Eyethu Coal

Kromdraai North Colliery

Draft Scoping Report

January 2014

Submitted as contemplated in Regulation 29 of the Environmental Impact Assessment Regulations, 2010 of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

For the application for Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations 2010
Government Notice R544 - Listing Notice 1 of 2010 and Government Notice R545 - Listing Notice 2 of 2010

MDEDET Reference No.: 17/2/3 N - 410

Executive Summary

Eyethu Coal (Pty) Limited has applied for a mining right (DMR Ref. MP 30/5/1/1/2/10022 MR) in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). Eyethu Coal (Pty) Limited proposes to mine coal at Kromdraai North Colliery situated on portions 4, 5, 6 and 18 of the farm Kromdraai 263 IR, situated in the Magisterial District of Delmas (Mpumalanga Province). The application for the mining right has been submitted to the Department of Mineral Resources (DMR) and Eyethu Coal (Pty) Ltd awaits the decision by the DMR. During the compilation of the above-mentioned application, relevant specialist studies were conducted to compile the Environmental Impact Assessment. Since the specialist studies were conducted for the proposed Kromdraai North Colliery, these studies will therefore be used in the compilation of the Environmental Impact Assessment Report (EIAR).

This document aims to address the activities to be undertaken at the proposed Kromdraai North Colliery. Kromdraai North Colliery is situated approximately 15 km northwest of Leslie/Leandra town, 25 km southeast of Delmas and 15 km south of Kendal. The proposed mining operation will consist of opencast mining activities that will make use of the sequential lateral rollover mining technique and underground mining activities that will make use of the bord and pillar mining technique. The target mineral at the proposed Kromdraai North Colliery is the No. 4 and No. 2 coal seams, which consist of approximately 7 million tons of Run of Mine (R.O.M) coal. The No. 4 seam will be mined using opencast mining methods and the No. 2 coal seam will be mined using underground mining methods.

The proposed mine surface infrastructure at the opencast section will include; a box-cut, a crushing and screening plant, topsoil stockpiles, overburden stockpiles, R.O.M stockpiles, product stockpiles, a weighbridge, a workshop/office complex, fuel storage facilities, access and haul roads, a pollution control dam and associated water management structures.

The proposed mine surface infrastructure at the underground section will include; an access adit, access/haul roads, topsoil stockpiles, R.O.M stockpiles, overburden stockpiles, a weighbridge, power supply facilities, workshop and office complex, equipment yard, fuel storage facilities, a pollution control dam and associated water management structures. The coal product will be transported and sold to Eskom and other markets.

The proposed mining activities at the Colliery will trigger the NEMA listed activities in terms of government notices R544 and R545.

The National Environmental Management Act, 1998 (Act 107 of 1998) requires that any person or entity that intends to undertake activities listed in government notices R544 and R545 must obtain an environmental authorisation in terms of section 24D of the National Environmental Management Act before undertaking such activities.

On evaluation of the proposed Kromdraai North Colliery mining activities, the following listed activities were identified i.e.

GN R544:

Activity 11: The construction of mine associated infrastructure such as pollution control dams (opencast and underground), softs stockpile (at the opencast area), topsoil stockpile (at the opencast

area), underground access adit and a substation where such construction occurs within 32m of a temporary/seasonal wetland associated with the Kromdraaispruit.

Activity 22: The construction of access and haul roads where the road is wider than 8 metres, for the transportation of coal and overburden material within and around Kromdraai North Colliery.

GN R545:

Activity 5: The construction of mine associated infrastructure such as pollution control dams, overburden stockpiles, Run of Mine stockpiles, opencast pit, and underground access adit which requires a Water Use License in terms of the National Water Act (Act 36 of 1998).

Activity 15: The physical alteration of undeveloped land for the construction of mine related infrastructure where the total area to be transformed is more than 20 hectares.

Based on the above, an application for an environmental authorisation for the above listed activities was undertaken with the Department of Economic Development, Environment and Tourism (eMalahleni Regional Office). The application has been accepted and the Draft Scoping Report (this document) is thereby being submitted.

CONTENTS PAGE

DRAFT SCOPING REPORT

1. INTRODUCTION 3
1.1 Who is Developing the Scoping Report? 3
1.2 Who will Evaluate the Scoping Report? 4
1.3 Legal Requirements 4
1.4 Purpose of the Scoping Report 4

2. PROJECT BACKGROUND AND CONTEXT 7
2.1 Overview of the Project 7
2.1.1 Name of the Applicant 7
2.1.2 Name of the Proposed Project 7
2.1.3 Address of proposed Project 7
2.1.4 Project Manager 7
2.1.5 Contact Person 7
2.2 Location 7
2.2.1 Magisterial District & Regional Services Council 9
2.2.2 Direction and Distance to Nearest Towns 9
2.2.3 Surface Infrastructure 9
2.2.4 Presence of Servitudes 9
2.2.5 Name of River Catchments 9
2.3 Name and Address of Land Owner & Farm Description 11
2.4 Brief Proposed Project Overview 11
2.4.1 NEMA Listed Activities in terms of Government Notice R544 – Listing Notice 1 of 2010 12
2.4.2 NEMA Listed Activities in terms of Government Notice R545 – Listing Notice 2 of 2010 12

3. BASELINE INFORMATION 15
3.1.1 Geology 15
3.1.2 Climate 18
3.1.3 Topography 19
3.1.4 Soils 20
3.1.5 Pre – mining Land Use 20
3.1.6 Land capability 20
3.1.7 Natural Vegetation / Plant Life 23
3.1.8 Surface Water 23
3.1.9 Ground water 25
3.1.10 Air Quality 25
3.1.11 Sites of Archaeological and Cultural Interest 26
3.1.12 Visual Aspects 26
3.1.13 Regional Socio-Economic Structure 26

4. DETAILS OF THE PUBLIC PARTICIPATION PROCESS 29
4.1 The Consultation Process 29
4.1.1 Registration phase 29
4.1.2 Scoping Phase 29

4.1.3 EIA/EMP Phase....30
4.1.4 Record of Decision (ROD)....30

5. NEED AND DESIRABILITY OF THE PROPOSED PROJECT....32

5.1 Need and desirability for the Project....32

6. DETAILED DESCRIPTION OF THE PROJECT....34

6.1 Detail Description of the Project....34

6.1.1 Surface Infrastructure....34
6.1.2 Roads, railways and power lines....34
6.1.3 Waste Management....34

7. CONSIDERATION OF ALTERNATIVES....38

7.1 Location Alternatives....38

7.2 Site Layout Alternatives....38

7.3 Transport Alternatives....38

8. DESCRIPTION OF ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS....40

8.1 CONSTRUCTION PHASE....40

8.1.1 Geology....40
8.1.2 Topography....40
8.1.3 Soils....40
8.1.4 Land Use....40
8.1.5 Land capability....41
8.1.6 Natural vegetation....41
8.1.7 Animal Life....41
8.1.8 Surface water....41
8.1.9 Groundwater....41
8.1.10 Air Quality....41
8.1.11 Visual Aspects....41
8.1.12 Noise 41
8.1.13 Social Aspects....41

8.2 OPERATIONAL PHASE....42

8.2.1 Geology....42
8.2.2 Topography....42
8.2.3 Soils....42
8.2.4 Land capability....42
8.2.5 Land Use....42
8.2.6 Natural Vegetation....42
8.2.7 Animal Life....43
8.2.8 Surface water....43
8.2.9 Groundwater....43
8.2.10 Air Quality....43
8.2.11 Noise 43
8.2.12 Visual Aspects....43
8.2.13 Regional Socio-Economic Structure....44
8.2.14 Interested and Affected Parties....44

8.3 DECOMMISSIONING PHASE....44

8.4 RESIDUAL IMPACTS AFTER CLOSURE....44

8.4.1 Geology....44
8.4.2 Groundwater....45

8.5 Cumulative Impacts....45

9. CONCLUSION 47
9.1 Objectives of this report 47
9.2 Environmental Feasibility of the Proposed Project 47

10. STATUTORY REQUIREMENTS 49

11. PLAN OF STUDY 51
11.1 Description of tasks that will be undertaken as part of the environmental impact assessment process 51
11.2 Stages at which the competent authority will be consulted 51
11.3 description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity 51
11.4 Public Participation process 53
11.4.1 Interested and Affected Parties 53
11.4.2 The Consultation Process 53
11.4.3 Advertisements 54
11.4.4 Identification of issues and alternatives 54
11.4.5 Evaluation of concerns 54

12. COMMENT REPLY SHEET 56

FIGURES

Figure 1: Kromdraai North Colliery's Regional Setting 8

Figure 2: Location of the proposed mine in relation to the tertiary and quaternary drainage regions ... 10

Figure 3: Stratigraphic layers of the proposed mining area 17

Figure 4: Soil Landform map of the proposed mining area 22

Figure 5: Catchment delineation for the proposed Kromdraai North Colliery 24

TABLES

#	Table	Page
Table 1:	Direction and Distance to Nearest Towns.	9
Table 2:	Description of immediate and adjacent landowners and their property	11
Table 3:	Contact Details of Immediate and Adjacent Landowners	11
Table 4:	Mean monthly rainfall, rain days and evaporation data for the proposed Colliery	18
Table 5:	Mean monthly temperature data for 0476762 (Springs)	18
Table 6:	Average wind speeds and directions	19
Table 7:	Description and extent of pre-mining land use categories	20
Table 8:	Land capability assessment	21
Table 9:	Dust Fallout Guidelines	26

APPENDICES

Appendix 1 Mining Layout Plan

SECTION ONE

Introduction

1. INTRODUCTION

1.1 WHO IS DEVELOPING THE SCOPING REPORT?

SCOPING Report Compilation	:	Geovicon Environmental (Pty) Limited P.O. Box 4050 MIDDELBURG, 1050 Tel: (013) 243 0542 Fax: (086) 632 4936 Contact: Mr. O.T. Shakwane

Geovicon Environmental (Pty) Limited has been appointed by Eyethu Coal (Pty) Ltd as the independent environmental consultant to compile this scoping Report and has no vested interest in the project.

Geovicon Environmental (Pty) Limited is a geological and environmental consulting company. The company was formed in 1996, and currently has nineteen years' experience in the geological and environmental consulting field. During the past ten years, Geovicon Environmental (Pty) Limited has successfully completed consulting projects in the Mining sector (coal, gold, base metal and diamond), Quarrying sector (sand, aggregate and dimension stone), Industrial sector and housing sector. Geovicon Environmental (Pty) Limited has undertaken contracts within all the provinces of South Africa, Swaziland, Botswana and Zambia. During 2001 Geovicon Environmental (Pty) Limited entered the field of mine environmental management and water monitoring.

Geovicon Environmental (Pty) Limited is a Black Economically Empowered Company with the BEE component owning 60% of the company. Geovicon Environmental (Pty) Limited has three shareholders i.e. O.T. Shakwane, J.M Bate and T.G. Tefu.

Mr. O.T Shakwane obtained his BSc (Microbiology and Biochemistry) from the University of Durban Westville in 1994, and completed his honours degree in Microbiology in 1995.

Mr. T.G. Tefu is a geologist. He obtained his BSc. in geology at the University of Witwatersrand. He worked with several mining companies and was also employed by the Department of Mineral Resources' Environmental Management directorate.

Mr. Bate, founder of Geovicon Environmental (Pty) Limited, is used by the company on an ad hoc (consultancy) basis. He is also a qualified geologist. He obtained his BSc (geology) from the Potchefstroom University for CHE in 1993, and completed his honours degree (cum Laude) in geology in 1994. He obtained his MSc (cum Laude) in 1995. Over the past years Geovicon Environmental (Pty) Limited has formalised working relationships with companies that offer expertise in the following fields i.e. Geohydrology, Civil and Geotechnical Engineering, Geotechnical Consultancy, Survey and Mine Planning and Soil & Land Use Consultancy.

1.2 WHO WILL EVALUATE THE SCOPING REPORT?

Before the proposed listed activities applied for can proceed, the environmental impacts that may result from the proposed project must be assessed.

In the spirit of co-operative governance, other commenting authorities will be consulted with. These include:

Department of Mineral Resources (DMR)

Mpumalanga Tourism and Parks Agency (MTPA)

Department of Water and Sanitation (DWS)

National Department of Agriculture, Forestry and Fisheries (NDA)

1.3 LEGAL REQUIREMENTS

The National Environmental Management Act, 107 of 1998 (NEMA) requires that a Scoping Report be conducted and that the Environmental Impact Assessment (EIA) be carried out for the listed activities applied for in terms of the Environmental Impact Assessment Regulations 2010.

In addition to the NEMA, the following key legislation is also relevant to the Scoping Report:

Minerals and Petroleum Resources Development Act (MPRDA), No. 28 of 2002

Environment Conservation Act (ECA), No. 73 of 1989

The Mine Health and Safety Act (MHSA), No. 29 of 1996, as amended

The National Water Act (NWA), No. 36 of 1998, as amended

The National Environmental Management Biodiversity Act (NEMBA), No. 10 of 2004

The National Environmental Management Air Quality Act (NEM:AQA), No. 39 of 2004

The Final Scoping Report will be finalised based on the comments received from Interested and Affected Parties (I&AP's).

1.4 PURPOSE OF THE SCOPING REPORT

The draft Scoping report addresses the requirements as contemplated in section 28 of the Environmental Impact Assessment Regulations published in Government Notice No. R543. This report also allows for registered I&AP's to raise issues and concerns during the consultation phase which will then be addressed in the final scoping report. The aim of this Scoping Report is to:

- Provide information on the proposed project and present the findings of the Scoping to the authorities
- Provide information regarding alternatives that have been considered

- Show how authorities and Interested and Affected Parties were afforded the opportunity to contribute to the project, and to indicate the issues raised and the responses to those issues
- Describe the baseline receiving environment
- Describe the extent of environmental consequences for the construction and operating phases of the proposed project
- Propose mitigation measures for impacts that are considered significant
- Describe the environmental feasibility of the proposed project
- Present findings in a manner that facilitates decision-making by the relevant authorities.

SECTION TWO

Project Background & Context

2. PROJECT BACKGROUND AND CONTEXT

2.1 OVERVIEW OF THE PROJECT

2.1.1 Name of the Applicant

Eyethu Coal (Pty) Ltd

2.1.2 Name of the Proposed Project

Kromdraai North Colliery

2.1.3 Address of proposed Project

Portions 4, 5, 6 and 18 of the farm Kromdraai 263 IR, situated within the Magisterial District of Delmas, Mpumalanga Province.

2.1.4 Project Manager

Mr. Mike Elliot

2.1.5 Contact Person

Mr. Mike Elliot

Stonehill Office Park, Block B

c/o Solomon Mahlangu & Disselboom Rd

Wapadrand, PTA, 0050

Tel: 012 807 0229

2.2 LOCATION

Kromdraai North Colliery is situated on portions 4, 5, 6 and 18 of the farm Kromdraai 263 IR, situated within the Victor Khanye Local Municipality within the Nkangala District Municipality (Mpumalanga Province). Kromdraai North Colliery is situated approximately 15 km northwest of Leslie/Leandra town, 25 km southeast of Delmas and 15 km south of Kendal. Access to the mine will be via the Kendal – Leandra road. Refer to Figure 1 for the Regional Setting and locality of the proposed Kromdraai North Colliery.

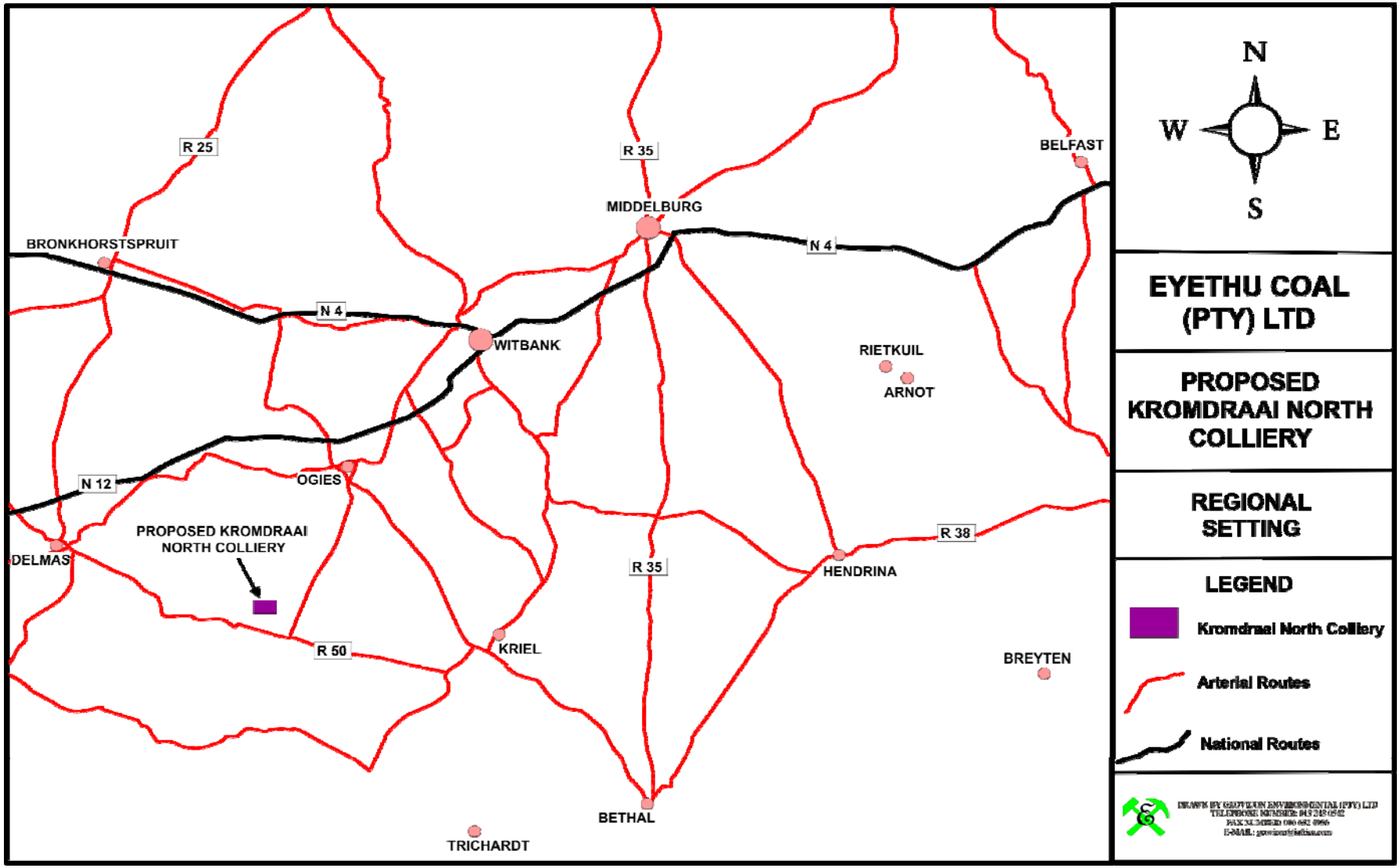


Figure 1: Kromdraai North Colliery's Regional Setting

2.2.1 Magisterial District & Regional Services Council

Magisterial: Delmas, Mpumalanga

District Municipality: Nkangala District Municipality

Local Municipality: Victor Khanye Local Municipality

2.2.2 Direction and Distance to Nearest Towns

Table 1: Direction and Distance to Nearest Towns.

Town	Direction	Distance (km)
Leslie/Leandra	Northwest	15 km
Delmas	Southeast	25 km
Kendal	South	15 km

2.2.3 Surface Infrastructure

The mining right area covers a vast area (approximately 690 hectares). Kromdraai North Colliery's proposed mining areas are located in an area where extensive agricultural activities are taking place. Surface infrastructure available on the area is limited to farming activities as compared to established towns. District roads (R 50, D 686 and D 2543), telephone lines and heavy duty Eskom power lines transect the mining area. Farmhouses and dams are scattered around the proposed mining area.

2.2.4 Presence of Servitudes

Provincial roads and Eskom Power Lines are regarded as servitudes existing within the proposed mining area.

2.2.5 Name of River Catchments

In terms of the Department of Water and Sanitation demarcations, the proposed Kromdraai North Colliery mining project area falls in the Olifants Water Management area. Within the water management area, the proposed mine falls within the Wilge River catchment area, which is demarcated as tertiary drainage region B20. Kromdraai North Colliery falls into quaternary drainage region B20E. Figure 2, depicts the location of the proposed mine in relation to the tertiary and quaternary drainage regions within the Wilge River catchment.

The Kromdraai catchment area drains towards the Kromdraaispruit which ultimately flows directly into the Wilge River (to the west of the mining area). The Wilge River eventually drains into the Olifants River upstream of the Loskop Dam.

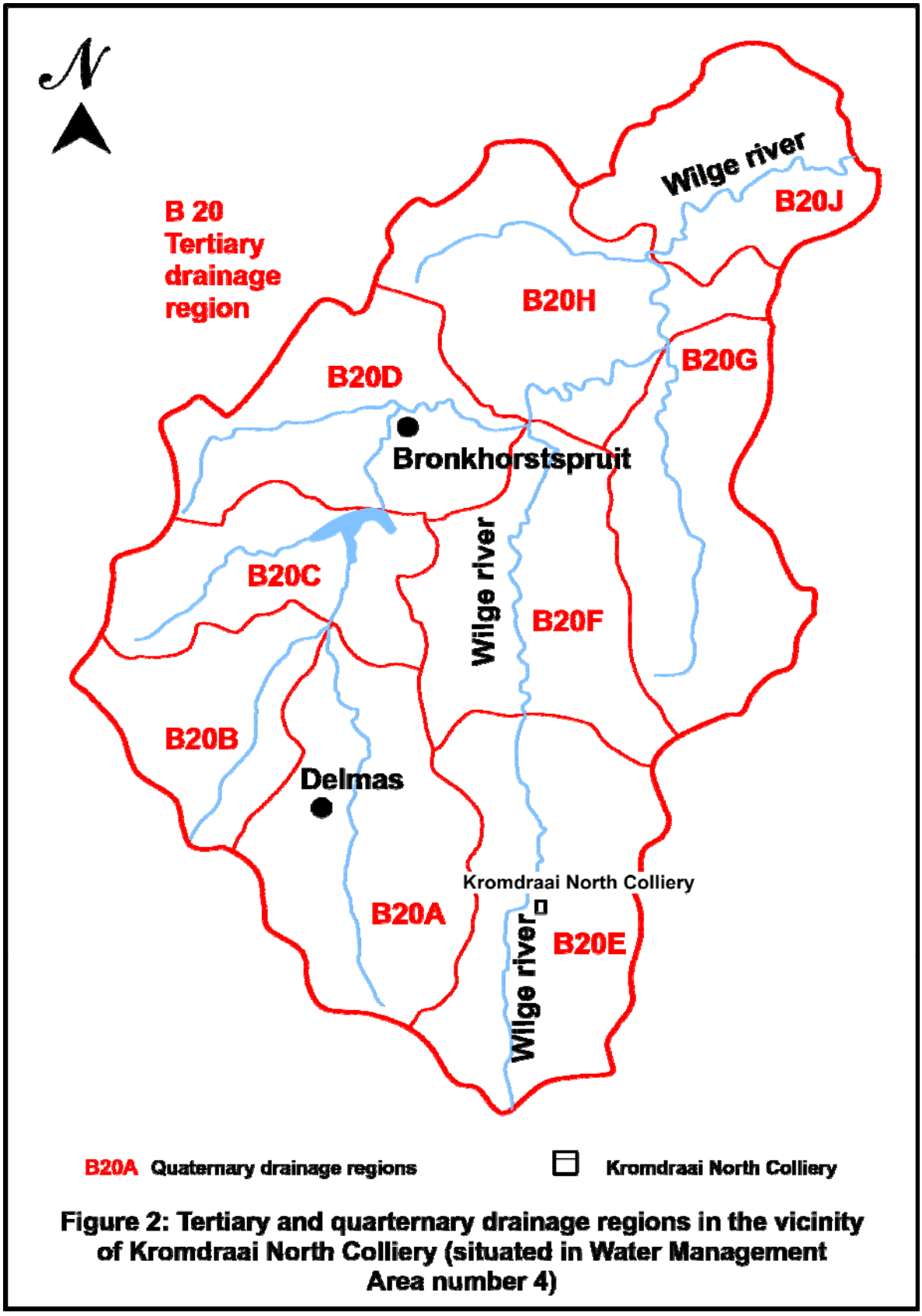


Figure 2: Tertiary and quarternary drainage regions in the vicinity of Kromdraai North Colliery (situated in Water Management Area number 4)

Figure 2: Location of the proposed mine in relation to the tertiary and quaternary drainage regions

2.3 NAME AND ADDRESS OF LAND OWNER & FARM DESCRIPTION

Table 2 indicates the surface owners on the proposed Kromdraai North Colliery.

Table 2: Description of immediate and adjacent landowners and their property

Farm name	Farm portion	Surface Owner
Kromdraai 263 IR	Portion 4*	P. J. Schutte
Kromdraai 263 IR	Portion 5*	D. J. O. Bezuidenhout
Kromdraai 263 IR	Portion 6*	D. J. O. Bezuidenhout
Kromdraai 263 IR	Portion 18*	D. J. O. Bezuidenhout
Kromdraai 263 IR	Portion 1	Jerrie & Johan cc
Kromdraai 263 IR	Portion 7	C. H. Boshoff Familie Trust
Kromdraai 263 IR	Portion 11	Jerrie & Johan cc
Kromdraai 263 IR	Portion 12	Springboklaagte Mining (Pty) LTD
Kromdraai 263 IR	Portion 13	D. J. O. Bezuidenhout
Strehla 261 IR	Portion 0	Ongewis Boerdery (Pty) Ltd
Strehla 261 IR	Portion 8	C. H. Boshoff Familie Trust
Strehla 261 IR	Portion 9	C. H. Boshoff Familie Trust
Darwina Loue 254 IR	Portion 0	L. N. Hoffman Beleggings (Pty) Ltd
Dieplaagte 262 IR	Portion 1	Jongspan Boerdery cc
Dieplaagte 262 IR	Portion 2	Jongspan Boerdery cc
Dieplaagte 262 IR	Portion 3	Hofflou Boerdery (Pty) Ltd
Dieplaagte 262 IR	Portion 4	L. N. Hoffman Beleggings (Pty) Ltd
Brakfontein 264 IR	Portion 5	Norwesco Investments (Pty) Ltd
Haverklip 265 IR	Portion 8	Norwesco Investments (Pty) Ltd
Existing powerlines servitude		Eskom

* Indicate farm portions on which the proposed Kromdraai North Colliery mining activities will be undertaken.

Table 3: Contact Details of Immediate and Adjacent Landowners

SURFACE RIGHT OWNERS	Contact Person	Contact number
P. J. Schutte	P. J. Schutte	082 524 8328
D. J. O. Bezuidenhout	D. J. O. Bezuidenhout	082 415 2292
Jerrie & Johan cc	J. B. Langenhoven	013 665 3519
C. H. Boshoff Familie Trust	J. Boshoff	082 557 9580
Springboklaagte Mining (Pty) LTD	C. M. Ephron	011 772 0600
Ongewis Boerdery (Pty) Ltd	Louwtjie Hoffman	017 683 0160/ 0834540977
L. N. Hoffman Beleggings (Pty) Ltd	Louwtjie Hoffman	017 683 0160/ 0834540977
Jongspan Boerdery cc	B. J. van der Westhuizen	012 804 8290
Hofflou Boerdery (Pty) Ltd	Louwtjie Hoffman	017 683 0160/ 0834540977
Norwesco Investments (Pty) Ltd	M. I. Gibson	013 692 4603/ 013 295 5926
Eskom	Jan Coetzee	011 800 4591

2.4 BRIEF PROPOSED PROJECT OVERVIEW

Eyethu Coal (Pty) Limited has applied for a mining right (DMR Ref. MP 30/5/1/1/2/10022 MR) in terms of

the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). Eyethu Coal (Pty) Limited proposes to mine coal at Kromdraai North Colliery situated on portions 4, 5, 6 and 18 of the farm Kromdraai 263 IR, situated in the Magisterial District of Delmas (Mpumalanga Province). The application for the mining right has been submitted to the Department of Mineral Resources (DMR) and Eyethu Coal (Pty) Ltd awaits the decision by the DMR.

Kromdraai North Colliery is situated approximately 15 km northwest of Leslie/Leandra town, 25 km southeast of Delmas and 15 km south of Kendal. The proposed mining operation will consist of opencast mining activities that will make use of the sequential lateral rollover mining technique and underground mining activities that will make use of the bord and pillar mining technique. The target mineral at the proposed Kromdraai North Colliery is the No. 4 and No. 2 coal seams, which consist of approximately 7 million tons of Run of Mine (R.O.M) coal. The No. 4 seam will be mined using opencast mining methods and the No. 2 coal seam will be mined using underground mining methods.

The proposed mine surface infrastructure at the opencast section will include; a box-cut, a crushing and screening plant, topsoil stockpiles, overburden stockpiles, R.O.M stockpiles, product stockpiles, a weighbridge, a workshop/office complex, fuel storage facilities, access and haul roads, a pollution control dam and associated water management structures.

The proposed mine surface infrastructure at the underground section will include; an access adit, access/haul roads, topsoil stockpiles, R.O.M stockpiles, overburden stockpiles, a weighbridge, power supply facilities, workshop and office complex, equipment yard, fuel storage facilities, a pollution control dam and associated water management structures. The coal product will be transported and sold to Eskom and other markets.

2.4.1 NEMA Listed Activities in terms of Government Notice R544 – Listing Notice 1 of 2010

Activity 11: The construction of infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback.

The construction of mine associated infrastructure such as pollution control dams (opencast and underground), softs stockpile (at the opencast area), topsoil stockpile (at the opencast area), underground access adit and a substation where such construction occurs within 32m of a temporary/seasonal wetland associated with the Kromdraaispruit.

Activity 22: The construction of a road, outside urban areas, where no reserve exists where the road is wider than 8 metres.

The construction of access and haul roads where the road is wider than 8 metres, for the transportation of coal and overburden material within and around Kromdraai North Colliery.

2.4.2 NEMA Listed Activities in terms of Government Notice R545 – Listing Notice 2 of 2010

Activity 5: The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or 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 that Act will apply.

The construction of mine associated infrastructure such as pollution control dams, overburden stockpiles, R.O.M stockpiles, opencast pit, and underground access adit which requires a Water Use License in terms of the National Water Act (Act 36 of 1998).

Activity 15: Physical alteration of undeveloped vacant or derelict land for residential retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more.

The physical alteration of undeveloped land for the construction of mine related infrastructure where the total area to be transformed is more than 20 hectares.

SECTION THREE

Baseline Information

3. BASELINE INFORMATION

3.1.1 Geology

3.1.1.1 Regional Geology

The Kromdraai North Colliery mining area is situated in the Witbank Coalfield of the well-known Middle Ecca stage Coal Province. Several coal mines have been, or are operating within this coalfield. The Witbank coalfield extends from Springs in the west to Belfast in the east and from Middelburg in the north to Rietspruit in the south. The Witbank Coalfield includes the districts of Benoni, Nigel, Brakpan/Springs, Delmas, Dryden, Bronkhorstspruit, Kendal, Ogies, Witbank, Middelburg, Arnot and Belfast encompassing a surface area of approximately 568 000 ha. The Witbank Coalfield bounds the Highveld coalfield to the south, the South Rand coalfield to the southwest and the Ermelo coalfield to the southeast.

The coal seams of the Witbank coalfield are at a shallow depth, with the lowest seam seldom reaching 100 metres in the deepest lying parts of the field. Due to erosion of the sediments, all that remains of the Karoo System in this area is a portion from the lower part of the Middle Ecca Stage to the Dwyka tillite. Within the Witbank coalfield, the Karoo System unconformably overlays the Witwatersrand System, the Waterberg System and the Bushveld Igneous Complex.

The strata in which the coal seams (Middle Ecca Stage) occur consist predominantly of fine, medium and coarse-grained sandstone with subordinate mudstone, shale, siltstone and carbonaceous shale. Ideally there are seven coal seams with varying degrees of persistence numbered from below as No. 1, No. 2, No. 3, No. 4 lower, No. 4 upper, No. 4 A and No. 5 seams.

The layers of carbonaceous shale are usually confined to the beds between the No. 2 and No. 4 A Seams, with a glauconite sandstone marker present immediately above the No. 4 A Seam.

3.1.1.2 Local Geology

The target mineral at the Kromdraai North Colliery is the No. 4 and 2 coal seams, which consist of approximately 7 million R.O.M tons.

Boreholes drilled at the proposed opencast area intersected the No. 4 coal seam between 10.00 m and 28.34 m below surface. Most of the required infrastructure needed to undertake the proposed mining operation will be constructed within the mining area.

Boreholes drilled in the inferred underground area intersected the No. 2 coal seam between 45.90 m and 73.00 m below surface.

The No. 2 coal seam dips to the south-east. A number of boreholes were drilled that did not intersect the coal seam due to dolerite intrusions. The thickness of the No. 2 seam and depth below surface correlates in some boreholes. Continuity of the coal seam is therefore inferred considering the drilling information.

The No. 2 coal seam has a variable thickness of more than 2.3 m in the inferred underground coal resource area. The No. 2 coal seam is recognised by > 2 m roof shale in the hanging wall and speckled shale in the footwall. The average internal parting between the No. 2 seam and No. 4 lower coal seam is

29.4 m. Figure 3 depicts the generalised stratigraphic section of the proposed mining area.

Typical geological borehole Kromdraai North opencast

0.00	6.25	6.25	A	BROWN	SOFT OVB- SOIL					
6.25	15.52	9.27	G	WHITE	GRINTSTONE					
15.52	**15.95**	**0.43**	**FC**	**BLACK**	ROOF SHALE CARBONACEOUS					
15.95	**16.69**	**0.74**	**CM**	**BLACK**	**S4 UPPER COAL SEAM SAMPLED S4U**					
16.69	17.26	0.57	FC	BLACK	S4 MIDDLE SHALE MICACEOUS IN TOP		6.25	SOFT OVB	6.25	
					SAMPLED S4M					
17.26	**19.47**	**2.21**	**CM**	**BLACK**	**S4 LOWER COAL SEAM SAMPLED S4L**		TOTAL	HARD OVB	9.27	
19.47	20.05	0.58	S	LIGHT GREY	SANDSTONE FINE GRAIN		HARD			
20.05	20.47	0.42	SH	BLACK	MICACEOUS SHALE		9.70	ROOF SHALE	0.43	
20.47	23.32	2.85	S	LIGHT GREY	SANDSTONE FINE GRAIN	S4U		**S4U COAL**	**0.74**	
23.32	25.04	1.72	SH	BLACK	MICACEOUS SHALE	S4M		S4M SHALE	0.57	
25.04	28.75	3.71	S	LIGHT GREY	SANDSTONE FINE GRAIN					
28.75	**42.02**	**13.27**	**SH**	**BLACK**	**MICACEOUS SHALE**	S4L		**S4L COAL**	**2.21**	
42.02	**42.39**	**0.37**	**CM**	**BLACK**	**S2 COAL -NOT SAMPLED- TO THIN**					
42.39	42.91	0.52	S	WHITE	SANDSTONE FINE GRAIN					
42.91	45.90	2.99	OWK	GREEN	PEBBLES IN SANDSTONE MATRIX					
45.90					END OF HOLE					
						N/S		**S2 COAL**	**0.37**	

Figure 3: Generalised Stratigraphic layers of the area

Figure 3: Stratigraphic layers of the proposed mining area

3.1.2 Climate

3.1.2.1 Regional Climate

The mean annual precipitation of the site is 669 mm. The mean annual evaporation of the site is 1677 mm (S-Pan). The Mpumalanga Highveld has distinct wet and dry seasons. 91% of the proposed Colliery's mean annual rainfall falls between October and April inclusively. 68% of the area's mean annual evaporation occurs in this period (Midgley *et al*., 1990).

3.1.2.2 Mean Monthly Rainfall

The mean annual precipitation of the site is 669 mm. The mean annual evaporation of the site is 1677 mm (S-Pan). The monthly average rainfall, rainfall days, and evaporation are presented in Table 4.

Table 4: Mean monthly rainfall, rain days and evaporation data for the proposed Colliery

Month	Ave Rainfall (mm)	Ave rain days	Ave Evaporation (mm S-Pan)
October	69.1	6.1	180.8
November	105.5	9	170.6
December	118.5	8.9	187.8
January	113.8	9.2	184.5
February	87	6.6	153.8
March	78.3	6	151.8
April	39.6	3.7	116.7
May	17.1	1.8	98.3
June	7.7	0.8	79.8
July	5.4	0.5	87.4
August	7.6	0.8	115.7
September	19.8	1.8	149.9

3.1.2.3 Mean Monthly Maximum and Minimum Temperatures

No weather stations are located in close proximity to the proposed colliery. The closest weather stations are located in Witbank and Springs. Temperature data from the Springs weather station (Station number 0476762 A 3) was analysed and a summary of the data is presented in Table 5. The temperature data spanned 2001 to 2010.

Table 5: Mean monthly temperature data for 0476762 (Springs)

Month	Average daily minimum temperature (ºC)	Average daily maximum temperature (ºC)
January	15.2	26.5
February	14.5	26.3
March	12.3	25.0
April	8.8	23.2
May	3.7	20.8
June	1.1	18.4
July	-0.1	18.7
August	3.5	21.6
September	7.8	25.5
October	11.3	26.4
November	13.6	25.3

December	14.8	26.9

3.1.2.4 Wind Direction and Speed at the Project area

No data on the wind patterns is available for the proposed mining area. Owing to the location of the site, the gentle undulating topography and the non-existence of mountain ranges and ridges, no localised wind systems (topographically-induced) will be generated. Hence the wind patterns at the mine will conform to the regional wind patterns. The average wind speed and directions as recorded at the closest weather station are presented in Table 6.

Table 6: Average wind speeds and directions

Month	**N**		**NE**		**E**		**SE**		**S**		**SW**		**W**		**NW**	
	n	v	n	v	n	v	n	V	n	v	n	v	n	v	n	v
Jan	67	4.3	124	4.0	119	4.5	92	5.1	40	4.6	47	4.3	45	3.8	149	3.8
Feb	48	4.1	108	3.8	139	4.1	135	4.9	61	4.5	48	3.9	41	3.5	91	3.7
Mar	53	3.9	99	3.7	126	3.7	99	4.5	50	4.1	56	4.1	43	3.5	111	3.9
Apr	50	4.0	88	3.5	94	4.0	55	4.2	45	4.3	71	4.4	71	4.5	129	4.0
May	54	4.4	66	3.7	61	3.9	62	4.5	47	4.2	79	4.5	67	4.7	116	4.1
Jun	48	4.1	47	3.7	59	4.1	42	4.8	46	4.7	99	4.5	76	4.3	115	4.3
Jul	43	4.1	66	3.7	64	4.1	62	4.9	54	4.6	84	4.5	57	4.2	121	4.1
Aug	80	4.9	96	4.4	97	4.3	33	5.6	35	4.9	75	4.9	65	4.9	192	4.7
Sept	115	4.8	134	4.8	101	5.0	48	5.7	32	4.1	53	5.1	59	5.0	203	4.8
Oct	115	4.5	139	4.7	116	5.4	58	5.6	41	4.9	54	4.7	47	4.8	223	4.8
Nov	105	4.4	135	4.4	110	5.0	56	5.3	37	4.9	45	4.6	55	4.3	229	4.7
Dec	91	4.2	138	4.1	102	4.8	55	4.9	35	4.5	47	4.9	55	4.2	194	4.2
Avg	**72**	**4.4**	**103**	**4.1**	**98**	**4.4**	**66**	**4.9**	**44**	**4.5**	**64**	**4.5**	**57**	**4.4**	**156**	**4.4**

3.1.2.5 Extreme weather conditions

Thunderstorms occur frequently during summer (rainy season) and are usually accompanied by lightning, heavy rain, strong winds and occasional hail. Storms are localised and rainfall can vary markedly over short distances. An average of six hail incidents per annum can be expected at a particular site. Frost occurs in the winter months, peaking with an average occurrence of nine days in June.

3.1.3 Topography

3.1.3.1 Local topography

The topography can normally be used as a good first approximation of the hydraulic gradient in an unconfined aquifer. This discussion will focus on the slope and direction of fall of the area under investigation and features that are important from a groundwater point of view. The area is characterised by a gentle undulating topography and in the area of the proposed mining area the slope is more or less in the order of 1:150 (0.01). Locally, drainage is towards the Kromdraaispruit that flows from east to west of the proposed mining area into the Kromdraai dam and J.C. Dam. The Dieplaagte dam is also located towards the northwest of the proposed mining activities as well as smaller unnamed farm dams being fed by smaller tributaries of the Kromdraaispruit. On a larger scale, drainage occurs from the northeast to the southwest.

3.1.4 Soils

Pedoplan International consultants were commissioned by Geovicon Environmental (Pty) Limited to conduct a soil-landform assessment. The purpose of the study was to supply soil-landform data (See Figure 4 for the soil landform types) and interpretations to inform an impact assessment process. The survey was conducted in accordance with standard procedures for detailed investigations. The objectives of the survey were as follows:

- To conduct a detailed assessment of the soils-landform resources, comprising identification, description, classification and mapping of the soil-terrain types and assessing their attributes relating to agricultural potential, the potential for other land uses, susceptibility to erosion and topsoil quality.
- To identify pre-mining land uses.
- To assess the land capability of soil, terrain and climate combinations.
- To identify and demarcate wetland zones from a soil-landform perspective.
- To assess the impact of opencast and underground coal mining on the soil-landform resources and propose mitigation measures.

3.1.5 Pre – mining Land Use

Currently, cultivated lands planted with maize, two centre pivot irrigation schemes and grazing by cattle and sheep are the predominant land use activities. Other categories include two sizeable farm dams, public roads and several quarries. It is important to note that power lines, cutting through the south-eastern part of the mining area, will undoubtedly influence future mining activities. Land use categories are described in Table 7.

Table 7: Description and extent of pre-mining land use categories

LAND USE CODE	PRE-MINING LAND USE	AREA (ha)	AREA (%)
CP-S	Centre pivot irrigation: soya beans	41.33	5.96
CP-M	Centre pivot irrigation: maize	30.17	4.35
CL-M	Cultivated land: maize	289.90	41.82
G	Grazing: mainly cattle, some sheep; grass harvesting in places	257.10	37.09
FS	Farmstead with associated outbuildings	1.55	0.22
D	Farm dams	47.35	6.82
RR	Public roads	11.77	1.70
Q1, Q2	Quarry: construction materials	14.18	2.04

3.1.6 Land capability

Land capability refers to the general “basket” of agricultural or forestry land uses that a tract of land is capable of sustaining in a reasonably profitable manner under the reigning climatic conditions without undergoing undue degradation. The ratings presented in Table 8 are based on the land capability system

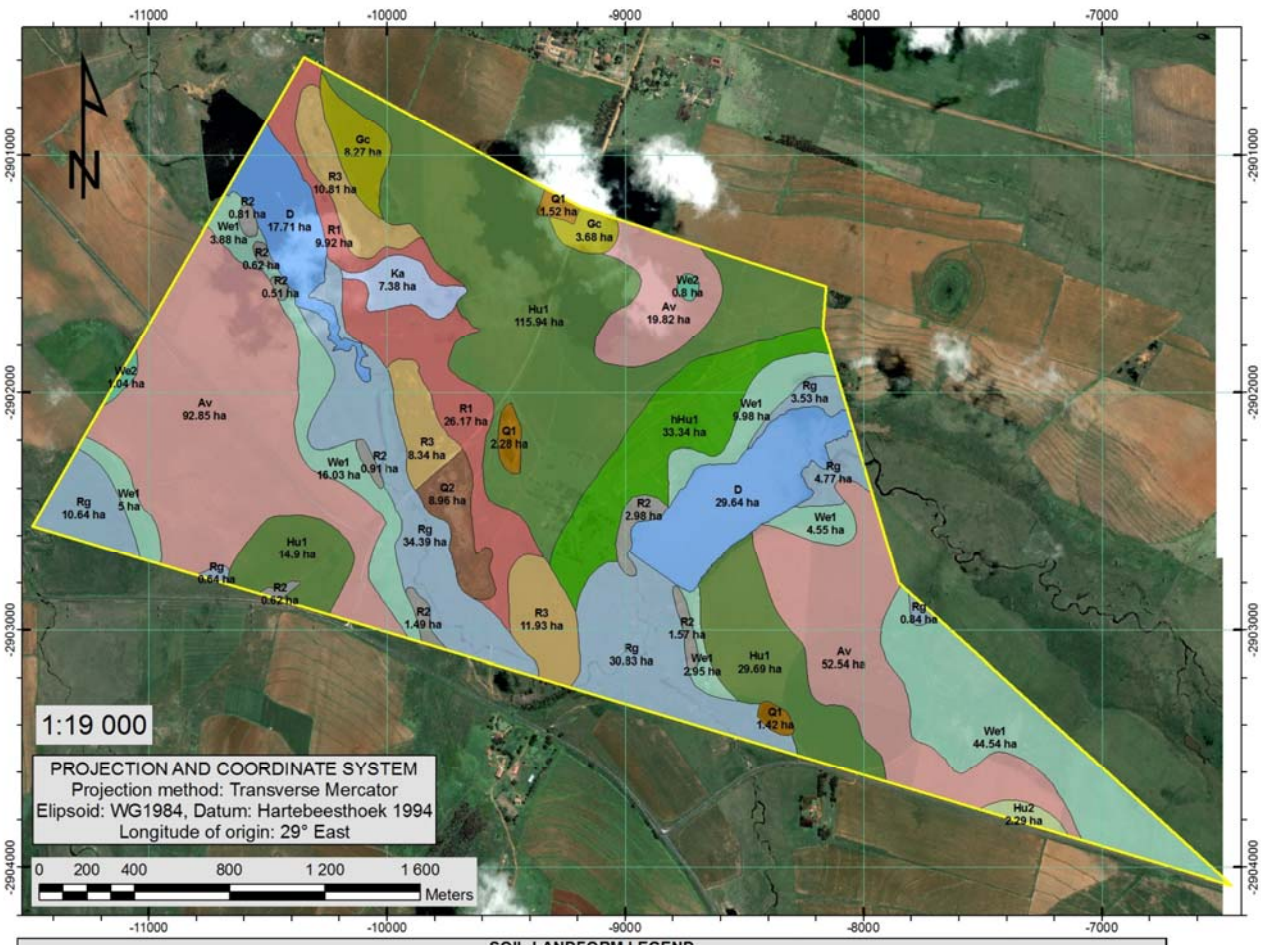
and diagnostic criteria as described by Scotney *et al*., 1987 and Schoeman *et al*., 2002. Climate, with its C2 rating (moderately restrictive), is regarded as uniform over the project area, resulting in map units not being ranked into capability classes higher than class II.

Table 8: Land capability assessment

MAP UNIT	LAND CAPABILITY CLASS*	PHYSICAL AGRICULTURAL POTENTIAL
Hu 1	II	Moderately high
Hu 1	III	Moderate
Hu 2	II	Moderately high
Gc	III	Moderate
Av	II	Moderately high
We 1	V-VI	Very low
We 2	V	Very low
Ka	VI	Very low
Rg	V	Low
R 1	VI	Very low
R 2	VI	Very low
R 3	VI	Very low
Q 1	VII	Very low-None
Q 2	VII	Very low-None

A detailed soil specialist report will be included in the EIA/EMP Report.

FIGURE 4: DETAILED SOIL-LANDFORM MAP OF PARTS OF PORTIONS 4, 5, 6 AND 18 OF THE FARM KROMDRAAI 263 IR, LEANDRA, MPUMALANGA



SOIL-LANDFORM LEGEND

MAP UNIT	LANDFORM COMPONENT	SOIL COMPONENT	AREA (ha)	AREA (%)
Hu1	Gently to moderately sloping crest and midslopes (2-8% slope)	Deep to very deep (100->150 cm), well-drained, dark red and red, apedal, sandy clay loam to clay loam of the Hutton form underlain by weathered, hard rock or degraded ferricrete; common small hard Fe/Mn nodules present in places in deep subsoil; associated with Bainsvlei and Avalon forms	160.53	23.15
hHu1	Strongly sloping midslopes (8-15% slope)	As for Hu1, but with sloping phase	33.34	4.81
Hu2	Gently sloping midslopes (2-5% slope)	Mainly deep (100-150 cm), well-drained, sandy loam to sandy clay loam topsoil on red apedal, sandy clay loam subsoil and deep subsoil of the Hutton form underlain by weathered, hard rock or degraded ferricrete; common small hard Fe/Mn nodules present in places in deep subsoil	2.29	0.33
Gc	Gently sloping midslopes (2-5% slope)	Moderately deep (50-80 cm), well-drained, yellow-brown, apedal, sandy clay loam on hard plinthite of the Glencoe form; common small hard Fe/Mn nodules present in subsoil; closely associated with moderately deep Avalon form	11.95	1.72
Av	Gently sloping midslopes (2-5% slope)	Mainly deep (depth to soft plinthic 100-130 cm), moderately well-drained, yellow-brown, apedal, sandy clay loam on soft plinthite deep subsoil of the Avalon form; in places with degraded hard plinthite in deep subsoil; overlying prominently mottled, saprolite; associated with Bainsvlei form	165.21	23.83
We1	Level to moderately sloping footslopes (1-8% slope)	Shallow (effective depth 30-40 cm), somewhat poorly drained, dark coloured, sandy clay loam topsoil on plinthic, sandy clay loam to clay loam subsoil of the Westleigh form; associated with Longlands, Kroonstad and Rensburg forms	86.93	12.54
We2	Level pan like depressions (0-1% slope)	Shallow (effective depth 30-40 cm), somewhat poorly drained, dark coloured, sandy clay loam topsoil on plinthic, sandy clay loam to clay loam subsoil of the Westleigh form; associated with Rensburg form	1.84	0.27
Ka	Gently to moderately sloping footslope (2-8% slope)	Moderately deep soil materials: poorly to very poorly drained, black, weakly structured, sandy clay loam topsoil with rusty root channels in places overlying dark grey, mottled/gleyed, clay loam subsoil of the Katspruit form; associated with Westleigh form	7.38	1.06
Rg	Level valley bottoms (0-2% slope) with distinct, narrow river channel and in places gently sloping (2-4% slope) lower footslopes	Deep soil materials: poorly to very poorly drained, black, structured, vertic, clay topsoil with rusty root channels in places overlying dark grey, gleyed, calcareous clay subsoil of the Rensburg form; associated with Longlands, Kroonstad and Westleigh forms; sheet and river bank erosion evident	85.64	12.35
R1	Strongly sloping areas with <10% rock outcrops (mainly gritstone) in complex association with mainly shallow, red, brown or yellow, sandy loam to sandy clay loam of the Hutton, Mispah and Clovelly forms; land surface slightly uneven to uneven		36.09	5.20
R2	Gently sloping areas with >10% rock outcrops (mainly gritstone) in complex association with lithosols; land surface slightly uneven to rough		9.51	1.37
R3	Strongly sloping area with >30% rock outcrops (mainly dolerite and gritstone) in complex association with lithosols; land surface uneven to very rough		31.08	4.48
Q1	Gently sloping areas with drastically disturbed sites probably quarried for construction materials		5.22	0.75
Q2	Strongly sloping areas with drastically disturbed sites probably quarried for construction materials		8.96	1.29
D	Farm dam		47.35	6.82
		TOTAL	693.32	100.0

Figure 4: Soil Landform map of the proposed mining area

3.1.7 Natural Vegetation / Plant Life

The proposed Kromdraai North Colliery area is situated in the Grassland Biome (Rutherford, 1988). Mucina and Rutherford (2006) classify Kromdraai North Colliery within the Eastern Highveld Grassland vegetation unit (Gm 12) of the grassland biome.

The vegetation in the opencast/underground and infrastructure areas consists mainly of maize (mono-crop cultivation). This is also indicated on the 1:50 000 topo - cadastral maps. Some natural vegetation exists north-east of the opencast infrastructure area. The grassland area south-east of the underground mining area (where a pivot irrigation system is situated), is a cultivated pasture area where some natural vegetation is established. These two grasslands areas are dominated by *Eragrostis curvula* (Weeping love grass). Eight additional grass species were found in these areas. Only a few herbaceous forb (plant) species were observed in the grassland areas.

Approximately twenty two plant species were observed in these grassland areas. Biodiversity is thus not very high due to maize cultivation on a large scale. Sedge and rush species that may occur in grasslands and wetland areas were observed. A few exotic plant species do occur in the area as well.

According to the amended regulations in the Conservation of Agricultural Resources Act (no 43 of 1983), two (2) declared invader species are established in the grassland areas *viz*. Scottish thistle and Pampas grass.

According to the National red list of South African Plants: February 2009, no threatened plant species were encountered in the grassland areas. One medicinal plant species was observed in the grassland areas *viz.* Milkweed. Milkweed is widespread in the Highveld region.

Vegetation north-east of both mining areas indicates moist conditions since the Kromdraaispruit is situated in this direction.

3.1.8 Surface Water

Geovicon Environmental (Pty) Limited commissioned iLanda Water Services cc to conduct a surface water study for the proposed Kromdraai North Colliery. The results of the study, as well as recommendations coming from the work conducted will be included in the EIA/EMP Report. The proposed Kromdraai North Colliery mining project area falls in the Olifants Water Management area, within the Wilge River catchment area, which is demarcated as tertiary drainage region B20 and quaternary drainage region B20E. Figure 2 depicts the location of the proposed mine in relation to the tertiary and quaternary drainage regions within the Wilge River catchment.

3.1.8.1 Catchment Boundaries

3.1.8.1.1 Catchment Delineation

The Kromdraaispruit runs through the mine lease area. It enters the mine lease area from east, turns south before turning northwards and exiting the site near the north-western corner of the mine lease area. The catchment of the Kromdraaispruit was delineated using the Surveyor General's 5 m contour data. These catchment boundaries are shown in Figure 5. The Kromdraaispruit catchment area where it leaves the mine lease area measures 87.4 km^2.

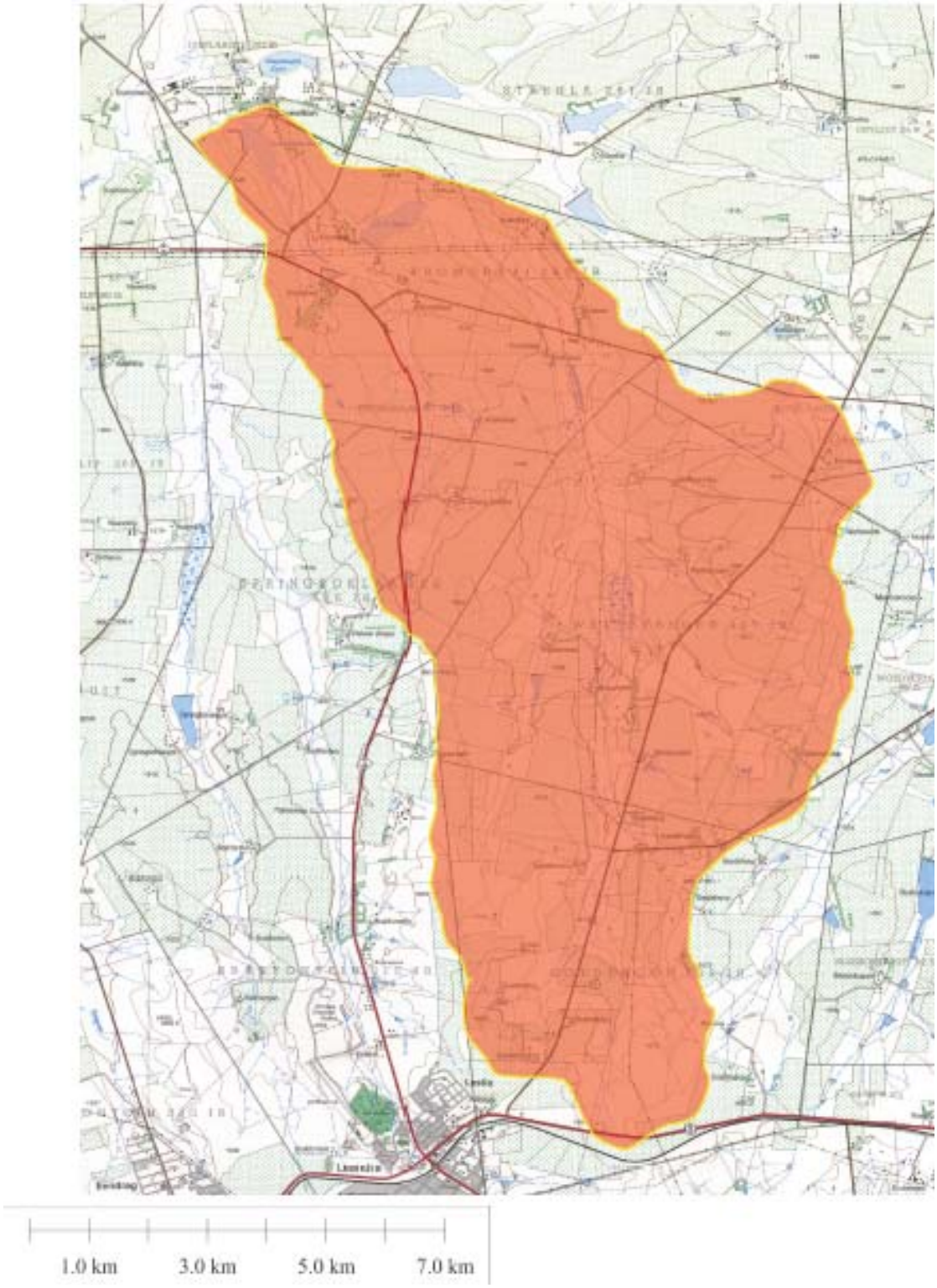


Figure 5: Catchment delineation for the proposed Kromdraai North Colliery

3.1.8.2 Mean Annual Runoff

The mean annual runoff for the Kromdraaispruit is 2.7 Mm^3 where it exits the mine lease area. The mean annual runoff for the quaternary catchment B20E is 19.28 Mm^3 (Middleton and Bailey, 2009). The catchment characteristics of the Kromdraaispruit catchment are similar to those of the quaternary catchment, thus the mean annual runoff was scaled from the quaternary catchment runoff, based on the relative catchment size.

3.1.8.3 River Diversions

No river diversions are planned for the activities covered by this Scoping Report**.**

3.1.8.4 Water Authority

In terms of the Department of Water and Sanitation demarcations, the proposed Kromdraai North Colliery mining project area falls in the Olifants Water Management area. The authority in charge is the Department of Water and Sanitation (Mpumalanga Regional Office).

3.1.8.5 Sensitive Landscape

Eyethu Coal (Pty) Ltd recognises that all streams and wetlands occurring in the vicinity of the proposed mining right area should be treated as sensitive landscapes. In view of the above, Sazi Environmental Consulting cc was commissioned by Geovicon Environmental (Pty) Ltd to conduct a Wetland Assessment for the proposed Kromdraai North Colliery. The report will be used for the information relating to wetlands occurring in the vicinity of the proposed mining area. The specialist study consisted of the identification and delineation of wetland areas in the vicinity of the proposed mining operation. A detailed Wetland Specialist report will be included in the EIA/EMP Report.

3.1.9 Ground water

Geo Pollution Technologies – Gauteng (Pty) Ltd (GPT) was appointed by Geovicon Environmental (Pty) Ltd to conduct a hydrogeological impact study for the proposed Kromdraai North Colliery.This geohydrological study aims to establish the prevailing groundwater conditions at the site and thus provide background conditions against which impacts of mining activities will be monitored:

- Identify impacts of mining activities on groundwater resources (existing & future)
- Develop mitigation plans for the identified impacts.
- Develop a monitoring network of boreholes to monitor the mine's potential impacts.

A detailed groundwater Specialist report will be included in the EIA/EMP Report.

3.1.10 Air Quality

Opencast mining and related activities have a potential to impact on the air quality of its surrounding area. Potentially air pollution may arise as a result of particulates entering the atmosphere. These particulates arise as dust from earth movement, blasting, and material movement on haul roads and other gravel roads and overburden stockpiles. The proposed Kromdraai North Colliery is situated within the Kendal

area. This area is dominated by mining (opencast/underground mines), agricultural practices, industries and residential areas. These activities have potential to generate particulates that may cause air pollution.

The presence of a Power Station in the region is the main source of airborne pollutants, releasing ash, CO, CO_2, SO_2 and NO_X gases as a result of burning of carbonaceous materials. Household fuel burning will contribute to emissions, although this impact will occur mainly during winter periods.

Visual observation of the Kromdraai North Colliery area and its surrounds indicated that the impacts of settle able dust within a 3 km radius of the colliery could be described as minimal and minor, since dust will gravimetrically settle within 500 m of the dust source. Generally, dust fallout will be well within the SLIGHT to MODERATE ranges (Table 9) outside of this 300 m area, with dust fallout in close proximity to these sources well within the HIGH to VERY HIGH ranges.

Highveld Environmental Control Services will be appointed to conduct ambient fall-out dust monitoring at the proposed Kromdraai North Colliery opencast area.

Table 9: Dust Fallout Guidelines

Description	RANGE
SLIGHT	<250 mg/m^2/day
MODERATE	251 – 500 mg/m^2/day
HIGH	<501 – 1200 mg/m^2/day
VERY HIGH	>1200 mg/m^2/day

3.1.11 Sites of Archaeological and Cultural Interest

Archaetnos cc was appointed by Geovicon to conduct a heritage impact assessment for the proposed Kromdraai North Colliery. The environment of the area is very much disturbed by old prospecting and agricultural activities. During the survey three sites of cultural heritage significance was located in the area to be developed. The detailed Heritage Assessment Specialist report will be included in the EIA/EMP Report.

3.1.12 Visual Aspects

Regionally, the area is characterised by a gentle undulating topography, covered by gum trees. Kromdraai North Colliery is situated adjacent to the R 50 and D 686 provincial roads, which is the main easterly artery through the Mpumalanga Province. As such, the surface related mining activities will be highly visible from the above-mentioned roads, to the community residing within the small holdings around the said Colliery.

3.1.13 Regional Socio-Economic Structure

3.1.13.1 Population Growth and Location

The Victor Khanye Local Municipality (VKLM) is situated on the western Highveld of Mpumalanga Province, covering a geographic area of approximately 1 567 square kilometres. The prominent towns and settlements in the Municipality include Abor, Argent, Delmas and Brakfontein. The municipality is strategically located close to the metropolitan areas of Tshwane and Ekurhuleni to the west. The headquarters of the municipality are in Delmas. VKLM is currently characterised by an increase in mining

and related activities in the Leandra area. In addition to mining (concentrating on coal and silica), other important sectors in this area are agriculture (a major provider of food and an energy source, i.e. maize); finance and manufacturing (capitalising on the area's proximity to Gauteng).

Natural resources make a significant and direct contribution to the Nkangala District economy, which is "resource based" (i.e. coal, water, land capacity, geographical features, climate, and conservation areas, ecosystems and natural features). The population of Victor Khanye Local Municipality (VKLM) has grown significantly since 2001 increasing from 56,335 to 75,452, which represent a growth of 33, 9% (Census, 2011).

The highest population density occurs in the core urban area of Delmas and Botleng, with the rural wards recording the lowest in terms of spatial distribution. Wards 3, 7 and 9 have the highest population numbers accounting for 50% of the total population of 75,452. These wards are the largest, rural wards characterised by mining and agricultural activities. Ward 3 includes a section of Botleng.

The highest percentage of the population, approximately 67%, is in the economically active age group of 15-64 year old category, the majority of which are under the age of 35 years of age. This trend demonstrates that labour migration may be the contributing factor to the increase, resulting from the economic growth potential of the area.

3.1.13.2 Major Economic Activities and sources of Employment

The VKLM Gross Domestic Product (GDP) is forecast to grow by 3.4% per annum up to and including 2016, although this is lower than the District and Province projections. The forecast is very optimistic if we consider that the historic growth rate in the period 1996-2011 remained relatively low at 2.0% per annum.

Agriculture, transport, community services, finance and mining will be the main contributors to the VKLM economic growth in the period up to 2016. The local municipality is a major maize producing area. Annual maize production is calculated at between 230 000 and 250 000 metric tons. Mining activities are concentrated on coal and silica. About 3 million metric tons of coal and 2 million metric tons of silica are mined annually in the municipal area.

3.1.13.3 Unemployment estimate for the area

The latest statistics reflect that the employment level in the VKLM is currently at 28, 9%. Based on the 2011 definition of Economically Active Population (EAP) of 30,415 the unemployment rate is reflected at 28, 2%, this represents an overall gain in employment compared to 2001. This figure is high when we consider the economic activity in the area, but obviously impacted by the migration influx of job seekers. Leading industries in employment comprise of Trade (18, 7%), Agriculture (18, 2%) and Community Services contributing (14, 3%). However, the former two sectors are experiencing a decline in employment in the last few years whilst Community Services has increased and mining as an employer has grown and now contribute 12, 7%.

SECTION FOUR

Details of Public Participation Process

4. DETAILS OF THE PUBLIC PARTICIPATION PROCESS

In terms of Chapter 6 of the NEMA regulations (GN R543), all potential interested and affected parties should be informed of the project and be given a chance to register as an interested and affected party in order to raise any comments and concerns which relates to the proposed mining.

4.1 THE CONSULTATION PROCESS

4.1.1 Registration phase

Immediate and adjacent landowners, local municipality, State departments and the greater public will be notified via emails, site notices and local newspaper of the intention of Eyethu Coal (Pty) Ltd to undertake mining activities at the proposed Kromdraai North Colliery. The Draft Scoping report will also be made available for comment to all relevant stakeholders during the registration phase.

4.1.2 Registered Interested and Affected Parties (I&AP's)

The interested and affected parties identified by the mine are as follows:

Department of Water and Sanitation (Mpumalanga Regional Office)

Department of Mineral Resources (Mpumalanga Regional Office)

Department of Economic Development, Environment and Tourism (Mpumalanga Regional Office)

National Department of Agriculture (Mpumalanga Regional Office)

Mpumalanga Parks and Tourism Agency

Immediate/adjacent landowners and legal occupiers

Victor Khanye Local Municipality

4.1.3 Scoping Phase

The Draft Scoping report will also be made available for comment to all relevant stakeholders during the registration phase.The draft Scoping report (this report) will be submitted to MDEDET, relevant State Departments, the Victor Khanye Local Municipality and I&AP's for comment. The draft Scoping report will also be placed in the Delmas and Witbank Libraries for evaluation and comment. An advertisement was placed in the local newspaper in accordance with Regulation 54 of Government Notice No. R534 under section 24 of the National Environmental Management Act, 107 (Act no. 107 of 1998) informing the public about the availability of the draft scoping report in the said Libraries for evaluation and comment. Once the commenting period lapses, the final Scoping Report will be submitted to MDEDET including the comments received from registered I&AP's.

4.1.4 EIA/EMP Phase

Once the Scoping Report is accepted, the draft EIA/EMP report, will be compiled and submitted to MDEDET, relevant State Departments, the Victor Khanye Local municipality and registered I&AP's for evaluations and comment. The draft EIA/EMP will also be placed in the Delmas and Witbank Libraries for comment. An advert will be placed in the local newspapers in accordance with Regulation 54 of Government Notice No. R534 under section 24 of the National Environmental Management Act, 1998 (Act no. 107 of 1998) informing the public about the availability of the draft EIA/EMP report in the said Libraries for evaluation and comments. Once the commenting period lapses, the final EIA/EMP including comments from registered I&AP's, will be made available to registered I&AP's for comment for 21 days, thereafter the final EIA/EMP will be submitted to MDEDET.

4.1.5 Record of Decision (ROD)

Inform registered I&AP's of ROD directly in writing, via email or fax and indirectly through advertisement in local newspapers.

SECTION FIVE

Need and Desirability of the Project

5. NEED AND DESIRABILITY OF THE PROPOSED PROJECT

5.1 NEED AND DESIRABILITY FOR THE PROJECT

Eyethu Coal (Pty) Limited will employ approximately 38 employees, thus the commencement of the mining operation at the proposed Kromdraai North Colliery will contribute to the job creation within the Victor Khanye Local Municipality and beyond. In view of the unemployment rates within the local municipality and the poverty within the area, it would be desirable for the project to commence. Not proceeding with the project will contribute to the already high levels of poverty and high unemployment rate. In terms of the Kromdraai North Colliery's Social and Labour Plan, the mining operation at Kromdraai North Colliery will result in assistance with the establishment of small and medium businesses and infrastructure development, community development and poverty eradication projects.

If the mining operation on the proposed mining area is not proceeded with, the consequences will be negative in that the coal reserves will be sterilized.

Again, if the mining operation is not proceeded with, it will be denying the company the opportunity of contributing, as the holders of the mining right, towards the socio-economic development of the area in which they are operating.

SECTION SIX

Detailed Description of the Project

6. DETAILED DESCRIPTION OF THE PROJECT

6.1 DETAIL DESCRIPTION OF THE PROJECT

6.1.1 Surface Infrastructure

All proposed surface infrastructure in relation to the proposed Kromdraai North Colliery is indicated in the Mining Layout Plan (opencast and underground). See Appendix 1

6.1.2 Roads, railways and power lines

There are various main and minor roads and power lines crossing nearby the proposed Kromdraai North Colliery mining area. District roads (R 50, D 686 and D 2543), telephone lines and heavy duty Eskom power lines transect the mining area. With regards to access to the proposed mining site, the proposed access is located on a fairly straight portion of district road D 686 where it is still gravel, approximately 1 km north of the existing T-junction with district road D 2543.

6.1.3 Waste Management

6.1.3.1 Solid Waste Management

Kromdraai North Colliery will use a contractor for the transportation of domestic waste from the mining operation to the registered Leandra waste disposal sites. The waste will be sorted before disposal, paper and cardboard will be separated and sent for recycling.

Industrial waste arising from the mine (classified as hazardous waste – old paint tins, degreaser containers, oily rags, etc) will be collected in a different waste collection system and disposed of by a contractor at a registered hazardous waste disposal site. Batteries, tyres, old conveyor belts, used oil drums and waste metal will be collected around the mine, transported to the Kromdraai North Colliery's salvage yard and sorted. The waste will then be sold to scrap and recycling companies.

6.1.3.2 Water Pollution Management Facilities

Kromdraai North Colliery will operate on the strategy of maximising the utilisation of "dirty water" in the mining area and will have a policy of zero discharge of contaminated water. Most of the water used in mining will be obtained from the pit and underground workings. The water accumulated in the pit workings will be pumped into the pollution control dams. The water from the pollution control dams will be utilised to suppress dust on the haul roads.

Septic/conservancy tanks will be used for the collection and treatment of sewage at Kromdraai North Colliery. A waste removal contractor will be appointed to empty the tanks on a regular basis. The removed waste will be deposited at a registered sewage treatment plant.

6.1.3.3 Potable water Plant

There will be no potable water treatment plant at Kromdraai North Colliery. Drinking water will be obtained from boreholes.

6.1.3.4 Process water Supply

The supply of process water that will be required at the mine will be the supply of water for dust suppression and for the treatment of sewage. The supply of water for dust suppression will include the use of water pumps which will be used to fill water carts that will sprinkle water on the access and haul roads and any area that will require dust suppression. Water supply for sewage treatment will be obtained from the water tanks to be installed on site. Water pumps will be installed for the pumping of water from the tanks to the septic tanks.

6.1.3.5 Transport

Mine officials and senior skilled employees will use their own vehicles for all transport requirements. Where necessary, a bus services will be made available to transport other employees from their residence to their working place. Normal light delivery vehicles will be utilized to transport employees to the opencast mining areas. Underground vehicles will be specially altered to work in a coal mine as per the Department of Mineral Resources requirements.

A number of haul roads will be constructed around the mine for the transportation of coal from the opencast areas to the main R.O.M. coal stockpiling area. R.O.M. from the underground section will be transported by dump trucks using the roads, R 580, R 50, D686 and D 2543 to the main R.O.M. at the opencast section. R.O.M. coal from the main stockpile will be crushed and screened before being transported to customers.

6.1.3.6 Workshops and Buildings

The locality of workshops, change houses, main office and others are indicated on the Mining Layout Plan. These buildings will be equipped with the necessary septic tanks, electricity and telecommunication facilities.

Workshops will be equipped with wash bays and oil separators will also be established adjacent to the workshops and fuel storage tanks. Power supply facilities will also be constructed on the proposed mining areas.

6.1.3.7 Housing

No houses or hostels will be established on the mining areas. All employees will be transported on a daily basis to the mine.

6.1.3.8 Disturbance of watercourses

Wetlands associated with the Kromdraaispruit and its tributaries occur on and adjacent to the mining areas. A seasonal wetland occurs within the underground mining section, this wetland will be undermined. A 100 m buffer zone from the edge of the seasonal wetland will be demarcated at the opencast mining section, where mining activities will not be conducted within the buffer zone. Management of Eyethu Coal (Pty) Limited is committed to comply with the environmental legislation, by obtaining necessary authorisations before mining within and adjacent to these wetlands.

6.1.3.9 Storm water management

Storm water measures will be necessary for the proposed mining project. Kromdraai North Colliery will practice a policy of clean and dirty water separation where dirty water is contained and stored in the pollution control dams for re-use on the haul roads and material stockpiles.

A conceptual storm water management plan has been drafted for the proposed Kromdraai North Colliery. This storm water management plan is designed to separate clean and polluted water. The storm water management plan is designed such that the separated dirty water is diverted to pollution control dams (PCD (opencast area) and PCD (underground area). The Conceptual Design Report and Water and Salt Balance Report for the conceptual storm water management plans will be included in the EIA/EMP Report.

SECTION SEVEN

Description of Identified potential alternatives

7. CONSIDERATION OF ALTERNATIVES

7.1 LOCATION ALTERNATIVES

In terms of the proposed Kromdraai North Colliery, there are no location alternatives that could be considered as the coal reserve occurs in the proposed mining area as shown in the Mining Layout Plan.

7.2 SITE LAYOUT ALTERNATIVES

In terms of the Kromdraai North Colliery infrastructure area, there were no site layout alternatives that could be considered, due to the location of the coal reserves on the proposed Kromdraai North Colliery.

7.3 TRANSPORT ALTERNATIVES

In terms of the Kromdraai North Colliery the most viable option chosen is using trucks to transport coal to Eskom and the other markets.

SECTION EIGHT

Description of Environmental issues and Potential Impacts

8. DESCRIPTION OF ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

This section will only highlight anticipated impacts at the proposed Kromdraai North Colliery. Note that impacts discussed in this section are only briefly highlighted. A detailed impact assessment in terms of the above-mentioned evaluation method will be given in the environmental impact assessment and environmental management programme report to be submitted.

8.1 CONSTRUCTION PHASE

During the construction phase, the following activities, which are likely to have a detrimental, effect on the environmental, social and cultural aspects, will be conducted:

- Construction of access/haul roads
- Preparation and formation of topsoil, subsoil and overburden stockpiling areas
- Excavation of the box-cuts and access adits
- Construction of storm water and dirty water diversion facilities
- Construction of pollution control dams
- Construction of mining related infrastructure

8.1.1 Geology

The construction of the above-mentioned activities will result in the disturbance of the geological profile.

8.1.2 Topography

The construction of storm water trenches will result in the formation of topographical void, which will change the local topographical patterns of the immediate area. The formation of topsoil, subsoil and overburden stockpiles will result in topographical highpoints, which will alter the local topographical patterns of the immediate area.

8.1.3 Soils

The construction phase activities will result in the disruption of the soil profile within the activity areas during the construction phase. The formation of the topsoil stockpiles will result in the topsoil being leached over time.

8.1.4 Land Use

All activities will result in the stripping and removal of topsoil layers, which will disrupt the soil profile. This may result in the loss of prime agricultural land, changes on the land surface, soil erosion, soil compaction and chemical soil pollution which will result in the reduction of the land capability.

8.1.5 Land capability

All construction phase activities will result in the land use changing from agricultural land and grazing land to mining.

8.1.6 Natural vegetation

Except for the stockpiling of topsoil that will result in the covering of the natural vegetation, all the other activities will result in the removal of soils, which in turn will result in loss of vegetation cover.

8.1.7 Animal Life

All construction phase activities will result in the migration of animals away from the project area. Disruption of topsoil profile may also lead to loss of animal burrows/microhabitats.

8.1.8 Surface water

The activities undertaken during the construction phase will result in the formation of compacted areas, which have the potential to increase surface runoff within the affected catchments. Exposure of soils may lead to increased silt loads in surface water runoff. During the construction phase, fuels will be stored on site and chemicals may be used during normal construction activities. If the construction vehicles are poorly maintained, oil spills could cause pollution if washed off roads by storm water. Leaks from fuel depots could result in surface water pollution. Spillage and unsafe storage of chemicals could result in surface water contamination. Oil from construction vehicles as well as domestic waste from the campsite may have the potential to pollute the affected catchments.

8.1.9 Groundwater

Oil from construction vehicles and waste from the campsite may have the potential to affect the groundwater.

8.1.10 Air Quality

Movement of construction machinery will generate dust and diesel fumes. Dust will be generated by wind blowing over exposed soils, as well as at the retreat where coal will be crushed and screened.

8.1.11 Visual Aspects

Kromdraai North Colliery is situated adjacent to the R 50 and D 686 provincial roads, which is the main easterly artery through the Mpumalanga Province. As such the surface related mining activities will be highly visible from the above-mentioned roads, to the community residing within the small holdings around the said Colliery.

8.1.12 Noise

Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85dBA.

8.1.13 Social Aspects

Commencement of the proposed Kromdraai North Colliery may result in the following: creation of jobs in the immediate area, development of mine employees in terms of skills and career development, injection of

capital into the local/regional economy, support of the infrastructure development, community development and poverty eradication projects.

8.2 OPERATIONAL PHASE

The following activities, which may impact on the health of people and the environment, will occur at the proposed Kromdraai North Colliery during the operational phase:

- Systematic removal of the coal seams by both opencast and underground mining methods
- Transportation and Stockpiling of R.O.M
- Use of Mine Infrastructure, Access and Haul Roads
- Disposal of Mine Affected Water into the Pollution control dams
- Transportation coal products

8.2.1 Geology

The removal of overburden material to access the targeted coal seams will result in the disturbance of the geological layers.

8.2.2 Topography

Establishment of opencast pits during mining will result in the formation of voids, which will alter the local topographical patterns within the immediate mining areas. The stockpiling of the R.O.M. coal will result in the formation of topographical highpoint, which may change the topography of the area.

8.2.3 Soils

Stripping of top- and subsoil layers during mining will result in the disruption of the soil profile. During mining the soils' physical, chemical and biological properties may be altered due to mixing soils with sub-soils during handling, stockpiling and subsequent placement. Spillage of hydrocarbon fluids outside the mine's office/workshop areas may result in the contamination of the soils.

8.2.4 Land capability

All operational phase activities will result in the reduction of land capability as a result of disruption of soil profiles.

8.2.5 Land Use

As described in the construction phase, the land use will change from agricultural to activities related to mining.

8.2.6 Natural Vegetation

The opencast mining will result in the removal of the topsoil layers, which will result in the loss of natural grassland vegetation cover.

8.2.7 Animal Life

Loss of animal burrows/microhabitats and migration of animals may occur due to disruption of the soil profile and stripping of vegetation cover over the mining areas.

8.2.8 Surface water

8.2.8.1 Surface water quantity

Formation of voids during mining will result in loss of MAR within the affected catchments.

8.2.8.2 Surface water quality

Water to be stored in to the pollution control dams will contain elevated chemical concentrations associated with coal mining and if discharged, will have a detrimental effect on the water quality in the Kromdraaispruit and its tributaries. Runoff from the R.O.M stockpiles may contain elevated chemical concentrations, which will impact negatively on the environment if released.

8.2.9 Groundwater

During the operational phase of the proposed operation the following impacts on groundwater may occur:

8.2.9.1 Groundwater quantity

During the operational phase, it is expected that the main impact on the groundwater quantity will be dewatering of the surrounding aquifer.

8.2.9.2 Groundwater quality

Seepage from the coal stockpiling area and pollution control dams may enter the groundwater table, resulting in pollution of the aquifer.

8.2.10 Air Quality

During mining, fine coal or coal dust may accumulate in the workings. This may have health impacts on the employees. Blasting of the overburden and coal seams will result in the generation of dust, which may contain fine coal and affect the surrounding environment. During stockpiling of the coal (R.O.M and product coal), machinery movement and wind blowing over exposed surfaces will generate diesel fumes and dust.

8.2.11 Noise

Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85 dB. During blasting, noise levels may reach in excess of 130 dB. The noise and vibration of the blast may be audible/felt within a certain distance from the mining area.

8.2.12 Visual Aspects

All mine surface activities will be visible from a certain distance from the mine. Dust generated from the mine may be visible from a certain distance from the mine.

8.2.13 Regional Socio-Economic Structure

The proposed Kromdraai North Colliery will have a positive impact on the socio-economic structure by creating employment both directly and indirectly through the multiplier effect and by uplifting the economic levels of the surrounding areas through the continuation of the local economic development projects (Social and Labour Plan).

8.2.14 Interested and Affected Parties

All interested and affected persons have been identified and consulted. Through this consultation all concerns will be recorded and measures to address the concerns identified. During the operational phase the mine will apply an open door policy with the public, meaning the public will be allowed to raise concerns/complaints and the concerns will be addressed promptly.

8.3 DECOMMISSIONING PHASE

Most impacts are expected to cease when the operational stage ceases. During this stage, the following activities will take place:

- Filling of all remaining voids and final shaping of the rehabilitated opencast pits
- Sealing of Adits
- Rehabilitation of access and haul roads
- Rehabilitation of overburden stockpile areas
- Rehabilitation of the pollution control dams and the diversion trenches/berms
- Dismantling of mine surface infrastructure
- Seeding of rehabilitated areas
- Maintenance and monitoring of rehabilitated and surrounding environments

8.4 RESIDUAL IMPACTS AFTER CLOSURE

Residual impacts post mining is taken as all potential impacts, which may arise as a result of mining activities on Kromdraai North Colliery following the decommissioning phase.

8.4.1 Geology

During the life of the mine, approximately 7 million tons of coal will be removed from the proposed Kromdraai North Colliery mining project area. The geological profile (target coal seam and overlying strata) on the Colliery will have been permanently disturbed by opencast mining.

8.4.2 Groundwater

Following rehabilitation of the opencast mining areas, the groundwater level will rise to a level that will differ from the pre-mining level due to the disturbance of the bedrock and surface. The hydraulic conductivity and recharge from rainfall may thus increase.

Groundwater within the rehabilitated opencast areas may deteriorate due to acid mine drainage and other chemical interactions between the backfill material and the groundwater. The resulting groundwater pollution plume will start migrating to downstream areas.

8.5 CUMULATIVE IMPACTS

This section of the environmental impact assessment will attempt to determine if the proposed Kromdraai North Colliery will contribute towards any cumulative impacts. For the purpose of this document cumulative impacts will be described as the impacts (including those that has been assessed as being insignificant) that would be significant when combined with the same impact arising from another activity within and around the area of the proposed project.

It must however be mentioned that the assessment of the cumulative impacts is a difficult exercise that requires a combined effort from the different role stakeholders (farmers, mines, industries, individuals etc.) that would contribute to the cumulative impacts identified. Accurate data from the contributing parties will be a key for a thorough and accurate impact assessment.

SECTION NINE

Conclusion

9. CONCLUSION

9.1 OBJECTIVES OF THIS REPORT

The objectives for this report were outlined in Section 1.4. These objectives were as follows:

- Present information to the authorities about the proposed project.
- Provide information regarding alternatives that have been considered by Eyethu Coal (Pty) Limited.
- Show how interested and affected parties will be afforded the opportunity to contribute to the project, to comment on the findings of the specialists studies.
- Describe the baseline environment. A description of the receiving environment is given in Section 3.
- Describe the extent of environmental consequences for the construction, operating and closure phases. A summary of the potential impact, for construction, operation and decommissioning, is given in Section 8.
- Describe the environmental feasibility of the proposed project – the potential negative impacts relating to environment can be mitigated appropriately while significant socio-economic benefits to the country could be realised if the project proceeds.

9.2 ENVIRONMENTAL FEASIBILITY OF THE PROPOSED PROJECT

Based on the environmental assessment conducted as described in this draft Scoping Report, there are no significant environmental impacts associated with the proposed project that cannot be mitigated.

SECTION TEN

Statutory Requirements

10. STATUTORY REQUIREMENTS

All activities within the proposed area have been evaluated and activities listed in terms of the EIA Regulations and Section 24 (7) of the National Environmental Management Act, 1998 (Act 107 of 1998) have been identified and relevant authorisation have been applied for.

Eyethu Coal (Pty) Ltd has applied for an Integrated Water Use Licence for the proposed Kromdraai North Colliery in terms of section 40 of the National Water Act, 1998 (Act 36 of 1998). The decision of this application has not yet been received.

Any other statutory requirements identified by the interested and affected parties will be verified and if necessary relevant authorisations applied for.

SECTION ELEVEN

Plan of Study

11. PLAN OF STUDY

11.1 DESCRIPTION OF TASKS THAT WILL BE UNDERTAKEN AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The proposed mining activities will be conducted mainly on agricultural and grazing land within the Kromdraai North Colliery's mining right area. It was necessary for Eyethu Coal (Pty) Limited to undertake detailed environmental studies. The following environmental studies were conducted and will be included in the EIA.

- Geohydrological study
- Wetland study
- Surface water Study
- Heritage impact Assessment
- Soil Survey
- Air Quality Study
- Noise Survey
- Traffic Impact study

The key findings of the above-mentioned studies will be explicitly discussed and summarised in the (EIAR/EMP). These studies will also be made available as attachments to the EIAR.

11.2 STAGES AT WHICH THE COMPETENT AUTHORITY WILL BE CONSULTED

The competent authority will be consulted on submission of the Draft Scoping Report. On acceptance of the Draft Scoping Report, the final Scoping Report will be submitted to include comments received from I&AP's. On acceptance of the final Scoping Report, a draft EIAR/EMP will be compiled. After consultation with I&AP's, the final EIAR/EMP will then be submitted to the Competent authority including comments (if any) received from the I&AP's.

11.3 DESCRIPTION OF THE PROPOSED METHOD OF ASSESSING THE ENVIRONMENTAL ISSUES AND ALTERNATIVES, INCLUDING THE OPTION OF NOT PROCEEDING WITH THE ACTIVITY

The following prediction and evaluation of impacts is based on the proposed Kromdraai North Colliery to be conducted at the proposed area.

The evaluation distinguishes between significantly adverse and beneficial impacts and allocates significance against national regulations, standards and quality objectives governing:

- Health & Safety
- Protection of Environmentally Sensitive Areas
- Land use
- Pollution levels
- Irreversible impacts are also identified.

The significance of the impacts is determined through the consideration of the following criteria:

Probability : likelihood of the impact occurring.

Area (Extent) : the extent over which the impact will be experienced.

Duration : the period over which the impact will be experienced.

Intensity : the degree to which the impact affects the health and welfare of humans and the environment (includes the consideration of unknown risks, reversibility of the impact, violation of laws, precedents for future actions and cumulative effects).

The above criteria are expressed for each impact in tabular form according to the following definitions:

Probability	Definition
Low	There is a slight possibility (0 – 30%) that the impact will occur.
Medium	There is a 30 –70% possibility that the impact will occur.
High	The impact is definitely expected to occur (70% +) or is already occurring.
Area (Extent)	**Definition**
Small	0 – 40 ha
Medium	40 – 200 ha
Large	200 + ha
Duration	**Definition**
Short	0 – 5 years
Medium	5 – 50 years
Long	51 – 200 years
Permanent	200 + years

Intensity	Definition
Low	Does not contravene any laws, Is within environmental standards or objectives, Will not constitute a precedent for future actions, Is reversible Will have a slight impact on the health and welfare of humans or the environment.
Medium	Does not contravene any laws,

	Will not constitute a precedent for future actions, Is not within environmental standards or objectives, Is not irreversible Will have a moderate impact on the health and welfare of humans or the environment.
High	Contravene laws, May constitute a precedent for future actions, Is not within environmental standards or objectives, Is irreversible Will have a significant impact on the health and welfare of humans or the environment.

Significance	Definition
Negligible	The impact is insubstantial and does not require management
Low	The impact is of little importance, but requires management
Medium	The impact is important; management is required to reduce negative impacts to acceptable levels
High	The impact is of great importance, negative impacts could render options or the entire project unacceptable if they cannot be reduced or counteracted by significantly positive impacts, and management of these impacts is essential
Positive	The impact, although having no significant negative impacts, may in fact contribute to environmental or economical health

11.4 PUBLIC PARTICIPATION PROCESS

11.4.1 Interested and Affected Parties

The following have been identified as the Interested and Affected Parties (IAP'S) for the proposed mining project:

- Department of Mineral Resources (Mpumalanga Regional Office)
- Department of Water and Sanitation (Mpumalanga Regional Office)
- Department Agriculture, Forestry and Fisheries
- Department of Economic Development, Environment and Tourism
- Mpumalanga Tourism and Parks Agency
- Emalahleni Local Municipality
- Surface owners
- Immediate and immediately adjacent landowners

11.4.2 The Consultation Process

During the consultation process, the public will be offered an opportunity to register as I& AP's as well as comment on the Draft Scoping Report (this document).

11.4.3 Advertisements

An advert will be placed in the local newspapers in accordance with Regulation 54 of Government Notice No. R534 under section 24 of the National Environmental Management Act, 1998 (Act no. 107 of 1998) informing the public about the availability of information at public places.

11.4.4 Identification of issues and alternatives

During consultation process issues and alternatives might be raised and will be addressed as required regarding the proposed mining activities.

11.4.5 Evaluation of concerns

Concerns will be addressed by relevant specialists including the company's consultant according to their significance as indicated in the impact rating.

Strategy to address concerns

Key environmental and social concerns will be evaluated through open communication with the relevant authorities and registered I&AP's who lodged concerns / complaints.

Registration & Scoping Phase

- Offer an opportunity to I& AP's to register and simultaneously comment on the Draft Scoping Report.
- Notify I&AP via adverts, posters, email and personal consultation.
- Draft Scoping Report submitted to I&AP's for comment.
- Final Scoping Report will be completed including comments from registered I&AP's

EIA Phase

- Ongoing communication with registered I&AP's
- Draft EIAR/EMP Report submitted to registered I&AP's for comment.
- Final EIAR/EMP Report will be completed including comments from I&AP's

Record of Decision (ROD)

- Inform registered I&AP's of ROD directly in writing, via email or fax and indirectly through advertisement in local news papers.

SECTION TWELVE

Comment Reply Sheet

12. COMMENT REPLY SHEET

Geovicon Environmental (Pty) Ltd
P. O. Box 4050
MIDDELBURG
1050
Reg. No.: 2006/030830/07

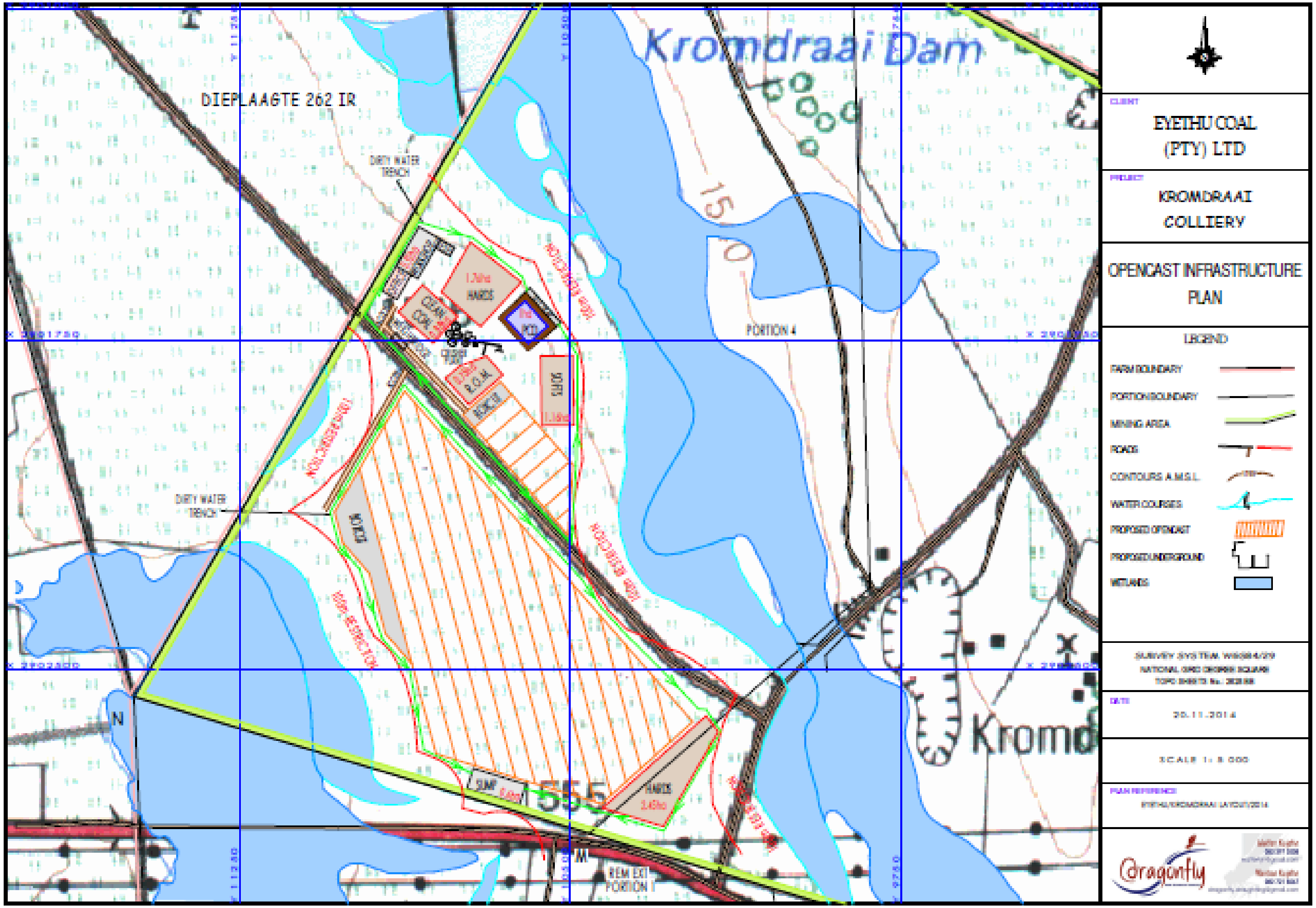
Tel: 013 243 0542
Fax: 086 632 4936
Cell: 082 359 5604
E-mail: geovicon@iafrica.com

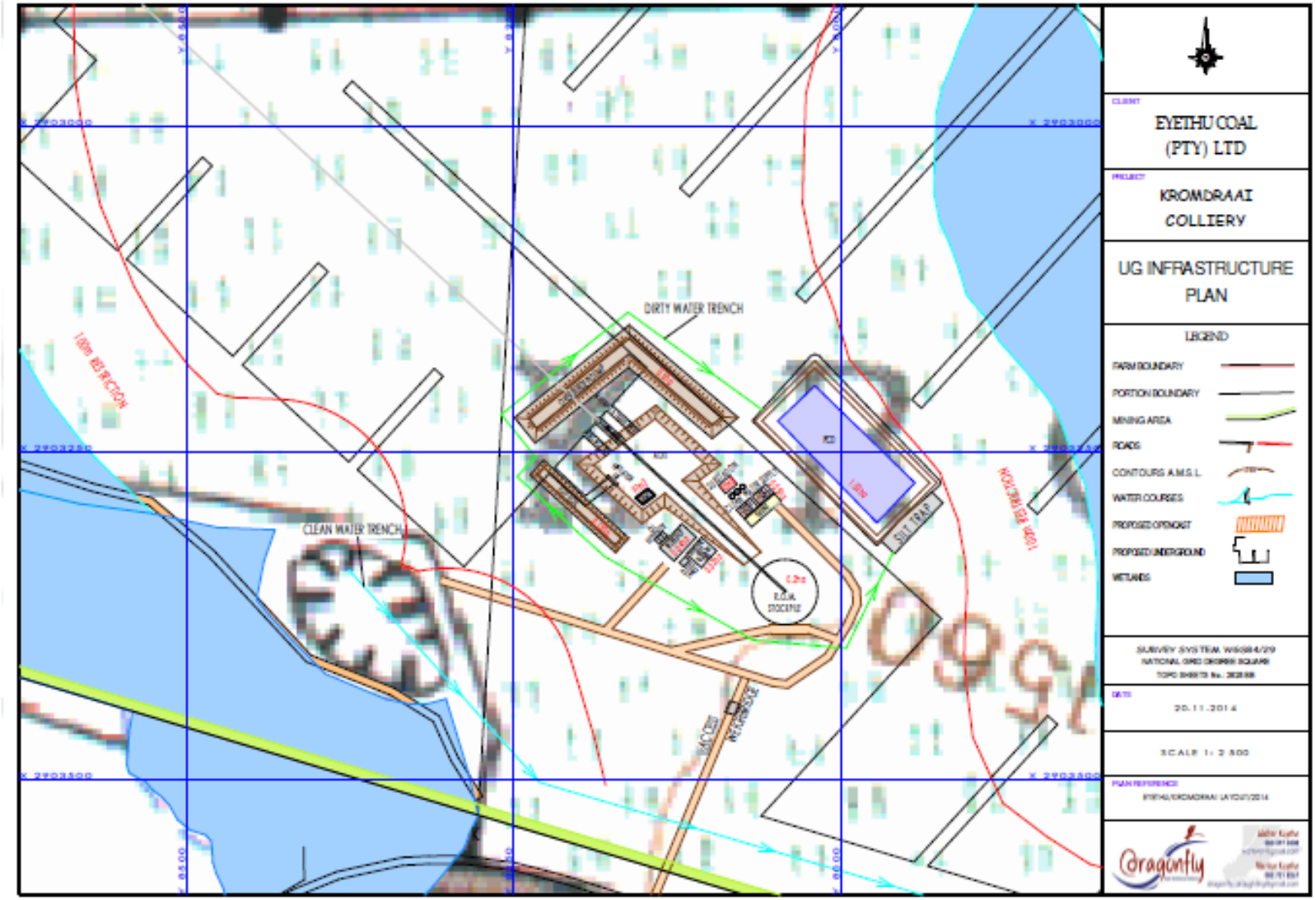
(Ref no: 17/2/3N-410)

Name:
Contact Details:
Interest in the project:
Comments:

Appendix 1

Mining Layout Plan (for the opencast and underground mining areas)


Kromdraai Dam
DIEPLAAGTE 262 IR
DIRTY WATER TRENCH
PORTION 4
HARDS
CLEAN COAL
SOFTS
SUMP
REM EXT PORTION 1
EYETHU COAL (PTY) LTD
KROMDRAAI COLLIERY
OPENCAST INFRASTRUCTURE PLAN
LEGEND
FARM BOUNDARY
PORTION BOUNDARY
MINING AREA
ROADS
CONTOURS A.M.S.L.
WATER COURSES
PROPOSED OPENCAST
PROPOSED UNDERGROUND
WETLANDS
20.11.2014


DIRTY WATER TRENCH
CLEAN WATER TRENCH
SILT TRAP
EYETHU COAL (PTY) LTD
KROMDRAAI COLLIERY
UG INFRASTRUCTURE PLAN
LEGEND
FARM BOUNDARY
PORTION BOUNDARY
MINING AREA
ROADS
CONTOURS A.M.S.L.
WATER COURSES
PROPOSED OPENCAST
PROPOSED UNDERGROUND
WETLANDS
20.11.2014
SCALE 1: 2 500
Dragonfly