing protected ecosystems is primarily to conserve sites of exceptionally high conservation value. Section 53 of NEM:BA provides that: *"(1) The Minister may, by notice in the Gazette, identify any process or activity in a listed ecosystem as a threatening process.* *(2) A threatening process identified in terms of subsection (1) must be regarded as a specified activity contemplated in section 24(2)(b) of the NEMA and a listed ecosystem must be regarded as an area identified for the purpose of that section."* No notices have been published yet under this section. Picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species is a restricted activity under NEMBA. A permit is required for a restricted activity involving a listed threatened or protected (TOPS) species without a permit. Chapter 7 of the NEMBA regulates the process for application of a permit under NEMBA. The following notices have been published in terms of section 56(1) of NEMBA: • National List of Ecosystems that are Threatened and in need of protection (TOPS List),[21] which contains the National List of Ecosystems that are threatened and in need of protection. This includes preventing further degradation and loss of structure, function and composition of threatened ecosystems and preserving witness sites of exceptionally high conservation value. The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction.

[20] Published in GN 710 of GG 40996 on 21 July 2017
[21] Published under GN1002 in GG34809 of 9 December 2012

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	• Lists of Critically Endangered, Endangered, Vulnerable and Protected Species;[22] and • Threatened and Protected Species Regulations.[23] Chapter 5 of NEMBA pertains to AIS and provides that a person may not carry out a restricted activity involving a specimen of an AIS without a permit issued in terms of Chapter 7 of NEMBA. Such permit can only be issued after a prescribed assessment of risks and potential impacts on biodiversity is carried out. Applicable, and exempted AIS are contained within the Alien and Invasive Species List 2020.[24] The NEMBA Alien and Invasive Species Regulations[25] categorises the different types of alien and invasive plant and animal species and how they should be managed. The Revised National Biodiversity Framework 2019 – 2024 was recently published.[26] ***Welgedacht must control and eradicate AIS in line with the NEMBA Alien and Invasive Species Regulations.***
Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA)	In terms of CARA, landowners are legally responsible for the control of weeds and alien vegetation. CARA makes provision for three categories of AIP: • Category 1a: must immediately be removed and destroyed; • Category 1b: need to be immediately removed and contained; • Category 2: requires a permit to retain the species on site and it must be ensured that they do not spread. All category 2 plants in riparian zones need to be removed; and • Category 3: require a permit to retain these species. All category 3 plants in the riparian zone need to be removed. CARA also regulates the conservation of soil and states that degradation of the agricultural potential is illegal. It furthermore requires the protection of land against soil erosion and the prevention of water logging and associated salinization. Permissions / permits are required under CARA for the 'cultivation' of 'virgin soil'; cultivation and/or draining vlei(s), marshes or water sponges; and cultivation of an area within a watercourse's flood area. ***Welgedacht will comply with CARA in relation to AIP control and soil conservation.*** ***No permits under CARA is required for the Umgala and Knight's Hill Projects.***
National Veld and Forest Fire Act (Act 101 of 1998) (NVFFA)	The NVFA's purpose is to prevent and combat veld, forest and mountain fires throughout South Africa. It applies to the open countryside beyond the urban limit and puts in place a range of requirements. The NVFA sets out the responsibilities of landowners or persons in control of the land which includes: • Prepare and maintain firebreaks on their side of the boundary if there is a reasonable risk of veld fire. The NVFA sets out the procedure in this regard and the role of neighbouring landowners and the fire protection association: • Have such equipment, protective clothing and trained personnel for extinguishing fires as are prescribed (in the regulations); • If there are no regulations, reasonably required in the circumstances, take all reasonable steps to notify the FPO of the local FPA (if there is one) when a fire breaks out; and • Do everything in their power to stop the spread of the fire.

[22] Published under GNR151 in GG 29567 of 23 February 2007
[23] Published under GNR152 in GG 29657 of 23 February 2007
[24] Published under GNR 1003 in GG 43726 of 18 September 2020
[25] Published under GNR1020 dated 25 September 2020
[26] In terms of GN 2423 of 26 August 2022,

LEGISLATION/GUIDELINE	OBJECTIVE & RELEVANCE
	Landowners must ensure that: (i) firebreaks are wide and long enough to have a reasonable chance of preventing a veldfire from spreading to or from neighbouring property, (ii) that it does not cause soil erosion; and (iii) it is reasonably free of inflammable material capable of carrying a veldfire across it.
National Forests Act, No 84 of 1998 (NFA)	In terms of section 15(3) of the NFA, the Minister published a list of protected tree species.[27] The effect thereof is that no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated. ***Should Welgedacht require any licence to disturb a protected tree, it will be duly applied for.***
National Heritage Resources Act (Act No. 25 of 1999) (NHRA)	The protection and management of South Africa's heritage resources are controlled by the NHRA. The national enforcing authority for the NHRA is the South African Heritage Resources Agency (SAHRA). In terms of the NHRA, historically important features, such as graves, archaeology and fossil beds, are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of section 38 of the NHRA, a permit is required for certain categories of development as follows: *"(1) (a): The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;* *(c): Any development or other activity which will change the character of a site -* *i. exceeding 5 000 m² in extent;* *ii. involving three or more existing erven or subdivisions thereof;* *iii. involving three or more erven or divisions thereof which have been consolidated within the past 5 years; or* *iv. the costs of which will exceed a sum in terms of regulations by SAHRA or a provincial heritage resource authority."* In terms of Section 38(8) of the NHRA, section 38(1) approval from SAHRA is not required where an environmental impact assessment is undertaken under NEMA, including a HIA, and SAHRA's requirements are considered by the CA when granting the EA. Section 38(8) of the NHRA provides that: *"The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the ECA, or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent."* Accordingly, provision is made for the assessment of heritage impacts as part of an environmental assessment process and, if such an assessment complies with the NHRA and SAHRA's requirements and the CA considers heritage impacts when granting the EA, a separate application for consent under the NHRA is not required. ***A heritage impact assessment was compiled, which will be submitted to SAHRA for consideration and comment, which comments will be incorporated in the FEIR.***

[27] GN 536 of GG 41887 on of 7 September 2018

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Hazardous Substance Act (Act No. 15 of 1973) (HSA)	The HSA aims to control the production, import, use, handling and disposal of hazardous substances. Under the HSA, hazardous substances are defined as substances that are toxic, corrosive, irritant, strongly sensitising, flammable and pressure generating under certain circumstances and may injure, cause ill-health or even death in humans. Where hazardous substances from any of the 4 groups below are to be used, (see below) care must be taken that they are sourced, transported, handled and disposed of in compliance with HSA. • Group I: industrial chemicals (IA) and pesticides (IB); • Group II: 9 classes of wastes excluding Class 1: explosives and class 7: radioactive substances; • Group III: electronic products and group; and • Group IV: radioactive substances. The HSA provides for the: • Control of certain electronic products; • Division of such substances or products into the groups above in relation to the degree of danger, with licensing requirements for certain activities undertaken in respect of Groups I and III; • Prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and • Matters connected therewith. ***Hazardous substances may be stored, handled or transported as part of the proposed projects and include diesel and other liquid fuel, oil and hydraulic fluid, cement, etc. Welgedacht will comply with the HSA, as required.***
National Water Act 36 of 1998 (NWA)	The NWA is the primary legislation controlling and managing the use of water resources and pollution thereof. It provides for fundamental reformation of legislation relating to water resource use. The NWA's preamble recognises that the ultimate aim of water resource management is to achieve sustainable use of water for the benefit of all users and that water resources quality protection is necessary to ensure sustainability of the nation's water resources in the interests of all water users. The NWA's purpose is stated in section 2 and enforced by the DWS. The NWA presents strategies to facilitate sound management of water resources; provides for the protection of water resources; and regulates use of water by means of Catchment Management Agencies (CMA), Water User Associations, Advisory Committees and International Water Management. As the NWA is founded on the principle of trusteeship, the government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest. Industry (including mines) can therefore only be entitled to use water if the use is permissible under the NWA. Section 19 of the NWA provides for pollution prevention and requires that a person who owns, controls, occupies or uses the land in question, is responsible for taking reasonable measures to prevent pollution of water resources. A CMA may take action to prevent or remedy the pollution and recover all reasonable costs from the responsible party. Under Section 21 of the NWA, certain consumptive and non-consumptive water uses are identified and can only commence once authorised. Water use is broadly defined in the NWA and includes taking and storing water; activities which reduce stream flow; waste discharges and disposals; controlled activities; altering a watercourse; removing water found underground for certain purposes; and recreation. Consumptive water uses include taking water from a water resource (section 21(a) of NWA) and storing water (section 21(b)). Non-consumptive water uses include impeding or diverting a watercourse's flow (section 21(c)); altering a watercourse's bed, banks,

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	course or characteristic or impeding the flow of a watercourse (sections 21 (c) and (i)); and disposal of waste in a matter that may detrimentally impact on a watercourse (section 21(g)). Where a water use constitutes a Scheduled 1 Use (permissible use without an authorisation requirement); permissible water uses in terms of section 22 of the NWA; or is authorised in terms of a General Authorisation (GA), a WUL is not required.[28] ***The Umgala and Knight's Hill Projects will include sections 21 water uses. A WULA will be submitted to the DWS to authorises these water uses.***
Government Notice 704 (GN 704)	GN 704, promulgated under section 26(1) of the NWA is specifically aimed at the protection of water resources associated with mining related activities. It provides minimum requirements which need to be adhered to for water resource protection on a mine. GN 704 regulates the use of water; management of dirty and clean water infrastructure; and related activities at mines. This includes minimum requirements for infrastructure that hold dirty water. A mine can apply for exemptions from these requirements and could be granted approval, should sufficient management measures be put in place to ensure environmental protection. Regulation 4 of GN 704 places some restrictions in terms of the locality of certain infrastructure which could have an impact on water resources. ***Welgedacht will comply with GN 704. Certain exemptions from GN 704 may however be necessary, including for construction of certain infrastructure in proximity to watercourses.***
NWA Regulations regarding the safety of dams ("DSR") in terms of section 123(1) of the NWA7 ("DSR Regulations")	The NWA defines a DSR as "*any existing or proposed structure which is capable of containing, storing or impounding water (including temporary impoundment or storage), whether that water contains any substance or not*". Chapter 12 of the NWA contains measures aimed at improving the safety of new and existing DSR, to reduce the potential for harm to the public, damage to property or to resource quality. To reduce the risk of a dam failure, control measures require an owner to comply with certain directives and regulations, such as to: submit a report on the safety of a DSR; repair or alter a dam, or appoint an approved professional person to undertake these tasks. These measures are in addition to the owners' common law responsibility to ensure the safety of their DSRs. An approved professional person has a statutory duty of care towards the State and the public and must fulfil, amongst other things, defined responsibilities when acting under this Chapter. All DSR must be registered. Compliance with any directive or regulation under this Chapter does not exempt an owner from complying with any other provision of the DSR, such as the requirement for a licence or other authorisation for water use in respect of the DSR. <u>DSR Regulations</u> The DSR Regulations regulate and classify DSR as category I, II or II dams, dependent on their size, hazard potential and safety risk. The compilation of a feasibility study is required for a DSR enlargement. There are licensing requirements for a Category II DSR enlargement, prior to the DSR owner commencing with any construction works relating to an enlargement. A licence application must be by submitted to the Director-General of the DWS, with a proposed design, complying with acceptable dam engineering practices and criteria. It must be based on the following documents, which must be included in the application: (a) an official application form; (b) a design report, including a natural seismicity evaluation at sources within a radius that could impact on the DSR; (c) project specifications; (d) engineering drawings; and (e) a safety evaluation of existing development that could be affected

[28] Various GAs have been published under the NWA, including for Sections 21(c),(i),(g), and (a) water uses. In respect of sections 21(c) and (i) water uses, activities can be conducted within 100m of a watercourse and 500m of a wetland without a WUL if the impacts to the watercourse / wetland are low. Water uses that will be conducted under a GA need to be registered with the DWS.

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	by the DSR . An operation and maintenance manual and an emergency preparedness plan ("EPP") must be drawn up by an approved professional person, assisted by a professional team. The DSR Regulations also require particulars on a plan of the nature and locality of development downstream of the DSR in the area that would be threatened by a DSR failure, for purposes of the EPP.
Mineral and Petroleum Resources Development Act (Act 28 of 2002) (MPRDA), as amended	The MPRDA governs mineral resources in South Africa, regulates mining and mining authorisations and has as one of its principal objectives the equitable access and the sustainable development of the South Africa's mineral resources. Section 5A of the MPRDA indicates that: *"No person may prospect for or remove, mine, conduct technical co-operation operations, reconnaissance operations, explore for and produce any mineral or petroleum or commence with any work incidental thereto on any area without – (a) an environmental authorisation (EA)"*. Section 37 of the MPRDA requires all mining and prospecting operations and related activities to be carried out in terms of the environmental management principles set out in Section 2 of NEMA. Social and environmental sustainability is enhanced through the requirement to submit a Social and Labour Plan (SLP), which records a mining company's obligations to improve social development. This includes a commitment to training and social investment, with the goal of transferring skills that can be used after mine closure.
Mine Health and Safety Act (Act No. 29 of 1996) (MHSA)	The MHSA aims to provide for protection of the health and safety (HS) of all employees and other personnel at RSA mines. Its main objectives are: • Protection of the HS of all persons at mines; • Requiring employers and employees to identify hazards and eliminate, control and minimise the risks relating to health and safety at mines; • Giving effect to the public international law obligations of South Africa that concern HS at all mines. • To promote: o a culture of HS in the mining industry; o training in HS in the mining industry; and o cooperation and consultation on HS between the State, employers, employees and their representatives. • Providing for: o employee participation in matters of HS through HS representatives and the HS committees at mines; o effective monitoring of HS conditions at mines; o enforcement of HS measures at mines; and o investigations and inquiries to improve HS at mines. ***Welgedacht already complies with the MHSA and will continue to do so in respect of the Umgala and Knight's Hill Projects***.
MHSA: DMREs Guideline for the Compilation of Mandatory Code of Practice ("COP") on Mine Residue Deposits, published in	The RS COP Guideline is published pursuant to the MHSA and contains requirements as to what a mine needs to include in its COP for RS. This includes that an employer must identify hazards; assess the HS risks to which employees, and as far as reasonably practicable to persons who are not employees, may be exposed while they are at work; and record the significant hazards identified and risks assessed ("Risk Assessment"), prior to commencing operations. The Risk Assessment must: be based on a site selection process (including input from I&APs); and a site-specific investigation (including that the site is geologically and geomorphologically stable);

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accordance with the MHSA ("RS COP Guideline")	detail pre-existing natural contaminant levels and incremental levels arising from the RS; consider all MRDs on a site in an integrated system; consider the lifestyles /living conditions of persons potentially affected; and assess future events which can give rise to increased risks. The RS COP Guideline set outs the technical information required during the site investigation process and various technical reports that must be compiled as a basis the RS design, which mirror the RS Regulations in various respects. This includes a detailed investigation by a competent person of the RS's characteristics that may directly or indirectly affect the HS of mining and non-mining personnel in the vicinity of the site; and design requirements. It also requires a safety classification of the RS in accordance South African National Standards (SANS): Code of Practice, Mine Residue, SABS 10286: 1998 ("SABS 10286"), being the principle management guidance document for RS. SANS 10286 contains fundamental objectives, the principles and minimum requirements for best practice, all aimed at ensuring that no unavoidable risks, problems and/or legacies are left to future generations. It does not, however, address the SHE and safety concerns of tailings storage, but places more focus on the need for management throughout a TSF's lifecycle . SANS 10286 also requires RS to be classified as either High, Medium or Low Hazard based on generic "catch-all" guidelines for determining a Zone of Influence, which is used. Although the intent of design and TSF management is to prevent catastrophic failure of the RS, design protocol requires that the consequence of potential failure be considered to inform EPP.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (OHSA)	The MHSA provides that OHSA is not applicable to any matter in respect of which any provision of the MHSA is applicable.
Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993) (COIDA)	Under COIDA, employers are not held liable for compensation for injuries sustained by employees or compensation to dependants due to the death of an employee which occurred during the course and scope of their employment. Compensation is paid out of a statutory fund, administered by the Compensation Commissioner ("CC") (appointed under COIDA), which is set in accordance with a tariff prescribed in COIDA. The fund is a trust fund that is controlled by the CC, which the employer contributes to. The CC is appointed to administer the fund and approve claims lodged by employees or their dependants. The CC compensates the employee or their dependants directly. ***Welgedacht will take cognisance of the requirements of the COIDA as part of daily operations should incidents occur.***
Restitution of Land Rights Act (Act 22 of 1994) (RLRA)	The RLRA governs land restoration claims. Initially, the RLRA only allowed land claims to be lodged until December 1998 (Initial Period). This Initial Period was amended with the promulgation of the Restitution of Land Rights Amendment Act of 2014 and the process for the lodgement of claims was extended to 2019. However, a few months thereafter, the Constitutional Court delivered a judgment, *Land Access Movement of South Africa and Others v Chairperson of the National Council of Provinces and Others* 2016 (5) SA 635 (CC) (LAMOSA).[29] In terms of the LAMOSA judgments, the Department of Rural Development and Land Reform (DRDLR) is interdicted from processing those claims lodged after December 1998 until those lodged prior to December 1998 have been finalised. Under section 11(7), no person may sell, exchange, donate, lease, subdivide, rezone or develop a land in respect of which a land claim has been published in a government gazette without giving the Regional Land Claims Commissioner (LCC) one month's written notice of the intention to do so.

[29] which was followed by *Speaker of the National Assembly and Another v Land Access Movement of South Africa and Others (2019) ZACC 10.*

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Other National Legislation and Policy	Other policies, legislation and associated regulations (where applicable) considered as part of the application process include: • Disaster Management Act (Act No. 57 of 2002). • Integrated Resource Plan 2019. • Local Government: Municipal Systems Act, No 32 of 2000. • National Development Plan 2030. • Protection of Personal Information Act, No. 4 of 2013. • Regulations of Gatherings Act, No. 205 of 1993 • Traditional and Khoi-San Leadership Act, No. 3 of 2019. • Water Services Act 108 of 1997. • Promotion of Access to Information Act 2 of 2000 • Promotion of Access to Justice Act 3 of 2000 • Basic Conditions of Employment Act 75 of 1997; • Labour Relations Act 66 of 1995
Provincial / Municipal Legislation and Policy	Provincial / Municipal policies, legislation and associated regulations (where applicable) considered as part of the application process include: • Mpumalanga Nature Conservation Act 10 of 1998. • Spatial Development Framework (SDF) 2019: Mpumalanga Province, as amended. • TCLM Water Supply By-Laws 2007. • TCLM (Lydenburg Municipality) Refuse (Solid Wastes) And Sanitary By-Laws 1980 (as amended). • TCLM Cleaning Services / Solid Waste Management By-Law 2019. • TCLM (transitional local council for Lydenburg) (lydenburg Municipality) drainage by-laws 1994. • TCLM Fire Safety By-laws for Fire and Rescue Services, 2019
Municipal Development Planning	The following municipal development planning documentation is relevant to the application process: • Ehlanzeni District Municipality final IDP and budget review 2020/2021 and draft IDP and Budget Review 2021/2022: The IDP speaks of how mining has contributed 17-26% of the Provinces budget in recent years and identifies various opportunities in the mining sector, such as the rich platinum and chrome deposits which exist in the area. • TCLM Review IDP 2021/2022: The IDP provides that mining is one of the main economic centres of the TCLM. It provides that not only does mining hold a great share of employment in the TCLM, but many households are dependent on the sector for survival. The TCLM's mining sector is the largest contributor (41%) to the total district mining sector. Mining constitutes one of 5 development 'thrusts' in t The IDP provides that mining is one of the TCLM's main economic centres. It provides that not only does mining hold a great share of employment in the TCLM, but many households are dependent on the sector for survival. The TCLM's mining sector is the largest contributor (41%) to the total district mining sector. Mining constitutes one of 5 development 'thrusts' in the TCLM's plan, with the mining thrust aimed

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	at the development and expansion of the mining sector value chain, to enable improved efficiency and diversification within the main commodities mined within TCLM area namely platinum, gold, chrome and coal. • TCLM IDP 2022-2027: The updated IDP provides that mining is one of the TCLM's main economic centres . The TCLM's mining sector is the largest contributor (41%) to the total district mining sector. Mining constitutes one of the development 'thrusts' in the TCLM's plan. The following programmes have been identified under the mining development and value chain diversification thrust: mining value chain linkages; industrial activities development support; and mining business development and support.
OTHER STANDARDS AND GUIDELINES	
Standards and Guidelines	In addition to the abovementioned Acts and their associated Regulations, the following guidelines and reports have been taken cognisance of during the application process: • Guidelines for consultation with communities and interested and affected parties issued by the DMRE. • NEMA Implementation Guidelines: Sector Guidelines for EIA Regulation[30] • Department of Environmental Affairs (DEA) (2011): A user friendly guide to the National Environmental Management: Waste Act, 2008. South Africa, Pretoria. • Department of Environmental Affairs and Tourism (2004): Criteria for determining Alternatives in EIA, Integrated Environmental Management, Information Series 11. • DFFE Integrated Environmental Management Guideline on Need and Desirability, 2017. • Guideline for Implementation: Public Participation in the EIA Process.[31] • Publication of Public Participation Guideline (GN 807 of 10 October 2012 GG No. 35769). • Mining and Biodiversity Guideline: mainstreaming biodiversity into the mining sector • Department of Water and Forestry ("DWAF"), 2006. Groundwater Assessment II • DWS, 2011 The Groundwater Dictionary – A comprehensive reference of groundwater related terminology, 2nd ed • DWS, 2016 New Water management Areas, South Africa: Government Gazette No 40279 • South African Water Quality Guidelines (DWAF): o South African Water Quality Guidelines (2nd Edition). Volume 4: Agricultural Use: Irrigation (1996a); o Water Quality Guidelines - Volume 1: Domestic Use (1996b); o South African Water Quality Guidelines (2nd Edition). Volume 5: Livestock Watering (1996c); o Water Quality Guidelines Volume 7: Aquatic Ecosystems (1996d); o Water Quality Guidelines Volume 2: Recreational Use (1996e); and o Water Quality Guidelines Volume 3: Industrial Use (1996f).

[30] Published under GN 654 in GG 3333 of 29 June 2010

[31] Published in under GN 807 in GG 35769 of 10 October 2012

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	• Best Practice Guidelines (DWAF):
	  ○ G3: Water Monitoring Systems (2007);
	  ○ A5: Water Management for Surface Mines (2008b); and
	  ○ G4: Impact Prediction (2008)
	• SANS 10103 of 2008: The measurement and rating of environmental noise with respect to annoyance and to speech communication[32]
	• SANS 10210 of 2004: Calculating and predicting road traffic noise.
	• SANS 10357: 2004: The calculation of sound propagation by the Concave method.

[32] Published under GN 718 in Government Gazette No. 18022

3.2 NEMA EIA Regulations 2014 (as amended)

The NEMA is South Africa's overarching framework for environmental legislation. Regulations promulgated under NEMA include the EIA Regulations (2014) published under Government Notice Regulation (GNR) 982, as amended (EIA Regulations), and the associated Listing Notices Listing Notice 1, 2 and 3. Section 24(5) of NEMA stipulates that certain "listed activities" require environmental authorisation by way of either a Basic Assessment (BA) or a full Scoping and Environmental Impact Assessment (S&EIR), as defined in the Listing Notices. Activities listed under Listing Notice 1 and 3 require a BA process to be undertaken, while those listed under Listing Notice 2 require a full Scoping and S&EIR process. Table 3-4 and Table 3-5 provides an assessment of the applicable listed activities in terms of NEMA and NEMWA respectively.

3.2.1 Screening and Initial Site Sensitivity Verification

Regulations published under NEMA in GN 960 of GG 42561 of 5 July 2019 prescribe that in an environmental authorisation (EA), a sensitivity report is to be generated through the Department of Forestry, Fisheries and the Environment's (DFEE) national web based environmental screening tool (DFFE Screening Tool). The DFEE Screening Tool ranks the sensitivities of a series of themes and identifies required procedures for the "Assessment and Minimum Criteria for Reporting on Identified Environmental Themes" in terms of Sections 24(5)(a) and (h) and 44 of NEMA (Assessment Procedures), which contains certain procedures and prescribed report content. The DFFE Screening Tool generated by the EAP confirmed that the agricultural, animal species and aquatic and terrestrial biodiversity were flagged as medium to high.

For themes included in the Assessment Procedures, an Initial Site Sensitivity Verification must be undertaken by an EAP or a registered specialist with expertise in the relevant environmental theme being considered. The Initial Site Sensitivity Verification must be undertaken through the use of:

- A desktop analysis, using satellite imagery; and
- A preliminary on-site inspection to identify if there are any discrepancies with the current land use and environmental status quo versus the environmental sensitivity. as identified on the national web-based environmental screening tool, such as new developments, infrastructure, indigenous/pristine vegetation, etc.

The outcome of the Initial Site Sensitivity Verification must be recorded in the form of a report that-

- Confirms or disputes the current use of the land and environmental sensitivity as identified by the DFFE Screening Tool;

- Contains motivation and evidence (e.g., photographs) of either the verified or different use of the land and environmental sensitivity; and
- Is submitted together with the relevant assessment report prepared following the requirements of the EIA Regulations.

The EAP generated a DFEE Screening Tool (05 July 2022) (Appendix A) for the Umgala and Knight's Hill Project Area. It noted several sensitivities and associated reporting requirements, as shown in Table 3-2.

Table 3-2: Site Sensitivities (based on the property description) from DFFE Screening Tool.

THEME	VERY HIGH	HIGH	MEDIUM	LOW
Agriculture			X	
Animal Species		X		
Aquatic Biodiversity	X			
Archaeological and Cultural Heritage	X			
Civil Aviation		X		
Defence				X
Palaeontology	X			
Plant Species			X	
Terrestrial Biodiversity	X			

Based on the above, and in accordance with the project team's initial investigations, the specialist investigations identified to be undertaken for the Umgala and Knight's Hill Projects are provided in Table 3-3 below.

Table 3-3: Specialist Investigations

Specialist Investigations to be undertaken in the EIA Phase:
Socio-Economic Assessment (SEIA)
Traffic Impact Assessment (TIA)
Biodiversity Impact Assessment (BIA)
Aquatic Impact Assessment (AIA)
Wetland Impact Assessment (WIA)
Heritage Impact Assessment (HIA)
Geohydrological Impact Assessment (GWIA)
Hydrological Impact Assessment (SWIA)
Hydropedological Impact Assessment (HPIA)
Noise Impact Assessment (NIA)
Air Quality Impact Assessment (AQIA)
Soil & Agricultural Potential Impact Assessment (S&AIA)
Conceptual Acid Mine Drainage Management Plan (CAMDMP)and Decant Management Plan (CDMP)

Please refer to Section 8.6 for the Specialist Investigation Terms of Reference.

3.2.2 Applicable Listed Activities

The proposed Umgala and Knight's Hill Projects will require an EA through a S&EIR process, due to the following listed activities being triggered:

Table 3-4: Listed activities in terms of the 2014 NEMA EIA regulations, as amended.

Notice	Activity	Description of related activity	Applicability
1	9	The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	Installation and operation of pipelines with a diameter of more than 0.36m and throughput of more than 120l/s for the supply of water/stormwater reticulation. ***This activity is therefore applicable.***
1	10	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes - (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	Installation and operation of pipelines with a diameter of more than 0.36m and throughput of more than 120l/s for the supply of process/waste/return water or effluent reticulation. ***This activity is therefore applicable.***
1	11(i)	The development of facilities or infrastructure for the transmission and distribution of electricity— (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.	
1	12(ii)	The development of (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;	

Notice	Activity	Description of related activity	Applicability
		excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of the development and where indigenous vegetation will not be cleared.	
1	14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	
1	19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse, 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; (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	***This activity is therefore applicable.***
1	24(ii)	The development of a road — (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres	
1	25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.	
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 vegetation is required for—	***This activity is therefore applicable.***

Notice	Activity	Description of related activity	Applicability
		(i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	
2	4	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	
2	6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding— (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.	***This activity is therefore applicable.***
2	15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	***This activity is not applicable.***
2	17	Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or (b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing; but excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.	17(b) is removed by NEMLAA IV. ***This activity is currently applicable.***
2	25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15 000 cubic metres or more.	
3	4 (iii) (viii) (x) (xii-aa)	The development of a road wider than 4 metres with a reserve less than 13,5 metres. d. KwaZulu-Natal i. In an estuarine functional zone; ii. Trans- frontier protected areas managed under	***This activity is therefore applicable.***

Notice	Activity	Description of related activity	Applicability
		international conventions; iii. Community Conservation Areas; iv. Biodiversity Stewardship Programme Biodiversity Agreement areas; v. World Heritage Sites; vi. A protected area identified in terms of NEMPAA; vii. Sites or areas identified in terms of an international convention; viii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; ix. Core areas in biosphere reserves; x. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; xi. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; xii. Outside urban areas: (aa) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any terrestrial protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve; or (bb) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined; or xiii. Inside urban areas: (aa) Areas zoned for use as public open space; (bb) Seawards of the development setback line or within 100 metres from the high-water mark of the sea if no such development setback line is determined; or (cc) Within urban protected areas.	
3	12 (ii) (iv) (vii)	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. d. KwaZulu-Natal i. Trans-frontier protected areas managed under international conventions; ii. Community Conservation Areas; iii. Biodiversity Stewardship Programme Biodiversity Agreement areas; iv. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; v. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; vi. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; vii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; viii. A protected area identified in terms of NEMPAA, excluding conservancies; ix. World Heritage Sites; x. Sites or areas identified in terms of an international convention; xi. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; xii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; or xiii. In an estuarine functional zone.	***This activity is therefore applicable.***

Notice	Activity	Description of related activity	Applicability
3	14	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. f. Mpumalanga i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas identified in terms of an international convention; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (gg) Core areas in biosphere reserves; or (hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve, where such areas comprise indigenous vegetation; or ii. Inside urban areas: (aa) Areas zoned for use as public open space; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, zoned for a conservation purpose	***This activity is therefore applicable.***

Table 3-5: Listed activities in terms of the 2013 NEMWA Waste Listed Activities, as amended

Category	Activity	Description of related activity	Applicability
B	10	The construction of a facility for a waste management activity listed in Category B of this Schedule	
B	11	The establishment or reclamation of a residue stockpiles or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the MPRDA	***This activity is therefore currently applicable.***

The proposed Umgala and Knight's Hill Projects and their individual listed activities triggered will be explained in further detail during the impact assessment phase of this S&EIR process.

3.2.3 The S&EIR Process

A S&EIR process has two distinct phases: The Scoping Phase and the Environmental Impact Reporting Phase. The Scoping Report identifies potential biophysical, social and health aspects and impacts of the proposed development on the receiving environment and invites comments from stakeholders in the identification of key issues and areas of concern, in order to inform the S&EIR process. The main objectives of the Scoping Phase are as follows:

- Identify the relevant policies and legislation relevant to the activity;
- Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location and layout;
- Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking processes;
- Identify and confirm the preferred site, through a detailed site selection process, which includes an identification of impacts and risks inclusive of identification of cumulative impacts and a ranking process of all the identified alternatives, focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
- Identify the key issues to be addressed in the EIA phase;
- Agree on the level of assessment to be undertaken; and
- Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

4 PROJECT MOTIVATION NEED AND DESIRABILITY

The presence of the Umgala and Knight's Hill Mining projects in the study area is generally seen to be positive due to the economic and employment benefits that the mine provides. Given the nature and scale of the project - the creation of employment opportunities, the contribution to the local, provincial, and national GVA/ GDP, the stimulation of new business activity, and the raising of income levels – is likely to result in medium to very high positive socio-economic impacts. It will help improve the economic performance of Emadlangeni and quality of life of the community.

5 PROJECT ALTERNATIVES

In accordance with the principles stipulated in NEMA it is required that various alternatives be investigated when considering a development which may impact significantly on the environment, in order to implement the BPEO. This means that the options will be assessed in such a manner that the alternative which has the most benefit or causes the least environmental damage to the natural environment is chosen. This option also needs to be of such a nature that the capital and social costs incurred will be of an acceptable nature to society.

Biophysical and socio-economic aspects are considered when investigating alternatives.

NEMA defines development alternatives are defined in relation to a proposed activity as different means of meeting the general purposes and requirements of the activity, which may include alternatives to the–

- property on which, or location where it is proposed to undertake the activity;
- type of activity to be undertaken;
- design or layout of the activity;
- technology to be used in the activity;
- operational aspects of the activity; and
- option of not implementing the activity.

For the purposes of this Project, rigorous Feasibility Studies and a scoping level assessment were undertaken by the Professional Team, and following on from the above, the alternatives identified as applicable to assess in this S&EIR process are as follows:

1. Property/Location Alternatives
2. Design/Layout Alternatives
3. "No-Go" Alternative (this is a mandatory option)

Based on the contextual information presented above, and described in detail below, there is no evidence to suggest that other alternatives should be investigated for the proposed projects.

5.1 Property/Location Alternatives

Due to the nature and location of the current activities at the Umgala and Knight's Hill Projects are proposed to be positioned in the locations and on the properties on which current surface mine activities are undertaken; and in accordance with current operational requirements and restrictions, including topography and surface hydrology, as explained earlier.

5.2 Design/Layout Alternatives

A brief summary of the aspects considered for the potential design and/or layout alternatives for the Umgala and Knight's Hill Projects are outlined below:

The need to consider the layout of selected aspects of the infrastructure is emphasised, notably the following:

- Placement of the haul roads need to consider nearby sensitive habitat types and requires adequate buffering to prevent the spread of impacts such as dust, pollutants, and coal material.
- In particular, should mining within Study site 3 be allowed, the design planning and construction of the bridge across the Sandspruit needs to be cognisant of the sensitivity of the environment, considering impacts such as pollutants, spillages and erosion.
- Access and haul roads towards Study site 3 could potentially be relocated further west (after the confluence of the tributaries) to avoid a double crossing of the Sandspruit tributaries.

5.3 No Go Alternative

The EIA Regulations require that all development alternatives be included into the investigation process. The no-go option will be comparatively assessed against the above-mentioned alternatives during the EIA phase and will act as a baseline against which all the other development alternatives are measured.

The "no-go" option would result in the Umgala and Knight's Hill Projects not being implemented.

Should the Umgala and Knight's Hill Projects not go-ahead, the continued operations at Umgala Mine will be negatively affected and continued operations compromised. The no-go option would result in a significant economic loss for Welgedacht; the surrounding community; the municipality; and at local, provincial and national macro-economic levels. The loss of employment would be immense, with workers often supporting entire families in an area with high unemployment rates. Furthermore, the benefits that flow from the SLP in terms of local economic development projects and skills development training to employees would furthermore be lost.

The no-go option would result in there being no additional environmental impacts from the Umgala and Knight's Hill Projects. Whilst the specific impacts will be assessed in the EIA Phase, it is not anticipated that the environmental impacts will be of a significant level.

Consequently, the "no-go" alternative is not the preferred alternative.

5.4 Concluding Statement of Preferred Alternatives

Based on the preliminary results of scientific studies done and socio-economic consideration, the following concluding remarks are made regarding the preferred alternatives:

Through implementation and execution of a terrestrial biodiversity monitoring programme, the anticipated and actual impacts of the mining activity within the terrestrial environment can be monitored. Collated information data and results will contribute towards a responsive management approach to minimize the impact footprint and associated sphere of influence.

6 ENVIRONMENTAL BASELINE

The baseline environment is described within this chapter. The baseline environment provides a status against which to assess the proposed project activities and potential impacts.

6.1 Climate

(Soils, Land Capability and Land Use, EcoAssist, 2023) and (Hydrological Assessment, GCS 2024) and (Atmospheric Impact Report, Soundscape 2024)

Climate, amongst other factors, influences soil-water processes and stormwater peak flows. The most influential climatic parameter is rainfall. Rainfall intensity, duration, evaporative demand, and runoff were considered in this study to indicate rainfall partitioning within the project area.

The nature of the topography within the WMA results in a varied climatic condition. At the coast, conditions are generally sub-tropical becoming progressively colder as one moves inland towards the mountains (Department of Water and Sanitation, 2022). The project area is situated in the upland bioclimatic zone of the northern Kwa-Zulu Natal region and forms part of the regional sub-tropical climatic zone of southern Africa. The climate is characterised as temperate with summer rainfall. Evaporation exceeds rainfall and the predominant winds blow south-easterly albeit the strongest winds blow from the north-west.

This region is characterised by summer rainfall, with overall MAP of between 710– 1 120 mm, mainly as summer thunderstorms. Mist occurs frequently on hilltops in spring and early summer, but summer droughts are also frequent. Summers are warm to hot. MAT is around 16°C, but some localities may reach 17°C, see **Figure 6-1** (Mucina, et al., 2006).

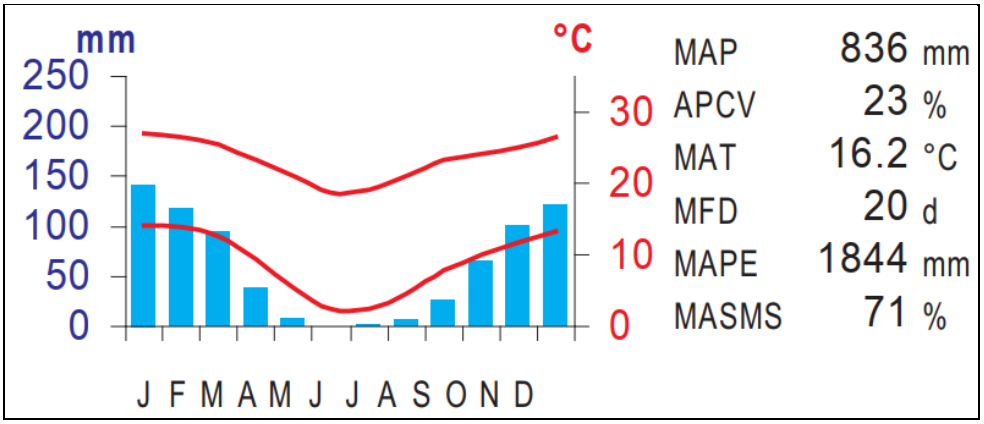


Figure 6-1: Climate Summary for local area

The average yearly temperature (refer to **Figure 6-2**) for the project area ranges from 17 to 31°C (high) and -5 to 13°C (low). The study area is situated in a subtropical highland climate (Cwb) area with a pronounced dry season and warm summers, as per the Köppen Climate Classification (Kottek, et al., 2006).

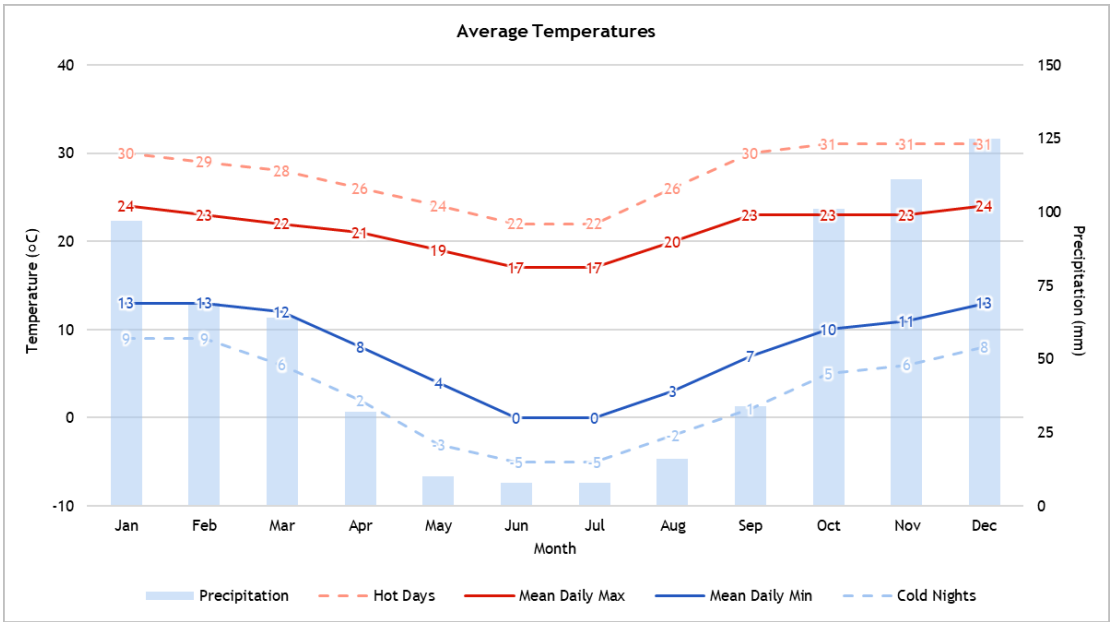
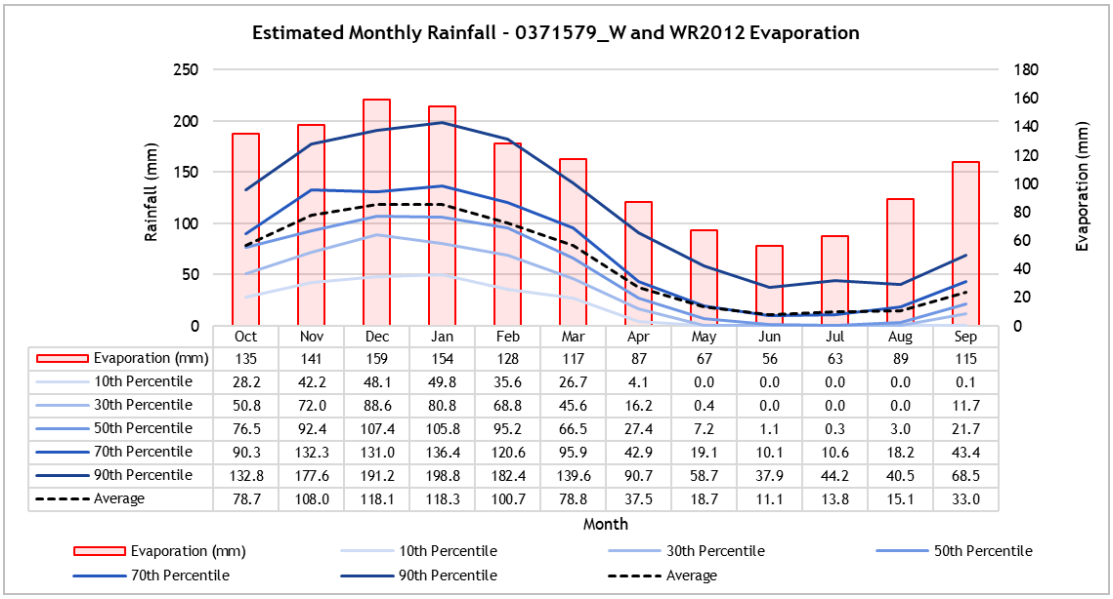


Figure 6-2: Average yearly temperatures (Meteoblue, 2024)

The project area is situated in rainfall zone V3C. The monthly rainfall data for the area was obtained from rainfall station 0371579_W (Utrecht), situated 3.3 km southeast of the sites. The rainfall record spans from 1920 to 2003, which is a record length of 84 years. Monthly rainfall for the site is likely to be distributed, as shown in **Figure 6-3** below. Available rainfall data suggest a MAP ranging from 435 mm/a (30th percentile) to 1 362 mm/a (90th percentile). The average rainfall is in the order of 731.7 mm/a.

The project area falls within evaporation zone 21A, of which the A class pan Mean Annual Evaporation (MAE) depth at station V3E004 is 1 928 mm. Data suggest an MAE ranging from 553 mm/a (5th percentile) to 2 115 mm/a (95th percentile). The MAE far exceeds the MAP for the site, which implies greater evaporative losses when compared to incident rainfall. Monthly evapotranspiration for the site is likely to be distributed, as shown in **Figure 6-3** below.

Runoff from natural (unmodified) catchments for quaternary catchments V32B and V32C is simulated in WR2012 (WRC, 2015) as ranging from 40.7 to 59.6 mm/a (or 6-8% of the MAP). This is approximately 25.61 to 33.17 Mm^3/a normalised mean annual runoff (NMAR) for the surface area of quaternary catchments V32B and V32C. The average monthly runoff volume varies between 0.6 Mm3 in July/August to 6.7 Mm3 in February.



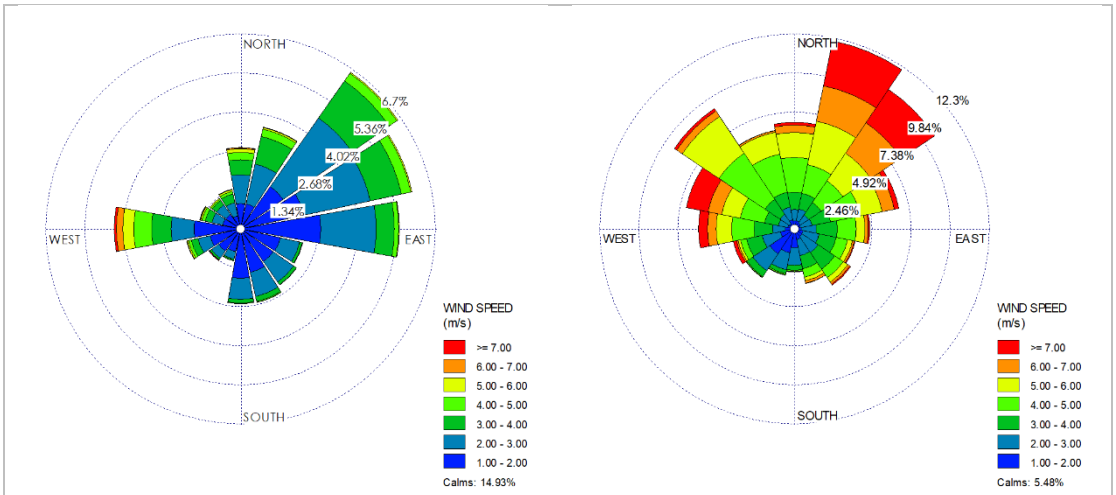
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Evaporation (mm)	135	141	159	154	128	117	87	67	56	63	89	115
10th Percentile	28.2	42.2	48.1	49.8	35.6	26.7	4.1	0.0	0.0	0.0	0.0	0.1
30th Percentile	50.8	72.0	88.6	80.8	68.8	45.6	16.2	0.4	0.0	0.0	0.0	11.7
50th Percentile	76.5	92.4	107.4	105.8	95.2	66.5	27.4	7.2	1.1	0.3	3.0	21.7
70th Percentile	90.3	132.3	131.0	136.4	120.6	95.9	42.9	19.1	10.1	10.6	18.2	43.4
90th Percentile	132.8	177.6	191.2	198.8	182.4	139.6	90.7	58.7	37.9	44.2	40.5	68.5
Average	78.7	108.0	118.1	118.3	100.7	78.8	37.5	18.7	11.1	13.8	15.1	33.0

Figure 6-3: Average rainfall for station 0371579_W & WR2012 Evaporation

A wind rose is a graphic tool to give a concise view of how wind speed and direction are distributed at a specific location. The colours reflect the wind speed and the size of the 'petal' the occurrences of wind from a specific direction.

The wind field is generally characterised by airflow from both the westerly as well as north-easterly and easterly sectors. The strongest winds are from the west. Calm conditions with wind speeds below 1 m/s occurred 14.9% of the reporting period, with 14.3% calms during the day and 32.9% during the night. From February to May there is a distinct increase in wind from a westerly direction. The strongest winds occur in the month of July.

A comparison of the wind field is made in **Figure 6-3**. The wind field in Utrecht, based on the simulated data set, is mainly characterised by airflow from north-easterly and north-westerly sectors with calm wind conditions occurring less than 6% of the time on average.



(a) Period wind rose, Vryheid 2017 to 2020

(b) Period wind rose, MM5 data, 2020 to 2022

Figure 6-4: Period Wind Roses

6.2 Geology

(Soils, Land Capability and Land Use, EcoAssist, 2023)

The geology according to the landtype data for the Knights Hill underground workings is mainly sandstone of the Vryheid Formation, Ecca Group, with dolerite. Small areas of shale of the Volksrust Formation, Ecca Group, and of sandstone, shale and mudstone of the Beaufort Group (provisionally Estcourt Formation) also occur (Land Type Survey Staff, 1972 - 2006). The remaining footprint for the Knights Hill is mainly sandstone of the Vryheid Formation, Ecca Group, and dolerite.

The geology according to the landtype data for the Umgala project area is mainly dolerite, with small areas of sandstone of the Vryheid Formation, Ecca Group.

6.3 Topography

(Soils, Land Capability and Land Use, EcoAssist, 2023)

The Knights Hill project relief shows that the elevation ranges from approximately 1245 masl to about 1595 masl. The Umgala project relief shows that the elevation ranges from approximately 1270 masl to about 1440 masl. The slopes are generally steep and the areas are dominated by slopes greater than 7%.

In land capability modelling terrain plays an important role not only from a plants' physiological growth requirements but also from a sensitivity and accessibility perspective (Department of Agriculture, Forestry and Fisheries, 2017). Two main terrain modelling concerns were included in the terrain capability modelling exercise namely:

The terrain capability for Umgala project area was dominated by low ratings (see). The Knights Hill area was dominated by low capability in the underground workings portion. Low-moderate ratings in the mining infrastructure footprint area, and moderate capability in the haul road portion.

6.4 Soils, Land Use and Land Capability

(Soils, Land Capability and Land Use, EcoAssist, 2023)

Soil capability takes into consideration all aspects pertaining to the characteristics of the soil and their contributions towards plant production (Department of Agriculture, Forestry and Fisheries, 2017).

Three databases were used as part of the soil capability modelling:

- Land type data modelled and mapped into topographical units (Beukes). The data were modelled and rasterised form the original land type data base and the 90 m SRTM DEM. All the soil attributes are linked to fixed boundary zones. The soil concerns, issues and data are therefore aimed at an attribute rather than a spatial level;
- The land type soil attribute data base (ARC); and
- Soil fertility data (DAFF).

Three main modelling concerns formed part of the soil capability modelling:

- Plant available water;
- Soil sensitivity; and
- Soil fertility.

The soil capability was rated as Low to low-moderate for the entire Knights Hill project area as well as the mining infrastructure area of Umgala project area (see **Figure 6-5** and **Figure 6-6**). The Umgala underground portion was rated as moderate-high, however this area is high in the mountains which would make economical agriculture difficult.

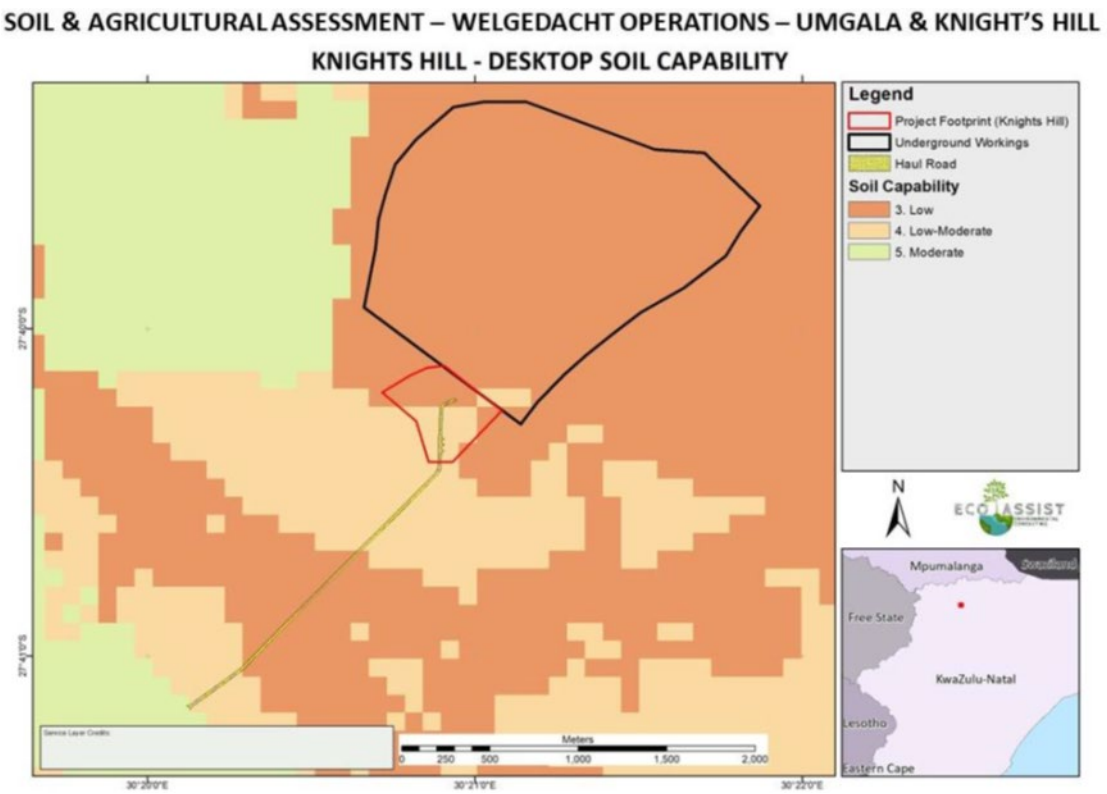


Figure 6-5: Soil capabilities within the Knights Hill project area (Department of Agriculture, Forestry and Fisheries, 2017).

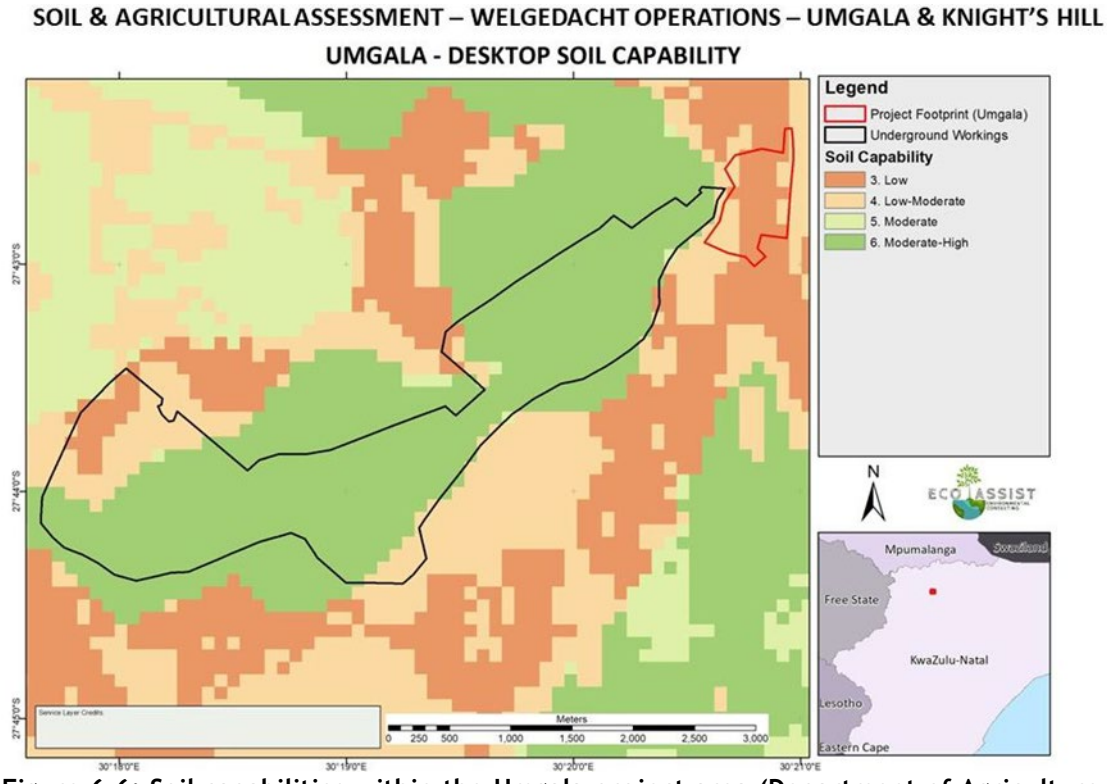


Figure 6-6: Soil capabilities within the Umgala project area (Department of Agriculture, Forestry and Fisheries, 2017).

Land capability is defined as the most intensive long-term use of land for purposes of rainfed farming determined by the interaction of climate, soil and terrain.

To represent the distribution of the land capability evaluation values in the country, used as one of the input data layers to determine and demarcate all high value agricultural land for ensuring that these areas, pending availability, are preserved for continued agricultural production, thereby ensuring long-term national food security (Department of Agriculture, Forestry and Fisheries, 2017).

The data layer is a seamless data layer and does not exclude permanently transformed areas (built up; waterbodies; mining etc.).

The land capability ratings show that the overall desktop land capability for both the Knights Hill and Umgala project areas were rated as low to Low-Moderate at best (see **Figure 6-7** and **Figure 6-8**). The haul road portion of the Knights Hill project area does have some areas of moderate capability. The result is based on the combination of the climate capability, the soil capability, and the terrain capabilities described earlier.

The long-term production potential of the herbaceous layer (grasses and forbs) of an area of vegetation that is required to maintain an animal with a weight of 450 kg (1 Large Stock Unit (LSU)) with an average fodder intake of 10 kg dry mass per day over a period that vegetation is suitable for grazing (mostly 1 year) without degrading the natural resources (vegetation and soil) and is measured in "Hectares per Large Stock Unit" (ha/LSU) (South Africa (Republic), 2018).

The long-term sustainable grazing capacity for both project areas was rated as 5.5 ha per large stock unit.

The cultivated area maps (see **Figure 6-9** and **Figure 6-10**) shows that the project areas are not being currently utilised for agricultural purposes.

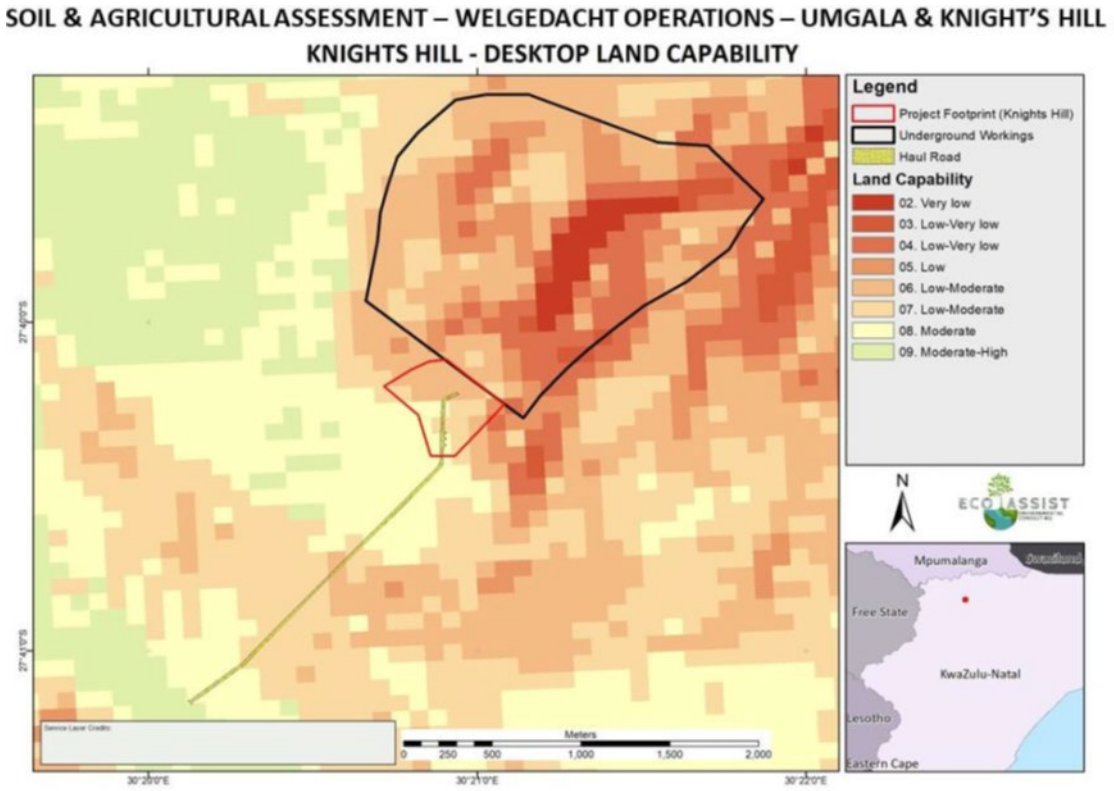


Figure 6-7: Land capabilities within the Knights Hill project area (Department of Agriculture, Forestry and Fisheries, 2017)

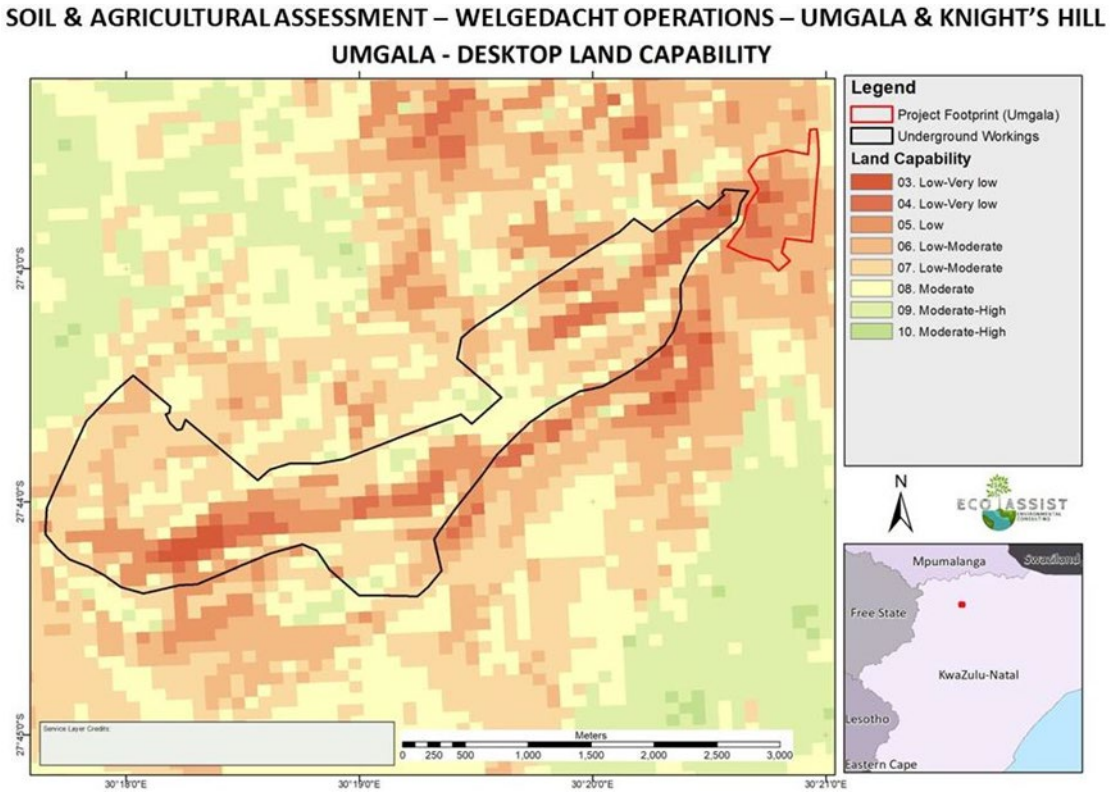


Figure 6-8: Land capabilities within the Umgala project area (Department of Agriculture, Forestry and Fisheries, 2017)

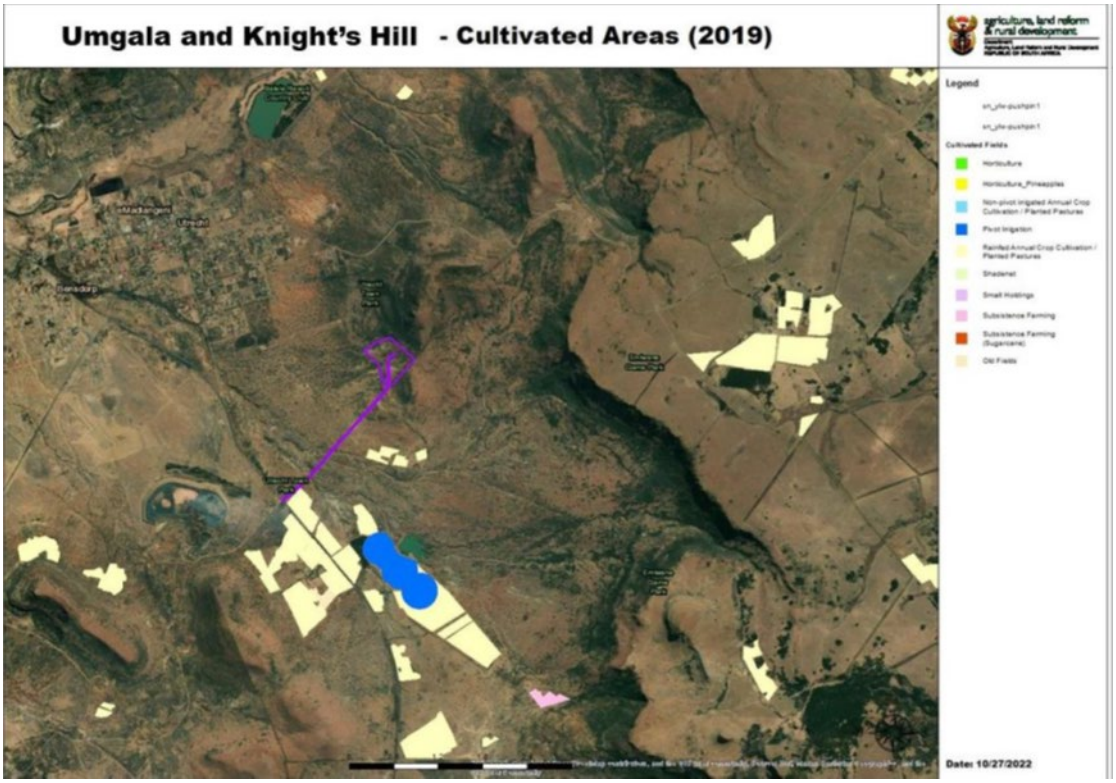


Figure 6-9: The cultivated areas within the Knights Hill project area (South Africa (Republic), 2018)

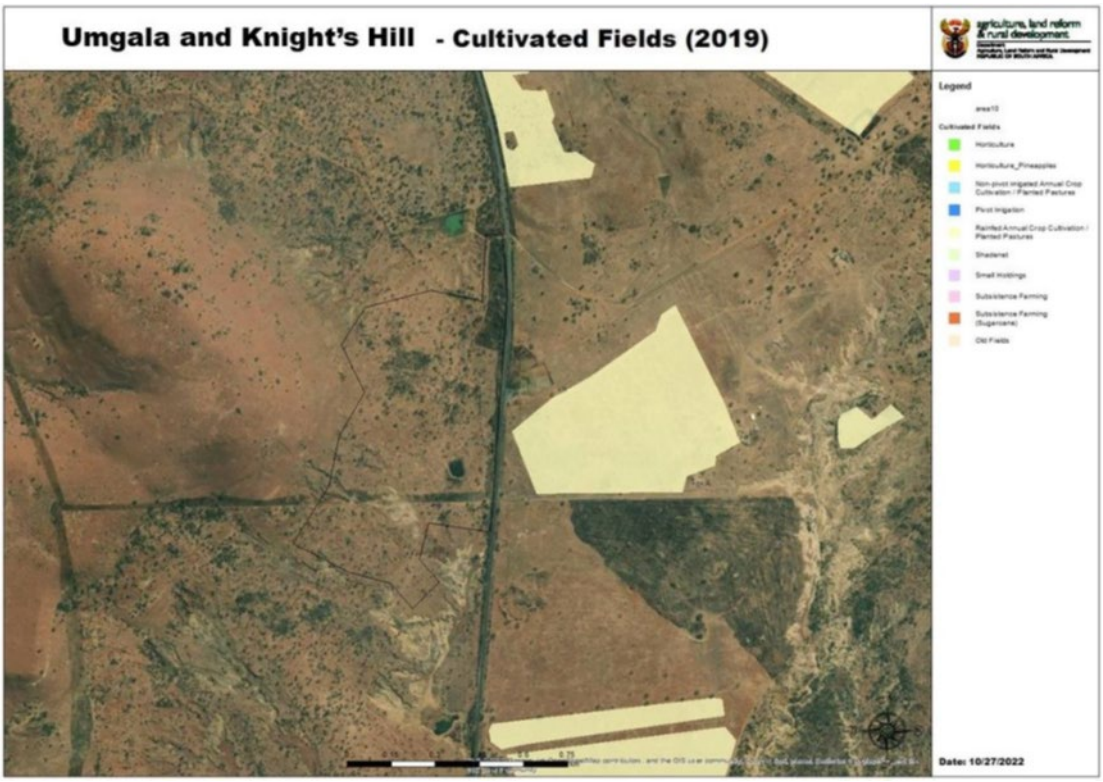


Figure 6-10: The cultivated areas within the Umgala project area (South Africa (Republic), 2018)

6.5 Surface Water

(Hydrological Assessment, GCS 2024)

The Pongola-Mtamvuna Water Management Area (WMA) lies predominantly in the KwaZulu-Natal province, with several tributaries draining from the Drakensberg escarpment towards the Indian Ocean. The major rivers in the WMA are the Mhlathuze, Mkuze, Mfolozi, Thukela, Mvoti, Mgeni, Mkomazi, uMzimkulu and Mtamvuna Rivers (Department of Water and Sanitation, 2022).

The WMA topography ranges from sea level to about 3000 mean seal level (mamsl). The WMA has relatively high rainfall as compared to the rest of the country, with the majority of the rainfall occurring in summer with rainfall depths between 800 mm – 1500 mm per annum. Higher rainfall is experienced along the western part of the WMA on the Windward side of the Drakensberg Mountains, while the lower end of the rainfall band is experienced in rain-shadow pockets. 80% of the rainfall is experienced as summer thunderstorms. Occasionally, the area will experience snow in the high-lying areas. The region is prone to drought and occasional flood events. Some of this variability may be associated with El Niño–Southern Oscillation (ENSO) which impacts strongly over the sub-continent in summer (Reason, et al., 2000), typically leading to below(above) average rainfall totals during El Niño (La Niña) episodes.

The proposed Knights Hill site falls within quaternary catchment V32B of the Thukela River Catchment in the Buffalo River sub-catchment of the Pongola-Mtamvuna WMA. The entire MR area falls within both V32B and V32C. The Buffalo River is the main northern tributary of the Thukela River and flows in a south-easterly direction from the eastern escarpment to its confluence with the Thukela River. There are two major dams in the area: the Ntshingwayo Dam (previously known as Chelmsford) with a full supply capacity of 199 million m3, and the Zaaihoek Dam with a full supply capacity of 193 million m3. The Ntshingwayo Dam water requirements are dominated by irrigation, but there are also large urban and industrial requirements. Releases are sometimes made to dilute factory spillage that ends up in the river system. Water from the Zaaihoek Dam is transferred out to the Vaal Water Management Area. Zaaihoek Dam also supplies limited demands downstream of the dam by releasing water into the Slang River. The largest water use in the catchment area is irrigation, with a requirement of 50 million m3/annum (Department of Water Affairs and Forestry, 2004). Domestic and industrial use is also significant, as are the transfers out to the Upper Vaal WMA, estimated at 55 million m3. Water quality is a major concern in the regional catchment area, as the water quality in the Buffalo River down to its confluence with the Thukela is considered to be very poor. (Department of Water Affairs and Forestry, 2004).

6.5.1 Umgala Colliery Sub-catchments/hydrological response units (HRUs)

Four (4) hydrological response units (HRUs) describe the natural drainage and hydropedology flow boundaries associated with the site (using a 1:1 000 stream count and 30 m DTM fill) – refer to **Figure 6-11**. The sub-catchment relates well to desktop-delineated drainage lines for the project area, as well as verified streams associated with the project area.

With regards to site-specific drainage, drainage from the proposed Umgala adit, ROM stockpile, pollution control dams (PCDs) and the hard stockpile is towards the south, via an ephemeral drainage line; and drainage for the proposed Umgala office complex, soft stockpile and soil stockpile is towards the north via an ephemeral drainage line. There are no recognised perennial drainage lines associated with the site. However, the Tiyna River (south ~ 2 km) and Dorpspruit River (north ~ 2.5 km) are the major rivers associated with the area and bound the project area.

6.5.2 Knight's Hill Sub-catchments/hydrological response units (HRUs)

Seven (7) hydrological response units (HRUs) describe the natural drainage from the site (using a 1:1 000 stream count and 30 m DTM fill) – refer to **Figure 6-12**. The sub-catchment relates well to desktop-delineated drainage lines for the project area, as well as verified streams associated with the project area.

With regards to site-specific drainage, drainage is towards the southwest from the position of the proposed K-Hill adit, and the south and west for the mountainous area towards the northeast of the K-hill adit. Drainage is in the form of ephemeral streams, with no recognised perennial drainage lines associated with the site. A perennial tributary of the Dorpspruit River is found in the valley, with regards to the project area, and is situated approximately 1.5 km downstream of the site.

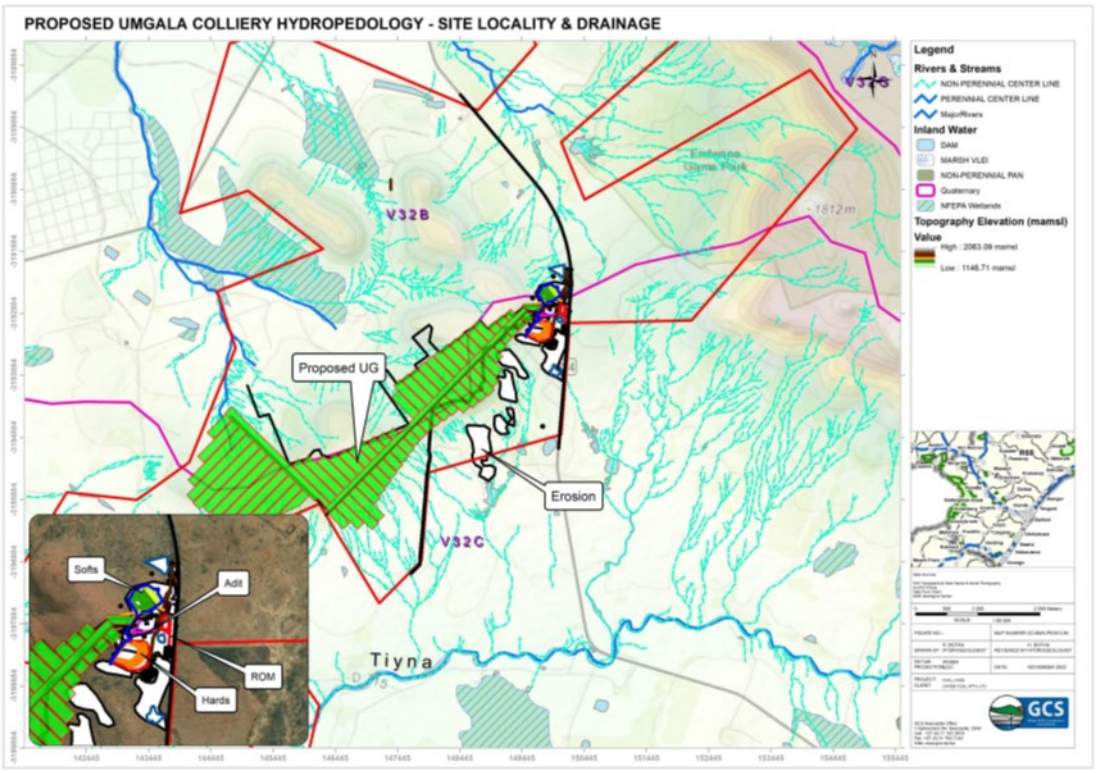


Figure 6-11: Site drainage

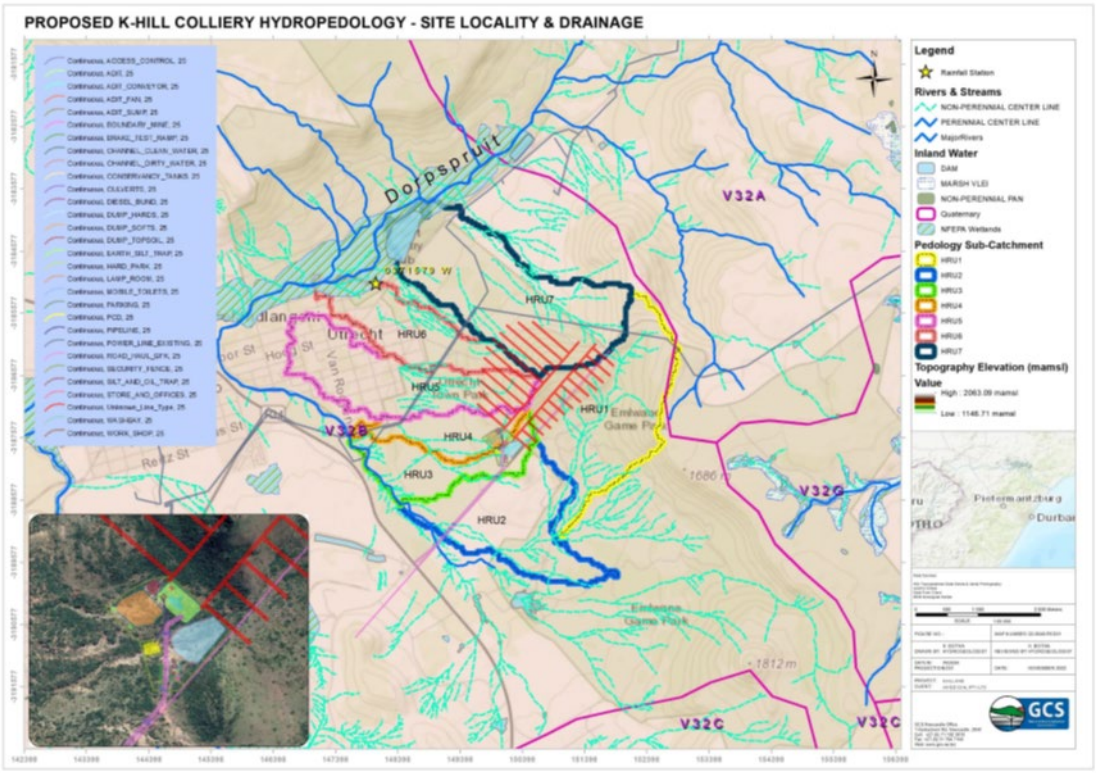


Figure 6-12: Site sub-catchments and drainage

6.6 Groundwater

(Geohydrological Assessment, GCS 2024)

The aquifer present can be classified as a Minor Aquifer system (Parsons, 1995). These can be fractured or potentially fractured rocks which do not have a high primary permeability or other formations of variable permeability. Aquifer extent may be limited and water quality variables. Although these aquifers seldom produce large quantities of water, they are important for local supplies and in supplying base flow for rivers/springs (as supported by the hydrocensus conducted).

Based on available data, the aquifers in the study area can be divided into three (3) distinct zones:

1. A shallow perched aquifer zone (unconfined):

a. A perched aquifer is associated with and hence limited to the occurrence of the dolerite sills within the study area. The sills are thickest on the hilltops (±40 m) thinning towards the valley areas. Surface seepage and springs are identified in locations where the contact margins of the dolerite sills and the underlying Karoo sediments outcrop (Golder, 2016a).

2. Shallow weathered-fractured aquifer zone (semi-confined):

a. The weathered aquifer is an unconfined system located in the weathered sandstone formation of the Ecca Group. In the Ecca group, multi-layered aquifers are common. It is, however, conceptualised as a single unit with interconnectivity between layers, as a best-case scenario.

b. On average the saturated thickness for the weathered to semi-confined aquifer zone, determined by boreholes drilled at the site, varies from 15 to 30 m. However, on a catchment scale, the average weathered thickness is estimated to be in the order of 28 m (King et al., 1998).

3. Fractured aquifer zone (confined):

a. The Dwyka Formation, which underlies the Ecca Group, normally has a very low permeability due to its secondary aquifer characteristics. The aquifer can be referred to as being primarily fractured and acts as an aquitard.

b. The fractured aquifer is found in sandstones and coal layers. It has been found that the sand grains within the sandstones are very well cemented by carbonate minerals and therefore there is no flow of groundwater through the matrix of the rock. Nevertheless, permeable zones can be created over time when acid water leaches the carbonate from the sandstone matrix adjacent to the mine. Groundwater is flowing essentially in the preferential pathway including fractured zones, joints and fissures. It has also been found that the coal layer is usually fractured and capable of transmitting groundwater.

c. The saturated fractured aquifer thickness for the general area is estimated to be in the order of 100 - 110 m (King et al., 1998; and Lourens, 2013).

The aquifer in the study area can be referred to as being predominantly intergranular and fractured. These aquifer types generally have very low to medium primary hydraulic conductivity and medium to low porosity values due to the secondary nature of the aquifer (King et al., 1998).

Dolerite intrusions (dykes and sills) are common in the Karoo Supergroup and are often encountered in the study area. These intrusions can serve as both aquifers and aquifuges1.

Thick un-weathered dykes will inhibit the flow of water, while the baked and cracked contact zones can be highly conductive. These conductive zones effectively interconnect the strata of the Ecca sediments both vertically and horizontally into a single, but highly heterogeneous and anisotropic zone on the scale of typical mining activity.

Various dolerite dykes and contact zones have been mapped during the old Umgala underground mining activities in the area. The strike of the dykes in this area are both parallel and perpendicular to the direction of groundwater flow and therefore act as no flow and preferential flow boundaries.

Groundwater in this area is restricted mainly to zones of weathering and fracturing. The hydraulic characteristics of the formations are principally associated with permeability. Within the Knight's Hill area, the secondary permeability is mainly confined to fracturing within the sandstone and dolerite formations. The zone of weathering varies from deep weathering near the Mphongosa Stream to extremely shallow weathering on the upper slopes of Knight's Hill.

6.7 Acid Mine Drainage (AMD)

(Conceptual Acid Mine Drainage Management Plan (CAMDMP) and Decant Management Plan (CDMP), GCS, 2024.)

Based on available static geochemical data, acid drainage (AD) and neutral drainage (ND) is likely to be associated with:

- Exposed rock in the mined out / partially mined out underground workings (i.e. a rock that is exposed to both oxygen and inflowing groundwater).
    - This is typically expected for shallow mine workings < 30 mbgl where oxygen ingress and rainfall infiltration will likely be high; and
    - Underground footwall / hanging wall rock (i.e. thin layer of rock either shale, mudstone or sandstone in contact with the coal) in unflooded or partly flooded mine workings; and

- Areas where mine workings daylight or decants (i.e. these mine water will be exposed to access oxygen and may become acidic).

- Drainage from coal discard and slurry -however not kept on-site; and
- Drainage from coal products and the coal seams that are / will be mined.

6.8 Waste

(Waste Re-Classification for the Umgala Discard Dump, GCS 2022.)

Golder Associates (2016) undertook a waste classification and geochemical screening of the discard dump in September 2016. The following provides an overview of the study findings:

- The waste materials are enriched (in decreasing order) in bismuth, selenium, tellurium, molybdenum, boron, mercury and arsenic. In addition to these elements, the combusted materials (ash) are also enriched in lithium, barium, beryllium, germanium, antimony, barium and uranium;
- The Umgala coarse and fine discard, coal fines and waste rock and the Utrecht coarse discard are potentially acid-generating;
- The discard ash and PCD ash and Zimbutu coarse discard are potentially acid-generating if total sulphur content is considered (worse case), but not potentially acid-generating if only sulphide sulphur is considered;
- The Utrecht PCD sediment is not potentially acid-generating;
- Leachate from the various waste materials generally exceed DWAF water use guidelines for domestic, livestock or irrigation use, and South African Stricter Receiving Water Quality Objectives, most commonly in the levels of TDS or EC and sulphate. Manganese, aluminium and calcium also exceed domestic use guidelines for most sites;
- The Umgala, Utrecht and Zimbutu Discard Dumps are all Type 3 waste (LCT0 < LC ≤ LCT1 and TC ≤ TCT1) – this includes the coal slurry compartments at Umgala. The Umgala and Utrecht PCDs are all Type 3 waste (LCT0 < LC ≤ LCT1 and TC ≤ TCT1);
- The waste rock materials are not Type 4 (TC ≤ TCT1), but do not meet the full definition of Type 3 (LCT0 > LC); and
- The coarse and fine discard materials (except Umgala coarse discard), coal slurry and PCD sediments are considered to be hazardous, but the Umgala coarse discard and the waste rock are considered non-hazardous.

6.9 Ecology

(*Terrestrial Biodiversity Impact Assessment Report, Bathusi, 2024)*

Private nature reserves account for approximately 37.8 % of the eMadlangeni LM, while 4.2 % represent community conservation areas and 5.2 % is 'stewardship areas' (eMadlangeni Municipality Draft IDP, 2020). Formal protected areas that are spatially situated in proximity to the study area include the following:

- Pongola Bush Nature Reserve (42 km northeast);
- Paardeplaats Nature Reserve (47| km northeast);
- Vryheid Mountain Nature Reserve (41 km east); and
- Chelmsford Nature Reserve (44 km southwest).

In particular, Study site 3 is situated within the Utrecht Community Game Farm (Park), which borders the Balele Game Park (northwest) and Emlwane Game Park (southeast). Due to a high topographical heterogeneity, it comprises numerous habitat and vegetation types, from Valley Bushveld to mountain forest, open wetland systems and savanna habitat, although it forms part of the Grassland Biome (KwaZulu-Natal Moist Grassland). It occupies undulating plains as well the rocky footslopes of the Balelesberg up onto the plateau across Knight's Hill Mountain (**Figure 6-13**).

Study site 3 is consequently considered highly sensitive in context of local and regional conservation efforts. Impacts, specifically habitat losses and secondary impacts that lead to habitat deterioration on a wider scale, will probably be perceived as significant and restrictive to the proposed activity within this particular site.

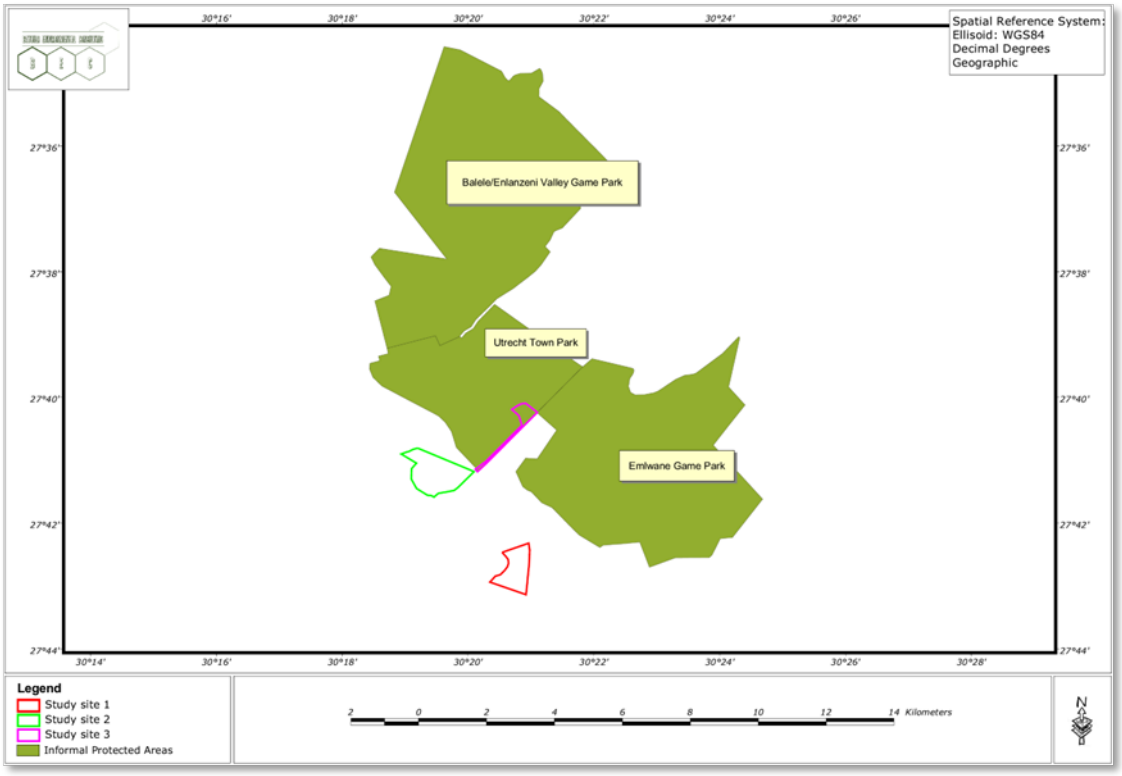


Figure 6-13: Local conservation areas

The Biodiversity Act (Act 10 of 2004) provides for listing of threatened or protected ecosystems, in one of four categories: Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or protected. The first list of nationally threatened terrestrial ecosystems in South Africa was gazetted in December 2011 (NEMBA: National List of ecosystems that are threatened and in need of protection, G34809, GN 1002), with the aim of reducing the rate of ecosystem and species extinction by preventing further degradation and loss of structure, function, and composition. This list also includes ecosystems outside of protected areas. Ecosystem delineation was based on the South African Vegetation Map (Mucina & Rutherford, 2006); National Forest Types (DWAF), priority areas identified in Provincial Systematic Biodiversity Plans, and high irreplaceability forest patches or clusters systematically identified by DWAF.

Figure 6-14 indicates the spatial location of the Uyskop Valley (KZN82) in relation to the study sites. This unit is currently afforded a Vulnerable conservation status. It is geographically located in the valley between the Uyskop trig beacon and surrounding hills south of the Sandspruit River and comprises parts of the Grassland Biome of KwaZulu-Natal Province. Of the original extent of approximately 1,000 ha, only 63 % remains and none of this system is included in any of the formal protected areas. Key biodiversity features of this system include one bird species (White-winged Flufftail); one millipede species (*Doratogonus minor*), one plant species (*Kniphofia galpinii*), and one vegetation type (Income Sandy Grassland) (Goodman, 2007).

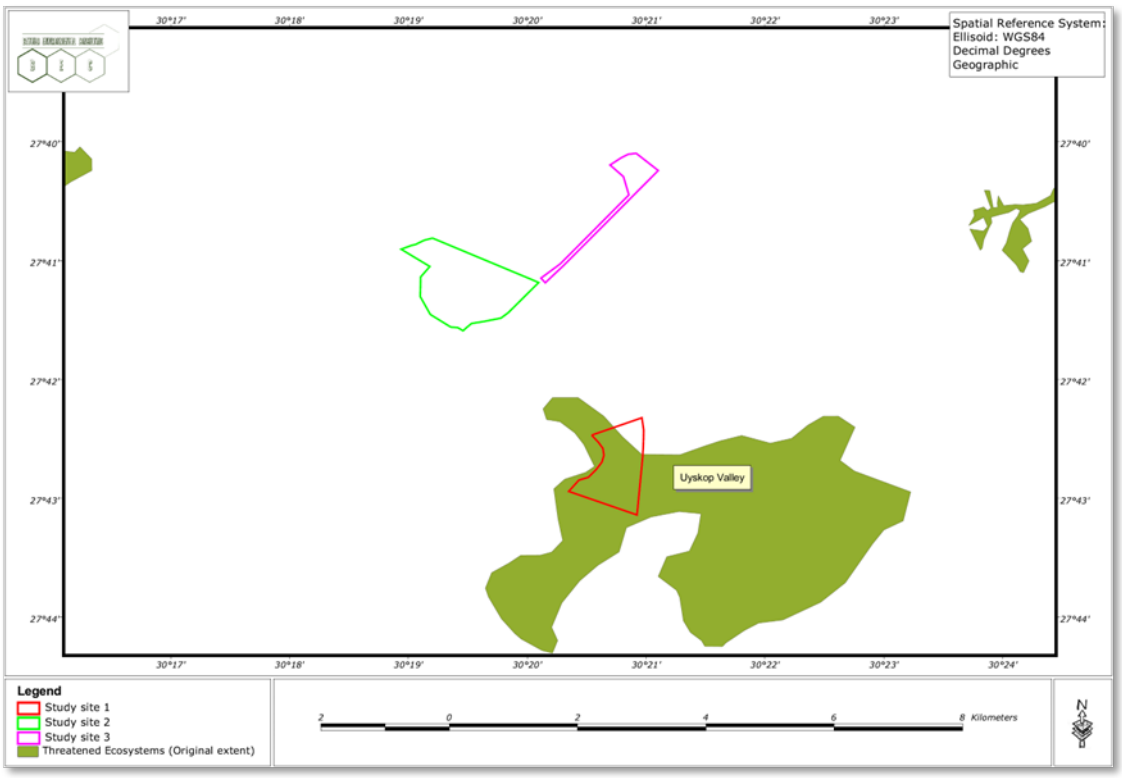


Figure 6-14: Spatial location of the study sites in relation to National Threatened Ecosystems

The study area is spatially situated within the Grassland Biome (SANBI 2021), regionally described as the Sub-Escarpment Grassland Bioregion that is characterised by a strong savanna association with a semi-open mixed tree and shrub component that is dominated by a well-developed grass layer, typically situated on foothills, plains and scarps or areas that are characterised by topographical and altitudinal variability. More specifically, the study areas are located in the vegetation types described as Income Sandy Grassland (EN) and the Northern KwaZulu-Natal Moist Grassland (VU).

Moderate to high losses of habitat are noted from both these habitat types; the remaining extent of the original ecological types, indicating that most of Study sites 1 and 3 comprises natural habitat, Study site 2 has largely been transformed by previous mining activities. Site observations furthermore indicated that some deteriorated areas, currently categorised as natural, are not accurately captured by the information source as a result of scale inaccuracies.

The exceptional floristic diversity of southern Africa is particularly interesting; much of southern African floristic diversity is concentrated in comparatively small geographical areas, and secondly, and secondly because an estimated 60 % of the species are endemic to the region, which is considered an exceptionally high figure for a subcontinental area. Floristic figures for southern Africa are furthermore intriguing when one considers that more than half of the subcontinent conforms to desert or semi-desert, regions that are generally associated with impoverished floristic patterns. Within the southern African context, several areas of particularly high floristic diversity have been known to scientists for a long period. These areas have been formally defined and described as Areas of Endemism, which is defined as geographical areas of exceptionally high floristic diversity and endemicity.

The study area is spatially included in the Pondoland Region of Endemism, situated along the coast of the Indian Ocean, comprising a well-defined geologically demarcated region of sandstones of the Msikaba Formation. The vegetation is not particularly varied, consisting of mainly grassland, with a few isolated forest patches confined chiefly to protected riverine gorges, from where they occasionally spill over onto south and southwest facing slopes. Forest is more extensive and exposed in the south of the region, and the inherent characteristics of these forest patches are dependent on dominant underlying geological patterns. Grasslands of this region are considered the densest in southern Africa and are particularly vigorous, permitting a high burning frequency of up to two to three times per annum. Although these fires are considered essential for the maintenance of grassland diversity, such high burning frequencies are clearly unnatural anthropogenic as part of extreme management systems. Inappropriate management practices over large areas in these grasslands have led to the loss of floristic diversity and an increase in the unpalatable grass *Aristida junciformis*.

Flora endemics of the region are strongly associated with both the forest and grassland elements of the region, notably the woody endemic species with more than 30 species of robust creepers, shrubs, or trees. The centre is also a major centre of diversity and endemism for some succulent species, such as *Plectranthus*.

Conservation of the region is unfortunately inadequate and the grassland areas, in particular, require better protection. Cooper and Swart (1992) recommended the highest priority be afforded to the conservation of the coastal forests. Inappropriate grazing practices,

excessive burning, and destructive agricultural activities (notably commercial afforestation and growing of sugar cane) pose a threat to the flora of the region.

The provincial KZN Systematic Conservation Plan (KZNSCP, 2012) identifies and map critical biodiversity areas and ecological support areas within the Province (**Figure 6-15**). An appraisal of the information source indicates that the sites comprise minor parts of Biodiversity Priority Area 3, based on the following priority attributes:

Vegetation Types: Glencoe Moist Grassland, Income Sandy Grassland

Plants: Kniphofia galpinii

Animals: Thukela Agate Snail (Cochlitoma simplex), Minor Black Millipede (Doratogonus minor)

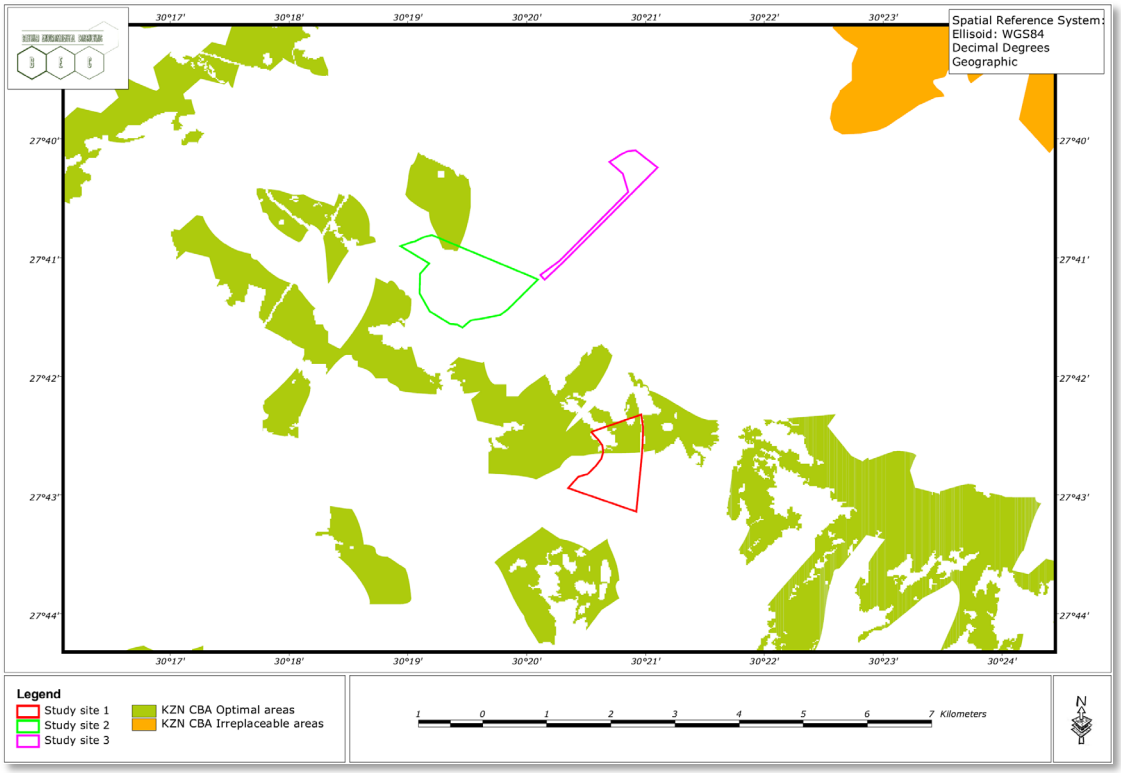


Figure 6-15: Spatial extent of KZN Biodiversity Sector Plan categories in relation to the study sites

6.10 Aquatic

(Baseline Aquatic Assessment for the Umgala Coal Mine, The River Guy, 2023.)

The reach associated with the extent of the proposed expansion of the Umgala Mining Area was assessed at the time of sampling, in line with the best practice guidelines. The development is considered to pose a potential impact to the Dorpspruit Buffels and Tinya Rivers.

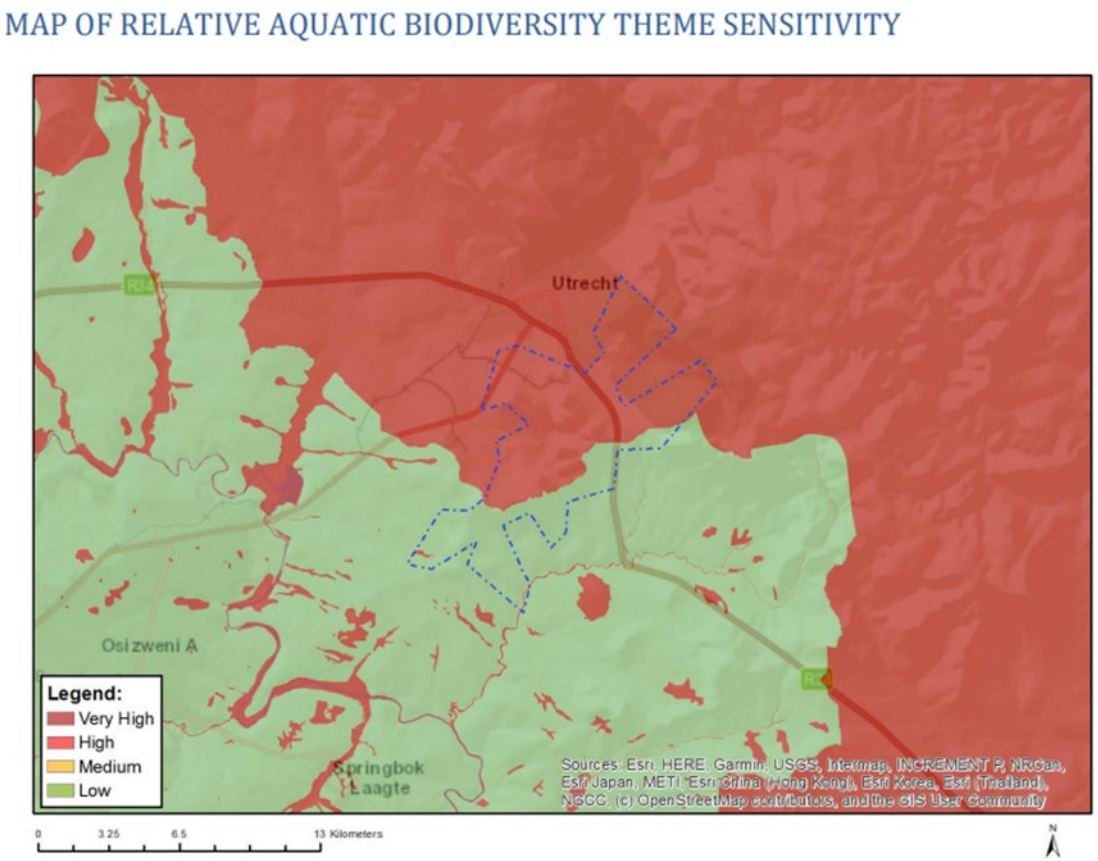


Figure 6-16: Aquatic sensitivity based on the National screening tool (2022)

The proposed project area is situated within the Dorpspruit Sub Quaternary Reach (SQR) V32A-03298, which is a Stream order one (1) river. The present ecological state of the Dorps River SQR based on the Department of Water and Sanitations historical data (DWS, 2012) is rated Largely Modified (Category D) with a High ecological importance and a very high ecological sensitivity. Historic recorded impacts upon the reach includes: Alien invasive plants, Acid Mine Drainage, the town of Utrecht, instream weirs, waste water treatment facilities and abstraction for irrigation purposes.

6.11 Wetland

(Wetland Assessment, CEET, 2024)

The proposed upgrade and expansion for Umgala 1 and 2 footprint is in the Thukela Water Management Area. The project boundary is within the V32B and V32C quaternary catchments. The sub-quaternary reach associated with the Umgala1 area is the Dorpspruit River (V32A-2398) with a PES classification of D (Largely Modified) and EI and ES of High and Very high, respectively. While Umgala 2 is associated with Tiyna River (V32C- 2526) with a PES classification of C (Moderately Modified) and EI and ES of both High.

Figure 6-17 and **Figure 6-18** shows NFEPA systems, in relation to the proposed development. There are no NFEPA rivers systems identified within 500m of the proposed upgrade and expansion. There are a number of NFEPA wetlands within close proximity (less than 32m) to the Umgala 1 infrastructure upgrade areas, all of which would require a Water Use License and possibly Environmental Authorization. Similarly, Umgala 2 has 4 NFEPA wetlands, which are remotely located outside of the development footprint but within 500m. The interaction with any NFEPA wetland system would require sensitive construction and operational phase mitigation measures to ensure there is no permanent impact on the wetland systems. It is worth noting that the NFEPA wetlands in close proximity to Umgala 1 are artificial in nature, and have been created by historical mining activities, however, be that as it may; these systems provide a habitat and ecosystem services for wetland flora and fauna. It is recommended that strict mitigation measures be included in the Environmental Management Programme (EMPr).

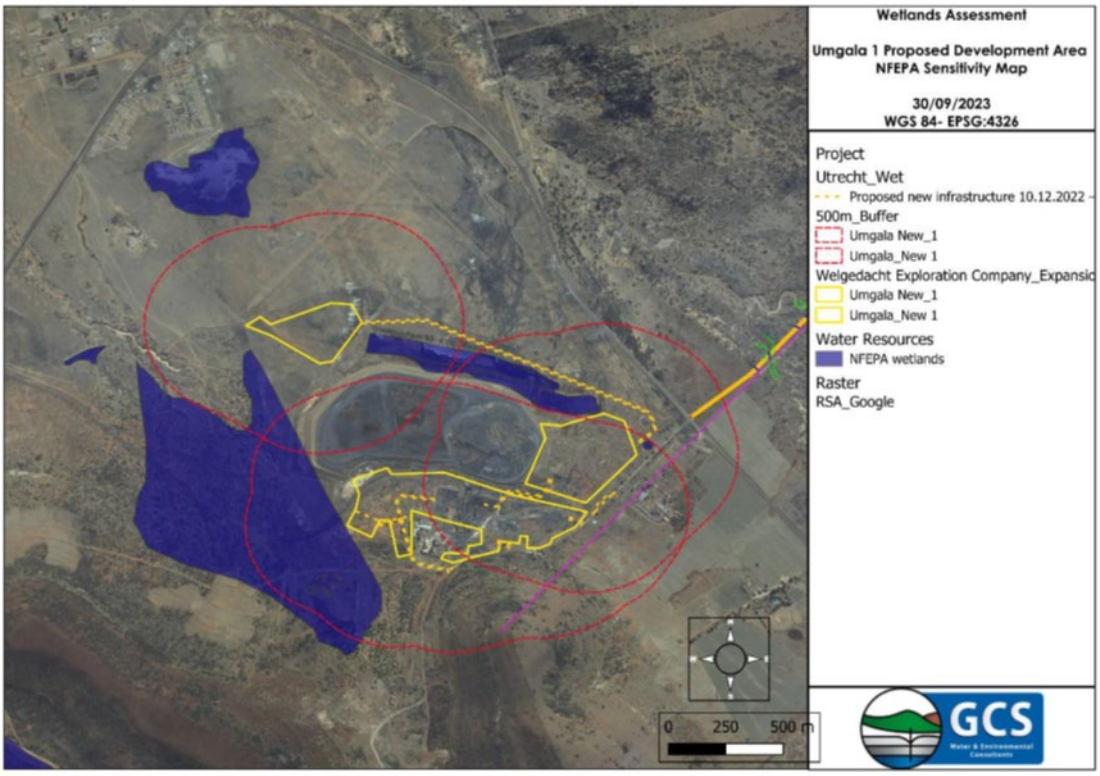


Figure 6-17: Location of NFEPA wetlands related to proposed project area of Umgala 1

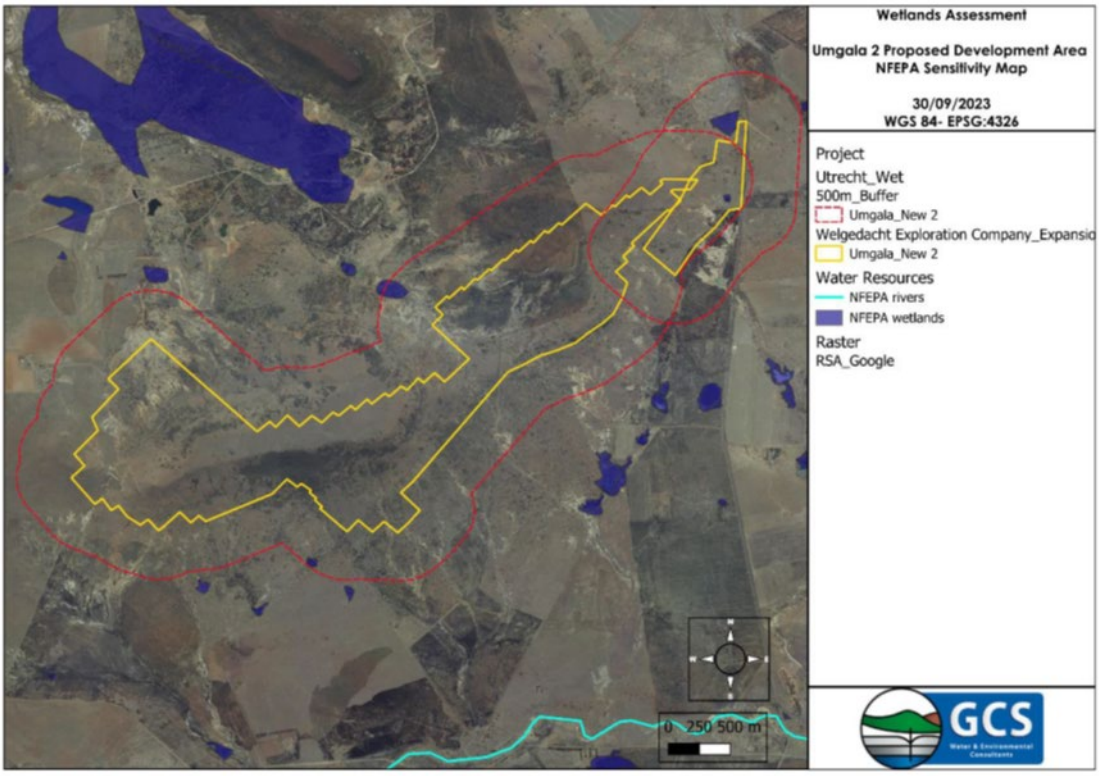


Figure 6-18: Location of NFEPA wetlands and rivers within and around proposed development area of Umgala 2

Figure 6-19 shows NFEPA systems, in relation to the proposed development. There are no NFEPA rivers systems identified within 500m of the proposed upgrade and expansion. There are no NFEPA wetlands within close proximity (less than 32m) to the Knightshill proposed infrastructure, however, there is an NFEPA wetland along the southwestern edge of the 500m buffer zone.

The proposed upgrade and expansion for Knightshill footprint is in the Thukela Water Management Area. The project boundary is within the V32B quaternary catchment. The sub-quaternary reach associated with the Knightshill area is the Dorpspruit River (V32A- 2398) with a PES classification of D (Largely Modified) and EI and ES of High and Very high, respectively.

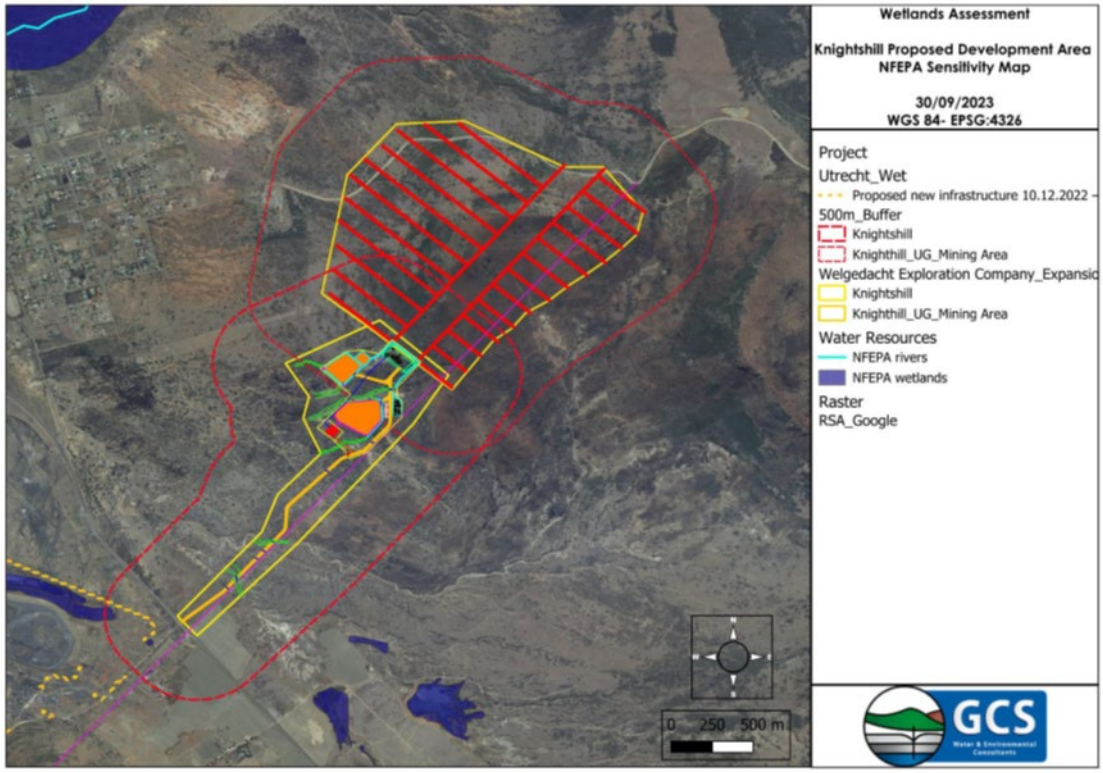


Figure 6-19: Location of NFEPA wetlands related to proposed development area

6.12 Hydropedological

(Hydropedological Assessment, GCS, 2024.)

Fourteen (14) hydropedological response unit (Ped-HRUs) describes the natural drainage and hydropedology flow boundaries associated with the site (using a 1:1 000 stream count and 30 m DTM fill). The sub-catchment relates well to desktop-delineated drainage lines for the project area, as well as verified streams associated with the project area.

With regards to site-specific drainage, drainage from the proposed Umgala adit, ROM stockpile, pollution control dams (PCDs) and the hard stockpile is towards the south, via an ephemeral drainage line; and drainage for the proposed Umgala office complex, soft stockpile and soil stockpile is towards the north via an ephemeral drainage line. There are no recognised perennial drainage lines associated with the site. However, the Tiyna River (south ~ 2 km) and Dorpspruit River (north ~ 2.5 km) are the major rivers associated with the area and bound the project area.

The dominant land types associated with the sub-catchment is observed to be light agricultural, cultivated, natural grasslands, thickets and bushes.

Seven (7) hydropedological response unit (Ped-HRUs) describes the natural drainage and hydropedology flow boundaries associated with the site (using a 1:1 000 stream count and 30 m DTM fill). The sub-catchment relates well to desktop-delineated drainage lines for the project area, as well as verified streams associated with the project area.

With regards to site-specific drainage, drainage is towards the southwest from the position of the proposed K-Hill adit, and towards the south and west for the mountainous area towards the northeast of the K-hill adit. Drainage is in the form of ephemeral streams, with no recognised perennial drainage lines associated with the site. A perennial tributary of the Dorpspruit River is found in the valley, with regards to the project area, and is situated approximately 1.5 km downstream of the site.

The dominant land types associated with the sub-catchment is observed to be natural grasslands, thickets and bushes.

6.13 Air Quality

(Atmospheric Impact Report, Soundscape 2024)

The project is located near Utrecht in KwaZulu-Natal. There are regional roadways, historic mining areas, agricultural activities, game reserves and lodges, and residential townships within 5 km of the project.

The town of Utrecht lies to the north and west of the proposed new coal processing plant at Umgala and north-west of the proposed Knight's Hill adit . There are several schools and hospitals within the area. The closest include Bergsig LSEN School, Niemeyer Memorial Hospital, and Utrecht High School to the north; Utrecht Primary School to the north-west, and Izumbuthu Primary School to the west.

Access to the project is from the R34. The Umgala coal processing plant and Umgala adit section lies directly west of the R34. The Knight's Hill Section lies to the east off the R34 and is accessed via a 2 km unpaved road.

The Balele/Enlanzeni Valley Game Park is situated north of Utrecht and the project. The Emlwane Game Park lies to the east of the Knight Hill Section.

The project will include both point and fugitive sources of emission. Fugitive air emissions refer to emissions that are distributed spatially over a wide area and not confined to a specific discharge point. They originate in operations where fumes are not captured and passed through a stack. Fugitive emissions have the potential for much greater ground-level impacts per unit than point source emissions, since they are discharged and dispersed close to the ground (IFC, 2007).

The following emissions are considered key to coal mining and processing activities:

- fugitive emissions of particulate matter (PM)
- exhaust emissions from mining equipment
- emissions from spontaneous combustion
- emissions from power generation

During the operation phase, fugitive PM emissions will be released during the handling of materials including topsoil, hard and soft wastes, and coal (RoM, and product), the transport of these materials from adits to the processing plant via unpaved haul roads and the R34, windblown dust from exposed areas such as topsoil stockpiles, wase dumps, and product stockpiles, and maintenance of haul roads i.e. grading.

PM generally refers to inhalable particles, composed of sulphate, nitrates, ammonia, sodium chloride, black carbon, mineral dust, or water. In air quality studies, PM emissions are typically classified into three categories based on their size, which also correlates with their potential health impacts when inhaled (US EPA, 2024; WHO, 2024):

- Total Suspended Particulates (TSP): This category encompasses a wide range of particle sizes. TSP can include particles typically up to 100 µm in diameter. Due to their size, these particles can settle quickly and are not usually respirable. However, they can contribute to environmental dust pollution and can have adverse effects on health if deposited in the respiratory tract or if they contain toxic substances.
- PM10: These are particulate matters with a diameter of 10 µm or less. Due to their smaller size, PM10 particles can penetrate deeper into the lungs, reaching the bronchi and the upper portion of the lung pathways. Inhalation of PM10 can cause adverse health effects, including aggravated asthma, coughing, acute respiratory symptoms, and chronic bronchitis.
- PM2.5: Particulate matter in this category have a diameter of 2.5 µm or less. These are fine particles capable of penetrating the lungs and entering the bloodstream. PM2.5 can cause more severe health issues than larger particles, including cardiovascular diseases, respiratory infections, and even premature death in people with pre-existing heart or lung conditions. Due to their small size and ability to carry toxic organic compounds and heavy metals, PM2.5 is of particular concern in air quality management.

The sources of the largest types of particles, known as coarse particles (with diameters between 2.5 µm and 10 µm), predominantly include pollen, ocean spray, and dust carried by the wind from erosion, farms, roads, and mining activities. Smaller particles, specifically PM2.5, originate from direct sources like fuel combustion in power plants, industries, or vehicles, as well as indirect sources through chemical reactions among gases (WHO, 2024).

The main pollutants emitted by internal combustion engines i.e. mobile diesel mining equipment and generators, include nitrogen oxides (NOx), total organic compounds (TOC), carbon monoxide (CO), and PM, which consist of both visible (smoke) and invisible emissions. The formation of NOx is closely linked to the high pressures and temperatures experienced during combustion, as well as to any nitrogen present in the fuel. Incomplete combustion is the primary cause of other pollutants like hydrocarbons (HC), CO, and smoke. Additionally, ash and metallic additives in the fuel contribute to the particulate matter in the exhaust. Exhaust from these engines also contains sulfur oxides (SOx), predominantly sulfur dioxide (SO2), which directly correlates with the sulfur content in the fuel (US EPA, 1996).

Spontaneous combustion in coal mines occurs when coal ignites without an external ignition source, such as a flame. This can happen due to the self-heating properties of coal, which, when exposed to oxygen, can increase in temperature. If this heat is not dissipated effectively, it can raise the coal's temperature to a point where it ignites. Factors that contribute to this phenomenon include coal type, moisture, coal or discard pile size and configuration, ambient conditions etc. Should spontaneous combustion occur in coal mines, it will lead to the release of PM10, PM2.5, and other combustion byproducts from the site. However, this issue is highly site specific (NPI, 2012).

Some emissions generated underground, including PM and combustion gases, will be released to atmosphere via ventilation shafts. At the time of the assessment, no information on mine ventilation was however available.

Activities proposed as part of the Welgedacht Umgala Project are not listed under Section 21 of the National Environmental Management: Air Quality Act (Act no. 39 of 2004) as amended (NEM: AQA). The project will therefore not require an Atmospheric Emissions Licence (AEL).

6.14 Noise

(Noise Impact Assessment, Soundscape, 2024.)

The topography of an area may act as a barrier to noise being transmitted from a source to a receiver. The extent to which noise will be reduced depends on how much further noise needs to travel over the barrier compared with direct transmission, and the frequency content of the noise. Topographical barriers will reduce high frequency noise more notably than low frequency noise (BKSV, 2001).

The project is located at an elevation of about 1 300 metres above sea level (masl) in the foothills of the Balele Mountains. The Balele Mountains stretch north of the town of Utrecht, which lies at their foot, south-east of Wakkerstroom and Volksrust (in Mpumalanga), and north-east of the Newcastle region. The terrain of the area is expected to provide some acoustic shielding to noise-sensitive receptors within the area.

Sound reflected by the ground interferes with direct propagation. The effect of ground reflection varies depending on whether the ground is considered acoustically hard (e.g., concrete or water), soft or porous (e.g., grass, trees, or vegetation), or mixed. Ground cover, mostly open short grassland, with scattered trees, and exposed soil, is considered mixed and only somewhat conducive to noise attenuation.

Sensitive receptors in terms of noise impacts typically include places of residence, and community locations such as schools and hospitals located outside the boundary of a development. The closest sensitive receptors included in the study, representative of community locations and or places of interest were identified during a site visit and from satellite imagery.

Noise sources that could have acoustical implications, were identified from site development plans, process descriptions, and in consultation with project proponents. The project will result in noise impacts during both the construction and operational phases.

6.15 Traffic

(Traffic Impact Assessment, MPAMOT, 2023.)

The impact of the additional traffic that will be generated by the new mining activities will be assessed from a qualitative perspective and not a quantitative perspective. The available information indicates that traffic volumes on the R34 can be described as low to moderate. The estimate traffic from the new mining activities, which is outlined in Section 5 of the report is the daily traffic. Normal traffic analysis is conducted during the peak hour, the mining operation would be considered as an industrial activity and any impact would be assessed during the morning and afternoon peak hours.

The peak hour traffic is approximately 10% of the daily traffic and when this is combined with exiting traffic on the R34, therefore the actual volume of traffic on the R34 during the peak hour would be low and analysis of the data would not provide any useful data.

However, it should be noted that part of the planning is the need for two new access points on the R34 to the Umgala and Knights Hill area. A wayleave application will be required to be made to SANRAL, which will include a detail design (geometric design) for the new access. As part of the design traffic analysis will be required to assess if there is the need turning lanes at the access to the Umgala and Knights Hill mining area.

6.16 Cultural Heritage and Palaeontological Importance

(Heritage Impact Assessment, Umlando, 2022.)

The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys. The general area is known for its high density of heritage sites. No surveys have been undertaken within the study area.

The Surveyor General maps indicate that both Goedgenoegd and Zandspruit and Utrecht Townlands were surveyed in 1887, and sold shortly thereafter. Buildings have been marked on the Goedgenoeg map but do not occur within the study area. These buildings still exist today. Zandspruit was later renamed to Gum Tree Grove in 1907.

The 1935 aerial photograph indicates that the current colliery had no built structures. However, two possible structures occur in the Umgala area. The latter map also shows small rectangular agricultural fields often associated with farm labourer's houses.

The 1953 area photographs indicate that the existing colliery has no buildings. There are two definite areas of built structures, or settlements, in the Umgala study area in 1953.

The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys. The general area is known for its. No surveys have occurred within the study area; however the general area is known to be archaeologically sensitive.

The Surveyor General map indicates that the Utrecht Townlandswas surveyed in 1887. Buildings have been marked on this map but do not occur within the study area.

The 1935 aerial photograph indicates that there are two possible settlements within the study area. However, these are not very clear. The erosion gullies are noticeably smaller as well.

The 1953 area photographs indicate that there are no visible structures within the study area. This is repeated on the 1961 aerial photograph. These maps suggest that any finds will probably predate 1935.

6.17 Socio-Economic Conditions

(Social Impact Assessment, Urban-Econ, 2023.)

Umgala Mine is located within the Emadlangeni Local Municipality (ELM), to the east of the town of Utrecht. ELM that was previously known as Utrecht Local Municipality, forms part of the Amajuba District Municipality. in the KwaZulu-Natal (KZN) Province. As indicated in the map below, the municipality is located along the northern boundary of Amajuba District Municipality and is bordered by:

- Newcastle Local Municipality in the west.
- Dannhauser Local Municipality in the south-west.
- Endumeni Local Municipality in the south.
- Pixely Ka Isaka Seme Local Municipality in the north.
- Edumbe Local Municipality in the north-east.
- Abaqulusi Municipality on the southeastern boundary

ELM is located approximately 52km east of Newcastle, and 68km west of Vryheid, along the R34 regional route. It covers an area of approximately 3 539km2 and has a population of approximately 36 869 people. Newcastle is the main urban centre and economic hub in the region, while Dannhauser and Utrecht serve as secondary service centres with limited thresholds. Utrecht Town is the urban centre servicing the community of Emadlangeni.

The ELM is predominantly rural and is characterised by vast commercial farmlands with rural settlements concentrated in selected areas. It has six electoral wards and five Traditional Councils, namely:

1. Ndlamlenze Traditional Council.
2. Thekwani Traditional Council.
3. Amantungwa Traditional Council.
4. Mbatha Traditional Council.
5. Mgundeni Traditional Council.

Numerous small rural settlements occur in selected areas within the municipality, particularly on land the communities acquired through the land reform programme and commercial farmlands. Utrecht is the only small urban settlement within the municipality

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Numerous small rural settlements occur in selected areas within the municipality, particularly on land the communities acquired through the land reform programme and commercial farmlands. Utrecht is the only small urban settlement within the municipality.

Emadlangeni has been experiencing a steady increase in population size since 2011. The implications of this includes service delivery in terms of housing and service infrastructure especially. The municipality has a generally young population with approximately 73.48% of the population falling under the age of 35. This has implications for education, youth facilities and the creation of job opportunities. Emadlangeni municipality population is made up of 93% black population and 6 % and 1% white and coloureds respectively. The rate of the not economic active and unemployed population in the municipality is quite alarming and a cause of concern of the availability of economic opportunities within the municipality.

The proposed mining projects can help mitigate some of the challenges that the municipality is currently facing by creating employment opportunities for the resident population. The mine will bring new job opportunities that require various skills from unskilled labour, semi-

skilled and skilled labour. This could potentially reduce the rate of not economically active people in the AOI. This will shift the dependence of the community on agricultural sector for employment opportunities and provide the community with in-demand skills. An effective SLP will support the municipality in tackling some of the challenges such as the high rate of illiteracy through investment is Adult Basic Education and Training (ABET) and investment in municipal infrastructure, amongst others.

7 PUBLIC PARTICIPATION PROCESS

The PPP is a legislated requirement under NEMA for EA and WML applications. This section of the report documents the process, which was and will be followed with respect to the consultation of Interested and Affected Parties (I&APs)/stakeholders and government authorities.

7.1 Purpose of Public Participation

The most important objective of PPP is to provide sufficient and accessible information to potential I&APs in an objective manner and a platform for constructive participation in the EA Application, thereby assisting I&APs to:

- Gain an understanding of the Umgala and Knights Hill Projects, the various components and the potential impacts (positive and negative);
- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been recorded in the Comments and Responses Report (CRR) and considered in investigations; and
- Contribute relevant local information and traditional knowledge to the process.

7.2 Public Consultation Process

This section provides a summary of the various activities of the public consultation process to be undertaken in support of the application process.

7.2.1 Stakeholder database

A stakeholder database or list of I&APs was compiled and will be updated during the PPP and as more I&APs registered. The database was compiled: a) using lists of contact details of I&APs from previous environmental applications for Umgala Mine; b) using information provided by the applicant's community liaison officers; and c) including responses from I&APs.

The I&AP database will be used to convey: information to stakeholders as part of the announcement of the S&EIR Application; the opportunity for I&AP consultation and the availability of the draft and final S&EIR Reports as these become available for public review. For the Proposed Projects, I&APs included the following:

- Owners of the land where the Umgala and Knight's Hill Projects are to be undertaken (Project Area) other than Welgedacht;
- Owners and occupiers of land adjacent to the Project Area;
- Provincial (KZN) and local government;
- Organs of state, other than the competent authority (CA) having jurisdiction over any aspect of the proposed activities.

- Relevant residents' associations, agricultural unions, community based organisations, water user associations, and any catchment management authority and Non-Governmental Organisation (NGOs);
- Environmental organisations, forums, groups and associations; and
- Private sector organisations (businesses, industries) in the vicinity.

7.2.2 Announcement of the application process

The integrated application process will be announced to I&APs by means of the following:

- An advertisement was placed in the Northern Natal News in English and isiZulu on 29 August 2024.
- A Background Information Document ("BID") was compiled and distributed to all I&APs on the stakeholder database and copies were available on request and at the meetings held;
- Site Notices were placed all around the project area;
- Placement of all notices and the BIDs on the GCS website (http://www.gcs-sa.biz/documents/). The GCS website is used to make documents electronically available to stakeholders. The website address was published in the advertisement, BIDs, site notices and all other communication; and
- A Registration and Comment Sheet was distributed with every BID, inviting stakeholders to register as I&APs and to provide their comments on the proposed application.

7.2.3 Comments and Response Report

All comments received during the application process will be captured in a Comments and Responses (CRR). The CRR will be updated on a continuous basis and presented to the authorities together with the consultation and final reports as a full record of issues raised, including responses on how the issues were considered during the application process. A summative Public Participation Report (PPR) which includes the Scoping CRR, will be compiled, detailing the entire public participation and consultative process followed for this integrated application process, and included in Appendix C of the Final Scoping Report.

7.2.4 Public Review of Draft Scoping Report

The DSR will be made available for public comment for 30 days for public review from 4 September until 4 October 2024 (30 days). The DSR will be available for review at the following public venues:

The Report will also be available electronically via the GCS Website (link provided above) or a CD/USB upon request.

Further information regarding the scoping consultation process, including proof of notification/DSR distribution and a copy of the PPR will be included in the final SR.

8 PLAN OF STUDY FOR EIA

The Plan of Study (POS) for the Impact Assessment Phase describes the approach to the Assessment, as required in terms of Section 2(1)(h) of Appendix 2 to Regulation GNR 326 promulgated in terms of the NEMA. In accordance with Section 2(1)(h) of Appendix 2, this POS includes:

- A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity.
- A description of the aspects to be assessed as part of the EIA and by specialists.
- A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists.
- A description of the proposed method of assessing duration and significance.
- An indication of the stages at which the CA will be consulted.
- Particulars of the PPP that will be conducted during the EIA process.
- A description of the tasks that will be undertaken as part of the EIA process
- 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.

8.1 Impact Assessment Phase Tasks

The objectives of the EIA Phase are to:

- Address the issues and concerns expressed by the environmental authorities and I&APs in the response to the Scoping Study.
- Assess the potential significant impacts imposed by the Umgala and Knight's Hill Projects and assess alternatives and mitigation measures to minimise potential impacts.
- Assess layout and design alternatives in order to minimise potential impacts.
- Document findings into an Environmental Impact Assessment Report (EIR), in order to inform the authorities and the I&APs with regard to issuing an EA.

The following tasks are required to be undertaken during the EIA process:

- Appoint specialists to undertake further specialist investigations, if required.
- Review of the specialist reports and amendment where necessary.
- Discuss the specialist report results and conclusions with I&APs and authorities.
- Incorporate the assessments in the DEIR.
- Distribute the DEIR to I&APs and authorities for review.
- Convene Focus Group/Public Meeting(s), as appropriate.
- Collate and address any comments/concerns documented by I&APs.
- Incorporate issues and responses into the Final EIR (FEIR).

- Submit the FEIR to the CA for consideration.
- Inform I&APs of the submission of the FEIR to the CA and make copies available for review.

The EIA process involves the compilation of an EIR that provides a formal assessment of the significance of all of the potential impacts identified for assessment in the Scoping Phase. The impact assessment will be based on the findings and assessments of the various specialist reports listed and described below.

Once the EIR has been drafted according to the findings of the specialist reports and their recommended mitigation measures, the DEIR will be made available to all registered I&APs for public comment. The aim of this public comment period is to allow the public to review the findings of the specialist reports and the findings of the significance assessment, the revised development proposal, and the mitigation measures proposed to minimise the impacts of the proposed development. All registered I&APs will be requested to comment on these aspects and confirm and/or reject the findings or assessments based on reasonable and substantiated arguments. Thereafter, reasonable and substantiated comments will be incorporated into the assessment and a final draft of the development proposal and the EIR produced.

8.2 Competent Authority Consultation

The CA (KZN DMRE) will be consulted at the following key stages:

- A possible site meeting and site visit with the CA will be held during the EIR phase.
- A consultation meeting will be held with the CA approximately two weeks after the distribution of the DEIR, to discuss any additional comments from I&APs and the outcome of the specialist studies, should it be required. An indication of the CA's satisfaction with the process undertaken to that stage should also be clear after the meeting.
- The FEIR will be submitted to the CA once all outstanding issues have been resolved.
- The CA may convene a meeting post-submission of the FEIR should it be deemed necessary.

8.3 Impact Assessment Methodology

Possible impacts are identified through comments from I&APs, specialist reports, and from the EAP's experience.

The assessment of potential impacts was addressed in a standard manner, to ensure that a wide range of impacts were comparable. The ranking criteria and rating scales were applied to all specialist studies for the Umgala and Knight's Hill Projects. To enable a scientific approach to the determination of the environmental significance (importance), a numerical value is linked to each rating scale.

Clearly defined rating and rankings scales (**Table 8-1 - Table 8-7**) will be used to assess the impacts associated with the Umgala and Knight's Hill Projects. The impacts identified by each specialist study and through PPP will be combined into a single impact rating table for ease of assessment.

Table 8-1: Severity or magnitude of impact

Not applicable/none/negligible	0
Minor/insignificant/non-harmful (no loss of species/habitat)	2
Low/small/potentially harmful (replaceable loss with minimal effort)	4
Moderate/significant/slightly harmful (replaceable loss of species/habitat with great effort and investment)	6
High/highly Significant/harmful (impact to human health or welfare/loss of species/habitat)	8
Very High/extremely significant/extremely harmful/within a regulated sensitive area (loss of human life/irreplaceable loss of Red Data species/conservation habitat)	10

Table 8-2: Spatial Scale of activity

Not applicable/none/negligible	0
Site only	1
Local (within 5km)	2
Regional/neighbouring areas (5 km to 50 km)	3
National	4
International	5

Table 8-3: Duration of activity

Not applicable/none/negligible	0
Immediate (immediately reversible with minimal effort)	1
Short-term (0-5 years - reversible)	2
Medium-term (5 to 15 years – difficult to reverse with effort)	3
Long-term/life of the activity (very difficult to reverse with extensive effort)	4
Permanent/beyond life of the activity (not reversible)	5

Table 8-4: Frequency of activity (how often activity is undertaken)

Not applicable/none/negligible	0
Improbable /almost never/annually or less	1
Low probability/very seldom/6 monthly	2
Medium probability/infrequent/temporary/monthly	3
Highly probable/often/semi-permanent/weekly	4
Definite/always/permanent/daily	5

Table 8-5: Frequency of incident/impact (how often activity impacts environment)

Almost never/almost impossible/>20%	1
Very seldom/highly unlikely/>40%	2
Infrequent/unlikely/seldom/>60%	3
Often/regularly/likely/possible/>80%	4
Daily/highly likely/definitely/>100%	5

Table 8-6: Legal Issues – governance of activity by legislation.

No legislation	1
Fully covered by legislation	5

Table 8-7: Detection (how quickly/easily impacts/risks of activity on environment, people and property are detected)

Immediately (easier to mitigate)	1
Without much effort	2
Need some effort	3
Remote and difficult to observe	4
Covered (more difficult to mitigate)	5

Each impact identified must be assessed in terms of probability (likelihood of occurring); the consequence of the impact (spatial scale, severity and duration); and the associated risk (impact significance).
Consequence was then determined as follows:

CONSEQUENCE = Severity + Spatial Scale + Duration

The probability or likelihood of occurrence of the activity was then calculated based on frequencies of the activity and impact, whether the activity is governed by legislation and how easily it can be detected:

LIKELIHOOD = Frequency of Activity + Frequency of Impact + Legal issues + Detection

The significance or risk of each identified impact was then based on the product of consequence and likelihood:

Environmental Significance/Risk = Consequence x Likelihood

Impacts will be rated as either of high, medium or low significance on the basis provided in **Table 8-8**. Each impact will also assessed in terms of the level to which there is an irreplaceable loss of resources and its degree of reversibility. The ratings as described in **Table 8-9** and **Table 8-10**.

Table 8-8: Impact significance ratings.

SIGNIFICANCE	ENVIRONMENTAL RISK RATING	COLOUR CODE
High (positive)	>240	H
Medium (positive)	120 to 240	M
Low (positive)	<120	L
Neutral	0	N
Low (negative)	>-120	L
Medium (negative)	-120 to -240	M
High (negative)	<-240 (max = 400)	H

Sub-categories:

Significance	Extreme	Very High	High	Moderate
High	260-400	320-359	280-319	241-279
Significance	High	Moderate	Medium	
Medium	200-240	160-199	120-159	
Significance	Moderate	Moderate	Low	
Low	80-119	40-79	1-39	

Significance	Extreme	Very High	High	Moderate
High	260-400	320-359	280-319	241-279
Significance	High	Moderate	Low	
Medium	200-240	160-199	120-159	
Significance	High	Moderate	Negligible	
Low	80-119	40-79	1-39	

Table 8-9: Irreplaceability of resource caused by impacts

No irreplaceable resources will be impacted (the affected resource is easy to replace/rehabilitate)	**Low**
Resources that will be impacted can be replaced, with effort	**Medium**
Project will destroy unique resources that cannot be replaced	**High**

Table 8-10: Reversibility of impacts

Low reversibility to non-reversible	**Low**
Moderate reversibility of impacts	**Medium**
High reversibility of impacts	**High**

The significance of an impact gives one indication of the level of mitigation measures required in order to minimise negative impacts and reduce environmental damage during the construction, operational and decommissioning phases. Suitable and appropriate mitigation measures, to ensure avoidance, management and mitigation of impacts, will be identified for each of the potential impacts based on specialist recommendations and GCS expertise.

8.4 Impact Management

Each specialist has identified means of avoiding, mitigating and/or managing the negative impacts in their particular aspect of investigation. The recommended management strategies will be synthesized by GCS to formulate the EMP for the Umgala and Knight's Hill Projects.

8.5 Environmental Management Programme Report (EMPr)

GCS will prepare a Draft EMPr, which is required as part of the EIR submission. The purpose of the EMPr is to control the impacts of construction and operational activities. The effective implementation of an EMPr will ensure that the required works are conducted in an environmentally sound manner and that the potential negative impacts of construction and operational activities are minimised and/or prevented.

The Draft EMPr details the responsibilities and authority of the various parties involved in the Umgala and Knight's Hill Projects and contains environmental specifications to which the contractor and operator are required to adhere throughout the duration of the construction and operational phases. The Draft EMPr will cover impacts that have been identified in the EIA Process and which could potentially arise during the construction and/or operation of the road. The EMPr will cover the following aspects:

- Project background information.
- Identification/listing of project and operational activities.
- Implementation and operational instructions.
- Roles and responsibilities of parties with regard to environmental management.
- Environmental training and awareness material for construction staff.
- Environmental specifications e.g. protection of biodiversity and sensitive environments, rehabilitation, public safety and perceptions, traffic control, material and waste management, litter, containment and disposal of hazardous substances (e.g. paints, waste oils) etc.
- Measurement of compliance with the EMPr.

8.6 Terms of Reference for the Specialist Investigations

The following terms of reference (ToR) were utilized in appointing the specialist consultants to undertake detailed investigations to assess the significance of potential impacts to the receiving environment. Further to the intended specialist ToR's the legislative requirements applicable to Welgedacht and the Umgala and Knight's Hill Projects, which has been captured in Table 3-1 of this report, will be shared with all specialists to ensure that cognisance of these requirements are taken within their individual investigations.

8.6.1 Soil, Land Use and Land Capability Assessment

The following TOR was provided:

GCS requires that a soil survey be conducted and that the following be assessed as per the Provincial and National Departments of Agriculture recommendations:

- Assess and discuss historic climate statistics;
- Assess and discuss geological information;

- Assess and discuss the terrain features using 5m contours;
- Source best recent satellite or aerial imagery and georeferenced;
- Assess and discuss current agricultural land use on site and comment on crop performance and estimated yields (if any);
- Conduct soil assessment as described in the methodology;
- Assess and discuss agricultural land potential (eight class scale);
- Discuss the impact of the proposed land use change on loss of agricultural land production (If any);
- Recommend best location for proposed development to reduce any impacts;
- Compile informative reports and maps on current land use and agricultural land potential;
- Discuss the impact of the proposed land use change on loss of agricultural land production; and
- A basic soil management guideline will be completed.

The results will be mapped in GIS format and will include the following maps:

- A soil distribution map;
- A current land use map; and
- An agricultural potential map.

An Impact assessment of the proposed development will be conducted, and the recommendations can be used in the Environmental Management Plan (EMP).

8.6.2 Hydrological Assessment

The Scope of Work can be summarised as:

- Conduct a quantitative impact assessment of the significance of the impact on the baseline surface water environment.
- Provide a range of mitigation measures to minimise the impacts, and recommendations on the monitoring required.
- Informed by the site layout, baseline hydrological regime and floodline assessment results, the potential impacts of the proposed activities on surface water receptors and the sensitivity of the surface water resources will be discussed and presented along with a summary of mitigation measures and monitoring requirements.
- The impacts of the proposed activities and the infrastructure will be identified and assessed based on the individual impact's magnitude, duration, probability, extent,

severity and consequences and the receptor's sensitivity. This analysis then culminates in the determination of the impact significance which indicates the most important impacts and those that required management.

8.6.3 Geohydrological Assessment

The following TOR was provided:

- Desktop study and Data Review:
    - All available groundwater monitoring data and other site-specific reports made available for this study must be assessed. Data will be extracted from the reports to establish groundwater quality and quantity conditions and thereafter assimilated for numerical application.
    - A desktop-level hydrocensus must be conducted. The National Groundwater Archive (NGA, 2019), Groundwater Resource Information Project (GRIP, 2016) and the Southern African Development Community Groundwater Information Portal (SADAC GIP) databases are to be assessed to identify existing groundwater users in the area.
- Field investigation:
    - A hydrocensus will be undertaken within a 2.5 km radius of the project area to identify groundwater users.
    - Several geophysical profile lines of magnetic will be conducted to confirm the presence and orientation of dolerite dykes at the site. The data was used to determine future monitoring of borehole drilling positions.
    - Hydrochemical sampling f hydrocensus boreholes.
    - All field data will be evaluated and interpreted per best practice guidelines.
- Hydrogeological and geological conceptual Model development:
    - Hydrogeological, geochemical, and geological conceptual models will be developed for the site – based on the data gathered for the site.
    - A site conceptual model will be developed in support of the numerical groundwater flow and transport model.
- Groundwater numerical flow and transport modelling:
    - A -steady-state model will be developed and calibrated with data available for the study area. The flow model was converted to a transient state model to enable scenario modelling.
- Hydrogeological risk assessment:

- The source-pathway-receptor (SPR) principle will be applied to the site, along with the conceptual site model and numerical model outputs to evaluate hydrogeological risk.

- Monitoring plan:
  - The existing groundwater monitoring network will be reviewed, and a gap assessment was undertaken.
- Reporting:
  - A geohydrological report encompassing all work done as well as a groundwater risk assessment and monitoring plan will be compiled.

8.6.4 AMD

The following TOR was provided:

The overall aim of the CAMDMP is to outline a conceptual strategy for the storage and handling of geological materials produced from mining activities, and remnants of materials or mine water that has remained on-site since the mine was closed, to reduce/prevent the environmental impact of acid rock drainage (ARD).

Although mining operations may result in a variety of water quality-related impacts such as sulphate, metals, suspended solids, radionuclides, nitrogen compounds, oil and grease, etc., it is generally accepted that the primary water quality-related problems are associated with ARD.

For this document, ARD-related impacts are those that originate from one or more of the following processes:

1. Chemical and biological oxidation of sulphide minerals to release acidity, metals and sulphates;

2. Dissolution of other metals and/or radionuclides by the acidity; and

3. In-situ neutralisation of the acidity by basic minerals to add contaminants such as calcium, magnesium and/or sodium.

In the presence of sufficient basic minerals, the acidity released in the sulphide oxidation step may be completely neutralised and many of the metals, radionuclides and sulphates may be precipitated as secondary minerals. Contaminated mine water that originates from ARD may, therefore, either be acid or neutral, may contain high or low levels of metals and may have varying levels of sulphate, calcium, magnesium or sodium

The objectives of this CAMDMP are to:

1. Conceptualise current geochemical environment;

2. Conceptualise geohydrological and geochemical changes as a result of mining;

3. Identify groundwater, decant and AMD risks;

4. Conceptualise mining and closure objectives; and

5.Conceptualise management and treatment strategies.

The overall aim of the conceptual decant water management strategy is to summarise pre-identified decant areas and decant elevations based on available site information. The CDMP can be updated as changes to the mine plans occur.

8.6.5 Waste

The following TOR was provided:

The objective of this report is to re-classify the Umgala discard dump waste stream, in terms of the National Environmental Management: Waste Act (DEA, National Environmental Management: Waste Act (Act No.59 of 2008), 2008) and GNR 635 National Norms & Standards for Assessment of Waste for Disposal to Landfill (DEA, The National Norms and Standards for Disposal of Waste to Landfill, 2013b).

The scope of work completed was as follows:

1. Site visit and sampling:

- GCS collected two (2) samples from the Umgala dump, one (1) at a depth of 1.5 metres below ground level, and one (1) at a depth of 3 mbgl.

2. Material Analyses:

- Samples were submitted to Aquatico Laboratories (SANAS Testing Laboratory T0685) for material analyses (refer to Appendix B for laboratory certificates).

3. Reporting and recommendations:

- Waste stream description, classification and type assessment; and
- Recommendations on the disposal and barrier requirements were made.

8.6.6 Ecology

The TOR includes the following:

- Desktop assessment to identify the relevant ecologically important geographical features within the Project Area of Influence (PAOI);
- Desktop assessment to compile an expected species list and identify possible threatened flora and fauna species that occur within the PAOI; and
- Identify the manner that the Project would impact the flora and fauna community based on the screening assessment information and the desktop information, and evaluate the level of risk of these potential impacts.

The specific methods of study for these assessments are detailed below:

Flora Survey:

- The fieldwork and sample sites will be placed within targeted areas (i.e., target sites) perceived as ecologically sensitive based on the preliminary interpretation of satellite imagery (Google Corporation) and GIS analysis (which will include the latest applicable biodiversity datasets) available prior to the fieldwork.
- The focus of the fieldwork will be to maximise coverage and navigate to each target site in the field, to perform a rapid vegetation and ecological assessment at each sample site. Emphasis will be placed on sensitive habitats, especially those overlapping with the Project Area.
- Homogenous vegetation units will be subjectively identified using satellite imagery and existing land cover maps.
- The floristic diversity and search for flora SCC will be conducted through timed meanders within representative habitat units delineated during the fieldwork. Emphasis will be placed mostly on sensitive habitats overlapping with the Project Area.
- The timed random meander method will be utilized, as it is highly efficient for conducting floristic analysis, specifically in detecting flora SCC and maximising floristic coverage, it is time and cost effective and highly suited for compiling flora species lists, and therefore gives a rapid indication of flora diversity. The timed meander search will be performed based on the original technique described by Goff *et al*. (1982). Suitable habitat for SCC will be identified according to Raimondo *et al*. (2009) as part of the timed meanders.
- At each sample site, notes will be made regarding current impacts (e.g., livestock grazing, erosion etc.), subjective recording of dominant vegetation species, and any sensitive features (e.g., wetlands, outcrops etc.).
- In addition, opportunistic observations will be made while navigating through the Project Area.

Fauna Survey:

The faunal assessment pertains to aquatic biota (water quality, macroinvertebrates and fish), herpetofauna (amphibians and reptiles) and mammals. The faunal field survey will be comprised of the following techniques:

- The assessment of water quality, aquatic habitat integrity and suitability, and macroinvertebrate and fish assemblages.

- Visual and auditory searches – This typically comprises of meandering and using binoculars to view species from a distance without them being disturbed; and listening to species calls;
- Relevant field guides and texts that will be consulted for identification purposes include the following:
    - A Field Guide to Freshwater Macroinvertebrates of Southern Africa (Fry, 2022);
    - Freshwater Fishes of Southern Africa (Skelton, 2001);
    - Field Guide to Snakes and other Reptiles of Southern Africa (Branch, 1998);
    - A Complete Guide to the Snakes of Southern Africa (Marais, 2004);
    - Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland (Bates et al, 2014);
    - A Complete Guide to the Frogs of Southern Africa (du Preez and Carruthers, 2009);
    - Smithers' Mammals of Southern Africa (Apps, 2000); and
    - A Field Guide to the Tracks and Signs of Southern and East African Wildlife (Stuart and Stuart, 2000).
- Active hand-searches – Used for species that shelter in or under particular micro-habitats (typically rocks, exfoliating rock outcrops, fallen trees, leaf litter, bark etc.);
- Point counts for the avifauna; and
- Utilization of local knowledge.

8.6.7 Aquatic

The TOR includes the following:

- To characterise the biotic integrity of the aquatic ecosystems associated with the Umgala Mining Area;
- To evaluate the extent of site-related effects in terms of selected ecological indicators; and
- To identify impacts (whether positive and/or negative) associated with the study area and to provide suitable mitigation measures and recommendations.
- In Situ Water Quality: During the survey a portable multi parameter water quality meter will used to measure the following parameters *in situ*: pH; Electrical Conductivity; Dissolved Oxygen and Water Temperature.
- Habitat Assessment: Habitat evaluation is conducted simultaneously with biological evaluations to facilitate the interpretation of results.

- Intermediate Habitat Integrity Assessment

The aim of the Intermediate Habitat Integrity Assessment (IHIA) is to make an intermediate assessment of the habitat integrity of rivers, according to a modified Habitat Integrity approach, which can be applied in intermediate determination of the ecological Reserve for rivers in South Africa (DWS, 1999). The methodology is based on the qualitative assessment of a number of pre-weighted criteria, which indicate the integrity of the in-stream and riparian habitats available for use by riverine biota.

The criteria considered indicative of the habitat integrity of the river were selected on the basis that anthropogenic modification of their characteristics can generally be regarded as the primary causes of degradation of the integrity of the river (DWS, 1999). The study assesses 5 to 10 km of the associated River.

The assessment of the severity of impact of modifications is based on six descriptive categories ranging from 'none' to 'critical'. The habitat integrity assessment takes into account the riparian zone and the instream channel of the river. Assessments are made separately for both aspects, but data for the riparian zone are primarily interpreted in terms of the potential impact on the instream component and the relative weighting of criteria remains the same as for the assessment of habitat integrity (DWS, 1999).

The negative weights are added for the instream and riparian facets respectively and the total additional negative weight subtracted from the provisionally determined intermediate integrity to arrive at a final intermediate habitat integrity estimate. The eventual total scores for the instream and riparian zone components are then used to place the habitat integrity in a specific intermediate habitat integrity category (DWS, 1999). These categories are indicated in the table below.

Category	Description	Score (% of Total)
A	Unmodified, natural.	90-100
B	Largely natural with few modifications. A small change in natural habitats and biota may have taken place but the ecosystem functions are essentially unchanged.	80-90
C	Moderately modified. A loss and change of natural habitat and biota have occurred but the basic ecosystem functions are still predominantly unchanged.	60-79
D	Largely modified. A large loss of natural habitat, biota and basic ecosystem functions has occurred.	40-59
E	The loss of natural habitat, biota and basic ecosystem functions is extensive.	20-39
F	Modifications have reached a critical level and the lotic system has been modified completely with an almost complete loss of natural habitat and biota. In the worst instances the basic ecosystem functions have been destroyed and the changes are irreversible.	0-19

- Integrated Habitat Assessment System

  The Integrated Habitat Assessment System (IHAS, version 2), which considers sampling habitat and stream characteristics, was applied at each of the macroinvertebrate sampling sites in order to assess the availability of habitat biotopes for macroinvertebrates. It is presently thought that a total IHAS score of over 65% represents good habitat conditions, while a score over 55% indicates adequate/fair habitat conditions (McMillan, 1998). Refer to the table below.

IHAS Score	Description
> 65%	Good
55-65%	Adequate/Fair
< 55%	Poor

- Aquatic Macroinvertebrates: The South African Scoring System version 5 (SASS5) is the current index being used to assess the status of riverine macroinvertebrates in South Africa. According to Dickens and Graham (2002), the index is based on the presence of aquatic invertebrate families and the perceived sensitivity to water quality changes of these families. Sampled invertebrates will be identified using the "Aquatic Invertebrates of South African Rivers" Illustrations book, by Gerber and Gabriel (2002). Identification of organisms will be made to family level (Thirion *et al.*, 1995; Dickens and Graham, 2002; Gerber and Gabriel, 2002).
- Fish Community Assessment: Fish samples are collected by various means including: fyke nets, minnow traps, cast nets, visual observation, electroshocking and angling (some methods pictured below – not from Project Area). Fish are identified in the field, photographed and released at the point of capture. Fish species are identified using the guide Freshwater Fishes of Southern Africa (Skelton, 2001). Expected species for the Project Area will be generated from local guides, the IUCN (2021), Skelton (2001), Fishbase (www.fishbase.org) and local literature (where available).
- Present Ecological Status: Ecological classification refers to the determination and categorisation of the integrity of the various selected biophysical attributes of ecosystems compared to the natural or close to natural reference conditions (Kleynhans and Louw, 2007). For the purpose of this study ecological classifications will be determined for biophysical attributes for the associated watercourse. This will be completed using the river ecoclassification manual by Kleynhans and Louw (2007).

Risk Assessment:

The risk assessment is conducted in accordance with the DHSWS risk-based water use authorisation approach and delegation guidelines. The significance of the impact is calculated according to the table below.

Rating	Class	Management Description
1 – 55	(L) Low Risk	Acceptable as is or consider requirement for mitigation. Impact to watercourses and resource quality small and easily mitigated. Wetlands may be excluded.
56 – 169	M) Moderate Risk	Risk and impact on watercourses are notable and require mitigation measures on a higher level, which costs more and require specialist input. Wetlands are excluded.
170 – 300	(H) High Risk	Always involves wetlands. Watercourse(s)impacts by the activity are such that they impose a long-term threat on a large scale and lowering of the Reserve.

8.6.8 Wetland

The TOR includes the following:

- Identification & Mapping: The National Wetland Classification Systems (NWCS), developed by the South African National Biodiversity Institute (SANBI), was considered for this assessment. The wetland areas are delineated in accordance with the DWAF (2005) guidelines. The outer edges of the wetland areas will be identified by considering the following four specific indicators, the:
    - *Terrain Unit Indicator* helps to identify those parts of the landscape where wetlands are more likely to occur;
    - *Soil Form Indicator* identifies the soil forms, as defined by the Soil Classification Working Group (1991), which are associated with prolonged and frequent saturation.
        - The soil forms (types of soil) found in the landscape were identified using the South African soil classification system namely; Soil Classification: A Taxonomic System for South Africa (Soil Classification Working Group, 1991);
    - *Soil Wetness Indicator* identifies the morphological "signatures" developed in the soil profile due to prolonged and frequent saturation; and
    - *Vegetation Indicator* identifies hydrophilic vegetation associated with frequently saturated soils.

    Vegetation is used as the primary wetland indicator. However, in practice, the soil wetness indicator tends to be the most important, and the other three indicators are used in a confirmatory role.
- Functional Assessment: The assessment of the ecosystem services supplied by the identified wetlands was conducted per the guidelines as described in WET-EcoServices (Kotze *et al*. 2008). An assessment will be undertaken that examines and

rates the following services according to their degree of importance and the degree to which the services are provided (refer to the table below).

Score	Rating of likely extent to which a benefit is being supplied
< 0.5	Low
0.6 - 1.2	Moderately Low
1.3 - 2.0	Intermediate
2.1 - 3.0	Moderately High
> 3.0	High

- Present Ecological Status (PES): The overall approach is to quantify the impacts of human activity or clearly visible impacts on wetland health, and then to convert the impact scores to a PES score. This takes the form of assessing the spatial extent of impact of individual activities/occurrences and then separately assessing the intensity of impact of each activity in the affected area. The extent and intensity are then combined to determine an overall magnitude of impact. The Present State categories are provided in the table below.

Impact Category	Description	Impact Score Range	PES
None	**Unmodified, natural**	**0 to 0.9**	**A**
Small	Largely Natural with few modifications. A slight change in ecosystem processes is discernible and a small loss of natural habitats and biota may have taken place.	1.0 to 1.9	B
Moderate	Moderately Modified. A moderate change in ecosystem processes and loss of natural habitats has taken place, but the natural habitat remains predominantly intact.	2.0 to 3.9	C
Large	Largely Modified. A large change in ecosystem processes and loss of natural habitat and biota has occurred.	4.0 to 5.9	D
Serious	Seriously Modified. The change in ecosystem processes and loss of natural habitat and biota is great, but some remaining natural habitat features are still recognizable.	6.0 to 7.9	E
Critical	Critical Modification. The modifications have reached a critical level and the ecosystem processes have been modified completely with an almost complete loss of natural habitat and biota.	8.0 to 10	F

- Importance & Sensitivity: The importance and sensitivity of water resources is determined to establish resources that provide higher than average ecosystem services, biodiversity support functions or are particularly sensitive to impacts. The mean of the determinants is used to assign the Importance and Sensitivity (IS) category, as listed in the table below (Rountree and Kotze, 2013).

EIS Category	Range of Mean	Recommended Ecological Management Class
Very High	3.1 to 4.0	**A**
High	2.1 to 3.0	**B**
Moderate	1.1 to 2.0	**C**
Low Marginal	< 1.0	**D**

- Determining Buffer requirements: The "*Preliminary Guideline for the Determination of Buffer Zones for Rivers, Wetlands and Estuaries"* (Macfarlane *et al.,* 2014) was used to determine the appropriate buffer zone for the proposed activity.

8.6.9 Hydropedological Assessment

The following TOR was provided:

- Desktop study:
    - All available reports (which were provided by the client) relating to the site were assessed.
    - Evaluation of soil occurrences in the study area, based on available South African databases.
    - Meteorological evaluation.
    - Catchment delineation.
    - Estimation of soil permeability and soil flow processes based on field observation and desktop data.
    - HOSASH (Hydrology of South African Soils and Hillslopes) index.
- Field investigation:
    - Several auger holes were drilled in the project area, in pre-determined hillslope areas.
    - The soils identified in the study area were screened per the Soil Classification guidelines for South Africa (Department of Agricultural Development, 1991) and (SCWG, 2018) to derive hydropedological flow regimes.
- Water balance and flow modelling:
    - A simple spreadsheet-based water balance model was used to illustrate unsaturated zone fluxes/water balances.
    - The total water loss during a development phase concerning the natural water processes in a sub-catchment was estimated. This was used in conjunction with the water balance flow model to determine the natural stream loss % for a sub-catchment and associated hillslopes.
- Risk assessment:
    - The risk and impact criteria were applied to the study area, to evaluate hydropedological risks.
    - Natural flow losses were estimated, using a spreadsheet water balance developed for the site.

- Mapping and report:
    - Several hydrological hillslope profiles, soil distribution and hydrological soil type maps were produced; and
    - This report was compiled.

8.6.10 Air Quality Assessment

The TOR for the scoping level air quality assessment includes:

- The assessment of site-specific atmospheric dispersion potential;
- The identification of existing sources of emissions in the area;
- The identification of the potential sensitive receptors within the vicinity of the Umgala and Knight's Hill Project Area;
- The characterisation of ambient air quality in the region based on observational data recorded to date (if available);
- The review of legislative and regulatory context, including national ambient air quality standards; and
- Identification of the potential impacts on air quality that could affect environmental and/or human health.

The following will be included in the impact assessment study:

- Compilation of an emissions inventory, comprising the identification and quantification of potential sources of emissions due to the Umgala and Knight's Hill Projects;
- Dispersion simulations of all potential pollutants from the Umgala and Knight's Hill Projects for applicable averaging periods;
- Evaluation of potential for human health and environmental impacts; and,
- Determination of environmental risk according to stipulated Impact Assessment methodology.

8.6.11 Noise Assessment

The following TOR was provided:

- The noise baseline information will be used to calculate the possible noise intrusion levels from the proposed mine expansion project areas at the noise receptors in the vicinity of the Project Area.
- The distances between the noise sources and the receptors, topography, vegetation, noise level at the noise source and the wind direction are all variables that may have

an impact on how the sound will be propagated to and perceived by the noise receptor/s.

- The distances between the point sources and topography will also be addressed.
- The general objectives of the environmental noise study are to gain a detailed understanding of the baseline noise environment along the boundaries of the mining area and at the abutting NSA's.

The study methodology is outlined below:

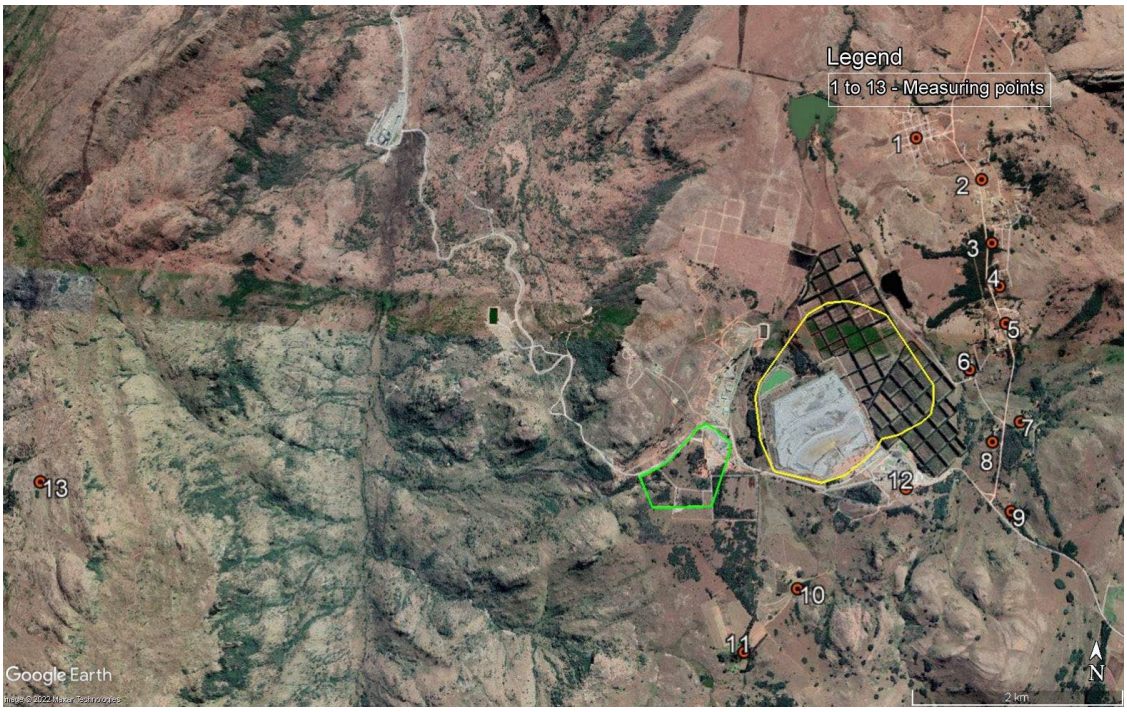
- Instrumentation:
    - The noise survey will be conducted in terms of the provisions of the Noise Control Regulations, 1994 and the SANS 10103 of 2008 (The measurement and rating of environmental noise with respect to annoyance and to speech communication) using a digital Larson Davis 831 and Larson Davis LXT – Class 1 meter with Logging, Environmental 1/1, 1/3 Octave Band and percentiles Sound Level Meter (Class 1).
    - On taking measurements the device-meter scale is to be set to the "A" weighed measurement scale which enables the device to respond in the same manner as the human ear.
    - The device will be held approximately 1.5 m above the surface and at least 3.0m away from hard reflecting surfaces.
    - A suitable wind shield is to be used on the microphone for all measurements to minimise wind interference. The instrument must be checked and calibrated prior to use and maintained in accordance with equipment and coincided below 1.0dBA. The following instruments were used in the noise survey:
        - Larson Davis 831
            - Larson Davis Integrated Sound Level Meter Type 1 – Serial no. S/N 0001072;
            - Larson Davis Pre-amplifier – Serial no. PRM831 0206;
            - Larson Davis ½" free field microphone – Serial no. 377B02-316581;
            - Larson Davis Calibrator 200 – Serial no.9855;
            - Certificate Number: 2019-AS-0892A;

- Date of Calibration: 3 February 2021.

- Larson Davis LXT Sound Expert
  - Larson Davis Integrated Sound Level meter Type 1 – Serial no. S/N 0006037;
  - Larson Davis Pre-amplifier – Serial no. PRM LXT1 069946;
  - Larson Davis ½" free field microphone – Serial no. 316345;
  - Certificate Number: 2022-AS-0035;
  - Date of Calibration: 17 January 2022.
- Larson Davis Calibrator 200.
  - Larson Davis 200 – Serial no.9855;
  - Certificate number – 2021-AS 1501;
  - Calibration Date – December 2022.

- The instrument must be calibrated before and after the measurements are taken and is to coincide within 1.0dBA.
- Batteries will be fully charged, and the windshield must be in place at all times.
- The measured ambient noise level during the daytime and night-time periods will be the baseline ambient noise criteria for the study area and will be evaluated in terms of SANS 10103 of 2008. The measuring points for the study area were selected to be representative of the prevailing ambient noise levels for the study area and include all the noise sources such as distant traffic noise, agricultural activities but exclude traffic noise which was intermittent in the vicinity of the measuring points.
- The LAeq will be measured over a representative sampling period exceeding 10 minutes at each measuring point; and
- The noise survey will be carried out during the day and night-time period being 06h00 to 22h00.

The measuring points are illustrated in the figure below.



8.6.12 Traffic Assessment

The nature of the visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the assessment is based on best practice, information and data analysis techniques and uses subjective professional judgement and quantifiable methods wherever possible.

To determine the potential extent of the visibility of the project, a preliminary Zone of Visual Influence (ZVI) analysis is conducted. The ZVI is defined as the 'area within which a proposed development may have an influence or effect on visual amenity' (GLVIA, Glossary). A ZVI analysis defines all possible sites from which the proposed infrastructure would be visible and therefore illustrates the potential (or theoretical) visibility of an object in the landscape. The principle of reduced impact over distance is applied to determine the core area of visual influence for the proposed infrastructure. It is envisaged that the nature of the proposed infrastructure will have limited views beyond a 10km radius.

The visual assessment methodology is based on the following:

- An initial desktop analysis: through which the ZVI and project design data will be analysed and manipulated using ArcGIS software. This will allow an understanding of the landscape character, the location of potential sensitive receptors, the scenic value and sense of place and an initial understanding of the absorption capacity of the landscape.

- Field/photographic survey: The purpose of the field survey is to identify representative viewpoints; to gain a better understanding of the sense of place, and the character of the landscape to accommodate and absorb change and to understand the receptors that may be affected by the project. The photography survey will be undertaken using a digital Canon camera and a 50mm equivalent lens. Overlapping (50%) landscape format photographs will be taken which are joined together using computer software to create a single panoramic image for each viewpoint. These will be used for photo simulations of the proposed infrastructure.
- Data analysis and modelling: ArcGIS software will be used to determine the ZVI through terrain, topographical and land cover modelling of the various infrastructure components. Additional modelling will be done to determine the visual impact index therefore the magnitude and extent of the various infrastructure components and the potential combined visibility thereof on the various receptors.

The assessment of visual impacts is both quantitative and qualitative. The assessment describes what would be affected i.e. the level of visual modification (magnitude), makes a judgement regarding the capacity of the landscape to accommodate change by assigning a visual receptor sensitivity and then assesses the significance of the resulting impact. These factors and how they are combined to identify the extent of the visual impact would be outlined in the following sections within the EIA report:

- Project Components; To understand the scope and scale of the proposed project the physical characteristics of the project components will be described and illustrated;
- Landscape Baseline; To evaluate the impacts of the proposed project, the inherent scenic values of the landscape will be determined by describing the setting, visual character, and sense of place;
- Magnitude Assessment; Estimate the magnitude of the visual impact by assessing the following factors:
    - Define the extent of the affected visual environment by identifying all possible observation sites from which the proposed infrastructure would be visible (i.e., ZVI) and the viewing distance from these observation sites;
    - Determine the visual absorption potential (i.e., the ability of the landscape to accommodate the proposed project from a visual perspective);
- Sensitive Visual Receptors; Determine the sensitivity of the critical views/visual receptors that may be affected by the proposed project (e.g., residents, motorists, and tourists);
- Impact Assessment; The significance of the visual and landscape impact is calculated by taking into consideration the duration, extent, and magnitude of the visual

impact. This is then multiplied by the critical view/visual receptor sensitivity rating as determined previously and the likelihood of the impact, (Significance = (duration + extent + magnitude) x sensitivity x likelihood); and

- Management Requirements; Suggest measures that could mitigate the negative impacts of the proposed project.

8.6.13 Archaeological, Paleontological and Cultural Heritage Assessment

The aim of this scoping report is to determine if any known heritage resources occur within the study area and to predict the occurrence of any possible heritage significant sites that might present a fatal flaw to the proposed project. The objectives of the scoping report are to:

- Conduct a desktop study:
    - Review available literature, previous heritage studies and other relevant information sources to obtain a thorough understanding of the archaeological and cultural heritage conditions of the area;
    - Gather data and compile a background history of the area;
    - Determine whether the area is renowned for any cultural and heritage resources, such as Stone Age sites, Iron Age sites, informal graveyards or historical homesteads.
- Compile a Report

  The reporting of the scoping component is based on the results and findings of the desk-top study, wherein potential issues associated with the Umgala and Knight's Hill Projects will be identified, and those issues requiring further investigation through the EIA Phase highlighted. Reporting will aim to identify the potential impacts of the Projects' activity on heritage resources; and will also consider alternatives should any significant sites be impacted on by the Projects. This is done to assist the developer in managing heritage resources in a responsible manner, in order to protect, preserve and develop them within the framework provided by heritage legislation.

To comply with the NHRA, it is recommended that a Phase 1 HIA must be undertaken for the study area. During the HIA the potential impact on heritage resources will be determined and levels of significance of recorded heritage resources. The HIA will also provide management and mitigation measures should any significant sites be impacted upon, ensuring that all the requirements of the SAHRA are met. The study area is indicated as insignificant to low paleontological sensitivity on the SAHRA paleontological sensitivity map, and no further studies are required for this aspect. The PPP and stakeholder consultation process must reference the requirements of the NHRA.

8.6.14 Socio-Economic Assessment

The following TOR was provided:

- **Determining the Local Area**: The 'local' community relevant to the Socio-Economic Impact Assessment include communities close to the proposed project as well as the larger local community of the Thaba Chew Local Municipality. For macro-impacts such as contribution to government revenue, the national economy is also relevant.
- **Socio-Economic Baseline**: The socio-economic baseline entails the description of the current (pro-project) socio-economic characteristics of the local area. Socio-economic baseline variables could include but is not restricted to the following:
    - Land-use and settlement patterns
    - Demographic profile (households and population size, age, gender, growth)
    - Heath institutions and profile
    - Education institutions and profile
    - Municipal services (energy, waste, water and sanitation)
    - Municipal institutional capacity
    - Community safety
    - Economic activities in the local area
    - Economic infrastructure (roads, telecommunications, energy)
    - Labour force composition (unemployed, informal, employed)
    - Skills levels of the labour force
    - Income poverty levels
- **Socio-Economic Impact Assessment**: Potential socio-economic impacts could include but are not limited to:
    - Potential impact on in-migration
    - Impact on community safety
    - Impact on economic and social infrastructure in the local area
    - Impact on sense of place
    - Potential local employment and income resulting from the project (direct, indirect and induced)
    - Potential impact on local businesses is already present in the local area
    - Impact on property values of adjacent land-owners

- Potential skills transfer
- Impact on low income groups
- Impact on PDIs
- Potential cumulative impacts: In terms of the economic impact assessment, cumulative impacts are those resulting from the added impacts of other past, present or future developments. It considers how the impacts of one project may affect and be affected by other projects and can be seen as the sum of the proposed action plus past and present activity in the same area including the proposed project.

- **The Formulation of a Socio-Economic Risk Management Strategy:** The formulation of a strategy and management system to mitigate the potential negative economic impacts and enhance the positive socio-economic impacts of the project.

  Primary, secondary resources as well as economic modelling will be used to support the findings of the study. These include:

  - Primary sources:
    - An orientation site visit during the impact assessment phase
    - Review of socio-economic sensitive areas surrounding the different options with the aid of Google maps
    - Other reports of the feasibility study and design report
  - Secondary Sources, including:
    - Public planning documents including Integrated Development Plans; the local economic development plan and spatial development framework)
    - Interviews with specialists responsible for different EIA work streams including ecological studies and visual assessments
    - Statistics South Africa Data (Census 2001 – 2011; Community Survey 2016); Census of Commercial Agriculture, 2017 Free State; Other national economic statistics
    - Any other relevant documentation such as project information, EIA reports of similar developments, etc.
    - Conningarth (2019). Water Demand Model, Water Research Council, Pretoria
    - Social Accounting Matrix ratios for Mpumalanga (2018 prices)

- Economic modelling:
  - Multiplier impacts on Gross Value Added (GVA) and employment (linkages and induced impact) during construction and due to increased water availability will be calculated through a simple input –output model based on provincial and national ratios obtained from the Social Accounting Matrix for Mpumalanga (2018) and production statistics for South Africa.

8.7 EIA Phase Public Participation

The PPP for the remainder of the Project will involve the following tasks:

8.7.1 Announcement of the Availability of the DEIR and DEMPr

At this point, the specialist studies would have been completed and the Draft EIR (DEIR) and Draft EMPr (DEMPr) would be ready for public review. A letter will be circulated to all registered I&APs, informing them of progress made with the study and the availability of the DEIR and EMPr for a 30 day comment period. The DEIR will be made available similarly to the DSR during the Scoping Phase.

8.7.2 Public Review of the DEIR and DEMPr

The DFFE EIA Guidelines specify that stakeholders must have the opportunity to verify that their issues have been captured and assessed before the EIR will be approved by the competent authority. The DEIR provides this opportunity and will be written in a way that makes it accessible to stakeholders in terms of language level and general coherence.

As part of the process to review the DEIR and DEMPr, an open day(s) will be arranged, as appropriate, to afford the public the opportunity to obtain first-hand information from the project team members and also to discuss their issues and concerns. Contributions at this meeting will be considered in the Final EIR (FEIR).

8.7.3 Announcement of the Availability of the FEIR and EMPr

After comments from I&APs have been incorporated into the CRR and the DEIR revised accordingly, all stakeholders on the database will receive a letter informing them that the FEIR and EMPr have been submitted to the CA for consideration. Electronic copies of the FEIR will be available should the I&APs wish to review the documents submitted to the CA. The I&APs will be informed that should they wish to submit comments on the FEIR; these must be submitted directly to the CA and copied to the EAP.

8.7.4 Announcement of Authorities' Decision

Based on the contributions by the stakeholders, the decision of the authorities may be advertised through the following methods:

- Letters/emails to individuals and organisations on the database.
- Advert in local or regional newspapers.

9 POTENTIAL IMPACTS

The intention of this chapter is to raise awareness with regard to **potential** impacts that are evident through the establishment and operation of the Umgala and Knight's Hill Projects and associated infrastructure.

Based on the investigation of the receiving environment, as well as the understanding of activities to be carried out for the construction and operation phases of the project, the potential impacts during the various phases of the projects will be identified and addressed in detail during the EIA phase. Potential impacts that have been identified at this stage are summarised in the table below.

Table 9-1: Preliminary impacts identified

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT	POTENTIAL MITIGATION MEASURES
Impacts of gaseous emissions on sensitive receptors	Air Quality Impact Assessment	• Ensure vehicles are in good condition and not leaking fuel or oil when entering the construction site. • Continuation of existing air quality monitoring programmes
Dust generation	Air Quality Impact Assessment	• Reduction of speed limit (max 20km/h) and restriction of construction vehicle movement to designated construction areas. • Early/concurrent rehabilitation and re-vegetation, as appropriate on disturbed areas. • Implement measures to prevent dust outfall.
	Socio-Economic Impact Assessment	
Effect on Local Communities	Socio-Economic Impact Assessment	• Reduction of speed limit (max 20km/h) and restriction of construction vehicle movement to designated construction areas. • Implement measures to prevent dust outfall. • Community complaints will be properly investigated and responded to; and a complaints register is to be readily available.
	Archaeological, Paleontological and Cultural Heritage Assessment	
	Air Quality Impact Assessment	
Potential impact / loss of heritage / cultural / paleo artefacts / sites	Archaeological, Paleontological and Cultural Heritage Assessment	• Implement "Chance Find Protocol"
Noise pollution / disturbance	Noise Impact Assessment	• Community complaints will be properly investigated and responded to; and a complaints register is to be readily available.
	Socio-Economic Impact Assessment	

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT	POTENTIAL MITIGATION MEASURES
Change in land use	Soils & Agricultural Potential Impact Assessment	• Reduction of speed limit (max 20km/h) and restriction of construction vehicle movement to designated construction areas. • Minimise extent of disturbed areas. • Reduction of frequency of disturbance. • Demarcate construction footprint area clearly. • Restrict site clearance to the footprint area only. • Restrict the movement of personnel and construction vehicles to where they are needed. • Early/concurrent rehabilitation and re-vegetation, as appropriate on disturbed areas. • Stabilisation (chemical, rock cladding or vegetative) of disturbed soil. • The necessary flood attenuation and erosion control structures must be put in place. • Ensure adequate stormwater management measures are in place to separate/manage clean and dirty water around the site. • Upon completion of construction activities, it must be ensured that all areas are re-vegetated appropriately. • If any hydrocarbons are stored on the property, the storage area must be within a bunded area with 110% the capacity of its content. • The bunded area must consist of an impermeable floor and walls and be fitted with a valve that can be used to drain any spillages. • Suitable spill prevention measures to be in place and spills should be cleaned up on occurrence.
Loss of soils and/or agricultural potential Disturbance of soil profiles		
Soil pollution and/or contamination		
Erosion / sedimentation of soils and drainage lines	Air Quality Impact Assessment	
	Hydrological Impact Assessment	
	Terrestrial & Aquatic Biodiversity Assessments	
Alteration / destruction / pollution of drainage lines / water courses	Hydrological Impact Assessment	• Minimise extent of disturbed areas. • Reduction of frequency of disturbance. • Demarcate construction footprint area clearly. • Restrict site clearance to the footprint area only. • Restrict the movement of personnel and construction vehicles to where they are needed. • Early/concurrent rehabilitation and re-vegetation, as appropriate on disturbed areas.
	Aquatic Biodiversity Impact Assessment	

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT	POTENTIAL MITIGATION MEASURES
		• If any hydrocarbons are stored on the property, the storage area must be within a bunded area with 110% the capacity of its content. • The bunded area must consist of an impermeable floor and walls and be fitted with a valve that can be used to drain any spillages. • Suitable spill prevention measures to be in place and spills should be cleaned up on occurrence.
Groundwater pollution/contamination	Geohydrological Impact Assessment	• Park heavy machinery in lined areas and place drip trays under vehicles at the site. • Visual soil assessments for signs of contamination during construction (monthly) • If any hydrocarbons are stored on the property, the storage area must be within a bunded area with 110% the capacity of its content. • The bunded area must consist of an impermeable floor and walls and be fitted with a valve that can be used to drain any spillages. • Suitable spill prevention measures to be in place and spills should be cleaned up on occurrence. • Implementation of appropriate waste management and control procedures. • An integrated waste management approach, taking cognisance of the waste management hierarchy and other proposed mitigation measures, must be developed and implemented. • Continuation of the groundwater monitoring programme(s) in place. • Ensure vehicles are in good condition and not leaking fuel or oil when entering the construction site. • All plant and equipment that make use of hydrocarbons substances must be daily checked for leakages before operations commence. • Maintenance of vehicles and/or equipment are to be done in suitably designed areas, preferably off site. • Measures must be put in place for all plant and equipment that are found leaking to: o Stop the leakage from continuing o Prevent the hydrocarbons or contaminant from spreading o Remove the contaminated material into an impermeable bag and dispose as hazardous waste. o Remove the plant and equipment from site and only return once it has been fixed.

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT	POTENTIAL MITIGATION MEASURES
		• All refuelling of plant and equipment must be conducted over a drip-tray or designated bunded areas.
Surface water pollution/ contamination and deterioration of instream water quality	Hydrological Impact Assessment	• Minimise extent of disturbed areas. • Reduction of frequency of disturbance. • Demarcate construction footprint area clearly. • Restrict site clearance to the footprint area only. • Restrict the movement of personnel and construction vehicles to where they are needed. • If any hydrocarbons are stored on the property, the storage area must be within a bunded area with 110% the capacity of its content. • The bunded area must consist of an impermeable floor and walls and be fitted with a valve that can be used to drain any spillages. • Suitable spill prevention measures to be in place and spills should be cleaned up on occurrence. • Implementation of appropriate waste management and control procedures. • An integrated waste management approach, taking cognisance of the waste management hierarchy and other proposed mitigation measures, must be developed and implemented. • Continuation of the surface monitoring programme(s) in place.
	Aquatic Biodiversity Impact Assessment	• Ensure vehicles are in good condition and not leaking fuel or oil when entering the construction site. • All plant and equipment that make use of hydrocarbons substances must be daily checked for leakages before operations commence. • Maintenance of vehicles and/or equipment are to be done in suitably designed areas, preferably off site. • Measures must be put in place for all plant and equipment that are found leaking to: o Stop the leakage from continuing o Prevent the hydrocarbons or contaminant from spreading o Remove the contaminated material into an impermeable bag and dispose as hazardous waste. o Remove the plant and equipment from site and only return once it has been fixed. • All refuelling of plant and equipment must be conducted over a drip-tray or designated bunded areas.

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT	POTENTIAL MITIGATION MEASURES
Destruction, fragmentation and degradation of habitats and ecosystems (terrestrial and aquatic).	Terrestrial & Aquatic Biodiversity Assessments	• Minimise extent of disturbed areas. • Reduction of frequency of disturbance. • Demarcate construction footprint area clearly. • Restrict site clearance to the footprint area only. • Restrict the movement of personnel and construction vehicles to where they are needed. • Early/concurrent rehabilitation and re-vegetation, as appropriate on disturbed areas. • Implement measures to prevent dust outfall. • The Alien Invasive Management Plan (AIMP) must make provision for the identification of all the alien invasive plant species on the project site; and the management and control measures to be implemented. The AIMP must also make provision for the monitoring of all management and control interventions, to gauge the success of these activities.
Spread and/or establishment of alien and/or invasive species	Terrestrial & Aquatic Biodiversity Assessments	
Reduced dispersal/migration of fauna (terrestrial and aquatic).	Terrestrial & Aquatic Biodiversity Assessments	

The potential impacts (positive or negative) and risks of the proposed projects will be assessed in detail during the next phase of the impact assessment, in terms of the requisite criteria which requires the assessment of *"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"*. It is during this phase of the impact assessment where possible mitigation measures and level of residual risks will be identified and analysed.

10 CONCLUSION AND WAY FORWARD

10.1 Conclusion

Local knowledge, professional experience and specialist knowledge of the area have all been used to identify the potential environmental issues associated with this development and the resultant potential environmental impacts. While there is no guarantee that all the potential impacts arising from the proposed development have been identified within the Scoping Phase, the report provides an outline of the established measures that were taken to best identify all the potential impacts. The purpose of the Scoping Phase is NOT to assess and mitigate the potential environmental impacts and issues identified but rather to scope them and determine which needs further investigation before an assessment can be undertaken.

The circulation of the Draft Scoping Report for public comment was aimed to give the public an opportunity to review the outcomes of the Scoping process and identify additional possible issues that have not yet been identified. This will further enhance the rigour of the scoping process. The Plan of Study for EIA outlines the strategy to identify and assess all these potential impacts and concerns in the EIR Phase.

10.2 Way Forward

The Draft Scoping Report was submitted to all I&AP's for a 30-day comment period. All comments received from I&AP's will be included in the CRR and included as an appendix to the FSR.

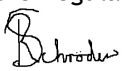
The FSR, including the Plan of Study for EIA, will be submitted to the CA for review. Upon receipt of comment from the CA regarding the Final Scoping Report, the Terms of Reference for any further studies will be amended should it be required, and the studies completed.

Following completion of the specialist studies and assessment of the impacts, a Draft EIR will be compiled and will follow a similar public participation procedure to that undertaken for the Scoping Phase, whereby opportunities for engagement will be provided through stakeholder meetings and dissemination of project information. I&APs will be afforded the opportunity to review the DEIR prior to submission to the CA for decision-making.

11 EAP DECLARATION AND UNDERTAKING

I, Rona Schröder, as the appointed Environmental Assessment Practitioner, declare that:

- I act as the independent environmental assessment practitioner in this application;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I will take into account, to the extent possible, the matters listed in Regulation 14 of the Regulations when preparing the application and any report relating to the application;
- I herewith undertake that the information provided in this report is correct, and that the comments and inputs from stakeholders and Interested and Affected Parties received since project announcement, have been correctly recorded in the report;
- I herewith undertake that the information provided in this report is correct, and that the level of agreement with Interested and Affected Parties and stakeholders since announcement of the project, have been correctly recorded in the report;
- I undertake to disclose to the applicant and the Competent Authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the Competent Authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the Competent Authority, unless access to that information is protected by law, in which case it will be indicated that such information exists and will be provided to the Competent Authority;
- I will perform all obligations as expected from an environmental assessment practitioner in terms of the Regulations;
- I am aware of what constitutes an offence in terms of Regulation 48 and that a person convicted of an offence in terms of Regulation 48(1) is liable to the penalties as contemplated in Section 49B of the Act; and
- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations.

Signature of the EAP: 

Name of Company: GCS Water and Environmental (Pty) Ltd

Date: 02 September 2024

12 REFERENCES

Atmospheric Impact Report, Soundscape 2024

Baseline Aquatic Assessment for the Umgala Coal Mine, The River Guy, 2023

Conceptual Acid Mine Drainage Management Plan (CAMDMP) and Decant Management Plan (CDMP), GCS, 2024

Geohydrological Assessment, GCS 2024

Heritage Impact Assessment, Umlando, 2022

Hydrological Assessment, GCS 2024

Traffic Impact Assessment, MPAMOT, 2023

Noise Impact Assessment, Soundscape, 2024

Soils, Land Capability and Land Use, EcoAssist, 2023

Waste Re-Classification for the Umgala Discard Dump, GCS 2022

Wetland Assessment, CEET, 2024

APPENDIX A: PROJECT SPECIFIC INFORMATION

Appendix A1 – DFFE Screening Report

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: KZN 30/5/1/2/2/122 MR

Project name: Umgala / Knights Hill Mine

Project title: Umgala/Knights Hill Mine Re-Opening Authorisations

Date screening report generated: 26/10/2023 16:57:33

Applicant: Welgedacht Operations

Compiler: GCS Water and Environment

Compiler signature: J.Bothma

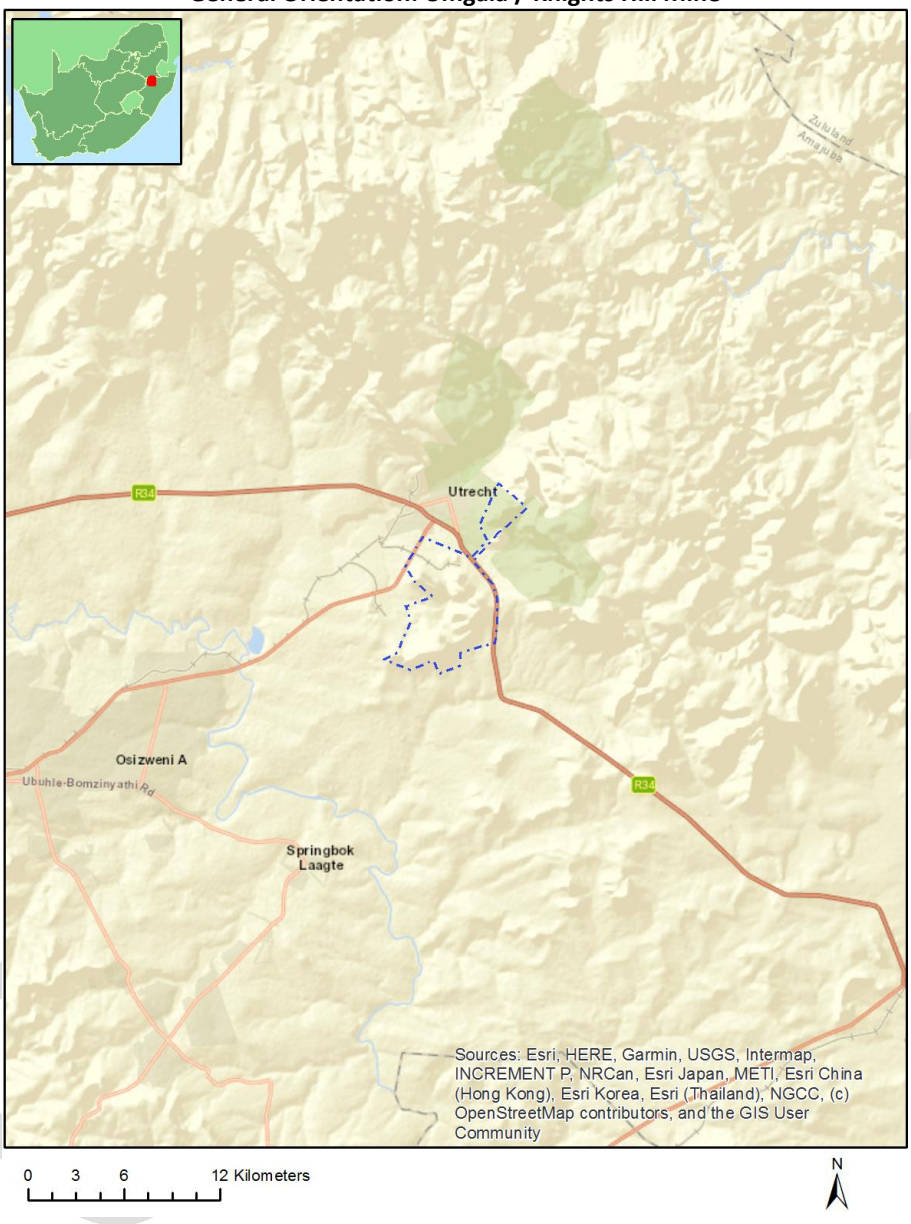
Application Category: Mining|Mining Right

Table of Contents

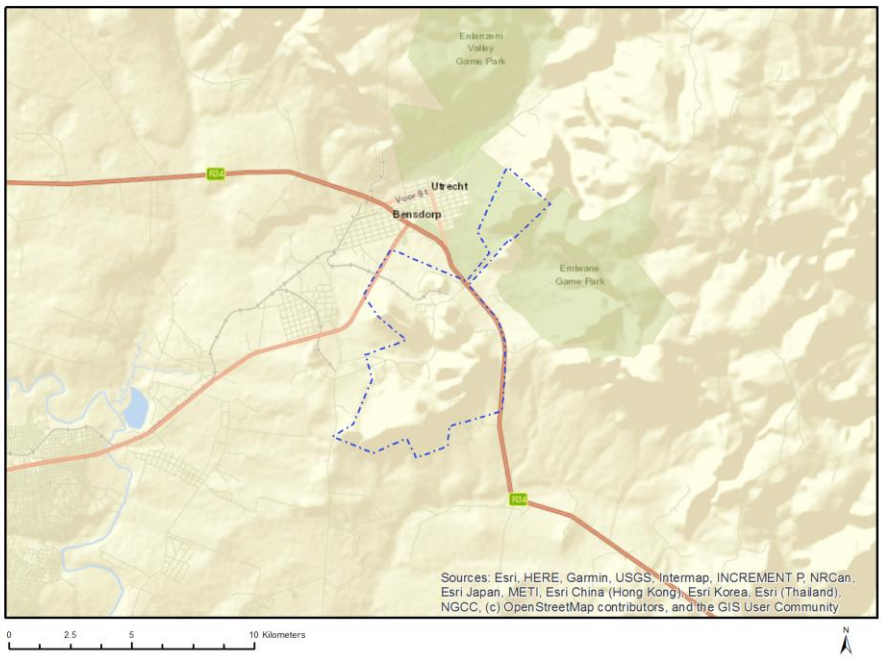
Proposed Project Location

Orientation map 1: General location

General Orientation: Umgala / Knights Hill Mine



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
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3	UTRECHT	777	0	27°40'0.3S	30°18'50.76E	Erven
4	UTRECHT	977	0	27°40'44.05S	30°18'17.06E	Erven
5	UTRECHT	1014	0	27°43'0.87S	30°19'45.12E	Erven
6	UTRECHT	1125	0	27°40'31.69S	30°18'34.36E	Erven
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14	UTRECHT	1006	0	27°39'13.04S	30°20'23.37E	Erven
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166	UTRECHT	1441	0	27°40'42.62S	30°18'54.39E	Erven
167	UTRECHT	1446	0	27°40'42.6S	30°18'57.04E	Erven
168	UTRECHT	1459	0	27°40'44.14S	30°18'53.73E	Erven
169	UTRECHT	1477	0	27°40'47.72S	30°19'4.25E	Erven
170	UTRECHT	1487	0	27°40'46.61S	30°19'2.97E	Erven
171	UTRECHT	1495	0	27°40'43.76S	30°19'0.51E	Erven
172	UTRECHT	1505	0	27°40'45.78S	30°19'5.21E	Erven
173	UTRECHT	1514	0	27°40'48.61S	30°19'6.55E	Erven
174	UTRECHT	1519	0	27°40'50.41S	30°19'5.64E	Erven
175	UTRECHT	1527	0	27°40'51.39S	30°19'3.1E	Erven
176	UTRECHT	1528	0	27°40'50.87S	30°19'2.76E	Erven
177	UTRECHT	1530	0	27°40'51.62S	30°19'2.45E	Erven
178	UTRECHT	1552	0	27°40'49.11S	30°19'2.79E	Erven
179	UTRECHT	1559	0	27°40'50.85S	30°19'0.05E	Erven
180	UTRECHT	1585	0	27°40'48.98S	30°18'59.74E	Erven
181	UTRECHT	1586	0	27°40'49.16S	30°18'59.21E	Erven
182	UTRECHT	1597	0	27°40'47.01S	30°18'58.55E	Erven
183	UTRECHT	1599	0	27°40'46.61S	30°18'59.58E	Erven
184	UTRECHT	1600	0	27°40'46.43S	30°19'0.09E	Erven
185	UTRECHT	1604	0	27°40'46.77S	30°19'0.86E	Erven
186	UTRECHT	1625	0	27°40'50.66S	30°18'51.59E	Erven
187	UTRECHT	1628	0	27°40'50.32S	30°18'53.18E	Erven
188	UTRECHT	1632	0	27°40'50.78S	30°18'53.88E	Erven
189	UTRECHT	1641	0	27°40'51.35S	30°18'49.04E	Erven
190	UTRECHT	1655	0	27°40'52.38S	30°18'52.12E	Erven
191	UTRECHT	1661	0	27°40'52.43S	30°18'54.9E	Erven
192	UTRECHT	1668	0	27°40'53.2S	30°18'51.17E	Erven
193	UTRECHT	1683	0	27°40'53.86S	30°18'47.35E	Erven
194	UTRECHT	1691	0	27°40'54.53S	30°18'50.6E	Erven
195	UTRECHT	740	0	27°40'29.76S	30°18'5.56E	Erven
196	UTRECHT	1126	0	27°40'32.04S	30°18'34.76E	Erven
197	UTRECHT	1127	0	27°40'32.5S	30°18'34.32E	Erven
198	UTRECHT	1143	0	27°40'36.08S	30°18'38.02E	Erven
199	UTRECHT	1158	0	27°40'37.08S	30°18'43.49E	Erven
200	UTRECHT	1161	0	27°40'38.58S	30°18'44.27E	Erven
201	UTRECHT	1170	0	27°40'40.52S	30°18'45.12E	Erven
202	UTRECHT	1187	0	27°40'39.62S	30°18'41.48E	Erven
203	UTRECHT	1193	0	27°40'40.57S	30°18'43.35E	Erven
204	UTRECHT	1203	0	27°40'42.78S	30°18'42.84E	Erven
205	UTRECHT	1206	0	27°40'43.17S	30°18'42.38E	Erven
206	UTRECHT	1210	0	27°40'43.98S	30°18'41.35E	Erven
207	UTRECHT	1215	0	27°40'45.23S	30°18'39.77E	Erven

208	UTRECHT	1217	0	27°40'46.04S	30°18'39.7E	Erven
209	UTRECHT	1255	0	27°40'48.91S	30°18'44.84E	Erven
210	UTRECHT	1259	0	27°40'50.43S	30°18'45.42E	Erven
211	UTRECHT	1266	0	27°40'47.88S	30°18'42.84E	Erven
212	UTRECHT	1013	0	27°42'12.99S	30°19'38.95E	Erven
213	UTRECHT	1015	0	27°43'26.19S	30°18'49.46E	Erven
214	UTRECHT	1129	0	27°40'32.6S	30°18'35.3E	Erven
215	UTRECHT	1135	0	27°40'34.28S	30°18'36.13E	Erven
216	UTRECHT	1137	0	27°40'34.36S	30°18'37.14E	Erven
217	UTRECHT	1140	0	27°40'35.63S	30°18'37.5E	Erven
218	UTRECHT	1154	0	27°40'37.43S	30°18'42.99E	Erven
219	UTRECHT	1159	0	27°40'37.51S	30°18'44E	Erven
220	UTRECHT	1166	0	27°40'40.42S	30°18'46.19E	Erven
221	UTRECHT	1176	0	27°40'36.42S	30°18'39.27E	Erven
222	UTRECHT	1188	0	27°40'39.29S	30°18'42.05E	Erven
223	UTRECHT	1201	0	27°40'42.8S	30°18'43.84E	Erven
224	UTRECHT	1207	0	27°40'43.61S	30°18'41.83E	Erven
225	UTRECHT	1214	0	27°40'44.82S	30°18'40.3E	Erven
226	UTRECHT	1221	0	27°40'47.42S	30°18'40.11E	Erven
227	UTRECHT	1561	0	27°40'51.19S	30°18'59.02E	Erven
228	UTRECHT	1562	0	27°40'51.4S	30°18'58.5E	Erven
229	UTRECHT	1565	0	27°40'51.98S	30°18'56.72E	Erven
230	UTRECHT	1566	0	27°40'52.13S	30°18'56.03E	Erven
231	UTRECHT	1570	0	27°40'49.19S	30°18'57.48E	Erven
232	UTRECHT	1572	0	27°40'48.8S	30°18'58.46E	Erven
233	UTRECHT	1589	0	27°40'49.77S	30°18'57.74E	Erven
234	UTRECHT	1596	0	27°40'47.17S	30°18'58.01E	Erven
235	UTRECHT	1606	0	27°40'47.16S	30°18'59.86E	Erven
236	UTRECHT	1607	0	27°40'47.33S	30°18'59.34E	Erven
237	UTRECHT	1608	0	27°40'47.54S	30°18'58.83E	Erven
238	UTRECHT	1616	0	27°40'45.61S	30°18'53.69E	Erven
239	UTRECHT	1621	0	27°40'50.56S	30°18'49.15E	Erven
240	UTRECHT	1630	0	27°40'50.09S	30°18'54.3E	Erven
241	UTRECHT	1631	0	27°40'50.66S	30°18'54.43E	Erven
242	UTRECHT	1634	0	27°40'51.03S	30°18'52.86E	Erven
243	UTRECHT	1638	0	27°40'51.48S	30°18'50.7E	Erven
244	UTRECHT	1640	0	27°40'51.74S	30°18'49.59E	Erven
245	UTRECHT	1642	0	27°40'50.97S	30°18'48.63E	Erven
246	UTRECHT	1650	0	27°40'52.98S	30°18'49.31E	Erven
247	UTRECHT	1658	0	27°40'52.05S	30°18'53.65E	Erven
248	UTRECHT	1672	0	27°40'53.71S	30°18'49.06E	Erven
249	UTRECHT	1674	0	27°40'53.27S	30°18'48.23E	Erven
250	UTRECHT	1676	0	27°40'52.51S	30°18'47.51E	Erven
251	UTRECHT	1698	0	27°40'54.37S	30°18'53.27E	Erven
252	UTRECHT	1703	0	27°40'53.92S	30°18'55.29E	Erven
253	UTRECHT	1705	0	27°40'53.23S	30°18'55.73E	Erven
254	UTRECHT	1713	0	27°40'52.5S	30°18'58.53E	Erven
255	UTRECHT	1714	0	27°40'53.03S	30°18'58.75E	Erven
256	UTRECHT	1610	0	27°40'47.93S	30°18'57.83E	Erven
257	UTRECHT	1613	0	27°40'45.43S	30°18'56.84E	Erven
258	UTRECHT	1622	0	27°40'50.94S	30°18'49.72E	Erven
259	UTRECHT	1623	0	27°40'50.82S	30°18'50.53E	Erven
260	UTRECHT	1624	0	27°40'50.79S	30°18'51.07E	Erven
261	UTRECHT	1627	0	27°40'50.45S	30°18'52.64E	Erven
262	UTRECHT	1635	0	27°40'51.16S	30°18'52.33E	Erven
263	UTRECHT	1643	0	27°40'50.65S	30°18'46.54E	Erven
264	UTRECHT	1664	0	27°40'52.73S	30°18'53.3E	Erven
265	UTRECHT	1671	0	27°40'53.56S	30°18'49.58E	Erven
266	UTRECHT	1700	0	27°40'53.63S	30°18'53.87E	Erven
267	UTRECHT	1701	0	27°40'53.54S	30°18'54.42E	Erven

268	UTRECHT	10000	0	27°40'30.49S	30°17'36.53E	Erven
269	UTRECHT	10000	0	27°41'27.15S	30°19'17.66E	Erven
270	UTRECHT	1222	0	27°40'47.05S	30°18'40.57E	Erven
271	UTRECHT	1225	0	27°40'48.41S	30°18'41.01E	Erven
272	UTRECHT	1250	0	27°40'47.07S	30°18'42.99E	Erven
273	UTRECHT	1252	0	27°40'47.81S	30°18'43.74E	Erven
274	UTRECHT	1267	0	27°40'47.53S	30°18'42.46E	Erven
275	UTRECHT	1273	0	27°40'45.54S	30°18'44.16E	Erven
276	UTRECHT	1275	0	27°40'46.28S	30°18'44.88E	Erven
277	UTRECHT	1287	0	27°40'49.96S	30°18'47.62E	Erven
278	UTRECHT	1291	0	27°40'48.49S	30°18'46.17E	Erven
279	UTRECHT	1296	0	27°40'46.67S	30°18'44.36E	Erven
280	UTRECHT	1322	0	27°40'44.51S	30°18'46.67E	Erven
281	UTRECHT	1324	0	27°40'43.85S	30°18'47.49E	Erven
282	UTRECHT	1326	0	27°40'43.24S	30°18'48.3E	Erven
283	UTRECHT	1328	0	27°40'43.34S	30°18'49.2E	Erven
284	UTRECHT	1332	0	27°40'44.64S	30°18'47.53E	Erven
285	UTRECHT	1343	0	27°40'44.74S	30°18'49.1E	Erven
286	UTRECHT	1359	0	27°40'46.62S	30°18'49.48E	Erven
287	UTRECHT	1361	0	27°40'45.95S	30°18'50.31E	Erven
288	UTRECHT	1366	0	27°40'46.39S	30°18'50.75E	Erven
289	UTRECHT	1371	0	27°40'48.04S	30°18'48.74E	Erven
290	UTRECHT	1376	0	27°40'41.57S	30°18'50.06E	Erven
291	UTRECHT	1385	0	27°40'42.7S	30°18'50.27E	Erven
292	UTRECHT	1395	0	27°40'40.45S	30°18'51.28E	Erven
293	UTRECHT	1399	0	27°40'41.38S	30°18'52.22E	Erven
294	UTRECHT	1432	0	27°40'42.51S	30°19'3.66E	Erven
295	UTRECHT	1436	0	27°40'44.29S	30°18'52.33E	Erven
296	UTRECHT	1444	0	27°40'42.45S	30°18'55.97E	Erven
297	UTRECHT	1456	0	27°40'43S	30°18'55.07E	Erven
298	UTRECHT	1218	0	27°40'45.65S	30°18'39.25E	Erven
299	UTRECHT	1228	0	27°40'48.91S	30°18'41.44E	Erven
300	UTRECHT	1238	0	27°40'50.87S	30°18'44.33E	Erven
301	UTRECHT	1239	0	27°40'51.21S	30°18'44.72E	Erven
302	UTRECHT	1243	0	27°40'52.16S	30°18'45.61E	Erven
303	UTRECHT	1244	0	27°40'52.59S	30°18'45.16E	Erven
304	UTRECHT	1245	0	27°40'52.6S	30°18'46.14E	Erven
305	UTRECHT	1246	0	27°40'53.05S	30°18'45.61E	Erven
306	UTRECHT	1249	0	27°40'46.73S	30°18'42.64E	Erven
307	UTRECHT	1258	0	27°40'49.99S	30°18'45.92E	Erven
308	UTRECHT	1270	0	27°40'46.4S	30°18'41.4E	Erven
309	UTRECHT	1280	0	27°40'48.07S	30°18'46.72E	Erven
310	UTRECHT	1295	0	27°40'47.05S	30°18'44.7E	Erven
311	UTRECHT	1297	0	27°40'46.32S	30°18'43.98E	Erven
312	UTRECHT	1303	0	27°40'43.57S	30°18'45.03E	Erven
313	UTRECHT	1306	0	27°40'42.63S	30°18'46.26E	Erven
314	UTRECHT	1315	0	27°40'43.74S	30°18'45.93E	Erven
315	UTRECHT	1316	0	27°40'44.09S	30°18'45.53E	Erven
316	UTRECHT	1321	0	27°40'44.79S	30°18'46.26E	Erven
317	UTRECHT	1337	0	27°40'46.71S	30°18'46.59E	Erven
318	UTRECHT	1341	0	27°40'45.37S	30°18'48.25E	Erven
319	UTRECHT	1344	0	27°40'44.4S	30°18'49.5E	Erven
320	UTRECHT	1348	0	27°40'45.21S	30°18'49.56E	Erven
321	UTRECHT	1349	0	27°40'45.54S	30°18'49.18E	Erven
322	UTRECHT	1353	0	27°40'46.79S	30°18'47.53E	Erven
323	UTRECHT	1355	0	27°40'47.87S	30°18'47.84E	Erven
324	UTRECHT	1357	0	27°40'47.2S	30°18'48.66E	Erven
325	UTRECHT	1369	0	27°40'47.42S	30°18'49.55E	Erven
326	UTRECHT	1377	0	27°40'41.92S	30°18'50.47E	Erven
327	UTRECHT	1268	0	27°40'47.15S	30°18'42.12E	Erven

328	UTRECHT	1286	0	27°40'50.33S	30°18'47.99E	Erven
329	UTRECHT	1289	0	27°40'49.22S	30°18'46.9E	Erven
330	UTRECHT	1299	0	27°40'45.6S	30°18'43.26E	Erven
331	UTRECHT	1314	0	27°40'43.37S	30°18'46.3E	Erven
332	UTRECHT	1320	0	27°40'45.14S	30°18'45.78E	Erven
333	UTRECHT	1323	0	27°40'44.2S	30°18'47.08E	Erven
334	UTRECHT	1333	0	27°40'44.97S	30°18'47.13E	Erven
335	UTRECHT	1335	0	27°40'45.6S	30°18'46.3E	Erven
336	UTRECHT	1345	0	27°40'44.06S	30°18'49.94E	Erven
337	UTRECHT	1363	0	27°40'45.32S	30°18'51.16E	Erven
338	UTRECHT	1372	0	27°40'48.36S	30°18'48.32E	Erven
339	UTRECHT	1383	0	27°40'43.48S	30°18'50.93E	Erven
340	UTRECHT	1388	0	27°40'41.63S	30°18'49.17E	Erven
341	UTRECHT	1402	0	27°40'42.78S	30°18'52.63E	Erven
342	UTRECHT	1411	0	27°40'41.48S	30°18'56.37E	Erven
343	UTRECHT	1445	0	27°40'42.51S	30°18'56.52E	Erven
344	UTRECHT	1452	0	27°40'43.28S	30°18'57.46E	Erven
345	UTRECHT	1461	0	27°40'44.74S	30°18'52.88E	Erven
346	UTRECHT	1473	0	27°40'45.92S	30°19'3.37E	Erven
347	UTRECHT	1479	0	27°40'48.65S	30°19'4.64E	Erven
348	UTRECHT	1486	0	27°40'47.08S	30°19'3.18E	Erven
349	UTRECHT	1489	0	27°40'45.69S	30°19'2.53E	Erven
350	UTRECHT	1497	0	27°40'43.59S	30°18'59.46E	Erven
351	UTRECHT	1498	0	27°40'44.29S	30°19'3.79E	Erven
352	UTRECHT	1513	0	27°40'48S	30°19'6.28E	Erven
353	UTRECHT	1515	0	27°40'48.89S	30°19'5.99E	Erven
354	UTRECHT	1517	0	27°40'49.61S	30°19'6.07E	Erven
355	UTRECHT	1520	0	27°40'49.91S	30°19'5.29E	Erven
356	UTRECHT	10000	0	27°38'52.66S	30°18'58.26E	Erven
357	UTRECHT	10000	0	27°41'0.77S	30°19'27.29E	Erven
358	UTRECHT	1386	0	27°40'42.33S	30°18'49.92E	Erven
359	UTRECHT	1389	0	27°40'41.24S	30°18'48.83E	Erven
360	UTRECHT	1391	0	27°40'39.73S	30°18'49.77E	Erven
361	UTRECHT	1396	0	27°40'40.94S	30°18'51.76E	Erven
362	UTRECHT	1397	0	27°40'41.35S	30°18'51.41E	Erven
363	UTRECHT	1398	0	27°40'41.74S	30°18'51.72E	Erven
364	UTRECHT	1400	0	27°40'41.83S	30°18'52.66E	Erven
365	UTRECHT	1408	0	27°40'41.07S	30°18'55.28E	Erven
366	UTRECHT	1413	0	27°40'41.05S	30°18'57.24E	Erven
367	UTRECHT	1419	0	27°40'41.88S	30°18'59.12E	Erven
368	UTRECHT	1420	0	27°40'41.35S	30°18'59.29E	Erven
369	UTRECHT	1424	0	27°40'41.54S	30°19'0.65E	Erven
370	UTRECHT	1429	0	27°40'41.87S	30°19'2.89E	Erven
371	UTRECHT	1431	0	27°40'42.73S	30°19'3.12E	Erven
372	UTRECHT	1434	0	27°40'43.2S	30°19'4.01E	Erven
373	UTRECHT	1435	0	27°40'44.57S	30°18'51.94E	Erven
374	UTRECHT	1447	0	27°40'42.69S	30°18'57.59E	Erven
375	UTRECHT	1451	0	27°40'43.4S	30°18'58E	Erven
376	UTRECHT	1454	0	27°40'43.19S	30°18'56.37E	Erven
377	UTRECHT	1465	0	27°40'43.09S	30°19'0.64E	Erven
378	UTRECHT	1467	0	27°40'43.3S	30°19'1.71E	Erven
379	UTRECHT	1471	0	27°40'45.02S	30°19'2.98E	Erven
380	UTRECHT	1478	0	27°40'48.17S	30°19'4.44E	Erven
381	UTRECHT	1481	0	27°40'49.33S	30°19'4.23E	Erven
382	UTRECHT	1536	0	27°40'51.89S	30°19'0.21E	Erven
383	UTRECHT	1540	0	27°40'51.38S	30°18'56.48E	Erven
384	UTRECHT	1544	0	27°40'50.63S	30°18'58.71E	Erven
385	UTRECHT	1545	0	27°40'50.43S	30°18'59.25E	Erven
386	UTRECHT	1549	0	27°40'49.7S	30°19'1.25E	Erven
387	UTRECHT	1457	0	27°40'43.44S	30°18'54.48E	Erven

388	UTRECHT	1462	0	27°40'45.08S	30°18'52.46E	Erven
389	UTRECHT	1463	0	27°40'42.99S	30°18'59.55E	Erven
390	UTRECHT	1474	0	27°40'46.38S	30°19'3.57E	Erven
391	UTRECHT	1475	0	27°40'46.81S	30°19'3.8E	Erven
392	UTRECHT	1483	0	27°40'48.45S	30°19'3.77E	Erven
393	UTRECHT	1492	0	27°40'44.36S	30°19'1.88E	Erven
394	UTRECHT	1503	0	27°40'45.47S	30°19'4.38E	Erven
395	UTRECHT	1504	0	27°40'45.92S	30°19'4.6E	Erven
396	UTRECHT	1509	0	27°40'46.85S	30°19'5.74E	Erven
397	UTRECHT	1510	0	27°40'47.42S	30°19'6.01E	Erven
398	UTRECHT	1521	0	27°40'50.08S	30°19'4.79E	Erven
399	UTRECHT	1534	0	27°40'52.11S	30°19'1.15E	Erven
400	UTRECHT	1548	0	27°40'49.91S	30°19'0.77E	Erven
401	UTRECHT	1569	0	27°40'49.37S	30°18'56.95E	Erven
402	UTRECHT	1594	0	27°40'47.58S	30°18'56.95E	Erven
403	UTRECHT	1598	0	27°40'46.83S	30°18'59.06E	Erven
404	UTRECHT	1603	0	27°40'46.55S	30°19'1.45E	Erven
405	UTRECHT	1611	0	27°40'48.17S	30°18'57.19E	Erven
406	UTRECHT	1615	0	27°40'45.06S	30°18'59.85E	Erven
407	UTRECHT	1639	0	27°40'51.6S	30°18'50.18E	Erven
408	UTRECHT	1651	0	27°40'52.86S	30°18'49.95E	Erven
409	UTRECHT	1659	0	27°40'51.91S	30°18'54.19E	Erven
410	UTRECHT	1662	0	27°40'52.51S	30°18'54.36E	Erven
411	UTRECHT	1673	0	27°40'53.64S	30°18'48.55E	Erven
412	UTRECHT	1687	0	27°40'55.09S	30°18'48.03E	Erven
413	UTRECHT	1688	0	27°40'54.79S	30°18'48.76E	Erven
414	UTRECHT	1692	0	27°40'54.46S	30°18'51.24E	Erven
415	UTRECHT	1693	0	27°40'54.11S	30°18'51.72E	Erven
416	UTRECHT	1012	0	27°41'57.67S	30°18'43.99E	Erven
417	UTRECHT	1119	0	27°40'30.11S	30°18'31.13E	Erven
418	UTRECHT	1124	0	27°40'32.02S	30°18'33.81E	Erven
419	UTRECHT	1133	0	27°40'33.49S	30°18'36.22E	Erven
420	UTRECHT	1136	0	27°40'34.74S	30°18'36.57E	Erven
421	UTRECHT	1138	0	27°40'34.73S	30°18'37.53E	Erven
422	UTRECHT	1142	0	27°40'35.75S	30°18'38.52E	Erven
423	UTRECHT	1149	0	27°40'36.09S	30°18'41.64E	Erven
424	UTRECHT	1525	0	27°40'50.58S	30°19'3.48E	Erven
425	UTRECHT	1531	0	27°40'51.85S	30°19'1.81E	Erven
426	UTRECHT	1532	0	27°40'51.35S	30°19'1.47E	Erven
427	UTRECHT	1547	0	27°40'50.06S	30°19'0.27E	Erven
428	UTRECHT	1568	0	27°40'49.61S	30°18'56.15E	Erven
429	UTRECHT	1580	0	27°40'48.04S	30°19'2.27E	Erven
430	UTRECHT	1590	0	27°40'49.95S	30°18'57.22E	Erven
431	UTRECHT	1591	0	27°40'50.14S	30°18'56.62E	Erven
432	UTRECHT	1593	0	27°40'50.41S	30°18'55.53E	Erven
433	UTRECHT	1619	0	27°40'47.98S	30°18'55.41E	Erven
434	UTRECHT	1647	0	27°40'52.11S	30°18'48.03E	Erven
435	UTRECHT	1648	0	27°40'52.46S	30°18'48.41E	Erven
436	UTRECHT	1652	0	27°40'52.74S	30°18'50.47E	Erven
437	UTRECHT	1657	0	27°40'52.16S	30°18'53.14E	Erven
438	UTRECHT	1665	0	27°40'52.85S	30°18'52.76E	Erven
439	UTRECHT	1666	0	27°40'52.94S	30°18'52.23E	Erven
440	UTRECHT	1679	0	27°40'51.43S	30°18'46.43E	Erven
441	UTRECHT	1680	0	27°40'51.05S	30°18'46.04E	Erven
442	UTRECHT	1681	0	27°40'53.78S	30°18'46.38E	Erven
443	UTRECHT	1686	0	27°40'54.4S	30°18'47.93E	Erven
444	UTRECHT	1690	0	27°40'54.55S	30°18'50.02E	Erven
445	UTRECHT	1696	0	27°40'53.92S	30°18'52.53E	Erven
446	UTRECHT	1702	0	27°40'54.07S	30°18'54.62E	Erven
447	UTRECHT	1709	0	27°40'52.92S	30°18'57.05E	Erven

448	UTRECHT	1695	0	27°40'54.52S	30°18'52.58E	Erven
449	UTRECHT	1697	0	27°40'53.82S	30°18'53.03E	Erven
450	UTRECHT	1706	0	27°40'53.8S	30°18'55.96E	Erven
451	UTRECHT	1551	0	27°40'49.3S	30°19'2.26E	Erven
452	UTRECHT	1563	0	27°40'51.59S	30°18'58.01E	Erven
453	UTRECHT	1571	0	27°40'49.02S	30°18'57.98E	Erven
454	UTRECHT	1574	0	27°40'48.43S	30°18'59.47E	Erven
455	UTRECHT	1577	0	27°40'47.85S	30°19'1.01E	Erven
456	UTRECHT	1579	0	27°40'47.47S	30°19'2E	Erven
457	UTRECHT	1581	0	27°40'48.23S	30°19'1.75E	Erven
458	UTRECHT	1602	0	27°40'46S	30°19'1.2E	Erven
459	UTRECHT	1614	0	27°40'45.14S	30°18'58.35E	Erven
460	UTRECHT	1626	0	27°40'50.55S	30°18'52.12E	Erven
461	UTRECHT	1633	0	27°40'50.92S	30°18'53.36E	Erven
462	UTRECHT	1644	0	27°40'51.02S	30°18'46.94E	Erven
463	UTRECHT	1646	0	27°40'51.75S	30°18'47.66E	Erven
464	UTRECHT	1649	0	27°40'52.86S	30°18'48.73E	Erven
465	UTRECHT	1663	0	27°40'52.59S	30°18'53.83E	Erven
466	UTRECHT	1677	0	27°40'52.15S	30°18'47.14E	Erven
467	UTRECHT	1685	0	27°40'54.74S	30°18'47.33E	Erven
468	UTRECHT	1694	0	27°40'54.7S	30°18'51.87E	Erven
469	UTRECHT	1156	0	27°40'38.32S	30°18'43.04E	Erven
470	UTRECHT	1160	0	27°40'38.68S	30°18'46.7E	Erven
471	UTRECHT	1173	0	27°40'39.36S	30°18'44.12E	Erven
472	UTRECHT	1175	0	27°40'36.8S	30°18'38.76E	Erven
473	UTRECHT	1181	0	27°40'37.78S	30°18'40.58E	Erven
474	UTRECHT	1183	0	27°40'38.68S	30°18'40.55E	Erven
475	UTRECHT	1200	0	27°40'42.36S	30°18'44.3E	Erven
476	UTRECHT	1209	0	27°40'44.4S	30°18'41.78E	Erven
477	UTRECHT	1220	0	27°40'46.53S	30°18'39.05E	Erven
478	UTRECHT	1230	0	27°40'49.03S	30°18'42.47E	Erven
479	UTRECHT	1231	0	27°40'49.37S	30°18'42.87E	Erven
480	UTRECHT	1236	0	27°40'50.71S	30°18'43.32E	Erven
481	UTRECHT	1248	0	27°40'46.34S	30°18'42.34E	Erven
482	UTRECHT	1274	0	27°40'45.92S	30°18'44.49E	Erven
483	UTRECHT	1279	0	27°40'47.71S	30°18'46.35E	Erven
484	UTRECHT	1283	0	27°40'49.18S	30°18'47.79E	Erven
485	UTRECHT	1290	0	27°40'48.85S	30°18'46.56E	Erven
486	UTRECHT	1308	0	27°40'41.98S	30°18'47.05E	Erven
487	UTRECHT	1309	0	27°40'41.64S	30°18'47.47E	Erven
488	UTRECHT	1312	0	27°40'42.71S	30°18'47.11E	Erven
489	UTRECHT	1318	0	27°40'44.73S	30°18'44.66E	Erven
490	UTRECHT	1336	0	27°40'45.95S	30°18'45.89E	Erven
491	UTRECHT	1364	0	27°40'45.72S	30°18'51.61E	Erven
492	UTRECHT	1368	0	27°40'47.07S	30°18'49.95E	Erven
493	UTRECHT	1373	0	27°40'40.45S	30°18'48.93E	Erven
494	UTRECHT	1393	0	27°40'40.48S	30°18'50.45E	Erven
495	UTRECHT	1394	0	27°40'40.81S	30°18'50.82E	Erven
496	UTRECHT	1406	0	27°40'41.44S	30°18'54.28E	Erven
497	UTRECHT	1407	0	27°40'41.22S	30°18'54.81E	Erven
498	UTRECHT	1417	0	27°40'41.26S	30°18'58.58E	Erven
499	UTRECHT	1426	0	27°40'42.21S	30°19'1.29E	Erven
500	UTRECHT	1433	0	27°40'43.41S	30°19'3.41E	Erven
501	UTRECHT	1437	0	27°40'43.94S	30°18'52.76E	Erven
502	UTRECHT	1438	0	27°40'43.59S	30°18'53.16E	Erven
503	UTRECHT	1440	0	27°40'42.97S	30°18'54.01E	Erven
504	UTRECHT	1448	0	27°40'42.78S	30°18'58.11E	Erven
505	UTRECHT	1450	0	27°40'43.48S	30°18'58.52E	Erven
506	UTRECHT	1458	0	27°40'43.8S	30°18'54.09E	Erven
507	UTRECHT	1468	0	27°40'43.6S	30°19'2.3E	Erven

508	UTRECHT	1494	0	27°40'43.82S	30°19'1.06E	Erven
509	UTRECHT	1500	0	27°40'44.79S	30°19'4.03E	Erven
510	UTRECHT	1506	0	27°40'46.26S	30°19'5.48E	Erven
511	UTRECHT	1522	0	27°40'50.65S	30°19'5E	Erven
512	UTRECHT	1550	0	27°40'49.52S	30°19'1.75E	Erven
513	UTRECHT	1554	0	27°40'49.9S	30°19'2.55E	Erven
514	UTRECHT	1558	0	27°40'50.64S	30°19'0.53E	Erven
515	UTRECHT	1564	0	27°40'51.78S	30°18'57.46E	Erven
516	UTRECHT	1573	0	27°40'48.61S	30°18'58.94E	Erven
517	UTRECHT	1575	0	27°40'48.24S	30°18'59.96E	Erven
518	UTRECHT	1582	0	27°40'48.41S	30°19'1.25E	Erven
519	UTRECHT	1588	0	27°40'49.59S	30°18'58.2E	Erven
520	UTRECHT	1617	0	27°40'46.15S	30°18'54.19E	Erven
521	UTRECHT	1618	0	27°40'46.68S	30°18'54.72E	Erven
522	UTRECHT	1636	0	27°40'51.24S	30°18'51.78E	Erven
523	UTRECHT	1637	0	27°40'51.37S	30°18'51.26E	Erven
524	UTRECHT	1645	0	27°40'51.37S	30°18'47.29E	Erven
525	UTRECHT	1654	0	27°40'52.54S	30°18'51.59E	Erven
526	UTRECHT	1656	0	27°40'52.27S	30°18'52.6E	Erven
527	UTRECHT	1660	0	27°40'51.81S	30°18'54.73E	Erven
528	UTRECHT	1670	0	27°40'53.43S	30°18'50.12E	Erven
529	UTRECHT	1678	0	27°40'51.8S	30°18'46.77E	Erven
530	UTRECHT	1682	0	27°40'53.42S	30°18'46.87E	Erven
531	UTRECHT	1684	0	27°40'54.3S	30°18'46.87E	Erven
532	UTRECHT	1689	0	27°40'54.64S	30°18'49.37E	Erven
533	UTRECHT	1699	0	27°40'54.25S	30°18'53.94E	Erven
534	UTRECHT	1707	0	27°40'53.65S	30°18'56.61E	Erven
535	UTRECHT	1708	0	27°40'53.09S	30°18'56.55E	Erven
536	UTRECHT	1711	0	27°40'53.3S	30°18'58.03E	Erven
537	UTRECHT	778	0	27°41'16.98S	30°17'58.58E	Erven
538	UTRECHT	1010	0	27°40'36.8S	30°20'13.97E	Erven
539	UTRECHT	1011	0	27°40'51.27S	30°20'3.83E	Erven
540	UTRECHT	1120	0	27°40'31.34S	30°18'32.86E	Erven
541	UTRECHT	1123	0	27°40'31.58S	30°18'33.37E	Erven
542	UTRECHT	1139	0	27°40'35.19S	30°18'37.03E	Erven
543	UTRECHT	1147	0	27°40'36.02S	30°18'40.8E	Erven
544	UTRECHT	1151	0	27°40'36.95S	30°18'41.72E	Erven
545	UTRECHT	1182	0	27°40'38.24S	30°18'40.1E	Erven
546	UTRECHT	1184	0	27°40'38.39S	30°18'41.1E	Erven
547	UTRECHT	1185	0	27°40'38.74S	30°18'41.46E	Erven
548	UTRECHT	1195	0	27°40'41.48S	30°18'43.33E	Erven
549	UTRECHT	1199	0	27°40'42.01S	30°18'44.82E	Erven
550	UTRECHT	1205	0	27°40'43.57S	30°18'42.81E	Erven
551	UTRECHT	1234	0	27°40'49.94S	30°18'43.43E	Erven
552	UTRECHT	1237	0	27°40'51.19S	30°18'43.77E	Erven
553	UTRECHT	1240	0	27°40'51.65S	30°18'44.26E	Erven
554	UTRECHT	1241	0	27°40'52.11S	30°18'44.69E	Erven
555	UTRECHT	1262	0	27°40'49.31S	30°18'44.31E	Erven
556	UTRECHT	1276	0	27°40'46.62S	30°18'45.27E	Erven
557	UTRECHT	1281	0	27°40'48.41S	30°18'47.09E	Erven
558	UTRECHT	1285	0	27°40'49.91S	30°18'48.53E	Erven
559	UTRECHT	1288	0	27°40'49.57S	30°18'47.27E	Erven
560	UTRECHT	1310	0	27°40'42.05S	30°18'47.96E	Erven
561	UTRECHT	1311	0	27°40'42.4S	30°18'47.55E	Erven
562	UTRECHT	1313	0	27°40'43.06S	30°18'46.73E	Erven
563	UTRECHT	1325	0	27°40'43.55S	30°18'47.9E	Erven
564	UTRECHT	1330	0	27°40'43.98S	30°18'48.36E	Erven
565	UTRECHT	1331	0	27°40'44.34S	30°18'47.94E	Erven
566	UTRECHT	1334	0	27°40'45.32S	30°18'46.74E	Erven
567	UTRECHT	1338	0	27°40'46.34S	30°18'47.05E	Erven

568	UTRECHT	1339	0	27°40'46.02S	30°18'47.43E	Erven
569	UTRECHT	1340	0	27°40'45.69S	30°18'47.84E	Erven
570	UTRECHT	1346	0	27°40'44.49S	30°18'50.4E	Erven
571	UTRECHT	1347	0	27°40'44.85S	30°18'49.96E	Erven
572	UTRECHT	1358	0	27°40'46.87S	30°18'49.04E	Erven
573	UTRECHT	1409	0	27°40'40.86S	30°18'55.89E	Erven
574	UTRECHT	1414	0	27°40'41.59S	30°18'57.21E	Erven
575	UTRECHT	1421	0	27°40'41.46S	30°18'59.98E	Erven
576	UTRECHT	1423	0	27°40'42.06S	30°19'0.51E	Erven
577	UTRECHT	1425	0	27°40'41.64S	30°19'1.32E	Erven
578	UTRECHT	1427	0	27°40'42.31S	30°19'1.82E	Erven
579	UTRECHT	1443	0	27°40'42.34S	30°18'55.4E	Erven
580	UTRECHT	1449	0	27°40'42.88S	30°18'58.68E	Erven
581	UTRECHT	1453	0	27°40'43.23S	30°18'56.94E	Erven
582	UTRECHT	1466	0	27°40'43.2S	30°19'1.17E	Erven
583	UTRECHT	1469	0	27°40'44.15S	30°19'2.55E	Erven
584	UTRECHT	1472	0	27°40'45.47S	30°19'3.16E	Erven
585	UTRECHT	1476	0	27°40'47.25S	30°19'4.01E	Erven
586	UTRECHT	1480	0	27°40'49.09S	30°19'4.82E	Erven
587	UTRECHT	1490	0	27°40'45.23S	30°19'2.3E	Erven
588	UTRECHT	1496	0	27°40'43.7S	30°18'59.96E	Erven
589	UTRECHT	1502	0	27°40'45.17S	30°19'4.93E	Erven
590	UTRECHT	1516	0	27°40'49.48S	30°19'6.83E	Erven
591	UTRECHT	1523	0	27°40'50.88S	30°19'4.36E	Erven
592	UTRECHT	1524	0	27°40'50.36S	30°19'4E	Erven
593	UTRECHT	1533	0	27°40'51.52S	30°19'0.97E	Erven
594	UTRECHT	1535	0	27°40'52.33S	30°19'0.54E	Erven
595	UTRECHT	1542	0	27°40'51S	30°18'57.73E	Erven
596	UTRECHT	1543	0	27°40'50.83S	30°18'58.22E	Erven
597	UTRECHT	1557	0	27°40'50.46S	30°19'1.03E	Erven
598	UTRECHT	1576	0	27°40'48.05S	30°19'0.48E	Erven
599	UTRECHT	1583	0	27°40'48.59S	30°19'0.73E	Erven
600	UTRECHT	1584	0	27°40'48.79S	30°19'0.24E	Erven
601	UTRECHT	1592	0	27°40'50.3S	30°18'56.08E	Erven
602	UTRECHT	1595	0	27°40'47.35S	30°18'57.51E	Erven
603	UTRECHT	1605	0	27°40'46.99S	30°19'0.35E	Erven
604	UTRECHT	1609	0	27°40'47.75S	30°18'58.33E	Erven
605	UTRECHT	1612	0	27°40'44.53S	30°18'55.36E	Erven
606	UTRECHT	1620	0	27°40'48.1S	30°18'51.7E	Erven
607	UTRECHT	1629	0	27°40'50.21S	30°18'53.76E	Erven
608	UTRECHT	1653	0	27°40'52.62S	30°18'51.01E	Erven
609	UTRECHT	1667	0	27°40'53.08S	30°18'51.73E	Erven
610	UTRECHT	1669	0	27°40'53.33S	30°18'50.62E	Erven
611	UTRECHT	1675	0	27°40'52.9S	30°18'47.84E	Erven
612	UTRECHT	1704	0	27°40'53.34S	30°18'55.23E	Erven
613	UTRECHT	1710	0	27°40'53.49S	30°18'57.28E	Erven
614	UTRECHT	1712	0	27°40'52.69S	30°18'57.94E	Erven
615	DORPSGRONDEN VAN UTRECHT	266	0	27°40'15.95S	30°18'50.23E	Farm
616	ZANDSPRUIT	162	0	27°45'10.46S	30°18'49.83E	Farm
617	TUSSCHENBIJ	167	0	27°44'9.5S	30°16'32.84E	Farm
618	TWIJFELFONTEIN	160	0	27°39'45.43S	30°23'23.2E	Farm
619	WELTEVREDEN	53	0	27°37'46.36S	30°21'42.44E	Farm
620	MAGDALENA	443	0	27°42'14.95S	30°17'54.87E	Farm
621	VERGENOEGD	107	0	27°41'28.16S	30°21'29.97E	Farm
622	GUMTREESPRUIT	424	0	27°43'50.74S	30°20'54.99E	Farm
623	VERGENOEGD	107	1	27°41'23.67S	30°20'36.52E	Farm Portion
624	VERGENOEGD	107	2	27°42'8.01S	30°21'58.41E	Farm Portion
625	TUSSCHENBIJ	167	2	27°44'46.38S	30°16'44.69E	Farm Portion
626	MAGDALENA	443	0	27°42'14.95S	30°17'54.87E	Farm Portion

627	TUSSCHENBIJ	167	1	27°43'32.51S	30°17'34.89E	Farm Portion
628	VERGENOEGD	107	4	27°41'51.71S	30°20'10.8E	Farm Portion
629	GUMTREESPRUIT	424	0	27°44'8.66S	30°20'20.23E	Farm Portion
630	GUMTREESPRUIT	424	1	27°43'30.23S	30°21'34.78E	Farm Portion
631	TWIJFELFONTEIN	160	2	27°40'6.99S	30°22'59.79E	Farm Portion
632	ZANDSPRUIT	162	1	27°44'56.9S	30°17'60E	Farm Portion
633	ZANDSPRUIT	162	4	27°44'12.18S	30°18'20.7E	Farm Portion
634	ZANDSPRUIT	162	6	27°44'10.82S	30°19'16.77E	Farm Portion
635	DORPSGRONDEN VAN UTRECHT	266	0	27°40'15.76S	30°18'50.17E	Farm Portion
636	WELTEVREDEN	53	4	27°38'52.02S	30°21'21.41E	Farm Portion
637	VERGENOEGD	107	5	27°42'30.91S	30°20'31.66E	Farm Portion
638	VERGENOEGD	107	7	27°40'28.01S	30°21'27.92E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/2/655/AM5	Wind	Approved	2.8

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Mining|Mining Right**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction	Implication

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

or prohibition	
Strategic Gas Pipeline Corridors-Phase 3: Richards Bay to Gauteng	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
South African Protected Areas	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/SAPAD_OR_2023_Q1_Metadata.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

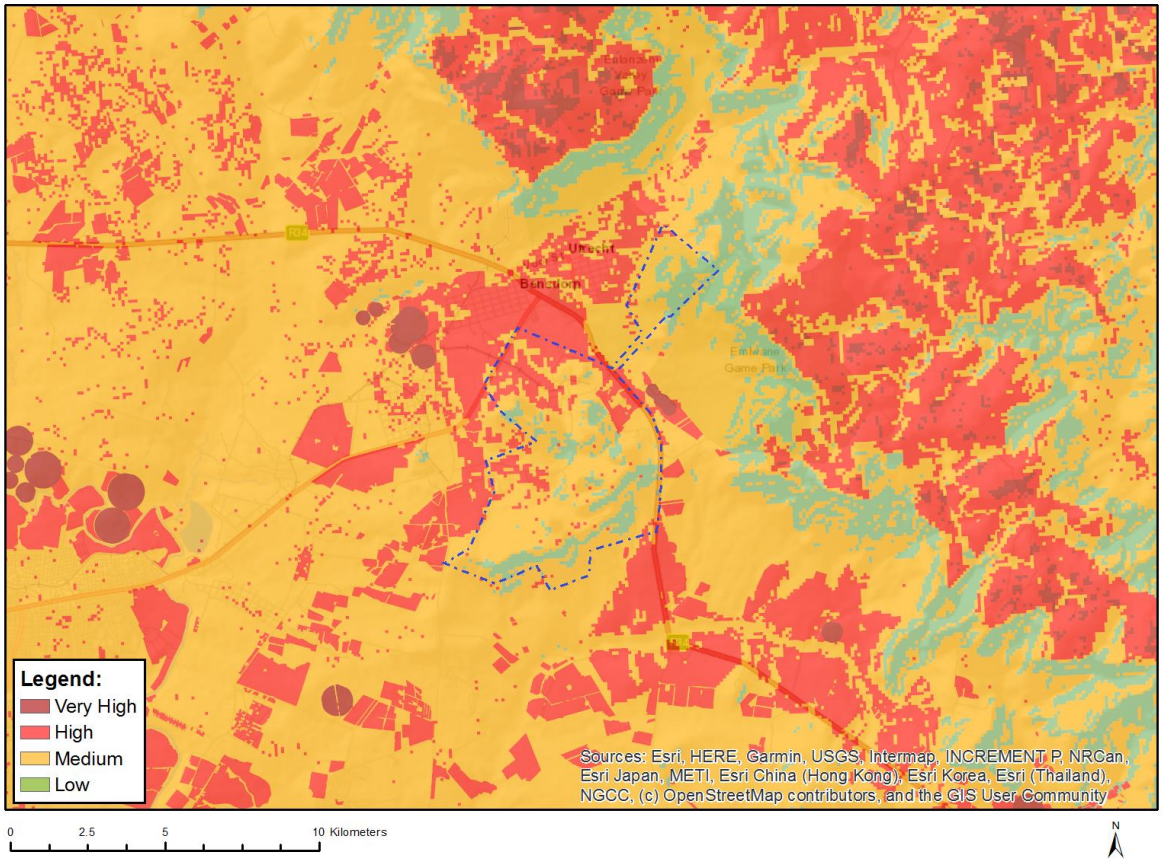
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_

		Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Hydrology Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
8	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
9	Radioactivity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
12	Climate Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Health Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
16	Seismicity Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
17	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
18	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

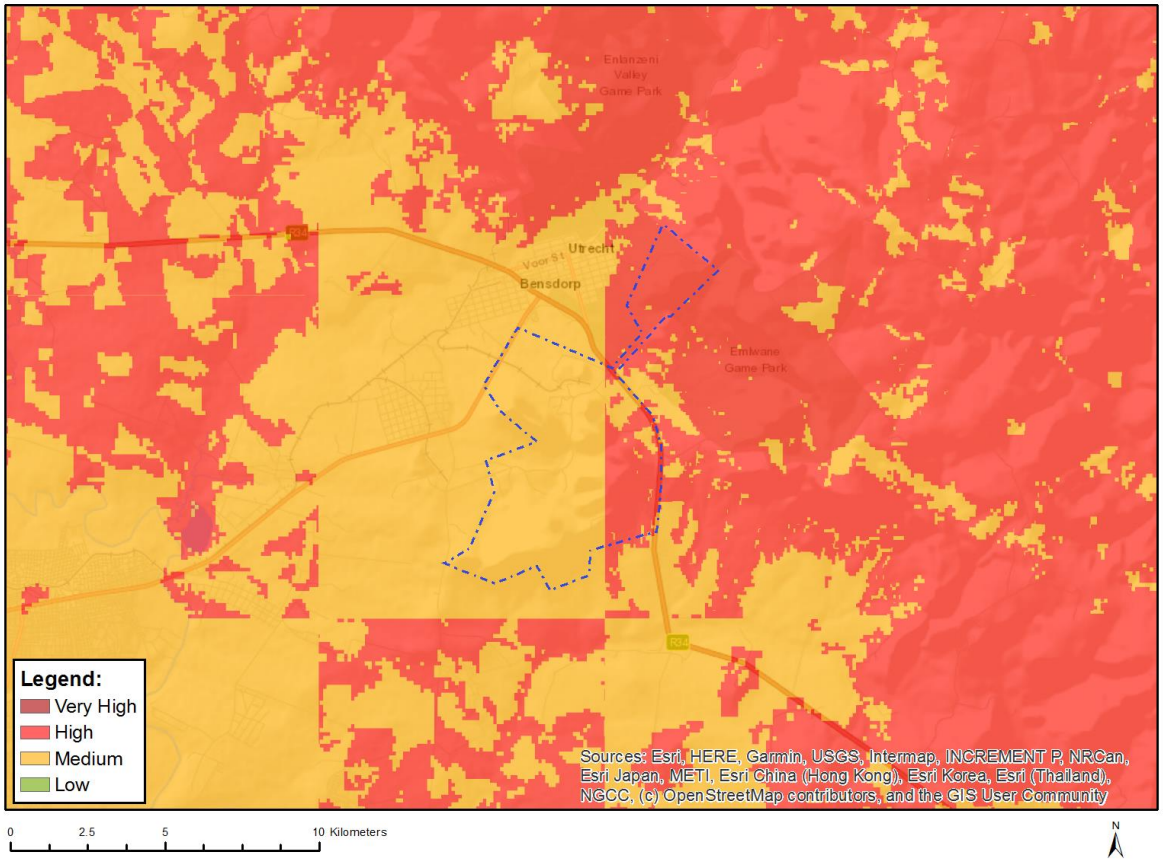


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

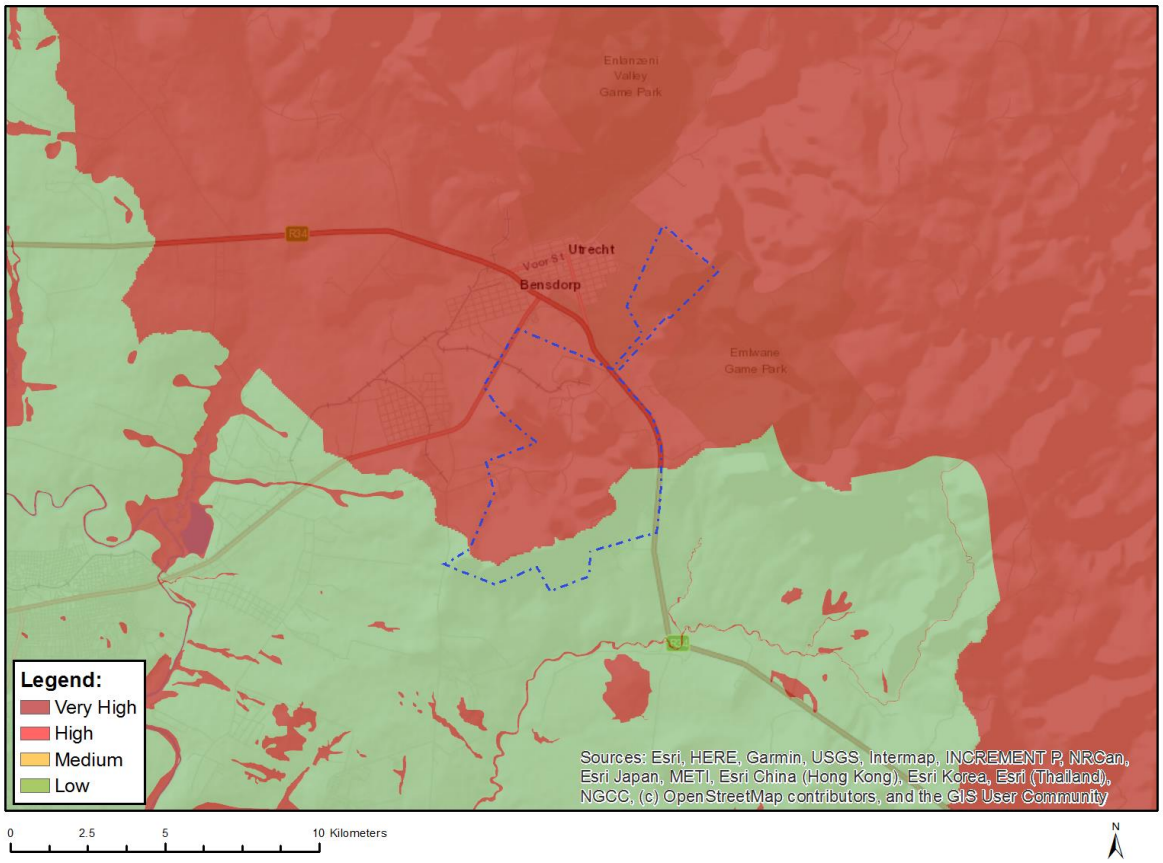
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Sylvia nigricapillus
High	Aves-Ciconia nigra
High	Aves-Falco biarmicus
High	Aves-Geronticus calvus
High	Aves-Eupodotis senegalensis
High	Aves-Sagittarius serpentarius
Medium	Aves-Stephanoaetus coronatus
Medium	Aves-Neotis denhami
Medium	Aves-Geronticus calvus
Medium	Aves-Eupodotis senegalensis
Medium	Aves-Sagittarius serpentarius
Medium	Mammalia-Chrysospalax villosus

Medium	Mammalia-Hydrictis maculicollis
Medium	Mammalia-Ourebia ourebi ourebi
Medium	Invertebrate-Clonia lalandei

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

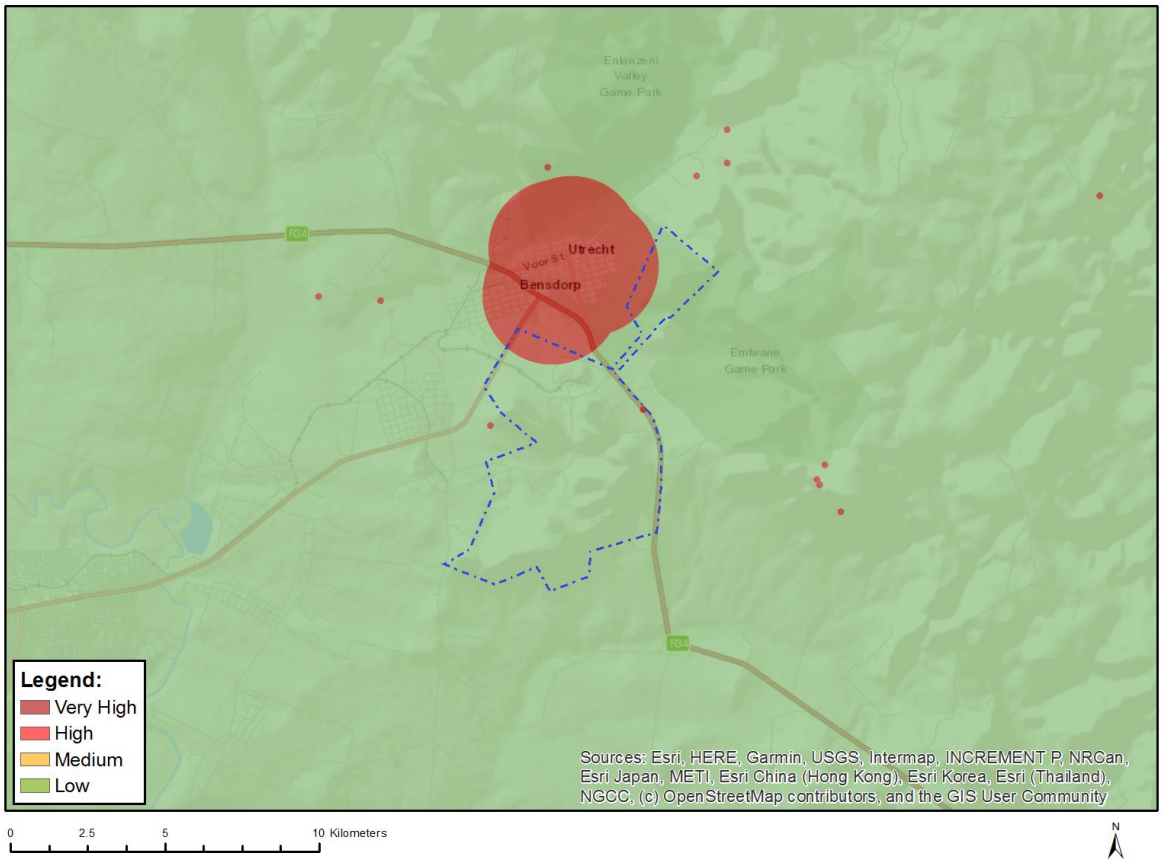


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	FEPA Subcatchment
Very High	SWSA (SW) _Enkangala Grassland
Very High	Wetlands_(River)
Very High	Wetlands_Sub-Escarpment Grassland Bioregion (Depression)
Very High	Wetlands_Sub-Escarpment Grassland Bioregion (Seep)

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

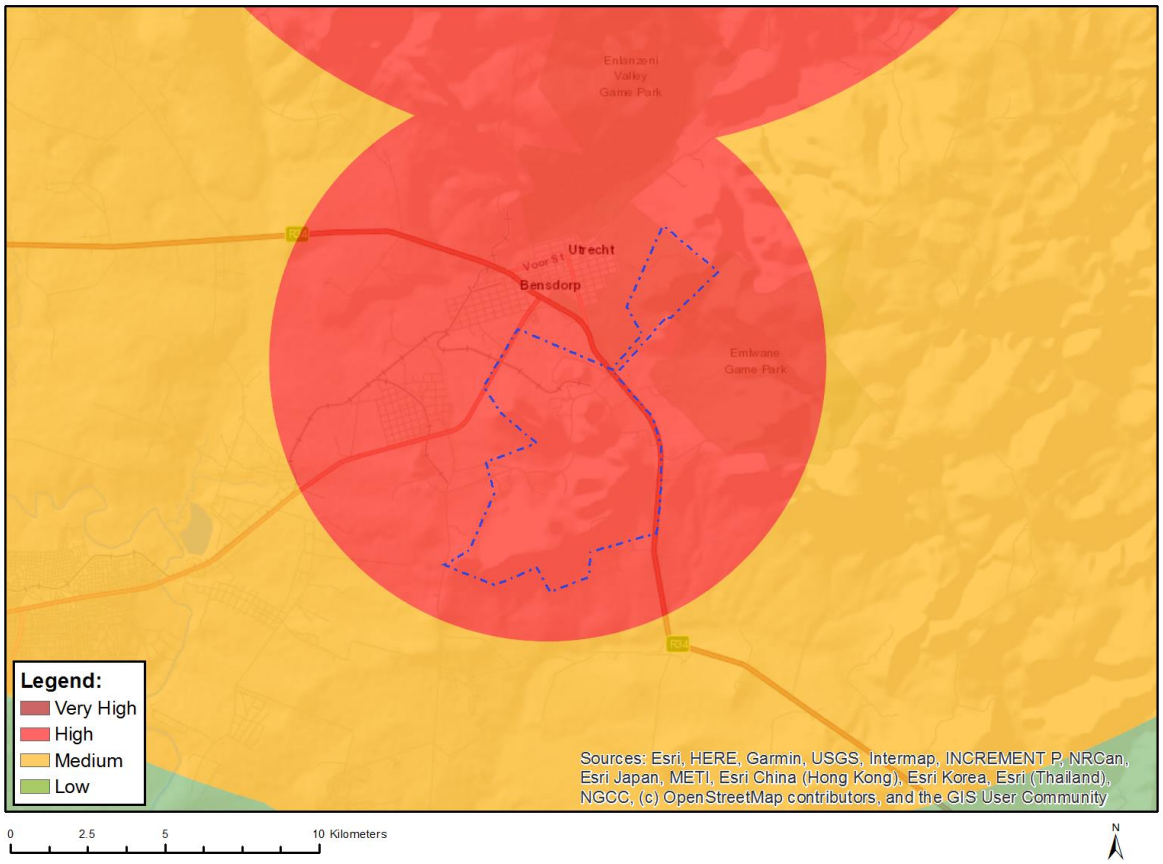


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Within 2km of a Grade II Heritage site
Very High	Within 100m of an Ungraded Heritage site

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

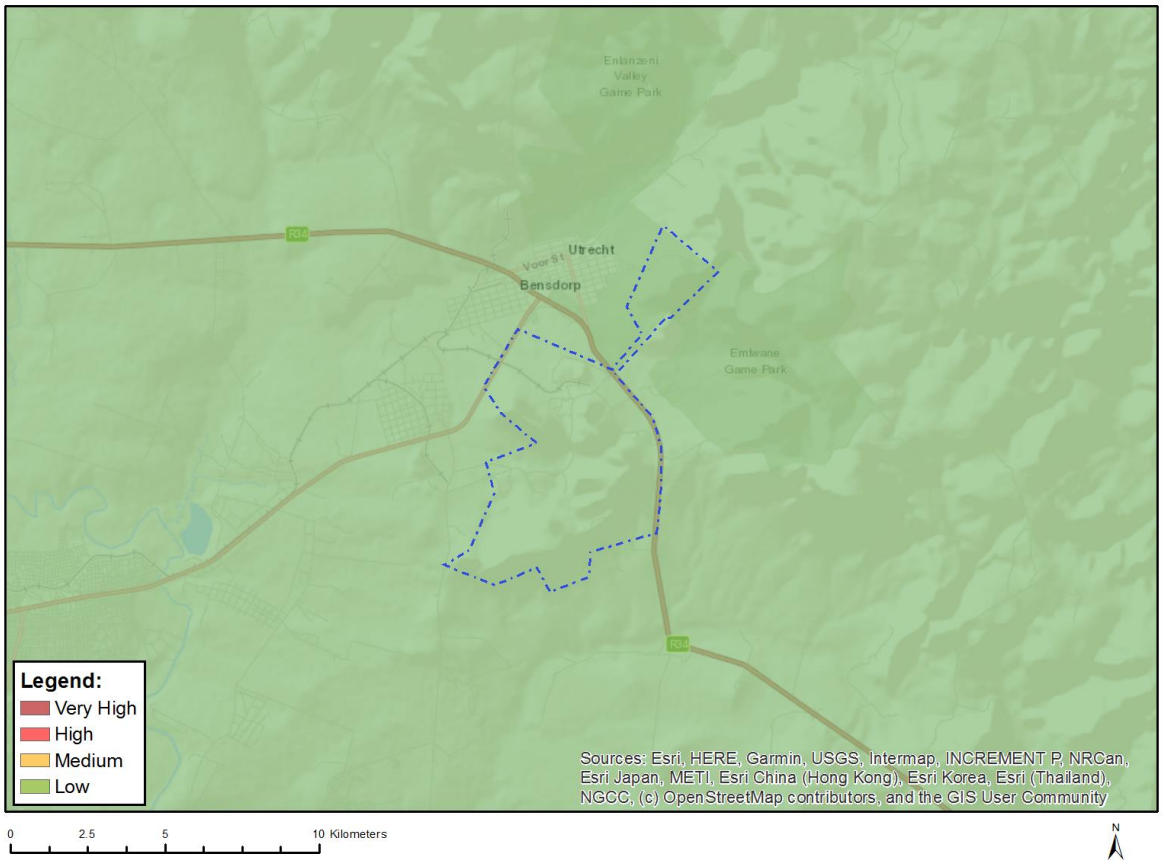


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 8 km of other civil aviation aerodrome
Medium	Between 15 and 35 km from a civil aviation radar

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

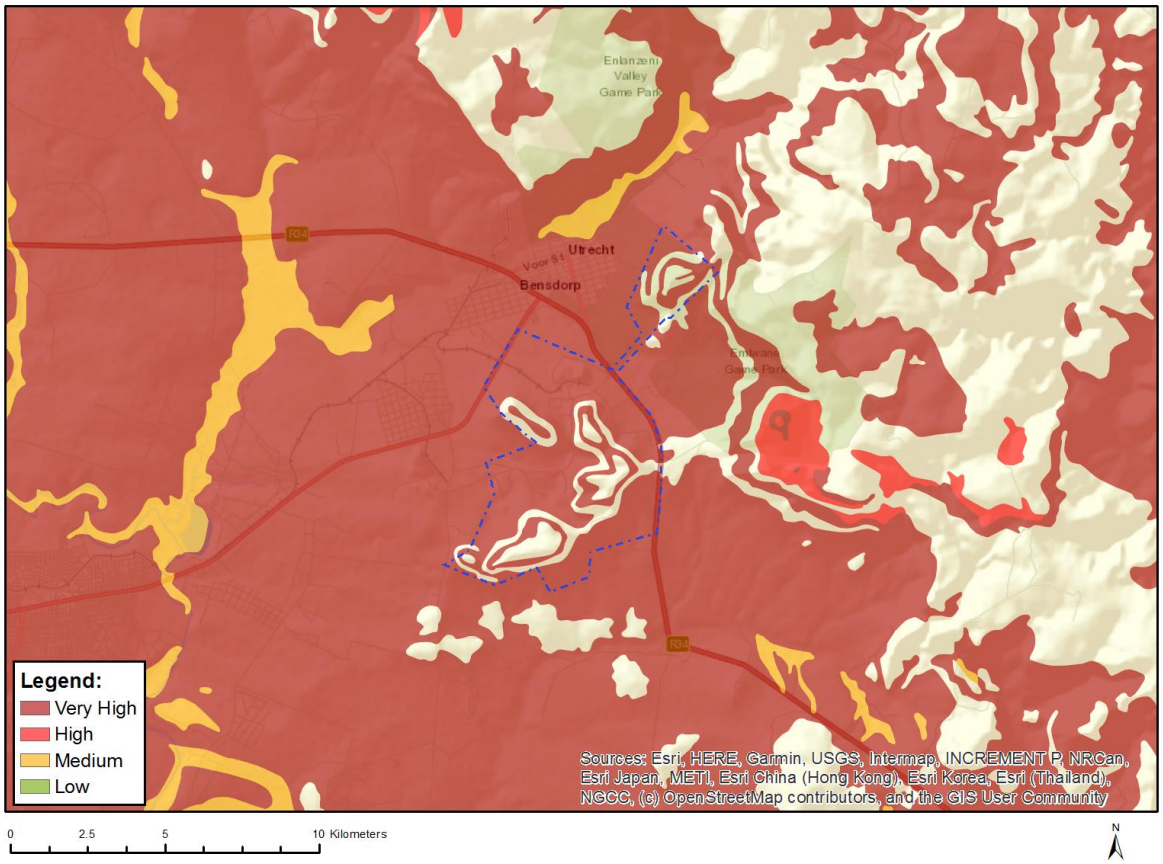


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

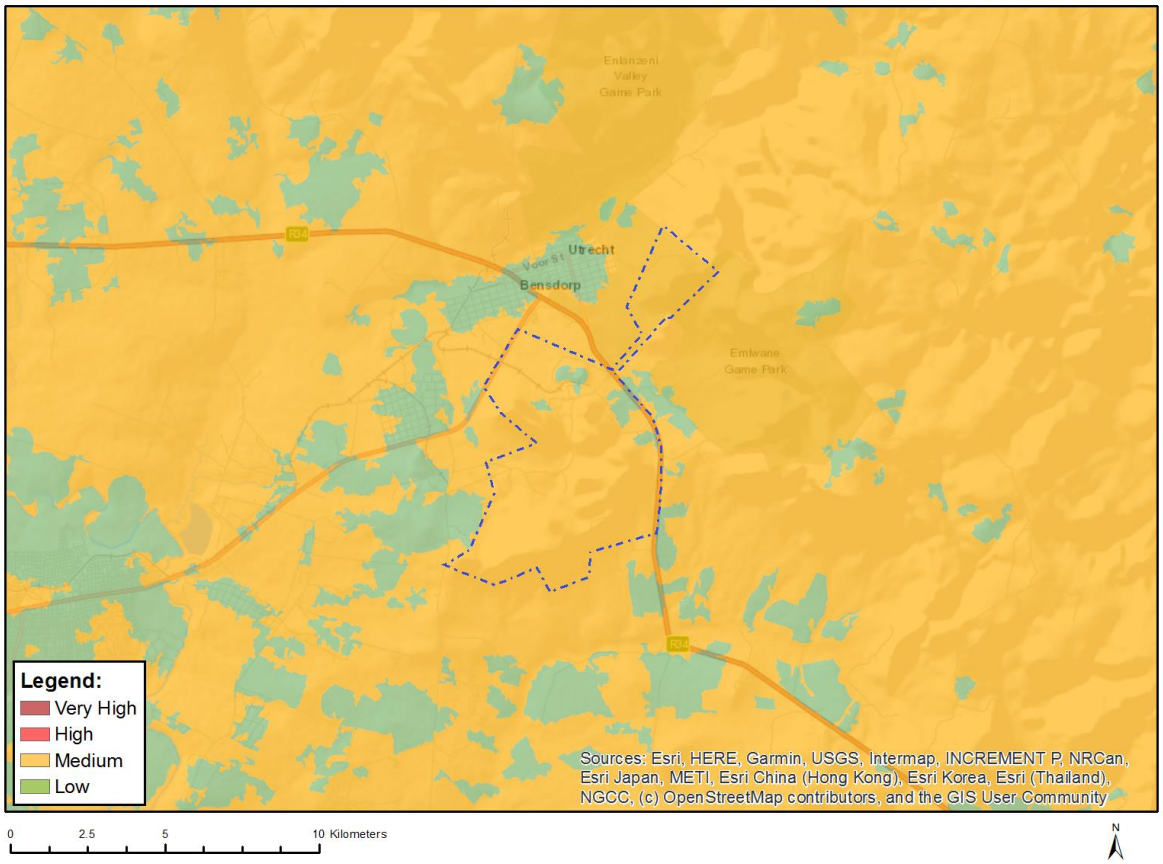


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Features with a Very High paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



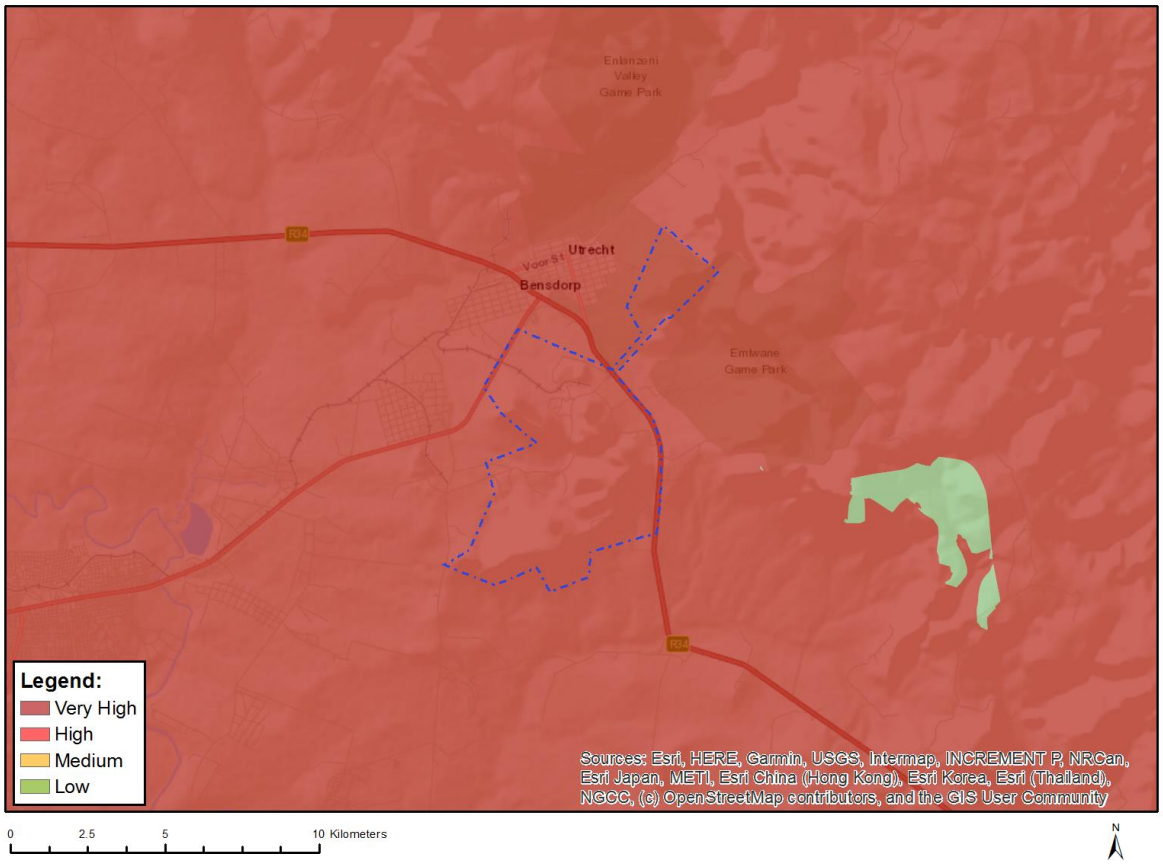
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Sensitive species 1003
Medium	Lotononis amajubica
Medium	Sensitive species 41
Medium	Sensitive species 998
Medium	Sensitive species 1152
Medium	Sensitive species 1086
Medium	Sensitive species 321
Medium	Gerbera aurantiaca
Medium	Polygala praticola

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	CBA: Optimal
Very High	FEPA Subcatchment
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	Balele/Enlanzeni Valley Game Park
Very High	Emlwane Game Park Private Nature Reserve
Very High	Utrecht Town Park Private Nature Reserve
Very High	SWSA (SW) _Enkangala Grassland
Very High	VU_Northern KwaZulu-Natal Moist Grassland
Very High	EN_Income Sandy Grassland

APPENDIX B: EAP INFORMATION

Appendix B1 – Project Team CV's

Tarryn Dale

Senior Environmental Specialist

Pr.Sci.Nat (Reg No: 400242/13)

CORE SKILLS

- Environmental Project Management and Planning
- Environmental Science
- Data Management
- Report Writing
- Environmental Legislation
- Compliance Monitoring
- Specialist and Contract Management
- Risk assessment
- GRI Sustainability Reporting

DETAILS

Qualifications

- BSc (Hons)Zoology (2010)
- BSc Zoology and Botany (2008)

Memberships

- International Association of Impact Assessors (IAIA) – South Africa
- Environmental Law Association (ELA)
- South African Council of Natural Science Professionals (SACNASP)

Languages

- English – Proficient
- Afrikaans – Good

Countries worked in:

- South Africa
- Lesotho

PROFILE

Tarryn Dale is a Senior Environmental Scientist and has been working for GCS Water and Environment (Pty) Ltd since February 2010.

She has experience in project management as well as an incredible understanding, applied knowledge and experience in terms of processes and procedures of the Environmental Legislation of South Africa. All of the above functions require the co-ordination of a specialist team, project management, report compilation and review, budget and time management as well as in depth communication with governmental departments.

Tarryn is registered with the South African Council of Natural Science Professionals (SACNASP) Pr. Sci. Nat. (Reg. No.400242/13).

Tarryn Dale has been seconded to Exxaro Coal Mpumalanga (Pty) Ltd for the past 7 years as an advisor and integral role in their planning and execution phases in terms of licensing and compliance.

Tarryn has the following specialist skills:

- South African Environmental Legislation
- Environmental Impact Assessment and Management
- Risk Assessment and Management
- Compliance Auditing and Monitoring
- Project Planning and Management
- Specialist Co-ordination and Contract Management
- Stakeholder Engagement and Management
- Strategic Planning
- Advisory Role to Engineering and Design Teams
- Environmental Controls Officer
- Sustainability Development and Reporting

KEY PROJECT EXPERIENCE

SPECIFIC EXPERIENCE IN THE MINING INDUSTRY

RSA, 2018 – Current (Environmental Manager): Secondment to Exxaro Coal Mpumalanga (Pty) Ltd: Belfast Expansion Project. Co-ordination of specialists and sub-consultants, integral role in technical/design review providing recommendations to the engineering design team, stakeholder engagement management, manage and pursue all license to operate requirements. Integral role in project risk assessment and management strategies and treatment plans as well as formulation and execution of an appeal management and response strategy. Supporting role to the Exxaro Sustainability, Safety, Health, Environment and Community Department. Ensure compliance with all authorised licenses.

RSA, 2016 – Current (Environmental Manager): Secondment to Exxaro Coal (Pty) Ltd: Thabametsi IPP1 Project. Co-ordination of specialists and sub-consultants, manage and pursue all license to operate requirements for the proposed Mine. Integral role in project risk assessment and management strategies and treatment plans. Supporting role to the Exxaro Sustainability, Safety, Health, Environment and Community Department. Ensure compliance with all authorised licenses. Acting Environmental Controls Officer (“ECO”) on a part-time basis.

RSA, 2013 – Current (Environmental Manager): Secondment to Exxaro Coal Mpumalanga (Pty) Ltd: Belfast Implementation Project. Co-ordination of specialists and sub-consultants, integral role in technical/design review providing recommendations to the engineering design team, stakeholder engagement management, manage and pursue all license to operate requirements for the proposed Mine and Waste and Water treatment facilities, Siding, provincial and access roads and resettlement site (i.e. Integrated Water Use License, Waste Management License, environmental authorisations, rezoning). Integral role in project risk assessment and management strategies and treatment plans as well as formulation and execution of an appeal management and response strategy. Supporting role to the Exxaro Sustainability, Safety, Health, Environment and Community Department. Ensure compliance with all authorised licenses.

RSA, 2013 (Environmental Consultant): Assmang Limited: Beeshoek Iron Ore Mine - Basic Assessment and Water Use License Amendment for the iron ore mine in the Northern Cape Province.

RSA, 2012-2013 (Environmental Consultant): Witkop Exploration and Mining (Pty) Ltd - EIA/EMP and IWULA for a proposed coal mine in the Free State Province.

RSA, 2012-2013 (Environmental Consultant):Witwatersrand Consolidated Resources (Pty) Ltd - Wits Gold SOFS Mining Operation - Mining Right Application in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002), Public Participation, Environmental Scoping Report in terms of the National Environmental Management Act, 1998 (Act 107 of 1998).

RSA, 2012 (Environmental Consultant): Steynol (Pty) Ltd Coal and Clay Project - Public Participation and Mining Right Application in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002).

RSA, 2012 (Environmental Consultant): Cabanga Concepts (Pty) Ltd – Sekoko Siding - Integrated Water Use License Application in terms of the National Water Act, 1998 (Act 36 of 1998).

RSA, 2012 (Environmental Consultant): Sentula Ltd – Nkomati Anthracite Mine – Section 24 G in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

RSA, 2012 (Environmental Consultant): Lerama Resources (Pty) Ltd - Screening Assessment for Roodepoortjie Prospecting Right Area - Prospecting Screening Assessment.

RSA, 2011 (Junior Environmental Consultant): Exxaro Matla Colliery – Stooping and Opencast - Environmental Scoping Report in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002), Public Participation.

RSA, 2011 (Junior Environmental Consultant): Exxaro Matla Colliery – Water Treatment Plant and Brine Ponds- Environmental Scoping Report in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002),Integrated Water Use License Application in terms of the National Water Act, 1998 (Act 36 of 1998), Public Participation.

RSA, 2011 (Junior Environmental Consultant): Mbila Resources (Pty) Ltd – Msebe Colliery - Environmental Scoping Report in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002).

RSA, 2011 (Junior Environmental Consultant): Meruka Mining (Pty) Ltd - Meruka Mining Screening Assessment for Prospecting Right Area.

RSA, 2011 (Junior Environmental Consultant): Total Coal South Africa (Pty) Ltd – Dorstfontein Seam 2– Environmental Auditing and Performance Assessment.

RSA, 2011 (Junior Environmental Consultant): Total Coal South Africa (Pty) Ltd – Forzando North– Environmental Auditing and Performance Assessment.

RSA, 2011 (Junior Environmental Consultant): Total Coal South Africa (Pty) Ltd – Forzando West– Public Participation, Environmental Scoping Report according to the National Environmental Management Act of 1998.

RSA, 2010 (Junior Environmental Consultant): African Exploration Mining and Finance Corporation (Pty) Ltd (AEMFC) - Prospecting Environmental Management Plans and Public Consultation in terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002).

RSA, 2010 (Junior Environmental Consultant): Total Coal South Africa (Pty) Ltd – Dorstfontein East Expansion – Environmental Auditing.

RSA, 2010 (Junior Environmental Consultant): Shanduka Coal (Pty) Ltd – Springlake Colliery Expansion – Environmental Auditing.

PROFESSIONAL EXPERIENCE (UNRELATED TO MINING): -

RSA, 2010 (Project Manager): Khare Inc. Trout Creek: Lost Valley - Integrated Water Use License Application in terms of the National Water Act, 1998 (Act 36 of 1998)

SPECIFIC EXPERIENCE IN SASS5 BIOMONITORING

RSA, 2012 (SASS5 Practitioner): Umthombo Resources (Pty) Ltd – Schoongezicht Colliery – Winter and Summer surveys.

RSA, 2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Tumelo - Winter and Summer surveys.

RSA, 2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Forzando South - Winter and Summer surveys.
RSA, 2011-2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Dorstfontein Seam 2 - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Forzando North - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Forzando West - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Dorstfontein East - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Total Coal South Africa (Pty) Ltd – Springbok SIding - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Zinoju Investments (Pty) Ltd – Aviemore - Winter and Summer surveys.

RSA, 2011-2012 (SASS5 Practitioner): Chemwes (Pty) Ltd – Post-Construction Rehabilitation - Winter and Summer surveys.

RSA, 2011 (SASS5 Practitioner): Sentula Ltd – Nkomati Mine - Winter and Summer surveys.

RSA, 2011 (SASS5 Practitioner): Newtown Lanscape Architects (Pty) Ltd – Luipaardsvlei landfill Site (Baseline Investigation).

RSA, 2011 (SASS5 Practitioner): Cabanga Concepts (Pty) Ltd – World Wide Coal - Winter and Summer surveys.

RSA, 2011 (SASS5 Practitioner): Northam Platinum – Booysendal Construction Camp - Winter and Summer surveys.

RSA, 2011 (SASS5 Practitioner): Zululand Anthracite Colliery – Winter and Summer surveys.

RSA, 2011 (SASS5 Practitioner): Tendele Coal Mine (Pty) Ltd – Somkhele Mine -Winter and Summer surveys.

RSA, 2010 (SASS5 Practitioner): Shanduka Coal (Pty) Ltd – Springlake Colliery - Springlake proposed shaft and new Cliftshaft opencast (Baseline Investigation).

Lesotho, 2010 (SASS5 Practitioner): SSI Engineers and Environmental Consultants – Kao Storm Mountain Diamond Mine (Baseline Investigation).

Rona Schröder

Senior Environmental Assessment Practitioner

CORE SKILLS

- Project Management
- Environmental Impact Assessment
- Water Use Licencing
- Mining Environmental Compliance
- Environmental Compliance Auditing
- Environmental Strategic Action Plans

DETAILS

Qualifications

- B.Sc. (Hons) Environmental Analysis and Management - University of Pretoria (2011)
- B.Sc. Geology and Management - University of the Free State (2012)
- SHEilds (NEBOSH) International General Certificate in Occupational Health and Safety (2018)
- Certificate in Project Management for Strategic Advantage, University of Stellenbosch Business School (2017)

Professional Registrations

- Environmental Assessment Practitioners Association of South Africa (EAPASA) (2020/1149)
- Pr.Sci.Nat (120605), South African Council for Natural Scientific Professionals)
- International Association for Impact Assessors of South Africa (IAIASA)

Languages

- English
- Afrikaans

Countries Worked In

- South Africa
-

PROFILE

Rona has over 10 years's experience within the environmental management, water and mining field and is aimed at delivering the required environmental services for each client.

Rona has experience in the environmental fields as an Environmental Assessment Practitioner as well as having worked in the mining field on-site ensuring environmental compliance for several mining and processing sites.

She has dealt with projects in the mining, municipal, farming, electricity generation, telecommunications and water industries. She has been involved with environmental projects from site screening and feasibility, environmental application, writing of Environmental Management Programes (EMPr), writing of technical reports all the through to Stakeholder Engagement Processes and completing of projects up to issuing authorization permits and licenses.

- Proposal Writing and project management
- Stakeholder Management and Engagement
- Government institution and authority liaison
- Water Use Licence Applications
- Environmental Impact Assessment / Basic Assessments
- Environmental Compliance Officer
- Public Participation Processes
- Environmental Compliance Auditing
- Mining Environmental Projects and Licensing
- Environmental Screening and Site Evaluations
- Environmental Training

Previous Experience

Period	Employer	Position	Role/ Responsibility
2021 - 2023	Ikwezi Mining & Zinoju Coal & Zarbon Coal	Group Environment Manager	**I started as Group Environment Officer for Ikwezi Mining and Zarbon Coal and was promoted to Group Environment Manager for Ikwezi Mining, Zarbon Coal and Zinoju Coal. Here is a brief description of my responsibilities at Ikwezi Mining and Buffalo Coal.** • **Responsible for obtaining all relevant environmental authorizations and licenses for the current mining and plant operations as well as new projects;** • **Managing environmental compliance for opencast and underground mining operations as well as washing plants;** • **Departmental and community liaising on all environmental aspects;** • **Project planning, project management and process management for applications and specialist studies;** • **Developing and reviewing SOPs and COPs for environmental aspects;** • **Environmental Auditing, compliance tracking and reporting;** • **Environmental awareness program development and implementation;** • **Environmental monitoring and reporting;** • **Action plans development and implementation;** • **Guidance and implementation of Environmental Legislation;**
2019 - 2021	ACE Environmental Solutions	Head of Department: Environmental	• **Project Management; Proposal Writing for new projects; Company Marketing; Document Quality Assurance;** • **Environmental Authorizations, Water Use License Applications and Waste Management License Applications;** • **Client and Government Department Liaisons;** • **Environmental Compliance Auditing;** • **Managing of Environmental Impacts Assessments and developing implementable mitigation measures to reduce possible impacts;** • **Managing Stakeholder Engagement Processes for authorizations and licensing**

			applications; • Development and implementation of Environmental Management Plans (EMP); • Developing Protocols for environmental processes
2013 - 2019	Alta van Dyk Environmental Consultants	Environmental Consultant	• Project Management of multi-disciplinary teams; • Please note that our standard 2023 terms and conditions were sent out in December of 2022. • Environmental Compliance Auditing of Authorizations (ECO), Authorizations and Environmental Management Programmes (EMP); • Project Management for Environmental Processes under the National Environmental Management Act (NEMA), Mineral and Petroleum Resources Development Act (MPRDA) and National Water Act (NWA); • Environmental Authorization, Water Use License and Waste Management License Applications; • Proposal Writing for new projects; • Identification and assessments of Environmental Impacts Assessments and developing implementable mitigation measures to reduce possible impacts; • Report Writing and reviewing; Client and Government Department Liaisons; • Stakeholder Engagement Processes for authorizations and licensing applications; • Development and implementation of Environmental Management Plans (EMP); • Developing License Auditing Protocols for conducting environmental legal compliance audits, • Experience as a Data Controller for a large international company with several operations as part of their due diligence process and management system actions;
2013	**Prime Africa Consultants**	**Risk Assessment Matrix Developer**	• Developing a Multi Criteria Risk Assessment Matrix for site selection during Environmental Impact Assessments.

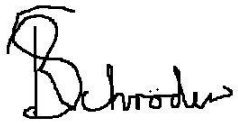
Project Experience

Year	Client	Project Description	Role/Responsibility
2013-2015	Pandora Platinum Mine	Environmental Impact Assessment and Water Use Licence Application	Environmental Practitioner
2014	Lonmin Plc	Baobab, Dwaalkop and Doornvlei External Water Use Licence Audits	Environmental Practitioner
2014-2019	Lonmin Plc	Marikana Operations Water Use Licence Audit	Environmental Practitioner
2015	Lonmin Plc	Precious Metal Refinery Water Use Licence Application	Environmental Practitioner
2015-2016	Lonmin Plc	Marikana Operations Water Use Licence Application	Environmental Practitioner
2016	Keaton Energy	Vanggatfontein Colliery Wash Plant Extension Authorisation	Environmental Practitioner
2016-2018	Keaton Energy	Vanggatfontein Colliery External Water Use Licence Audits	Environmental Practitioner
2016	Nqutu Local Municipality	Rural Electrification Project Ndodekhling-Shayiwe Small Scall Hydropower Plant	Environmental Practitioner
2016	Mhlontlo Local Municipality	Rural Electrification Project Kwa-Madiba Small Scale Hydropower Plant	Environmental Practitioner
2016	Anglo Thermal Coal	Licence and Permitting Database Development – For all Coal Operations	Data Controller
2016	Anglo Platinum	Licence and Permitting Database Development – For all Platinum Operations	Data Controller
2019	Ekurhuleni Metropolitan Municipality	Mooifontein Cemetery Extension Water Use Licence Application	Environmental Practitioner
2019	Blue Valley Golf Estate	Environmental Management Programme	Environmental Practitioner
2017	Nkomati Anthracite	Water Use Licence Audit Report	Environmental Practitioner
2017	Nkomati Anthracite	Basic Assessment Report	Environmental Practitioner
2017-2019	Lonmin Plc	Baobab, Dwaalkop and Doornvlei External Water Use Licence Audits	Environmental Practitioner
2018	Glencore	Chrome Plant Environmental Impact Assessment and Water Use Licence Application	Environmental Practitioner

2018-2019	Lonmin Plc	Precious Metal Refinery Water Use Licence Audit	Environmental Practitioner
2018-2019	Lonmin Plc	Marikana Operations Water Use Licence Application Amendment	Environmental Practitioner
2020-2021	Atlas Towers	Telecommunications Mast Basic Assessments	Project Manager and Environmental Practitioner
2021-2023	Ikwezi Mining	Opencast Mining and Coal Washing Plant Compliance	Group Environmental Manager
2022-2023	Buffalo Coal	Underground Mining and Coal Washing Plant Compliance	Group Environmental Manager

DECLARATION

I, Rona Schröder, hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and I undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, I am aware that I may be held liable for it.

Signature:  Date: 15/01/2024

Environmental Assessment Practitioners Association of South Africa

Registration No. 2020/1149

Herewith certifies that

Rona Schroder

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2024

Expires: 28 February 2025

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Rona Wilma Schroder

Registration Number: 120605

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following field(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **11 September 2019** Expires **31 March 2025**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

28055749

Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae Honores

in

Omgewingsanalise en -bestuur

met al die regte en voorregte daaraan verbonde by geleentheid van 'n kongregasie van die Universiteit toegeken is aan

Rona Wilma Schroder

kragtens die Wet op Hoër Onderwys, 1997 en die Statuut van die Universiteit

Namens die Raad en die Senaat

C. de la Rey

Visekanselier en Rektor

Namens die Fakulteit
Natuur- en Landbouwetenskappe

Dekaan

Registrateur

2013-04-17

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THIS IS TO CERTIFY THAT THE DEGREE HIERMEE WORD VERKLAAR DAT DIE GRAAD

Baccalaureus Scientiae

HAS BEEN CONFERRED UPON
TOEGEKEN IS AAN

SCHRÖDER, Rona Wilma

IN ACCORDANCE WITH THE STATUTES AND REGULATIONS OF THE UNIVERSITY. AS WITNESS OUR RESPECTIVE SIGNATURES AND THE SEAL OF THE UNIVERSITY BELOW.

NADAT AAN DIE STATUTE EN REGULASIES VAN DIE UNIVERSITEIT VOLDOEN IS. AS BEWYS DAARVAN PLAAS ONS ONS ONDERSKEIE HANDTEKENINGE EN DIE SEëL VAN DIE UNIVERSITEIT HIERONDER.

ENDORSEMENT: GEOLOGY AND MANAGEMENT
ENDOSSEMENT: GEOLOGIE EN BESTUUR

VICE- CHANCELLOR / VISEKANSELIER

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Management of international health and safety

A unit of the:
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NEBOSH International Certificate in Construction Health and Safety
NEBOSH International Certificate in Fire Safety and Risk Management

Rona Wilma Schroder

achieved this unit on

12 November 2018

William Nixon
Chair

Ian Taylor
Chief Executive

Master log certificate No: IGC1/00447107/1026644
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Hiermee word gesertifiseer dat
It is hereby certified that

Rona Wilma Schroder

die volgende kursus suksesvol voltooi het
successfully completed the following course

PROJECT MANAGEMENT FOR STRATEGIC ADVANTAGE (ONLINE)

Number of Short Course Credits : 8

Vir die periode
Over the period

24/01/2017 - 10/03/2017

Prof Piet Naude
Director/Direkteur USB

Frik Landman
Chief Executive Officer
Hoof-Uitvoerende Beampte

USB Executive Development
University of Stellenbosch Business School

4497/55470

Gerda Bothma

GCS Group Environmental Manager

CORE SKILLS

- Project Management
- Technical & Impact Assessment Guidance
- Environmental Assessment
- Water Use Licencing
- Waste Management Licencing
- Environmental & Waste Auditing and Compliance Monitoring

DETAILS

Qualifications

- B.Sc. Microbiology (Honours) University of Pretoria 1996
- B.Sc. Biological Sciences University of Pretoria 1994

Memberships/ Professional Affiliations

- International Association for Impact Assessors of South Africa (IAIA)
- Institute of Waste Management of South Africa (IWMSA)
- SACNASP (No.117348) (South African Council for Natural Scientific Professionals)

Languages

- Afrikaans
- English

Countries worked in:

South Africa, Zambia, Namibia

PROFILE

Gerda has over 25 years' experience within the environmental and waste management field and strives to deliver custom environmental services to clients.

Gerda began her career in the environmental field within the government sector, managing environmental aspects and impacts as well as reviewing environmental assessments with the view of authorizing or declining authorization of the developments.

After six years within the government sector she joined a consulting engineering firm where she was ultimately responsible for the Management of the Environmental Sub-Division. Gerda has experience in project and client management, financial management and the compilation and costing of project proposals and tenders. She has been involved in several engineering projects as the Environmental Assessment Practitioner as well as the Environmental Control Officer during construction working closely with the Occupational Health and Safety Officer. Gerda has also been involved in projects where waste licensing as well as water use licensing processes formed an integral part of the services offered. Environmental auditing and compliance monitoring of waste disposal sites also forms part of her experience gained. She also has experience in dealing with projects which involve NEC3 Contracts, the Equator Principles and World Bank IFC Principles.

Gerda has specialist skills in the following areas:

- Project proposals, planning, costing and timing
- Project and Client Management
- Authority Liaison
- Basic Assessments & Scoping/EIA Processes
- Amendment of EA's & EMP's
- S24G Applications
- Facilitation of Public Participation Processes & Stakeholder Engagement
- IWULA & IWWMP Applications
- Environmental Control Officer (ECO) duties
- Environmental Compliance Auditing (IFC Performance Standards & Equator Principles)
- Mentorship & Guidance

Period	Employer	Position	Role/ Responsibility
2019 to Current	GCS Water and Environment (Pty) Ltd	Environmental Manager	Management of the environmental unit since 2019 up to January 2024 and then the GCS Group Environmental Division since February 2024. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2018 to 2019	Terramanzi Group (Pty) Ltd	Senior Environmental Consultant	Management of the environmental unit within the Terramanzi Group. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2014 to 2017	GIBB (Pty) Ltd	Senior Environmental Scientist	Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking of basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2011 to 2013	WorleyParsons RSA	Senior Environmental Scientist & Durban Department Head Environment	Management of the environmental unit in the Durban Office. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking of basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2003 to 2011	KV3 Engineers	Senior Environmental Scientist	Management of applications for exemption from compliance with the EIA Regulations, undertaking of basic environmental assessment applications, as well as full environmental impact assessment applications.
2000 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Assistant Director: Waste Management Division	Project management and environmental management pertaining to all developments within a designated area in Gauteng Province. Review of EIAs, formulation of comments and or authorisations within designated area in Gauteng Province. Liaison with waste contractors, industries and others. Management of legal interventions required in terms of environmental legislation within a designated area. Supporting environmental officers at all levels in terms of technical and environmental guidance, input into strategic decisions, resolving complex and potentially challenging issues.
1999 to 2000	Gauteng Department of Agriculture, Conservation & Environment	Senior Environmental Officer: Waste Management Division	
1997 to 1999	Gauteng Department of Agriculture, Conservation & Environment	Environmental Officer: Waste Management Division	
1996	Spartan Private School	Teacher: Natural Science & Biology	Teacher in Biology and Natural Science for Grades 7 to 12.

Year	Client	Project Description	Role/ Responsibility
Strategic and Environmental Guidance Projects			
1999 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Development of a Health Care Risk Waste Management Strategy for Gauteng.	Part of Development Team
2001 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Development of Minimum Domestic Waste Collection Standards for Gauteng Province.	Part of Development Team
2002	Gauteng Department of Agriculture, Conservation & Environment	Development of new EIA guidelines and regulations for the Gauteng Province.	Part of Development Team
2005	Gauteng Department of Agriculture, Conservation & Environment	GDACE Green Procurement Project: Development of the GDACE Green Procurement Policy, Gauteng	Project Manager & Reviewer
2008	GAUTRAIN Project Engineers (i.e. KV3 Engineers)	Environmental Assistance for the Gautrain Project: Environmental Evaluation of various documentation and engineering designs in terms of their environmental compliance.	Project Manager & Reviewer
2009	Department of Environmental Affairs	Alignment of MIG Project Process with EIA Process: Evaluation of the EIA process as well as the MIG process in order to produce a process alignment guideline to the municipalities to streamline the two processes.	Part of Development Team
2021	CoalTech	Development of "A Manual for the Authorisation of Pitlakes as a Closure Option for South African Coal Mines"	Part of Development Team
Environmental Feasibility and Screening			
2008	Nu Way-property Developments	Management of Environmental Screening and Due Diligence Assessment for several proposed Nu Way-property Developments, Gauteng.	Project Manager
2008	Department of Water Affairs	Mokolo Croc WAP Environmental Feasibility and Screening, Limpopo.	Project Manager & Senior Environmental Assessment Practitioner (EAP)
2016	Kwadukuza Municipality	Environmental Feasibility for Civil Engineering Project Foxhill Road Alignment and Construction, Tongaat, Kwa-Zulu-Natal.	Environmental Project Leader
2016	King Sabata Dalindyebo Local Municipality (C/O OR Tambo District Municipality)	Environmental Screening Investigation of six proposed development corridors for the Mthatha Bulk Water Infrastructure Presidential Intervention – Phase 2: Secondary Bulk Infrastructure project.	Environmental Project Leader
2019 to 2020	Phumaf Holdings (Pty) Ltd	Environmental Screening for various sites within Ekhurhuleni Municipality as part of the Gauteng Rapid Land Release Programme (GRLRP) project for the Provincial Department of Human Settlements	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Environmental Opinions & Appeals			
2019 to 2020	Tendele Coal	Environmental Review Report for the Somkhele Anthracite Mine (MR 10041) High Court Case Number 82865.	Project Manager & Senior EAP
2022	CNG Holdings	Environmental Opinion regarding the Environmental Legislative Requirements for the proposed Compressed Natural Gas Motherstation in Avoca, KwaZulu-Natal.	Project Manager & Senior EAP
2021 to 2022	Tendele Coal	Environmental support to the Somkhele Anthracite Mine for the IWULA Appeals Process.	Project Manager & Senior EAP
Development Environmental Assessments			
2003 to 2005	ABSA DevCO	Environmental Impact Assessment for a change of land-use from agricultural to Residential and Town Development of the farm Brakfontein 399 JR, Centurion, Gauteng.	Project Manager & Senior EAP
2005 to 2010	Air Traffic Navigation Services (ATNS)	The project entails the upgrading of existing, and the provision of new air navigation sites (27 in total) throughout South Africa. Civil and electrical infrastructure to the sites needed to be upgraded to accommodate the equipment. Various Environmental Impact Assessments for various individual projects in various provinces within South Africa.	Project Manager & Senior EAP
2006 to 2009	Amathole District Municipality	Elliotdale Rural Sustainable Human Settlement Pilot Project Environmental Impact Assessment. Responsible for the environmental assessment process which was based on a strategic approach for the Elliotdale Rural Housing Project, Elliotdale, Eastern Cape.	Project Manager & Senior EAP
2007	Elkem Ferroveld	Environmental Basic Assessment for the upgrading and expansion of the Ferroveld Plant in Ferrometals, Emahlaheni, Mpumalanga.	Project Manager & Senior EAP
2008	ABSA DevCO	Environmental Impact Assessment for a change in land use from agricultural to Residential and Town development of Montana X40, Pretoria, Gauteng.	Project Manager & Senior EAP
2012	Transnet Capital Projects	Environmental Basic Assessment and technical environmental investigations for the proposed expansion of the existing tug jetty and construction of a new tug jetty for Transnet Capital Projects in the Port of Durban, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2016	Dube TradePort	Environmental Impact Assessment for the proposed construction of the Dube TradePort TradeZone 2 in La Mercy, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2017	Dube TradePort	Environmental Impact Assessment for the proposed Support Precinct 2 Development in La Mercy, KwaZulu-Natal.	Project Manager & Senior EAP
2016 to 2017	Areena Resort	Application for rectification in terms of S24G and associated Environmental Basic Assessment for the alleged unlawful construction activities at the Areena Resort, Great Kei Municipality, Eastern Cape.	Project Manager & Senior EAP
2016 to 2017	Areena Resort	Application for rectification in terms of S24G and associated Environmental Basic Assessment for the alleged unlawful construction activities on Hillsdrift Farm, Great Kei Municipality, Eastern Cape.	Project Manager & Senior EAP
2018 to 2019	Watchman Properties (Pty) Ltd	Environmental Basic Assessment for the proposed Vendome Residential Development on Portion 1 of Farm 1766 and Portion 2 of Farm 1766, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2018 to 2019	Keysha Investments 213 (Pty) Ltd	Environmental Basic Assessment for the proposed River Farm Estate Development and associated infrastructure on remainder of farm Rivierplaas No. 1486, Erf 111 and Erf 197, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2018 to 2019	Paarl Vallei Developments (Pty) Ltd	Environmental Basic Assessment for the proposed Paarl Valleij Retirement Village Development, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2018 to 2019	Val de Vie Investments (Pty) Ltd	Parallel Substantive Amendment Application process for the authorised Pearl Valley II & Levendal Residential Developments, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2019 to 2021	Phumaf Holdings (Pty) Ltd	Environmental Services for: • Full Environmental Impact Assessment for the proposed Unitas Park Ext 16 Mixed Use Development; • Basic Environmental Impact Assessment for the proposed Evaton West F Mixed Use Development; and • Basic Environmental Impact Assessment for the proposed Evaton West I Mixed Use Development.	Project Manager & Senior EAP
Renewable Energy Environmental Assessments			
2011	Farmsecure Carbon	Environmental Basic Assessment and Water Use License Application process for a proposed Biogas Waste to Energy project for a pig farm, Mooiriver, KwaZulu-Natal.	Project Manager & Senior EAP
2018 to 2019	GPIPD – Doornfontein Solar Farm (Pty) Ltd	Environmental Impact Assessment for the proposed 230 MW Doornfontein Photovoltaic Solar Energy Facility (PVSEF) located on Remainder of Farm 118, Doornfontein, Piketberg, Bergrivier Local Municipality, Western Cape.	Project Manager & Senior EAP
2018 to 2019	GPIPD – Kruispad Solar Farm (Pty) Ltd	Environmental Impact Assessment for the proposed 150 MW Kruispad Photovoltaic Solar Energy Facility (PVSEF) located on Remainder of Farm 120, Kruispad, Piketberg, Bergrivier Local Municipality, Western Cape.	Project Manager & Senior EAP
2018 to 2019	Brandvalley Wind Farm (Pty) Ltd	Part 2 Amendment Application for the authorised 140 MW Brandvalley Wind Energy Facility (WEF) located within the Karoo Hoogland, Witzenberg and Laingsburg Local Municipalities in the Northern and Western Cape Provinces.	Project Manager & Senior EAP
2018 to 2019	Copperton Wind Farm (Pty) Ltd	Non-Substantive Amendment Application to update the information of the Holder of the Environmental Authorisation & an EMPr Amendment Process to update the Airstrip Alignment and to provide an updated “outcomes based” EMPr for the Copperton Wind Energy Facility near Copperton in the Northern Cape.	Project Manager & Senior EAP
2018 to 2019	WKN Windcurrent SA (Pty) Ltd	Environmental Impact Assessment for the proposed 150 MW Haga Haga Wind Energy Facility (WEF) & Environmental Basic Assessment for the associated Haga Haga Overhead Powerline (OHPL) in Haga Haga, Great Kei Local Municipality, Eastern Cape.	Project Manager & Senior EAP
2021 to 2022	Cennergi Holdings	Environmental Impact Assessment and Water Use License Application (GA) process for the proposed 100MW Lephalale Solar Plant located mainly on the Farm Appelvlakte 448 within the Lephalale Local Municipality, Limpopo.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Mining Environmental Assessments			
2007	Chris Hani Municipality	Environmental Assessment and DME Licence Application on behalf of Chris Hani Municipality. Responsible for exemption application from Mining Permit and Environmental Management Programmes for 17 borrow pits in Middelburg, Eastern Cape.	Project Manager & Senior EAP
2010	Samancor Chrome Limited	The Lwala Greenfields Mine and Smelter EIA and EMP. Responsible for the Environmental impact assessment and technical investigations for the waste management issues for the proposed development of a new chrome smelter project in the Steelpoort area, Limpopo.	Project Manager & Senior EAP
2011	Xtrata Alloys	Xtrata Alloys Western Mines PSV application for authorization in terms of the MPRDA. Responsible for the undertaking of the EIA and compilation of the amended EMPr and technical environmental investigations for the proposed development of an open cast mine in Rustenburg, North West.	Project Manager & Senior EAP
2019 to 2021	Harmony Gold	Environmental Assessment process to obtain environmental authorisation for the proposed expansion of the existing Kareerand Tailings Storage Facility, Dr Kenneth Kaunda District Municipality, North-West Province.	Project Manager & Senior EAP
2019 to 2021	Zululand Anthracite Colliery	Environmental Basic Assessment for the proposed New Mngeni Adit & Associated Infrastructure, Mandlakazi Traditional Authority, KwaZulu-Natal.	Project Manager & Senior EAP
2021 to 2022	Sibanye-Stillwater	Part 2 Amendment Application for the approved Burnstone Gold Mine EA/EMPr located near Balfour within the Dipalaseng Local Municipality, Mpumalanga.	Project Manager & Senior EAP
2021 to 2022	Exxaro Resources	Section 34 EMPr Amendment Application for the approved Grootegeluk Mine EMPr located near Lephalale within the Lephalale Local Municipality, Limpopo.	Project Manager & Senior EAP
2021 to 2022	Booysendal Northam Platinum	Part 2 Amendment Applications for the Booysendal Mine located near Lydenburg, across both Mpumalanga and Limpopo provices: • Booysendal North Mine: New Emergency Escape Portal and two new Ventilation Shafts and associated Infrastructure; and • Booysendal South Mine: New Ventilation Shafts and associated infrastructure.	Project Manager & Senior EAP
2022 to 2023	Booysendal Northam Platinum	Integrated Environmental Authorisation Application for the Booysendal South Phase III Expansion, Lydenburg, Mpumalanga: • Booysendal South Tailings Storage Facility Expansion; • Booysendal South Run of Mine Stockyard Stockpile Expansion; and • Booysendal South New Merensky Plant.	Project Manager & Senior EAP
2022 to 2023	Kangra Coal	Integrated Environmental Authorisation Application for the establishment of a Co-Disposal Discard Facility and Wastewater Treatment Plant at the Maquasa East Operations, Piet Retief, Mpumalanga.	Project Manager & Senior EAP
2023	Kangra Coal	Integrated Environmental Authorisation Application for the Umgala/Knights Hill Mining Application, Utrecht, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Waste Management Environmental Assessments			
2003	Assmang Chrome Machadodorp	Environmental Impact Assessment for the permitting of the H:H Hazardous Waste Disposal Facility at Assmang Chrome, Machadodorp.	Senior EAP
2004	Emfuleni Local Municipality	Environmental Impact Assessment for the closure of the Zuurfontein Landfill site for the Emfuleni Local Municipality, Sedibeng, Gauteng	Senior EAP
2004	Ekurhuleni Municipality	Environmental Impact Assessment for the closure of the Sebenza Landfill Site for the Ekurhuleni Municipality, Gauteng.	Senior EAP
2004	Tzaneen Local Municipality	Application for authorisation and EIA for the permitting of an existing solid waste disposal site for the Tzaneen Local Municipality, Mpumalanga.	Senior EAP
2006	Samancor Chrome Middelburg	Environmental Basic Assessment for the permitting of the existing Slag Waste Disposal facility for Samancor Chrome Middelburg, Mpumalanga.	Senior EAP
2006	Samancor Chrome Ferrometals	Environmental Basic Assessment for the permitting of the existing Slag Waste Disposal facility for Samancor Chrome Ferrometals Witbank, Mpumalanga.	Senior EAP
2007	Steve Tshwete Municipality	Environmental Impact Assessments for four Solid waste Transfer Stations for the Steve Tshwete Municipality, Mpumalanga.	Senior EAP
2008	Assmang Chrome Machadodorp	Environmental Impact Assessment for the expansion of the existing Slag Waste Disposal Facility at Assmang Chrome. Responsible for the EIA application for authorization for the proposed expansion project in Machadodorp, Mpumalanga.	Project Manager & Senior EAP:
2010	ArcelorMittal	ArcelorMittal BOF Slag Disposal site licensing of new site and closure of old site, Newcastle, KwaZulu-Natal.	Project Manager & Senior EAP:
2010	Lekwa Municipality	Waste Management License Application for authorization and the conducting of an EIA and technical environmental investigation for the proposed development of two landfill sites for the Lekwa Municipality, Mpumalanga.	Project Manager & Senior EAP:
2015 to 2017	Umgungundlovu Municipality	Advanced Solid Waste Management Project for Umgundgundlovu Municipality for proposed Materials Recovery Facilities located in various Local Municipalities, Umgungundlovu Municipality, KwaZulu-Natal.	Project Manager & Senior EAP:
2019 to 2022	Buffalo Coal	Magdalena Colliery Waste Management License Application, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP:
Water and Wastewater Environmental Assessments			
2004	Msukaligwa Municipality	Environmental Impact Assessment for the installation of a water reticulation system at Nganga for the Msukaligwa Municipality, Mpumalanga.	Senior EAP
2006 to 2010	eThekwini Municipality: Water and Sanitation	Proposed upgrading of the WWTW capacity in the Northern Areas of the eThekwini Municipality. Responsible for EIA application for authorization, technical environmental investigations, and waste management license application for the proposed expansion of the WWT capacity in Northern eThekwini, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2008	Johannesburg Water	Environmental Management Services for Johannesburg Water: Environmental Impact Assessment (Exemption) for various individual projects related to the upgrading of the Bryanston Water Mains, Gauteng.	Project Manager & Senior EAP
2014 to 2017	eThekwini Municipality: Water and Sanitation	Environmental Basic Assessment and Water Use License Application for the Northern Aqueduct Water Augmentation Project (Phase 5), Durban, KwaZulu-Natal.	Project Manager & Senior EAP
Electrical and Linear Environmental Assessments			
2005	Magallies Water	Application for (exemption) authorisation on behalf of Magallies Water for the installation of the Rising Main from the Roodeplaat Waterworks to the Wallmannsthal Reservoir, in Wallmannsthall, Gauteng.	Senior EAP
2010	Moloto Rail Corridor Development	EIA for the Moloto Rail Corridor Development. Responsible for the EIA application for authorization and technical environmental investigations for the proposed Moloto Rail Corridor Development, Moloto, Gauteng.	Project Manager & Senior EAP
2010	ESKOM	Environmental Basic Assessment of for the ESKOM Honingklip 88kV & ESKOM Randjiesfontein 88kV overhead line and Sub-Stations, Johannesburg, Gauteng.	Project Manager & Senior EAP
2010	ESKOM	Environmental Basic Assessment of for the ESKOM Ubertas Strategic Servitude Sub-Station, Johannesburg, Gauteng	Project Manager & Senior EAP
2014 to 2017	Msunduzi Municipality	Environmental Impact Assessment for the proposed Msunduzi IRPTN project, Pietermaritzburg, KwaZulu-Natal	Project Manager & Senior EAP
Environmental and Waste Management Compliance Monitoring and Auditing			
2005 to 2009	Sedibeng District Municipality	Auditing of Zuurfontein and Boitshepi Landfill sites for the Sedibeng District Municipality, Gauteng.	Part of Audit Team
2006 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Amberfield Development on the farm Brakfontein 399 JR, Centurion, Gauteng.	Project Manager & Environmental Control Officer (ECO)
2007 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Zambezi Estate Development, Montana, Gauteng.	Project Manager & ECO
2008 to 2009	Steve Tshwete Municipality	Auditing of Middelburg Landfill Site for the Steve Tshwete Municipality, Mpumalanga.	Part of Audit Team
2008 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Cedar Creek Development, Fourways, Gauteng.	Project Manager & ECO
2017 to 2018	Dube TradePort	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the construction of TradeZone 2, Dube TradePort, La Mercy, KwaZulu-Natal.	Project Manager & ECO
2017	Richards Bay Minerals	Environmental Legal Compliance Audit to determine the level of compliance of Richards Bay	Project Manager &

Year	Client	Project Description	Role/ Responsibility
		Minerals' to their various mining, water and waste licenses and environmental authorisations and permits, Richards Bay, KwaZulu-Natal.	Environmental Auditor
2017 to 2018	eThekwini Municipality	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the construction of the Northern Aqueduct Phase 5, Durban, KwaZulu-Natal.	Project Manager & ECO
2019	Buffalo Coal	Annual EMPr and WUL audits for Coalfields, Aviemore and Magdalena Operations, Dundee, KwaZulu-Natal.	Project Manager & Lead Auditor
2020	Buffalo Coal	Annual EMPr and WUL audits for Coalfields, Aviemore and Magdalena Operations, Dundee, KwaZulu-Natal.	Project Manager & Lead Auditor
2020	Samancor Eastern Chrome Mines	Annual Performance Assessment Audits for the following mines in Limpopo: • Doornbosch, Steelpoort and Montrose Mines; • Quartz Mine; • Lwala Mine; • Lannex Mine; • Spitskop Mine; and • Tweefontein Mine.	Project Manager & Technical Review
2020	ESKOM	ESKOM Biennial PCB Phase-out Compliance Audit, various sites within South Africa.	Project Manager & Lead Auditor
2020	ESKOM	Majuba Power Station Legal Compliance Audit, Volksrust, Mpumalanga.	Project Manager & Lead Auditor
2021	Zululand Anthracite Colliery	Annual IWUL Audit for 2020, Mandlakazi Traditional Authority, KwaZulu-Natal	Project Manager & Technical Review
2021	ESKOM	Kendal Power Station Legal Compliance Audit, eMalahleni Local Municipality, Mpumalanga.	Project Manager & Lead Auditor
2021	Coalition Trading	External Compliance Audit for the Humberdale Landfill Site, in terms of the Waste Management Permit, KwaZulu-Natal	Project Manager & Auditor
2021	Tronox KZN Sands (Pty) Ltd	NEM: WA Norms and Standards External Waste Compliance Audit for the Tronox Central Processing Complex located in Empangeni, KwaZulu-Natal	Project Manager & Lead Auditor
Integrated Water Use License Applications			
2010	FOSKOR	Integrated Water Use License Application for a new storage dam for FOSKOR, Richards Bay, KwaZulu-Natal.	Part of Project Team
2014 to 2015	SANRAL	Integrated Water Use License Applications as required for the proposed SANRAL N2 Road upgrade from Mthunzini to Empangeni, KwaZulu-Natal.	Project Manager & Senior EAP
2014	eThekwini Municipality: Roads	Integrated Water Use License Application for the proposed Realignment of Inanda Arterial Road, Durban, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2015 to 2017	SMEC (Umzimkulu Municipality)	Integrated Water Use License Application for the proposed Licensing of the existing Umzimkhulu Waste Water Treatment Works, Umzimkhulu, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2016	eThekwini Municipality: Roads	Water Use License Application for the proposed eThekwini BRT Route C1A, Durban, KwaZulu-Natal.	Project Manager & Senior EAP
2019 to 2020	Zululand Anthracite Colliery	Integrated Water Use License Application for the new Mngeni Adit and associated infrastructure, Mandlakazi Traditional Authority, KwaZulu-Natal.	Project Manager & Senior EAP
2019 to 2021	South32 SA Coal Holdings	Integrated Water Use License Application for the Roy Point Mine, Newcastle, KwaZulu-Natal.	Project Manager & Senior EAP
2020 to 2022	Buffalo Coal	Integrated Water Use License Amendment Application for the Magdalena Colliery, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP
2020 to 2022	Buffalo Coal	Integrated Water Use License Application for the Coalfields Processing Plant, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP
Management and Master Plans			
2005	Livingstone Municipality	Development of the Livingstone Integrated Development Plan, Zambia.	Part of the Project Team
2008	Steve Tshwete Municipality	Development of an Integrated Waste Management Plan for the Steve Tshwete Municipality, Mpumalanga.	Part of the Project Team
2008	Kungwini Local Municipality	Development of an EMP (Framework) for Kungwini Local Municipality, Mpumalanga.	Part of the Project Team
2010	KZN Department of Public Works – Southern Region	Compilation of an Environmental Management Plan for the Fort Napier sewage upgrading project, Pietermaritzburg, Kwa-Zulu Natal.	Project Manager & Senior EAP

DECLARATION

I, ___Gerda Bothma_____ hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and I undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, I am aware that I may be held liable for it.

Signature:  _____ Date: 21/02/2024

APPENDIX C: PUBLIC PARTICIPATION

Appendix C1 – Scoping PPP Notification Documentation

Newspaper Advertisements

KANGRA

APPLICATION FOR INTEGRATED ENVIRONMENTAL AUTHORISATION FOR THE RE-COMMISSIONING OF COAL MINING ACTIVITIES AT THE UMGALA COLLIERY AND CONSTRUCTION OF THE KNIGHT'S HILL ADIT AREA IN THE UTRECHT AREA, KWAZULU-NATAL

• GCS Ref. No: 22-0649 • DMRE Ref.: KZN 30/5/1/2/2/10125 MR

The Welgedacht Exploration Company (Pty) Ltd (Welgedacht) is a subsidiary of Unyezi Coal (Pty) Ltd (Unyezi Coal) which is an affiliate company of Kangra Coal (Pty) Ltd, falling within the greater Menar group structure. Menar is the holder of the mining right of the Umgala and Knight's Hill operations, under one mining right (KZN 30/5/1/2/2/101125 MR), located approximately 3km from Utrecht, within the Emadlangeni Local Municipality in the Kwazululu Natal Province. The re-commissioning of coal mining at Umgala and Knight's Hill is proposed, and the following application processes are required:

- Integrated Environmental Authorisation (IEA) application through a Scoping and Environmental Impact Reporting (S&EIR) process and the compilation of an Environmental Management Programme (EMPr) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) Regulations (2014, as amended).
- Waste Management License (WML) application for the Umgala Discard facility, included in the IEA Application process for the identified waste management activities outlined in the Waste Management License (WML) Regulations (2013, as amended) in terms of the National Environmental Management Waste Act (Act no. 59 of 2008) (NEMWA).
- A Part 2 Amendment application in terms of Section 31 of NEMA to update the existing Environmental Authorisation/EMPr to make provision for the upgrading and new adit complex at Umgala, and to ensure that all proposed infrastructure at Knight's Hill is accounted for within the authorisation/EMPr.
- Integrated Water Use License (IWUL) application for water uses triggered in terms of the National Water Act, 1998 (Act 36 of 1998; NWA), including an Integrated Water and Waste Management Plan (IWWMP).

An IEA will be applied for under NEMA/NEMWA and the following listed activities in terms of Listing Notice(s):

Listing Notice	Listed Activities
Listing Notice 1, published under GNR 983 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 9, 10, 11(i), 12 (ii), 14, 19, 24 (ii), 25, 27
Listing Notice 2, published under GNR 984 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 4, 6, 15, 17, 25
Listing Notice 3, published under GNR 985 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 4 (iii) (viii) (x) (xii-aa), 12 (ii) (iv) (vii), 14
List of Waste Management Activities, published under GNR 921 in Government Gazette 37083 of 29 November 2013, as amended.	Category B, Activity 10 and 11

An IWUL will be applied for under NWA and Regulations regarding the Procedural Requirements for Water Use License Applications and Appeals:

Section 21 Water Uses:	(a); (b); (c); (f); (g); (i); (j)

The proposed developments are located at co-ordinates 27°42'30.25"S and 30°20'57.72"E on Vergenoegd 107 HT: portions 1 to 7, Zandspruit 162 HT: portions 1,4, 6 and 11, Tusschenbij 167 HT: portions 1 and 2, Remainder of Gumtreespruit 424 HT and Townlands of Utrecht 266 HT, held under the existing Mining Right (as renewed in 2023).

GCS Water and Environmental Consultants (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner to undertake the application to the relevant Competent Authorities; the KwaZulu-Natal Department of Mineral Resources and Energy (DMRE) and the Department of Water and Sanitation (DWS).

DRAFT SCOPING REPORT AVAILABLE FOR PUBLIC COMMENT FROM 4 September to 4 October 2024

The Draft Scoping Report is available as follows:

Printed Copies: Utrecht Library, Voor Street, Utrecht
Electronic Copies: **https://www.gcs-sa.biz/public-documents/**

Stakeholder meetings will be held between 16 and 20 September 2024 to discuss the contents of the Draft Scoping Report. Should you wish to attend a meeting, please register your attendance by contacting GCS in order to obtain details regarding the various opportunities for engagement. For a copy of a Background Information Document or the Draft Scoping Report and to register as an Interested and Affected Party, please contact GCS.

Interested and Affected Parties are invited to participate by providing written comments and raising issues of concern.

GCS Pty Ltd: Contact Person: Gerda Bothma / Anelle Lötter, **Tel:** 011 803 5726,
Email gerdab@gcs-sa.biz / anellel@gcs-sa.biz Post: PO Box 2597, Johannesburg, 2128

UKUFAKA ISICELO SOKUGUNYAZA INDAWO EDIDIYELWE YOKWAKHIWA KABUSHA KWEMISEBENZI YOKUMBIWA KWAMALAHLE KWI-MGALA COLLIERY KANYE NOKWAKHA KWI-KNIGHT'S HILL ADIT AREA ENDAWENI YASE-UTRECHT, KWAZULU-NATALI

• Inkomba ye-GCS. No: 22-0649 • Inkomba ye-DMRE.: KZN 30/5/1/2/2/10125 MR

I-Welgedacht Exploration Company (Pty) Ltd (Welgedacht) ingaphansi kwe-Unyezi Coal (Pty) Ltd (Unyezi Coal) esebenzelana nenkampani i-Kangra Coal (Pty) Ltd, engena ngaphansi kwesakhiwo seqembu elikhulukazi leMenar. I-Menar iwumnikazi welungelo lokumba izimbiwa ekusebenzeni kwe-Umgala and Knight's Hill, ngaphansi kwelungelo elilodwa lokumba izimbiwa (KZN 30/5/1/2/2/101125 MR), esendawemi ecishe ibe ama-3km ukusuka e-Utrecht, kuMasipala wasEmadlangeni eSifundazweni saKwaZulu Natali. Ukuhlanganiswa kabusha kokumbiwa kwamalahle e-Umgala and Knight's Hill kuyahlongozwa, kanti kudingeka izinhlelo ezilandelayo zokufaka isicelo:

- Ukufaka isicelo sokuGunyaza iNdawo eDidiyelwe (i-IEA) ngokuBika uMthelela weNdawo nokuHlela (i-S&EIR) nokuhlanganisa uHlelo lokuPhatha iNdawo (EMPr) ngokwemigomo yoMthetho wokuLawula iNdawo kuZwelonke, 1998 (uMthetho 107 wowe-1998) (i-NEMA) kanye neMitheshwana yoMthelela weNdawo (i-EIA) (2014, njengoba sichitshiyelwe).
- Ukufaka isicelo seLayisense yokuLawula iMfucuza (WML) asendawo yaseMgala Discard, esifakwe ohlelweni lokuFaka iSicelo se-IEA semisebenzi yokulawula imfucuza ehlonziwe njengoba kufakwe uMthetho wokuLawula iMfucuza (i-WML) iMitheshwana (2013, njengoba sichitshiyelwe) ngokwemigomo yoMthetho wokuLawula iMfucuza kuZwelonke (uMthetho no. 59 wowezi-2008) (i-NEMWA).
- Ingxenye 2 weSicelo sokuchibiyela ngokwemigomo yeSigaba 31 se-NEMA ukuphucula ukuGunyaza iNdawo ukuhlinzekela ukwenza ngcono indawo yeaseMgala, nokuqinisekisa ukuthi zonke izingqalasizinda ezinconyiwe eKnight's Hill ziyabalwa ekugunyazeni.
- Ukufaka isicelo seLayisense yokuSetshenziswa kwaManzi (IWUL) okukhulunywa ngakho ngokwemigomo yoMthetho waManzi kuZwelonke, 1998 (uMthetho 36 wowe-1998; NWA), okufaka noHlelo lwaManzi oluDidiyelwe nokuPhatha iMfucuza (i-IWWMP).

Kuyosetshenziswa i-IEA ngaphansi kwe-NEMA/NEMWA kanye nemisebenzi elandelayo efakwe ohlwini ngokwemigomo yesaziso sokufaka ohlwini:

Isaziso sokufaka ohlwini	Imisebenzi efakwe ohlwini
Isaziso sokufaka ohlwini 1, esishicilelwe ngaphansi GNR 983 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 9, 10, 11(i), 12 (ii), 14, 19, 24 (ii), 25, 27
Isaziso sokufaka ohlwini 2, esishicilelwe ngaphansi GNR 984 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 4, 6, 15, 17, 25
Isaziso sokufaka ohlwini 3, esishicilelwe ngaphansi GNR 985 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 4 (iii) (viii) (x) (xii-aa), 12 (ii) (iv) (vii), 14
IMisebenzi yokuLawula iMfucuza, esishicilelwe ngaphansi GNR 921 kuSomqulu kahulumeni 37083 mhla zingama-29 Lwezi 2013, njengoba sichitshiyelwe.	Isigaba B, Umsebenzi 10 no-11

I-IWUL izofakelwa isicelo ngaphansi kwe-NWA neMitheshwana emayelana neZidingo ngoKwen-qubo yoKufakwa kweZicelo zeLayisense yokuSetshenziswa kwaManzi noKwedluliselwa kweZicelo:

Isigaba 21 Ukusetshenziswa kwamanzi:	(a); (b); (c); (f); (g); (i); (j).

Intuthuko ehlongozwayo ikula makho-odinethi 27°42'30.25"S naku 30°20'57.72"E iVergenoegd 107 HT: izingxenye 1 kuya ku- 7, iZandspruit 162 HT: izingxenye 1,4, 6 no- 11, iTusschenbij 167 HT: izingxenye 1 no- 2, Okusele kwe-Gumtreespruit 424 HT ne-Townlands yase-Utrecht 266 HT, yenziwe ngaphansi kweLungelo lokuMba izimbiwa elikhona (njengoba senziwe kabusha kowezi- 2023).

I-GCS Water and Environmental Consultants (Pty) Ltd isiqoke uMsebenzi oHlola iNdawo eZimele ukusebenza ukufaka isicelo kwaBasemagunyeni abafanelekile; i-KwaZulu-Natal Department of Mineral Resources and Energy (DMRE) kanye noMnyango weZamazni nokuThuthwa kwendle (DWS).

UMBIKO WOKUHLELA OWUHLAKA UYATHOKALA UKUBA KUPHAWULWE NGAWO KUSUKELA MHLA zi-4 kuMandulo kuze kube mhla zi-4 kuMfumfu 2024

Umbiko wokuHlela owuHlaka utholakala ngendlela elandelayo:

Amakhophi aphrintiwe: Utrecht Library, Voor Street, Utrecht
Amakhophi akwikhompyutha: https://www.gcs-sa.biz/public-documents/

Imihlangano yabanesabelo iyobanjwa phakathi kwamhla ziyi-16 kuya zingama-20 kuMandulo 2024 ukudingida okuqukethwe wumMbiko wokuHlela owuHlaka.

Uma ufisa ukwethamela umhlangano, uyacelwa ukuba urejiste ukwethamela kwakho ngokuthintana ne-GCS ukuze kutholakale imininingwane emayelana namathuba ehlukene okuthintana. Ukuze uthole ikhophi yeDokhumenti yoLwazi oluYisisekelo noma uMbiko wokuHlela owuHlaka nokurejista njengoMuntu oNentshisekelo noThintekayo, uyacelwa ukuba uthintane ne-GCS.

ABantu abaNentshisekelo naBathintekayo bayamenywa ukuba babambe iqhaza ngokuhlinzeka ukuphawula okubhaliwe nokuphakamisa izindaba ezihamba phambili.

GCS Pty Ltd: Okuthintwana naye: Gerda Bothma / Anelle Lötter,
Ucingl: 011 803 5726, **Email gerdab@gcs-sa.biz / anellel@gcs-sa.biz**
Ikheli: PO Box 2597, Rivonia, Johannesburg, 2128

GCS Water & Environmental Consultants

POPCRU calls for restoration of women's dignity in the criminal justice cluster

Police and Prisons Civil Rights Union (POPCRU) is calling for renewed focus on restoring dignity and promoting gender equality within the criminal justice cluster (CJC), including the South African Police Service (SAPS), correctional services, traffic law enforcement, and border control. This call to action comes amid growing concerns over the treatment and representation of women in these critical sectors.

"The underrepresentation of women across all sectors of the safety cluster remains a significant issue, with few holding senior positions in particular. This hints at serious systemic issues within the sector, where women are both underrepresented and face significant barriers to advancement," says Thulani Ngwenya, president of POPCRU.

POPCRU president, Thulani Ngwenya.

"Drawing inspiration from the fearless women of 1956 who marched against discrimination, and their legacy of courage and resilience, we call on all victims to take a stand. The mental and emotional toll of abusive workplace environments has tragically led to the deaths of some of our female law enforcement members, and forced others into resignation due to unbearable stress," Ngwenya identified sexual harassment within departments as an especially pressing issue. "Women must be equal to men in all aspects, something that's especially important in the CJC. Our women already face many risks to their lives every time they step out into the field. They cannot also have issues when they return to the station and interact with male officers."

Ngwenya adds that, in addition to harassment, there is an alarming culture of exploitation within certain departments and that the expectation of sexual favours in exchange for career advancement is a particularly egregious violation of women's rights. "This practice is unfortunately very common in certain traffic departments. It both demeans female officers who deserve our respect and gratitude, and serves to break down public trust in the system. We stand with those who have been victimised by these horrible practices, and our union is committed to completely purging this practice from the entire criminal justice system.

"We call on all the women within South Africa's CJC to unite and raise their voices against the disturbing issues of victimisation, sexual abuse, abuse of power, and other forms of mistreatment in the workplace.

We have received a number of complaints that reveal that senior managers often commit these abuses. It is deeply disturbing news, and means that change must be made at the top first." Ngwenya further expressed concern about the broader societal issue of gender based violence. In the third quarter of last year, the latest crime statistics released by the SAPS reveal that more than 15 000 sexual offences cases occurred in this three-month period, roughly 12 000 of which were instances of rape. Of note, nearly 3 000 of these cases were detected as a result of police action. "Most of these cases involved violence against women and children, which serves as a cold reminder that women and children are disproportionately affected by violence.

We must now call on government to stop paying lip service to this issue, and take concrete steps to resolve and eradicate gender based violence in South Africa."

Ngwenya finally highlighted that women are frequently sidelined and discriminated against, negatively affecting their future career prospects. "The dismissal of competent women leaders based on unconvincing charges or unfounded allegations is a reflection of a broader issue that needs urgent redress. We need to ensure that the voices of the women in our ranks are heard and respected, and that they're supported in their roles as they perform their vitally important work." Ngwenya stated that addressing inequalities among members of the CJC and improving working conditions remains a top priority for the union. POPCRU will host an event centred around restoring dignity on August 21, where the issue will be discussed in greater detail.

"We call on women in the workplace to stand together, and not ally themselves with men who only see women as objects. Furthermore, if you are a victim of such abuses, we urge you to contact your nearest shop stewards. You need not divulge every detail, but simply let them know you are a victim of abuse, and they will channel you to the relevant parties that are equipped to handle your matter privately. We will guarantee your safety and work to restore your dignity," he concluded.

Pro-Forma Site Notice

APPLICATION FOR INTEGRATED ENVIRONMENTAL AUTHORISATION FOR THE RE-COMMISSIONING OF COAL MINING ACTIVITIES AT THE UMGALA COLLIERY AND CONSTRUCTION OF THE KNIGHT'S HILL ADIT AREA IN THE UTRECHT AREA, KWAZULU-NATAL

UKUFAKA ISICELO SOKUGUNYAZA INDAWO EDIDIYELWE YOKWAKHIWA KABUSHA KWEMISEBENZI YOKUMBIWA KWAMALAHLE KWI-MGALA COLLIERY KANYE NOKWAKHA KWI-KNIGHT'S HILL ADIT AREA ENDAWENI YASE-UTRECHT, KWAZULU-NATALI

Inkomba ye-GCS. No: / GCS Reference Number 22-0649 | Inkomba ye-DMRE.: / DMRE Reference Number KZN 30/5/1/2/2/10125 MR

I-Welgedacht Exploration Company (Pty) Ltd (Welgedacht) ingaphansi kwe-Unyezi Coal (Pty) Ltd (Unyezi Coal) esebenzelana nenkampani i-Kangra Coal (Pty) Ltd, engena ngaphansi kwesakhiwo seqembu elikhulukazi leMenar. I-Menar iwumnikazi welungelo lokumba izimbiwa ekusebenzeni kwe-Umgala and Knight's Hill, ngaphansi kwelungelo elilodwa lokumba izimbiwa (KZN 30/5/1/2/2/101125 MR), esendawemi ecishe ibe ama-3km ukusuka e-Utrecht, kuMasipala wasEmadlangeni eSifundazweni saKwaZulu Natali. Ukuhlanganiswa kabusha kokumbiwa kwamalahle e-Umgala and Knight's Hill kuyahlongozwa, kanti kudingeka izinhlelo ezilandelayo zokufaka isicelo:

- Ukufaka isicelo sokuGunyaza iNdawo eDidiyelwe (i-IEA) ngokuBika uMthelela weNdawo nokuHlela (i-S&EIR) nokuhlanganisa uHlelo lokuPhatha iNdawo (EMPr) ngokwemigomo yoMthetho wokuLawula iNdawo kuZwelonke, 1998 (uMthetho 107 wowe-1998) (i-NEMA) kanye neMitheshwana yoMthelela weNdawo (i-EIA) (2014, njengoba sichitshiyelwe).
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  (i-WML) iMitheshwana (2013, njengoba sichitshiyelwe) ngokwemigomo yoMthetho wokuLawula iMfucuza kuZwelonke (uMthetho no. 59 wowezi-2008) (i-NEMWA).
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Kuyosetshenziswa i-IEA ngaphansi kwe-NEMA/NEMWA kanye nemisebenzi elandelayo efakwe ohlwini ngokwemigomo yesaziso sokufaka ohlwini:

Isaziso sokufaka ohlwini	Imisebenzi efakwe ohlwini
Isaziso sokufaka ohlwini 1, esishicilelwe ngaphansi GNR 983 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 9, 10, 11(i), 12 (ii), 14, 19, 24 (ii), 25, 27
Isaziso sokufaka ohlwini 2, esishicilelwe ngaphansi GNR 984 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 4, 6, 15, 17, 25
Isaziso sokufaka ohlwini 3, esishicilelwe ngaphansi GNR 985 kuSomqulu kahulumeni 38282 mhla zi-4 Zibandlela 2014, njengoba sichitshiyelwe.	Imisebenzi efakwe ohlwini 4 (iii) (viii) (x) (xii-aa), 12 (ii) (iv) (vii), 14
IMisebenzi yokuLawula iMfucuza, esishicilelwe ngaphansi GNR 921 kuSomqulu kahulumeni 37083 mhla zingama-29 Lwezi 2013, njengoba sichitshiyelwe.	Isigaba B, Umsebenzi 10 no-11

I-IWUL izofakelwa isicelo ngaphansi kwe-NWA neMitheshwana emayelana neZidingo ngoKwenqubo yoKufakwa kweZicelo zeLayisense yokuSetshenziswa kwaManzi noKwedluliselwa kweZicelo:

Isigaba 21 Ukusetshenziswa kwamanzi:	(a); (b); (c); (f); (g); (i); (j).

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UMBIKO WOKUHLELA OWUHLAKA UYATHOKALA UKUBA KUPHAWULWE NGAWO KUSUKELA MHLA ZI-4 KUMANDULO KUZE KUBE MHLA ZI-4 KUMFUMFU 2024

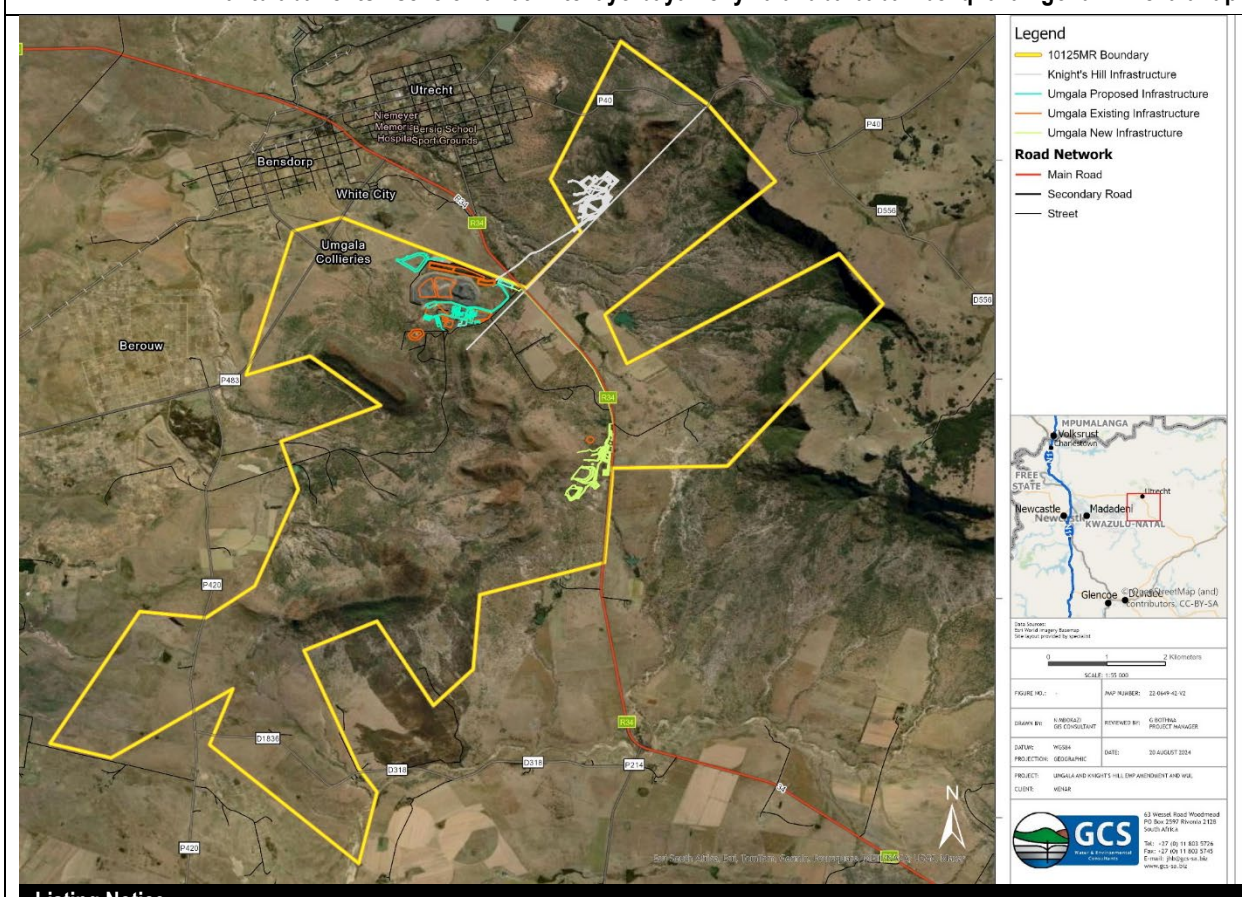
Umbiko wokuHlela owuHlaka utholakala ngendlela elandelayo:

Amakhophi aphrintiwe: Utrecht Library, Voor Street, Utrecht	**Amakhophi akwikhompyutha:** https://www.gcs-sa.biz/public-documents/

Imihlangano yabanesabelo iyobanjwa phakathi kwamhla ziyi-16 kuya zingama-20 kuMandulo 2024 ukudingida okuqukethwe wumMbiko wokuHlela owuHlaka.

Uma ufisa ukwethamela umhlangano, uyacelwa ukuba urejiste ukwethamela kwakho ngokuthintana ne-GCS ukuze kutholakale imininingwane emayelana namathuba ehlukene okuthintana. Ukuze uthole ikhophi yeDokhumenti yoLwazi oluYisisekelo noma uMbiko wokuHlela owuHlaka nokurejista njengoMuntu oNentshisekelo noThintekayo, uyacelwa ukuba uthintane ne-GCS.

ABantu abaNentshisekelo naBathintekayo bayamenywa ukuba babambe iqhaza ngokuhlinzeka ukuphawula okubhaliwe nokuphakamisa izindaba ezihamba phambili.



The Welgedacht Exploration Company (Pty) Ltd (Welgedacht) is a subsidiary of Unyezi Coal (Pty) Ltd (Unyezi Coal) which is an affiliate company of Kangra Coal (Pty) Ltd, falling within the greater Menar group structure. Menar is the holder of the mining right of the Umgala and Knight's Hill operations, under one mining right (KZN 30/5/1/2/2/101125 MR), located approximately 3km from Utrecht, within the Emadlangeni Local Municipality in the Kwazululu Natal Province. The re-commissioning of coal mining at Umgala and Knight's Hill is proposed, and the following application processes are required:

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- Waste Management License (WML) application for the Umgala Discard facility, included in the IEA Application process for the identified waste management activities outlined in the Waste Management License (WML) Regulations (2013, as amended) in terms of the National Environmental Management Waste Act (Act no. 59 of 2008) (NEMWA).
- A Part 2 Amendment application in terms of Section 31 of NEMA to update the existing Environmental Authorisation/EMPr to make provision for the upgrading and new adit complex at Umgala, and to ensure that all proposed infrastructure at Knight's Hill is accounted for within the authorisation/EMPr.
- Integrated Water Use License (IWUL) application for water uses triggered in terms of the National Water Act, 1998 (Act 36 of 1998; NWA), including an Integrated Water and Waste Management Plan (IWWMP).

An IEA will be applied for under NEMA/NEMWA and the following listed activities in terms of Listing Notice(s):

Listing Notice	Listed Activities
Listing Notice 1, published under GNR 983 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 9, 10, 11(i), 12 (ii), 14, 19, 24 (ii), 25, 27
Listing Notice 2, published under GNR 984 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 4, 6, 15, 17, 25
Listing Notice 3, published under GNR 985 in Government Gazette 38282 of 4 December 2014, as amended.	Listed Activities 4 (iii) (viii) (x) (xii-aa), 12 (ii) (iv) (vii), 14
List of Waste Management Activities, published under GNR 921 in Government Gazette 37083 of 29 November 2013, as amended.	Category B, Activity 10 and 11

An IWUL will be applied for under NWA and Regulations regarding the Procedural Requirements for Water Use License Applications and Appeals:

Section 21 Water Uses:	(a); (b); (c); (f); (g); (i); (j).

The proposed developments are located at co-ordinates 27°42'30.25"S and 30°20'57.72"E on Vergenoegd 107 HT: portions 1 to 7, Zandspruit 162 HT: portions 1,4, 6 and 11, Tusschenbij 167 HT: portions 1 and 2, Remainder of Gumtreespruit 424 HT and Townlands of Utrecht 266 HT, held under the existing Mining Right (as renewed in 2023).

GCS Water and Environmental Consultants (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner to undertake the application to the relevant Competent Authorities; the KwaZulu-Natal Department of Mineral Resources and Energy (DMRE) and the Department of Water and Sanitation (DWS).

DRAFT SCOPING REPORT AVAILABLE FOR PUBLIC COMMENT FROM 4 SEPTEMBER TO 4 OCTOBER 2024

The Draft Scoping Report is available as follows:

Printed Copies: Utrecht Library, Voor Street, Utrecht	**Electronic Copies:** https://www.gcs-sa.biz/public-documents/

Stakeholder meetings will be held between 16 and 20 September 2024 to discuss the contents of the Draft Scoping Report.

Should you wish to attend a meeting, please register your attendance by contacting GCS in order to obtain details regarding the various opportunities for engagement. For a copy of a Background Information Document or the Draft Scoping Report and to register as an Interested and Affected Party, please contact GCS.

Interested and Affected Parties are invited to participate by providing written comments and raising issues of concern.

GCS Pty Ltd - Contact Person: Gerda Bothma / Anelle Lötter. Tel: 011 803 5726, Email gerdab@gcs-sa.biz / anellel@gcs-sa.biz

Background Information Document

BACKGROUND INFORMATION DOCUMENT

Integrated Environmental Authorisation for the re-commissioning of coal mining activities at the Umgala Colliery and construction of the Knight's Hill Adit Area (Mining Right: KZN 30/5/1/2/2/10125)

September 2024

The purpose of this Background Information Document (BID) is to:

a) Invite your participation and registration as an Interested and Affected Party (I&AP).
b) Provide information pertaining to the intention to recommission mining with the re-opening of the Umgala Operation, the licencing of the Discard Disposal Facility and the construction of the Knight's Hill Operation and associated infrastructure near Utrecht in the eMadlangeni Local Municipality, KwaZulu-Natal Province.

YOUR COMMENTS AND PARTICIPATION ARE IMPORTANT

You can participate by:

a. Responding (by phone or email) to our invitation for your participation in this application process.
b. Completing the attached registration and comment form and return it to GCS.
c. Writing or contacting GCS in a convenient way for you if you have a query, comment or require further project information or assistance with the registration process.
d. Attending meetings as a registered I&AP.
e. Reviewing and commenting on the Draft Scoping Report by **4 October 2024**.

Contact the GCS Public Participation Office to register as an Interested and Affected Party (I&AP)
Anelle Lötter / Gerda Bothma, Tel: 011 803 5726, Email: anellel@gcs-sa.biz / gerdab@gcs-sa.biz,
Postal Address: PO Box 2597, Rivonia, Johannesburg, 2128

Documents for review and comment are available on http://www.gcs-sa.biz/documents/ and at the public places listed below.

Where you provide your personal information to be registered as an Interested and Affected Party (IAP), GCS Water and Environment (Pty) Ltd (GCS) will retain this information according to the provisions of the Protection of Personal Information Act 4 of 2013 (POPIA). GCS may also provide this information to third parties, such as the applicant and competent and commending authorities. By submitting your information, you consent to GSC processing your personal information in this manner. You are entitled to leave the IAP List, but then your submissions will not be considered as part of the public participation process. You can revoke your consent by contacting the contact persons described above. GCS and its employees will not process your personal information unless they have a lawful basis to do so.

The Draft Scoping Report is available for public review and comment from 4 September to 4 October 2024 as follows:

Printed Copies	
Utrecht Library, Voor Street, Utrecht	
Electronic Copy	
Website download	https://www.gcs-sa.biz/public-documents/

Please send your *written comments* on the Draft Scoping Report to GCS by 4 October 2024.

Project Background and History

The Welgedacht Exploration Company (Pty) Ltd (Welgedacht) is the holder of the Mining Right (KZN 30/5/1/2/2/10125 MR) for the Umgala / Knight's Hill Mining Operations. Welgedacht is a subsidiary of Unyezi Coal (Pty) Ltd (Unyezi Coal) which is an affiliate company of Kangra Coal (Pty) Ltd that falls within the greater Menar group structure. Welgedacht has been operating in the Utrecht area since 1963 and is comprised of the following mining areas:

- Aasvoëlkrans;
- Umgala / Knight's Hill;
- Utrecht; and
- Zimbutu.

Welgedacht proposes to recommission the Umgala Colliery and construct the Knight's Hill Adit area (an adit is an almost horizontal passage to an underground mine).

The Umgala / Knight's Hill Mining Project consists of two individual coal mining operations, namely Umgala Operation and Knight's Hill Operation, functioning under one Mining Right (MR) (KZN 30/5/1/2/2/10125 MR).

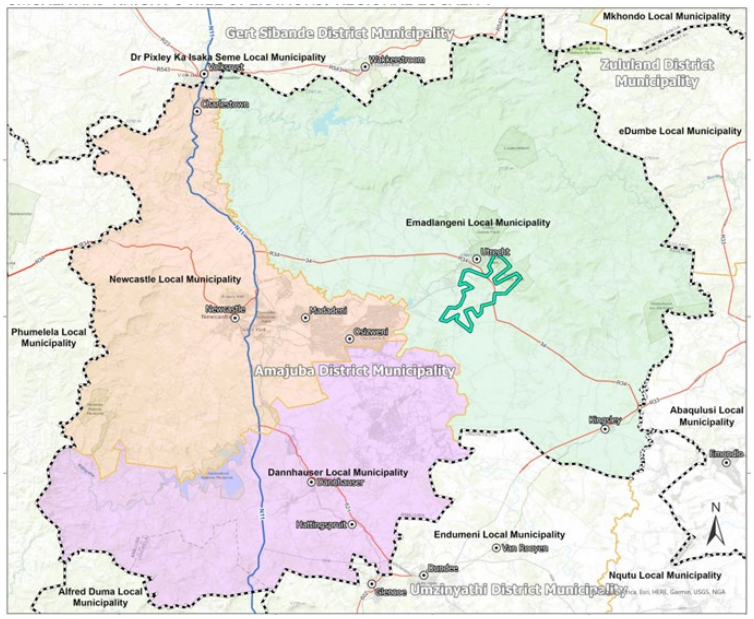
Underground mining was undertaken at Umgala between 1964 and 1997. Opencast mining took place between 1997 and 2004 at Umgala, when the mine was placed under Care and Maintenance. The operation of the processing plant and disposal on the discard facility at Umgala also ceased in 2004. The old Umgala underground workings can no longer be accessed as they were closed and secured according to specifications of the Department of Mineral Resources and Energy (DMRE).

It was the intention of Welgedacht to re-open and extend its mining operations at Umgala and Knight's Hill in 2006 and subsequent applications were lodged, however recommissioning has never commenced.

Location of Umgala and Knight's Hill

The Umgala / Knight's Hill Mine is situated at 27°42'30.25"S and 30°20'57.72"E, within the Emadlangeni Local Municipality, approximately 45km from Newcastle and 3km from Utrecht (Fig 1). Umgala is situated south-southeast of Utrecht on the southern side of the R34 and Knight's Hill is east of Utrecht on the northern side of the R34 within the Amajuba District Municipal area.

The area falls within the Buffalo River Catchment, which forms part of the Greater Tugela River Catchment. The Umgala mining area and the related mining infrastructure are situated below the Zimbutu Mountain (approximately 5km south of Utrecht), west of the Balelesberg mountain range.



The following properties are affected:

Property	Ownership
Vergenoegd 107 HT: portions 1	Welgedacht Exploration
Vergenoegd 107 HT: portions 2	Welgedacht Exploration
Vergenoegd 107 HT: portions 3	Marthinus Wessels Jordaan; Henning Petrus Nicolaas Jordaan; Lambertus Petrus Nel
Vergenoegd 107 HT: portions 4	Welgedacht Exploration
Vergenoegd 107 HT: portions 5	Welgedacht Exploration
Vergenoegd 107 HT: portions 6	Welgedacht Exploration
Vergenoegd 107 HT: portions 7	Welgedacht Exploration
Zandspruit 162 HT: portions 1	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 4	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 6	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 11	Zandspruit Property Trust-Trustees
Tusschenbij 167 HT: portions 1	Gert Jakobus Grobler
Tusschenbij 167 HT: portions 2	Gert Jakobus Grobler
Remainder of Gumtreespruit 424 HT	Boshoff Davel Trust-Trustees
Townlands of Utrecht 266 HT	eMadlangeni Municipality

Project Description

Welgedacht now intends to recommission mining with the re-opening of the Umgala Operation, the Discard Disposal Facility and the construction of the Knight's Hill Operation. The target coal seams will be mined via a combination of opencast (in the area

where the adit will be cleared) and underground board and pillar mining. It is the intention to mine anthracite coal from Umgala and bituminous coal from Knight's Hill.

Various activities and/or infrastructure is planned for the recommissioning of the operations. The following upgrades/refurbishments/rebuilding of existing structures/infrastructure within the old **Umgala mine complex** is proposed:

- New processing plant (on current plant's footprint);
- Discard disposal facility extension;
- Additional access road;
- Additional security / access control office;
- Additional office complex (incl. general and bus/taxi parking areas, lamp room, change room, workshop, wash bay, ablution facilities, stores and offices);
- New fuel depot;
- New adit and adit sump;
- New underground workings;
- Various additional overburden stockpiles;
- Additional haul roads, brake test ramp and hard park area;
- New sewage management system;
- Additional stormwater infrastructure;
- Two new Pollution Control Dams (PCDs);
- Ericson dam;
- New Run-of-Mine (RoM) and product stockpile areas;
- Pipeline from Umgala adit to the plant.

The following is proposed at **Knigh't Hill mine complex**:

- Adit, adit sump and adit conveyor system;
- Access road;
- Security / access control office;
- Brake test ramp;
- Stormwater infrastructure;
- PCD;
- Various overburden stockpiles;
- Hard park area (incl. parking area, wash bay, lamp room, workshop, ablution facilities, stores and offices);
- Pipeline from Knight's Hill to Umgala plant.

The existing discard disposal facility was commissioned in the early 1970 and has been dormant since the beginning of 2004. Discard material was dumped at very steep angles in an uncontrolled form during the initial operations. During later years a discard buttress was formed around this facility and slurry and discard were co-disposed to the west of the initial disposal facility. Concurrent rehabilitation took place to the outer embankments.

It is proposed to extend the discard disposal facility to the east. This will enhance the stability on the eastern side of the facility in accordance with the Department of Water and Sanitation (DWS) Standards. The proposed extension to the east will be used for the first 6 years and will be filled to the elevation of the existing facility. This will give the slurry ponds time to dry out and strengthen. Thereafter, the entire top surface of the discard disposal facility will be used for the life of mine.

To enable the implementation of the proposed projects, Welgedacht must acquire the necessary environmental approvals.

GCS Water and Environment (Pty) Ltd (GCS) was appointed to undertake the required environmental assessment processes, to determine the biophysical, social and economic impacts associated with undertaking the proposed projects.

Regulatory Context

For the recommissioning of mining operations, Welgedacht must apply and receive approval for the following:

- Integrated Environmental Authorisation (IEA) application through a Scoping and Environmental Impact Reporting (S&EIR) process and the compilation of an Environmental Management Programme (EMPr) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) Regulations (2014, as amended).
- Waste Management License (WML) application for the Umgala Discard facility, included in the IEA Application process for the identified waste management activities outlined in the Waste Management License (WML) Regulations (2013, as amended) in terms of the National Environmental Management : Waste Act (Act no. 59 of 2008) (NEMWA).
- A Part 2 Amendment application in terms of Section 31 of NEMA to update the existing Environmental Authorisation/EMPr to make provision for the upgrading and new adit complex at Umgala, and to ensure that all proposed infrastructure at Knight's Hill is accounted for within the authorisation/EMPr.

- Integrated Water Use License (IWUL) application for water uses triggered in terms of the National Water Act, 1998 (Act 36 of 1998; NWA), including an Integrated Water and Waste Management Plan (IWWMP).

National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA)

Section 24 of NEMA requires that certain listed activities, which may have an impact on the environment, trigger the need for environmental authorisation from a relevant authority before commencing with the activities. Such activities are listed under Regulations Listing Notice 1 GNR 324, Listing Notice 2 GNR 325 and Listing Notice 3 GNR 327 (2014 as amended) of NEMA (as amended).

Applicable Listed Activities for this application is:

	Description of related activity
Listing Notice 1 (GN R327)	
9	The development of infrastructure exceeding 1 000m in length for the bulk transportation of water or storm water with an internal diameter of 0,36m or more; or with a peak throughput of 120l per second or more.
10	The development and related operation of infrastructure exceeding 1 000m in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes.
11(i)	The development of facilities or infrastructure for the transmission and distribution of electricity (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kVs.
12(ii)	The development of infrastructure or structures with a physical footprint of 100m^2 or more within a watercourse or if no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse.
14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80m^3 or more but not exceeding 500m^3.
19	The infilling or depositing of any material of more than 10m^3 into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m^3 from a watercourse.
24(ii)	The development of a road with a reserve wider than 13,5m, or where no reserve exists where the road is wider than 8m.
25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000m^{3}but less than 15 000m^3.
27	The clearance of an area of 1 ha or more, but less than 20 ha of indigenous vegetation.
Listing Notice 2 (GN R325)	
4	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500m^3.
6	The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent.
15	The clearance of an area of 20 ha or more of indigenous vegetation.
17	Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing.
25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15 000m^3 or more.
Listing Notice 3 (GN R324)	
4 (iii) (viii) (x) (xii-aa)	The development of a road wider than 4m with a reserve less than 13,5m in KwaZulu-Natal in a Community Conservation Area, Critical Biodiversity Areas (CBAs) or Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; or Outside urban areas: (aa) Areas within 10km from national parks or world heritage sites or 5km from any terrestrial protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve.
12 (ii) (iv) (vii)	The clearance of an area of 300m^2 or more of indigenous vegetation in Community Conservation Areas; or within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or on land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.
14	The development of infrastructure or structures with a physical footprint of 10m^2 or more; where such development occurs (a) within a watercourse; (c) if no development setback has been adopted, within 32m of a watercourse, measured from the edge of a watercourse; in CBAs or Areas within 10km from national parks or world heritage sites or 5km from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve, where such areas comprise indigenous vegetation.

National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEMWA)

Section 20 of NEMWA requires that certain listed waste management activities, need a waste management license from a relevant authority before commencing with the activities. Such waste management activities are listed under Regulations GNR 921 (as amended).

Applicable Waste Management Activities for this application is:

#	Description of related activity
Category B	
10	The proposed project entails the construction of a facility for an activity governed by the regulations.
11	The establishment or reclamation of a residue stockpiles or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act (MPRDA).

Considering the above, a full Scoping and Environmental Impact Assessment (S&EIR) process is to be undertaken.

National Water Act, 1998 (Act 36 of 1998) (NWA)

An Integrated Water Use License Application (IWULA) is to be compiled and submitted to the Department of Water and Sanitation (DWS) to ensure the legality of the proposed project's water uses. The Water Use License Application will be conducted for the project in parallel with the EIA and EMP process for any activity in terms of Section 21 of the NWA.

The water uses triggered as part of the project which require authorisation in terms of Section 21 of the NWA involves:

Section 21:	
(a)	Taking water from a water resource
(b)	storing water
(c)	Impeding or diverting the flow of water in a watercourse
(f)	Discharging of wase or water containing waste
(g)	Disposing of water in a manner which may detrimentally impact on a watercourse
(i)	Altering the bed, banks, course or characteristic of a watercourse
(j)	Removing, discharging or disposing of water found underground

National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA)

The protection and management of South Africa's heritage resources are controlled by the NHRA. Historically important features, such as graves, archaeology and culturally significant symbols, spaces and landscapes are protected by the NHRA. A permit from the South African Heritage Resources Agency (SAHRA) is required in terms of Section 38 of the NHRA for certain categories of development, which the proposed activities trigger. An application in this regard will thus be lodged during the EIA process.

Structure of the Environmental Impact Assessment (EIA) Process

The EIA is a legislative tool used to ensure that the potential environmental impacts that may occur due to the proposed development are avoided or mitigated, if authorisation is granted. The 'environment' includes social, economic and biophysical aspects which the EIA must assess equitably. The EIA process is divided into two phases, the Scoping Phase and the Impact Assessment Phase.

Scoping Phase (Sept – Oct 2024):

The Scoping Phase aims to:

- Investigate and gather information on the proposed site, to establish an understanding of the area.
- Establish how the proposed development activities will potentially impact on the environment.
- Identify IAPs and relevant authorities by conducting a Public Participation Process.
- Identify potential environmental impacts.
- Describe the proposed project and potential alternatives.

Impact Assessment Phase (Oct – Dec 2024):

During this phase, all issues/impacts and proposed alternatives identified in the Scoping Phase are assessed and are rated in terms of their significance. Where necessary, recommendations are made for the mitigation of potential negative impacts, or enhancement of potential positive impacts.

An Environmental Management Programme (EMPr) will be compiled that will prescribe environmental specifications for the construction, operational and decommissioning phases of the project. As with the Scoping phase, public participation is an integral part of the Assessment Phase.

During this phase, specialist will provide their written findings on the following specialist investigations which are underway:

- Socio-Economic Assessment
- Traffic Impact Assessment
- Biodiversity Impact Assessment
- Aquatic Impact Assessment
- Wetland Impact Assessment
- Heritage Impact Assessment
- Geohydrological Impact Assessment
- Hydrological Impact Assessment
- Hydropedological Impact Assessment
- Noise Impact Assessment
- Air Quality Impact Assessment
- Soil & Agricultural Impact Assessment
- Conceptual Acid Mine Drainage Management Plan & Decant Management Plan

The findings of these assessments will be made available to stakeholders in the Draft Environmental Impact Report.

Public Participation

The Public Participation Process aims to inform a wide range of I&APs (any person or organisation that has a direct, business, financial, personal or other interest in, or may be directly or indirectly affected by, the proposed project) about the proposed development and the environmental authorisation process to be followed. It is a tool to allow the public to exchange information and to express their views and concerns on the proposed development for which the EIA is being conducted. The Public Participation Process assists in identifying potential issues and concerns that need to be addressed in the impact assessment by highlighting relevant information to be included in the assessment. It enables more accurate and descriptive analysis and helps to focus and enhance decision-making.

The EIA will be open and transparent to the public through this process with all registered I&APs continuously updated on events throughout the process. All contributions from I&APs will be fully documented, evaluated and responded to in the EIA.

Public Participation activities:

Stakeholders are invited to register as I&APs and obtain more information through:

- Media notices placed in the locally circulated newspapers.
- This Background Information Document (BID).
- Site notice boards placed around the development sites.
- Stakeholder meetings to be held between 16 and 20 September 2024 in the Utrecht area.
- Review of the Draft Scoping and Draft Impact Assessment Reports.

How you can participate:

Stakeholders may forward their written comments along with their name, contact details and an indication of any direct business, financial, personal or other interest which they have in the application by post or email to GCS – contact details on page 1 of this BID.

Next steps:

Stakeholders have until **4 October 2024** to register as I&APs and to comment on the Draft Scoping Report.

The Draft Scoping Report describes the project, the baseline conditions of the affected area and the issues and concern to be investigated during the impact assessment phase. Copies of the report is available as described on page 1 of this BID.

Following stakeholder comments, the Scoping Report will be finalised and submitted to the Competent Authority for approval. Stakeholders will be notified as such, and a copy of the Final Scoping Report will be made available.

During the next phase of the EIA, the impact assessment phase, stakeholders will be notified of the availability of the draft Impact Assessment Report.

Stakeholder meetings will be held to present and discuss the findings of this phase. The WUL application's Technical Report will also be made available during this phase for public comment.

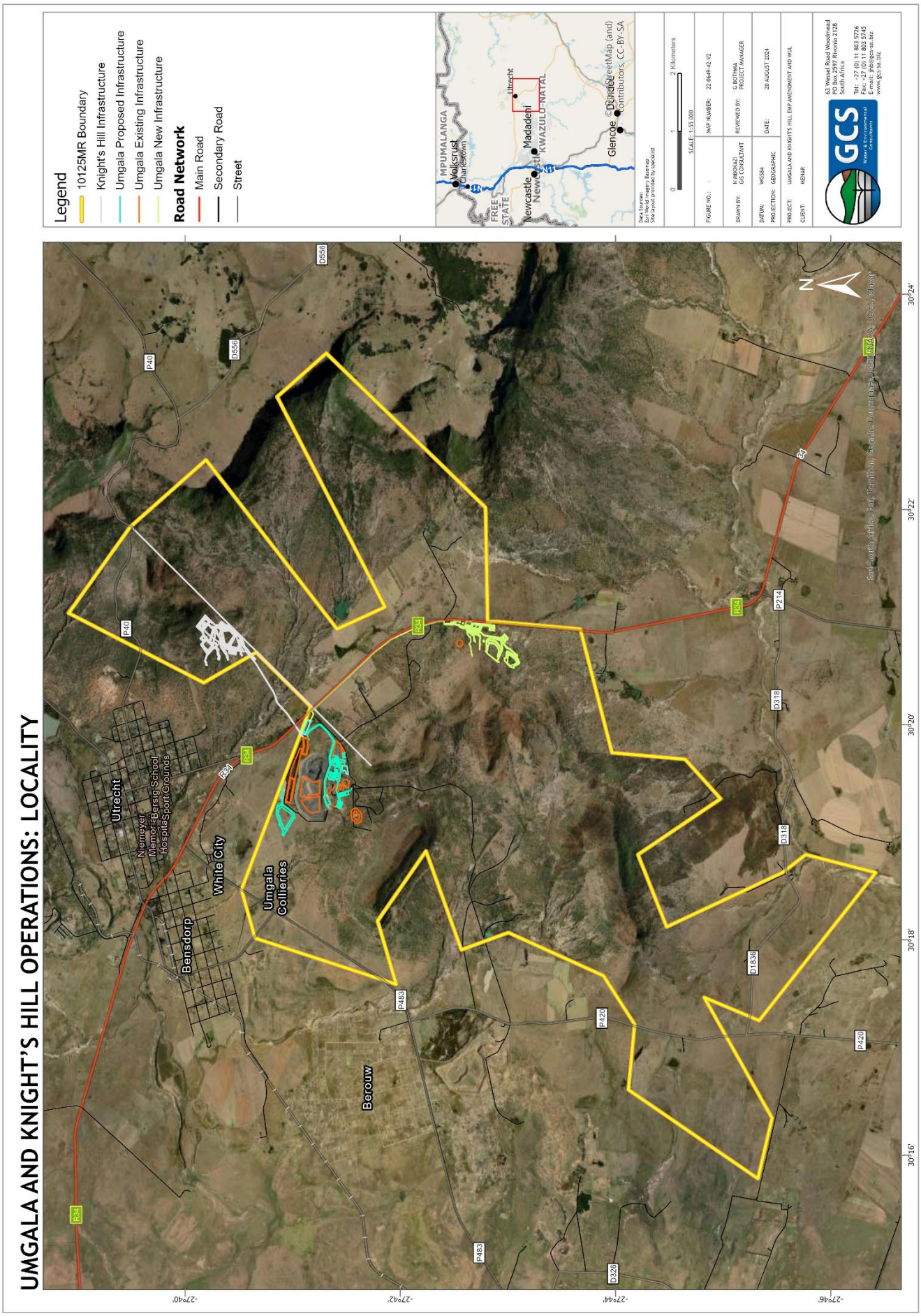


Figure 1: Locality Map for Umgala / Knight's Hill Mining Operations

Integrated Environmental Authorisation for the recommissioning of coal mining activities at the Umgala Colliery and construction of the Knight's Hill Adit Area. (KZN 30/5/1/2/2/10125)

I&AP Comment and Registration Form
GCS Ref No: 22-0649

Name:		Surname:	
Organisation / interest:			
Postal / Residential address			
	Area:		Code:
Contact details	Tel:	( )	
	Mobile:	( )	
	Email:		

Please mark with an **X** to indicate whether you would like to participate in the process:	
Yes, I would like to participate in this process and receive periodic updates	
No, I am not interested in participating and do not wish to receive further information	
Date commented	(DD / MM / YYYY)
Please indicate any issues, comments and concerns with regards to the proposed project	
Please indicate in which aspects you would require more information	

Please indicate the contact details of any other I&APs whom you think should be contacted			
Name:		Surname:	
Tel:	( )	Mobile:	
Email:			

In order to be registered as an I&AP for this project, fax, mail, or e-mail the completed registration form to Gerda Bothma / Anelle Lotter at:
Tel: (011) 803 5726
Email: gerdab@gcs-sa.biz / anellel@gcs-sa.biz
Post: PO Box 2597, Rivonia, 2128

IDOKHUMENTI YOLWAZI OLUYISISEKELO

Ukugunyaza Indawo ngokuDidiyelwe ngokufakwa kabusha kwemisebenzi yokumba amalahle eMgala Colliery kanye nokwakha iNdawo yaseKnight's Hill Adit (Ilungelo lokuMba izimbiwa: KZN 30/5/1/2/2/10125)

Mandulo 2024

Inhloso yale Dokhumenti yoLwazi oluYisisekelo (i-BID) wukwenza lokhu:

a) Ukukumema ukuba ubambe iqhaza nokuba urejiste njengoMuntu oNentshisekelo noThintekayo (i-I&AP).
b) Ukuhlinzeka ulwazi olumayelana nenhloso lokuqala kabusha ukumba izimbiwa kanye nokuvulwa kabusha koMgala Operation, ukunika ilayisense i-Discard Disposal Facility kanye nokwakha i-Knight's Hill Operation nengqalasizinda ehlobene nalokhu eduze nase-Utrecht kuMasipala wasekhaya i-Madlangeni Local Municipality, eSifundazweni saKwaZulu-Natali.

UKUPHAWULA KWAKHO NOKUBAMBA IQHAZA KUBALULEKILE

Ungabamba iqhaza ngokwenza lokhu:

a. Ngokuphendula (ngocingo noma nge-imeyli) esimemweni sethu sokuba ubambe iqhaza kulo hlelo lokufaka isicelo.

b. Ngokugcwalisa ifomu lokurejista nokuphawula ellinanyathiselwe bese ulibuyisela kwa-GCS.

c. Ngokubhala noma ngokuthintana ne-GCS ngesikhathi esiyiso kuwe uma unombuzo, uphawule noma udinga usizo olongeziwe noma usizo ngohlelo lokurejista.

d. Ngokwethamela imihlangano njenge-I&AP erejistile.

e. Ngokubukeza nokuphawula eMbikweni wokuHlela owuHlaka ngamhla zi-**4 kuMfumfu 2024**.

Thintana neHhovisi lokuBamba iQhaza koMphakathi we-GCS ukuze urejiste njengoMuntu oNentshisekelo noThintekayo (i-I&AP)
Anelle Lötter / Gerda Bothma, Ucingo: 011 803 5726, i-Imeyli: anellel@gcs-sa.biz / gerdab@gcs-sa.biz, Ikheli leposi: PO Box 259 7, Rivonia, Johannesburg, 2128

Amadokhumenti azobukezwa nokuzophawulwa kuwo ayatholakala ku- http://www.gcs-sa.biz/documents/ nazesindaweni zomphakathi ezibhalwe ngezansi.

Uma uhlinzeka ulwazi ngawe siqu ukuba urejiste njengoMuntu oNentshisekelo noThintekayo (i-IAP), i-GCS Water and Environment (Pty) Ltd (GCS) kuzogcina imininingwane ngokokuhlinzeka koMthetho wokuVikela uLwazi ngoMuntu ngqo 4 wowezi-2013 (i-POPIA). I-GCS ingaphinde ihlinzeke lolu lwazi kubantu abaseceleni, njengomfakisicelo nabagunyaziwe abakwaziyo ukwenza nabancomayo. Ngokuthumela ulwazi lwakho, uvuma ukuba i-GCS isebenzise ulwazi ngawe ngale ndlela. Unelungelo lokushiya uhlu lwe-IAP, kodwa okuthumele ngeke kubhekwe njengengxenye yohlelo lokubamba iqhaza. Ungayihoxisa imvume yakho ngokuthintana nabantu okuthintwana nabo abachazwe ngenhla. I-GCS nabasebenzi bayo ngeke basebenze ulwazi ngawe ngaphandle uma benesizathu esisemthethweni sokwenza lokho.

UMbiko woHlelo oluwuHlaka luyatholakala ukuba umphakathi uwubukeze bese uphawula ngawo kusukela zi-4 kumandulo kuya zi-4 kuMfumfu 2024 ngendlela elandelayo:

Amakhophi aphrintiwe	
Umtapo wolwazi wase-Utrecht, Voor Street, Utrecht	
Amakhophi akukhompyutha	
iWebhusaythi yokudawuniloda	https://www.gcs-sa.biz/public-documents/

Uyacelwa ukuba uthumele *ukuphawula kwakho okubhalwe phansi* eMbikweni wokuHlela owuHlaka kwi-GCS mhla zi- 4 October 2024.

Isendlalelo sePhrojekthi noMlando

I-Welgedacht Exploration Company (Pty) Ltd (iWelgedacht) ingumnikazi weLungelo lokuMba izimbiwa (KZN 30/5/1/2/2/10125 MR) leMisebenzi yaseMgala / kanye ne-Knight's Hill Mining Operations. I-Welgedacht ingaphansi kwe-Unyezi Coal (Pty) Ltd (Unyezi Coal) okuyinkampani esebenzisana ne-Kangra Coal (Pty) Ltd engaphansi kwesakhiwo seqembu i-greater Menar. I-Welgedacht ilokhu isebenza endaweni yase-Utrecht kusukela kowezi-1963 kanti ithinta lezi zindawo ezilandelayo zokumba izimbiwa:

- Aasvoëlkrans;
- Umgala / Knight's Hill;
- Utrecht; kanye
- neZimbutu.

I-Welgedacht iphakamisa ukuqala kabusha i-Umgala Colliery kanye nokwakhiwa kwendawo yase-Knight's Hill Adit (i-adithi icisho ibe yiphaseji elinqumile elingenelela kwimayini engaohansi komhlaba).

Iphrojekthi yaseMgala / neKnight's Hill Mining Project inemisebenzi emibili ezimele yokumba amalahle, okuyilena Umgala Operation ne-Knight's Hill Operation, esebenza ngaphansi kweLungelo elilodwa lokuMba izimbiwa (MR) (KZN 30/5/1/2/2/10125 MR).

Ukumba izimbiwa ngaphansi komhlaba kwenziwa eMgala phakathi kowe-1964 nowe-1997. Ukumba ichoba kwenziwa phakathi kowe-1997 nowezi-2004 eMgala, uma imayini yafakwa ngaphansi koNakekelo nokuGcinwa. Umsebenzi wokuhlela indawokusebenza nendawo yokulahla eMgala yaphela kowezi-2004. Ukusetshenzwa kwezangaphansi komhlaba eMgala ngeke kusafinyeleleka kukho njengoba kwavalwa kwaphinde kwenziwa kwaba okuphephile ngokuhambisana nezimiso ze-Department of Mineral Resources and Energy (DMRE).

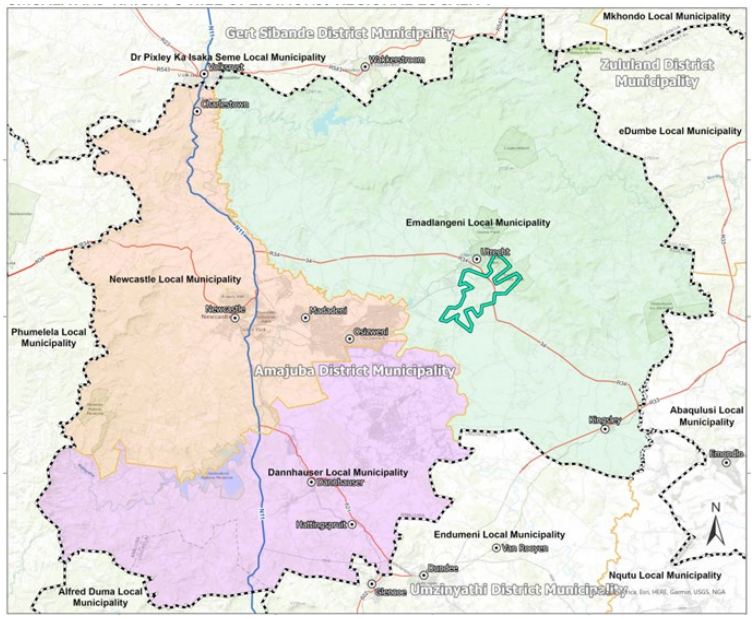
Kwakuyinhloso ye-Welgedacht ukuvula kabusha nokwelula imisebenzi yokumba izimbiwa eMgala nase-Knight's Hill kowezi-2006 nezicelo ezilandelayo zafakwa, kodwa ukuqala kabusha akukaze kwenzeke.

Indawo okukuyo Umgala ne-Knight's Hill

Imayini yaseMgala / Knight's Hill ikule ndawo 27°42'30.25"S naku-30°20'57.72"E, kuMasipala wasekhaya i-Emadlangeni Local Municipality, cisho kuma-45km ukusukela eNewcastle nama-3km ukusuka e-Utrecht (iFiga 1).

Umgala usendaweni eseningizimu-ningizimumpumalanga yase-Utrecht engxenyeni eseningizimu ka-R34 kanti i-Knight's Hill isempumalanga yase-Utrecht engxenyeni esenyakatho kwi-R34 endaweni kaMasipala weSifunda saseMajuba District Municipal.

Indawo ingaphansi kweBuffalo River Catchment, eyingxenye ye-Greater Tugela River Catchment. Indawo yezimbiwa yaseMgala nengqalasizinda yokumbiwa ingaphansi kwe-Zimbutu Mountain (cishe ama-5km eningizimu yase-Utrecht), enyakatho yezintaba zase-Balelesberg.



Izakhiwo ezilandelayo zizothinteka:

Isakhiwo	Umnikazi
Vergenoegd 107 HT: portions 1	Welgedacht Exploration
Vergenoegd 107 HT: portions 2	Welgedacht Exploration
Vergenoegd 107 HT: portions 3	Marthinus Wessels Jordaan; Henning Petrus Nicolaas Jordaan; Lambertus Petrus Nel
Vergenoegd 107 HT: portions 4	Welgedacht Exploration
Vergenoegd 107 HT: portions 5	Welgedacht Exploration
Vergenoegd 107 HT: portions 6	Welgedacht Exploration
Vergenoegd 107 HT: portions 7	Welgedacht Exploration
Zandspruit 162 HT: portions 1	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 4	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 6	Kangra Group Pty Ltd
Zandspruit 162 HT: portions 11	Zandspruit Property Trust-Trustees
Tusschenbij 167 HT: portions 1	Gert Jakobus Grobler
Tusschenbij 167 HT: portions 2	Gert Jakobus Grobler
Remainder of Gumtreespruit 424 HT	Boshoff Davel Trust
Townlands of Utrecht 266 HT	eMadlangeni Municipality

Ukuchaza iphrojekthi

IWelgedacht njengamanje uhlose ukuqala kabusha ukumba izimbiwa ngokuvulwa kabusha koMgala Operation, i-Discard Disposal Facility nokwakha i-Knight's Hill Operation. Imiphetho yamalahle ehlosiwe izombiwa ngengxube yendawo evulekile (endaweni lapho i-adithi izosuswa khona) nebhodi elingaphansi komhlaba nokumba izinsika. Kuyinhloso ukumba amalahle e-anthracite kusukela eMgala namalahle ayi-bituminous asuke e-Knight's Hill.

Imisebenzi eyehlukene kanye/noma ingqalasizinda ihlelelwe ukuqala kabusha kwemisebenzikwakha, Ukuphucula/ukubhidliza wakhe/ukwakha kabusha kwezakhiwo/izingqalasizinda ezikhona ziphakanyiselwe enkomponi endala **Umgala mine complex**:

- Indawo entsha yokucoyisisa (endaweni eyiyo yesitshalo);
- Ukunweba indawo yokulahla;
- Umgwaqo ongenelelayo oyisongezo;
- Ezokuphepha ezongeziwe/ihhovisi lokulawula ukungena nokuphuma;
- Indawo yamahhovisi eyongeziwe (okufaka. Izindawo zamabhasi/ namatekisi, igumbi lokukhanyisa, igumbi lokushintsha iwekshophu, indawo yokuwashela, izindawo zokushabalalisa okungadingekile, izigcini namahhovisi);
- Idepho entsha yamafutha;
- I-adithi entsha nosampu we-adithi;
- Imisebenzi emisha yangaphansi komhlaba;
- Izinqwaba ezicinene ezongeziwe;
- Imigwaqo engenelelayo eyongeziwe, irempu yokuhlola amabhuleki nendawo eyipaki; Kuphakanyiswe
- Uhlelo olusha lokulawula amapayipi endle;
- Ingqalasizinda eyongeziwe yamanzi emvula;
- AMadamu amabili amasha alawul ukunukubezeka kwamanzi (PCDs);
- Idamu lase-Ericson;
- Ingelezomayini entsha (RoM) nezindawo zokukhiqiza ukunqwabelana;
- Ipayipi elisuka eMgala adithi liye endaweni yokusebenzela.

Olkulandelayo kuphakanyiswe e**Knigh't Hill mine complex**:

- I-Adithi, usampu we-adithi nebhandesedlulisi le-adithi;
- Umgwaqo ongenelelayo;
- Ukuphepha / ihhovisi elilawula ukungena nokuphuma;
- Irempu yokuhlola amabhuleki;
- Ingqalasizinda yamanzi emvula;
- I-PCD;
- Izinqwaba ezicindezelekile;
- Ipaki eqinile (okufaka indawo yokupaka, indawo yokuwashela, igumbi lokukhanya, iwekshophu, izindawozokulahla, izigcini namahhovisi);
- Amapayipi asuka eKnight's Hill kuya endaweni yaseMgala.

Indawo ekhona yokulahla yaqokwa ngasekuqaleni kweminyaka yawo-1970 kanti yilokhu yahlala kanjalo kusukela ekuqaleni kowezi-2004. Impahla elahlwayo yabekwa kumayengela enyukelayo angendlela engalawuleki ngesikhathi imisebenzi isaqala. Eminyakeni yokugcina kwakhiwa umgodi wokulahla eduze nendawo kwase kuthi okumincikayo nakho kwalahlwa ngasenyakatho yendawo yokulahla yasekuqaleni. Ukuhlumelelisa okwenziwa kanyekanye kwenziwa ezinkwazi ezingaphandle.

Kuhlongozwa ukunwetshwa kwendawo yokulahla ngasempumalanga. Lokhu kuzophucula ukusimama kwengxenye esempumalanga lendawo ngokuhambelana namaZinga abekwe wuMnyango waManzi nokuThuthwa kwendle i- Department of Water and Sanitation (DWS). Ukunweba okuhlongozwayo kuzosetshenziswa iminyaka eyisi-6 yokuqala kanti iyogcwaliswa ukukhuphuka kwendawo ekhona. Lokhu kuzonika amaxhaphozi amincizelayo isikhathi sokoma nokuthi aqine. Emva kwalokho, unqenqema lonke olungaphezulu lwendawo yokulahla luzosetshenziswa isikhathi sonke kukhona imayini.

Ukudala ukuqalisa ukusebenza kwamaphrojekthi ahlongozwayo, iWelgedacht kumele ithole izimvume ezidingekayo zendawo.

I-GCS Water and Environment (Pty) Ltd (GCS) yaqokwa ukwenza izinhlelo zokuhlola indawo, ukuhlonza impilomzimba, nemithelela yomphakathi neyomnotho ehlobene nokwenza amaphrojekthi ahlongozwayo.

Ingxenye yezolawulo

Ukuze kuqalwe kabusha imisebenzi yokumba izimbiwa, iWelgedacht kumele ifake isicelo iphinde ithole imvume yalokhu okulandelayo:

- Ukufaka isicelo sokugunyaza iNdawo okudidiyelwe okuyi- Integrated Environmental Authorisation (i-IEA) ngohlelo lokubika uMthelela weNdawo noHlaka (i-S&EIR) nokuhlanganisa uHlelo lokuLawula iNdawo (i-EMPr) ngokwemigomo yoMthetho wokuLawula iNdawo kuZwelonke, 1998 (uMthetho 107 wowe-1998) (i-NEMA) nokuHlola uMthelela weNdawo (i-EIA) iMitheshwana (2014, njengoba kuchitshiyelwe).
- Ukufaka isicelo seLayisense yokuLawula iMfucuza (i-WML) yendawo yaseMgala Discard facility,okufakwe ohlelweni lokuFaka isicelo se-IEA ngemisebenzi yokulawula imfucuza okukhonjiwe okubalulwe eMitheshwaneni yeLayisense yokuLawula iMfucuza (i-WML) (2013, njengoba kuchitshiyelwe) ngokwemigomo yokuLawula iNdawo kuZwelonke: uMthetho weMfucuza (uMthetho no. 59 wowezi-2008) (i-NEMWA).
- Ukufaka isicelo sokuchibiyela iNgxenye 2 ngokwemigomo yeSigaba 31 se-NEMA ukwenza ngcono i-Environmental Authorisation/EMPr ukuhlinzekela ukwenza ngcono i-adithi entsha eseMgala, nokuqinisekisa ukuthi ingqalasizinda ehlongozwayo e-Knight's Hill ifakwe Phakathi kokugunyaza/ i-EMPr.
- Ukufaka isicelo seLayisense yokuSebenzisa aManzi (i-IWUL) sokusetshenziswa kwamanzi kuvukuzeke ngokwemigomo yoMthetho waManzi kuZwelonke, 1998 (uMthetho 36 wowe-1998; NWA), okufaka noHlelo lwaManzi oluDidiyelwe nokuLawula iMfucuza (IWWMP).

UMthetho wokuLawula iNdawo kuZwelonke, 1998 (UMthetho 107 wowe-1998) (i-NEMA)

ISigaba 24 se-NEMA sidinga ukuba imisebenzi ethile efakwe ohlwini, engaba nomthelela endaweni, ivukuze Isidingo sokugunyazwa kwendawo kwabasegunyeni abafanelekile ngaphambi kokuqala ukwenza imisebenzi. Imisebenzi enjalo ifakwe ohlwini olungaphansi kweSaziso eSifaka ohlwini iMitheshwana 1 GNR 324, ISaziso sokufaka oHlwini 2 GNR 325 kanye neSaziso sokufaka ohlwini 3 GNR 327 (2014 njengoba kuchitshiyelwe) se-NEMA (njengoba kuchitshiyelwe).

Imisebenzi efaka ohlwini engenayo yalesi Sicelo esifakiwe yilena:

	Incazelo yomsebenzi ohlobene nalokho
ISaziso sokufaka ohlwini 1 (GN R327)	
9	Intuthuko yengqalasizinda engaphezu kwe-1 000m ubude ngokuthuthwa kwamanzi amaningi noma amanzi emvula anedayamitha yangaphakathi eyi-0,36m noma ngaphezulu; noma Afika phezulu nge-120l ngomzuzwana noma ngaphezulu..
10	Intuthuko yomsebenzi ohlobene nalokho wengqalasizinda esingaphezu kwe-1 000m ubude ngokuthutha indle eningi, i-efluwenti, amanzi okusebenza, amanzi emfucuza, amanzi abuyayo, okukhishwa yizimboni noma izikhiminci.
11(i)	Intuthuko yezindawo noma ingqalasizinda yokwedlulisa nokusabalalisa ugesi (i) ngaphandle kwezindawo zasemadolobheni noma ezindaweni eziyizimboni ezinomthamo ongaphezu kwama-33 kodwa ongaphansi kwama-275 kVs.
12(ii)	Intuthuko yengqalasizinda noma izakhiwo engalandeleka ngebanga eliyi-100m^2 noma ngaphezulu phakathi endaweni yamanzi uma kungekho ukudonseleka emuva, kuma-32m endawo yamanzi, akalwe kusukela onqenqemeni lwendawo yamanzi.
14	Intuthuko nomsebenzi ohlobene nalokho wendawo noma ingqalasizinda, yokubeka noma yokubeka nokuphatha izimpahla eziyingozi, uma lokho kugcina eziqukathini ezinomthamo ohlangene ongama-80m^3 noma ngaphezulu kwama- 500m^3.
19	Ukugcwalisa nokufaka nanoma iyiphi impahla engaphezu kwama-10m^3 iphakathi noma ukugweda, ukumba, ukukhipha noma ukuhambisa umhlabathi, isihlabathi, amagobolondo, izivikeligobolondo, amagendi, noma idwala elingaphezu kwama-10m^3 kusukela endaweni yamanzi.
24(ii)	Ukwakhiwa komgqawo onesigcini esibanzi kunama-13,5m, noma lapho kungekho khona izigcini lapho umgwaqo unobubanzi obungaphezu kwama-8m.
25	Intuthuko nemisebenzi ehlobene nalokho yezindawo noma ingqalasizinda sokuhlanza i-efluwenti, amanzi angcolile, noma amapayipi okuhambisa indle anomthambo wokukhipha ongaphezu kwezi-2 000m^3 kodwa engaphansi kwezi-15 000m^3.
27	Ukuqoqa endaweni eyi-1 ha noma ngaphezulu, kodwa engaphezu kwama-20 ha amahlathi endabuko.
ISaziso sokufaka ohlwini 2 (GN R325)	
4	Intuthuko nemisebenzi ehambelana nakho kwezindawo noma ingqalasizinda, ukuba kubekwe, noma ukubeka nokuphatha, impahla enobungozi, lapho lokho kugcina kwenzeka ngomthamo ohlanganisiwe ongaphezu kwama-500m^3.
6	Intuthuko yezindawo noma ingqalasizinda yanoma yiluphi uhlelo noma umsebenzi odinga imvume noma ilayisense ngokwemigomo yemithetho kazwelonke neyesifundazwe ebusa ukwakhiwa noma ukukhishwa

	Incazelo yomsebenzi ohlobene nalokho
	kwezintuthusisi, ukunukubezeka komoya namanzi noma i-efluwenti.
15	Ukuqoqa endaweni engama-20 ha noma ngaphezulu yamahlathi endabuko.
17	Nanoma yikuphi ukwenziwa komsebenzi okufaka ukwenziwa kwalowo msebenzi odinga ilungelo lokumba izimbiwa njengoba kuhlongozwe esigabeni 22 soMthetho wokuThuthukisa iMithombo yePhethroliyamu nokuMbiwa phansi, 2002 (uMthetho No. 28 wowezi-2002), okufaka ukuhlela okuseqhulwini komthombo ombiwa phansi, okufaka ukuhenqa, ukudonsakumunca, ukuhlukanisa ngezigaba, ukugxila, ukugaya, ukuskrina noma ukuwasha.
25	Intuthuko nokusebenza okuhlobene kwezindawo noma ingqalasizinda ukuba kuhlanzwe i-efluwenti, amanzi angcolile noma amapayipi okuthutha indle ngomthamo wokuphumayo okungama-15 000m^3 noma ngaphezulu.
Isaziso sokufaka ohlwini 3 (GN R324)	
4 (iii) (viii) (x) (xii-aa)	Ukwakha umgwaqo obanzi kunama-4m nokubekiwe okungaphansi kwama-13,5m eNdaweni yokuGcina yoMphakathi KwaZulu-Natali, iziNdawo zeBhayodayivesithi eBalulekile (ama-CBAs) noma iziNdawo ezakhelwe ukusetshenziselwa ukugcinwa eZinhlakeni zeNtuthuko yeNdawo eqagulwe abakwazi ukugunyaza lokho noma zikalelwe ukugcina; noma ngaphandle kwezindawo ezisemadolobheni: (aa) Izindawo ezikuma-10km kumapaki kazwelonke noma izindawo ezingamagugu emhlabeni noma kuma-5km kwenye indawo evikelekile ehlonzwe ngokwemigomo ye-NEMPAA noma endaweni ewumongo yokugcina ibhayosfiye.
12 (ii) (iv) (vii)	Ukuqoqa indawo engama-300m^2 noma ngaphezulu engamahlathi endabuko eNdaweni yokuGcina eZomphakathi; noma kwimpiliswano yabantu nezilwane esengcupheni yokuphela efakwe ohlwini ngokwemigomo yesigaba 52 se-NEMBA noma ezweni, lapho, ngesikhathi sokuqalisa ukusebenza kwalesi Saziso noma emva kwalokho lowo mhlaba wathathwa njengobiyelwe, ukugcina noma unokubiyelwa okufana nalokho.
14	Intuthuko yengqalasizinda noma izakhiwo ngokwenzeka kubonakale okuyi-10m^2 noma ngaphezulu; lapho lokho kuthuthukisa kwenzeka (a) endaweni yamanzi; (b) phakathi endaweni yamanzi; (c) uma kungekho okubuyisela emuva intuthuko okuvunyiwe, endaweni yamanzi engama-32m, ekalwe kusukela onqenqemeni lwendawo enamanzi; i-CBAs noma iZindawo ezikuma-10k. kumapaki akuzwelonke noma izindawo ezingamagugu emhlabeni noma kuma-5km kusuka kunoma iyiphi indawo evikelekile ehlonzwe ngokwemigomo ye-NEMPAA noma endaweni ewumongo yokugcinwa kwebhayosfiye, lapho lezo zindawo zinezihlahla zendabuko.

Ukulawula iNdawo kuZwelonke: uMthetho weMfucuza, 2008 (uMthetho 59 wowezi-2008) (NEMWA)

ISigaba 20 se-NEMWA sidinga ukuthi imisebenzi ethile yokulawula imfucuza, sidinga ilayisense yokulawula imfucuza kwabagunyaziwe abafanelekile ngaphambi kokuqala ukwenza umsebenzi. Leyo misebenzi yokulawula imfucuza ifakwe ohlwini ngaphansi kweMitheshwana GNR 921 (njengoba uchitshiyelwe).

Imisebenzi yokuLawula iMfucuza eNgenayo kulesi Sicelo yilena>

#	Ukuchaza umsebenzi osondele
ISigaba B	
10	Iphrojekthi ehlongozwayo ifaka nokwakhiwa kwendawo yomsebenzi obuswa yimitheshwana.
11	Ukusungula noma ukufuna insalela yenqwabazitoko noma insalela enqwabelwaniselwe umsebenzi odinga ilungelo lokumba izimbiwa, ilungelo lokucinga noma ilungelo lokukhiqiza ngokwemigomo yoMthetho wokuThuthukisa iMithombo yeZimbiwa nokusaMafutha (i-MPRDA).

Uma kubhekwa lokhu okungenhla, uhlelo lokuHlola uMthelela weNdawo nokuHlela (i-S&EIR) kumele lwenziwe.

UMthetho waManzi kuZwelonke, 1998 (uMthetho 36 wowe-1998) (i-NWA)

Isicelo seLayisense yokuSebenzisa aManzi eDidiyelwe (i-IWULA) kumele kuhlanganiswe futhi kwathunyelwa kwa-Department of Water and Sanitation (i-DWS) ukuqinisekisa ukuba semthethweni ngokusetshenziswa kwamanzi kwiphrojekthi ephakanyiswayo. Isicelo seLayisense yokuSetshenziswa kwaManzi siyokwenziwa kwiphrojekthi ngokuhambelana nohlelo lwe-EIA ne-EMP nganoma yimuphi umsebenzi ngokwemigomo yeSigaba 21 se-NWA.

Ukusetshenziswa kwamanzi kusukume njengengxenye yephrojekthi okudinga ukugunyaza ngokwemigomo yeSigaba 21 se-NWA kufaka:

Isigaba 21:	
(a)	Ukukha amanzi emthonjeni wamanzi
(b)	Ukubeka amanzi
(c)	Ukuthikameza noma ukujikisa ugelezomanzi emthonjeni
(f)	Ukuchitha imfucuza noma amanzi anemfucuza
(g)	Ukulahla amanzi ngendlela engaba nomthelela omubi emthonjeni wamanzi

(i)	Ukuguqula isizalo, izinkwazi, isizathu noma isakhisici somthombo wamanzi
(j)	Ukukhipha, ukulahla noma ukuchitha amanzi atholakala ngaphansi komhlaba

UMthetho weMithombo eYifagugu kuZwelonke, 1999 (Act 25 of 1999) (NHRA)

Ukuvikela nokulawulwa kwemithombo yamagugu eNingizimu Afrika ilawulwa yi-NHRA. Imimo ebalulekile ngokomlando, njengamathuna, i-akhiyoloji nezimpawu ezibalulekile ngokwamasiko, izindawo nezinkalo kuvikelwe yi-NHRA. Imvume evela kwa-South African Heritage Resources Agency (i-SAHRA) iyadingeka ngokwemigomo yeSigaba 38 se-NHRA ezigabeni ezithile zentuthuko, eziphakanyiswa yimisebenzi ehlongozwayo. Isicelo kulokhu sizofakwa ohlelweni lwe-EIA.

Umumosakhiwo woHlelo lwe-Environmental Impact Assessment (i-EIA)

I-EIA iyisisetshenziswa somthetho esisetshenziselwa ukuqinisekisa ukuthi imithelela engaba khona yendawo okungaba khona ngenxa yentuthuko ehlongozwayo iyagwenywa noma kuyangenelelwa kukho. 'Indawo' ifaka izinto zasemphakathini, zomnotho nezempilomzimba lapho okumele i-EIA ihlole ngendlela okuyiyo. Uhlelo lwe-EIA lwehlukaniswe izigaba ezimbili, isigaba sokuhlela kanye nesigaba sokuHlola uMthelela.

Isigaba sokwakhiwa kohlaka (Mandulu – Mfumfu 2024):

Isigaba sokwakhiwa kohlaka sihlose lokhu:

- Ukuphenya nokuqoqa ulwazi endaweni ehlongoziwe, ukusungula ukuqonda indawo.
- Ukusungula ukuthi imisebenzi ehlongozwayo izoba namthelela muni endaweni.
- Hlonza ama-IAPs nabasemagunyeni abangenayo ngokwenza uhHlelo lokuBamba iQhaza koMphakathi.
- Ukuhlonza imithelela engaba khona yendawo.
- Chaza iphrojekthi ehlongoziwe nokungafakwa esikhundleni oukhona.

Isigaba sokuHlola uMthelela (Mfumfu – Zibandlela 2024):

Ngesikhathi salesi sigaba, zonke lezi zindaba/imithelela nokuseceleni okuhlongozwe eSigabeni soHlaka zihlolwa ziphinde zilinganiswe ngokwemigomo yokubaluleka kwazo. Lapho kudingeke khona, iziphakamiso ziyenziwe ukuvimbela imithelela emibi engaba khona, noma ukuphucula imithelela emihle engaba khona.

UHlelo lokuLawula iNdawo i-Environmental Management Programme (EMPr) luzohlanganiswa okuzoqondisa okubekwe ngokwendawo nokwakha, ukusebenza nesigaba sokuhlakazakusungula sephrojekthi. Njengoba isigaba soHlaka, ukubamba iqhaza kuyingxenye ebalulekile leSigaba sokuHlola.

Kulesi sigaba, ungoti uyohlinzeka okutholakele okubhalwe phansi ophenyweni longoti oluqhubekayo:

- UkuHlola eZomphakathi neZomnotho
- UkuHlola uMthelela weZominyanozimoto
- UkuHlola uMthelela weBhayodayivesithi
- UkuHlola uMthelela we-Akhwathikhi
- UkuHlola uMthelala weZindawo eZingamaxhaphozi
- UHlelo loMthelela weZamagugu
- UkuHlola uMthelela weJiyohayidrolojikhi
- UkuHlola uMthelela weZamanzi
- Ukuhlola uMthelela weHayidrophedolojikhi
- UkuHlola uMthelela woMsindo
- UkuHlola uMthelela weZingabunjalo loMoya
- UkuHlola uMthelela woMhlabathi & neZolimo
- UHlelo lokuLawula ukuMuncwa kwe-Esidi yaseMayini eseyiKhonsepthi & uHlelo lokuLawula iDekhanti

Okutholwe yilokhu kuhlolwa kuyotholakala kwabanesabelo eMbikweni owuHlaka woMthelela weNdawo.

Ukubamba iqhaza komphakathi

UHlelo lokuBamba oqhaza koMphakathi kuhlose ukwazisa iningi lama-I&APs (nanoma yimuphi umuntu noma inhlangano enentshisekelo eqondile, yebhizinisi, yezezimali, yomuntu ngqo noma enye, noma okungenzeka ukuba ithinte ngokuqondile noma ngokwedlula yiphrojekthi ehlongozwayo) ngentuthuko ehlongozwayo nohlelo lokugunyaza indawo okumele lulandelwe. Luyisisetshenziswa esivumela umphakathi ukuba ushintshisane ngolwazi nokuveza imibono yayo nokukhathazeka ngentuthuko ehlongozwayo eyenzelwa i-EIA.
UHlelo lokuBamba iqhaza koMphakathi lusiza ekuhlonzeni izindaba ezingaba khona nokukhathazeka okudinga ukubhekwa ekuhlolweni umthelela ngokukhanyisa ulwazi oluyilo okumele lufakwe ekuhlolweni. Kuzisa ukuhlaziya okuyikho nokuchazayo nokusiza ukugxila kanye nokuphucula ukuthatha isinqumo.

I-EIA izoba evulelekile nengafihli lutho emphakathini ngohlelo lwawo wonke ama-I&Aps arejistiwe bazolokhu baziswa ngemicimbi ngohlelo. Konke ukufaka isandla kuma-I&APs izobhalwa

phansi ngokugcwele, kuzohlaziywa bese kuphenzulwa kwi- EIA.

Imisebenzi yokubamba iqhaza koMphakathi:

Abanesabelo bayamenywa ukuba barejiste njengama-I&APs bese bethola ulwazi olwengeziwe lapha:

- Izaziso kwabezindaba ezifakwe emaphepheni asatshalaliswa endaweni yasekhaya.
- Le Dokhumenti yoLwazi oluYisisekelo (i-BID).
- Amabhodi ezaziso abekwe ezindaweni zentuthuko.
- Imihlangano yabanesabelo okumele ibanjwe phakathi kwamhla ziyi-16 namhla ziyi-20 kuMandulo 2024 endaweni yase-Utrech.
- Ukubuyekeza iMibiko yokuHlela ewuHlaka neyokuHlola iMithelela.

Ungalibamba kanjani iqhaza:

Abanesabelo bangedlulisela ukuphawula kwabo kanye namagama abo, imininingwane yokuxhumana kanye nenkomba yanoma yiliphi ibhizinisi eliqondile, ezezimali, ezomuntu ngqo noma enye intshisekelo abanayo esicelweni abasifakile ngeposi noma nge-imeyli kwi-GCS – imininingwane yokuxhumana ekhasini 1 kule BID.

Izinyathelo ezilandelayo:

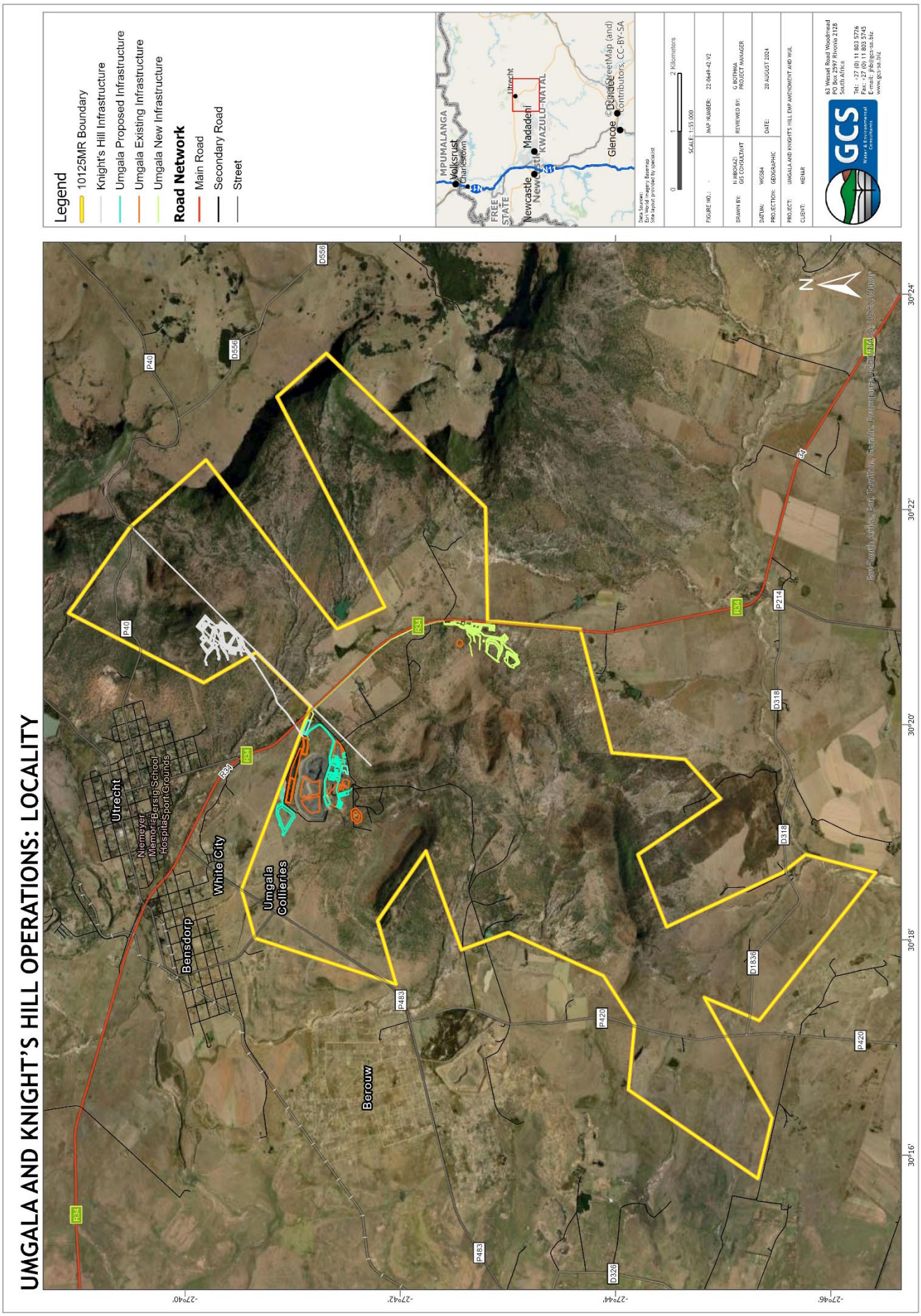
Abanesabelo banesikhathi esingaze sifike **zi-4 kuMfumfu 2024** ukurejista njenge-I&APs nokuphawula eMbikweni wokuHlela uHlaka.

UMbiko wokuHlela owuHlaka uchaza iphrojekthi, izimo eziyisisekelo, izimo eziyisisekelo zendawo ethintekile nezindaba nokukhathazayo okumele kuphenywe ngesikhathi sesigaba sokuhlola umthelela. Amakhophi ombiko ayatholakala ekhasini 1 wale BID.

Uma kulandela ukuphawula kwabanesabelo, uMbiko wokuHlela uyophothulwa bese uthunyelwa kwaBagunyaziwe abakwazi ukwenza umsebenzi ukuze ivunywe. Abanesabelo bazokwaziswa, bese kutholakla ikhophi ewuMbiko wokuGcina wokuHlela.

Ngesikhathi sesigaba esilandelayo se-EIA, isigaba sokuhlola umthelela, abanesabelo bayokwaziswa ngokutholakala kohlaka loMbiko wokuHlola uMthelela.

Umhlangano wabanesabelo uzobanjwa ukuze kwethulwe kuphinde kudingidwe okutholakale kulesi sigaba. UMbiko weZobuchwepheshe besicelo esifakelwe i-WUL ozokwenziwa utholakale ngalesi sigaba ukuze kuphawule umphakathi.



Figa 1: Ibalazwe eliveza Umgala / Knight's Hill Mining Operations

Ukugunyaza iNdawo eDidiyelwe kokwakha kabusha imisebenzi ebekelwe ukumba amalahle eMgala Colliery kanye nokwakhiwa kwe-Knight's Hill Adit Area. (KZN 30/5/1/2/2/10125)

Ifomu le-I&AP lokuPhawula nokuRejista
Inombolo eyinkomba ye-GCS: 22-0649

Igama:		Isibongo:	
Inhlangano/ Intshisekelo:			
Ikheli leposi/ lendawo yokuhlala			
	Indawo:	Ikhodi:	
Imininingwane yokuxhumana	Ucingo:	( )	
	Umakhalekhukhwini:	( )	
	I-imeyli:		

Uyacelwa ukuba ufake uphawu luka **X** ukukhombisa ukuthi ungathanda yini ukubamba iqhaza ohlelweni:

Yebo, Ngingathanda ukubamba iqhaza kulolu hlelo nokuthola ulwazi olusha izikhawu	
Cha, Angizimisele ukubamba iqhaza kanti angifisi nokuthola olunye ulwazi	

Usuku lokuphawula (DD / MM / YYYY)

Uyacelwa ukuba uveze nanoma yiziphi izinkinga, ukuphawula nokukhathazeka mayelana nephrojekthi ehlongozwayo

Uyacelwa ukuba ukhombise ukuthi yiziphi izimo ezingadinga ulwazi olongeziwe

Uyacelwa ukuba ufake eminye imininingwane yokuxhumana nanoma yimaphi amanye ama-I&APs ocabanga ukuthi kumele kuthintwane nawo

Igama:		Isibongo:	
Ucingo:	( )	Umakhalekhukhwini:	
I-imeyli:			

Ukuze urejiste njenge-I&AP kule phrojekthi, thumela ngefeksi, ngeposi, noma nge-imeyli ifomu lokurejista eligcwalisiwe ku-Gerda Bothma / Anelle Lotter lapha:

Ucingo: (011) 803 5726, **I-imeyli:** gerdab@gcs-sa.biz **/** anellel@gcs-sa.biz

Ikheli leposi: PO Box 2597, Rivonia, 2128