

Draft Social Baseline and Impact Assessment as part of the Integrated Environmental Authorisation for the Der Brochen Amendment Project

Report Prepared for

Anglo American Platinum: Rustenburg Platinum Mines



PLATINUM

Report Number 533247_SIA



Report Prepared by



August 2019

Draft Social Baseline and Impact Assessment as part of the Integrated Environmental Authorisation for the Der Brochen Amendment Project

Anglo American Platinum: Rustenburg Platinum Mines

Anglo Operations (Pty) Ltd
55 Marshall Street
Johannesburg
2107

SRK Consulting (South Africa) (Pty) Ltd
265 Oxford Rd
Illovo 2196
Johannesburg
South Africa

e-mail: johannesburg@srk.co.za
website: www.srk.co.za

Tel: +27 (0) 11 441 1111
Fax: +27 (0) 11 880 8086

SRK Project Number 533247

August 2019

Compiled by:

Jessica Edwards
Senior Social Scientist

Email: jedwards@srk.co.za

Authors:

Ashleigh Maritz, Adel Malebana and Jessica Edwards

Peer Reviewed by:

Vassie Maharaj
Partner

Table of Contents

Disclaimer.....	vi
List of Abbreviations.....	vii
1 Introduction	1
1.1 Objectives	1
2 Project description.....	3
2.1 Project location.....	3
2.2 Project activities	6
2.2.1 Current activities.....	6
2.2.2 Proposed activities	6
3 Approach and methodology.....	8
3.1 Overview	8
3.2 Approach.....	8
3.2.1 Phase 1: Social baseline update.....	8
3.2.2 Phase 2: Social Impact Assessment.....	9
3.3 Impact assessment methodology	9
3.3.1 Overview	9
3.3.2 SRK Impact Assessment methodology.....	11
3.4 Assumptions and limitations	12
4 Legal and regulatory framework	13
5 Zones of influence.....	17
6 Social baseline	18
6.1 Context: traditional governance	19
6.2 Land tenure and ownership systems	19
6.2.1 South African context	19
6.2.2 Study area governance structures	20
6.3 Socio-demographic profile	24
6.3.1 Population size and density	24
6.3.2 Language and ethnic groups.....	24
6.3.3 Gender and Age	25
6.3.4 Property ownership and tenure	26
6.3.5 Migration patterns and labour sending areas.....	28
6.3.6 Household income and poverty intensity	29
6.3.7 Food security.....	30
6.4 Services and infrastructure	33
6.4.1 Water	34
6.4.2 Sanitation and refuse removal	35
6.4.3 Energy	36

6.4.4	Access to education	36
6.4.5	Health facilities	38
6.4.6	Transportation infrastructure	39
6.4.7	Justice and policing	41
6.5	Socio-economic profile	42
6.5.1	Macro-economic context	42
6.5.2	Employment	43
6.6	Vulnerability	44
6.7	Human rights	46
7	Socio-economic Impact Assessment	47
7.1	Introduction	47
7.2	Overview	47
7.2.1	Social change processes and social impact categories	47
7.3	Socio-Economic Impacts	48
7.3.1	Demographic processes	49
7.3.2	Economic processes	51
7.3.3	Social Change Process: Geographic processes	55
7.3.4	Social Change Process: Institutional and legal processes	55
7.3.5	Emancipatory and empowerment processes	58
7.3.6	Socio-cultural processes	61
7.3.7	Cumulative Impacts	71
8	Concluding Remarks	74
9	References	76
	Appendices	78
	Appendix A: Land claims enquiry sent to the Limpopo RLCC Office	79
	Appendix B: Confirmation of land claims from the Limpopo RLCC Office	80
	Appendix C: Detailed impact tables	81

List of Tables

Table 3-1:	Construction and operation timeframes	12
Table 4-1:	Policy and legislative context of the proposed amendment project.....	13
Table 5-1:	Der Brochen's zones of influence	17
Table 6-1:	Land ownership and tenure rights.....	19
Table 6-2:	Der Brochen land tenure	22
Table 6-3:	Population characteristics	24
Table 6-4:	Gender 2011 and 2016	25
Table 6-5:	Population age category	26
Table 6-6:	Municipal level household income	29
Table 6-7:	Household poverty	30
Table 6-8:	Access to services	33
Table 6-9:	Municipal level employment per sector.....	44
Table 7-1:	Planning Phase - Effect of temporary workers on social dynamics – influx of job seekers into the study area	50
Table 7-2:	Construction Phase - Effect of temporary workers on social dynamics – influx of job seekers into the study area	50
Table 7-3:	Planning Phase – Waged labour or employment creation – lack of employment creation and increase in unemployment	54
Table 7-4:	Construction Phase – Waged labour or employment creation – limited employment creation	54
Table 7-5:	Decommissioning Phase – Waged labour or employment creation –temporary creation of employment for rehabilitation activities.....	55
Table 7-6:	Decommissioning Phase – Waged labour or employment creation – loss of income to surrounding businesses	55
Table 7-7:	Planning Phase – Functional government agencies – Insufficient essential services.....	57
Table 7-8:	Decommissioning Phase – Functional government agencies – Lack of support from governmental agencies to ensure the sustainability of essential services after mine closure...	57
Table 7-9:	Planning Phase – Capacity building and skills transfer – Lack in capacity building	59
Table 7-10:	Operation Phase – Capacity building and skills transfer – Lack in capacity building in preparation for closure	59
Table 7-11:	Planning Phase – Gendered division of labour – Insufficient woman in the workplace	61
Table 7-12:	Planning Phase – Health and social wellbeing	63
Table 7-13:	Construction Phase – Health and social wellbeing during the construction of infrastructure	63
Table 7-14:	Construction Phase – Health and social wellbeing during the construction of gravel maintenance roads to the proposed ventilation shafts	63
Table 7-15:	Construction Phase – Health and social wellbeing during the upgrade of existing gravel roads to tar roads to serve as main access roads	63
Table 7-16:	Operation Phase – Health and social wellbeing regarding impacts from mining vehicles on surrounding communities on mine access roads.....	64
Table 7-17:	Operation Phase – Health and social wellbeing regarding impacts from mining vehicles on surrounding communities from the use of the gravel maintenance roads associated with the ventilation shafts	64
Table 7-18:	Operation Phase – Health and social wellbeing regarding impacts from mining related activities including blasting.....	64

Table 7-19:	Planning Phase – Feelings in relation to the project – Potential stakeholder unhappiness over perceived lack of coordinated disclosure of the Der Brochen project activities.....	66
Table 7-20:	Operation Phase – Feelings in relation to the project – Unfavourable perceptions of the project	67
Table 7-21:	Planning Phase – Physical quality of the living environment – Site clearing of all footprint areas can generate noise and dust impacts	69
Table 7-22:	Planning Phase – Physical quality of the living environment – Stockpiling of topsoil can generate dust.....	69
Table 7-23:	Planning Phase – Physical quality of the living environment – Use of gravel roads for pre-construction activities	69
Table 7-24:	Construction Phase – Physical quality of the living environment – Construction of infrastructure	70
Table 7-25:	Construction Phase – Physical quality of the living environment – Construction of gravel maintenance roads.....	70
Table 7-26:	Planning Phase – Loss of cultural heritage due to clearance of vegetation and soil in preparation for construction.....	71

List of Figures

Figure 2-1:	Location of the Der Brochen project	4
Figure 2-2:	Der Brochen's mining rights area, current activities and communities	5
Figure 2-3:	Authorised activities and infrastructure associated with the Der Brochen Mine	6
Figure 3-1:	Description of Social Change Processes or Drivers leading to social impacts.....	9
Figure 3-2:	Definition of social processes that may lead to social impacts	10
Figure 3-3:	Social Change Processes	10
Figure 6-1:	Dwelling type	27
Figure 6-2:	Tenure status	27
Figure 6-3:	Types of agricultural production	28
Figure 6-4:	Province of birth	29
Figure 6-5:	Distance from main source of water	35
Figure 6-6:	Highest level of education	37
Figure 6-7:	Population attending an educational institution	38
Figure 6-8:	Time taken to get to educational institution	38
Figure 6-9:	Distance from site to closest health facilities	39
Figure 6-10:	Safety when it is dark versus during the day	41
Figure 6-11:	Distance from site to the nearest Police Stations	42
Figure 6-12:	Categories of vulnerable people	45

Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd (SRK) by Anglo American Platinum Limited (AAP). The opinions in this Report are provided in response to a specific request from AAP to do so. SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

List of Abbreviations

AAP	Anglo American Platinum
AIDS	Acquired Immunodeficiency Syndrome
CPF	Community Policing Forum
DBE	Department of Basic Education
DMR	Department of Mineral Resources
DMS	Dense Medium Separation
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECD	Early Childhood Development
EDM	Ehlanzeni District Municipality
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESMS	Environmental and Social Management System
FGTLM	Fetakgomo Greater Tubatse Local Municipality
GSDM	Greater Sekhukhune District Municipality
GVA	Gross Value Added
HIV	Human Immunodeficiency Virus
IDP	Integrated Development Plan
IFC	International Finance Corporation
JV	Joint Venture
LEDET	Limpopo Department of Economic Development, Environment and Tourism
LEDPs	Local Economic Development Plans
LGOS	Low-grade ore stockpile
MDG	Millennium Development Goals
MPRDA	Mineral and Petroleum Resources Development Act
NDP	National Development Plan
NEM:WA	National Environmental Management: Waste Act
NEMA	National Environmental Management Act
NWA	National Water Act
PCCT	Pakaneng Choma Community Trust
PCD	Pollution Control Dam
PS	Performance Standard
RDP	Reconstruction and Development Programme
RLCC	Regional Land Claims Commissioner
RO	Reverse Osmosis
RoM	Run of Mine
RPM	Rustenburg Platinum Mines Limited
RWD	Return Water Dam

SAPS	South African Police Service
SDG	Sustainable Development Goals
SEAT	Socio-Economic Assessment Toolbox
S&EIA	Social and Environmental Impact Assessment
SIA	Social Impact Assessment
SLP	Social and Labour Plan
SRK	SRK Consulting South Africa
StatsSA	Statistics South Africa
TCLM	Thaba Chweu Local Municipality
TSF	Tailings Storage Facility
UN	United Nations
WUL	Water Use Licence
ZoI	Zone of Influence

1 Introduction

The Der Brochen Mine is a platinum project owned by Rustenburg Platinum Mines Limited (RPM) a wholly owned subsidiary of Anglo American Platinum (AAP). RPM is considering expanding the Der Brochen Mine with a number of mining related infrastructure and associated activities (refer to Section 2.2).

In terms of the Der Brochen Expansion Project, RPM must apply for Environmental Authorisation (EA) from the Department of Mineral Resources (DMR) – Limpopo Province, the Limpopo Department of Economic Development, Environment and Tourism, (LEDET) as well as the Department of Water and Sanitation (DWS), in accordance with the following legislation:

The National Environmental Management Act (Act No. 107 of 1998) (NEMA)	For project-related Listed Activities stipulated in the NEMA Environmental Impact Assessment (EIA) Regulations of 2014, as amended in 2017
The National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	For project-related waste management activities stipulated in Government Notice Regulation 921, promulgated under NEM:WA
The Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) (MPRDA)	For amendments the proposed project will have on the Mine Works Programme and the Environmental Management Programme (EMPr) in accordance with Section 102 of the MPRDA
The National Water Act (Act No. 36 of 1998) (NWA)	For project-related water uses stipulated under Section 21 of NWA

This report presents the socio-economic baseline and impact assessment for the Der Brochen integrated environmental authorisation process which will be submitted to the DMR and LEDET. In addition to the baseline, the report details the positive and negative socio-economic impacts which are predicted to arise from the project. This assessment provides a comprehensive overview of the socio-economic conditions and opportunities associated with the project as well as proposed management and mitigation measures.

1.1 Objectives

The aim of this SIA is to investigate and describe the social environment surrounding the proposed project, to assess the anticipated social impacts as a result of the proposed project and to identify appropriate mitigation measures to mitigate adverse impacts and enhance positive impacts.

The purpose of the SIA is to advise decision-making authorities on whether the development will be socially, environmentally and economically sustainable. A summary of the objectives of the Der Brochen SIA are summarised below:

The objectives of this study are to:

- Describe the project, business drivers and goals, mining method, technology and any other information relevant to the SIA;
- Describe the study areas, focusing on stakeholders and risk identification;
- Describe the social and economic baseline of the potentially impacted area;
- Identify and assess potential direct, indirect and cumulative impacts, both positive and negative;
- Identify measures to enhance positive social impacts and mitigate negative social impacts;
- Identify potential human rights impacts and social risks; and
- Review and provide feedback in terms of the existing EMPr, including management measures, timelines, roles and responsibilities.

2 Project description

2.1 Project location

The Der Brochen mine is located approximately 25 km south-west of the town of Steelpoort and 40 km west of Mashishing (Lydenburg), in the Limpopo Province. The mine falls within the Fetakgomo - Greater Tubatse Local Municipality¹ (FGTLM), under jurisdiction of the Greater Sekhukhune District Municipality (GSDM). Thaba Chweu Local Municipality (TCLM) is an important labour sending area for the mine and as such, has been included in this report. The TCLM falls under the Ehlanzeni District Municipality (EDM), within the Mpumalanga Province.

As demonstrated in Figure 2-1, the mining right for the Der Brochen Mine has been registered on the farms Richmond 370 KT' St George 2 JT' Hermansdal 3 JT' Hebron 5 JT' Helena 6 JT and Der Brochen 7 JT.

In addition to the abovementioned farms, RPM also holds the surface right to Portion 7 of the farm Mareesburg 8 JT on which the Mareesburg tailings storage facility (TSF), associated return water dams (RWDs) and tailings-return water pipeline are located, which forms part of the Der Brochen Mine operation. Please refer to Figure 2-1 and Figure 2-2 for spatial aspects of the project, including infrastructure and geographical setting.

During 2018, RPM also became the sole owner of the Mototolo Platinum Mine (Mototolo), which previously formed part of a 50:50 joint venture (JV) between RPM and GlencoreXstrata. As a result, Mototolo is assessed as part of the Der Brochen study (Figure 2-2). RPM will mine ore from Mototolo's underground operations, which border the northern section of the Der Brochen mining right and transport it via a conveyor belt to the Mototolo Concentrator where the ore is processed. Tailings material from the concentrator is disposed of on the Helena TSF.

¹ The FGTLM was established by the amalgamation of the Fetakgomo and Greater Tubatse Local Municipalities in August 2016, prior to which they were separate entities.

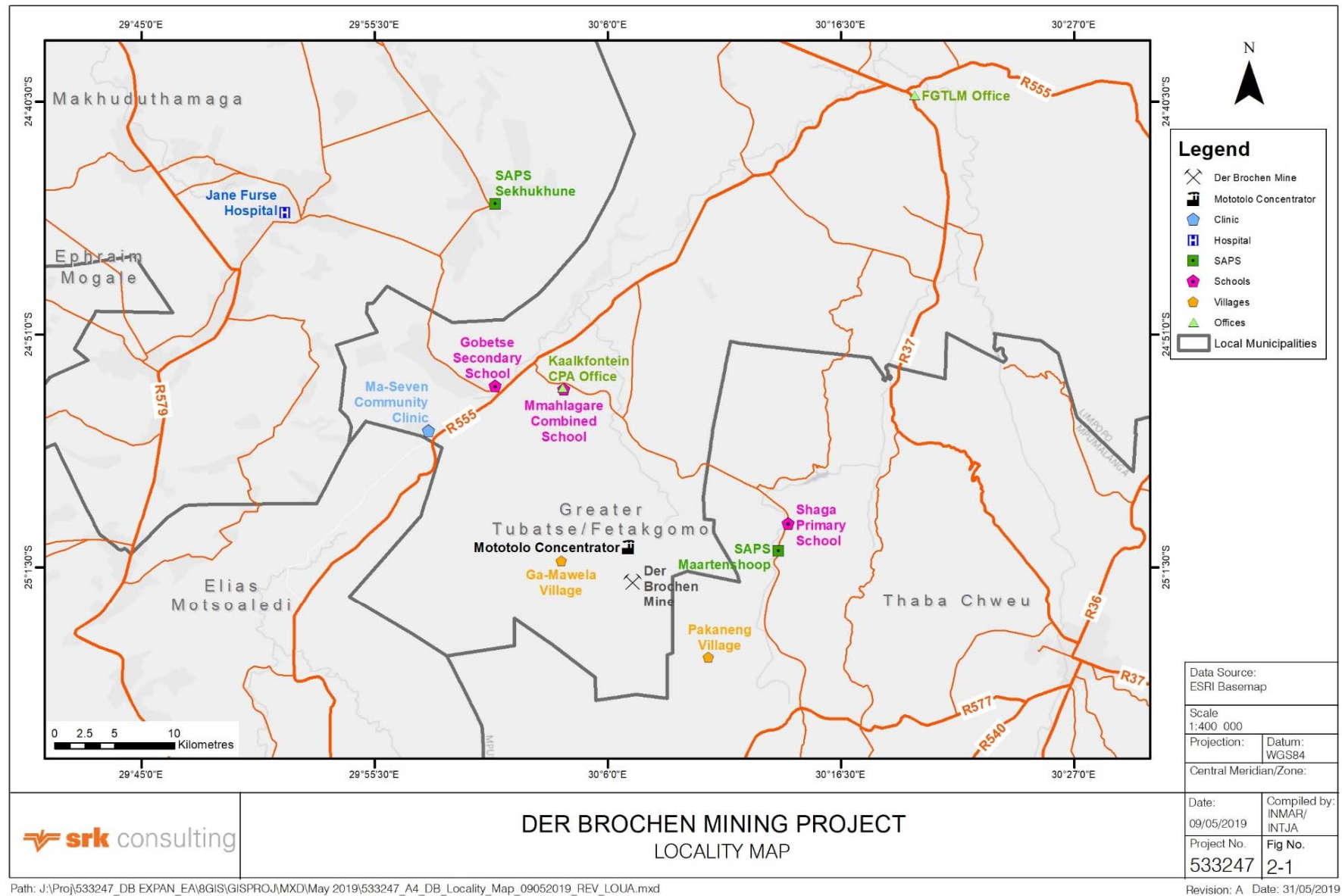


Figure 2-1: Location of the Der Brochen project

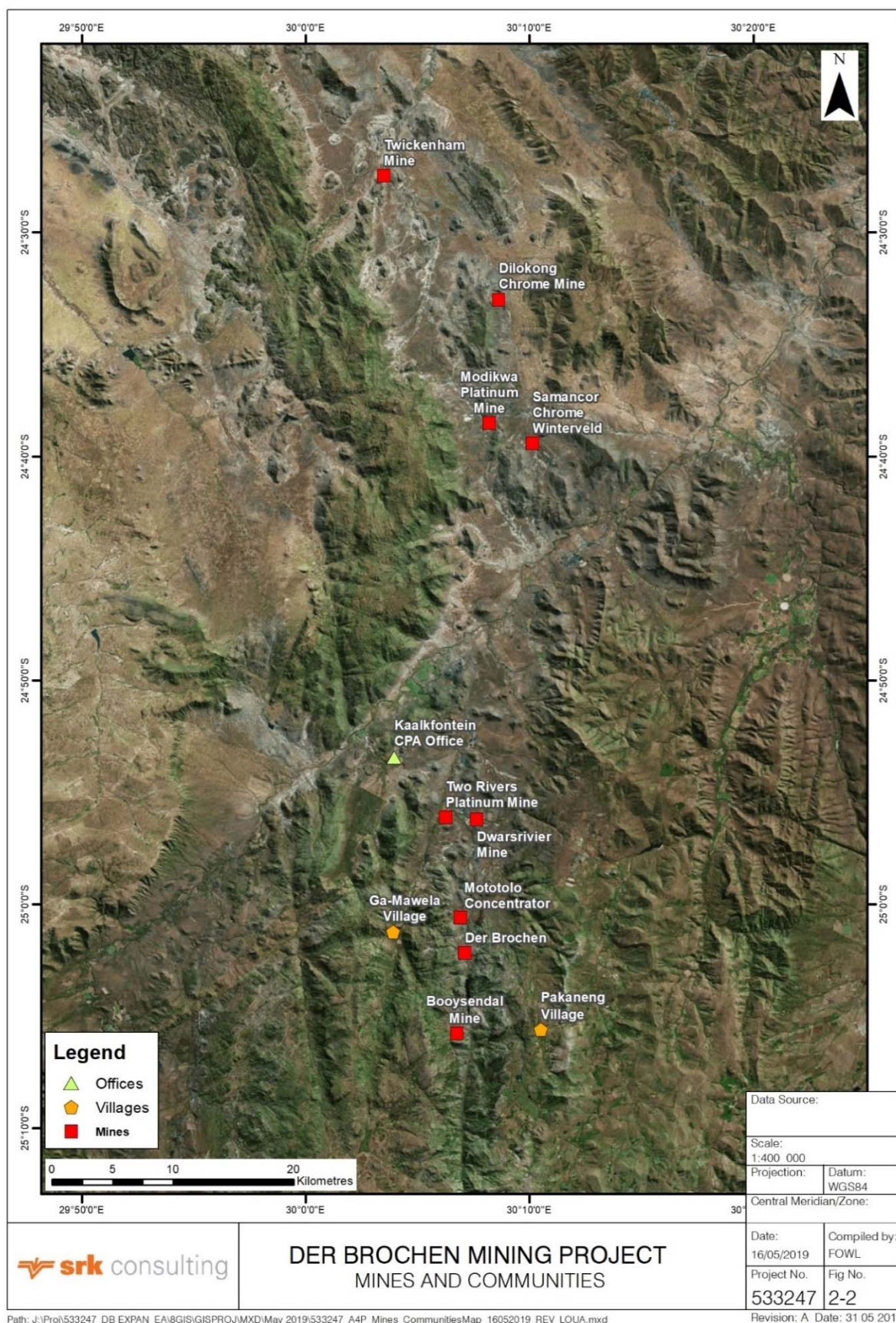


Figure 2-2: Der Brochen's mining rights area, current activities and communities

2.2 Project activities

The current activities (all authorised as part of the approved Environmental Management Programmes (EMPrs) and Water Use Licences (WULs) for Der Brochen Mine) as well as the proposed activities (forming part of the current EMPr amendment process) have been summarised in sections 2.2.1 and 2.2.2 below. Some activities, such as the North open pit, has been assessed and approved, but not yet commenced. Although these activities are not assessed as part of this process, it does form part of the cumulative impacts. More detail on the project activities can be sourced from the EIA Report.

2.2.1 Current activities

The following activities and infrastructure (Figure 2-3) are associated with the Der Brochen Mine, as authorised through the Der Brochen Mine's approved EMPrs and WULs:

EXISTING FACILITIES AND ACTIVITIES	ACTIVITIES PREVIOUSLY AUTHORISED BUT NOT YET COMMENCED	ACTIVITIES UNDER CONSTRUCTION
Mototolo Concentrator	The Helena and Richmond wellfields (only two of the authorised boreholes per well field currently in use)	Mareesburg TSF and associated RWDs
Helena TSF and two associated RWDs	Helena and Richmond shafts and associated waste rock dumps	Mareesburg tailings-return water pipeline system to Mototolo Concentrator
Raising of the Helena TSF	Two Open Pits (Northern and Southern Pits) and associated waste rock/overburden dumps and pollution control dam	
Mine offices and access roads	A Co-Disposal Facility (tailings disposal with a rock embankment in the north pit)	
Five monitoring weirs	Re-routing of a 132 kV powerline	
Prospecting activities		
Trial mining area on the Richmond farm (activity is completed)		
Abstraction from existing lawful use boreholes		
Abstraction from Der Brochen Dam		
Monitoring of surface and groundwater		

Figure 2-3: Authorised activities and infrastructure associated with the Der Brochen Mine

2.2.2 Proposed activities

It is the intention of RPM to amend the Der Brochen Mine's approved EMPr and associated EA including updating their WUL to address activities relating to construction activities at the mine. Most of the construction activities will take place within the mine boundary itself, with the exception of linear infrastructure which includes the conveyor systems as well as access and haul roads. RPM also intends to develop Reverse Osmosis (RO) plant(s) – if viable the mine will develop either one central RO Plant at South Shaft or a RO Plant at each shaft. Other activities that may result in social impacts include the construction of watercourse crossings and diversions associated with the linear infrastructure and Low-Grade Ore Stockpiles (LGOS); the construction of accommodation facilities at the Der Brochen Dam; and the inclusion of an explosive destruction bay area to be located near the proposed South decline shaft.

The operations at Mototolo also forms part of the proposed activities that will be assessed. RPM will mine ore from Mototolo's underground operations, which border the northern section of the Der Brochen mining right and transport it via a conveyor belt to the Mototolo Concentrator where the ore is processed. Tailings material from the concentrator is disposed of on the Helena TSF.



3 Approach and methodology

SRK was requested by AAP to amend the Der Brochen Mine's approved EMPr and associated EA including updating their WUL. Included in this scope is the SIA that forms part of the EIA. A scope of work and objectives of the study were discussed and approved by AAP and outlined in this section.

3.1 Overview

According to IAIA (2003) 'Social Impact Assessment (SIA) is concerned with analysing, monitoring and managing the social consequences of development. SIA is a methodology used to assess the social impacts of planned interventions or events, and to develop strategies for the on-going monitoring and management of those impacts' (IAIA, 2003).

A social impact is something that is experienced or felt by people. It can be positive or negative. Two types of social impacts can be distinguished, viz.:

Objective social impacts.

These are impacts that can be quantified and verified by independent observers, such as changes in population size or composition, in employment patterns, in standards of living or in health and safety.

Subjective social impacts.

These are mentally or emotionally related impacts of people, such as negative public attitudes, psychological stress or reduced quality of life.

It is important to take note of and address subjective social impacts, as these can have far-reaching consequences in the form of opposition to, and social mobilisation against a project or development (Du Preez & Perold, 2005).

In terms of social impacts, these cannot be addressed or mitigated in isolation, and usually require the intensive participation of stakeholders. Therefore, this SIA provides mitigation measures to enhance benefits and mitigate negative effects, which need to be implemented by AAP in partnership with the affected communities.

3.2 Approach

The SIA for the Der Brochen Mine was conducted in two phases as described below.

3.2.1 Phase 1: Social baseline update

The social baseline was developed after a review of desktop sources, including information from Statistics South Africa (Stats SA), as well as the Integrated Development Plans (IDPs) and Local Economic Development Plans (LEDPs) of the relevant municipalities. Der Brochen's stakeholder engagement reports and databases, grievances register, and other relevant records were also reviewed and assessed. A complete list of secondary data sources that were consulted are included in Section 9. As part of the baseline study, a scoping site visit was undertaken on 18 October 2018 to confirm the project footprint as it relates to the surrounding communities. The site assessment also included a meeting with the onsite geologist, Stephan van As, and the Social Performance team, Ntowane Marobane and Jack Selowa.

Primary data was collected in the form of focus group discussions and key informant interviews which were held on 28 February 2019 and 1 March 2019 to inform the impact assessment. The emphasis of the focus group discussions was gaining a deeper understanding of the collective social context of the communities and the challenges they face (including personal well-being, land use, community relations, and heritage). A discussion guide was used to guide the discussions. A total of two focus group meetings and one Open Day were held.

3.2.2 Phase 2: Social Impact Assessment

Information from the project description and baseline was used to identify potential socio-economic impacts during each phase of the project. Focus group meetings were held within the potentially affected community between 3 and 5 April 2019, with a telephonic interview taking place on 10 April 2019. Discussions were held with the following stakeholders at the Ga-Mawela Community Hall: Ga-Mawela (including Magane and Leshaba); Hermansdal 3 JT; Matjomane and Mogashoa; Richmond 370 KT; Moletsi (Leshaba), Welgevonden 9 JT; Mankge; and Mareesburg 8 JT. Further meetings took place at the Pakaneng -Ward Councillor's house and included Pakaneng Choma; Mawela; Vygenhoek; and Schaapkraal. The Kalkfontein CPA was consulted at the Kalkfontein CPA hall.

Key informant interviews included: Shaga Primary School; Maartenshoop Police Station; Mmahlagare Primary School; Maseven Clinic; and the GTFLM.

The impact assessment methodology described in Section 3.3 was informed by a human rights-based approach and includes proposed mitigation measures that ensures these rights are protected.

3.3 Impact assessment methodology

3.3.1 Overview

According to Vanclay (2003a), SIA should first assess the anticipated social change processes that the proposed project is likely to create. Within each phase of the project certain processes will also occur, although they may not occur in every phase of the project it is important to determine when the impact will occur and the potential impacts it may have on the social change process in that environment.

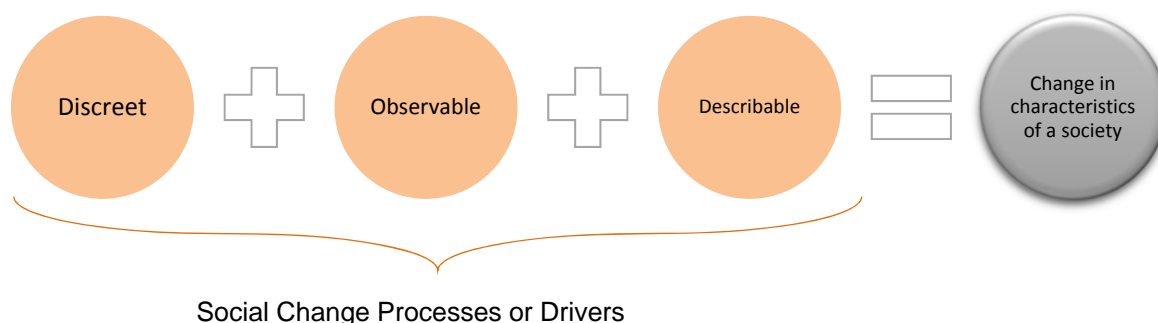


Figure 3-1: Description of Social Change Processes or Drivers leading to social impacts

There is often not enough distinction between social change processes that are caused by development projects, and social impacts that are actually experienced. An impact must be an experience (either real or perceived) of an individual, family or household or a community or society at large. Resettlement, for example, is not a social impact, but causes social impacts such as anxiety and stress, disruption to daily living as well as impacts such as homelessness.

It is important to appreciate that some impacts may be caused directly by an activity, while other impacts may be caused indirectly. Moreover, the experience of an impact can then cause other processes to take place, which then cause second order impacts. Because of people's dependency on the biophysical environment, changes to the biophysical environment can create social impacts, and social processes which are the direct result of a project, or the result of the experience of a social impact, can also cause changes to the biophysical environment (Vanclay, 2003a).

Vanclay (2003b) defines social impacts as changes to one or more of the following, as described in Figure 3-2:



Figure 3-2: Definition of social processes that may lead to social impacts

These processes, as pioneered by Vanclay (2003a, 2003b), are elaborated on and summarised in Figure 3-1 to Figure 3-3 forms the basis of the Evaluation Framework.

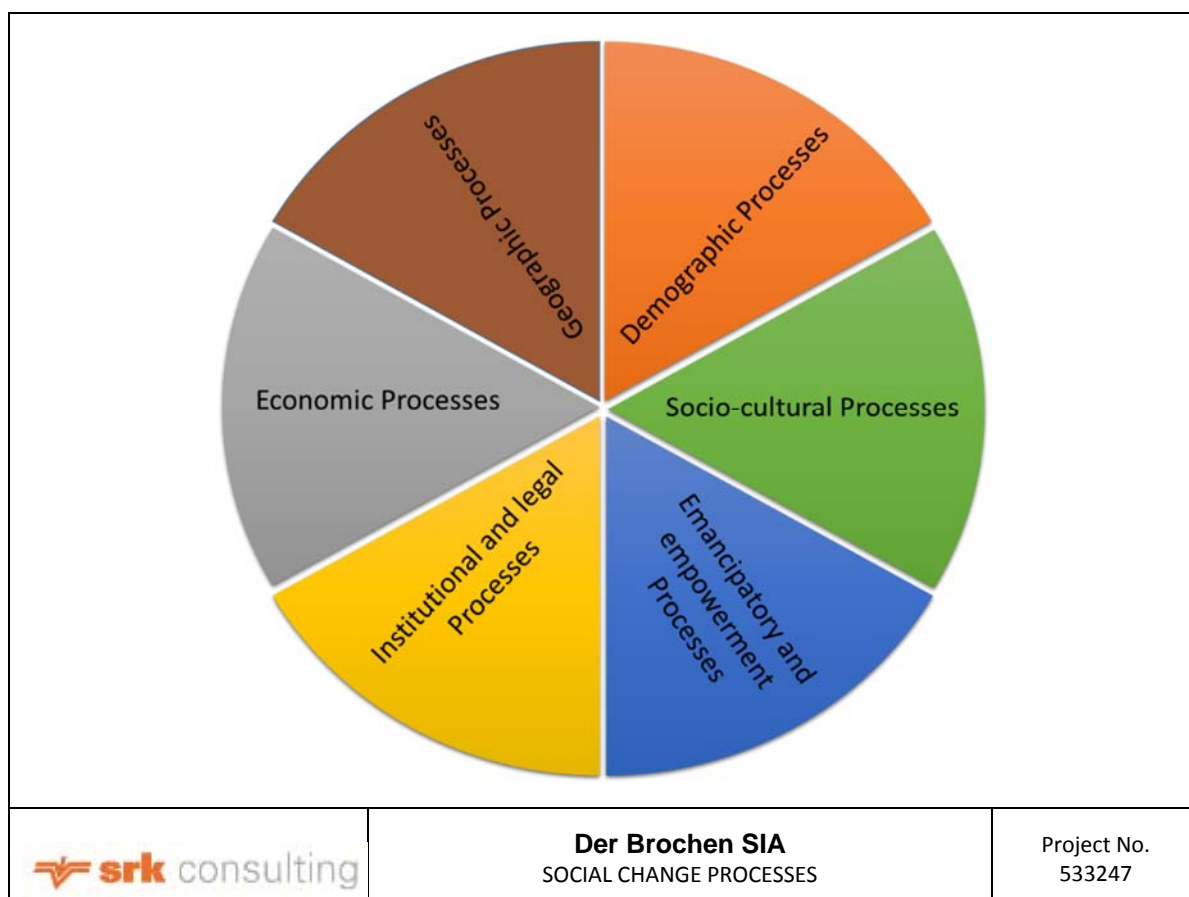


Figure 3-3: Social Change Processes

3.3.2 SRK Impact Assessment methodology

A summary of the impact assessment methodology is included in this section (a more detailed methodology is included in the EIA Report) and has been formalised to comply with Regulation 31(2)(I) of the National Environmental Management Act (Act 107 of 1998) as amended (NEMA), which states the following:

- 2) *An environmental impact assessment report must contain all information that is necessary for the competent authority to consider the application and to reach a decision, and must include*
- (I) *an assessment of each identified potentially significant impact, including –*
- (i) **cumulative** impacts;
 - (ii) the **nature** of the impact;
 - (iii) the **extent** and **duration** of the impact;
 - (iv) the **probability** of the impact occurring;
 - (v) the **degree** to which the **impact can be reversed**;
 - (vi) the **degree** to which the impact may **cause irreplaceable loss of resources**; and
 - (vii) the **degree** to which the **impact can be mitigated**.

Based on the above, the EIA Methodology will require that each potential impact identified is clearly described (providing the nature of the impact) and be assessed in terms of the following factors:

- extent (spatial scale) - will the impact affect the national, regional or local environment, or only that of the site?;
- duration (temporal scale) - how long will the impact last?;
- magnitude (severity) - will the impact be of high, moderate or low severity?; and
- probability (likelihood of occurring) - how likely is it that the impact may occur?.

To enable a scientific approach for the determination of the environmental significance (importance) of each identified potential impact, a numerical value has been linked to each factor.

The following ranking scales are applicable:

Occurrence	Duration:	Probability:
	5 – Permanent	5 – Definite/don't know
	4 - Long-term (ceases with the operational life)	4 – Highly probable
	3 - Medium-term (5-15 years)	3 – Medium probability
	2 - Short-term (0-5 years)	2 – Low probability
	1 – Immediate	1 – Improbable
		0 – None
Severity	Extent/scale:	Magnitude:
	5 – International	10 - Very high/uncertain
	4 – National	8 – High
	3 – Regional	6 – Moderate
	2 – Local	4 – Low
	1 – Site only	2 – Minor
	0 - None	

Once the above factors had been ranked for each identified potential impact, the environmental significance of each impact can be calculated using the following formula:

Significance = (duration + extend + magnitude) x probability

The maximum value that can be calculated for the environmental significance of any impact is 100. The environmental significance of any identified potential impact is then rated as either: high, moderate or low on the following basis:

- More than 60 significance value indicates a **high (H)** environmental significance impact;
- Between 30 and 60 significance value indicates a **moderate (M)** environmental significance impact; and
- Less than 30 significance value indicates a **low (L)** environmental significance impact.

In order to assess the **degree to which the potential impact can be reversed and be mitigated**, each identified potential impact will need to be assessed twice. Firstly, the potential impact will be assessed and rated prior to implementing any mitigation and management measures; and Secondly, the potential impact will be assessed and rated after the proposed mitigation and management measures have been implemented. The purpose of this dual rating of the impact before and after mitigation is to indicate that the significance rating of the initial impact is and should be higher in relation to the significance of the impact after mitigation measures have been implemented.

3.4 Assumptions and limitations

It is essential that the SIA are based on current and accurate project information. Similarly, the geographic extent of the SIA is influenced by project design and overall planning processes. The SIA report is based on current information received while compiling the SIA and the report therefore takes into consideration project information relating to planning and design, implementation and infrastructure placement available to SRK during the compilation of this report.

Table 3-1: Construction and operation timeframes

	Start	End
Construction	June 2018	June 2019
Maintenance and Operation	July 2019	Dec 2020

With reference to Table 3-1, please note that the above timeframes are dependent on the outcome of the Environmental Application currently underway.

The information contained in this report has been compiled with the utmost care and accuracy within the parameters specified in this document. Any decision based on the contents of this report is, however, the sole responsibility of the decision maker.

4 Legal and regulatory framework

Table 4-1 provides an overview of international, national, regional regulations and policy as well as Anglo American's policies and procedures pertinent to this study. In addition, a description of how the proposed activity complies with and responds to the legislation and policy context is given. This list is not exhaustive but rather presents the most applicable pieces of legislation relevant to the SIA for the proposed project. A more comprehensive list of applicable legislation, policies and plans can be found in the Environmental Impact Assessment Report.

Anglo must ensure that they understand all the social and environmental parameters that guide their project. Applicable laws and regulations of the jurisdictions in which the project operates that pertain to social and environmental matters, including those laws implementing host country obligations under international law, should be taken into account.

Table 4-1: Policy and legislative context of the proposed amendment project

Applicable legislation and guidelines used to compile the report	How does this project comply with and respond to the legislation and policy context
National legal framework	
Constitution of the Republic of South Africa, (No. 108 of 1996)	<p>Chapter 2 – Bill of Rights</p> <p>Section 24 – Environmental rights</p> <p>Section 25 - Property</p> <p>The Constitution of South Africa is the overarching framework legalisation driving the NEMA principles and therefore EIA process. The right to a safe environment and the right to information are addressed in the EIA process through stakeholder engagement, where available information pertaining to the environment and proposed activities are disclosed. The proposed activities shall be conducted in such a manner that significant environmental impacts are avoided, where significant impacts cannot all together avoided be minimised and mitigated in order to protect the environmental rights of South Africans</p> <p>The Constitution further protects occupiers in two important areas: Section 25(6) states that a person or community whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices, is entitled either to tenure which is legally secure or to comparable redress. Section 26 of the Bill of Rights states that everyone has a right to have access to adequate housing, that the State must take reasonable legislative and other measures within its resources to achieve this right and that no-one may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances.</p>
Minerals and Petroleum Resources Development Act 28 of 2002	<p>South African mining legislation is regulated by the MPRDA, which is the predominant piece of legislation dealing with acquisitions or rights to conduct reconnaissance, prospecting and mining. In terms of NEMA and the MPRDA, an EIA must determine the nature, extent, duration, probability and significance of the potential environmental, social and cultural impacts of proposed developments. SIA is undertaken as part of the EIA process to determine the social and cultural impacts of the proposed project.</p>
National Environmental Management Act (No. 107 of 1998)	<p>Section 2(2) of NEMA states that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. Section 2(4)(c) of NEMA further provides for the concept of environmental justice, and states that "Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons".</p> <p>These distinctive principles include the polluter pays principle, the precautionary principle, sustainable development, life cycle responsibility and environmental justice. Environmental management must be integrated. It must take into account the effects of decisions on all aspects of the</p>

Applicable legislation and guidelines used to compile the report	How does this project comply with and respond to the legislation and policy context
	environment and all people in the environment by pursuing the best practical environmental option. The beneficial use of environmental resources must serve the public interest while the environment must be protected as the people's common heritage
International regulations and standards	
The International Covenant on Economic, Social and Cultural Rights, ratified in 1978	<p>This convention is a multilateral treaty that commits signatories to work towards the granting of economic, social and cultural rights. As part of the International Bill of Human Rights, the covenant addresses the following:</p> <ul style="list-style-type: none"> • <i>Article 1</i> recognises the right of all peoples to self-determination, including the right to pursue their economic, social and cultural goals, and manage and dispose of their own resources. It also recognises that people cannot be deprived of their means of subsistence (livelihoods); • <i>Articles 2–5</i> establish the principle of "progressive realisation" and requires the rights be recognised "without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status"; and • <i>Articles 6–15</i> list the rights themselves. These include rights to work, under "just and favourable conditions", with the right to form and join trade unions, social security, an adequate standard of living, education and health.
The United Nations Convention on the Elimination of Discrimination Against Women	<p>This convention acts as an international bill of rights for women. The Convention defines discrimination against women as "...any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field."</p> <p>Requirements of the convention are the following:</p> <ul style="list-style-type: none"> • Incorporate the principle of equality of men and women within their legal system, abolish all discriminatory laws and adopt appropriate ones prohibiting discrimination against women; • Establish tribunals and other public institutions to ensure the effective protection of women against discrimination; and • Ensure elimination of all acts of discrimination against women by persons, organizations or enterprises
International Finance Corporation Performance Standards	<p>The International Finance Corporation (IFC's) Performance Standards (PS) provide internationally recognised standards for a range of social and environmental impacts.</p> <ul style="list-style-type: none"> • IFC PS 1: Assessment and Management of Environmental and Social Risks and Impacts: <ul style="list-style-type: none"> ◦ IFC PS 1 underscores the importance of managing environmental and social performance throughout the life of a project. An effective Environmental and Social Management System (ESMS) is a dynamic and continuous process initiated and supported by management, and involves engagement between the client, its workers, local communities directly affected by the project (the affected communities) and, where appropriate, other stakeholders. Drawing on the elements of the established business management process of "plan, do, check, and act," the ESMS entails a methodological approach to managing environmental and social risks and impacts in a structured way on an ongoing basis. A good ESMS appropriate to the nature and scale of the project promotes sound and sustainable environmental and social performance, and can lead to improved financial, social, and environmental outcomes. • IFC PS 8: Cultural Heritage: <ul style="list-style-type: none"> ◦ PS 8 recognizes the importance of cultural heritage for current and future generations. Consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage, this Performance Standard aims to ensure that clients protect cultural

Applicable legislation and guidelines used to compile the report	How does this project comply with and respond to the legislation and policy context
	heritage in the course of their project activities. In addition, the requirements of this PS on a project's use of cultural heritage are based in part on standards set by the Convention on Biological Diversity.
Municipal Plans	
The Fetakgomo Tubatse Local Municipality Integrated Development Plan, 2018/2019	<p>The Fetakgomo Tubatse Local Municipality Integrated Development Plan (IDP) identified mining as the major economy of the municipality. For instance, the sector accounts for 34% of the Municipality's total Gross Value Add (GVA) and 54% of the total labour force in the formal sector. However, the IDP mentions that there are several constraining forces which hinder the growth of the sector such as labour unrest, foreign capital owners, exclusion of locals in the local supply chain and poor coordination and monitoring of implementation of social labour plans.</p> <p>The IDP also identifies a number of environmental issues in the area that are associated with mining. Mining has a large air pollution impact mainly due to the presence of smelter complexes within the municipality.</p>
Anglo American policies and procedures	
The Anglo American Social Way	<p>The Anglo American Social Way describes Anglo's Social Vision, which is to make a lasting positive contribution to the communities associated with Anglo American's operations, and to be a partner of choice for host governments and communities as well as an employer of choice. Underpinning this vision are four core principles:</p> <ul style="list-style-type: none"> • Engage respectfully with host communities throughout the project cycle, and be accountable to stakeholders; • Host communities should experience a lasting benefit from the presence of Anglo American operations and Anglo must seek to maximise the benefits flowing from an operation in addition to traditional social investment; • Take the necessary steps to spread the application of good practice, and to learn from negative social impacts, complaints, incidents, audit findings and other non-conformances to prevent their recurrence. In addition, put in place appropriate mechanisms for handling and resolving grievances; and • Common, non-negotiable performance standards and procedures shall be applied throughout the Group as a minimum requirement. Anglo American seeks to assure compliance with the Social Way standards through the Good Citizenship Business Principles letters of assurance process; regular self-assessments; peer review; community consultation; implementation of the SEAT process at relevant operations; and third-party audits.
The Anglo American Environment Way	<p>The Anglo American Environment Way is a suite of Environmental Performance Standards that cover key management areas. These standards contain mandatory, high-level requirements set at corporate level. They support the Anglo Environmental Vision, Principles and Policy, and outline the required approach avoiding or minimising the potential adverse environmental impacts associated with mining activities. The performance standard relevant to this SIA is the Social and Environmental Impact Assessment (S&EIA). The S&EIA performance standard's purpose is to ensure that all Anglo American projects proactively consider social and environmental matters in their planning and decision-making. Some of the key principles underpinning the S&EIA performance standard are:</p> <ul style="list-style-type: none"> • Stakeholder engagement: <ul style="list-style-type: none"> ◦ Give local communities that may be affected by adverse impacts of the project access to relevant information on the purpose, nature, scale, and duration of the proposed activities, and opportunities to express their views on the impacts and mitigation measures; • Identification and selection of alternatives:

Applicable legislation and guidelines used to compile the report	How does this project comply with and respond to the legislation and policy context
	<ul style="list-style-type: none"> ○ Use the S&EIA process to examine alternatives, including the 'no project' option, and document the rationale for selecting the preferred option(s); • Social and environmental characterization/description: <ul style="list-style-type: none"> ○ Use sufficiently accurate, detailed and current data to describe and characterize the pre-mining baseline social and environmental conditions within the project's zone(s) of influence, taking into consideration the identification of land owners, socio-economic status of the communities, presence of indigenous peoples and/or other vulnerable individuals or groups etc.; and • Risk/Impact Assessment: <ul style="list-style-type: none"> ○ Using existing, recognised methods, adopt a systematic and structured approach to identify, predict and evaluate the significance of potential impacts. All potential impacts should be subject to a conceptual (scoping) assessment and then, as appropriate, to full impact assessment.
Socio-economic Assessment Toolbox (SEAT)	<p>The Anglo American SEAT is intended to improve an operation's understanding of their socio-economic impacts, both positive and negative, to build a more structured dialogue with stakeholders, to create greater internal capacity in the management of social issues, and to be a step forward in transparency and local accountability (SEAT, 2007).</p> <p>The SEAT addresses numerous topics relating to socio-economic development and management, using the following key steps and tools:</p> <ul style="list-style-type: none"> • Profiling the operation: Tools 1A, 1B and 1C; • Profiling and engaging with stakeholders: Tools 2A and 2B; • Assessment and prioritisation of impacts and issues: Tool 3A; • Improving social performance management: Tools 4A, 4B, 4C, 4E, 4F, and 4H; • Delivering enhanced socio-economic benefits: Tools 5A, 5B, 5C, 5D, and 5F; and • Developing a social management plan: Tool 6A. <p>The requirements of the relevant tools will be applied during the planning, implementation and monitoring of the Der Brochen SIA.</p>

5 Zones of influence

For the purposes of this study, the labour sending areas as identified in Der Brochen's Social and Labour Plan (SLP) (2016-2020) have been used to identify the Zone of Influence (Zoi). Immediate focus areas for Der Brochen have been identified as Steelpoort and Burgersfort, which are located within the FGTL, as well as Mashishing (formerly Lydenburg), located in the TGL (Table 5-1) (SLP, 2016). The locality of these towns allows for immediate access to and benefit from opportunities at Der Brochen (SLP, 2016). Der Brochen Mine also focuses on providing villages within the Zoi access to opportunities, starting with those in their immediate vicinity

Other towns within the mining community include Jane Furse, Roosenekal, Stoffberg and Dullstroom. For the purposes of this study, the immediately affected communities were identified and summarised in Table 5-1.

Table 5-1: Der Brochen's zones of influence

Town/settlement/farm	District Municipality	Local Municipality	Province
Immediately affected areas			
Gamawela, St George 2 JT	Greater Sekhukhune	Fetakgomo Greater Tubatse	Limpopo
Magane & Leshaba, Hermansdal 3 JT	Greater Sekhukhune	Fetakgomo Greater Tubatse	Limpopo
Matjomane and Mogashoa, Richmond 370 KT	Greater Sekhukhune	Fetakgomo Greater Tubatse	Limpopo
Moletsi (Leshaba), Welgevonden 9 JT	Greater Sekhukhune	Fetakgomo Greater Tubatse	Limpopo
Mankge, Mareesburg 8 JT	Greater Sekhukhune	Fetakgomo Greater Tubatse	Limpopo
Pakaneng, Choma and Mawela, Vygenhoek 10 JT	Ehlanzeni	Thaba Chweu	Mpumalanga
Pakaneng, Choma and Mawela, Schaapkraal 42 JT	Ehlanzeni	Thaba Chweu	Mpumalanga
Immediate focus areas			
Steelpoort, Burgersfort	Greater Sekhukhune (cross border)	Fetakgomo Greater Tubatse	Limpopo
Mashishing	Ehlanzeni	Thaba Chweu	Mpumalanga
Broader focus areas			
Jane Furse	Greater Sekhukhune (cross border)	Makhuduthamaga	Limpopo
Roosenekal	Greater Sekhukhune (cross border)	Elias Motsoaledi	Limpopo
Stoffberg	Nkangala	Emakhazeni	Mpumalanga
Dullstroom	Nkangala	Emakhazeni	Mpumalanga

Source: Der Brochen social study update SRK 2018; Der Brochen SLP, 2016

6 Social baseline

This social baseline provides a snapshot of the key demographics of the Zol before project implementation. As part of the impact assessment methodology, a baseline must be established against which potential impacts will be assessed. For the purposes of this report, a detailed baseline report is included as Annexure B, with the main findings being summarised here for ease of reference.

Key baseline findings

The growing mining sector in both FGTL and TCLM has attracted many job seekers and their families to the area. FGTL is part of the 7th largest regional economy in South Africa, while TCLM is showing promising upward economic growth in tourism, mining and trade. FGTL is ranked 19th amongst Local Municipalities according to population size (335 676 people), while TCLM is ranked 115th and has a population of 98 387.

A large percentage (50.3%) of the population in the FGTL is unemployed and most households (62%) are living on less than R76,400 per annum. The TCLM has a much lower unemployment rate (20.5%). A higher percentage (59.6%) of economically active youth is unemployed in the FGTL, a most worrying statistic when compared to TCLM, which has a youth unemployment rate of 27.2%. More than half of those employed in the FGTL work in the mining and quarrying sector, while mining, agriculture and trade are significant employment sectors in the TCLM.

A promising 43.2% of the FGTL population have completed some primary school education, while 39.3% completed their secondary school education. Only 0.8% have received higher education, while 1.6% have no schooling. The TCLM has poorer education levels, with 38.6% having some primary school education, 15.4% having completed their secondary school education and slightly more having achieved higher education (1.5%) than the FGTL.

The baseline has revealed a number of concerns for the socio-economic status of FGTL and TCLM. The incidence of HIV/AIDs, while less than previous years in FGTL, is still significant, particularly in the rural and peri-rural parts of the municipality. The TCLM still has one of the highest HIV prevalence rates in the Mpumalanga Province and few clinics and hospitals to service those affected. The FGTL also has a high crime rate, with dangerous crimes including rape, murder, and assault reported on a frequent basis.

Sanitation and water delivery is a constant constraint, while over 16.0% of the population do not have access to energy for warmth in the colder months in the FGTL. Service delivery in the TCLM is better than the FGTL; however, many rural and informal settlements find themselves with poor service delivery. Minimal health facilities and a growing population will be a cause for concern for both municipalities as populations continue to increase.

Local governance structures in the study area are complex and are likely to become more complex. A number of land claims have been lodged for the same land by a number of claimants, and the final land distribution could lead to violence and conflict between communities.

**All data included in summary tables has been collected from sources indicated in text and in the reference list in Section 6.*

6.1 Context: traditional governance

Traditional governance plays an important role in South Africa. This is particularly true in the Limpopo Province rural context, where traditional systems, although intertwined with western modernisation, continue to be influential in many communities. Traditional governance and influence is sustained by a number of traditional structures including Traditional Councils (Kgoshis and Councillors), Communal Property Associations and religious organisations and leaders.

The FGTLM currently has 39 wards and a larger portion of the municipality is predominantly rural. With its rural nature, the area is administered by Traditional Leaders and are responsible for the day to day running of the traditional authorities including land allocation in the rural areas. The majority of the land claims in the GSDM are lodged by Traditional Leaders.

There are 12 Traditional Leaders seconded by the Limpopo house of Traditional Leaders serving in the FGTLM council.

The relationship between Traditional Leaders and the FGTLM is generally good and therefore needs to be maintained.

6.2 Land tenure and ownership systems

6.2.1 South African context

Land tenure and ownership is a complex issue in South Africa. The Land Claims Commission and the Land Claims Court were established in 1995 under the provision of Section 4 of the Restitution of Land Rights Act No. 22 of 1994 and Section 123 of the Interim Constitution. While the Land Claims Commission deals with the administration of land claims, the compensation of present owners and restitution to the claimants, the Land Claims Court specialises in dealing with disputes that are not solved by the Commission. Thus, the Land Claim Commission screens all land claims, identifies those that qualify in terms of the Constitution and the Restitution of Land Rights Act No. 22 of 1994, and attempts to solve these claims by administrative or mediation procedures.

Today, land in South Africa is managed through both statutory and customary systems of tenure and use rights. Statutory rights are protected by the Constitution, while customary rights are managed through Cooperative Governance and Traditional Affairs legislation and the various Traditional Authorities and Councils of South Africa. The two basic types of land tenure systems in South Africa are summarised in Table 6-1 below.

Table 6-1: Land ownership and tenure rights

Land ownership/tenure rights	Summary
Community Ownership and Rights	<ul style="list-style-type: none"> The former homeland areas cover 13% of South Africa which is in the region of 18 million ha. This land is owned by the government but managed through traditional structures. This system of tenure is usually characterised by some form of "permission to occupy". This does not have legal status although it is common in the former homeland areas. It is estimated that approximately 16.5 million people, or more than 3 million households (more than a third of the total population), still live in these areas. Official land information regarding communal land tenure is almost non-existent. Many farmers in these areas will refer to this as "own land" although technically it is not so. Land rights are embedded in a range of social relationships, including household and kinship networks, and various forms of

Land ownership/tenure rights	Summary
	<p>community membership, often multiple and over-lapping in character.</p> <ul style="list-style-type: none"> • Land rights are inclusive rather than exclusive in character, being shared and relative, but generally secure. • In a specific community, rights may be individualised (dwelling), communal (grazing, hunting and fishing) or mixed (seasonal cropping combined with grazing and other activities). • Access to land is guaranteed by norms and values embodied in the community's land ethic. This implies that access through defined social rights is distinct from control of land by systems of authority and administration. • Social, political and resource-use boundaries are usually clear, but often flexible and negotiable, and sometimes the source of tension and conflict.
Individual Rights	<ul style="list-style-type: none"> • This land is owned by an individual or legal entity (Sole Proprietor, Partnership, Property Trust, Close Corporation, Cooperative, Pty Ltd Company to name a few examples).

* Adapted from Pienaar (2013)²

Communal land rights have been exercised for centuries by traditional communities in the rural areas of the former homelands. These rights are not individualised and may not be registered at present.

6.2.2 Study area governance structures

Communities

Three communities reside on farms falling within the ZoI, those being the Gamawela, Moletsi and PakanengChoma (further elaborated on below). While these communities acknowledge the presence of ward councillors in their areas, there seem to be little or no interaction between these communities and the ward councillors; rather, these communities refer to their Communal Property Associations (CPAs) or community trusts for governance.

There is a complex and contradictory land claims situation in the study area, for example, several communities and families claimed the same farm portions separately; different communities collectively lodged claims; and, different communities collectively lodged claims but later decided to part ways thus leading to conflicts relating to the legitimacy of their claims (SRK SIA, 2014).

² Pienaar, G. (2013). Land Tenure Security: The Need for Reliable Land Information. The Journal of the Helen Suzman Foundation, 70, 20-27.

Community context

The Gamawela Community

This community falls within the boundaries of the FGTL. The Gamawela community includes households currently residing on St. George 2 JT, Hermansdal 3 JT, Richmond 370 KT and Mareesburg 8 JT, with the families Magane, Leshaba, Matjomane, Mogashoa and Gamawela. This community is currently governed by the Gamawela CPA, and has lodged land claims for all the farm portions they reside on (Table 5 4). According to the SRK team's knowledge, the only claim that has officially been finalised is for St. George 2 JT.

Gamawela derives its name "Gamawela Mankge" from the appearance of the surrounding landscape. Oral history advises that the Mankge community became fascinated by the landscapes in the Dwars River valley as they moved (also known as "go wela" in Sepedi) down the valley to settle at the foot of the mountains many years ago. Besides the rock outcrops (some of which resemble a baboon, which is the community totem), the land has other beautiful characteristics and attractions in the form of fauna and flora, including a multitude of birds species, hiking trails, and "dinalana" (grinding stones).

The first recorded history of the Gamawela Community dates to the 1700s, when the community started residing on the farms along Molototsi (Klein Dwars River) and some parts of the Moletsi (Dwars River). The Gamawela community was established under the leadership of Kgoshi Marobele Mankge. The land was divided into farm portions soon thereafter, when white people arrived in the area and claimed land ownership. In 1987 the last head of household remaining on the St George 2 JT passed away and his widow and children were evicted from the farm (SRK key informant interview, 2014).

Following the successful claim on the farm St. George 2 JT, some of the Gamawela people started moving back into the area from 2008 for agricultural purposes, following a decision by the community to use the land for agricultural rather than residential purposes. A lack of services in the area have also discouraged some claimants from returning to settle in the area.

The Moletsi community

This community falls within the boundaries of the FGTL. The Moletsi community is made up of the Leshaba family who reside on Welgevonden 9 JT. The community was governed by the Gamawela CPA until recently. Due to land claims for farm portions similar to those of the Gamawela community (Table 5 4), the Leshaba family has separated itself from the Gamawela CPA and is currently governed by the Dithabeng Tsa Moletsi Community Trust.

The Moletsi community had not specified the farm portions that they were claiming and the Land Claims Commission has requested clarification in this regard in order to further investigate the claim (SRK SIA, 2014).

The PakanengChoma community

This community falls within the boundaries of the TCLM. The PakanengChoma community includes the Pakaneng, Choma, Makanyane and Mawela families and lives on Vygenhoek 10 JT and Schaapkraal 42 JT. The Choma, Mawela and the Malepa A Makanyane communities together lodged a land claim against these two farm portions. Vygenhoek 10 JT was restituted to the PakanengChoma community in 2010. Schaapkraal 42 JT has not yet been restituted to the PakanengChoma community. However, following the separation between the three families/communities after 2010, the only claim that remains is the Choma claim (Table 5 5). The Mawela and Makanyane families/communities have indicated that they would be lodging a claim against this farm portion as well.

Two governance structures are active in the area: the Mawela Community Trust, which includes the Malepa A Makanyane, and the Pakaneng Choma Community Trust (PCCT). These trusts were created following a status report from the Land Claims Commission in 2012, stating that the Schaapkraal 42 JT claim has yet to be finalised. Those who recently moved into the area following the receipt of the status report from the Land Claims Commission in 2012 appear to be governed by the PCCT. Farmworker households appear to be governed by the Mawela Community Trust.

The influx into the area seems to have been motivated by the opinion of the claimants that the finalisation of the Schaapkraal 42 JT claim was taking too long. There were also fears that the land would be illegally occupied. Most of these in-migrants live in informal structures without access to services.

Land tenure and land claims

Land ownership specific to the farm portions that form part of Der Brochen are described Table 6-2.

Table 6-2: Der Brochen land tenure

Farm Name	Portion	Land owner	Proposed Infrastructure
Helena 6 JT	Remaining Extent	RPM Limited	<ul style="list-style-type: none"> • DMS Plant • RoM Stockpiles & Silos • Conversion of the existing Chrome Plant from a final tails to an inter-stage arrangement • Sections of the following conveyor systems: <ul style="list-style-type: none"> ◦ Ore conveyor system; and ◦ DMS conveyor system; • Access and haul roads • Der Brochen gate house; and • River crossings (conveyor & roads)
	Portion 3	RPM Limited	<ul style="list-style-type: none"> • A central ventilation complex • Access and haul roads • Explosive destruction bay area • Portion of the South decline shaft; and • Section of the ore conveyor system

Farm Name	Portion	Land owner	Proposed Infrastructure
Der Brochen 7 JT	Remaining Extent	PRM Limited	<ul style="list-style-type: none"> • Portion of the South decline shaft with associated water management infrastructure • Offices and change houses at the South decline shaft • 3 x up-cast ventilation shafts associated with the South decline shaft • Access roads • River crossings (access roads); and • Staff accommodation (near the Der Brochen Dam)
Mareesburg 8 JT	Portion 1	Samancor Chrome Ltd	<ul style="list-style-type: none"> • Portion of the DMS Stockpile
	Portion 7	RPM Limited	<ul style="list-style-type: none"> • Portion of the DMS Stockpile; • Section of the DMS Conveyor Belt system • PCDs; and • Topsoil stockpile area

A complex and contradictory land claims situation is evident in the study area, with the following factors contributing towards this complexity (SRK SIA, 2014):

- Several communities and families claimed the same farm portions separately and individually;
- Some communities claimed the farms and later withdrew the claims after these had been registered with the Regional Land Claims Commissioner (RLCC);
- In some instances, Traditional Authorities claimed land on behalf of the affected communities and families in order to meet the closing date for submission, with the intention to return successful claims to the rightful owners;
- Different communities collectively lodged claims (mostly using verbal agreements without any formal documentation of the agreement) and later decided to part ways. In most instances, the party that separated itself left without having any proof of having lodged a claim, apart from a verbal agreement that was nullified when they decided to part ways;
- The project site and affected farms are close to the boundary between the Limpopo and Mpumalanga Provinces, and therefore land claims for the same properties were lodged in Mpumalanga and Limpopo Provinces;
- The amount of time that it takes to research, verify and resolve the land claims also compromises on the outcome of the claims, especially in cases where the paper trail is lost, or when the officials dealing with the claims change positions; and
- Some of the communities who missed the 1998 cut-off date for lodging the claims have indicated their intention to lodge claims on farms that have already been claimed by other parties, following the reopening of the restitution process by Government in 2014.

Some of the farms currently falling under Limpopo Province were previously located in Mpumalanga Province before the revision of the Municipal Demarcation Board boundaries. As a result, land claims for some of the farms were originally lodged with the Mpumalanga RLCC office. However, because these were historical claims, which have been transferred to the Limpopo Province, the current information could not be made available. The existing information received from the Mpumalanga RLCC office is dated 2010 and has been used for comparative purposes only.

On 30 October 2018, SRK sent an enquiry to the Limpopo RLCC office regarding the status of land claims on the farms affected by the De Brochen project (Appendix A). Land claims lodged on the mine lease area, as well as their current status have been included in Appendix B.

6.3 Socio-demographic profile

This section discusses the population size, race, gender, age, language, and marital status of the inhabitants of the Zol.

6.3.1 Population size and density

The FGTL M is a category B Municipality located in the GSDM in the Limpopo Province. It is the largest of the four local municipalities within the district and has a total area of 5 693km². The FGTL M has a total population of 489 902 people recorded by Census 2016, compared to 428 948 people in 2011 (2.02% growth per annum). The FGTL M was established by the amalgamation of the Fetakgomo and Greater Tubatse Local Municipalities in August 2016. In comparison, the TCLM (located in the Ehlanzeni District Municipality (EDM) in Mpumalanga Province) had a total population estimated at 101 895 in 2016, as opposed to 98387 in 2011 (0.80% growth per annum). This suggests an increase in population in the area, as well as the number of households, which could potentially be as a result of in-migration into the area due to emerging economic opportunities (StatsSA, 2016).

According to StatsSA (2016) data, the GSDM population has an annual growth rate of 1.9%. A minority male population is unusual for a mining area, and this has affected the migration rate significantly. In comparison, the EDM has an annual growth rate of 0.9% per annum. A summary of population changes at municipal level between 2011 and 2016 can be found in Table 6-3.

Table 6-3: Population characteristics

		Population size		No. of households		Average household size	
		2011	2016	2011	2016	2011	2016
Limpopo	Limpopo Province	5 404 868	5 799 090	1 418 085	1 601 083	3.8	3.6
	Greater Sekhukhune DM	1 076 840	1 169 762	263 802	290 527	4.1	4.0
	Fetakgomo Tubatse LM	428 948	489 902	105 948	125 361	4.1	3.9
Mpumalanga	Mpumalanga Province	4 039 939	4 335 964	1 075 466	1 238 861	3.6	3.5
	Ehlanzeni DM	1 688 615	1 754 931	445 079	483 903	3.7	3.5
	Thaba Chweu LM	98 387	101 895	33 352	37 022	2.7	2.8

Source: StatsSA, 2012; StatsSA, 2016

Implications: Population size and density

There is a substantial and generally growing population residing in the Zol, with the population in both local municipalities growing at a fast rate. The number of households within the Zol has increased significantly, which could add additional pressure on the municipalities to provide a sufficient number of serviceable stands for housing development. AAP should take note of the housing policies of the respective municipalities to understand the way in which they may impact on the municipalities' ability to provide housing.

6.3.2 Language and ethnic groups

According to StatsSA (2016), the majority of the population in the FGTL M are black African (97.1%), with 2.3% being white. All other race groups make up less than 1.0% of the population. The sex ratio in the municipality is 94, meaning that for every 100 women there are 94 men.

TCLM has a similar race profile, with the population made up of 83.4% black Africans, 14.4% whites and other population groups making up the remaining 2.2% (StatsSA, 2016).

The principal spoken languages in the FGTLT is Sepedi (94.3%), followed by SiSwati, (1.9%) and Afrikaans at (1.1%), but both Xitsonga (17.0%) and Tshivenda (16.7%) are spoken in the Limpopo Province as well.

According to StatsSA (2016), the population of TCLM has a more diverse number of non-Sepedi speakers, with Sepedi speakers accounting for only 42.7% of the population. This is followed by SiSwati (23.2%) and Afrikaans (14.8%).

Implications: Language and ethnicity

It is probable that most households in the Zol will have a member who speaks and understands Sepedi. It is likely that many adults in the study area will not fully understand communication in English. Sepedi should therefore be the preferred language for verbal and written communication for AAP, especially when presenting technical information. If training for skilled jobs and the jobs themselves require English, language may limit opportunities for local employment.

Language and ethnicity contribute to cultural identity. The cultural identity might be eroded if traditional African customs are not considered when executing project meetings, construction and operational activities. The behaviour of construction and operational workers not familiar with the local practices and customs may result in intentionally or unintentionally offending the local people, potentially leading to dissatisfaction and conflict. The situation could be exacerbated if workers rent accommodation in the villages.

6.3.3 Gender and Age

According to StatsSA (2016), the FGTLT's population consists of a majority of females (51.4%), as compared to 48.6% males. About 44.9% of households are headed by females. A total of 65.6% of the population falls under the working age category (15 years and older), while the youth contributes towards the biggest component of the population (45.5%).

In the TCLM, 67.5% represent those of working age. TCLM has less female headed households as compared to FGTLT, with only 32.7% of households being female headed, while the youth population is lower in the TCLM at 36.0%.

A summary of gender and age distribution may be found in Table 6-4 and Table 6-5.

Table 6-4: Gender 2011 and 2016

		2011		2016	
		Male	Female	Male	Female
Limpopo	Limpopo Province	46.70%	53.30%	47.22%	52.78%
	Greater Sekhukhune District Municipality	46.21%	53.79%	46.89%	53.11%
	Fetakgomo Tubatse Local Municipality	47.19%	52.81%	48.63%	51.37%
Mpumalanga	Mpumalanga Province	48.86%	51.14%	49.34%	50.66%
	Ehlanzeni District Municipality	47.58%	52.42%	48.13%	51.87%
	Thaba Chweu Local Municipality	51.24%	48.76%	52.02%	47.98%

Source: StatsSA, 2012; StatsSA, 2016

Table 6-5: Population age category

		Age group – 2016			
		0-14 (Children)	15-34 (Youth)	35-59 (Adults)	60+ (Elderly)
Limpopo	Limpopo Province	33.23%	38.73%	20.48%	7.56%
	Greater Sekhukhune District Municipality	32.55%	42.01%	17.74%	7.70%
	Fetakgomo Tubatse Local Municipality	30.10%	45.55%	18.00%	6.35%
Mpumalanga	Mpumalanga Province	31.24%	38.39%	23.55%	6.81%
	Ehlanzeni District Municipality	35.70%	36.48%	21.44%	6.38%
	Thaba Chweu Local Municipality	27.71%	36.03%	28.58%	7.68%

Source: StatsSA, 2016

Implications: Gender and age

The potential pool of labour is clearly large (and growing). When communicating the employment requirements for the expansion projects, it will be critical that expectations are managed and skills requirements explicitly explained. The changed skills profile may provide an opportunity for targeted training aimed at women and youth.

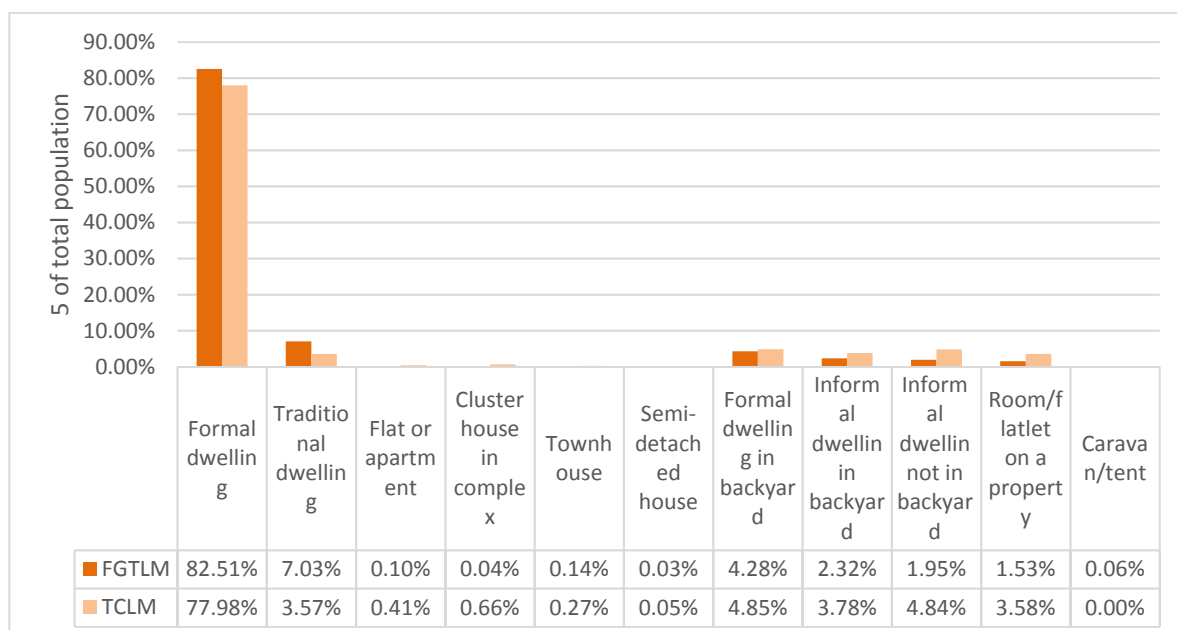
Both Local Municipalities have a large Economically Active Population which could indicate a large number of migrant workers looking for employment opportunities.

6.3.4 Property ownership and tenure

Mine development often leads to disagreement over land use and rights. These disagreements significantly affect a company's ability to make a positive social impact.

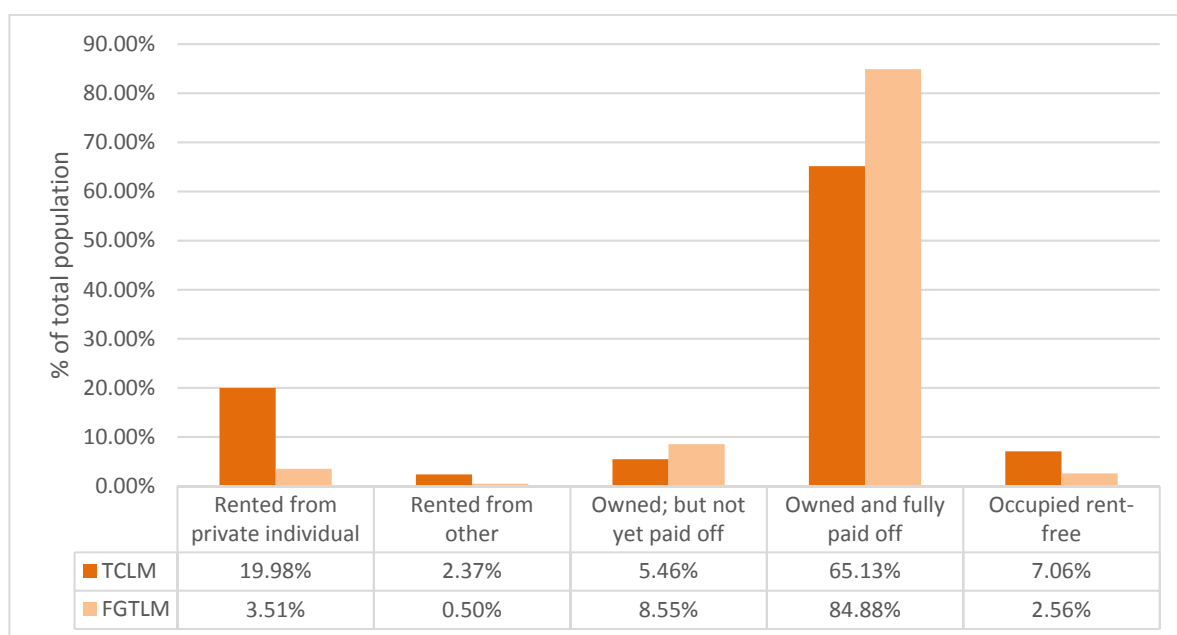
Figure 6-1 indicates that the majority of households living within the FGTL, (82.51%) and TCLM (77.98%) reside within a formal house. According to data obtained from the Community Survey (StatsSA, 2016), 7.03% of households within the FGTL reside in a traditional dwelling, as compared to the 3.57% of the TCLM. According to Table 6-1, the majority of households living within the FGTL- (70.591%) and TCLM (93.43%) live in a house that is owned by them with 65.13% in FGTL- and 84.88% in TCLM having paid off their homes in full. There are considerably more persons in the FGTL (19.98%) who opted to rent their dwelling from a private individual, as compared to the TCLM (3.51%).

According to data obtained from the Community Survey (StatsSA, 2016), a small number of households live in Reconstruction and Development Programme (RDP) or government subsidised dwellings. Persons living within the TCLM are, however more likely to live in a government subsidised house than those living in FGTL. According to data obtained from the Community Survey (StatsSA, 2016), the majority of households within the Zol possess a title deed to their house (Figure 6-2).



Source: StatsSA, 2016

Figure 6-1: Dwelling type

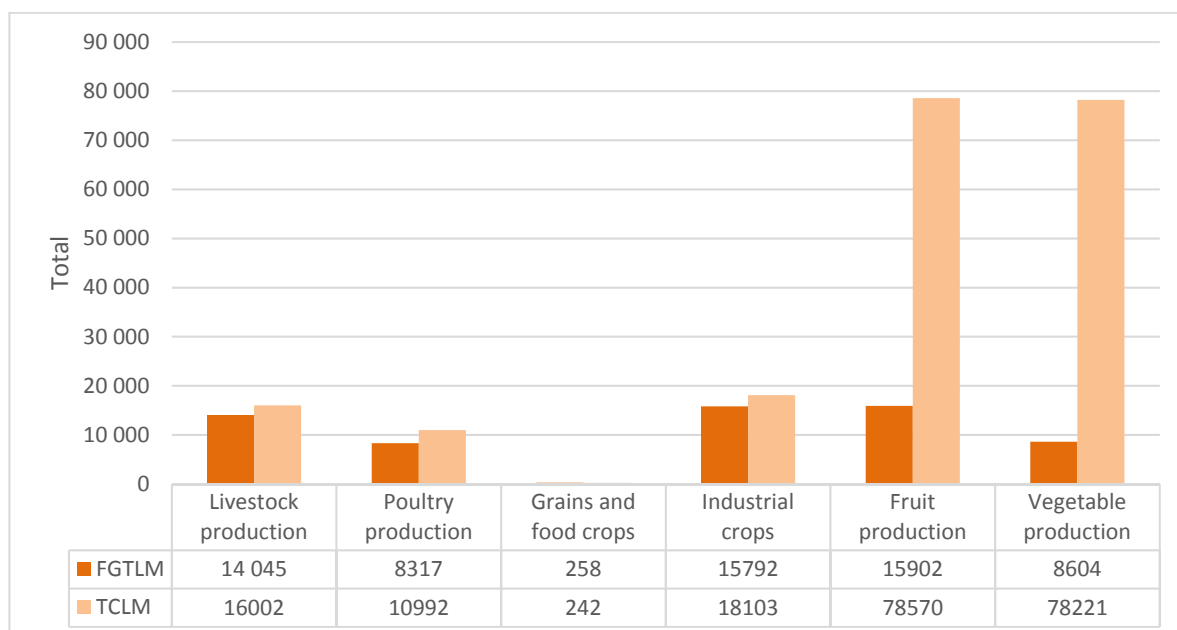


Source: StatsSA, 2016

Figure 6-2: Tenure status

According to data obtained from the Community Survey (StatsSA, 2016), a total of 128 445 persons (or 26.22%) living in the FGTLM are involved in agricultural production, as compared to 29 572 persons (or 29.02%) living in the TCLM. The data presented in Source: StatsSA, 2016

Figure 6-3 indicates that a large portion of households that practise agriculture within the TCLM rely on fruit and vegetable production. Within the FGTLM reliance on agriculture appears to be much smaller.



Source: StatsSA, 2016

Figure 6-3: Types of agricultural production

Implications: Property ownership and tenure

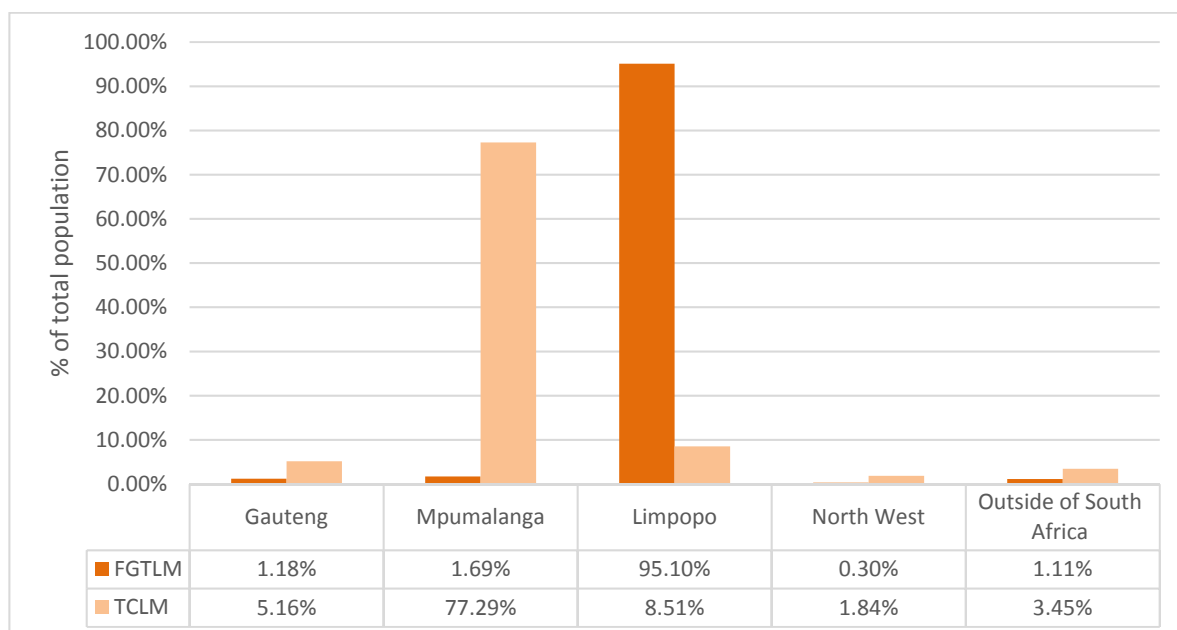
Tenure security is often used to leverage efficient planning for housing, roads, health services, educational services and electricity. Tenure insecurity can therefore have negative consequences for people living on communal land, or where they do not hold the title to the land. The risks associated with insecurity of tenure often results in a lack of investment and growth, especially in terms of administrative support for agricultural development.

From the data it is clear that less than 10% of the households living within the Zol reside in a traditional dwelling, signalling only a small lack of tenure (i.e. communal property rights). Security of tenure is more prevalent within the FGTL, whereas households within the TCLM are less likely to own their own house and are more likely to live in a government subsidised house.

The data also indicates that many households within TCLM rely on agricultural practises to supplement either their income or as a main source of food. The protection of livelihoods, especially where it is reliant on agriculture, must be considered as a key priority.

6.3.5 Migration patterns and labour sending areas

The long history of migrant work in South Africa has resulted in significant patterns of in-migration into both local municipalities. According to the Community Survey data (StatsSA, 2016), the majority (95.10%) of persons living within the FGTL were born within the Limpopo Province, as compared to the 77.29% of the TCLM who lives within the Mpumalanga Province and were born there. When considering the number of persons living within both municipalities that were born outside of South Africa, it is clear that foreign nationals are not migrating to the area in great numbers (Figure 6-4). As such, labour sending areas are largely within the Limpopo and Mpumalanga Provinces.



Source: StatsSA, 2016

Figure 6-4: Province of birth

Implications: Migration and labour

From the data it is clear that migrant labour does not constitute a large proportion of either municipalities' population, however it can be assumed that much labour is coming from elsewhere in the provinces. It will be important to ensure that the recruitment of labour benefits the residents of those areas included in the Zol.

6.3.6 Household income and poverty intensity

Household income is widely distributed across income brackets in the FGTLM and TCLM. Household incomes are illustrated in Table 6-6 and shows that a high percentage (15.7%) of households in FGTLM has no income and is therefore experiencing extreme poverty. When combining the income brackets three to six in Table 6-6, one can determine that the majority of the FGTLM population (62%) is earning between R4,801 and R76,400 per annum. This is considered to be a low annual income and is reflective of inexpensive, labour intensive jobs available in the area.

In the neighbouring municipality of TCLM, household income ranges are similar, with the majority of the population falling into the first six income brackets. The number of households with no income is slightly lower at 12%, while 43% earn between R9,601 and R38,200.

Table 6-6: Municipal level household income

Income bracket No.	Household Income range per annum	% Households in FGTLM	% Households in TCLM
1	None	15.7	12.0
2	R1 - R4.800	6.5	3.3
3	R4.801 - R9.600	11.9	5.8
4	R9.601 - R19.600	18.6	20.6
5	R19.601 - R38.200	17.7	22.4
6	R38.201 - R76.400	13.8	14.9

Income bracket No.	Household Income range per annum	% Households in FGTL	% Households in TGL
7	R76.401 - R153.800	8.8	9.6
8	R153.801 - R307.600	4.5	6.2
9	R307.601 - R614.400	1.9	3.7
10	R614.001 - R1.228.800	0.4	1.0
11	R1.228.801 - R2.457.600	0.1	0.3
12	R2.457.601+	0.1	0.2

Source: StatsSA, 2012

Table 6-7 indicates the number of grants or subsidies households have been receiving, as well as the poverty headcount comparison between 2011 and 2016. According to StatsSA (2016), the poverty intensity in the FGTL increased by (1.5 percentage points), as compared to the TGL, which saw its poverty intensity reduce by 1.4 percentage points.

Table 6-7: Household poverty

		2015 grants and subsidies received as % of total income	2011		2016	
			Poverty headcount ³	Intensity of poverty ⁴	Poverty headcount	Intensity of poverty
Limpopo	Limpopo Province	Not assessed	10.1	41.6	11.5	42.3
	Greater Sekhukhune District Municipality	87.1	11.2	41.6	13.6	42.4
	Fetakgomo Tubatse Local Municipality	72.7	30.5	42.1	26.1	43.6
Mpumalanga	Mpumalanga Province	Not assessed	7.9	41.8	7.8	42.7
	Ehlanzeni District Municipality	95.9	8.9	41.5	7.8	41.8
	Thaba Chweu Local Municipality	29.8	6.6	40.9	5.5	42.3

Source: StatsSA, 2012; StatsSA, 2016

6.3.7 Food security

The General Household Survey (GHS, 2016) found that households with access to piped water are less likely to experience problems with access to food, especially those households with taps in the dwelling and access to mains electricity. On the other hand, households that utilise rivers, pools and other sources are likely to have inadequate access to food.

Households in rural areas are more vulnerable and more likely to experience inadequate access to food compared to households in urban areas. Households in rural areas are more likely to be headed by women, and these households are marginally better off in terms of access to food in rural areas. Households headed by those in the age group 35-59 are most likely to experience hunger in both urban and rural areas (GHS, 2016).

³ Poverty Headcount means the share of the population whose income or consumption is below the poverty line, that is, the share of the population that cannot meet its basic needs.

⁴ The intensity of poverty is the average proportion of indicators in which multidimensional poor households are deprived. The intensity of poverty (or poverty gap) is an indicator used to assess the extent to which the standard of living of the poor population is under the poverty line. <https://www.insee.fr/en/metadonnees/definition/c2021>

Those households in rural areas that do not have access to safe water sources and do not use electricity for cooking are more likely to experience inadequate access to food. These households are effectively stuck in a vicious cycle of poverty. Consuming unsafe water increases the risk of ill health, lowering resistance to illness and the ability to retain nutritional elements of food. Households with sufficient access to food could be drawn into a poverty cycle should their access to safe water be compromised (GHS, 2016).

Households that practice subsistence farming or are employed in the commercial farming sector are more likely to experience hunger than those not reliant on agriculture. This is likely due to restricted access to other food sources, low income and an inability to access equipment and methodologies that promote better crop yields, additional sources of income and lack of access to equipment, services and methods that will increase the yield of the land. The GHS (2016) reports that households in Limpopo- (49.4%) and Mpumalanga Provinces (30.8%) are more likely to engage in subsistence farming.

Households with income sources other than salaries are more likely to have inadequate access to food. Social grants play an important role in food security where households do not have other sources of income, for many households this is the sole source of income.

According to the FGTLMDP, poor households (FGTLM, 2018) without access to social grants are more likely to be:

- A single person household;
- Smaller than poor households in general or households with access to grants in particular;
- Male headed;
- Younger;
- Located in urban areas;
- Without an income; and
- Residing in informal settlements.

Food insecurity has been noted in both the FGTLMDP (2018) and the TCM (2018) IDPs and is indicated to be a concern in six villages in the FGTLMDP (Ga-Mamampuru. Ga-Masha. Santeng. Pidima. Kgautswane and Tshehlwaneng). Factors resulting in food insecurity in the FGTLMDP include:

- Food price increase;
- Petrol hikes;
- Growing cost of producing food;
- Increase in household size;
- Violence;
- Theft; and
- Illness.

The TCM has a poverty rate of 41.3%, the highest in the province. As such, food insecurity is but one issue faced by those living under the poverty line.

Implications: Socio-demographic profile

The study area falls within the “The Pedi area”, or heartland, also known as “Sekhukhuneland”, “Lepelle” and “The Tubatse”, between the Olifants- and Steelpoort Rivers. As expected, the main language spoken in the study area and surrounds is Sepedi, which is representative of the Pedi culture.

The study area had a low population density until as recent as two years ago. After 2010, in response to successful land claims, the population increased significantly on the farms Vygenhoek 10 JT and Scaapkraal 42 JT. The influx into the area took place as a result of the perceived opportunities available in the area. Opportunities in this case include the chance of owning land, economic survival and an improvement in quality of life. Challenges, such as the lack of educational and health care services and community fears raised by stakeholders include invasion of land by illegal occupiers of land and the desecration of ancestral graves by AAP. However, the positive impacts of landownership can be realised only if the necessary infrastructure, facilities and equipment are in place.

The influx took place without any planning, and consultation with or regulation by the municipality, and infrastructure and services are not in place (Section 5.4). It follows that the provision of infrastructure and services will be a main challenge for the municipality in this remote area (water, sanitation, electricity, housing, healthcare and education), and stakeholder pressure may be directed at Der Brochen Mine to deliver these services.

It is likely that more family members will be moving into the area in anticipation of job opportunities at Der Brochen. This theory is supported by the fact that family members had come from elsewhere during the time of this social study to register for employment. Therefore, in this case, migrants are not likely to be “true” migrants, i.e. those genuinely mobile in their search for economic opportunities, but rather extended families that rely on ties of family kinship to move into the area. Family members might “visit” and stay for an undefined period of time.

To exacerbate the situation, the informal settlement that already exists on Vygenhoek 10 JT, with a number of unoccupied shacks, opens up the opportunity for others to settle in the area, either by making use of rental accommodation, moving into the empty shacks, staying with family and/or building their own house. In addition, high levels of unemployment occur in the municipalities and the provinces within the Zol, increasing the likelihood of desperate job seekers moving into the area.

In-migration is also evident along the eastern limb and seems to be regarded as part of a development, further supporting the theory that some level of influx may be expected. However, influx might be limited, although proximity to site is regarded as correlating with opportunity. This site is not easy to access, transport opportunities to the main towns are lacking, and services non-existent.

Labour requirements of the project, as well as demand for goods and services, is low. The required skills levels are mostly for semi-skilled and skilled workers. Demographic data shows that the level of skills available in the study area is low, similarly, those migrating into the area are unlikely to have the skills required to fill the positions needed. There are several possible scenarios that could occur, for instance, people might move away when it becomes evident that jobs are not likely to result from this phase of the project. On the other hand, however, they might stay on when no other prospects, apart from the second phase of the project presents itself in six years’ time.

6.4 Services and infrastructure

According to the latest Community Survey data (StatsSA, 2016), communities in the FGTLT were mainly concerned with the cost of electricity, lack of safe and reliable water supply as well as the lack of, or inadequate employment opportunities. Communities within the TCLM were concerned about the inadequate roads in their area. Table 6-8 provides a summary of the FGTLT's and TCLM's access to services. These services are described in more detail in the following sections.

Table 6-8: Access to services

Types of services	Fetakgomo -Greater Tubatse Local Municipality	Thaba Chweu Local Municipality
Access to safe drinking water		
Yes	63.9%	87.2%
No	36.1%	12.8%
Main source of drinking water		
Piped (tap) water inside the dwelling/house	2.7%	32.6%
Piped (tap) water inside yard	21.7%	47.1%
Piped water on community stand	23.0%	5.6%
Borehole in the yard	6.3%	2.7%
Borehole outside the yard	1.8%	2.5%
Neighbours tap	7.2%	0.7%
Public/communal tap	16.3%	1.6%
Rain-water tank in yard	3.5%	0.0%
Flowing water/stream/river	11.7%	6.1%
Spring	0.6%	0.0%
Tanker	2.3%	0.0%
Well	0.5%	0.6%
Other	2.5%	0.5%
Access to electricity		
In-house conventional meter	15.8%	14.5%
In-house prepaid meter	73.7%	71.0%
No access to electricity	7.3%	9.6%
Solar	0.4%	0.0%
Unpaid alternative source	0.7%	0.9%
Paid alternative source	1.4%	3.5%
Generator	0.1%	0.1%
Other	0.6%	
Main source of energy for lighting		
Electricity from mains	84.4%	89.7%
Other		9.9%
None		0.3%
Main source of energy for heating water		
Electricity from mains	61.8%	80.9%

Types of services	Fetakgomo -Greater Tubatse Local Municipality	Thaba Chweu Local Municipality
Other		16.7%
None		2.5%
Main source of energy for heating space		
Electricity from mains	47.8%	62.5%
Other		16.6%
None		20.9%
Main source of energy for cooking		
Electricity from mains	66.6%	80.0%
Other		19.7%
None		0.3%
Access to sanitation		
Bucket toilet (collected by municipality)	0.1%	0.0%
Bucket toilet (emptied by household)	0.6%	0.1%
Chemical toilet	4.4%	1.7%
Ecological toilet (e.g. urine diversion; enviroloo)	0.5%	0.0%
Flush toilet connected to a public sewerage system	3.2%	60.8%
Flush toilet connected to a septic tank	1.1%	5.3%
None	3.7%	0.5%
Other	2.1%	0.6%
Pit latrine/toilet without ventilation pipe	53.2%	18.4%
Pit latrine/toilet with ventilation pipe	31.1%	12.7%
Refuse disposal		
Communal container/central collection point	0.1%	0.5%
Communal refuse dump	2.1%	0.5%
Dump or leave rubbish anywhere (no rubbish disposal)	10.2%	5.4%
Other	0.5%	0.2%
Own refuse dump	77.7%	33.1%
Removed by local authority/private company/community members at least once a week	8.8%	57.8%
Removed by local authority/private company/community members less than once a week	0.6%	2.5%

Source: StatsSA, 2016

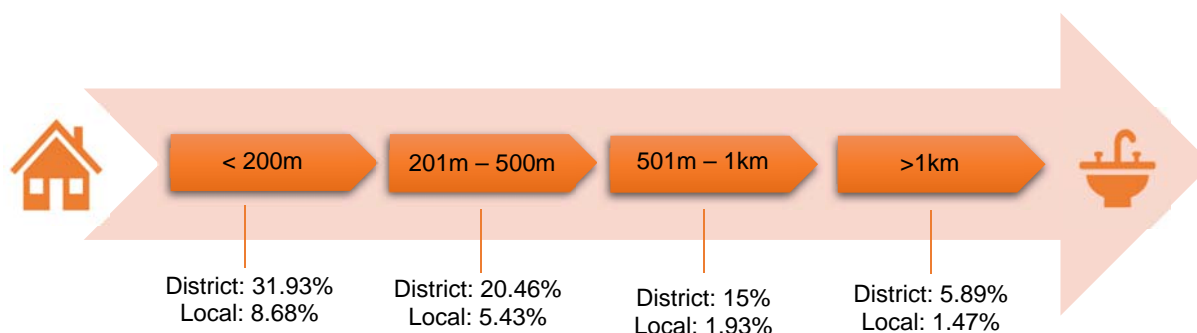
6.4.1 Water

A total of 63.9% of households in the FGTLT have access to safe drinking water, while 36.1% do not. A significant percentage of people (11.7%) are reliant on water from rivers and streams, however the majority (47.4%) have access to piped water. Households within the TCLM have better access to water, with 87.2% having access to safe drinking water, and 12.8% having no access to safe drinking

water. The majority (85.3%) had access to piped water. Rivers/streams account for 6.1% of water access in the TCLM (StatsSA, 2016).

Access to safe water is strongly associated with home ownership and access to services (sanitation, refuse removal, formal dwellings). Lack of access to water is more likely in households with four or less rooms, a monthly expenditure of R1,800 or less and a household head aged 35 years or younger (StatsSA, 2016). Non-payment for water (and other services) is likely to be prevalent in these households, as well as in households living in a dwelling fully or partially owned and a household receiving at least one social grant (StatsSA, 2016).

Distances travelled to reach water depends to a large extent on the maintenance levels of communal water infrastructure. A household may have a borehole with a hand pump within 200 metres from their dwelling, but only if it is maintained and fixed when broken. Households in the FGTLM were found to be travelling greater distances to collect water when compared to TCLM (Figure 6-5).



Source: StatsSA, 2016

Figure 6-5: Distance from main source of water

6.4.2 Sanitation and refuse removal

Sanitation and refuse removal levels are a key indicator of environmental hygiene, which plays an essential role in the prevention of many diseases. Poor sanitation infrastructure and refuse removal services also impacts on the natural environment and the preservation of important natural assets, such as water resources.

The sanitation system remains poor in the rural areas of the FGTLM, and 53.2% of the population rely on pit latrines without ventilation for their ablutions. Only 3.2% of the population have access to flush toilets connected to a sewerage system (StatsSA, 2016). Due to the lack of waterborne sewerage infrastructure in many of the villages, one of the major challenges is the pollution occurring in these rivers. The rivers are a major source of drinking water for the communities who do not have access to piped water (FGTLM, 2018).

TCLM performed better in terms of access to sanitation. Of the total population, 60.8% have access to a flushing toilet connected to a sewerage system, and 18.4% rely on pit latrines without ventilation. This is possibly due to the fact that the TCLM has a larger urban area compared to FGTLM, with fewer traditional and rural settlements in the municipality overall (StatsSA, 2016).

Within the FGTLM, the GSDM is responsible for providing sanitation to households. According to the FGTLM IDP (FGTLM, 2018), challenges facing the municipality in terms of the provision of sanitation services include the current backlog in delivery. The TCLM IDP (TCLM, 2018), indicates that sanitation backlogs are also evident.

Data (StatsSA, 2016) shows that 77.7% of households have their own refuse dump in the FGTLM, with a further 10.2% having no refuse disposal at all. Only 8.8% of all refuse is removed by a refuse removal company/authority on a weekly basis. This is indicative of the settlements' locations on

secondary roads, spatially disbursed and far from municipal centres. Accessibility and resources are at a minimum for many (StatsSA, 2016).

The majority of households in the TCLM (57.8%) have their refuse removed by the local authority or a private company at least once a week, which is significantly more than those in the FGTL (StatsSA, 2016). Of the total number of households, 33.1% utilise their own refuse dumps, whereas 5.4% have no access to a refuse service (StatsSA, 2016).

According to the FGTL IDP (FGTL, 2018), illegal dumping and burning of waste remains a popular means of disposing of waste. Improvement in refuse removal in the FGTL has been slow and only 8279 households benefit from municipal refuse removal (FGTL, 2018). TCLM provides kerbside refuse removal for about 12 000 households across their jurisdiction, however, communities identified refuse removal as a priority need (TCLM, 2018).

6.4.3 Energy

Having adequate and affordable access to energy sources is vital to address household poverty. In order to assess household access, statistics help to assess the diversity, and main sources of energy used by households to satisfy basic human needs (cooking, lighting, heating water, space heating). According to StatsSA (2018b), the percentage of South African households that were connected to the mains electricity supply increased from 76.7% in 2002 to 84.4% in 2017. The largest increases between 2002 and 2017 were observed in the Eastern Cape (+30.1 percentage points), and Limpopo (+18.2 percentage points).

In the FGTL, a total percentage of 54.5%, 39.3% and 75.7% respectively, of the municipality's households have access to electricity for cooking, heating and lighting. A significant percentage (16.8%) of households have no access to energy sources for heating (StatsSA, 2016).

When compared to FGTL, the majority of TCLM's population uses electricity for cooking (71.7%), heating (61.9%) and lighting (84.3%). Thus, access to energy is far greater in the TCLM when compared to FGTL (StatsSA, 2016).

6.4.4 Access to education

Early Childhood Development (ECD) is one of the priority areas of the South African government and remains a critical policy issue that the Department of Basic Education (DBE) aims to address. The promotion of universal primary education also forms part of the Millennium Development Goals (MDGs) (UN, 2000) for South Africa. Further to this Goal 4 of the Sustainable Development Goals (SDGs) (UN, 2015) are to ensure inclusive and equitable quality education and to promote lifelong learning opportunities for all. Education is one of the National Development Plan's (NDP) direct measures to address poverty and aims to improve the quality of education in underperforming schools and further education and training colleges.

According to the NDP (National Planning Commission, 2012), a sustainable increase in employment will require the removal of structural impediments, such as poor-quality education. The NDP further states that the government aims at providing the youth with education and skills and helping school leavers find work that is stimulating and through which they can fulfil their aspirations.

The ECD report released by Statistics South Africa (StatsSA, 2016) shows that almost half (46%) of children aged 0–6 were living in households belonging to the lower household income quintiles (quintiles 1 and 2). The ECD report (StatsSA, 2016) further noted that from this group, close to half of the children did not attend educational facilities, while 40% of the children in the highest household income quintile attended ECD facilities.

According to the Community Survey data (StatsSA, 2016) only 10.82% of children aged 0-6 living within the FGTLM attended an ECD facility as compared to 17.14% of children living within the TCLM.

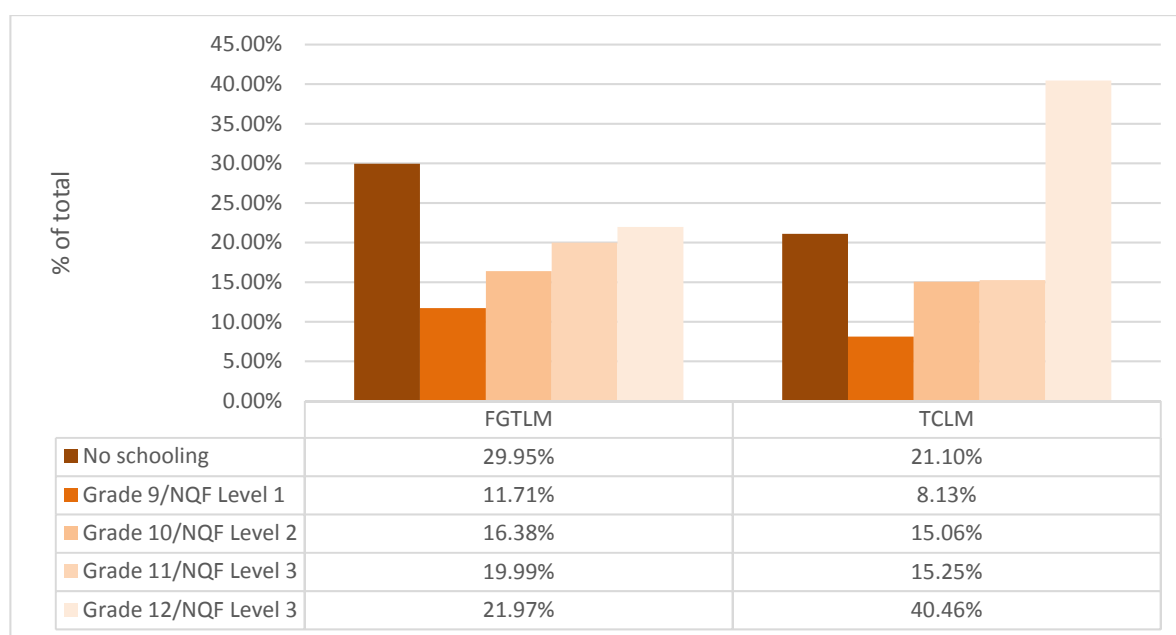
Limpopo Province has one of the higher illiteracy rates in the country, however, the 2016 Community Survey has shown a promising trend in education levels for both the province and the local municipalities.

There has been an increase in the proportion of the population with Grade 12/Matric and higher education and a reduction in the population with no schooling, which has halved in the GSDM. The EDM has the worst functional literacy rate in Mpumalanga (75.5%), and while this rate is increasing, 13.8% of people aged 20+ have had no schooling (StatsSA, 2016).

Regarding the FGTLM, 24.4% of those 20 years and older have completed some form of primary school education, while 39.3% completed their secondary school education. Only 6.2% have received higher education, with 16.9% having received no schooling at all (StatsSA, 2016).

The TCLM too has experienced lower education levels when compared to FGTLM. Of those aged 20 years and older, 36.9% have completed matric, and 9.9% have some form of higher education (StatsSA, 2016).

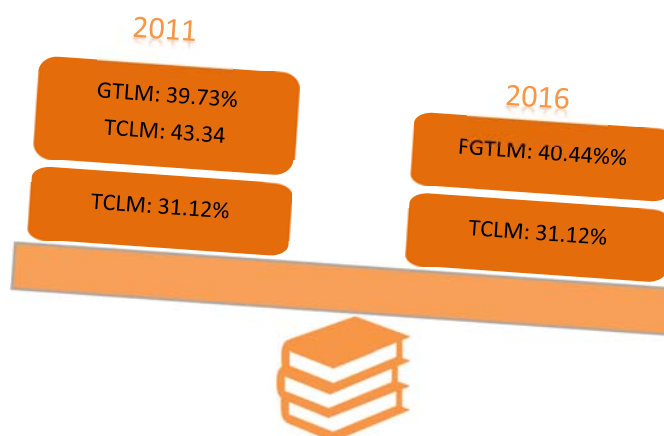
Figure 6-6 indicates the top five categories in the education data, showing that the majority of persons living within both the FGTLM (29.95%) and TCLM (21.10%) had no schooling. Both the FGTLM (21.97%) and TCLM (40.46%) did, however, have a fairly large portion of the population who had a minimum level of grade 12 education.



Source: StatsSA, 2016

Figure 6-6: Highest level of education

According to the Community Survey data (StatsSA, 2016), the number of those aged between 5 and 24 years and attending an educational institution remained low for both local municipalities when comparing the 2011 and 2016 data (Figure 6-7). This supports the data from Figure 6-6 that shows that education levels are low within the Zol.

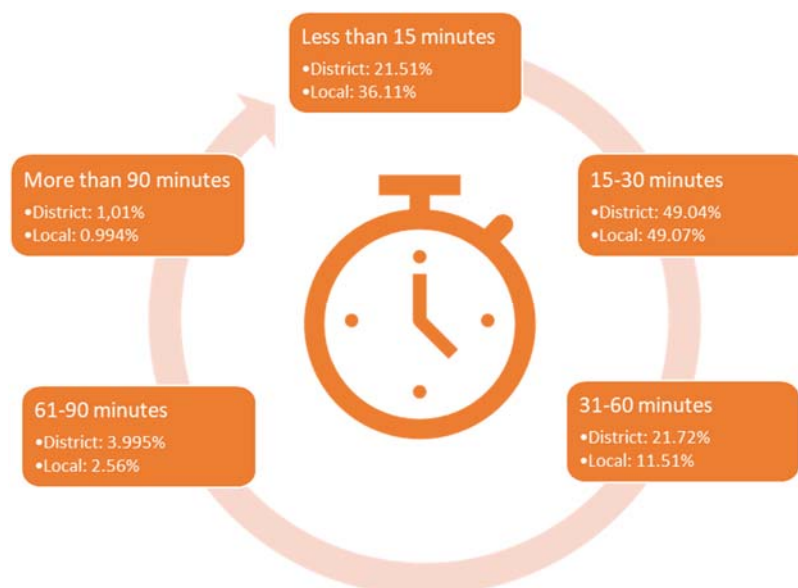


Source: StatsSA, 2012, StatsSA, 2016

Figure 6-7: Population attending an educational institution

Source: StatsSA, 2016

Figure 6-8 indicates that the majority of persons in the Zol traveling to an educational institution took between 15 and 30 minutes to get to school (StatsSA, 2016).



Source: StatsSA, 2016

Figure 6-8: Time taken to get to educational institution

6.4.5 Health facilities

Goal 3 of the SDG aims at ensuring healthy lives and the promotion of well-being for all at all ages (UN, 2015). Improving maternal health has been one of the MDG of the UN (2000).

According to the Limpopo Department of Health, there are 11 medical facilities in the FGTLM, which mainly constitute regional clinics that provide localised inputs to the community. The Dilokong Hospital is the biggest hospital followed by Mecklenburg health centre Boshoff and Penge health centres. Clinics are scattered in the area, i.e. Burgersfort, Bothashoek, Praktiseer, Ga-Makofane, Motshana, Ga-Mashabela, Ga-Motodi, Ga-Rantho Ga-Riba, Leboeng, Malokela, Mampuru, Phiring, Taung, Motlolo and Ga-Selala. Three clinics are located respectively in Steelpoort, Ohrigstad and Burgersfort, which were previously the responsibility of the National Health Department and hence, these clinics offer improved service to those scattered across the region. Specialist treatment is exclusively

available at the major hospitals outside of the municipal area (FGTLM, 2018). Many communities and villages rely on mobile clinics.

In comparison, the TCLM has three district hospitals and nine clinics (TCLM, 2018). The number of mobile clinics was not specified in the IDP, and thus the total number of health facilities in the TCLM cannot be confirmed. Anti-Retroviral Treatment programmes are available at hospitals and some of the clinics in the FGTLM. There are numerous initiatives within the healthcare scope of the TCLM to increase capacity and effectiveness at hospitals and clinics in the local municipality, many of which are targeted at vulnerable people (women, children, HIV/AIDS positive people and their families to name a few) (TCLM, 2018).

Anti-Retroviral Treatment programmes have been initiated in most primary health clinics. HIV/AIDS programmes are the responsibility of the local AIDS council (GSDM, 2009). The FGTLM (2018) reported that HIV/AIDS decreased in the Limpopo Province, with a prevalence rate of 9.2%. The FGTLM IDP (2018) reported that 28 335 people living in the FGTLM were HIV Positive, and that AIDS related deaths had increased from the previous year. In the TCLM, the HIV/AIDS prevalence rate is far greater, and currently sits at 34% (TCLM, 2018).

The Mpumalanga Province has the highest HIV/AIDS rate behind KwaZulu Natal at 36.7%, thus the TCLM's rate is slightly below provincial rates. There is limited HIV/AIDS data available for the FGTL and TCLM, and thus much of the HIV/AIDS data is that from the South African National HIV Survey (2012). Figure 6-9 indicates the closest health facilities from Der Brochen, with major hospitals being located more than 50km away from the site.

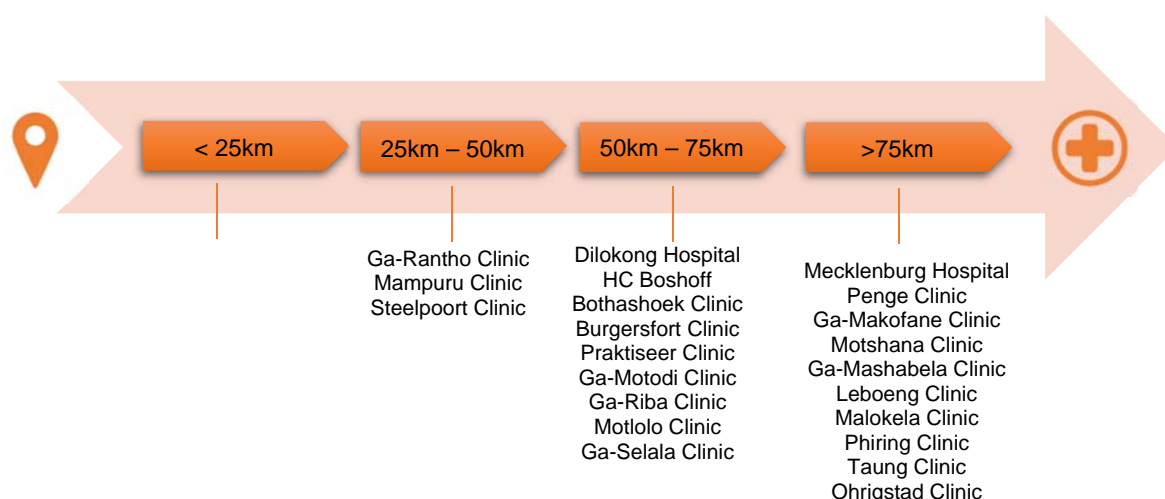


Figure 6-9: Distance from site to closest health facilities

6.4.6 Transportation infrastructure

Demands for transport shape the urban landscape and influence spatial choices that the persons make in relation to social and economic services such as place of residence, education and work. Similarly, businesses make locational choices based on market proximity and size as well as considerations for ease of temporal and spatial mobility of labour, goods and services (StatsSA, 2014). With growing populations that expand towards cities (i.e. urbanisation), the structure and especially size of demands on urban management systems, urban infrastructure and transport services keeps on evolving.

The FGTLM road network covers approximately 1 318 km. Of these roads, 39.0 % are surfaced, while 61.0% are unsurfaced roads (FGTLM, 2018). Thus, the majority of the population relies on unsurfaced roads to access socio-economic opportunities. The majority of the unsurfaced roads are found in between scattered villages and are poorly maintained. The roads deteriorate in the wet season, which

is aggravated by inadequate storm water drainage and a lack of bridges over water systems. Roads are used mainly by buses and taxis taking commuters to and from their place of work (mines or town centres) (FGTLM, 2018). There is currently no passenger rail service in the Greater Tubatse area, but many bus routes run close to the project site.

The FGTLM's public works unit maintains and repairs damaged roads in the municipality (FGTLM, 2018).

In the TCLM, the majority of roads are graded, but not surfaced. The TCLM does not have a road maintenance plan in place but is in the process of developing one (TCLM, 2018). Main transport routes, including the N4 are tarred and frequently maintained, however, the large majority of the population continues to rely on minor roads with poor storm water management and poor surface quality, particularly in the rainy season (TCLM, 2018). According to the community survey (StatsSA, 2016), the dominant modes of transport in both municipalities are minibus taxis.

According to the National Household Travel Survey (StatsSA, 2014), the Limpopo Province had one of the highest percentages of workers classified as rural (21.5%). Limpopo Province was also the only province where the percentage who received travel allowances from their employer increased from 2.7% to 3% between 2003 and 2013 (StatsSA, 2014). According to the survey, one in ten households in South Africa thought that taxis were too expensive, with households in Limpopo (12,2%) being amongst those who are the most likely to be concerned about the cost of taxis.

In Limpopo, about 47.4% of learners left their place of residence to their educational institutions between 06:30 to 06:59 as compared to about 27% of learners who left their place of residence from 07:00 to 07:59 (StatsSA, 2014). With regard to the time workers left, most travelled between 07:00 to 07:59 (26.7%), followed by 25.4% who left home before 06:00 (StatsSA, 2016). Limpopo Province was the province with the most amount (20.7%) of students having to leave before 06:30 (StatsSA, 2014). The survey further found that 34.4% of persons walked to their workplace with 24.8% relying on a car or company car driver, 19.1% using a taxi and 11.1% using a bus (StatsSA, 2014). Of those who drove to work in the Limpopo Province, 92.1% use a car or a bakkie.

Of those workers relying on public transport, most (62,3%) arrive within a 5-minute walking distance of their workplace, with a fair number (12,8%) having to walk more than 15 minutes to their place of work after using public transport (StatsSA, 2014). Taxis were commonly used by travellers in Limpopo (54.6%), with the second most used mode of travel being buses and car/bakkie/truck passengers, both at 13%.

Within the Mpumalanga Province, residents of urban areas (85,6%) travelled more than those in rural areas (81,8%) with the vast majority of learners in Mpumalanga walking all the way to their educational institutions (StatsSA, 2014). Approximately seven in ten learners walked all the way (69,6%), followed by those who travelled by taxis (11,3%) and buses (10,4%). According to the data (StatsSA, 2014), learners who used public transport in the province were more likely to use taxis (52,0%), followed by buses (48,0%).

The majority of learners (54,9%) within the Mpumalanga Province left their place of residence between 07:00 and 07:59 in the morning to their educational institutions. Learners in Victor Khanye, Steve Tshwete, Emalahleni and Emakhazeni local municipalities were more likely to leave after 08:00 for their educational institutions (StatsSA, 2014).

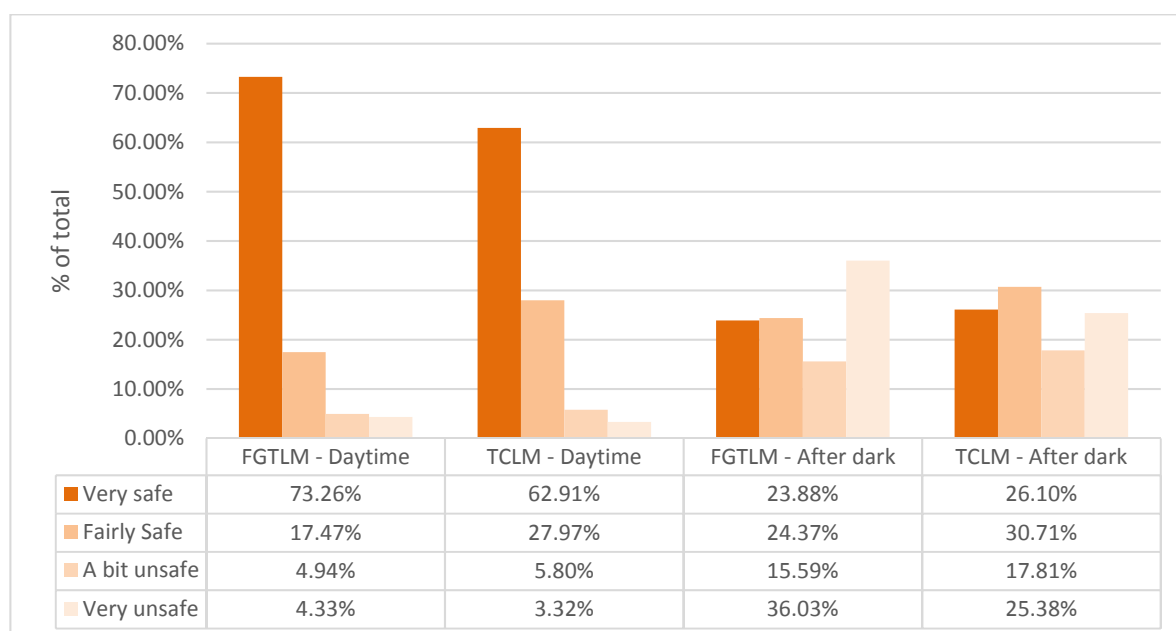
The main mode of travel to work in Mpumalanga is public transport, with 41,3% using public transport (buses and taxis) as their main mode of travel to work. More than a quarter of workers (26,2%) walked all the way and 24,8% drove cars/trucks to work. According to the data (StatsSA, 2014), workers in rural areas were more likely to use buses (33,5%) as their mode of travel to work and those in urban

areas drove cars/trucks (32,3%). More than half of work trips made by public transport were made using buses (51,5%), and 48,5% were made by taxis.

About 47% of workers living with the Mpumalanga Province who used public transport walked for up to five minutes to their first public transport, and 11,8% of workers walked for more than 15 minutes (StatsSA, 2014). Bus users (16,2%) were more likely to walk for more than 15 minutes to their first bus than taxi users (7,0%). The majority (62,5%) of the workers waited only up to five minutes for their first public transport to arrive, and only 7,4% waited for more than 15 minutes (StatsSA, 2014).

6.4.7 Justice and policing

The NDP envisions that by 2030, people living in South Africa will feel safe at home, at school and at work. It has as a priority that all people living in South Africa feel safe and have no fear of crime (National Planning Commission, 2012). According to the Community Survey data (StatsSA, 2016), persons living within both the FGTL (73.26%) and TCLM (62.91%) feel very safe during the day, but feel unsafe at night (Figure 6-10). When considering persons who have been victims of crimes in the past 12 months of taking the survey, slightly more persons were affected by crime in the TCLM (5.80%) as compared to the FGTL (3.35%).



Source: StatsSA, 2016

Figure 6-10: Safety when it is dark versus during the day

Crime is relatively high in the FGTL, and Burgersfort and Steelpoort have been identified as crime hotspots. ATM blasting (75%), assaults (64%), domestic related crimes (80%) and general theft (80%) have the highest crime rates (SAPS, 2010).

The TCLM IDP has highlighted the “unacceptable” levels of crime in the municipality (2018). While actual numerical statistics for crime in the FGTL was unavailable, the TCLM IDP indicates that numerous socio-economic factors have contributed to an increase in the community’s crime rates (2018).

There are currently five police stations or Community Policing Forums (CPFs) in the FGTL, namely Burgersfort, Leboeng, Mecklenburg, Ohrigstad and Tubatse. The FGTL also has three satellite stations in Penge, Driekop and Ga-Mopodile. CPFs have been established in several areas with varying degrees of success.

The Department of Safety Security and Liaison have provided 13 personnel as safety ambassadors in various wards within the municipal area. The personnel work jointly with South African Police Force and municipal officials to create awareness through public co-ordination (FGTLM, 2018). Magistrate courts are located in Burgersfort, Leboeng, Mecklenburg and Tubatse but there is a need to develop and implement a more comprehensive crime prevention strategy in the area.

According to the TCLM IDP (2018), a general lack of adequate police stations and capacity within existing police stations has had a negative impact on the safety and security of the communities in the TCLM. The TCLM has launched the National Crime Prevention Strategy as introduced into the province in 2001, as well as a Multi-Agency Mechanism. Police stations in the TCLM include Sabie, Mashishing, Graskop and numerous satellite stations within informal settlements and townships in the municipality. The closest police station to Der Brochen is the Tubatse Police Station, which is located approximately 34km from the site. The Burgersfort Police Station is the second closest police station, followed by the Mashishing, Mecklenburg, Leboeng, Ohrigstad, Graskop and Sabie Police Stations (Figure 6-11).

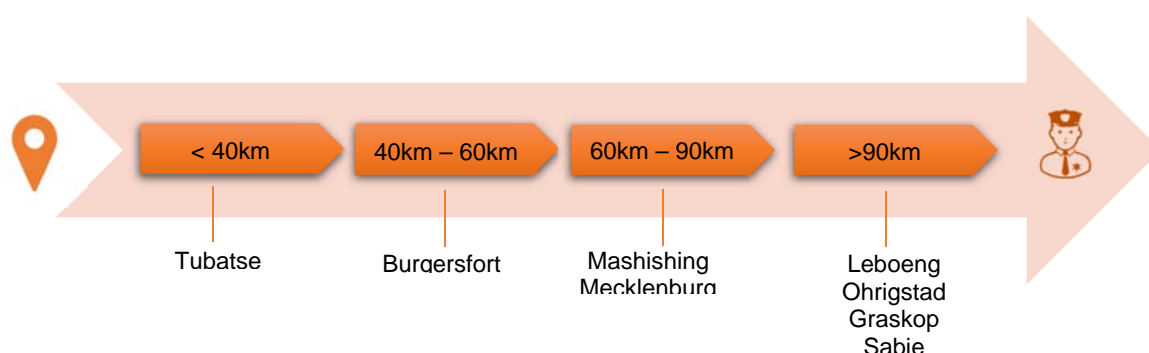


Figure 6-11: Distance from site to the nearest Police Stations

Implications: Infrastructure and services

Together with housing, the provision of infrastructural services enhances the opportunity and likelihood for improved economic growth, welfare, quality of life and productivity of people. While having a house provides stability for the individuals, its benefits are enhanced by access to all the other social facilities such as employment, health, education etc.

6.5 Socio-economic profile

Der Brochen is situated in an area that is characterised by high levels of poverty and low levels of education and employment. This section discusses education and employment levels on a municipal and local level to give a better illustration of the poverty evident in the area.

6.5.1 Macro-economic context

Local Municipalities

The FGTLM has a weak economic base, accompanied by high poverty levels (StatsSA, 2012). The town of Burgersfort has been identified as a growth point in the province because of its mining activities, however, its natural resources has also lent itself to a growing economic base through

tourism (FGTLM, 2018). According to the FGTLM IDP (2018), poverty alleviation projects implemented by the municipality have improved the socio-economic conditions of the area.

Some of the largest platinum producers in South Africa are currently operating in the FGTLM, including AAP, Impala Platinum and GlencoreXstrata (FGTLM, 2018). Mining accounts for 34% of the GVA⁵ for the municipality. It follows that the largest majority of employment opportunities in the FGTLM (approximately 50%) are from the mine and mine-related industries (including ferro-chrome smelting) in the region (FGTLM, 2018). Protracted unrest and violent strikes are impacting production at mines and have the potential to impact the sectors growth in FGTLM negatively if the protests continue (FGTLM, 2018).

Opportunities for development within the FGTLM have been identified in the Local Economic Development Plan (LEDP) of 2015, but the current status of plans to develop and expand on these opportunities could not be determined. The opportunities included the following (FGTLM, 2018):

- Unlocking the agricultural potential of the municipality could potentially help resolve land use challenges, whereby 40% of the municipality's land remains under-utilised. The potential to grow the FGTLM through tourism has been identified, as the area has many natural conservation opportunities afforded to it;
- The retail sector was identified as an area for potential growth, but the high unemployment rate experienced by the municipality, resulting in poor buying power, was identified as a restriction; and
- An integrated intervention mechanism that included instruments such as skills development, infrastructure investments, enterprise development programmes, institutional reform, etc, was identified to stimulate growth in the economy of the FGTLM.

The western half of the TCLM (Mashishing District), i.e. the portion within which Der Brochen is situated, is dominated by agricultural and farming activities. Other economic activities in the Western region of TCLM include mining and quarrying, manufacturing, real estate and business services (TCLM, 2018). In contrast to FGTLM, mining contributes 24% to the TCLM GVA (StatsSA, 2018).

Mining has been identified as a fast-growing industry in the region. The locality of TCLM within the eastern limb of the Bushveld Complex suggests that mining should be the future focus of the TCLM's economy. This is reflected in the growth of towns such as Mashishing and informal settlements around the area (TCLM, 2018). There is however a risk in that economic developments are not being approved due to insufficient infrastructure capacity (TCLM, 2018)

Although the GVA is not mentioned, tourism contributes significantly to the economy of the FGTLM (FGTLM, 2018), with its full potential yet to be realised. Proximity to wildlife, nature and heritage sites and the Kruger National Park, as well as multiple luxury lodges, contributes to job creation and economic growth. Most of these activities are, however, concentrated around the eastern section of the FGTLM (FGTLM, 2018).

6.5.2 Employment

As outlined in Table 6-9, the youth (15–35 years) unemployment rate is at 59.6%, while the total unemployment rate is 50.3%. Statistics derived from the FGTLM IDP (2018) show that more than 50.0% of those employed within the FGTLM are in the Mining and Quarrying Sector, followed by Wholesale and Retail Trade, Catering and Accommodations (15.8%) and then Community, Social and Personal Services (8.3%).

The TCLM total unemployment rate is less than that of the Ehlanzeni District Municipality, estimated at 20.5%, as compared to 34.4% for the EDM. Of the total number of youth (15–35 years), a total unemployment rate of 27.1% was recorded in TCLM (StatsSA, 2012). Mining accounts for 23.5% of

⁵ The total value of goods and services produced in the municipality

all employment in the TCLM, with agriculture still providing a high level of employment at 14.8% (Table 6-9).

Table 6-9: Municipal level employment per sector

Sector	% employment	
	FGTLM	TCLM
Agriculture	2.2	14.8
Mining & quarrying	50.0	23.5
Manufacturing	3.6	6.4
Transport	3.1	2.8
Community services	8.3	15.6
Private households. general government	7.6	8.4
Finance	5	4.1
Trade	15.8	17.6
Construction	4.2	6.3
Utilities	0.1	0.4

Source: FGTLM, 2018; TCLM, 2018

Implications: Socio-economic profile

With the low-income levels apparent, the ability to meet basic needs such as adequate food, clothing, shelter and basic amenities is hampered, indicating that the many households are poverty stricken (poverty is defined as the inability to meet these needs).

The level of education and skills evident in the baseline does not give a range of employment options to choose from and to build on. The lack of education and skills correlates with the inability to meet basic needs and to access employment opportunities, maintaining the poverty status quo. The focus on the mining sector in the area does open up a variety of opportunities to choose from, but this choice cannot be executed due to the lack of skills and education.

The quality of the labour force gives an indication of the employability and is mostly reflected by the educational profile and the quality of the training and health centres. The employability of those within and outside the study area seems to be low.

Most of the population in the municipal baseline area will be unable to meet the labour requirements for Der Brochen (Grade10 and above). In the mining sector, with its high demand for labour during construction and operation, and continued demand for goods and services, the estimation is that for every single job the mine creates an additional three to ten are created. However, for Der Brochen, the demand for labour is limited for this phase of the project, and the benefits of opportunity will therefore not be as significant.

High expectations for employment are present in the communities, and these expectations will have to be managed.

6.6 Vulnerability

According to Blaikie. et. al (2004) as quoted by the World Health Organisation's practical guide on environmental health in emergencies and disasters "vulnerability is the degree to which a population,

individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters". Poverty is a major contributor to vulnerability, and in light of high unemployment, and general poverty in the Der Brochen study area, it is reasonable to conclude that the area is demographically vulnerable. Population growth is expected to increase in areas where new economic development opportunities are available, and this could increase vulnerability, more so if it is coupled with reduced water availability and degradation and loss of land (whether mine-induced or not).

Population growth has been relatively rapid at district and local levels. Continued growth with no change in economic opportunities and livelihood conditions will perpetuate existing levels of poverty in the study area. Like South Africa itself, the population of the direct area of influence has a low to moderate resilience to demographic, economic and environmental resources shocks, making timely and effective mitigation important.

With the above in mind, the following broad categories of people can be considered particularly vulnerable, at varying levels:

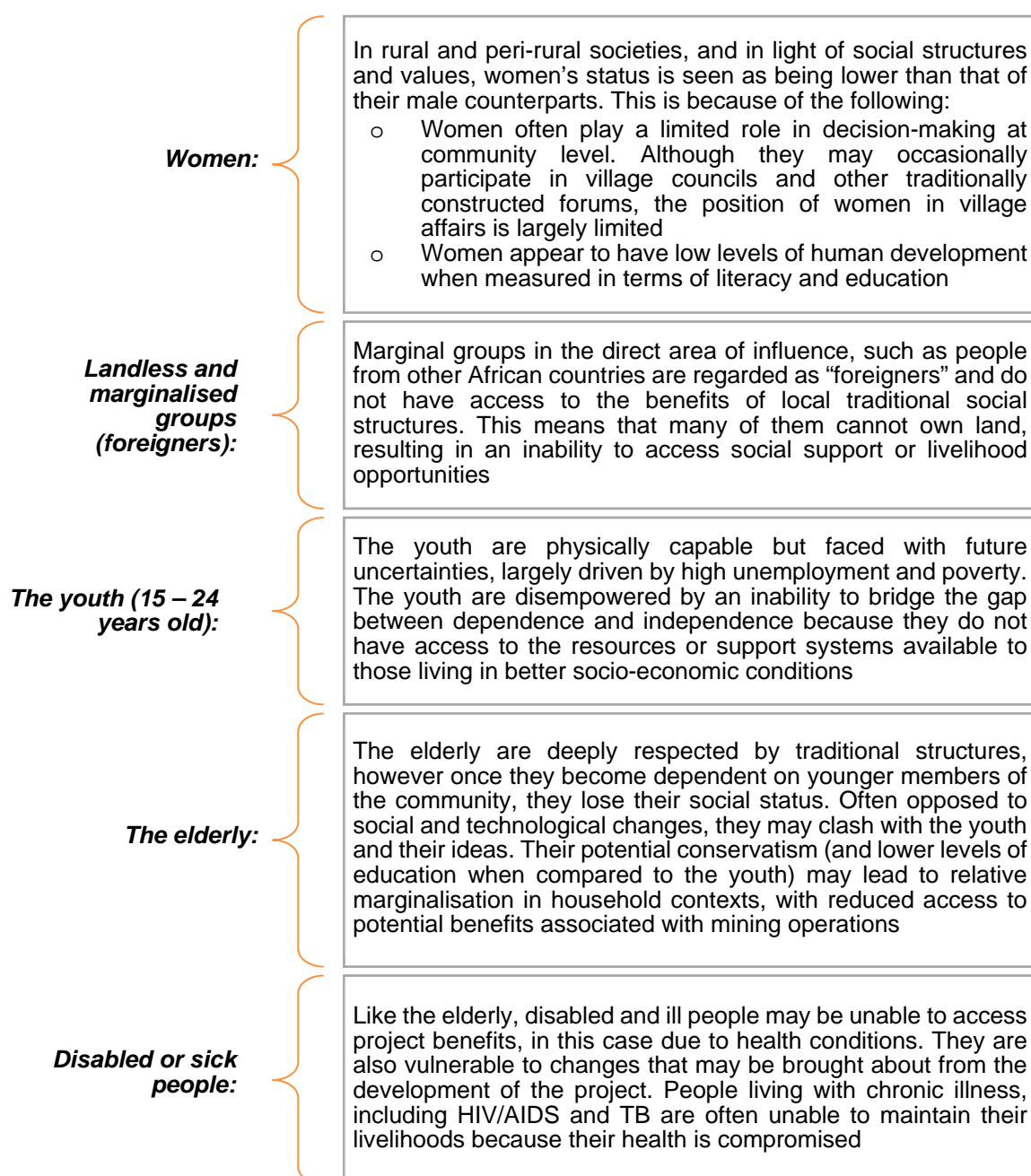


Figure 6-12: Categories of vulnerable people

Implications: Vulnerability

AAP should explicitly recognise the causes and effects of vulnerability and ensure that vulnerable groups have access both to mitigation and to potential project-related benefits. AAP would be well placed to address many of these vulnerabilities by ensuring their investment in Corporate Social projects or Local Economic Development projects are targeted towards infrastructure development and livelihood restoration. Targeting skills and wider economic development in the study area is a good starting point.

6.7 Human rights

Human rights are basic rights and freedoms belonging to all. Human rights challenges faced by mining communities in Southern Africa include corruption connected to employment, environmental degradation and damage, and unfair and unequal access to land. These challenges are not uncommon in South Africa's coal mining sector. According to the Bench Marks Foundation, the greatest concern of mining communities is living conditions and service delivery.

Implications: Human rights

Human Rights are a contentious issue in the South African mining environment, as many Non-Governmental Organisations (NGOs), trade unions and miners actively rally in the area and report on what they deem human rights infringements. Degraded air quality, water pollution and inadequate access to health services have all been noted by various NGOs. Negative impacts from the Der Brochen project may affect these aspects of the environment and will require effective mitigation and as per the relevant management plans to ensure that human rights are not threatened.

7 Socio-economic Impact Assessment

7.1 Introduction

This section of the report considers the positive and negative socio-economic impacts which are predicted to occur in the pre-construction, construction, operation and decommissioning/closure phases of the project. Furthermore, cumulative impacts have been included in section 7.3.7. Measures to mitigate negative impacts and enhance positive impacts are also presented. The significance of each impact is presented both without and with mitigation. The significance impact ratings have been summarised under each driver, with the complete impact rating tables included as Appendix C. A full overview of the methodology is included in Section 3 of the report.

7.2 Overview

7.2.1 Social change processes and social impact categories

The purpose of this chapter is to describe anticipated social change processes that the proposed project is likely to create. Within each phase of the project certain processes will also occur, although they may not occur in every phase of the project it is important to determine when the impact will occur and the potential impacts it may have on the social change process in that environment. Processes that will be investigated include:

Social Change Processes

- Demographic processes
- Economic processes
- Geographic processes
- Institutional and legal processes
- Emancipatory and empowerment processes
- Socio-cultural processes

Confusion in the SIA literature often relates to the lack of distinction between social change processes that are caused by development projects, and social impacts that are actually experienced. In this conceptualisation, an impact must be an experience (either real or perceived) of an individual, family or household or a community or society at large. Resettlement, for example, is not a social impact, but causes social impacts such as anxiety and stress, disruption to daily living as well as impacts such as homeliness.

It is important to appreciate that some impacts may be caused directly by an activity, while other impacts may be caused indirectly. Moreover, the experience of an impact can then cause other processes to take place, which then cause second order impacts. Because of people's dependency on the biophysical environment, changes to the biophysical environment can create social impacts, and social processes which are the direct result of a project, or the result of the experience of a social impact, can also cause changes to the biophysical environment (Vanclay, 1999).

Social impacts do not occur in a vacuum, they occur within the context of human behaviour, which is often unpredictable, as well as varieties of cultures, traditions, political and religious beliefs. These social, cultural, political, economic and historic contexts are influenced by various perceptions. Therefore, it can be concluded that the mitigation measures proposed for the anticipated social impacts, can also not be made in a vacuum. Where the anticipated social impact is regarded as a direct consequence of the development, and it is possible for the applicant to mitigate it, it would be

recommended in such a way. Sometimes the social impact is a result of a cumulative effect and can only be mitigated by the intervention of formal societal structures such as the local / district municipality or government. In such cases, it would be indicated as such.

It is important to consider that social impacts can be positive or negative. Community values may change over time, thus it is a complex task to determine whether an impact should be regarded as positive or negative. Deciding whether an impact is short term or long term, has its own set of complexities, as time scales are in most cases culturally and socially defined.

The impacts of the proposed project will be examined and discussed according to the following four categories as indicated below:

Project Phases

- ✿ Originating prior to the construction phase (planning phase);
- ✿ Expected to set in during the construction phase;
- ✿ Expected during the operational phase; and
- ✿ Expected to occur as part of the decommissioning and closure phase.

It is important to remember that social change can be extremely subtle and the report will aim to describe the anticipated social impacts that the proposed project is likely to effect.

The following social change processes are likely to take place as a result of this project:

- ✿ Demographic processes
 - Effect of new or temporary workers on social dynamics
- ✿ Economic processes
 - Waged labour / Employment creation and decrease in unemployment
- ✿ Geographic processes
 - None
- ✿ Institutional and legal processes
 - Functioning of government agencies
- ✿ Emancipatory and empowerment processes
 - Capacity building and skills transfer
 - Gendered division of labour
- ✿ Socio-cultural processes
 - Health and social well-being
 - Quality of the living environment
 - Cultural impacts
 - Family and community impacts

7.3 Socio-Economic Impacts

The actual impacts experienced at a given project site will depend on a variety of factors, that range between the baseline conditions (Section 6), the public participation process, engagement and capacity building that has taken place, the role of politics, most notably in local municipalities and the other processes of social change either already under way (e.g. due to marketing activities), or which may develop during the operational life of the project. The social change processes relevant to the Der Brochen Amendment project are described in the section below together with their associated impacts.

7.3.1 Demographic processes

Demographic processes are those relating to the movement and composition of people in the region affected by the project.

Demographic impacts include the number of new permanent residents or seasonal residents associated with the development, the density and distribution of people and any changes in the composition of the population, (e.g., age, gender, ethnicity, wealth, income, occupational characteristics, educational level, health status). Development invites growth in new jobs in a community and draws new workers and their families into the community, either as permanent or temporary residents. When this occurs, the incoming population affects the social environment in various ways including increased demand for housing and social services (e.g., health care, day care, education, recreational facilities).

Because residents' needs depend on a wide range of variables (e.g. age, gender, employment status, income level and health status), the diversity of service needs are determined not only by the absolute size of the incoming population but also by the old and new populations' demographic and employment profiles. As a result, a proposed development may have a significant impact on the community's ability to accommodate new residents and adapt to changes in the social environment for existing residents. Assessing the magnitude and rate of population change has important implications for community infrastructure and service requirements and can play a major role in determining social impacts associated with the proposed development. It is predicted that the following demographic processes will take place:

Effect of new or temporary workers on social dynamics

Phases at which impact is relevant:

Prior to construction

Construction

There is a small likelihood of job seekers moving into the study area and seeking accommodation in the villages located in close proximity to the mine (specifically the Pakaneng Village and Kalkfontein). During the stakeholder engagement process, the Kalkfontein community specifically mentioned that their village was expanding due to the influx of potential job-seekers. This may cause conflict with existing community member who currently feel that they have not been fairly consulted for job opportunities at the mine.

In most cases, the potential in-migration of workers is likely to result in other cumulative impacts, such as conflict with existing community members, social inconveniences and/or problems and pressures on existing infrastructure. Among recent years, South Africa has seen xenophobic attacks on "outsiders" due to competition for business opportunities, scarce resources such as jobs or land, or due to other conflicts. These types of attacks, although it can be viewed as isolated incidences, should serve as a reminder of the very volatile situation of most low-income residential areas. This process of potential in-migration is anticipated to have a notable effect on the communities in close proximity to the proposed project. These impacts are anticipated to mostly occur during the construction phase of the project, however, if not correctly managed, these impacts could flow into the operational phase.

In order to mitigate most of these impacts, Anglo should consider the establishment of a Community Monitoring Forum (CMF) in order to monitor the construction phase and the implementation of the recommended mitigation measures. The CMF should be established before the construction phase commences, and should include key stakeholders, including representatives from local communities, local councillors, affected landowners and the contractor(s).

It is further advised that Anglo, along with the appointed contractor(s), should in consultation with representatives from the CMF, develop a code of conduct for workers during the construction phase. The code should identify which types of behaviour and activities are not acceptable to the community and measures should be in place to monitor and manage this. Construction workers in breach of the code should face appropriate disciplinary steps. All dismissals must comply with the South African labour legislation.

In order to address any potential health impacts, it is advised that Anglo, along with the appointed contractor(s), devise and implement an HIV/AIDS awareness programme for all construction workers at the outset of the construction phase. All permanent employees should receive Health and Safety, including basic HIV/AIDS awareness training at the onset of their employment.

Furthermore, the movement of construction workers on and off the site should be closely managed and monitored by Anglo. In this regard the necessary arrangements should be made for the housing and transport of temporary construction workers. Allowance should be made for workers from outside the area to return home over weekends and/ or on a regular basis. This would reduce the risk posed to local family structures and social networks.

Table 7-1 and Table 7-2 describe the impacts before and after mitigation for the planning and construction phases:

Table 7-1: Planning Phase - Effect of temporary workers on social dynamics – influx of job seekers into the study area

Significance before mitigation		Moderate (-): 30
Proposed mitigation measures	<ul style="list-style-type: none"> Anglo should ensure quarterly meetings are held with the CMF where monitoring results can be shared and grievances discussed and managed; Employ local labour as far as possible; Avoid the establishment of camps, hostels or temporary accommodation for workers. Accommodation should be provided at suitable locations in and surrounding the area; Appropriate housing solutions should be investigated, focusing on the housing needs of the area in line with Anglo's housing policy; Assist employees (non-local) with suitable employment in the surrounding the area; Plan and budget for health services to contractors and employees during construction and operational phases. Anglo should develop a Health and Safety Policy for all construction and operational staff, detailing their HIV/AIDS policy and any awareness training that they will provide as part of the general employment contract with contract or permanent staff; and Prepare an Influx Management Plan in liaison with surrounding mining companies and the local authorities. 	
Significance after mitigation		Low (-): 16

Table 7-2: Construction Phase - Effect of temporary workers on social dynamics – influx of job seekers into the study area

Significance before mitigation		Moderate (-): 30
Proposed mitigation measures	<ul style="list-style-type: none"> Anglo should consider the establishment of a Community Monitoring Forum (CMF) in order to monitor the construction phase and the implementation of the recommended mitigation measures; Employ local labour as far as possible; Avoid the establishment of camps, hostels or temporary accommodation for workers. Accommodation should be provided at suitable locations in and surrounding the area; Ensure that during the project construction process of the project, employees receive adequate health support from the project team for work-related health problems; and Anglo should implement a Health and Safety Policy for all construction and operational staff, detailing their HIV/AIDS policy and any awareness training that they will provide as part of the general employment contract with contract or permanent staff. 	
Significance after mitigation		Low (-): 16

7.3.2 Economic processes

Economic processes affect economic activity in the region, including the way in which people make a living as well as macroeconomic factors that affect society as a whole. Economic impacts can also be viewed from a social point of view, as employment creation or increased government income, can for example lead to social development and the reduction of poverty. The construction of a proposed project can set in motion several economic processes, such as the creation of job opportunities, the enhancement of the local economy, the additional tax revenue generated, etc.

Waged labour / Employment creation and decrease in unemployment

Phases at which impact is relevant:

Prior to construction

Construction

Decommissioning, rehabilitation and closure

Waged labour can be defined by an impact that changes the number of available jobs in an area. Development directly influences changes in employment and income opportunities in communities. Such changes may be more or less temporary (e.g., construction projects, or seasonal employment) or may constitute a permanent change in the employment and income profile of the community should the development project bring long-term job opportunities for residents. With the Der Brochen project now incorporating the Mototolo mine, it is anticipated that Der Brochen will take over labourers from the Mototolo mine, thus reducing the number of employment opportunities required.

In order to ensure that this impact leads to maximum benefit, it is important to ensure that employment opportunities created will lead to employment of local residents as far as possible. Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities. This will ensure a reduced dependency on temporary employment in addition to enhancing the living standards of local residents. Comments from the stakeholder engagement process indicated that the immediately surrounding communities or 'doorstop' communities have not been considered for employment by the mine with the main reason being that these communities do not meet the minimum requirements (a Grade 12 qualification) set by Anglo. It was suggested that the mine provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine.

Anglo should further consider investing into ABET and FET centres to provide opportunities for skills development to persons without the requisite educational qualifications. Persons from doorstep communities should receive preference when providing bursaries or learnerships at the mine.

Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour by any appointed contractors. In order to address local requirements, a local employment procedure and recruitment process should be developed in consultation with local authorities and representatives. Anglo should ensure that a transparent process of employment is followed to limit opportunities for conflict situations.

It is important to ensure that the resultant positive impacts develop into a long-term boost to the economy. It is therefore suggested that, where possible, Anglo advise and assist, in line with the SLP requirements, local business operators, etc. to establish and grow SMMEs. In order to meet the SLP requirements, the support of local business and the use of their products and services should be promoted as far as possible. Comments received during the stakeholder engagement process indicate that the communities would like Anglo to communicate operational needs where communities can contribute as well as how local small businesses can also benefit from the mine.

Affirmative procurement is an ideal mechanism for the economic empowerment of HDSAs. Therefore, Anglo should align their policies to ensure local procurement and assist potential HDSA suppliers, through mentoring, to become part of the project's supply chain. Through their contractual agreement with contractors and their supply chain, the use of local labour and local suppliers should be promoted. Through this proposed project, Anglo has the ability to create an enabling environment for the empowerment of HDSAs within the surrounding areas. It is therefore suggested that Anglo's Procurement Policy provide local residents and business owners in the surrounding communities with a preferred supplier status.

Anglo can provide preferred supplier status to local HDSAs through implementation of the following measures: identifying products which could be supplied by local suppliers; and identifying prospective procurement suppliers from employees/surrounding communities, by means of a Local Economic Development (LED) Forum.

Anglo should also require in its tender process the following from suppliers: the promotion of SMMEs, especially within the direct environment of the project; the creation of new jobs; and the upliftment of communities.

Anglo should aim to procure from local service providers in the area. Various procurement outsourcing services could benefit the wider community such as:

- Construction – building material and building;
- Transportation – material, waste and workers;
- Accommodation for workers;
- Catering;
- Personal Protective Equipment;
- Spare parts;
- Recycling;
- Security services; and
- Equipment renting and maintenance.

During the operational phase of the mine, new employment opportunities will decline and communities surrounding the mine may experience fewer direct benefits flowing from the mine. It would be important for Anglo to manage expectations from the local communities. Procurement and employment procedures should clearly be communicated to communities. It is, furthermore proposed that Anglo's procurement policy require its core contractors to recruit and employ, where possible, local job seekers from the immediate communities. A further measure to ensure the employment of local persons is to require that project contracts between Anglo and the appointed sub-contractors stipulate the use of local labour for unskilled and semi-skilled jobs as well as local service providers.

Anglo should ensure that their labour practises align with both South African legislation, as well as best international practise, where feasible. Anglo should document and communicate to all employees and workers directly contracted, their working conditions and terms of employment, including entitlement to wages and benefits, hours of work, overtime arrangements and compensation etc. where such agreements are respected.

Migrant workers should be identified, and Anglo should ensure that they are engaged on substantially equivalent terms and conditions to non-migrant workers carrying out similar work. Employment decisions should not be made on the basis of personal characteristics unrelated to job requirements. Job opportunities will be provided on the principles of equal opportunity and fair treatment. The principles of non-discrimination should also apply to migrant workers.

Anglo should also establish policies and procedures for managing and monitoring the performance of workers employed by third party employers in relation to the above requirements. Anglo should use

commercially reasonable efforts to incorporate these requirements in contractual agreements with such third-party employers.

Where there is a high risk of child labour or forced labour in the primary supply chain, Anglo should identify those risks. In the unlikely event that child labour or forced labour cases are identified, Anglo should take appropriate steps to remedy them. Anglo should monitor its primary supply chain on an ongoing basis in order to identify any significant changes in its supply chain and if new risks or incidents of child and/or forced labour are identified, Anglo should take appropriate steps to remedy them.

Where there is a high risk of significant safety issues related to supply chain workers, Anglo should introduce procedures and mitigation measures to ensure that primary suppliers within the supply chain are taking steps to prevent or to correct life-threatening situations.

Workers' Organizations and workers' rights to form and join worker organizations of their choice without interference, and collectively bargain, should be protected and ensured.

During the cessation of mining and closure of the operations, surrounding businesses will lose income due to the loss of employment or redeployment of employees/contractors, and local purchases made by the mine. This will result in a loss in buying power for the surrounding businesses. This could impact on economic growth and business development in the region. Due to the numerous mining operations in the area, minimal reskilling will be required for employees.

Prior to the decommissioning and closure of the operations, contractors will be employed to undertake the required decommissioning and rehabilitation activities in line with the closure plan. This creation of employment will be short term, for the duration of the decommissioning and closure phase. It is proposed that Anglo investigate alternative sustainable livelihood options for the workforce which can be developed as part of the closure plan while the mine is in operation. These alternative sustainable livelihood options can include agricultural programmes where produce can be sold to the surrounding operational mines and communities as well as alternative key skills development (plumbers, electricians, etc.). The mine would need to engage with the communities from the planning phase already in order to identify what the communities and workforce would prefer in terms of alternative livelihood options.

Prior to implementing any collective dismissals, Anglo should carry out an analysis of alternatives to retrenchment. If the analysis does not identify viable alternatives to retrenchment, a retrenchment plan should be developed and implemented to reduce the adverse impacts of retrenchment on workers. The retrenchment plan should be based on the principle of non-discrimination and should reflect Anglo's consultation with workers, their organizations, and, where appropriate, the government, and comply with collective bargaining agreements if they exist. Anglo should comply with all legal and contractual requirements related to notification of public authorities, and provision of information to, and consultation with workers and their organizations.

Anglo should ensure that all workers receive notice of dismissal and severance payments mandated by law and collective agreements in a timely manner. All outstanding back pay and social security benefits and pension contributions and benefits should be paid: (i) on or before termination of the working relationship to the workers, (ii) where appropriate, for the benefit of the workers, or (iii) payment will be made in accordance with a timeline agreed through a collective agreement. Where payments are made for the benefit of workers, workers will be provided with evidence of such payments.

In addition to the above, workers should also have access to a grievance mechanism (separate from the community grievance mechanisms) where they can raise reasonable workplace concerns.

The ILO Minimum Age Convention, 1973 (No. 138) and its accompanying Recommendation (No. 146) set the goal of elimination of child labour, and the basic minimum age for employment or work. Anglo

should ensure that they abide by the convention. They should also take every reasonable precaution to ensure that they do not employ children in a manner that is economically exploitative or is likely to be hazardous or to interfere with the child's education or be harmful to the child's development.

According to the Forced Labour Convention, 1930 (No. 29), the ILO defines forced labour for the purposes of international law as "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily. Anglo should therefore ensure that they do not employ forced labour which consists of any work or service not voluntarily performed and that is extracted from an individual under threat of force or penalty.

The other fundamental ILO instrument, the Abolition of Forced Labour Convention, 1957 (No.105), specifies that forced labour can never be used for the purpose of economic development or as a means of political education, discrimination, labour discipline, or punishment for having participated in strikes. Table 7-3, Table 7-4, Table 7-5, and Table 7-6 describe the impacts before and after mitigation for the planning, construction and decommissioning phases:

Table 7-3: Planning Phase – Waged labour or employment creation – lack of employment creation and increase in unemployment

Significance before mitigation		Moderate (-): 52
Proposed mitigation measures	<ul style="list-style-type: none"> Unskilled and unemployed labour should be sourced from the surrounding local communities as far as possible; Skills development opportunities should be granted to community members and local job seekers, where needed; A Skills and Services Audit should be conducted within the community to verify which skills and service providers are readily available within the community; Project contracts between Anglo and the appointed sub-contractors should stipulate the use of local labour for unskilled and semi-skilled positions and tasks; Ensure that local businesses, especially those of HDI, women and of SMMEs get allocated the maximum appropriate share of project related business opportunities; Transparent employment and procurement procedures; Develop a Contractor Management Plan; Ensure that the Labour Relations Amendment Act, 2002 (Act No. 12 of 2002) as well as the necessary policies and procedures are taken into consideration to ensure the correct procurement procedures; and Prepare a high-level closure plan that incorporates social and economic transitioning of communities after mine closure. 	
Significance after mitigation		Moderate (-): 30

Table 7-4: Construction Phase – Waged labour or employment creation – limited employment creation

Significance before mitigation		Moderate (-): 48
Proposed mitigation measures	<ul style="list-style-type: none"> Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities The mine must provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour by any appointed contractors. Anglo should ensure that a transparent process of employment is followed to limit opportunities for conflict situations. Anglo to grow SMMEs in line with their SLP commitments. The support of local business and the use of their products and services should be promoted as far as possible. 	
Significance after mitigation		Moderate (-): 30

Table 7-5: Decommissioning Phase – Waged labour or employment creation –temporary creation of employment for rehabilitation activities

Significance before mitigation		Moderate (+): 33
Proposed mitigation measures	<ul style="list-style-type: none"> Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour by any appointed contractors. Anglo should ensure that a transparent process of employment is followed to limit opportunities for conflict situations. The support of local business and the use of their products and services should be promoted as far as possible. 	
Significance after mitigation		Moderate (+): 44

Table 7-6: Decommissioning Phase – Waged labour or employment creation – loss of income to surrounding businesses

Significance before mitigation		High (-): 75
Proposed mitigation measures	<ul style="list-style-type: none"> It is proposed that Anglo investigate alternative sustainable livelihood options for the workforce which can be developed as part of the closure plan while the mine is in operation; and The mine would need to engage with the communities from the planning phase already in order to identify what the communities and workforce would prefer in terms of alternative livelihood options. 	
Significance after mitigation		Moderate (-): 52

7.3.3 Social Change Process: Geographic processes

Geographic processes are those that affect the land-use patterns of a community. Current land use activities associated with the focus area are largely dominated by wildlife and wilderness, with some mining operations in the surrounding areas. No agricultural activities were observed in the surrounding areas. Since the proposed project activities will take place within Der Brochen's surface right (with the construction of the DMS stockpile over a section of Portion 1 of the farm Mareesburg 8 JT located on Samacor's surface right), it is not anticipated that the activities will affect the land-use patterns of the surrounding communities. Geographic processes are therefore not further discussed in this assessment.

Going forward, Anglo should, however, consider every feasible alternative in their project designs to avoid or at least minimize physical or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable.

7.3.4 Social Change Process: Institutional and legal processes

Institutional and legal processes are those processes that affect the efficiency and effectiveness of various organisations that are responsible for the supply of the goods and services on which people depend.

These organisations include government agencies, non-government organisations and the commercial sector. These impacts refer to the capacity of the authorities and other institutions to cope with the workload generated by the proposed project.

Functioning of government agencies

Phases at which impact is relevant:

Prior to construction

Decommissioning

This project entails the development of the additional mining related activities to support the current activities taking place at Der Brochen Mine. The project also includes the upgrade of municipal infrastructure; therefore, the capacity and the functioning of the relevant government agency should be assessed. Municipal infrastructure is defined in broad terms as 'the capital works required to provide municipal services.' It includes all the activities necessary to ensure that the works are delivered effectively. The communities have mentioned specific areas of need which are currently lacking. These include poor roads making access difficult, electricity, schools etc. The mine together with local government need to agree on an approach to respond or assist with developing these areas of need such as the requirement for more schools/training facilities and health care facilities and assistance in decreasing the HIV/AIDs rate in the community. In addition to this, the municipality has a functional Local Aids council which drives the implementation of a local HIV/AIDS and TB response strategy. This needs to be communicated to the communities.

Since the delivery of municipal infrastructure involves all spheres of government and a whole range of sector departments, there is a strong need for both co-operative governance and cross sector collaboration. There are several national departments, including their regional or provincial counterparts, where relevant, that are directly contributing and adding value to the municipal infrastructure programmes. They do this through supporting the planning, design, implementation, operation and maintenance, monitoring and evaluation phases of infrastructure projects implemented by municipalities countrywide, and includes:

- Department of Provincial and Local Government (dplg) and its provincial counterpart;
- National Treasury and its provincial counterparts;
- Department of Water and Sanitation (DWS);
- Department of Public Works and its provincial counterparts;
- Department of Education and its provincial counterparts;
- Department of Health and its provincial counterparts;
- Sports and Recreation South Africa and its provincial counterparts;
- Department of Environmental Affairs (DEA) and its provincial counterparts;
- Department of Minerals Resources;
- Department of Transport and its provincial counterparts; and
- Department of Housing and its provincial counterparts.

Whilst national and provincial government are responsible for creating an enabling policy, financial and institutional (support) environment for municipal infrastructure, municipalities are responsible for planning and implementing municipal infrastructure. This is reflected in the various policies, which support the devolution of responsibility for municipal infrastructure development to the lowest possible level. Infrastructure development at a local level is dependent on both programme based and project-based activities. Both types of activities are dependent upon adequate resources in terms of skills and funding.

These activities have a beginning and an end and are aimed at addressing a particular need of a community. Within the local sphere there are different levels of responsibility that impact on municipal infrastructure. These are described below:

- Municipal level (multi-sectoral infrastructure programme);

- Municipalities need to ensure that they have programme and project management capacity for the overall management of the municipal infrastructure programme;
- Local sector level;
 - The local sector level is where sectoral planning and provision takes place, for example water services development planning and the provision of water services, transport planning, and the provision of transport services, and so on;
 - Sectoral planning feeds into the IDP;
- Project level;
 - The project level includes all activities that directly relate to the planning and implementation of projects.

It is anticipated that the project may have a short-term negative impact on the municipal road infrastructure in the area. The quality of the road infrastructure is already poor in areas and additional vehicle trips may cause the access road to deteriorate even further. Special care should be taken to ensure that existing infrastructure is not negatively impacted while the project is implemented.

Furthermore, during consultation with the community, it was identified that there is a dire need for additional educational facilities (primary and high schools and training centres) to be built in closer proximity to the communities as existing schools are too far and overcrowded. In addition to schools the communities highlighted the need for additional clinics and hospitals to be built closer to the communities as existing facilities are too far.

Table 7-7 and Table 7-8 describe the impacts before and after mitigation for the planning and decommissioning phases.

Table 7-7: Planning Phase – Functional government agencies – Insufficient essential services

Significance before mitigation		Moderate (-): 48
Proposed mitigation measures	<ul style="list-style-type: none"> With support from the municipality, improve access to health care services With support from the municipality, improve quality of health care through the implementation of the SLP With support from the municipality, improve health facility planning and accelerate infrastructure delivery through the implementation of the SLP Consult with provincial and national departments on sector specific programs for alignment (for the development of schools, libraries, clinics, water, electricity, roads, etc). Increase access to comprehensive HIV/AIDS, STIs and TB treatment, management and support. 	
Significance after mitigation		Low (-): 20

Table 7-8: Decommissioning Phase – Functional government agencies – Lack of support from governmental agencies to ensure the sustainability of essential services after mine closure

Significance before mitigation		High (-): 75
Proposed mitigation measures	<ul style="list-style-type: none"> Any of these areas of need which are developed by the mine during operations need to be adequately handed over to the municipality who will be responsible for ensuring that the provisioning of these needs are sustainable; The mine, together with local government need to agree on an approach to ensure the viability of these services during operation in preparation for closure. 	
Significance after mitigation		Moderate (-): 52

7.3.5 Emancipatory and empowerment processes

Emancipatory and empowerment processes are those that lead to an increase in the ability of local people to contribute to the decision-making that affects their lives. It is likely that capacity building will take place during the construction and operational phase of the project.

Capacity building and skills transfer

Phases at which impact is relevant:

Prior to construction

Operation

Capacity building refers to the conscious increasing of knowledge, networking capability and the skills base amongst local people. There is a perceived lack of support to local communities, especially woman and youth to enable them to access opportunities at the mine. During focus group discussions, most of the community members had concerns regarding the mine's inability to build their capacity, especially with regards to training provision by the mine. Furthermore, stringent entry level requirements for employment were identified by community members as a way of deterring them from accessing opportunities. Currently the minimum requirement for Grade 12 and a significant number of the surrounding communities do not fulfil this requirement nor do they have any practical skills training which would be required by the mine. This reduces their chances of gaining employment at Der Brochen.

It is predicted that the proposed project will add, to a limited degree, capacity building in the community, as opportunities do exist to develop the skills of local residents as well as opportunities for businesses and service providers. Skills development for employees and community members wishing to obtain employment through the project should, however, encompass more skills than merely the technical skills and should include life skills training and mentorship. In terms of training, it is suggested that all employees be trained in the function of their job and that this training incorporate health, safety, security and environmental aspects. The development and support of SMMEs in the local communities should also be encouraged as far as possible.

In order to ensure that the local communities enjoy equal advantage, it is advised that Anglo provide training and skills development programmes specifically tailored to local persons. It is furthermore advised that recognition of prior learning and training take place for all applicants with the relevant skills, but who may not have the necessarily qualifications.

Underground mechanised mining is proposed at the South Shaft. On a short-term basis, mechanisation generally has a negative effect on the labour complement and on the communities in which these mining companies operate. However, mechanisation may not necessarily lead to job losses but to different employment demographics such as the employment of more skilled people and to the upskilling of the current workforce during the operational phase. This will also help mitigate the impact of mine closure.

In order to ensure that all Anglo's policies and procedures translate into real time benefits to the local community it must become a requirement of all tender procedures that bidders comply with Anglo principles and policies. A key requirement should be that local communities be used for temporary, low and semi-skilled job opportunities. The use of local business should also be promoted as far as possible by providing them with preferential procurement status.

Table 7-9 and Table 7-10 describe the impacts before and after mitigation for the planning and operational phases.

Table 7-9: Planning Phase – Capacity building and skills transfer – Lack in capacity building

Significance before mitigation		Moderate (-): 48
Proposed mitigation measures	<ul style="list-style-type: none"> It is advised that Anglo provide training and skills development programmes specifically tailored to local persons It is furthermore advised that recognition of prior learning and training take place for all applicants with the relevant skills, but who may not have the necessarily qualifications; In order to ensure that all Anglo's policies and procedures translate into real time benefits to the local community it must become a requirement of all tender procedures that bidders comply with Anglo principles and policies; The use of local business should also be promoted as far as possible by providing them with preferential procurement status. 	
Significance after mitigation		Moderate (-): 30

Table 7-10: Operation Phase – Capacity building and skills transfer – Lack in capacity building in preparation for closure

Significance before mitigation		Low (+): 20
Proposed mitigation measures	<ul style="list-style-type: none"> It is advised that Anglo provide training and skills development programmes specifically tailored to local persons and employees 	
Significance after mitigation		Moderate (+): 36

Gendered division of labour**Phase at which impact is relevant:**

Prior to construction

In most societies' certain roles, occupations, responsibilities and qualities are associated with being male or female (i.e. gendered division of labour). While some of these roles have biological origins, many are socially constructed and deeply entrenched by history and tradition. Traditionally, women are represented in the caring professions (i.e. healthcare, education, etc.) and lacks representation in high paying professions, such as engineering (mining, construction and manufacturing).

Women still face barriers to entering and participation in the construction sector, even though South African legislation compels companies to employ women at all levels. The lack of participation has been attributed to low levels of education (specifically technical training), companies with unsupportive work cultures, a lack of mentors for women in the workplace and the lack of facilities and attention to ergonomics for women.

Gender equality is one of the basic rights guaranteed under South Africa's Constitution. It is an integral part of the country's system of fundamental basic human rights intended to guarantee the right to equality for all South Africans. The enjoyment of this constitutional right is enforced through a number of legislation and codes of good practice intended to eliminate unfair discrimination on the basis of a number of grounds such as religion, race, age, disability, culture, language and birth.

Section 9 (3)5 of the South African Constitution is part of the comprehensive Bill of Rights guaranteeing basic socio, economic, cultural and political rights to all South Africans. Among others, it prohibits any form of discrimination based on several grounds, which includes gender. Furthermore, section 9 (4) of the Constitution makes provision for the enactment of relevant national legislation to implement the

prohibition of discrimination. One of the key pieces of national legislation intended to prohibit discrimination and promote equality and fair treatment in the workplace is the Employment Equity Act, (Act 55 of 1998) (EEA). The Act provides for the promotion of “equal opportunity and fair treatment in employment through the elimination of unfair discrimination” as well as the implementation of “affirmative action measures to redress the disadvantages in employment experienced by designated groups, to ensure their representation in all occupational categories and levels in the workplace.” Designated groups include “black people, women and people with disabilities”.

While the Act is an important legal instrument for the promotion of equity and fair treatment of designated groups, when applied in conjunction with other relevant local and international legal and policy instruments it has the greatest impact. Among the local legal and policy instruments are: the Labour Relations Act (LRA) 66 of 1995, the Basic Conditions of Employment Act (Act 75 of 1997), the Promotion of Equality and Prevention of Unfair Discrimination Act (Act 4 of 2000), the White Paper on Affirmative Action (1998) as well as a range of relevant Codes such as the Code of Conduct on Employment Equity, the Code of good practice on Sexual Harassment, the Code of Good Practice on the Preparation, Implementation and Monitoring of Employment Equity Plans and other codes similarly intended to underpin the implementation of the EEA.

In addition, to current legal and policy instruments, a set of formal institutions exist in South Africa, designed to institutionalise support for and to monitor and evaluate the promotion of gender equality through proper application of relevant laws and policies in various sectors, including the workplace. These structures exist at national and provincial levels, both inside and outside government and the state. They include the Ministry of Women, Children and People with Disabilities; the Public Service Commission; South African Human Rights Commission and the South African Law Commission. This group of institutions forms a systemic network of support structures underpinning efforts to attain gender equality and fair treatment in all sectors of society.

Anglo should therefore ensure that their recruitment policy for Der Brochen mine incorporate a robust gender policy, which should aim to achieve broadly equal outcomes for women and men. To achieve this Anglo should:

- Provide equal remuneration for women and men for work of equal or comparable value;
- Remove barriers to the full and equal participation of women in the workforce;
- Provide full and genuine access to all occupations, including to leadership roles for women and men;
- Eliminate discrimination on the basis of gender particularly in relation to family and caring responsibilities for both women and men; and
- Encourage workplace consultation between employers and employees on issues concerning gender equality in employment and in the workplace.

It is understood that these outcomes are covered broadly in Anglo American's Code of Conduct but it is recommended that a recruitment policy specific to Der Brochen Mine is compiled and implemented.

The following actions can be taken to promote gender equity within the Anglo workplace:

- Establish a policy that ensures that men and women are compensated equally for performing the same work. Beyond equal pay for equal work, the policy should also ensure that both genders are treated equally in recruitment, training, hiring and promotion;
- Establish a policy that strictly and specifically forbids any form of sexual harassment; and
- Provide training on gender equality to management personnel. Educate managers in both the obvious and the subtle discrimination that takes place in organisations.

Table 7-11 describes the impacts before and after mitigation for the planning phase.

Table 7-11: Planning Phase – Gendered division of labour – Insufficient woman in the workplace

Significance before mitigation		Moderate (-): 36
Proposed mitigation measures	<ul style="list-style-type: none"> • Women must have equal employment opportunities; • Training and skills development should take place for women; • Remuneration of women should be equal to that of men when undertaking the same job; • Institute a well-designed gender equality strategy for the project. 	
Significance after mitigation		Low (-): 24

7.3.6 Socio-cultural processes

Socio-cultural processes are those that affect the culture of a society, that is, all aspects of the way that people live together. The following socio-cultural processes are relevant to the project:

- Health and social well-being
- Feelings in relation to the project
- Quality of the living environment
- Cultural impacts

Health and Social Well-being

Phases at which impact is relevant:

Prior to construction

Construction

Operation

Health aspects are included from a social perspective and will be expressed in non-medical terminology.

The Occupational Health and Safety (OHS) Act (Act 85 of 1993) provides for the protection of the health and safety of employees and other persons at a workplace. The prevention and management of work-related incidents are addressed by the OHS Act. It is, however, advised that Anglo develop a comprehensive policy in order to train all new employees in terms of the relevant health, safety and quality procedures.

Anglo should take all necessary steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice, as reflected in various internationally recognized sources including the World Bank Group Environmental, Health and Safety Guidelines, the client will address areas that include the: i) identification of potential hazards to workers, particularly those that may be life-threatening; ii) provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; iii) training of workers; iv) documentation and reporting of occupational accidents, diseases, and incidents; and v) emergency prevention, preparedness, and response arrangements.

Where accommodation services are provided to workers, Anglo will put in place and implement policies on the quality and management of the accommodation and provision of basic services. This also includes the applicable requirements of the IFC Guidelines on Worker Accommodation.

Construction related public health impacts due to possible air/dust pollution, noise pollution, light pollution, blasting and vibration should also be considered. The contractor as well as Anglo should strive to abide by the abovementioned Act, in addition to international best practice guidelines.

Furthermore, it is advised that Anglo ensure that everyone working at the mine is competent for the work they do. They must be properly trained and have the experience and knowledge to work in a safe and responsible manner. Proper health and safety training as well as PPE should be provided at the site and medical induction.

Areas of the project, particularly beyond the mine boundary, where there are particular health or safety hazards need to be marked and treated as danger areas. All people, other than those who have been specifically authorised to enter, must be excluded from such areas, for example by erecting warning signs and barriers. The barriers should clearly identify the boundary of the danger area and make entry impossible without a conscious effort. Suitable barriers must be provided around the project if members of the public are likely to trespass onto the site. Barriers should always be provided at project boundaries such as hedges, trenches and mounds. If heavy pedestrian traffic is noted in the area, it is recommended that more extreme measures be used such as the erection of sophisticated metal paling fences. Special care should be taken to keep all active personnel at the Der Brochen safe and out of harm's way by providing them with a site induction at the start of the construction period. All visitors to the site should receive the same induction.

The design, construction, operation, and decommission of the structural elements or components of the project must be done in accordance with GIIP, taking into consideration safety risks to third parties or affected communities.

Emergency preparedness and response measures must be developed in consultation with the local authorities and the relevant information shared with stakeholder in and around the area of the operations. Anglo should also inform the potentially affected communities about potential risks and impacts from the project activities in a culturally appropriate manner, including collaborating with the community and government agencies in their efforts to respond effectively to an emergency situation.

Where possible, Anglo should avoid or minimize the potential for community exposure to hazardous materials and substances that may be released by the project. Anglo should also avoid or minimise the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable diseases that could result from project activities. Anglo should avoid or minimise transmission of communicable diseases that may be associated with the influx of temporary or permanent project labour.

Preventive and control measures for the mitigation of these impacts must be consistent with good international industry practice, such as in the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) or other internationally recognized sources.

From a safety point of view, Anglo should assess risks to those within and outside the project site from the security arrangements provided. Anglo should ensure that any employee or service provider has received training on rules of conduct and the handling of security equipment. A grievance mechanism should be available where the community can raise concerns about security arrangements. Anglo should furthermore ensure that any unlawful or abusive acts by the security are investigated appropriately. Table 7-12, Table 7-13, Table 7-14, Table 7-15, Table 7-16, Table 7-17 and Table 7-18 describe the impacts before and after mitigation for the planning, construction and operational phases.

Table 7-12: Planning Phase – Health and social wellbeing

Significance before mitigation		Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, blasting/vibrations, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; Understand the impacts of blasting (from the North open pit) on the surrounding communities and undertake baseline surveys on the quality of building materials used on community infrastructure (including buildings, boreholes, etc). This should inform reasonable blasting limits that will avoid any negative impact on the community infrastructure; Ensure that the grievance mechanism is communicated to all surrounding communities to allow for the logging and tracking of nuisance associated grievances; The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative. 	
Significance after mitigation		Low (-): 20

Table 7-13: Construction Phase – Health and social wellbeing during the construction of infrastructure

Significance before mitigation		Moderate (-): 36
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; As a good practise measure, inform surrounding communities of the blasting schedule; Ensure that all nuisance associated grievances are addressed as per the grievance mechanism; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative. 	
Significance after mitigation		Low (-): 10

Table 7-14: Construction Phase – Health and social wellbeing during the construction of gravel maintenance roads to the proposed ventilation shafts

Significance before mitigation		Moderate (-): 30
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative. 	
Significance after mitigation		Low (-): 16

Table 7-15: Construction Phase – Health and social wellbeing during the upgrade of existing gravel roads to tar roads to serve as main access roads

Significance before mitigation		Low (-): 30
--------------------------------	--	-------------

Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative.
Significance after mitigation	Low (-): 24

Table 7-16: Operation Phase – Health and social wellbeing regarding impacts from mining vehicles on surrounding communities on mine access roads

Significance before mitigation	Moderate (-): 33
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative.
Significance after mitigation	Low (-): 20

Table 7-17: Operation Phase – Health and social wellbeing regarding impacts from mining vehicles on surrounding communities from the use of the gravel maintenance roads associated with the ventilation shafts

Significance before mitigation	Low (-): 22
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative.
Significance after mitigation	Low (-): 20

Table 7-18: Operation Phase – Health and social wellbeing regarding impacts from mining related activities including blasting

Significance before mitigation	Moderate (-): 48
Proposed mitigation measures	<ul style="list-style-type: none"> Environmental pollution (noise, dust, vibrations/blasting, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents; Implement reasonable blasting limits that will avoid any negative impact on the community infrastructure; As a good practise measure, inform surrounding communities of the blasting schedule; The necessary safety precautions should be taken, and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; Appoint a Health and Safety representative.

Significance after mitigation

Moderate (-): 40

Feelings in relation to the project

Phases at which impact is relevant:

Prior to construction

Operation

Proposed projects and developments often generate uncertainty, anxiety or fear due to lack of communication between the project, especially the Social Performance (SP) team and the communities. Perceived lack of information provided to the local communities by the SP team, especially with regards to employment and procurement opportunities has led to the erosion of trust, which affects the communities attitude towards the project, and Anglo operations in general. The capacity of the SP team is also inadequate to ensure proper, consistent and continuous engagement with stakeholders. Currently Der Brochen SP team consists of two team members, with one off-site support personnel, to engage with a total of 26 key villages spanning over a 30km radius.

These impacts include uncertainty, annoyance, dissatisfaction due to a failure of the project to deliver promised benefits and an experience of moral outrage. Examples include where a project leads to violation of deeply held moral or religious beliefs or requires households to relocate their houses to make way for the new project.

The credibility or trust in government, as well as attitudes towards private companies, will affect a community's attitudes towards the process. If people have been made promises by companies and politicians before, and have been disappointed, it is less likely that they will believe that benefits offered will actually be delivered. When offers to negotiate economic or other benefits become part of the public consultation process, they can create serious internal tensions within communities and cultural groups or exacerbate ones already existing. The long-term ramifications of these can be very serious and very negative for the social fabric of a community.

The feelings of the residents and community groups should not be disregarded. In order to conduct the proposed project activities in a responsible manner, Anglo as well as the appointed contractors should not only consider the ecological impacts of the proposed development, but also the social impacts. It will therefore be important for Anglo to introduce a media/information dissemination campaign in addition to the public participation process conducted as part of the EIA to ensure a transparent process going forward. Community information requirements include the following:

- Recruitment process to be followed;
- The types and number of employment opportunities for local communities;
- How the mine can assist the communities in gaining relevant skills to be eligible to work on the mine;
- Health awareness campaigns including HIV/Aids, drug abuse and TB;
- How the potential negative impacts on the biophysical and social environment (dust generation, noise generation, blasting, perceived surface and ground water contamination) will be monitored and policed, etc;
- How the reporting of monitoring data can be accessed;
- The responsibilities of environmental officers during construction and ways to report any suspected environmental impacts; and
- A grievance mechanism by which the community can raise concerns or comment on activities taking place at the mine.

Anglo should ensure that their Stakeholder Engagement Plan (SEP) is scaled to the project risks and impacts and development stage. The SEP should be tailored to the characteristics and interests of the affected communities. The SEP should also ensure that community members have access to relevant information on: i) the purpose, nature, and scale of the project; ii) the duration of proposed project activities. iii) any risks to and potential impacts on such communities and relevant mitigation measures; iv) the envisaged stakeholder engagement process; and v) the grievance mechanism.

The SEP should further ensure that any consultation processes that are implemented: i) begin early in the process; ii) be based on the prior disclosure and dissemination of information which is in a culturally appropriate local language(s) and format; iii) be documented.

It is advised that the communities be engaged with on platforms suitable to their needs and take their access to online (internet) resources as well as transport (travel to centralised meetings far from their homes) into consideration.

It is critical to ensure the transparent flow of information. It is, however, advised that Anglo inform all stakeholders that any commitments made are strictly subject to receiving a positive Environmental Authorisation for the project. Care should be taken not to create any undue expectation from the community in terms of employment and business opportunities.

Anglo should implement and maintain a procedure for external communications that includes methods to: i) receive and register external communications from the public; ii) screen and assess the issues raised and determine how to address them; iii) provide, track, and document responses, if any; and, iv) adjust the management program, as appropriate.

The grievance mechanism should be scaled to the risks and adverse impacts of the project and have doorstep- and affected communities as its primary user. It should seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies. Anglo should inform the affected communities about the mechanism in the course of the stakeholder engagement process.

In addition, Anglo should consider making publicly available periodic reports on their environmental and social sustainability.

Table 7-19 and Table 7-20 describe the impacts before and after mitigation for the planning and operational phases.

Table 7-19: Planning Phase – Feelings in relation to the project – Potential stakeholder unhappiness over perceived lack of coordinated disclosure of the Der Brochen project activities

Significance before mitigation		Moderate (-): 40
Proposed mitigation measures	<ul style="list-style-type: none"> Anglo to work with local traditional leadership, community representatives or ward councillors to inform residents on different levels (print media, radio, flyers, social media, etc.) about the project background, local social and economic benefits, roll-out, employment procedures, etc; Anglo, in liaison with the municipality to engage with stakeholders and community structures to inform them of the project details, monitoring data, and other information that may have a bearing on potential environmental impacts associated with the proposed project; Anglo to provide more accessible platforms for stakeholders to understand the collection and monitoring of data, such as inviting stakeholders on a site visit and providing them with demonstrations (i.e. video) of similar projects or activities; and Make use of the existing stakeholder engagement plan (SEP) which provides engagement protocols for Anglo's stakeholders. 	
Significance after mitigation		Low (-): 24

Table 7-20: Operation Phase – Feelings in relation to the project – Unfavourable perceptions of the project

Significance before mitigation		Moderate (-): 56
Proposed mitigation measures	<ul style="list-style-type: none"> Anglo to work with local traditional leadership, community representatives or ward councilors to inform residents on different levels (print media, radio, flyers, social media, etc.) about the project background, local social and economic benefits, roll-out, employment procedures, etc; Anglo, in liaison with the municipality to engage with stakeholders and community structures to inform them of the project details, monitoring data, and other information that may have a bearing on potential environmental impacts associated with the proposed project; Anglo to provide more accessible platforms for stakeholders to understand the proposed project, such as inviting stakeholders on a site visit to the proposed site and providing them with demonstrations (i.e. video) of similar projects. 	
Significance after mitigation		Moderate (-): 30

Physical quality of the living environment (actual and perceived)**Phases at which impact is relevant:**

Prior to construction

Construction

The impacts related to the quality of the living environment refer to how appropriate, from a social point of view, the study area is to live in. These impacts relate directly to the biophysical environment and are assessed according to both a perceived and actual dimension.

At any and all types of construction sites, the construction method and/or processes and actions taken, will have the potential to create pollution/environmental degradation. While these may differ from project to project only experience will enable officials to easily identify these. Some factors may not be readily measurable and may not be visible at all. Still, impacts such as noise, odour, dust, etc. have an impact on the social well-being of society.

During the construction of the project, nuisance impacts such as noise, air pollution and increased levels of traffic can have an impact on the physical quality of the living environment. It's important to note, however, that most of these impacts will only be present for the duration of the construction phase. It is recommended that the following mitigation measures should be complied with, in addition to the mitigation measures provided below.

- Maximise the offset distance between noisy equipment items and human receptors;
- Construction contractors should be required to use equipment that is in good working order and that meets current best practice noise emission levels. This should be achieved by making it a component of contractual agreements with the construction contractors;
- Community liaison would form a critical element in the management of the impacts. If provided with adequate warning, affected sensitive receptors are sometimes willing to accept excessive noise or vibrations (in the case of blasting) for a short period of time. Designation of a community liaison officer who will be able to deal with the concerns of residents and establishment of a complaint response programme can enable the identification and resolution of any noise related concerns at an early stage;
- A grievance mechanism, accessible to members of public, should be implemented and maintained. A grievance mechanism which allows for the capturing of comments and outcomes should be developed and implemented. The register should also include a means of recording and communicating the close-out of issues.
- All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a municipal by-law or National Legislation, shall comply with such regulation while in the course of project activity;
- Electrically powered equipment instead of pneumatic or internal combustion powered equipment shall be used, where feasible;

- Construction site and haul-road speed limits shall be established and enforced during the construction period;
- The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only;
- The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process shall be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor; and
- The contractor shall develop a project noise control plan, which shall have been approved and implemented prior to commencement of any construction activity.

Emissions to air from construction, operational and rehabilitation machinery have the potential to be significant if appropriate mitigation and management measures are not undertaken. Under normal, responsible operation, a number of areas of potential emissions can include:

- Dust and associated emissions during all phases, particularly associated with loading and offloading of material and the transport of the material, as well as bulldozer activity;
- Vehicle emissions associated with the construction, operational and decommissioning phases.

Social specific mitigation measures which would be required to eliminate any identified risk of dust impacts associated with construction activities are listed below:

- As with noise impacts, a grievance mechanism, accessible to members of public, should be implemented and maintained;
- Bonfires and burning of waste materials should be prohibited;
- Where practical, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind.

The following social specific mitigation measures relating to construction equipment and vehicles are recommended to be implemented:

- Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads;
- Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and
- Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust.

In order to address impacts relating to dust pollution, it is recommended that vehicle (construction and transport) speeds be limited during the construction and operational phase, especially during high risk periods of high winds, high temperature and low humidity.

Most construction sites produce domestic, industrial and hazardous waste products. During the construction phase, it is suggested that the appointed contractor continually seek opportunities to minimise the generation and disposal of waste products through recycling, waste minimisation programmes and improvement of operational practices and processes. However, should mitigation measures be implemented, this impact is considered very low. It is therefore advised that construction workers and operational staff be educated in best practice waste minimisation procedures.

The availability of clean and abundant water is a critical concern for the surrounding landowners and communities whose livelihoods depend on it. Every effort should be taken to protect the quantity and quality of water supply to landowners.

In conclusion, during the construction and operational phases for the project, it is expected that there will be a decrease in the quality of the physical environment. Noise levels (including blasting and vibrations) and traffic volumes will increase as result of the construction and operational activities.

It is expected that the surrounding environment will suffer a level of environmental degradation, even though the surrounding communities may not be directly impacted (rather indirectly, or in a cumulative way as a result of, for example, increased traffic or reduced levels of air quality). It is, however, recommended that all the mitigation measures suggested by the EIA (including all specialist reports) and EMP be implemented and monitored on a regular basis.

Table 7-21, Table 7-22, Table 7-23, Table 7-24 and Table 7-25 describe the impacts before and after mitigation for the planning and construction phases.

Table 7-21: Planning Phase – Physical quality of the living environment – Site clearing of all footprint areas can generate noise and dust impacts

Significance before mitigation		Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> • A grievance mechanism should be implemented and maintained; • Bonfires and burning of waste materials should be prohibited; • Where practical, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind; • Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; • Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and • Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. 	
Significance after mitigation		Low (-): 21

Table 7-22: Planning Phase – Physical quality of the living environment – Stockpiling of topsoil can generate dust

Significance before mitigation		Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> • A grievance mechanism should be implemented and maintained; • Bonfires and burning of waste materials should be prohibited; • Where practical, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind; • Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; • Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and • Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. 	
Significance after mitigation		Low (-): 21

Table 7-23: Planning Phase – Physical quality of the living environment – Use of gravel roads for pre-construction activities

Significance before mitigation		Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> • A grievance mechanism should be implemented and maintained; • Bonfires and burning of waste materials should be prohibited; • Where practical, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind; • Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; 	

	<ul style="list-style-type: none"> Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust.
Significance after mitigation	Low (-): 21

Table 7-24: Construction Phase – Physical quality of the living environment – Construction of infrastructure

Significance before mitigation	Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> A grievance mechanism should be implemented and maintained; Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust.
Significance after mitigation	Low (-): 15

Table 7-25: Construction Phase – Physical quality of the living environment – Construction of gravel maintenance roads

Significance before mitigation	Low (-): 28
Proposed mitigation measures	<ul style="list-style-type: none"> A grievance mechanism should be implemented and maintained; Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust.
Significance after mitigation	Low (-): 21

Loss of natural and cultural heritage

Phase at which impact is relevant:

Prior to construction

South Africa is a multi-cultural society and urbanisation has resulted in many of the diverse cultures sacrificing their cultural integrity. The National Heritage Resources Act 25 of 1999 and Provisional Declaration of Types of Heritage Objects (General Notice No. 630 of 2000) are concerned with the protection of heritage and promotion of history and culture.

During the stakeholder engagement process, concerns were raised that the mining activities are disturbing cultural heritage sites within the communities and that the heritage and cultural sites (including caves, mountains, old graves and initiation schools) need to be preserved.

In addition to complying with applicable law on the protection of cultural heritage, including national law implementing South Africa's obligations under the Convention Concerning the Protection of the World Cultural and Natural Heritage, Anglo should identify and protect cultural heritage by ensuring that internationally recognised practices for the protection, fieldbased study, and documentation of cultural heritage are implemented.

Where the project is likely to affect cultural heritage, Anglo should consult with those in the affected communities who use, or have used within living memory, the cultural heritage for long-standing cultural purposes. Anglo should consult with the affected communities to identify cultural heritage of importance and incorporate it into their decision-making process. Consultation should also involve the relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.

In the event where the site contains cultural heritage or prevents access to previously accessible cultural heritage sites Anglo should, based on their consultations, allow continued access to the cultural site or provide an alternative access route, subject to overriding health, safety, and security considerations.

A Heritage Impact Assessment (HIA) was commissioned as part of this S&EIR process, however, at the time of writing the SIA, the report was not yet available for review. This section should therefore be considered in association with the HIA findings, and all proposed mitigation measures should be adhered to (see Table 7-26).

Table 7-26: Planning Phase – Loss of cultural heritage due to clearance of vegetation and soil in preparation for construction

Significance before mitigation		Low (-): 22
Proposed mitigation measures	<ul style="list-style-type: none"> Local residents and land owners should inform mitigation measures when addressing any potential impact on cultural heritage sites; HIA mitigation measures to be implemented; and The construction of infrastructure outside the boundaries of the mine should avoid impacting on the identified sites as far as practically possible. 	
Significance after mitigation		Low (-): 7

7.3.7 Cumulative Impacts

Cumulative effects or impacts are defined as “changes to the environment that are caused by an action in combination with other past, present and future human actions” (DEAT, 2004). The NEMA EIA Regulations (2014) define cumulative impact as follows: “in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.”

Although the construction of the proposed project poses no social fatal flaws, and even though most of the anticipated impacts can be mitigated without resulting in any major social consequences, the proposed project forms part of a larger, all-inclusive environment. As mentioned in section 2.2, there are several approved activities, some of which have commenced whilst others will be initiated as part of the LoM.

In addition, the long history between the communities in the area and the mines must be considered. There is a potential that feelings of mistrust among the community and the mines can be used by community structures to unjustly influence public opinion about the proposed project. The strategic importance of mining in the region, should not be ignored.

The sub-sections below describe the cumulative impacts that have been identified for the proposed project. The cumulative impacts will be most profound during the construction phase of the project.

Impact on local surface water resources used by the communities

The mine is situated in an area where water demand is growing as population increases and economic activities increase. Current water shortages are seen as part of a regional change in rainfall patterns associated with the impacts of climate change as well as the demand for water from mines and other economic activities. The Draft National Adaptation Strategy for Climate Change has already called on provinces and municipalities to build institutional capacity for response planning and implementation.

The DWS has also identified water scarcity in all major urban centres which anchor the country's economy. DWS is therefore focussing heavily on diversification of its water mix in order to prevent serious water shortages from adversely affecting the economy and peoples' livelihoods.

Comments received during the stakeholder engagement process indicate that the mining communities are concerned that their surface water resources are being negatively impacted on by all the mines in the area, specifically the Molotsi and Moletsane Rivers. Communities are also attributing the loss of their dogs and cattle to the contaminated water within these rivers. Water scarcity has been noted as an issue in the Pakaneng Village which can be extrapolated to several villages due to the natural dry climate of the region. The additional impact of this proposed project on water resources can therefore not be considered in isolation, and the continued negative impact on the communities and their daily functioning should be considered.

Blasting and noise impacts from mining on surrounding communities

There are several mining operations in the area surrounding the Der Brochen mine. In addition to the noise generated by mining operations (i.e. North open pit and associated infrastructure) and trucks, the communities consulted during the stakeholder engagement process have highlighted that blasting is a severe impact which has impacted on their houses and the noise generated from blasting activities is a nuisance. Der Brochen will add to the blasting and noise impacts already taking place in the area and therefore these impacts on the surrounding communities need to be assessed by means of a noise and vibration assessment.

Cumulative health impacts

The baseline has revealed a number of concerns for the socio-economic status of FGTL and TCM. The incidence of HIV/AIDs, while less than previous years in FGTL, is still significant, particularly in the rural and peri-rural parts of the municipality. The TCM still has one of the highest HIV prevalence rates in the Mpumalanga Province and few clinics and hospitals to service those affected specifically in the affected project area. It is advised that the mine together with the local municipality help address the need for additional health-care facilities as well as access the conditions aggravating the vulnerability of communities to HIV/AIDs such as poverty.

Job creation

From a cumulative impact perspective, it is anticipated that the construction of the activities at Der Brochen will have limited new job opportunities as the project is seen as a replacement project. Employees will be moved around from old sections of the mine to continue working at the new mine activities thereby allowing the mine to continue to operate with its current workforce of approximately 2350 people.

It is therefore anticipated that the cumulative positive impact of new job opportunities in the local area will only provide a marginal improvement in the overall status quo.

The net effect of the mining developments on local unemployment levels, given that there may be a larger worker pool due to influx, cannot be predicted at this stage.

It is anticipated that the cumulative impact of employment, and associated benefits will be most profound during the construction phase of the operation when employment opportunities will be at their highest, albeit of a temporary nature.

Based on the review of the potential environmental, social and economic impacts associated with the proposed project, the overall social benefit outweighs the potential negative impacts, which overall are of low significance.

8 Concluding Remarks

The socio-economic impacts anticipated from the proposed Der Brochen mine are minimal. By far the biggest concern that has been identified through the stakeholder engagement was the lack in employment opportunities available for the immediately affected communities which is not an impact which the mine has created but is an area wide issue. The biggest impact that the mine will have is to address issues regarding unemployment in a positive manner that will contribute to the community. The social impacts can be mitigated where negative, but by enhancing the positive impacts, the mine will have a far greater positive impact, especially if they implement the requirements of the IFC, GIIP and Anglo Policies such as the Anglo American Social Way, and mitigation measures of the SIA and EMP. The South African legislation also requires mines to pay taxes and contribute towards their SLP. The objectives of the SLP include:

- (a) Promote economic growth and mineral and petroleum resources development in the Republic (Section 2 (e) of the (MPRDA);
- (b) Promote employment and advance the social and economic welfare of all South Africans (Section 2 (f) of the MPRDA);
- (c) Ensure that holders of mining or production rights contribute towards the socio-economic development of the areas in which they are operating as well as the areas from which the majority of the workforce is sourced (Section 2 (i) of the MPRDA, and the Charter); and
- (d) To utilize and expand the existing skills base for the empowerment of HDSA and to serve the community.

Due to current recruitment procedures that requires a minimum qualification, many hopeful applicants do not qualify for job opportunities. Anglo has the opportunity to immediately address this by developing ABET and FET opportunities within the community.

An additional concern is the lack of educational and health care facilities in close proximity to the communities. Although Anglo cannot be expected to provide education and healthcare services, it must ensure that they collaborate with the municipality to propose a way forward in order to mitigate this impact. Anglo should assist in developing the capacity of these facilities to ensure their future sustainability.

There is a risk that vulnerable persons living within the surrounding communities may be disproportionately affected by the project because of their access to information and political power. Anglo should propose and implement differentiated measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in sharing development benefits and opportunities. Special care should be taken to ensure that benefits flowing from the SLP, procurement and employment process benefit the vulnerable members of the community.

Since most of the amendment activities will take place with the mine's existing boundary, it is not anticipated that significant impacts on the social environment from the construction and operation of the mine's additional activities will occur. However, despite this, all of the project phases will result in some socio-economic impact that will need to be addressed based on the mitigation measures recommended in this report. It is anticipated that proactive and sustainable mitigation measures will mitigate most of the negative impacts and enhance the positive to an extent that the mine becomes an asset to the local community and enhances their current standard of living.

It is recommended that the Der Brochen mine's Environmental and Social Management System be updated to include the findings of this SIA and to incorporate the mitigations measures provided for the anticipated impacts. It is further recommended that management plans be devolved for influx management, employment and supplier management, contractor management and closure

management. The identified impacts and associated mitigation measures should be re-assessed throughout the life span of the mine and updated on a regular basis. This process should contribute towards the closure plan for the mining operation.

Anglo should establish an overarching policy defining the environmental and social objectives and principles that guide the project to achieve sound environmental and social performance. Anglo should communicate the policy to all levels of its organization.

Training should be provided to all staff, especially staff that will be responsible for implementing and managing the Environmental and Social System. Sufficient organisational capacity should be developed to implement the mitigation measures and management programmes proposed in this report.

Effective monitoring and reporting should take place on the social impacts highlighted in this report. Where possible, community members must be capacitated to assist in the identification of indicators and data collection

9 References

- Anglo American Platinum (2018). Der Brochen Mine Social and Labour Plan: 2016-2020
- Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (2004). At risk: natural hazards, people's vulnerability and disasters. Routledge.
- Der Brochen Social and Labour Plan 2016-2020. (2019). pp.1-100.
- Fetakgomo Greater Tubatse Local Municipality (2018). Draft IDP 2017/18 for Fetakgomo Greater Tubatse Municipality (LM476). pp.1-502.
- Greater Sekhukhune District Municipality (2009). Integrated Development Plan. Pp 1 - 460
- HSRC (2012). South African National HIV Survey. Pp 1- 195. [Accessed on 07/08/2018 from <http://www.hsrc.ac.za>
- Limpopo Department of Health (n.d.). [Accessed on 07/08/2018 from <http://www.doh.limpopo.gov.za/hospitals#vhembe>]
- National Environmental Management Act No. 107 of 1998
- National Planning Commission. (2012). National Development Plan 2030: Our future—make it work. Presidency of South Africa, Pretoria.
- Pienaar, G. (2013). Land Tenure Security: The Need for Reliable Land Information. The Journal of the Helen Suzman Foundation, 70, 20-27.
- Section 24 of the Constitution of the Republic of South Africa, Act 108 of 1996
- South African History Online (2014). Land Restitution in South Africa since 1994. [Accessed on 17/09/2018 from <https://www.sahistory.org.za/article/land-restitution-south-africa-1994>]
- South African Police Department (n.d.). Crime Statistics 2016/2017. [Accessed on 07/08/2018 from <https://www.saps.gov.za/services/crimestats.php>]
- SRK Consulting (2014). Der brochen Social Impact Assessment. pp.1-50.
- Statistics South Africa (2014). National Household Travel Survey. Statistics South Africa. Pretoria
- Statistics South Africa (2018a, May 15). Youth unemployment still high in Q1: 2018. [Accessed on 30/08/2018 from: <http://www.statssa.gov.za/?p=11129>]
- Statistics South Africa (2018b). General Household Survey 2017. Statistical Release P0318. [Accessed on 30/08/2018 from: <http://www.statssa.gov.za/publications/P0318/P03182017.pdf>]
- Statistics South Africa. (1998). The people of South Africa: population census 1996, census in brief. Statistics South Africa. Pretoria.
- Statistics South Africa. (2003). Census 2001: Census in brief. Statistics South Africa. Pretoria
- Statistics South Africa. (2012). Census 2011 Census in brief. Statistics South Africa. Pretoria.
- Statistics South Africa. (2016). Community Survey 2016, Statistical release P0301. Statistics South Africa. Pretoria.
- Thaba Chweu Local Municipality (2018). Intergrated Development Plan 2017-2022 Term. pp.1-169.
- United Nations (2000). United Nations millennium declaration. United Nations General Assembly. [Accessed on 06/08/2018 from <http://www.un.org/millennium/declaration/ares552e.pdf>]

United Nations (2015). Transforming Our World: The 2030 Agenda for Sustainable Development. New York: UN Publishing.

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

Prepared by

Jessica Edwards

Senior Social Scientist

Prepared by

Adel Malebana

Senior Social Scientist

Prepared by

Ashleigh Maritz

Senior Environmental Scientist

Reviewed by

Vassie Maharaj

Partner

Appendices

Appendix A: Land claims enquiry sent to the Limpopo RLCC Office



30 October 2018
533247

J. Phukubye
Department of Rural Development and Land Affairs
Information Management Unit
Private Bag X9552
Polokwane
0700

Email: jerry.phukubye@drdlr.gov.za

Dear Mr Phukubye

Confirmation of land claims on Anglo American Platinum's (AAP's) Der Brochen Expansion Project footprint, Limpopo Province

SRK Consulting is conducting an environmental authorisation process for the Expansion of the Der Brochen Mine project in Limpopo Province. As part of this process, we need to confirm with your office if there are official land claims on the following farms affected by the project:

- Booyssendal 43 JT;
- Der Brochen 7 JT;
- Dwars Rivier 372 KT
- Hebron 5 JT;
- Helena 6 JT;
- Hermansdal 3 JT;
- Kalkfontein 367 KT
- Mareesburg 8 JT.
- Richmond 370 KT;
- Schaapkraal 42 JT;
- St George 2 JT;
- Thornecliffe 374 KT
- Vygenhoek 10 JT; and
- Welgevonden 9 JT.

Partners R Armstrong, S Bartels, AH Bracken, N Brien, JM Brown, CD Dalglish, BM Engelsman, R Gardiner, M Hinsch, W Jordaan, WC Joughin, DA Kilian, S Kisten, F Lake, JA Lake, V Maharaj, I Mahomed, HAC Meintjes, MJ Morris, GP Nel, VS Reddy, T Shepherd, PJ Shepherd, MJ Sim, VM Simposya, JS Stiff, HFJ Theart, KM Uderstadt, AT van Zyl, MD Wanless, ML Wertz, A Wood

Directors AJ Barrett, CD Dalglish, WC Joughin, V Maharaj, VS Reddy, PE Schmidt, PJ Shepherd

Associate Partners PJ Aucamp, CM Bauman, LSE Coetser, M du Toit, SG Jones, L Linzer, JI Mainama, L Nedeljkovic, RD O'Brien, S Reuther, JJ Slabbert, M van Huyssteen, D Visser

Consultants JR Dixon, PrEng, GC Howell, PrEng, T Hart, MA, TTHD, PR Labrum, PrEng, RRW McNeill, PrTech Eng, PN Rosewarne, PrSci Nat, MSc, AA Smithen, PrEng, TR Stacey, PrEng, DSc, PJ Terbrugge, PrSci Nat, MSc, DJ Venter, PrTech Eng

African Offices:

Cape Town	+ 27 (0) 21 659 3060
Durban	+ 27 (0) 31 279 1200
East London	+ 27 (0) 43 748 6292
Johannesburg	+ 27 (0) 11 441 1111
Pietermaritzburg	+ 27 (0) 33 347 5069
Port Elizabeth	+ 27 (0) 41 509 4800
Pretoria	+ 27 (0) 12 361 9821
Accra	+ 23 (3) 24 485 0928
Lubumbashi	+ 243 (0) 81 999 9775

Group Offices:

Africa
Asia
Australia
Europe
North America
South America



For each of the farms, may you kindly provide the following information:

- When were the claims lodged?
- Who are the land claimants?
- What is the KRP number?
- What is the current status of the claim?

Should you need more information, please do not hesitate to contact Adel Malebana on 011 441 1151 or 073 125 6447.

Yours faithfully,

SRK Consulting (South Africa) (Pty) Ltd

SRK Consulting - Certified Electronic Signature
 **srk** consulting
433247/43401/Letter
2427-1242-3472-MALA
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database.

Adel Malebana

Senior Social Scientist

Appendix B: Confirmation of land claims from the Limpopo RLCC Office



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: LIMPOPO
 61 Biccard Street/96 Kagiso House Cnr. Rissik and Schoeman, Polokwane, 0700
 Private Bag X9552, Polokwane, 0700
 Tel: (015) 284 6300/287 2600 Fax No: (015) 295 7404/7403

Enq: Ratshisusu TU
 Our Ref: 9/2/2 – KRP 239

SRK CONSULTING
P O BOX 55291
NORTHLANDS
2116
 Email: AMalebana@srk.co.za

Attention: Mr / Ms Adel Malebana

Dear Sir / Madam

ENQUIRIES REGARDING LAND CLAIMS IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994)

1. Your enquiry dated the 31 October 2018 has reference and is acknowledged.
2. Kindly take note that there are restitution land claims lodged prior 1998 on the property appearing on your letter. The land claims are as follows:

Property/Farm Name	Claimant(s)	KRP	Claim Status
Mareesburg 8 JT	Mawela Community	1973	Research Approved Report
Richmond 370 KT	Masha Community	12317	Research
	Mawela Community	1973	Research Report Approved
	Leshaba Community	4235	
Schaapkraal 42 JT	Ga Mawela Community	1973	
	Phetla Tribe	7965	
	Tshehla MJ	338	
	Baga Choma Community	337	
St George 2 JT	Ga Mawela Community	1973	Research
	Masha Community	12317	Settled: Restoration
	Ga Mawela Community	5882	
Thornecliffe 374 KT	Ga Mawela Community	1973	Research Report Approved
	Moletji Dwarsrivier Community	4266	

Vygenhoek 10 JT	Ga Mawela Community	1973	Research Report Approved
	Vygenhoek Community	465	
	Baga Choma Community	337	
	Tshehla MJ	338	
	Phetla Tribe	7965	
Welgevonden 9 JT	Mashau Community	12317	

The Project Manager is Mrs Makhanana Senwana and she can be contacted at (015) 284 6300 or makhanana.senwana@drdlr.gov.za

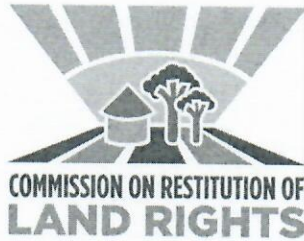
Yours Faithfully,



Mr. S S MABEBA

DIRECTOR QUALITY ASSURANCE AND ADMINISTRATION

DATE: 15/11/2018



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: LIMPOPO

61 Biccard Street/96 Kagiso House Cnr. Rissik and Schoeman, Polokwane, 0700

Private Bag X9552, Polokwane, 0700

Tel: (015) 284 6300/287 2600 Fax No: (015) 295 7404/7403

Enq: Ratshisusu TU
Our Ref: 9/2/2-R/6/141/285/39037

SRK CONSULTING
P O BOX 55291
NORTHLANDS
2116
Email: AMalebana@srk.co.za

Attention: Mr / Ms Adel Malebana

Dear Mr / Ms Sir / Madam

**LAND CLAIMS ENQUIRY – MAREESBURG 8 JT, RICHMOND 370 KT,
SCHAAPKRAAL 42 JT, ST GEORGE 2 JT, THORNECLIFFE 374 KT &
VYGENHOEK 10 JT**

We refer to your letter dated 30 October 2018.

We confirm that there are existing land claims against the Property. The claims were lodged by Batau бага Choma with ref: R/6/141/285/39037 on 27-11-2014 & others.

The claims were lodged in terms of the Restitution of Land Rights Amendment Act, 2014 (Act No 15 of 2014) ("the Amendment Act") which, amongst others, reopened the lodgement of claims for a period of five years.

The validity of the Amendment Act was challenged in the Constitutional Court. The Constitutional Court found the Amendment Act to be invalid because of the failure of Parliament to facilitate public involvement as required by the Constitution. The Amendment Act ceased to be law on 28 July 2016.

The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, but it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims.

The Commission will therefore not be processing the above claim until it finishes claims lodged by 31 December 1998 or until Parliament passes a new law providing for re-opening of lodgement of claims.

It is important to note that the provisions of section 11 (7) of the Restitution of Land Rights Act, 1994 do not apply until after the Commission has accepted the claim for investigation and published its details in the Government Gazette. That will only be done on the happening of either event in the previous paragraph.

Yours faithfully

A handwritten signature in black ink, appearing to read 'M. S. Mabeba', is written over a circular stamp that is partially obscured.

MR. S S MABEBA

DIRECTOR QUALITY ASSURANCE AND ADMINISTRATION

DATE: 15/11/2018



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: LIMPOPO

61 Biccadd Street/96 Kagiso House Cnr. Rissik and Schoeman, Polokwane, 0700

Private Bag X9552, Polokwane, 0700

Tel: (015) 284 6300/287 2600 Fax No: (015) 295 7404/7403

Enq: Ratshisusu TU
Our Ref: 9/2/2-R/5/121/460/1102

SRK CONSULTING
P O BOX 55291
NORTHLANDS
2116
Email: AMalebana@srk.co.za

Attention: Mr / Ms Adel Malebana

Dear Mr / Ms Sir / Madam

LAND CLAIMS ENQUIRY – WELGEVONDEN 9 JT

We refer to your letter dated 30 October 2018.

We confirm that there are existing land claims against the Property. The claims were lodged by Dithabeng tsa Moletsi Community with ref: R/5/121/460/1102 on 10-07-2014 & others.

The claims were lodged in terms of the Restitution of Land Rights Amendment Act, 2014 (Act No 15 of 2014) ("the Amendment Act") which, amongst others, reopened the lodgement of claims for a period of five years.

The validity of the Amendment Act was challenged in the Constitutional Court. The Constitutional Court found the Amendment Act to be invalid because of the failure of Parliament to facilitate public involvement as required by the Constitution. The Amendment Act ceased to be law on 28 July 2016.

The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, but it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims.

The Commission will therefore not be processing the above claim until it finishes claims lodged by 31 December 1998 or until Parliament passes a new law providing for re-opening of lodgement of claims.

It is important to note that the provisions of section 11 (7) of the Restitution of Land Rights Act, 1994 do not apply until after the Commission has accepted the claim for investigation and published its details in the Government Gazette. That will only be done on the happening of either event in the previous paragraph.

Yours faithfully

A handwritten signature in black ink, appearing to read 'M. S. Mabeba', is written over a circular stamp that contains several vertical lines.

MR. S. S. MABEBA

DIRECTOR QUALITY ASSURANCE AND ADMINISTRATION

DATE: 15/11/2018



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: LIMPOPO
 61 Biccard Street/96 Kagiso House Cnr. Rissik and Schoeman, Polokwane, 0700
 Private Bag X9552, Polokwane, 0700
 Tel: (015) 284 6300/287 2600 Fax No: (015) 295 7404/7403

Enq: Kenneth Maunye
 Our Ref: 9/2/2/ KRP 1973

SRK Consulting
PO Box 55291
Northlands
2116

Email: amalebana@srk.co.za

Dear Sir/Madam

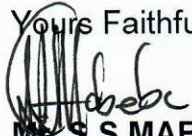
ENQUIRIES REGARDING LAND CLAIMS IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994)

1. Your enquiry dated the 30 October 2018 has reference and is acknowledged.
2. Kindly take note that there are restitution land claims lodged prior 1998 on the properties appearing on your letter. The land claims are as follows:

Property/ Name	Farm	Claimant (s)	KRP(s)	Claim Status
Booyssendal 43 JT		Ga Mawela Community	1973	Research Approved
Der Brochen 7 JT		Phetla Tribe	7965	Research
		Ga Mawela Community	1973	
Dwarsrivier 372 KT		Masha Community	12317	Research Approved
		Ga Mawela Community	1973	
		Moletsi Dwarsrivier Community	4266	
Helena 6 JT Hermansdal 3 JT		Masha Community	12317	Research
		Ga-Mawela Community	1973	
Kalkfontein		Rantho Tribal Authority	794	
		Bahlakwana ba Rantho	6603	
		Masha Lengwai Community	12317	
		Mokgwadi P.J & other Individuals	4250 & others	

The Acting Project Manager for Sekhukhune District is Ms Makhanana Senwana and she can be contacted at (015) 284 6300 or Makhanana.Senwana@drdlr.gov.za.

Yours Faithfully,



MR. S S MABEBA

DIRECTOR QUALITY ASSURANCE AND ADMINISTRATION

DATE: 15/11/2018

Appendix C: Detailed impact tables

Nature of the impact	Significance of potential impact BEFORE mitigation						Mitigation Measures	Significance of potential impact AFTER mitigation						degree of mitigation (%)			
	Probability	Duration	Extent	Magnitude	Loss of Resources (%)	Significance		Probability	Duration	Extent	Magnitude	Loss of Resources (%)	Significance				
Pre-Construction Phase																	
Planning Phase (* for Social Component only)																	
<u>Influx of job seekers into the study area</u> There is a likelihood that job seekers will move into the study area and seek accommodation in the villages located in close proximity to the mine (specifically the Pakaneng Village and Kalkfontein). This may cause conflict with existing community members who currently feel that they have not been fairly considered for job opportunities at the mine.	-	3	2	2	6	1	30	Moderate	Anglo should consider the establishment of a Community Monitoring Forum (CMF) in order to monitor the construction phase and the implementation of the recommended mitigation measures. The CMF should include the following: Enforcing local employment far as practically possible; Avoid the establishment of camps, hostels or temporary accommodation for workers. Assist employees (non-local) with suitable employment in the surrounding the area. Provide employees with adequate health support from the project team for work-related health problems, including the dissemination of the Health and Safety Policy -including HIV/AIDS policy, and any awareness training required as part of the general employment contract with contract or permanent staff.	2	2	2	4	1	16	Low	46.7
<u>Lack of employment creation and increase in unemployment</u> With the Der Brochen project now incorporating the Mototolo mine, it is anticipated that Der Brochen will take over labourers from the Mototolo mine, thus reducing the number of employment opportunities required It is not anticipated that the construction of the proposed additional activities at Der Brochen mine will create employment for a significant number of people however, some employment opportunity may be available for unskilled, semi-skilled and skilled labour.	-	4	3	2	8	1	52	Moderate	Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities. The mine must provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour. The recruitment process must be transparent and communicated to stakeholders in order to limit opportunities for conflict situations. Der Brocken's contractor management plan also needs to be implemented to ensure that appointed contractors also employ locally as far as practically possible. Support for local businesses through SMME development should be prioritised, with support from other surrounding mines, business forums and the municipality. The appointment of local business and the use of their products and services should be promoted as far as practically possible, as it will potentially open up opportunities for local employment.	3	2	2	6	1	30	Moderate	42.3

<p><u>Stakeholder concerns regarding insufficient women in the workplace (gendered division of labour)</u></p> <p>Women still face barriers to entering and participating in the mining sector even though South African legislation compels companies to employ women at all levels. Der Brocken's Human Rights Due Diligence (HRDD) report also identified unfair employment practices as human rights infringements, and this includes women. According to the Der Brochen SLP, at the end of June 2018, Der Brochen employed 158 people, 45 of which were women (28%). The majority of these women were in semi-skilled and junior positions. Gender equality needs to be considered in the planning phase of the project to ensure that equal employment outcomes for both women and men and to ensure that women are also employed in management positions at the mines.</p>	-	4	2	1	6	1	36	Moderate	Der Brocken's HR policy should support preferential employment opportunities for women, as well as measures to increase accessibility and safety considerations for women working in mines. Training and skills development focused on women should take place to increase their participation in the labour force. Continue the implementation of the management measures provided in the HRDD report, with HR input, to ensure equitable remuneration packages for women and their male counterparts. Institute a well-designed gender equality strategy for the project.	3	2	2	4	1	24	Low	33.3
<p><u>Potential stakeholder unhappiness over perceived lack of coordinated disclosure of the Der Brochen project activities.</u></p> <p>Proposed projects and developments often generate uncertainty, anxiety or fear due to lack of communication between the project, especially the Social Performance (SP) team and the communities. Perceived lack of information provided to the local communities by the SP team, especially with regards to employment and procurement opportunities has led to the erosion of trust, which affects the communities attitude towards the project, and Anglo operations in general. The capacity of the SP team is also inadequate to ensure proper, consistent and continuous engagement with stakeholders. Currently Der Brochen SP team consists of two team members, with one off-site support personnel, to engage with a total of 26 key villages spanning over a 30km radius.</p>	-	4	2	2	6	1	40	Moderate	Der Brochen Mine has an existing Stakeholder Engagement Plan (SEP), 2018, which provides for engagement protocols for their stakeholders. The SEP provides a platform for engagement with the surrounding communities and stakeholders, as well as issues of priorities for such stakeholders. also provides for measures in which provides stakeholders. Strengthen the capacity of the SP team to ensure proper engagement with stakeholders on a continuous basis to ensure that all stakeholder concerns and inputs are taken into consideration, especially for vulnerable groups	3	2	2	4	1	24	Low	40.0

<p><u>Perceived lack of support to local communities, especially women and youth to enable them to access opportunities at the mine</u></p> <p>During focus group discussions, most of the community members had concerns regarding the mine's inability to build their capacity, especially with regards to training provision by the mine. Furthermore, stringent entry level requirements for employment were identified by community members as a way of deterring them from accessing opportunities. Currently the minimum requirement for Grade 12 and a significant number of the surrounding communities do not fulfil this requirement nor do they have any practical skills training which would be required by the mine. This reduces their chances of gaining employment at Der Brochen.</p>	-	4	2	2	8	1	48	Moderate	<p>The Der Brochen SLP makes provision for training of existing employees, and not local communities. However, based on the lack of availability of skilled labour force in the area, Der Brochen has made opportunities available for communities to attend Adult Education and Training (AET), with a view to increasing their literacy levels. The SLP also makes provision for engineering learnerships programmes for local youth, whereby they can get on the job training at the mine and where opportunities exist, they can be absorbed. Information regarding these opportunities (how many people, from which communities, progress on learnerships) should be communicated to stakeholders through existing forums to clear any misconceptions. It is furthermore advised that recognition of prior learning and training take place for all applicants with the relevant skills, but who may not have the necessarily qualifications.</p>	3	2	2	6	1	30	Moderate	37.5
<p><u>Functioning of government agencies - insufficient essential services</u></p> <p>The communities have mentioned specific areas of need which are currently lacking. These include poor roads making access difficult, electricity, schools etc. The mine together with local government need to agree on an approach to respond or assist with developing these areas of need such as the requirement for more schools/training facilities and health care facilities and assistance in decreasing the HIV/AIDs rate in the community. In addition to this, the municipality has a functional Local Aids council which drives the implementation of a local HIV/AIDS and TB response strategy. This needs to be communicated to the communities.</p>	-	4	2	2	8	1	48	Moderate	<p>Der Brochen has highlighted safety and health as one of their key sustainability pillars. As a result, partnerships with Local Schools, governance structures and communities to ensure maximum safety and good health practices within the zone of influence have been put in place, e.g. through contributions towards the building of the Maseven clinic. Implement the Social Health Programs in partnership with the key strategic partners (Sustainability presentation, 2018) in order to improve access to health care services and continuously attain health care outcomes for employees and local communities. Consult with provincial and national departments on sector specific programs for alignment (for the development of schools, libraries, clinics, water, electricity, roads, etc). The Municipality has a functional Local AIDS Council that drives the implementation of Local HIV/AIDS and TB response strategy in the local sphere. Increase access to comprehensive HIV/AIDS, STIs and TB treatment, management and support.</p>	2	2	2	6	1	20	Low	58.3
Site clearing of all footprint areas associated with the proposed project infrastructure																	
<p><u>Influx of job seekers into the study area</u></p> <p>There is a likelihood that job seekers will move into the study area and seek accommodation in the villages located in close proximity to the mine (specifically the Pakaneng Village and Kalkfontein). This may cause conflict with existing community members who currently feel that they have not been fairly considered for job opportunities at the mine.</p>	-	3	2	2	6	1	30	Moderate	<p>Anglo should consider the establishment of a Community Monitoring Forum (CMF) in order to monitor the construction phase and the implementation of the recommended mitigation measures. The CMF should include the following: Enforcing local employment far as practically possible; Avoid the establishment of camps, hostels or temporary accommodation for workers. Assist employees (non-local) with suitable employment in the surrounding the area. Provide employees with adequate health support from the project team for work-related health problems, including the dissemination of the Health and Safety Policy -including HIV/AIDS policy, and any</p>	2	2	2	4	1	16	Low	46.7

									awareness training required as part of the general employment contract with contract or permanent staff.								
<u>Impact on the physical quality of the living environment due to construction activities</u> Clearing activities have the potential to create pollution or environmental degradation. Impacts such as noise, odour and dust have an impact on social well-being of society.	-	4	2	1	4	2	28	Low	Implement social incident management procedure including the existing grievances to capture community and stakeholder concerns and grievances regarding environmental impacts Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. Implement Der Brocken's Emergency Preparedness Plan to communicate with communities regarding ways in which to respond during emergencies.	3	2	1	4	2	21	Low	25.0
<u>Loss of cultural heritage</u> During clearing of land in preparation for construction, cultural heritage chance-finds (unmarked graves, archaeological tools etc) could be exposed.	-	2	2	1	8	1	22	Low	Local residents and land owners should inform mitigation measures when addressing any potential impact on cultural heritage sites; mitigation measures recommended in the Heritage Impact Assessment (HIA) Study to be implemented; Implement the existing chance finds procedure to deal with how to project graves and heritage sites accidentally unearthed during construction.	1	2	1	4	1	7	Low	68.2

<p><i>Health and social well-being</i> Construction-related public health impacts due to dust/air pollution and noise pollution associated with land clearing are possible.</p>	-	4	2	1	4	1	28	Low	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative. Understand the impacts of blasting (from the North open pit) on the surrounding communities and undertake baseline surveys on the quality of building materials used on community infrastructure (including buildings, boreholes, etc). This should inform reasonable blasting limits that will avoid any negative impact on the community infrastructure.	4	2	1	2	1	20	Low	28.6
Stockpiling of Topsoil																	
<p><i>Physical quality of the living environment</i> Impacts such as noise and dust are expected to occur during topsoil stockpiling and may have an impact on social well-being of communities located in close proximity to the activities.</p>	-	4	2	1	4	2	28	Low	Implement social incident management procedure including the existing grievances to capture community and stakeholder concerns and grievances regarding environmental impacts Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. Implement Der Brocken's Emergency Preparedness Plan to communicate with communities regarding ways in which to respond during emergencies	3	2	1	4	2	21	Low	25.0
Use of existing gravel roads for pre-construction activities																	

<u>Physical quality of the living environment</u> Impacts such as noise and dust are expected to occur from trucks and machinery making use of the unsealed/gravel roads. This activity may have an impact on social well-being of communities in close proximity to the activities.	-	4	2	1	4	2	28	Low	Implement social incident management procedure including the existing grievances to capture community and stakeholder concerns and grievances regarding environmental impacts Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. Implement Der Brocken's Emergency Preparedness Plan to communicate with communities regarding ways in which to respond during emergencies.	3	2	1	4	2	21	Low	25.0
<u>Health and social well-being</u> Public health impacts due to dust/air pollution and noise pollution associated construction vehicles on unsealed roads are possible. Understanding the perceived potential impacts on the communities from blasting activities proposed during the construction and operational phases.	-	4	2	1	4	1	28	Low	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative.	4	2	1	2	1	20	Low	28.6
Construction Phase																	
Construction of infrastructure (DMS Plant, DMS Stockpile area and associated PCDs, conveyor belt systems, North open pit, South Shafts, Ventilation shafts, staff accommodation and explosive destruction bay)																	
<u>Influx of job seekers into the study area</u> There is a likelihood that job seekers will move into the study area and seek accommodation in the villages located in close proximity to the mine (specifically the Pakaneng Village and Kalkfontein). This may cause conflict with existing community members who currently feel that they have not been fairly considered for job opportunities at the mine.	-	3	2	2	6	1	30	Moderate	Anglo should consider the establishment of a Community Monitoring Forum (CMF) in order to monitor the construction phase and the implementation of the recommended mitigation measures. The CMF should include the following: Enforcing local employment far as practically possible; Avoid the establishment of camps, hostels or temporary accommodation for workers. Assist employees (non-local) with suitable employment in the surrounding the area. Provide employees with adequate health support from the project team for work-related health problems, including the dissemination of the Health and Safety Policy -including HIV/AIDS policy, and any awareness training required as part of the general employment contract with contract or permanent staff.	2	2	2	4	1	16	Low	46.7

<p><u>Lack of employment creation and increase in unemployment</u></p> <p>With the Der Brochen project now incorporating the Mototolo mine, it is anticipated that Der Brochen will take over labourers from the Mototolo mine, thus reducing the number of employment opportunities required</p> <p>It is not anticipated that the construction of the proposed additional activities at Der Brochen mine will create employment for a significant number of people however, some employment opportunity may be available for unskilled, semi-skilled and skilled labour.</p>	-	4	2	2	8	1	48	Moderate	<p>Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities.</p> <p>The mine must provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour. The recruitment process must be transparent and communicated to stakeholders in order to limit opportunities for conflict situations. Der Brocken's contractor management plan also needs to be implemented to ensure that appointed contractors also employ locally as far as practically possible. Support for local businesses through SMME development should be prioritised, with support from other surrounding mines, business forums and the municipality. The appointment of local business and the use of their products and services should be promoted as far as practically possible, as it will potentially open up opportunities for local employment.</p>	3	2	2	6	1	30	Moderate	37.5
<p><u>Physical quality of the living environment</u></p> <p>Impacts such as noise and dust are expected to occur from construction trucks and machinery. This activity may have an impact on social well-being of communities in close proximity to the activities.</p>	-	4	2	1	4	2	28	Low	<p>As with noise impacts, a comments and complaints register, accessible to members of public, should be implemented and maintained;</p> <p>Bonfires and burning of waste materials should be prohibited;</p> <p>Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads;</p> <p>Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and</p> <p>Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust.</p>	3	2	1	2	2	15	Low	46.4
<p><u>Health and social well-being</u> Public and workforce health impacts due to dust/air pollution and noise pollution associated construction vehicles and machinery on site. Impacts due to blasting activities in the establishment of the north open pit.</p>	-	3	2	1	4	1	21	Low	<p>Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative. As a good practise measure, inform surrounding communities of the blasting schedule.</p>	2	2	1	2	1	10	Low	52.4

Construction of gravel maintenance roads to the proposed ventilation shafts																	
<u>Physical quality of the living environment</u> Impacts such as noise and dust are expected to occur from trucks and machinery making use of the unsealed/gravel roads. This activity may have an impact on social well-being of communities in close proximity to the activities.	-	4	2	1	6	2	36	Moderate	Implement social incident management procedure including the existing grievances to capture community and stakeholder concerns and grievances regarding environmental impacts Bonfires and burning of waste materials should be prohibited; Where practicable, stockpiles of soils and materials should be located as far as possible from sensitive receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. Wherever feasible, construction traffic should avoid sensitive roads (residential roads, congested roads, via unsuitable junctions, etc.) and that vehicles are kept clean and sheeted when on public roads; Timing of any large-scale vehicle movements to avoid peak hours on the local road network would also be beneficial; and Vehicle speeds (especially on unpaved roads) should be reduced so as to limit the re-entrainment of dust. Implement Der Brocken's Emergency Preparedness Plan to communicate with communities regarding ways in which to respond during emergencies	3	2	1	4	2	21	Low	41.7
<u>Health and social well-being</u> Public and workforce-related health impacts due to dust/air pollution and noise pollution associated construction vehicles and machinery on site particularly during clearing for the construction of the gravel roads. Noise pollution may be generated if blasting is required for the construction of the ventilation shafts.	-	3	2	2	6	1	30	Moderate	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative.	2	2	2	4	1	16	Low	46.7
<u>Lack of employment creation and increase in unemployment</u> With the Der Brochen project now incorporating the Mototolo mine, it is anticipated that Der Brochen will take over labourers from the Mototolo mine, thus reducing the number of employment opportunities required It is not anticipated that the construction of the proposed additional activities at Der Brochen mine will create employment for a significant number of people however, some employment opportunity may be available for unskilled, semi-skilled and skilled labour.	-	4	2	2	8	1	48	Moderate	Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities. The mine must provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour. The recruitment process must be transparent and communicated to stakeholders in order to limit opportunities for conflict situations. Der Brocken's contractor management plan also needs to be implemented to ensure that appointed contractors also employ locally as far as practically possible. Support for local businesses through SMME development should be prioritised, with support from other surrounding mines, business forums and the municipality. The appointment of local business and the use of their products and services should be promoted as far as	3	2	2	6	1	30	Moderate	37.5

									practically possible, as it will potentially open up opportunities for local employment.								
Upgrading of existing gravel roads to tar roads to serve as main access roads																	
<u><i>Health and social well-being</i></u> Impacts such as noise and dust are expected to occur from construction trucks and machinery during the road upgrades. In addition to this, the health and safety aspects of the surrounding communities need to be considered specifically with regards to access roads which may be constructed off or not confined to the mine's property. The hazards associated with the construction of the access roads are therefore more easily accessed by community members, members of the general public and road users.	-	3	2	2	6	1	30	Moderate	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative.	3	2	2	4	1	24	Low	20.0
<u><i>Lack in employment creation and increase in unemployment</i></u> Some employment opportunity may be available for unskilled to semi-skilled labour for the upgrade of gravel roads to access roads for the mine.	-	4	2	2	8	1	48	Moderate	Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities. The mine provide the surrounding communities with practical skills training so that they have the opportunity to upskill themselves and apply for jobs with the mine. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour by any appointed contractors. Anglo should ensure that a transparent process of employment is followed to limit opportunities for conflict situations. Anglo advise and assist, in liaison with the municipality, local business operators, etc. to establish and grow SMMEs. The support of local business and the use of their products and services should be promoted as far as possible.	3	2	2	6	1	30	Moderate	37.5
Operational Phase																	
Underground mechanised South Shaft and opencast mining at North Open pit																	
<u><i>Unfavourable perceptions of the project</i></u> Proposed projects and developments often generate uncertainty, anxiety or fear due to lack in communication between the project developer and the mine. The credibility or trust in the mine will affect the communities attitude towards the operation of the proposed activities and may result in community tension and unrest specifically due to the stigma associated with mechanised mining.	-	4	4	2	8	1	56	Moderate	It is advised that the communities be engaged with on platforms suitable to their needs and take their access to online (internet) resources as well as transport (travel to centralised meetings far from their homes) into consideration.	3	2	2	6	1	30	Moderate	46.4

<i>Health and social well being</i> blasting and vibrations from blasting both underground and from the open pit may have negative impacts on the surrounding communities as well as their house and community infrastructure.	-	4	4	2	6	1	48	Moderate	Environmental pollution (noise, dust, vibrations/blasting, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. Implement reasonable blasting limits that will avoid any negative impact on the community infrastructure; As a good practise measure, inform surrounding communities of the blasting schedule.	4	4	2	4	1	40	Moderate	16.7
<i>Capacity building</i> On a short-term basis, mechanisation generally has a negative effect on the labour complement and on the communities in which these mining companies operate. However, mechanisation may not necessarily lead to job losses but to different employment demographics such as the employment of more skilled people and to the upskilling of the current workforce. This will also help mitigate the impact of mine closure.	+	2	4	2	4	1	20	Low	It is advised that Anglo provide training and skills development programmes specifically tailored to local persons interested in obtaining employment as part of municipal infrastructure programmes. It is furthermore advised that recognition of prior learning and training take place for all applicants with the relevant skills, but who may not have the necessarily qualifications. In order to ensure that all Anglo's policies and procedures translate into real time benefits to the local community it must become a requirement of all tender procedures that bidders comply with Anglo principles and policies. The use of local business should also be promoted as far as possible by providing them with preferential procurement status.	3	4	2	6	1	36	Moderate	-80.0
Temporary hauling of ore from shafts to Mototolo Concentrator along the corridor associated with the Ore Conveyor System (whilst conveyor system is being constructed)																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.							0	#N/A							0	#N/A	#DIV/0!
Operation of Conveyor Systems																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Stockpiling of ore material at Mototolo Concentrator																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Operation of the Chrome Recovery Inter-Stage Plant																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Operation of the DMS Plant																	

Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Deposition of DMS material onto the DMS Stockpile Area																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Utilisation of storm water management infrastructure at shafts, and PCD's at DMS stockpile																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Utilisation of the Staff Accommodation near the Der Brochen Dam																	
Since this activity is confined to the mine's boundary, it is not anticipated that this will impact on any of the surrounding communities and will have negligible impact on the mine's staff.	-						0	#N/A							0	#N/A	#DIV/0!
Utilisation of tar access roads																	
<u>Health and social well-being</u> The health and safety aspects of the surrounding communities need to be considered specifically with regards to access roads which may be easily accessed by community members. Large trucks may pose a hazard to community members, members of the general public and road users.	-	3	4	1	6	1	33	Moderate	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative.	2	4	2	4	1	20	Low	39.4
Utilisation of gravel maintenance roads associated with the ventilation shafts																	
<u>Health and social well-being</u> The health and safety aspects of the surrounding communities need to be considered specifically with regards to maintenance roads which are located in close proximity to surrounding communities.	-	2	4	1	6	1	22	Low	Environmental pollution (noise, dust, etc.) must be limited as far as possible and the requirements of the EMP be implemented to reduce the impact on surrounding residents. The necessary safety precautions should be taken and first aid supplies should be made available on site; All project employees (including contractors) should undergo health and safety training on induction and thereafter on a regular basis; Instruct contractors on how to work in line with the health and safety document and site rules; and Appoint a Health and Safety representative.	2	4	2	4	1	20	Low	9.1
Decommissioning and Rehabilitation Phase																	
Pre-Decommissioning planning (* for Social component only)																	

<p><u>Loss of income to surrounding businesses</u> During the cessation of mining and closure of the operations, surrounding businesses will lose income due to the loss of employment or redeployment of employees/contractors, and local purchases made by the mine. This will result in a loss in buying power for the surrounding businesses. This could impact on economic growth and business development in the region. A number of mines may still be in operational in the area at the time of Der Brocken's closure.</p>	-	5	5	2	8	1	75	High	It is proposed that Anglo investigate alternative sustainable livelihood options for the workforce which can be developed as part of the closure plan while the mine is in operation. These alternative sustainable livelihood options can include agricultural programmes where produce can be sold to the surrounding operational mines and communities as well as alternative key skills development (plumbers, electricians etc). The mine would need to engage with the communities from the planning phase already in order to identify what the communities and workforce would prefer in terms of alternative livelihood options.	4	5	2	6	1	52	Moderate	30.7
<p><u>Lack of support from government agencies to ensure the sustainability of any schools and health facilities built during the mine's operation:</u> The communities have mentioned specific areas of need which are currently lacking such as schools and access to health facilities.</p>	-	5	5	2	8	1	75	High	Any of these areas of need which are developed by the mine during operations need to be adequately handed over to the municipality who will be responsible for ensuring that these needs are sustainable. The mine together with local government need to agree on an approach to ensure the viability of these services during operation in preparation for closure.	4	5	2	6	1	52	Moderate	30.7
<p><u>Creation of employment and income</u> Prior to the decommissioning of the operations, contractors will be employed to undertake the required decommissioning and rehabilitation activities in line with the closure plan. This creation of employment will be short term, for the duration of the decommissioning and closure phase.</p>	+	3	2	1	8	1	33	Moderate	Emerging employment opportunities should be targeted at local residents as well as people from the surrounding communities in cases where the skills cannot be obtained from immediately adjacent communities. Recruitment of labour should be guided by Anglo's recruitment policies which should promote the employment of local labour by any appointed contractors. Anglo should ensure that a transparent process of employment is followed to limit opportunities for conflict situations. The support of local business and the use of their products and services should be promoted as far as possible.	4	2	1	8	1	44	Moderate	-33.3

SRK Report Distribution Record

Report No.

Copy No.

Electronic

Name/Title	Company	Copy	Date	Authorised by

Approval Signature:



This report is protected by copyright vested in SRK (South Africa) (Pty) Ltd. It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, SRK.