



global environmental solutions

Development of the Proposed Commissiekraal Coal Mine

Social Impact Assessment Report

SLR Project No.: 7AY.02038.00006

Report No.: 1

Revision No.1

October 2015

Tholie Logistics (Pty) Ltd

Farm Commissiekraal 90 HT, KwaZulu Natal

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EXECUTIVE SUMMARY

Introduction

Tholie Logistics (Pty) Ltd (Tholie Logistics) an emerging South African coal exploration and mining company is proposing to develop an underground coal mine on Farm Commissiekraal 90 HT located in the Emadlangeni Local Municipality area of the Amajuba District Municipality in KwaZulu–Natal. Tholie Logistics currently holds prospecting rights on Farm Commissiekraal 90 HT and has submitted a mining right application to the KwaZulu-Natal Department of Mineral Resources in terms of Section 22 of the Mineral and Petroleum Resources Development Act No 28 of 2002.

The proposed development will be located in an area that is largely rural in nature with very little large infrastructure or mining development. The mining development will be the first large scale development in the area and may require the relocation of persons within the mine footprint area. This report presents the social impact assessment which forms an appendix to the Environmental Impact Assessment Report

Approach and Methodology

- **Site Visit:** A site visit was undertaken by SLR (social team) on the 27th and 28th of July 2015. The purpose of the site visit was to observe social conditions, conduct informal discussions with members of the local community near the proposed mine area.
- **Desktop Research:** A desktop review of available information on the project and social environment was undertaken.
- **Study Assumptions and Limitations:** The following assumptions and limitations underpins this assessment:
 - No census was undertaken at a site specific scale. The baseline information is primarily based on 2011 census data. It is assumed that this information is still relevant as the district and local municipality have reported very little population growth from 2001 to 2011.
 - Information on the households surrounding the proposed mine is based on work done by CopperLeaf in 2011 and Mphahlele Wessels and Associates in 2013 and the site visit undertaken by SLR Social team.
 - A detailed survey of affected households within Farm Commissiekraal 90 HT was not undertaken. Should the establishment of the mine require displacement and resettlement, a census of affected people and a detailed resettlement study must be undertaken. This study only presents impacts on a community level on not for individual project affected households.
 - For the purpose of this assessment, baseline data is mostly given for the area where mining will be undertaken as this area is likely to experience most social impacts. For the

coal transportation route, only land use data is presented as it is believed that the main social impact will be on land use.

Project Description

The proposed project will involve the development of a sub-surface coal mine on Farm Commissiekraal 90 HT. The coal ore will be accessed via a box cut and there will be an on-site crushing and screening plant and temporary stockpiling of ore. Various support infrastructure and services will be required.

The total surface footprint of the proposed mine is estimated to be approximately 20 ha. Once operational, the mine will operate 6 days a week, 24 hours per day with only a day shift on Sunday for maintenance work. The mined coal ore will be transported directly to customers or a regional railway siding. For the purposes of this report it is assumed that the siding will be located in Paulpietersburg.

The commencement of construction is expected to be in 2016 and will be undertaken over a six month period. It should however be noted that commencement is subject to regulatory approval and funding considerations. The life of mine is expected to be 20 years.

During the construction phase the workforce will peak at 160. Construction contractors will be responsible for the housing of construction workers off-site and providing workers with transport to site. A temporary construction camp will be required during the construction phase.

During the operational phase it is expected that approximately 200 jobs will be created. Tholie Logistics plan to recruit locally as far as possible. No on-site accommodation facilities are planned for the operational phase.

Social Baseline

- The project area is located in an area that is rural in nature with a low population density of 9 people /km².
- There has not been any recent mining activities undertaken within the community but there are historical mines within 30 km from the community.
- The communities of the local municipality are reliant on natural resources such as rivers, wood for livelihood strategies
- The project area is under the jurisdiction of two chiefs from opposing political parties. The two chiefs do not have legal authority over farm Commissiekraal 90 HT as it is privately owned. The two chiefs are indicated to co-exist peacefully. In addition to the traditional leadership is the political leadership in the form of a ward councillor. Political and traditional leadership have indicated a good working relationship.

- The local and district municipality has a young population under the age of 20 years (approx.. 46%) and there is a high unemployment rate
- The majority of the population does not have secondary education with only 13 % at local and 20.8 % at district with secondary education. Access to secondary school at the community level is limited with only one secondary school located approximately 25 km east of the mine site. In addition to the long distance, access to transport services is limited. Taxis only operate once a week and children rely on hitch hiking and arranged transport by parents.
- There are no permanent healthcare facilities and communities are therefore reliant on mobile clinics that come twice a month. Other alternative healthcare facilities are in Utrecht.
- The main economic activity is agriculture and this is the source of employment at community level. There are also government programmes such as the Community Works Program (CPW), which provides employment as well.
- Individual income levels are at R1 600 a month and sources of income include employment by private farmers, CPW programmes and government grants.
- Farming undertaken by communities is for subsistence purposes

Social Impacts

The following social impacts have been identified for the proposed Commissiekraal Coal Mine:

In-migration of persons in search of economic opportunities: this impact is associated with the following changes:

- Change in social cohesion
- Potential pressure on shared community resources and services
- Development of squatter/informal settlements
- Development of social ills (crime and prostitution)
- **Compromise to Community Safety:** Commissiekraal is a largely rural community with agriculture as the main economic activity. There has not been any recent mining activities undertaken within the community but there are historical mines within 30 km from the community. Mining within the community will introduce foreign activities to the community. Mining has some safety concerns which the community might not be aware of; this includes trucks driving on public roads, increased vehicles on public roads, blasting activities (during construction only, if required) and the transporting of heavy equipment during the construction phase. Lack of community awareness on mining and its associated activities adds a safety risk for the community as a whole. Concerns with community safety will be along ore transport routes and areas within the immediate vicinity of the mine.

- **Resettlement of Households:** There are two households within the mine's infrastructure footprint that will require relocation due to the placement of infrastructure. Other households located in close proximity to the mine's surface activities may also require relocation depending on the cumulative impacts created by the mine on their land use. The relocation of persons will result in the permanent loss of immovable assets such as building structures and agricultural fields. In addition to the loss of assets, access to community facilities such as water points, wood collection areas and schools will be compromised depending on where households are relocated to. The relocation process will therefore need to be managed according to best practice properly to ensure that affected households are not left worst off due to impacts associated with relocation.

- **Spread of Communicable Diseases (HIV/AIDS and TB):** The mine's activities could have an indirect impact on the spread of communicable diseases such as HIV/AIDS, sexually transmitted diseases and Tuberculosis (TB) due to the in migration of people. The prevalence of HIV has increased over the years in the Emadlangeni Local Municipality. The increase in wealth and subsequent potential increase in alcohol consumption may result in the spread of HIV/AIDS and sexually transmitted diseases due to risky behaviour. This impact is far reaching to transportation routes and labour sending areas as infected labourers can spread the infection to partners back home. This will further exacerbate the current baseline statistics on HIV/AIDS.

- **Increase in social ills:** Establishment of mining in the area may result in the introduction of social ills such as prostitution, increased alcohol consumption and theft due to the in migration of people. The community of Commissiekraal is very rural in nature with limited social ills. The introduction of these social ills will result in disturbances to the community and therefore need to be managed. The main social ill includes sophistication of crimes in the area which include:
 - The crimes in the area include theft of livestock and crops. The introduction of new persons in the area, especially the ones looking for economic opportunities but do not find any may result in these persons resorting to crime for income. These crimes may typically include mugging, household robberies and trespassing
 - **Creation of Prostitution:** Development of new mines has been associated with the development of the sex industry within the mine's host communities. This can be attributed to increase in income levels and large number of unaccompanied men residing at host communities. There is a potential of this

impact also occurring for the Commissiekraal Mine development and therefore management measures need to be put in place to minimise the impacts. The main impact is that children may be attracted into this industry due to lack of education facilities. The mine will need to manage the potential

Local Economic Development Project and Procurement: The mine is anticipated to engage in local economic development plans as part of their Social and Labour Plan (SLP). At this stage in project planning, proposed LED projects have an agricultural and conservation focus. Tholie proposes to spend R5 000 000 towards LED. Although the details of the actual projects in the LED remain to be finalised, at this stage, it can be deduced that the spending of R5 000 000 for LED projects over the life of mine will result in positive impacts to the community. Based on the social baseline of the community, the following community needs exist which can be of beneficial to the community may be considered:

- Improved water supply
- Energy supply
- Learner transport services
- Secondary education facilities
- Teachers accommodation facilities
- Healthcare facilities
- Employment opportunities
- Skills development opportunities

Employment: It is anticipated that Tholie will have a construction work force of approximately 160 people and during operation approximately 200 jobs will be created. During the construction phase, 16% of these opportunities will be for unskilled labour and 84% will be for semi-skilled and skilled labour. During the operation phase, 22% will be unskilled and 78% will be semi-skilled and skilled labour. Due to the lack of skills in the area, it can be anticipated that the majority of the jobs will be directed to persons outside the community of Commissiekraal. The mine will engage in Learnership Programmes as part of the SLP.

Impacts on the socially marginalised members of the community: The socially marginalised community members are:

- Women headed households
- Child headed households
- Households headed by the elderly
- Persons with disabilities

The abovementioned negative impacts are likely to be experienced more by the marginalised members and therefore care should be taken in understanding these members for the Commissiekraal Project.

Conclusion

The Commissiekraal area is largely rural in nature with a high reliance on natural resources for livelihoods. The development of the mine may result in stress on communities' reliance on natural resources and therefore suggested mitigation will need to be applied to manage impacts.

Although mining has been conducted within the broader area (within 30 km), the development of the coal mine on Farm Commissiekraal 90 HT will introduce foreign activities that may pose safety concerns for communities within 5 km radius of the proposed mine.

The resettlement of two households within the mine footprint is a high impact that will need to be managed. Tholie logistics is encouraged to start consultations with the affected communities to ensure proper planning for resettlement.

The proposed development is not considered to have high social impacts that would prevent the development of the mine. The suggested mitigation measures are considered adequate and achievable to address the currently predicted impacts. It should be noted that the social environment constantly changes and therefore Tholie logistics is encouraged to keep abreast of the social conditions of the project area and ensure that impacts are identified and managed effectively.

DEVELOPMENT OF THE COMMISSIEKRAAL COAL MINE

SOCIAL IMPACT ASSESSMENT

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ACRONYMS AND ABBREVIATIONS

Below a list of acronyms and abbreviations used in this report.

Acronyms / Abbreviations	Definition
AIDS	Acquired Immune Deficiency Syndrome
Amajuba DM	Amajuba District Municipality
CWP	Community Works Programme
Emadlangeni LM	Emadlangeni Local Municipality
EIA	Environmental Impact Assessment
HIV	Human Immunodeficiency Virus
KZN	KwaZulu-Natal
SIA	Social Impact Assessment
SLR	SLR South Africa (Pty) Ltd
TB	Tuberculosis
Tholie Logistics (Pty) Ltd	(Tholie Logistics)

DEVELOPMENT OF THE COMMISSIEKRAAL COAL MINE

SOCIAL IMPACT ASSESSMENT REPORT

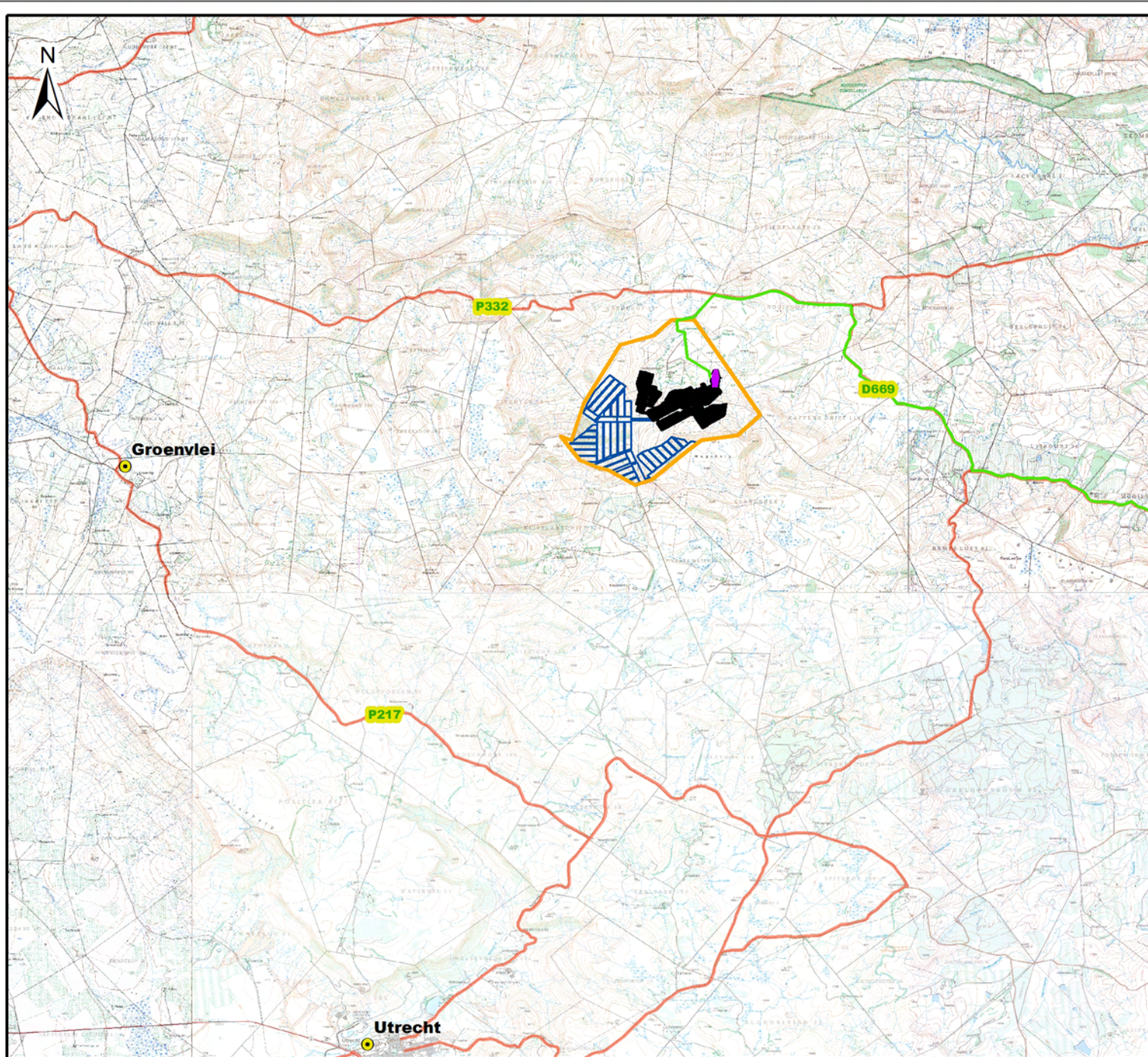
1 INTRODUCTION

Tholie Logistics (Pty) Ltd (Tholie Logistics) an emerging South African coal exploration and mining company is proposing to develop an underground coal mine on Farm Commissiekraal 90 HT located in the Emadlangeni Local Municipality area of the Amajuba District Municipality in KwaZulu-Natal (See Figure 1-1). Tholie Logistics currently holds prospecting rights on Farm Commissiekraal 90 HT and has submitted a mining right application to the KwaZulu-Natal Department of Mineral Resources in terms of Section 22 of the Mineral and Petroleum Resources Development Act No 28 of 2002. Figure 1-1 illustrates the area that is subject to the mining right application.

An Environmental Impact Assessment (EIA) is required in support of the mining right application. The EIA is required to determine potential environmental and social impacts of the proposed development. The EIA will also be undertaken to satisfy the requirements for application made in terms of the National Environmental Management Act No 107 of 1998 and the National Environmental Management: Waste Act No 59 of 2008. As part of the EIA, a Social Impact Assessment (SIA) is required to determine the proposed mine's social impacts.

In brief, the proposed project will involve underground mining of coal ore to be accessed via a boxcut with on-site crushing and screening, temporary stockpiling. Surface infrastructure will be located on Portion 1 and 6 of Farm Commissiekraal 90 HT and it is anticipated that an area of approximately 20 ha will be disturbed. Crushed ore will then be transported via trucks to a siding in Paulpietersburg approximately 40 km west of farm Commissiekraal.

The proposed development will be located in an area that is largely rural in nature with very little large infrastructure or mining development. The mining development will be the first large scale development in the area and may require the relocation of persons within the mine footprint area. This report presents the social impact assessment which forms an appendix to the Environmental Impact Assessment Report.



Legend

- Place Names
 - Main Roads
 - Rivers and Streams
 - 20m Contour Lines
 - Cultivated Land
 - Row of Trees
 - Woodlands
 - Marsh and Vlei
- Mine Layout**
- Mine Plan 10 yrs
 - Mine Plan 20 yrs
 - Comissiekraal Access Route
 - Surface Infrastructure
 - Comissiekraal Tholie (PR Area)
- Kilometers

Scale: 1:138 128 @ A4
 Projection: Transverse Mercator
 WGS84

**DEVELOPMENT OF THE PROPOSED
 COMMISSIEKRAAL COAL MINE**

Figure 1-1:

The Location of the Project

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 Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978

2 DETAILS OF THE SPECIALIST AND DECLARATION OF INDEPENDENCE

Details on the specialist who prepared the document are given in the table below:

TABLE 2-1: SPECIALIST DETAILS AND EXPERTISE

DETAILS	REPORT AUTHOR	REPORT REVIEWER
Name of the practitioner	Zama Khumalo	Liza van der Merwe
Responsibility on the project	Project Manager	Reviewer
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Fax No.:	(011) 467 0978	
Postal address	P O Box 1596, Cramerview, 2060, South Africa	
E-mail address	zkhumalo@slrconsulting.com	

2.1 EXPERTISE OF THE SPECIALIST

Zama Khumalo as the author and social project manager holds a Bachelor of Art Degree in Geography and Industrial Psychology. She has over 7 years of relevant experience in the assessment of environmental and social impacts associated with mining operations. She has conducted social impact assessments and resettlement planning for mining development in South Africa, Mozambique and Malawi.

Liza van der Merwe as report reviewer has over 27 years undertaking social impact assessments and resettlement work. She holds a Bachelor of Arts (Hons) in Development Administration. She has extensive experience in undertaking social impact assessments for mining developments and has conducted work in South Africa, Swaziland, Lesotho, Sierra Leon, Mozambique, Tunisia and Ghana.

The specialist CV's are attached in Appendix 1.

2.2 DECLARATION OF INDEPENDENCE

I Zama Khumalo declare that I act as an independent specialist and have no interest in the project other than fair payment for consulting services rendered as part of the social impact assessment.



Signature

14/10/2015

Date

3 APPROACH AND METHODOLOGY

3.1 STUDY OBJECTIVES

This assessment supports the EIA process for the Commissiekraal Coal Mine Development Project. The assessment was undertaken to advise the EIA of the social impacts of the project. The objectives of the study were therefore to:

- Understand the baseline social conditions of the project area;
- Identify aspects of the project that are likely to give rise to social impacts;
- Identify and assess the potential social impacts of the project; and
- Identify mitigation and management measures for social impacts.

3.2 COLLATION OF BASELINE DATA

Baseline data was collated using the following methods:

3.2.1 SITE VISIT

A site visit was undertaken by SLR (social team) on the 27th and 28th of July 2015. The purpose of the site visit was to observe social conditions, and conduct informal discussions with members of the local community near the proposed mine area. During the site visit, the social team held informal discussions with seven individuals. The topics for discussion were:

- Access to basic services (water, energy, sanitation)
- Access to schooling
- Levels of education
- Economic activities

A record of communication with each person interviewed is given in Appendix 1.

3.2.2 DESKTOP RESEARCH

A desktop review of available information on the project and social environment was undertaken. Table 3-1 lists the documents that were reviewed to obtain baseline information.

TABLE 3-1: LIST OF DOCUMENTS REVIEWED AS PART OF THE DESKTOP ASSESSMENT

Social Baseline Aspect	Documents Consulted
Governance Structures	<ul style="list-style-type: none"> • Mphahlele Wessels & Associates (2013), <i>Lawful Tenants, Interested and Affected Parties Consultation Report: Commissiekraal Coal Project.</i>

Social Baseline Aspect	Documents Consulted
	<ul style="list-style-type: none"> • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan.
Land Tenure	<ul style="list-style-type: none"> • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan.
Population Demographics	<ul style="list-style-type: none"> • 2011 South Africa Statistics
Health	<ul style="list-style-type: none"> • www.kznhealth.gov.za
Basic Services	<ul style="list-style-type: none"> • Amajuba District Municipality 2014/2015 Integrated Development Plan • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan.
Education	<ul style="list-style-type: none"> • Amajuba District Municipality 2014/2015 Integrated Development Plan • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan. • Site visit was undertaken by SLR (social team) on the 27th and 28th of July 2015
Employment	<ul style="list-style-type: none"> • Amajuba District Municipality 2014/2015 Integrated Development Plan • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan. • Site visit was undertaken by SLR (social team) on the 27th and 28th of July 2015
Economic Activities	<ul style="list-style-type: none"> • Amajuba District Municipality 2014/2015 Integrated Development Plan • Emadlangeni Local Municipality 2015/2016 Integrated Development Plan. • Site visit was undertaken by SLR (social team) on the 27th and 28th of July 2015
Project Information	<ul style="list-style-type: none"> • SLR Consulting (2015): <i>Scoping Report for Development of the proposed Commissiekraal Coal Mine including support services and</i>

Social Baseline Aspect	Documents Consulted
	<p><i>associated infrastructure.</i></p> <ul style="list-style-type: none"> • ECM Consulting (2015): Mine Works Program for Commissiekraal Project.
Commissiekraal social conditions and tenants information	<ul style="list-style-type: none"> • Mphahlele Wessels & Associates (2013), <i>Lawful Tenants, Interested and Affected Parties Consultation Report: Commissiekraal Coal Project.</i> • CopperLeaf (2011), Landowner, Lawful occupier consultation for coal prospecting on Farm Commissiekraal 90 HT poertions 2,3 & 8 in the Utrecht region, KwaZulu –Natal.

3.3 STUDY ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations underpin this assessment:

- No census was undertaken at a site specific scale. The baseline information is primarily based on 2011 census data. It is assumed that this information is still relevant as the district and local municipality have reported very little population growth from 2001 to 2011.
- Information on the households surrounding the proposed mine is based on work done by CopperLeaf in 2011 and Mphahlele Wessels and Associates in 2013 and the site visit undertaken by SLR Social team.
- A detailed survey of affected households within Farm Commissiekraal 90 HT was not undertaken. Should the establishment of the mine require displacement and resettlement, a census of affected people and a detailed resettlement study must be undertaken. This study only presents impacts on a community level and not for individual project affected households.
- For the purpose of this assessment, baseline data is mostly given for the area where mining will be undertaken as this area is likely to experience most social impacts. For the coal transportation route, only land use data is presented as it is believed that the main social impact will be on land use.

3.4 STRUCTURE OF THE REPORT

This report has been structured to meet the specialist report requirements set out in Appendix 6 of the 2014 EIA Regulations published in terms of NEMA. Table 3-2 below lists requirements for specialist

reports as set out in Appendix 6 and the cross reference of where the information is contained in the report:

TABLE 3-2: STRUCTURE OF THE SPECIALIST REPORT

NEMA REGS (2014) - APPENDIX 6	CROSS REFERENCE TO THE DOCUMENT
A specialist report or a report on a specialised process prepared in terms of these Regulations must contain -	
the person who prepared the report; and	Section 2
the expertise of that person to carry out the specialist study or specialised process;	Section 2.1
a declaration that the person is independent in a form as may be specified by the competent authority;	Section 2.2
an indication of the scope of, and the purpose for which, the report was prepared;	Section 3.1
the date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 3.2.1
a description of the methodology adopted in preparing the report or carrying out the specialised process;	Section 3
the specific identified sensitivity of the site related to the activity and its associated structures and infrastructure	Section 6
an identification of any areas to be avoided, including buffers;	N/A
a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	N/A
a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 3.3
a description of the findings and potential implications of such findings on the impact of the proposed activity,	Section 6
including identified alternatives, on the environment;	Section 4.1.3
any mitigation measures for inclusion in the EMPr	Section 7.2
any conditions for inclusion in the environmental authorisation	Section 8
any monitoring requirements for inclusion in the EMPr or environmental authorisation	N/A
a reasoned opinion -	Section 8
as to whether the proposed activity or portions thereof should be authorised and	Section 8
if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Section 8
a description of any consultation process that was undertaken during the course of carrying out the study;	Appendix 1
a summary and copies if any comments that were received during any consultation process, and -	Comments obtained from the EIA consultation process.
any other information requested by the competent authority.	N/A

4 BRIEF PROJECT OVERVIEW

4.1 PROJECT OVERVIEW

The proposed project will involve the development of an underground coal mine on Farm Commissiekraal 90 HT. The coal ore will be accessed via a box cut and there will be an on-site crushing and screening plant and temporary stockpiling of ore. Various support infrastructure and services will be required.

Once operational, the mine will operate 6 days a week, 24 hours per day with only a day shift on Sunday for maintenance work. The mined coal ore will be transported directly to customers or a regional railway siding. For the purposes of this report it is assumed that the siding will be located in Paulpietersburg.

4.1.1 CONSTRUCTION OF THE MINE

Based on project feasibility and authority approval, construction of the mine will commence in 2016 and will be undertaken over a six month period. As part of the construction phase the following activities will be undertaken:

- Setting up of contractors facilities listed below:
 - contractor's laydown areas
 - • workshops, stores, washbays, fuel handling and storage area, offices, ablution facilities
 - • handling and storage area for construction materials (paints, solvents, oils, grease) and wastes
 - • water management infrastructure
 - • generators for temporary power supply
 - • temporary access roads
 - • drill rigs for geotechnical drilling
 - • explosive store
 - • portable air compressors for the establishment of the decline shaft
 - Possible construction camp
- Selective clearing of vegetation in areas designated for surface infrastructure
- Stripping and stockpiling of soil
- Clearing and grubbing (earth moving activities)
- Establishing access roads – temporary access roads will be used initially but the strategy is to construct the permanent access roads early for construction vehicles to access the sites
- Establishment of the operation platform
- Development of the box cut and decline shaft from surface – this may require blasting

- Delivery of materials and general building/construction activities. Temporary access will be gained via the existing farm access road initially but the strategy is to establish a permanent access road early during construction for construction vehicles to access the site. Upgrading of access roads and/or transport routes may be required.

4.1.2 OPERATION OF THE MINE

Figure 4-1 shows the layout of the mine. Underground mining will be undertaken on Portions 2, 3, 4, 5, 6, 7 and 8, and will be accessed via box-cut. The following activities form part of the operation of the mine:

- **Mining:** the coal resource will be mined using underground mining methods which may require conventional drilling and blasting.
- **Crushing and screening and product stockpiling:** A mobile crush and screen plant will initially be used and then later replaced by a permanent fixture. The plant will be electrical and diesel run. No process plant will be developed on site. The basic plant design will comprise of: main boxcut conveyor to run-of-mine (ROM) stockpile, ROM coal stockpile, ROM crushing and screening, stockpile of final product.
- **Transportation of coal ore:** Coal ore produced at the mine will then be transported using existing community road. The mined coal ore will be transported directly to customers or a regional railway siding. For the purposes of this report it is assumed that the siding will be located in Paulpietersburg.

It is anticipated that surface infrastructure will be located on portion 1 and 6 of Farm Commissiekraal 90 HT. Infrastructure to be developed at the mine is indicated below and illustrated in Figure 4-1

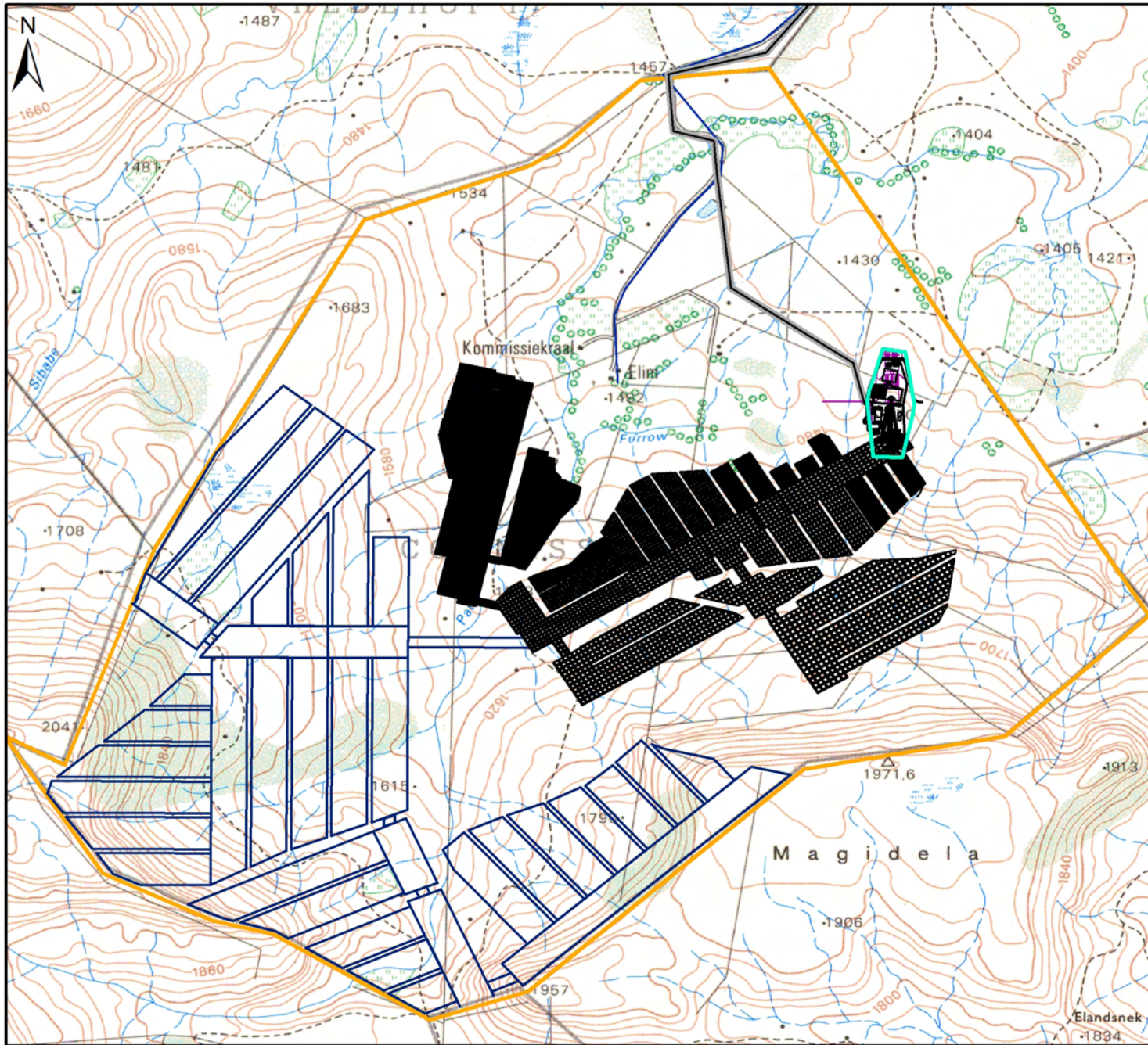
- a boxcut access intended for personnel, material and ore
- ventilation fans
- crushing and screening plant
- run of mine (ROM) and product (coal) stockpile areas
- water management infrastructure
- support services and facilities
- offices and change houses
- internal service roads

Surface disturbance is estimated at 20 ha. The mine will be fenced off to prevent public access. As can be seen in Figure 4-1 there are two households within the mine fenced off area that will need to be relocated should the mine be established.

4.1.3 PROJECT ALTERNATIVES

4.1.3.1 Access to Site

Access to the project site will be by means of existing gravel farm roads. Two routes were considered during the scoping process which are indicated in Figure 4-1. Route A will largely use existing gravel routes and then cut through Farm Rooipoort 97 opposite Lithulunye Primary School. Route B was going to cross largely through private land. Given two objections received from landowners during the scoping process, Alternative Route B was not considered feasible.



Legend

Mine Layout

- Mine Plan 10 yrs
- Mine Plan 20 yrs
- Commissiekraal Access Route
- Surface Infrastructure
- Commissiekraal Tholie (PR Area)



Scale: 1:40 000 @ A4

Projection: Transverse Mercator
WGS84

DEVELOPMENT OF THE PROPOSED COMMISSIEKRAAL COAL MINE

Figure 4-1:

Layout of the Commissiekraal Coal Mine



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4.1 ACCESS TO BASIC SERVICES

4.1.1 CONSTRUCTION PHASE

Access to basic services such as water, power and sanitation will be required for the construction phase. Various options are being considered for the supply of water and these include: recycling water, collection of rainfall and runoff, water from the municipality, natural springs, boreholes or a combination of the abovementioned.

Power will either be sourced from the existing farm supply or from on-site generators.

Portable sewage facilities will be used provided for construction phase. These will be serviced on a regular basis by an approved contractor. General and Hazardous waste will be temporarily handled and stored on site before being removed for recycling by suppliers, reuse by scrap dealers or final disposal at permitted waste disposal facilities.

4.1.2 OPERATIONAL PHASE

Water supply sources will be the same as the construction phase however, larger volumes will be required. It is estimated that 150 000 m³/annum will be required.

Approximately 5.5 MVA power will be required for operation. It is anticipated that power will temporarily be sourced from on-site generators until an Eskom supply is installed.

A packaged sewage treatment facility will be established on site for the operational phase. General and Hazardous waste will be temporarily handled and stored on site before being removed for recycling by suppliers, reuse by scrap dealers or final disposal at permitted waste disposal facilities.

4.2 STAFF REQUIREMENTS AND ACCOMMODATION

During the construction phase the workforce will peak at 160. Construction contractors will be responsible for the housing of construction workers off-site and providing workers with transport to site. A temporary construction camp will be required to house 50 to 100 people. The temporary camp will be provided with the necessary basic services such as water, energy, sanitation and waste management facilities. The construction camp will either be located near the box-cut area or at the unoccupied farm house.

During the operational phase it is expected that approximately 200 jobs will be created. Tholie Logistics plan to recruit locally as far as possible. No on-site accommodation facilities are planned for the