

HMI Electrical cc

Draft Scoping Report

July 2016

Compiled and Submitted as contemplated in Appendix 2 and Regulation 21 of the Environmental Impact Assessment Regulations, 2014 of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

For the application for an Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998),(Act No. 59 of 2008), Environmental Impact Assessment Regulations 2014, Government Notice R983 - Listing Notice 1 of 2014, Government Notice R984 - Listing Notice 2 of 2014, and Government Notice R985 - Listing Notice 3 of 2014

DMR Reference No.: MP 30/5/1/2/2/10138 MR

Executive Summary

HMI Electrical cc proposes to mine sand (with the option to wash sand when needed) and manufacture bricks at Breakthrough Sand Quarry situated on portion 17 of the farm Piet Zyn Drift 476 IS, situated within the Ermelo Magisterial District. Breakthrough Sand Quarry is situated approximately 22 kilometres north of Amersfoort. HMI Electrical will conduct the opencast mining at Breakthrough Sand Quarry. A brick manufacturing plant, which is already on site will be used at Breakthrough Sand Quarry for the manufacturing bricks.

The target mineral at Breakthrough Sand Quarry is sand and bricks will be manufactured as an additional product from the sand. The sand reserve is approximately 2.5 million m³. Test pits were undertaken by the landowner and the fact that area is currently used for the mining of sand and manufacturing of bricks, which HMI Electrical cc has taken over, is proof enough of the presence of the sand reserve over the area. This has also been confirmed by the geological map. Test pits has shown that the sand is found at depths of between 3 to meters. It is also possible that sand, which may be contaminated with clay is found deeper than 5 meters. Should this sand be mined, a sand washing plant will be erected on site. Most of the required infrastructure, which will be mobile, needed to undertake mining operation will be constructed within the mining area. For offices and workshop the buildings within the farm will be used. In view of the above, HMI Electrical cc (Reg. No.: 2015/436351/07) has applied for a Mining Right in terms of section 22 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) (MPRDA) as amended, and simultaneously applied for an Environmental Authorisation in terms sections 24 (5) and 44 of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) read together with Regulations 21, 22, 23 & 24 of the Environmental Impact Assessment Regulations, 2014 (Government Notice R 982) (EIA Regulations). HMI Electrical cc is also applying for an Integrated Water Use Licence (IWUL) or a general authorisation for certain water use activities in terms of section 40 of the National Water Act, 1998 (Act 36 of 1998) (NWA).

Through geological assessments and based on the current mining and test pits excavated from the site, it was determined that the sand reserves at the proposed mining area has an economic value and can be mined optimally. Since bricks have been manufactured before through the plant onsite, this activity will be continued. Based on the proposed production rate the life of mine is estimated to be at approximately 80 years.

HMI Electrical cc, a 100% black woman owned company fulfils the requirement of the Mining Charter in respect of a Black Economic Empowered.

Environmental baseline data to be used in forthcoming reports will be obtained through various agencies.

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Appendix 1 Geovicon Environmental (Pty) Limited Profile

Appendix 2 Regulation 2.2 Plan

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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 HMI Electrical cc 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 twenty years' experience in the geological and environmental consulting field. 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 and in Swaziland, Botswana and Zambia. During 2001 Geovicon Environmental (Pty) Limited entered the field of mine environmental management and water monitoring. See attached Appendix 1 for Geovicon Environmental (Pty) Limited's company profile.

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. See Geovicon Environmental (Pty) Limited's profile attached as Appendix 1.

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. The Department of Mineral Resources are the competent authority for this environmental authorisation application.

In the spirit of co-operative governance and in compliance with the requirements of the NEMA EIA Regulations of 2014, other commenting authorities will be consulted with. These include:

- Mpumalanga Department of Environment, Agriculture, Rural Development and Land Affairs (MDERADLA)
- Mpumalanga Tourism and Parks Agency (MTPA)
- Department of Water and Sanitation (DWS)
- National Department of Agriculture, Forestry and Fisheries (NDA)
- eMalahleni Local Municipality

In addition to the above, the public will also be given an opportunity to evaluate and comment on the documents to be submitted to the authorities.

1.3 LEGAL REQUIREMENTS

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

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 2014.

In addition to the NEMA, the following key legislation's are 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 National Environmental Management Act (NEMA), No. 107 of 1998
- 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 (this report) has been finalised after the public participation process.

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

The NWA requires that any person who intends on or who undertakes an activity that has been defined as a water use in terms of the NWA, apply for a Water Use Licence for that activity. Based on the proposed Breakthrough Sand Quarry, water uses were identified in terms of the NWA. In an effort for HMI Electrical cc to legally carry out the intended water uses at the proposed project area, a Water Use Licence Application will be compiled and submitted to the Department of Water and Sanitation (Mpumalanga Regional Office, Bronkhorstspuit).

1.4 PURPOSE OF THE SCOPING REPORT

The Draft Scoping report addresses the requirements as contemplated in Appendix 2 of the Environmental Impact Assessment Regulations published in Government Notice No. R982. 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

HMI Electrical cc

2.1.2 Name of the Proposed Project

Breakthrough Sand Quarry

2.1.3 Address of proposed Project

The proposed activities will occur on portion 17 of the farm Piet Zyn Drift 476 IS, situated within the Amersfoort Magisterial District, Gert Sibande District Municipality, Mpumalanga.

2.1.4 Surveyor General Code

Table 1: Surveyor General Code for the project area

Farm name	Surveyor General Code
Portion 17 of the farm Piet Zyn Drift 476 IS	TOIS 00000000047600017

2.1.5 Project Manager

Still to be appointed.

2.1.6 Contact Person

Mr. Freddy Mkwanazi

Portion 17 Piet Zyn Drift 476 IS, Amersfoort,

Tell: (07) 2 112 3452

Address:

182 Sivukile, Morgenzon

Mpumalanga, 2315

2.2 LOCATION

The proposed Breakthrough Sand Quarry is situated on portion 17 of the farm Piet Zyn Drift 476 IS within the Pixley Ka Seme Local Municipality and the Gert Sibande District Municipality (Mpumalanga Province). The proposed Breakthrough Sand Quarry is situated approximately 22 km north of Amersfoort. Access to the site will be via an access road joining the N11. Refer to Appendix 2, Figure and Figure 2 1 for the Regulation 2.2 plan, locality plan and farm portions plan of the proposed Breakthrough Sand Quarry, respectively. The geographic coordinates for the location of the proposed project is given in Table 2 below.

Table 2: Geographic coordinates of the project area

Farm name	Coordinates
Portion 17 of the farm Piet Zyn Drift 476 IS	26°48'23.41" S / 29°53'04.90" E

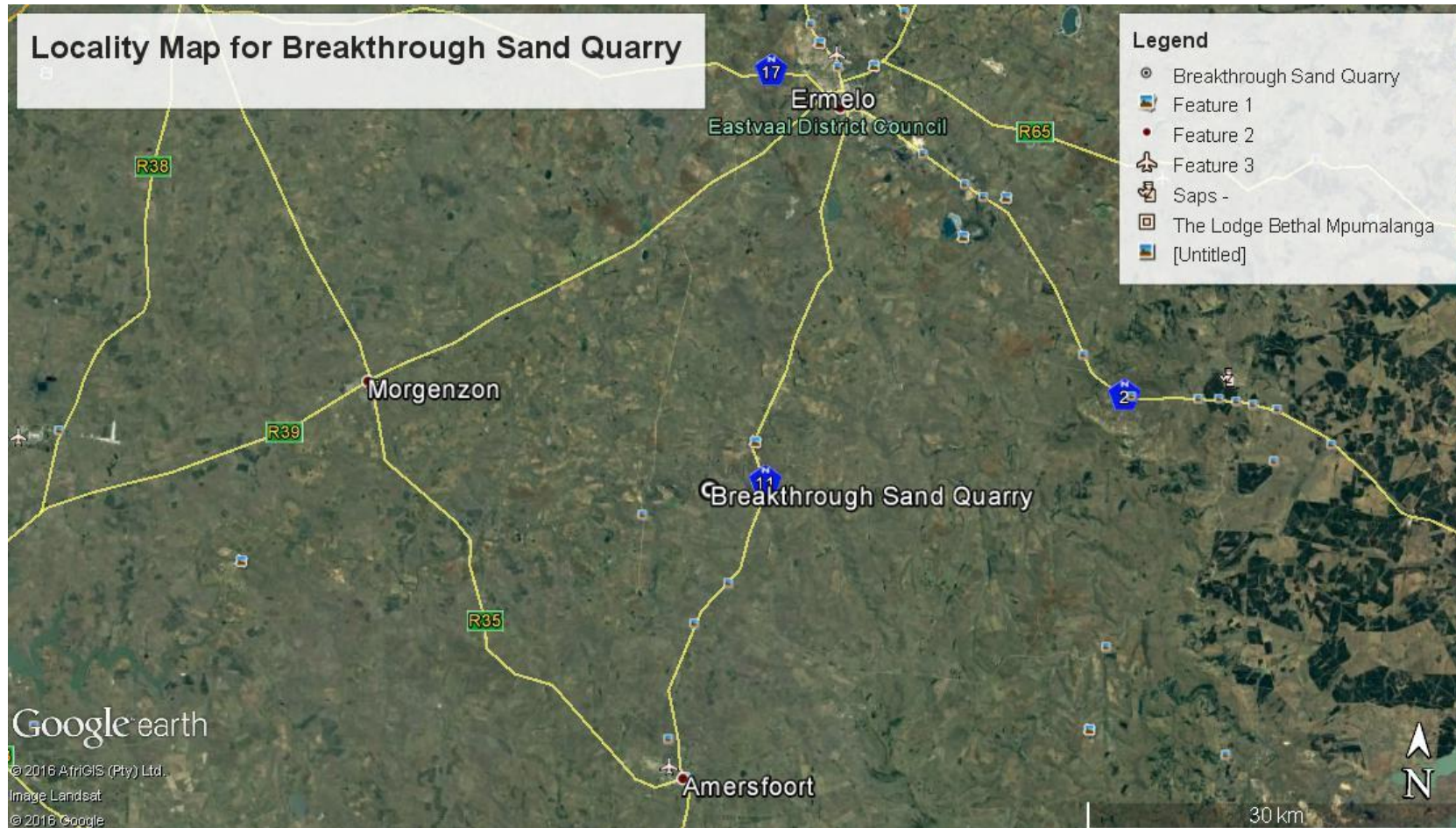


Figure 1: Breakthrough Sand Quarry locality plan

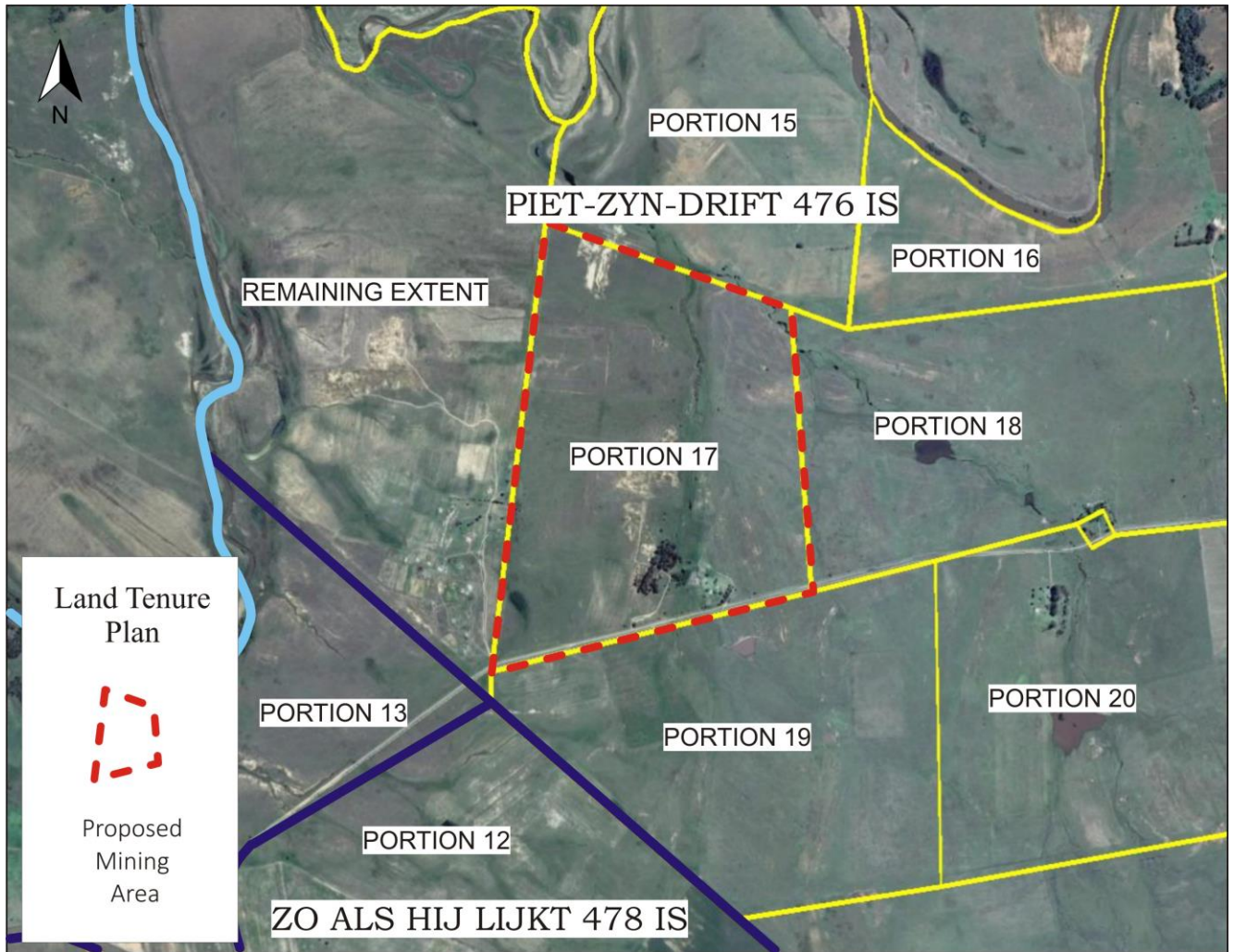


Figure 2: Breakthrough Sand Quarry Land Tenure Plan

2.2.1 Magisterial District & Regional Services Council

Magisterial: Amersfoort, Mpumalanga
 District Municipality: Gert Sibande District Municipality
 Local Municipality: Pixley Ka Seme Local Municipality

2.2.2 Direction and Distance to Nearest Towns

Table 3: Direction and Distance to Nearest Towns.

Town	Direction	Distance (km)
Ermelo	North	32 km
Amersfoort	South	23km
Morgenzon	West	28km
Sheepmoor	East	42km

2.2.3 Surface Infrastructure

The proposed Breakthrough Sand Quarry mining right area covers an area of approximately 120 hectares. The proposed Breakthrough Sand Quarry, which covers about 60 hectares, entails the mining of sand, manufacturing of bricks and associated building or infrastructure. A conventional opencast (roll-over) mining method will be used to mine the sand and mining will be conducted in-house. A beneficiation plant may be erected for the processing of the ROM sand to manufacture cleaned sand should the mining go deeper than five meters. Surface infrastructure will include: access / haul roads, mining pit, Offices and workshop complex, brick making plant, sand washing plant, electrical supply, material stockpiles, and water management facilities.

2.2.4 Presence of Servitudes

Eskom powerlines run through the proposed Breakthrough Sand Quarry mining area.

2.2.5 Name of River Catchments

In terms of the Department of Water and Sanitation Water Management areas, the proposed Breakthrough Sand Quarry falls within the Upper Vaal Water Management area. Within this water management area, the proposed project area falls within the Vaal River catchment area, which is demarcated as tertiary drainage region C11. The proposed Breakthrough Sand Quarry falls within

quaternary drainage region C11E.

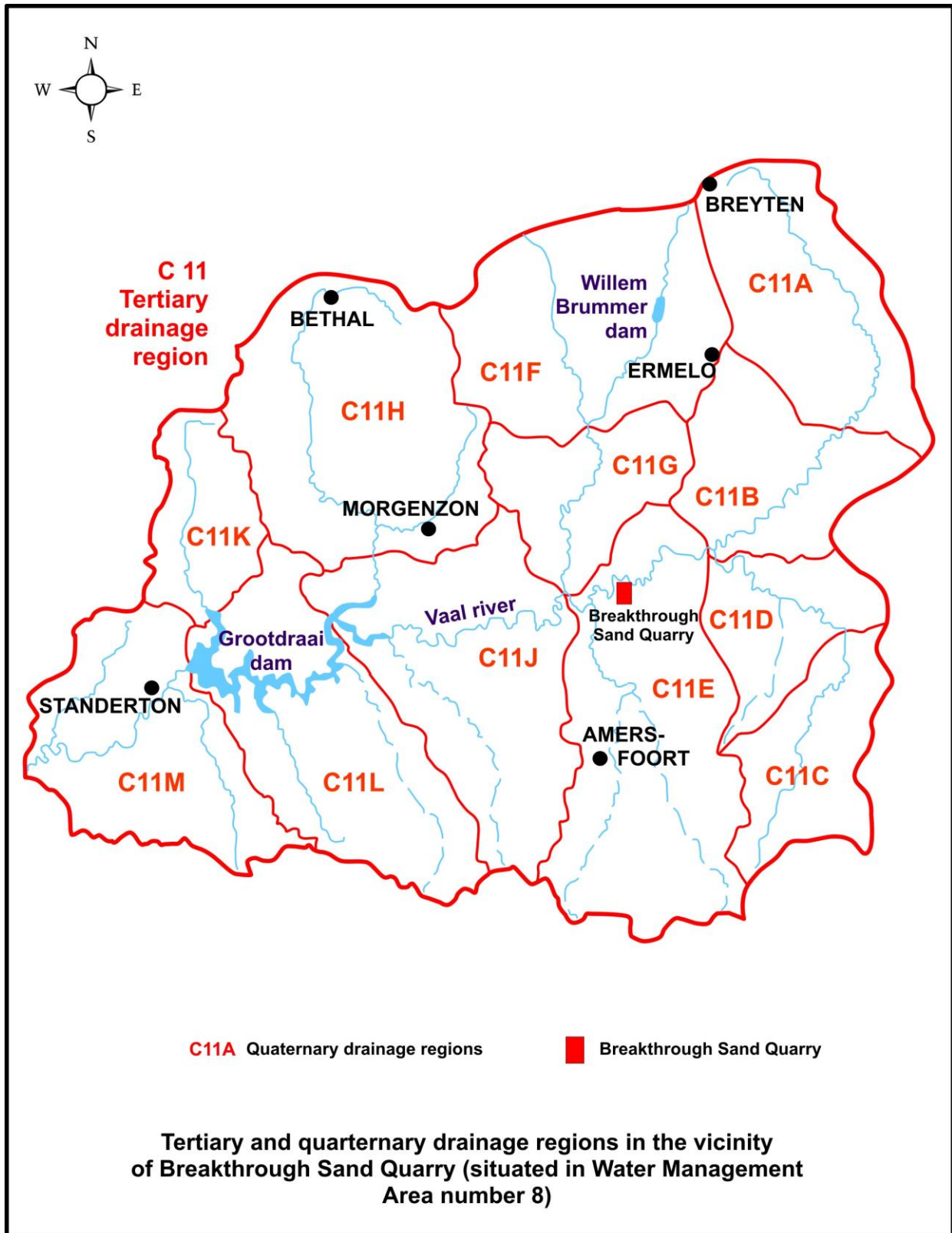


Figure 3 depicts the location of the proposed project in relation to the tertiary and quaternary drainage regions within the Vaal River catchment.

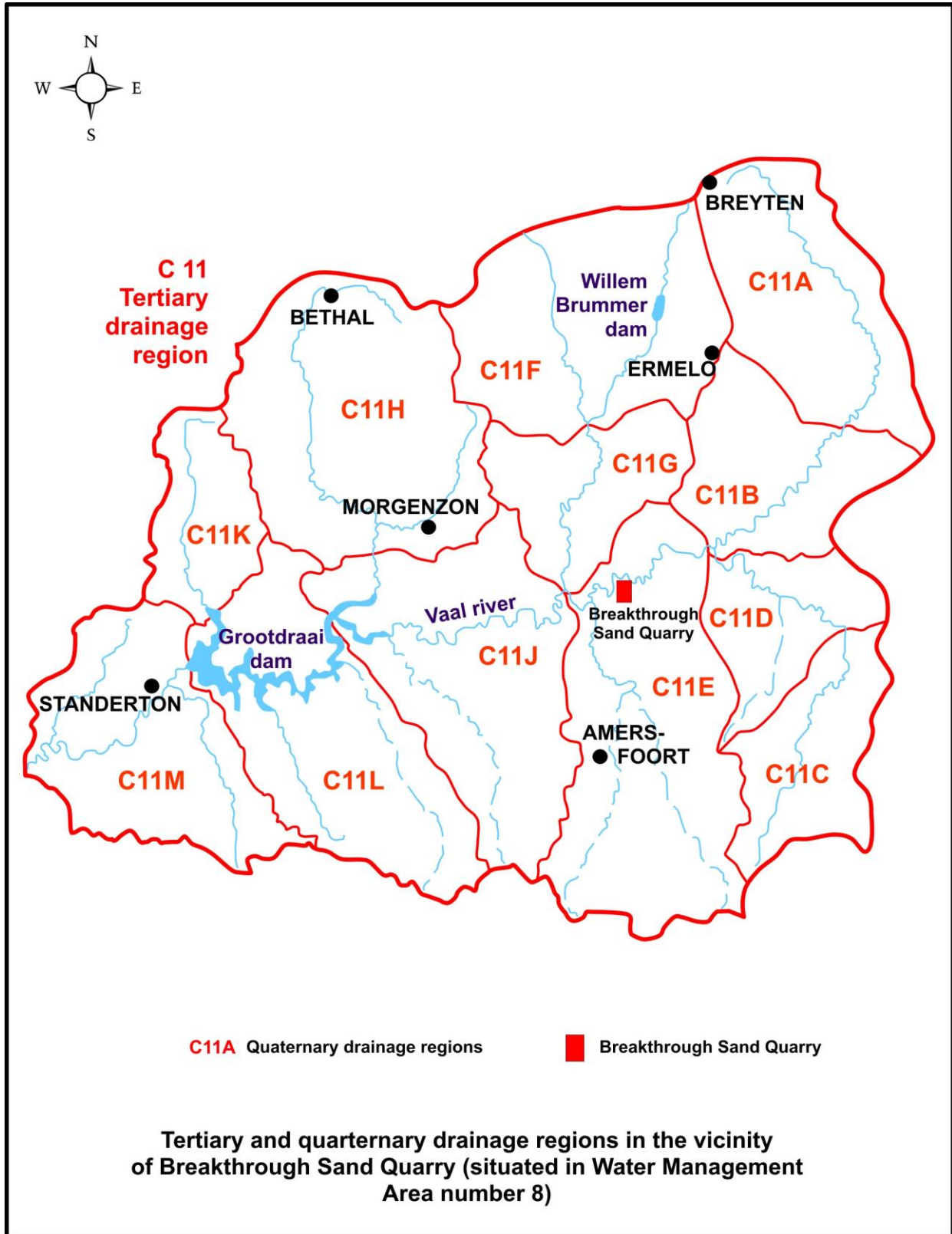


Figure 3: Location of the proposed project in relation to the tertiary and quaternary drainage regions

2.3 NAME AND ADDRESS OF LAND OWNER & FARM DESCRIPTION

Table 4 indicates the immediate and adjacent surface owners on the proposed Breakthrough Sand Quarry area.

Table 4: Description of immediate and adjacent landowners and their property

FARM	PORTION	SURFACE RIGHT OWNERS
Piet Zyn Drift 476 IS	0	Vulamehlo Communal Property
Piet Zyn Drift 476 IS	15	Jan Moll Frederik
Piet Zyn Drift 476 IS	17*	Judith Jacoba Kruger
Piet Zyn Drift 476 IS	18	Pieter Stephans Lourens
Piet Zyn Drift 476 IS	19	Pieter Stephans Lourens
Zoo Als Hij Lijkt 478 IS	12	Pieter Stephans Lourens
Zoo Als Hij Lijkt 478 IS	13	Rimrd Trust

* Indicate farm portion on which the proposed Breakthrough Sand Quarry will be undertaken.

2.4 BRIEF PROPOSED PROJECT OVERVIEW

The proposed Breakthrough Sand Quarry entails the mining and washing of sand and the manufacturing of bricks on portion 17 of the farm Piet Zyn Drift 476 IS. A conventional opencast (roll-over) mining method will be used to mine the sand and a reputable company will be contracted to conduct opencast mining operation. A brick manufacturing plant and a washing plant will be erected for the manufacturing of bricks and washing of sand. The target mineral at the Breakthrough Sand Quarry is sand. Bricks are additional commodity to be produced on site from some of the mined sand and other material that will be sourced from other sites. The sand reserve is approximately 2.5 million m³. The required infrastructure needed to undertake mining operation will be constructed within the mining area. Access to the site will be via the N11.

In addition to the above and depending on the market, stone will be hauled to the site for mixing to prepare product that will suit the market requirements. All mixes will be prepared on site.

2.4.1 NEMA Listed Activities in terms of Government Notice R983, 984 and 985 – Listing Notice 1, 2 and 3 of 2014

Activity No. 12 (GNR 983): The continuation of use of infrastructure situated within 32 meters and crossing the tributary of the Vaal River.

Activity 4 (GNR 984): The development of roads

Activity 6 (GNR 984): The operation of the quarry closer to the streams may require a water use lice or a general authorisation in terms of the National Water Act, 1998 (Act 36 of 1998).

Activity 12 (GNR 984): Clearance of the indigenous vegetation for the preparation and mining of sand and associated infrastructure.

Activity 17 (GNR 984): Mining of sand that requires a mining right including associated infrastructure,

structures and earthworks, directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).

Activity 12 (GNR 985): The clearance of an area of 300 square metres or more of indigenous vegetation during the mining of sand.

Activity 14 (GNR 985): Mining may occur within 32 of a wetland.

SECTION THREE

Baseline Information

3 BASELINE INFORMATION

3.1 GEOLOGY

Sand forms part of the raw material used by two main groups of industries, viz. the construction and building industries, and those using silica and silica sand.

By far the largest proportion, about 97 per cent of all sand produced is used by the former; the remainder is used for the manufacture of glass, in foundry works, for ceramics, fibreglass, silicon carbide, as filter material and as a filler in paint.

The purity of the sand required for the glass-making industry depends on the quality of the glass desired. Good glass sand is almost pure colourless silica, even-grained and about as fine as table sugar. The grain size and shape should be uniform and it is desirable that the grains should be angular rather than rounded. Sand of medium grade (between 0.25 and 0.5 mm diameter) is usually preferred.

The percentage of iron and other colouring oxides must be as low as possible, especially chromic oxide, which has a greater colouring effect than iron.

The South African glass industry has been using sand in the size range –28 to +100 Tyler mesh; experiments have shown, however that a grain size in the range –48 to +150 gives a melting rate increase of up to 20% over the larger size.

Most natural sand deposits do not fit these specifications for grain size and impurities, but can normally be beneficiated by methods such as screening, washing, leaching with acids and floatation.

Most of the silica sand used by the glass factories is drawn from the Cape Flats, the Magaliesberg and the Delmas area. Some good deposits are also worked outside these areas in smaller quantities. On the Transvaal Highveld by far the greatest amount of sandstone comes from the Vryheid Formation of the Ecca Group.

The sandstone containing high-grade silica deposit occurs within on the farm. The deposit is thought to be due to the filling of isolated sinkholes and the reserves are estimated to be approximately 45 000 m³.

Sand used for building is found in a number of area within the entire country. Specifications for the sand is provide by the SABS. Some of the sand may require washing to meet the required specifications.

3.1.1 Climate

The climate is typical of the highveld region of Mpumalanga with warm summers and cold winters with severe frost. The average number of frost days is 43.3 per annum. The average first frost occurs around the second week of May, with the last usually occurring in early September. Minimum monthly temperatures range from 0.0°C (July) to 13.0°C (January). The maximum monthly temperatures are between 16.5°C (June) and 24.7°C (January).

The area experiences an average rainfall of 727 mm per annum with high potential evaporation. The Agricultural Research Council's Institute for Soil, Climate and Water (ARC-ISCW) have recorded ranges in average monthly rainfall from 7.8 mm (June) to 128.0 mm (November). Thunderstorms occur frequently during summer, between October and March, and are usually accompanied by lightning, heavy rain, strong winds and occasionally hail. The Ermelo area has the highest hail frequency in South Africa. Storms are mainly localised and rainfall can vary markedly over short distances.

Fog occurs on an average of 55 days per annum. Winds in the study area blow predominantly from the west and northwest, and may reach speeds of up to 60 km/hr in summer..

3.1.2 Topography

The area is characterised by highly variable landscapes with extensive sloping plains and a series of ridges slightly elevated over undulating surrounding plains.

Locally, the proposed project area drains in a southern direction by means of non-perennial streams towards the Vaal River.

3.1.3 Soils

Mining at the proposed Breakthrough Sand Quarry will be undertaken by opencast mining methods with associated infrastructure. The opencast mining area will cover most of the surface to be disturbed and will have significant impacts on the soils over the mining area. Impacts associated with this type of mining are significant because of soil layer disturbance during mining.

In view of the above, it is necessary that the pre-mining soil environment be determined. Soils in the proposed opencast mining area are typical of the highveld catena with deeper soils of moderate to high agricultural potential on the upper slope and heavy soils with a higher clay content on the lower slope. A desktop soil survey over the areas to be affected by the proposed mining project will be conducted. The survey will be used to determine the distribution, types, usage and suitability of the soils. This information will be used during the compilation of the Environmental Impact Assessment and Environmental Management Programme Report.

3.1.4 Land Use

The pre-mining land use is primarily grazing land and the remaining areas have natural vegetation (used for grazing), streams, housing, mining and wilderness. Within the area small scale sand mining is currently being undertaken.

3.1.5 Natural Vegetation / Plant Life

Determination of natural vegetation over an area to be impacted on by mining activities is a prerequisite for commencement of any mining activities. The information regarding the vegetation of the area must form part of the Environmental Impact Assessment Report and Environmental Management Programme Report.

The proposed mining area has largely been transformed into cultivated and mining lands. The natural vegetation within the mining area is classified as Moist Sandy Highveld Grassland according to Low and Rebelo (1996). High rainfall on cold, frosty, eastern Mpumalanga highveld, together with sandy soils, controls the distribution of this vegetation type. This vegetation type is very suitable for crop production with natural vegetation heavily used for grazing by sheep and cattle. This grassland is dominated by Fan Lovegrass (*Eragrosti plana*), Weeping lovegrass (*Eragrosti curvula*), Speargrass (*Heteropogon contortus*), *Trachypogon spicatus* and *Themeda Triandra*. Dicotyledonous forbs are not abundant, though many species occur in the area.

The conservation status of Moist Sandy Highveld Grassland is very poor, as it is largely ploughed. Natural vegetation is restricted to patchy remnants.

3.1.6 Surface Water

The proposed Breakthrough Sand Quarry mining area is located in the Mpumalanga Province of South Africa. The project is located 22 km north of Amersfoort, in the upper reaches of the Vaal River catchment. The Vaal River and an associated tributary lie adjacent to the proposed Breakthrough Sand

Quarry. The project area is located in quaternary catchment C11E.

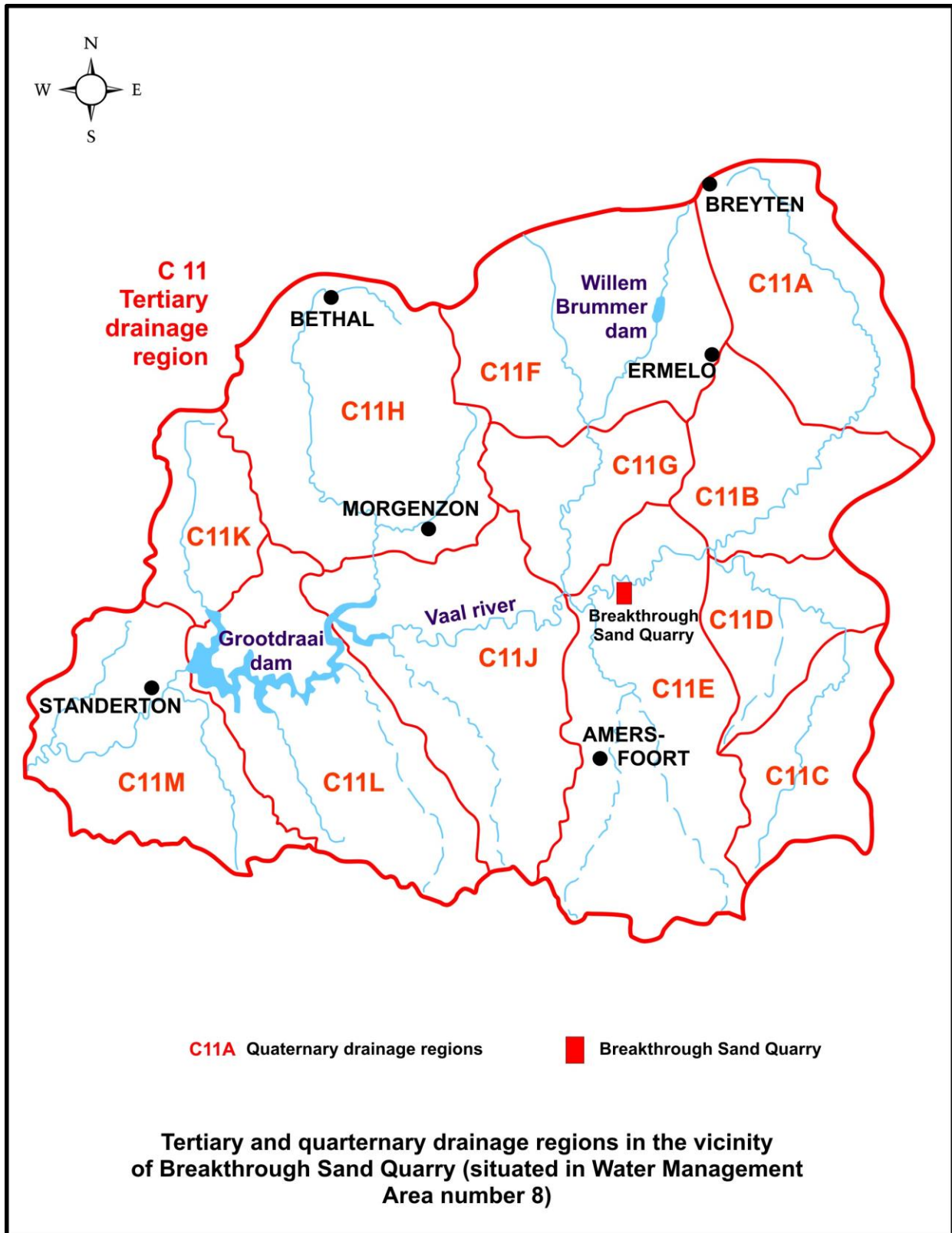


Figure 3 depicts the location of the proposed Breakthrough Sand Quarry mining area in relation to the tertiary and quaternary drainage regions within the Vaal River catchment.

3.1.6.1 Sensitive Landscape

HMI Electrical cc recognises that all streams and wetlands occurring in the vicinity of the project area should be treated as sensitive landscapes. In view of the above, a suitable company will be commissioned to conduct a Wetland Assessment for the proposed Breakthrough Sand Quarry. The report will be used for the information relating to wetlands occurring in the vicinity of the proposed project area. The specialist study will consist of the identification and delineation of wetland areas in the vicinity of the proposed project area.

3.1.7 Air Quality

The proposed Breakthrough Sand Quarry mining area is situated within the Amersfoort local municipal area. This area is dominated by agricultural practices and residential areas. These activities have the potential to generate particulates that may cause air pollution.

Potential impacts that the proposed project may have on air quality include the generation of dust during the mining phase. Dust generated will be as a result of vehicle movement over cleared surfaces. Potential sensitive receptors associated with this project include isolated farmsteads.

3.1.8 Sites of Archaeological and Cultural Interest

A Heritage Assessment will be conducted and included in the EIR/EMPr Report.

3.1.9 Visual Aspects

The area is characterised by a gentle undulating topography, seasonally covered by grazing land.

3.1.10 Regional Socio-Economic Structure

3.1.10.1 Geographical Location

The proposed Breakthrough Sand Quarry mining area is situated within Pixley Ka Seme Local Municipality which falls within the Gert Sibande District Municipality.

The Dr Pixley Ka Isaka Seme Local Municipality is situated on the eastern border between Mpumalanga and Kwa - Zulu Natal (Newcastle Local Municipality). Furthermore, the municipal area is framed by the Mkhondo Municipality in the east, Msukaligwa Municipality to the north and Lekwa Municipality to the west and it falls under the Gert Sibande District. For the purposes of the Dr Pixley Ka Isaka Seme Integrated Development Plan the boundaries as proclaimed in terms of Section 21 (B) of the Local Government: Municipal Demarcation Act, 1998 (Act 27 of 1998) are used. Figure 4 below shows the Map of Dr. Pixley Ka Isaka Seme Local Municipality.

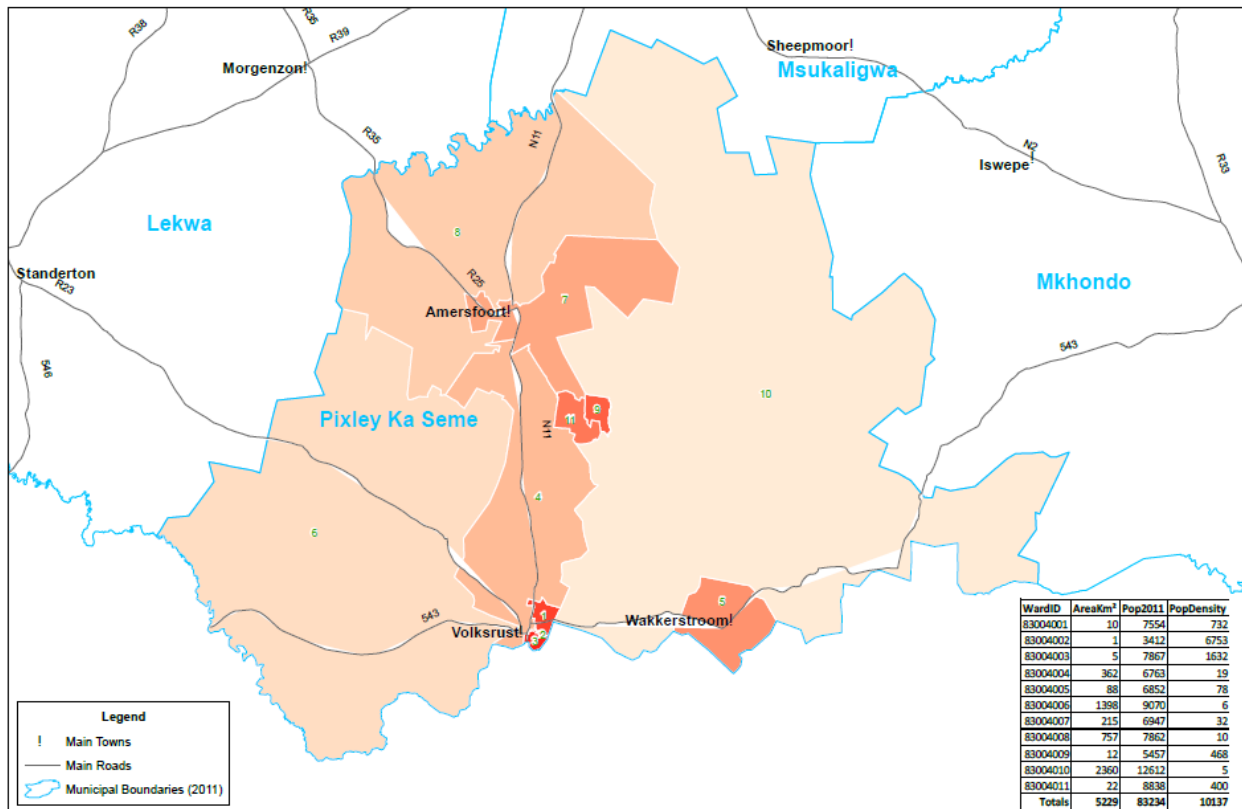


Figure 4: Map of Dr. Pixley Ka Isaka Seme Local Municipality

3.1.10.2 Population Size and Growth

In 2001 the population in Dr. Pixley Ka Isaka Seme Local Municipality was recorded at 80 737 by Statssa and the population has increased by 83 235 in 2011. The population growth rate therefore from 2001-2011 was 0.3%. The Municipality has a Total Population of 83 235 with 19838 households which amounts to a household size of 3.7 persons per household according to Census 2011 data.

The Dr. Pixley Ka Isaka Seme Local Municipality consists of 11 Wards of which are mostly rural. There are noticeable variations in the distribution of population within the Municipality. From the population information it is evident that most of the population is spatially located in Daggakraal Ward 10 with a total population of 12612 and the least number of the total population can be found in Vukuzakhe Ward 2 with a population of 3412. The proposed project is situated at the ward 8.

3.1.10.3 Major Economic Activities and sources of Employment

In 2011, Trade was the biggest employer in the municipality with a share of 19.9%. Agriculture 19.2%, Construction (11.30%), Community Services (17.0%), Utilities (10.60%) and Transport (6.60%) contributed significantly in the employment sector within the municipality. In 2012, there was an increase of 0.8% in Agriculture making it the leading sector (20.0%), a decrease, of 0.5% in Trade. Community Services and Construction increased to 17.5% and 13.3% respectively.

3.1.10.4 Unemployment estimate for the area

According to Census 2011 statistical data, the unemployment rate of the Municipality is standing at 36.1% in 2011 compared to 50.6% in 2001. Analysing the Census 2011 data it is evident that 28.3% of the

population is employed and 16% is unemployed, whilst 8.5% are discouraged job seekers (a person without work, who wants to work but has not taken active steps to seek work) and the remaining 47.3% are not economically active (people who are not available for work, such as full-time scholars, students, fulltime homemakers, those who are retired and those who are unable or unwilling to work).

SECTION FOUR

Details of Public Participation Process

4 DETAILS OF THE PUBLIC PARTICIPATION PROCESS

In terms of Chapter 6 of the NEMA regulations (GN R982), 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 project.

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, telephone or postage (individual notices), site notices and a local newspaper of the proposed Breakthrough Sand Quarry. The Draft Scoping report is made available for comment to all relevant stakeholders during the registration phase.

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

The interested and affected parties identified are as follows:

- Department of Agriculture, Rural Development, Land and Environmental Affairs (Mpumalanga Regional Office)
- Department of Water and Sanitation (Mpumalanga Regional Office)
- Department of Mineral Resources (Mpumalanga Regional Office)
- National Department of Agriculture (Mpumalanga Regional Office)
- Mpumalanga Parks and Tourism Agency
- Immediate/immediately adjacent landowners and legal occupiers
- Pixley Ka Seme Local Municipality

More interested and affected parties will be added should more parties register their names or send comments on the draft scoping report.

4.1.2 Scoping Phase

The draft Scoping report will be submitted to relevant State Departments, the Pixley Ka Seme Local Municipality, and I&AP's for comment. The draft Scoping report will also be placed in the Ermelo Public Library for evaluation and comment. An advertisement was placed in the local newspaper in accordance with Regulation 41 of Government Notice No. R982 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 Library for evaluation and comment and for interested and affected parties to register their names. Once the commenting period lapsed, the final Scoping Report will be submitted to the DMR including the comments received from registered I&AP's.

4.1.3 EIA/EMP Phase

Upon acceptance of the Final Scoping Report, the draft EIR/EMPr report, will be compiled and submitted to relevant State Departments, the Pixley Ka Seme Local municipality, and registered I&AP's for

evaluations and comment. The draft EIR/EMPr will also be placed in the Ermelo Public Library for comment. An advert will be placed in the local newspaper in accordance with Regulation 41 of Government Notice No. R982 under section 24 of the National Environmental Management Act, 1998 (Act no. 107 of 1998) informing the public about the availability of the draft EIR/EMP report in the said Library for evaluation and comments. Once the commenting period lapses, the final EIR/EMP including comments from registered I&AP's, will be submitted to the DMR.

4.1.4 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 MOTIVATION FOR THE NEED AND DESIRABILITY OF THE PROJECT

Breakthrough Sand Quarry will provide valuable job opportunities within the Pixley Ka Seme local municipality and contribute towards development of the Pixley Ka Seme local municipality.

5.2 NEED FOR THE PROJECT

The raw materials for the construction and building industry are supplied mainly by the quarry industry. The term 'quarry industry' is defined as the industry operating gravel, sand, stone and sand borrow pits and quarries and associated plants, whose products are used in concrete, mortar, bricks, road construction and for railway ballast purposes. Quarrying activities tend to be found near principal centres that are surrounded by developing areas. Quarry industry materials have a low unit value and transport plays a vital role in the economics of supply. It is therefore important that these basic materials are in regular supply at affordable prices, close to the point of consumption.

Although Pixley Ka Seme Local Municipality has a better employment rate compared to some local municipalities in the Gert Sibande District Municipality area, the unemployment rate within the area can be improved. In view of the above, it is very important for HMI Electrical cc to ensure that local communities within the municipality benefit from the operation at Breakthrough Sand Quarry. This will help in HMI Electrical cc's contribution towards the unemployment rate reduction and poverty eradication.

Full time employees will be employed at the mining operation. HMI Electrical cc will create employment opportunities during the 30 year life of mine, thus the commencement of the project will contribute to job creation within the Pixley Ka Seme Local Municipality and beyond.

5.3 DESIRABILITY FOR THE PROJECT

The proposed mining area is accessible from the N11 national road. The proposed Sand Quarry will supply sand, other stone material and bricks for localized developments. These will be sold to clients that build houses, shopping complexes and other related structures, encouraging development within the Pixley Ka Seme local municipality and beyond.

SECTION SIX

Detailed Description of the Project

6 DETAILED DESCRIPTION OF THE PROJECT

6.1 DETAILED DESCRIPTION OF THE PROJECT

6.1.1 Surface Infrastructure

Surface infrastructure will include: access / haul roads, mining pit, Offices and workshop complex, brick making plant, sand washing plant, electrical supply, material stockpiles, and water management facilities.

6.1.2 Roads, railways and power lines

There are power lines crossing the proposed sand quarry area. Access to the project area will be via an existing access road that connects to the N11 national road.

6.1.3 Waste Management

6.1.3.1 Solid Waste Management

HMI Electrical cc will transport waste generated during construction and operation of the mine. The waste will be transported to a nearby waste disposal site. The waste may be sorted before disposal. Paper and cardboard may be separated and sent for recycling. Industrial waste (classified as hazardous waste – paint tins, degreaser containers, oily rags, building rubble, scrap metal, building materials, etc.) will be collected in a different waste collection system and disposed of by the mine or a contractor at a registered hazardous waste site.

6.1.3.2 Water Management Facilities

Surface water drainage measures will be implemented. Water drainage will be undertaken by diverting clean runoff water around the mining pit and all other contaminated areas. Dirty water from contaminated areas will be collected via drains and diverted to a settling dam. This water is utilised for dust suppression. The water management will be undertaken in accordance with the requirements as set out in the Environmental Management Programme.

6.1.3.3 Water Supply

The proposed quarry will use the existing boreholes for the process water supply.

6.1.3.4 Transport

Employees will be sourced from the local area. Therefore, employees will make of local public transport to get to the proposed site.

6.1.3.5 Disturbance of watercourses

Wetlands associated with the tributaries of the Vaal River occur adjacent to the proposed development area.

HMI Electrical cc is committed to comply with the environmental legislation, by obtaining necessary authorisations before conducting mining activities adjacent to these wetlands.

SECTION SEVEN

Description of Identified potential alternatives

7 CONSIDERATION OF ALTERNATIVES

7.1 MOTIVATION FOR NOT CONSIDERING ALTERNATIVES

7.1.1 Location Alternatives

The location of the proposed development is the most suitable due to its ideal location in terms of the requirements for sand mining. Test pits indicated that the quality of the sand in the area where the applicant proposes to mine sand, is of the best quality and therefore no alternative site has been investigated.

7.1.2 Site Layout Alternatives

Site layout alternatives can be considered after specialist input has identified possible sensitive landscapes and wetland zones have been delineated.

7.1.3 Transport Alternatives

In terms of the proposed Breakthrough Sand Quarry the most viable option to accessing the site will be via the existing access road that connects to the N11 national road. In view of the above, there are no other alternatives to transportation routes.

7.2 CONCLUDING STATEMENT

Based on the above, the proposed Breakthrough Sand Quarry, is the preferred location for the proposed project based on the following:

- The Applicant is in the process of buying the land of the current surface owner of the farm portion.
- Based on test pits results the site proves to be favourable for sand mining.

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 Breakthrough Sand Quarry. 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:

- Excavation of an initial box cut
- Preparation of the subsoil and overburden stockpiling areas
- Construction of a R.O.M. sand stockpiling area
- Formation of topsoil stockpiles
- Construction of brick manufacturing plant
- Construction of storm water management structures
- Construction of mine surface infrastructure (offices, workshops, access/haul roads, water and electricity supply and telecommunication infrastructure)
- Construction of a settling dam

8.1.1 Topography

The construction of the mine surface infrastructure, R.O.M. sand and topsoil stockpiles and settling dam and the excavation of the initial box-cut will form topographical highpoints and voids, which will have an impact on the topography of the proposed mining area.

8.1.2 Soils

All construction phase activities will result in the stripping of soil, which will result in the removal of the topsoil. The stockpiling of the topsoil may result in the topsoil being leached out. The stockpiling of topsoil will result in the compaction of the topsoil layer, which will affect the fertility of the soil.

8.1.3 Land Use

As described above, the area is predominantly used for grazing and mining activities. All construction phase activities will result in the land use within the mining area changing from to mining.

8.1.4 Land capability

All construction phase activities will result in the reduction of the land capability through disruption of soil profile. The area in question is predominantly used for grazing. Note also that some of the areas are already altered due to the existence of the defunct opencast mine workings.

8.1.5 Natural vegetation

All mining activities will result in the removal of soils, which in turn, will result in loss of vegetation cover.

8.1.6 Animal Life

All construction phase activities will result in the migration of animals away from the proposed mining area. Disruption of topsoil profile may also lead to loss of animal burrows/microhabitats. Note however that due to the current state of the area and the land use, most of the naturally occurring animals have already fled the area.

8.1.7 Surface water

The activities undertaken during the construction phase will result in the formation of voids, which will decrease surface runoff within the mine-affected catchment. Exposure of soils may lead to increased silt loads in surface water runoff.

8.1.8 Groundwater

A dewatering cone may develop around both the opencast mining areas as groundwater will be flowing towards the said mining area.

8.1.9 Air Quality

Movement of mining machinery will generate dust and diesel fumes. Dust will be generated by wind blowing over exposed soils. This dust will have high levels of silica, which may be harmful to employees, nearby residents and vegetation if not controlled.

8.1.10 Visual Aspects

The mine activities will be visible from the surrounding farms and their respective farm roads. Note that due to the undulating nature of the topography, this impact will be minimal.

8.1.11 Noise

Machine operators in close proximity to machinery will be exposed to noise levels in excess of 85dBA. This will have impacts on employees and nearby residents.

8.1.12 Social Aspects

Commencement of mining activities may result in the following i.e. Creation of jobs in the 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 Breakthrough Sand Quarry during the operational phase:

- Systematic removal of the sand material by means of opencast mining methods
- Manufacturing of bricks from the R.O.M sand
- Stockpiling and transporting of R.O.M. material;
- Disposal of mine affected water into the settling dam.

- Use of the mine surface infrastructure

The activities listed above are likely to have a detrimental effect on the following environmental/social aspects:

8.2.1 Topography

Removal of sand by opencast mining methods and the stockpiling of the R.O.M. sand at the sand stockpile area will result in the formation of voids and highpoints which will impact on the topography at the proposed mining area.

8.2.2 Soils

Removal of the sand layer during the operational phase will require that the top and sub-soil layers, be removed for access to the sand layer. The above, will result in the disturbance of top- and sub-soil layers, which will have an impact on the physical and chemical structure of the soil layers.

8.2.3 Land capability

All operational phase activities will result in the reduction of land capability as a result of disruption of soil profiles. Except for the opencast area to be mined during the operational phase, no areas additional to those identified during the construction phase will be impacted on by the proposed mining operation.

8.2.4 Land Use

As described in the construction phase, the land use will change to mining. Except for the area demarcated for mining, no areas additional will be impacted on by the proposed mining operation.

8.2.5 Natural Vegetation

The systematic removal of the sand material by opencast mining methods will result in the removal of soil layers, which will in turn result in loss of vegetation.

8.2.6 Animal Life

The removal of the sand layer by opencast mining methods may result in the loss of animal burrows/microhabitats due to disruption of the soil profile and stripping of vegetation. This will result in the migration of animals away from the proposed mining area. Note however that the area has been disturbed already by previous mining operations, agricultural activities and housing, hence no significant animal life exist in the area.

8.2.7 Surface water

Removal of sand material by opencast mining methods will result in the formation of a void, which will result in loss of MAR within the catchments of the tributaries of the Vaal River. Runoff from the upslope area may enter the mine workings, giving rise to an increased loss of potential surface water runoff.

8.2.8 Sensitive landscapes

The erosion and/or sedimentation of the seasonal wetland as a result of poor storm water management. This may result in alien vegetation encroachment within the surrounding wetland.

8.2.9 Groundwater

The construction of the mine workings and removal of water from the workings will result in the formation of a dewatering cone. Since the depth of mining will be low it is not expected that borehole water levels within and surrounding the mining area will be affected by the proposed mining operation.

8.2.10 Air Quality

During the operational phase of the proposed mining operation, mine machinery movement may result in air pollution due to dust and diesel fumes generated. These air pollutants will have a tendency to travel towards the prevailing wind direction. Note however that dust and fuel particulates tend to attenuate within a distance of approximately 500 meters. This situation may however differ in situations where wind speed is stronger than usual.

8.2.11 Noise

Noise will be generated from mine machinery, which may be a nuisance to the nearby residents. Noise generated by the mine machinery will however attenuate to allowable levels within approximately one kilometre.

8.2.12 Visual Aspects

All 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. The potential visual impact sites will include farm roads and the nearby farmhouses.

8.2.13 Regional Socio-Economic Structure

The commencement of the Breakthrough Sand Quarry 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 implementation of the local economic development projects (Social and Labour Plan).

8.2.14 Interested and Affected Parties

All interested and affected persons will be 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 i.e. the public will be allowed to raise concerns/complaints and these concerns will be addressed promptly.

8.3 DECOMMISSIONING PHASE

The decommissioning phase of the proposed project will involve the rehabilitation of the final voids, removal of all mine infrastructure and rehabilitation of infrastructure. During this phase of the project, impacts identified during the construction and operational phase will cease, hence no additional impacts are predicted.

8.4 CUMULATIVE IMPACTS

This section of the Environmental Impact Assessment will attempt to determine if the proposed Breakthrough Sand Quarry 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 HMI Electrical cc.
- 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 National Environmental Management Act, 1998 (Act 107 of 1998) have been identified and relevant authorisation have been applied for. This draft Scoping report for the proposed development has been undertaken in accordance with the Environmental Impact Assessment Regulations (2014) published in Government Notices R982 of 4 December 2014 read with Section 44, of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

HMI Electrical cc is also applying for the Integrated Water Use Licence or a general authorisation for the proposed Breakthrough Sand Quarry in terms of section 40 of the National Water Act, 1998 (Act 36 of 1998).

SECTION ELEVEN

Plan of Study

11 PLAN OF STUDY

11.1 DESCRIPTION OF ALTERNATIVES TO BE CONSIDERED AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT

Based on the outcomes of the alternatives measured in the draft Scoping Report (see section 7), no alternatives will be considered as part of the Environmental Impact Assessment.

The option of not proceeding with the proposed Breakthrough Sand Quarry was assessed in this draft Scoping report (see section 5). However, during the EIA phase, consultation with Interested and Affected Parties and studies undertaken will be considered when investigating the option of not proceeding with the proposed project.

11.2 DESCRIPTION OF ASPECTS TO BE ASSESSED AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The proposed Breakthrough Sand Quarry operation will be developed mainly on agricultural and grazing land and in close proximity to a wetland area. The following environmental aspects will be assessed and will be included in the EIA.

- Surface water quality
- Surface water quantity
- Soil
- Topography
- Vegetation
- Waste management
- Sensitive areas
- Human impacts
- Heritage & cultural areas

11.3 ASPECTS TO BE ASSESSED BY SPECIALISTS

Specialist study to be undertaken	Aspect to be assessed
Wetland study	Sensitive areas, surface water
Heritage impact Assessment	Archaeological or cultural heritage sites
Soil study	Assessment of soil profiles, indicating different soil types
Surface water and bio-monitoring	Assessment of current water conditions and determination of possible impacts on the surface

	water resources.
Groundwater	Assessment of the current groundwater conditions and determination of impacts on the groundwater regime.
Wetland assessment	Delineation of wetland areas and assessing their conditions in terms of the present ecological status

11.4 DESCRIPTION OF THE PROPOSED METHOD OF ASSESSING THE ENVIRONMENTAL ASPECTS

The following prediction and evaluation of impacts is based on the proposed Breakthrough Sand Quarry to be conducted at the proposed development 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.

11.4.1 Risk Assessment

During the Environmental Impact Assessment data gathered and studies conducted will be used to identify the risks associated with the proposed project. All issues that have been identified as posing significant risks to the environment will be identified and prioritised. Management of these issues will be determined and will form part of this risk assessment.

11.4.2 Methodology followed

The environment risk assessment will address the actions of the activities associated with the proposed development and assess the significance of the impact on the environment. The risks will then be described using the parameters specified in Table 5 below.

Table 5: Criteria used for the environmental risk assessment

THE STATUS OF THE IMPACT		
Positive:	A benefit to the holistic environment	
Negative:	A cost to the holistic environment	
Neutral:	No cost or benefit	
The probability of the impact		
Score	Severe / beneficial effect	Description
0	None	The impact will not occur

1	Improbable	Less than 15% sure of an impact occurring
2	Low (probability)	Between 15% and 40% sure of an impact occurring
3	Medium (probability)	Between 40% and 60% sure that the impact will occur
4	Highly Probable	Between 60% and 85% sure that the impact will occur
5	Definite	Over 85% sure that the impact will occur
The duration of the impact		
Score	Severe / beneficial effect	Description
1	Short term	Less than 2 years
2	Short to medium term	2-5 years
3	Medium term	6-25 years
4	Long term	26-45 years
5	Permanent	46 years or more
The scale of the impact		
Score	Severe / beneficial effect	Description
0	None	
1	Site	Within the site boundary
2	Local	Affects immediate surrounding areas
3	Regional	Extends substantially beyond the site boundary but only affects the region or province
4	National	Affects country
5	International	Affects is beyond the country and possibly the world
The magnitude of the impact		
Score	Severe / beneficial effect	Description
2	Minor	Effects observable – environmental impacts reversible with time without human intervention
4	Low	Effects observable – impacts reversible with rehabilitation
6	Moderate	Effects observable – affected area restored to acceptable environmental state
8	High	Extensive effects – irreversible alteration to the environment
10	Very high/Don't know	Extensive permanent effects with irreversible alteration

11.4.3 Significance of possible impacts

The significance of the impacts is calculated by multiplying the consequence of the impact by the probability of the impact. Table 6 below illustrates the methodology used to calculate the significance

of the impact.

Table 6: Significance Rating

The consequences of the impact		
Consequence = Magnitude + Duration + Scale		
The significance of the impact		
Significance = Consequence x Probability		
Significance	Score out of 100	
Low	1 to 30	
Medium	30 to 60	
High	60+	

The methodology specified above will be used to identify and assess the impacts and then rate the significance of the impact and hence determine the risk of the impact on the environment during the development of the proposed project. Mitigation measures will be specified for each impact in effort to minimise the risk of the impact.

11.5 STAGES AT WHICH THE COMPETENT AUTHORITY WILL BE CONSULTED

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

11.6 PUBLIC PARTICIPATION PROCESS

11.6.1 Interested and Affected Parties

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

- 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
- Immediately adjacent landowners

11.6.2 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. Should more parties register their names will be added on to the above-mentioned list.

11.6.3 Advertisements

An advert is placed in the local newspaper (Highvelder) in accordance with Regulation 41 of Government Notice No. R982 under section 24 of the National Environmental Management Act, 1998 (Act no. 107 of 1998) informing the public about the availability of information of the draft scoping report at a public place. See Appendix 3 for the proof of notice.

11.6.4 Identification of issues and alternatives

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

11.6.5 Evaluation of concerns

Concerns will be addressed by applicant'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 to be submitted to I&AP's for comment.
- Final Scoping Report will be completed to include comments from registered I&AP's

EIA Phase

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

Record of Decision (ROD)

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

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

The proposed Breakthrough Sand Quarry mining operation will be developed mainly on agricultural and grazing land, which will result in the change of the areas land use. It was necessary for HMI Electrical cc to undertake detailed environmental assessment. The following environmental studies will be conducted and will be included in the EIR.

- Wetland study
- Heritage Impact Assessment (reconnaissance survey)
- Fauna and Flora study

- Soil Survey

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

Appendix 1

Geovicon Environmental (Pty) Limited's company profile

Appendix 2

Breakthrough Sand Quarry Regulation 2.2 Plan

Appendix 3

Consultation with interested and affected parties