



Environmental Consultants



Matai Mining (Pty) Ltd Mining
Right Application for
Vanadium, Titanium and Iron
Ore on various Farms within
the Magisterial District of
Mankwe, North West Province

Socio-economic Impact
Assessment Report

Niara Environmental Consultants, Registration no.: 2012/018290/07
59 Beaumont Road, Bluff, Durban, 4052
Cell: +27827672786; Fax: 0865314434





PROJECT DETAILS

PROJECT:	THE Matai Mining Project
Project Name	The development of the proposed Matai Mining Project in the Mankwe District, North West Province
Client:	Matai Mining (Pty) Ltd
Project Number	KIM03
Report Title	Socio-economic Impact Assessment Report for the Development of the Proposed Matai Mining Project, Mankwe District, Limpopo Province
Date Submitted	24 February 2019
Authors	Vumile Dlamini-Ribeiro

DISCLAIMER

This Report or document ("the Report") is given by Niara Environmental Consultants (Niara) solely for the benefit of Matai Mining (Matai). Neither Niara, nor any of their employees makes any warranty, express or implied, or assumes any legal liability or responsibility for use of the Report or its contents by any other person or organisation.

Niara does not accept any liability in negligence for any matters arising outside of the agreed scope of work.

Prepared For:	Charles Chigurah Environmental Scientist Kimopax (Pty) Ltd 546 16th Road Building 3 Constantia Office Park Midrand Gauteng E-mail: charles@kimopax.com
Prepared By:	Vumile Dlamini-Ribeiro Environmental Health Consultant Niara Environmental Consultants 5 Nottinghill Park, 2 Ferero Ave Randpark Ridge Johannesburg 2196 Mobile: 082 7672 786 Email: vumile@niara.co.za





Specialist Declaration of Independence

Niara Environmental Consultants (Pty) Ltd

Environmental Health Consultant

Niara Environmental Consultants

5 Nottingham Park, 2 Ferero Ave

Randpark Ridge

Johannesburg

vumile@niara.co.za

I Vumile Dlamini-Ribeiro, as duly authorised representative of Niara Environmental Consultants (Pty) Ltd., hereby confirm my independence and declare that I:

- ☛ I act as the independent specialist in this application;
- ☛ I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- ☛ I declare that there are no circumstances that may compromise my objectivity in performing such work;
- ☛ I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- ☛ I will comply with the Act, regulations and all other applicable legislation;
- ☛ I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- ☛ I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- ☛ all the particulars furnished by me in this form are true and correct; and
- ☛ I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.

Signature of the environmental assessment practitioner:	<i>V. Dlamini</i>
Designation:	Environmental Consultant
Qualifications:	Post Graduate Degree (Hons): BSoc Sci Environmental Analysis and Management
Name of company:	Niara Environmental Consultants (Pty) Ltd
Experience (years):	Twelve (12)
Date:	20 March 2019



Executive Summary

The definition of a Social Impact Assessment (SIA) as defined by Vanclay (2002) gives an understanding of the backdrop against which this SIA was conducted. According to this definition, a social impact assessment “is the process of analysing (predicting, evaluating and reflecting) and managing the intended and unintended consequences on the human environment of planned interventions (policies, programmes, plans and projects) and any social change processes invoked by those interventions so as to bring about a more sustainable and equitable biophysical and human environment”. The SIA assesses social-economic impacts associated with the development of an opencast operation and associated infrastructure to be development as part of the Matai Mining Project.

This Report presents the results of the Socio-economic Impact Assessment (SIA) for the Matai Mining Project near the town of Northam, in the Magisterial District, North West Province, South Africa. The terms of reference for this study are as follows:

- To augment and update the existing socio-economic baseline profile as defined in the projects scoping phase, with an emphasis on the local (project-specific) area, by means of (inter alia) a reconnaissance site visit;
- To describe the land use of the area affected by the proposed mine, informed by input of interested and affected parties;
- To investigate the potential impact of the Project-related activities on the social environment;
- To identify, describe and rate the significance of social impacts that may result from the proposed Matai Mining Project, including the potential impact of the proposed Matai Mining Project from a cumulative nature; and
- To develop feasible, practical and cost-effective mitigation and enhancement measures to ameliorate the significance of negative impacts and enhance the benefits of positive social impacts.

Methodology

The study was designed to comply with the relevant national legislative requirements, such as those stipulated in National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and Mineral and Petroleum Resources Development Act, 2002 (MPRDA) (Act No. 28 of 2002). The activities undertaken as part of the study comprised the following:

- Defining the primary and secondary study areas;
- Data collection, including a desktop review, undertaking of an investigative site visit comprising interviews with key informants, and a review of information from other specialist studies and the public participation process;



- The compilation of a baseline profile, including information on demographics, education, skills levels, employment, local and regional economic conditions, infrastructure and service delivery, health related issues, spatial development, claims and information pertaining to the prevalent concerns regarding and attitudes towards the proposed Matai Mining Project;
- Assessment of impacts (including cumulative impacts) on the basis of issues identified through specialist opinion, interviews with key informants and the public participation process. Impacts were identified in terms of a number of categories, related to physical intrusion resulting from Project activities, economic pull factors, as well as indirect impacts. These categories were then linked to the applicable Project phase in which an impact was most likely to originate, namely the construction, operational or decommissioning phases;
- Rating of impacts in terms of their anticipated duration, extent, intensity and probability. Duration, extent and intensity ratings were combined into a measure of an impact's expected consequence. Consequence ratings, in turn, were combined with probability ratings to give a measure of an impact's overall significance;
- Identification of appropriate mitigation measures to avoid or ameliorate negative social impacts and to enhance positive ones. The rating procedure was then repeated to assess the expected consequence, probability and significance of each impact after mitigation. This post-mitigation rating gives an indication of the significance of residual impacts, while the difference between an impact's pre-and post-mitigation ratings therefore represents the degree to which the recommended mitigation measures are expected to be effective in reducing or ameliorating that impact; and
- Formulating recommendations regarding the identified mitigation and enhancement measures, as well as other general recommendations that may aid the successful implementation of the proposed Matai Mining Project.

Social Impacts

The community in Mankwe has been encountering challenges which range from economic, environmental, social and spatial challenges. At a regional scale, like other with various lagging municipalities, North West is faced with developmental challenges coupled with socio-economic problems such as unemployment, job creation, education, HIV prevalence, basic service delivery, inequality, poverty, economic growth, sectorial dependency and economic distribution.

For the purpose of this Project, social impacts have been assessed in light of the current existing socio-economic challenges in the local area. It is expected that the proposed Matai Mining Project will result in social changes which may positively or negatively affect communities within the study area. In terms of the social changes that have been assessed, the following social impacts are have been identified:

- Employment opportunities;



- Change in movement patterns;
- Loss of agricultural land and infrastructure;
- Physical and Economic displacement;
- Impact on the local tourism industry;
- Increased pressure on Municipal infrastructure;
- Increased social pathologies linked to the influx of workers and job seekers; and
- Increased nuisance factors and changed sense of place;

In light of the abovementioned, the following social variables were considered to determine the likely impacts:

- Demographic processes refer to the movement and structure of the local community;
- Geographic characteristics- refer to the processes that affect the land uses of the local area;
- Economic processes refers to the economic activities with the affected project area;
- Socio-cultural wellbeing- refer to the processes that affect the local culture of an affected area, i.e. the way in which the local community live;
- Institutional, legal, political and equity-refers to the processes that affect service delivery of the study area.

The findings of this SIA indicate the proposed Matai Mining Project has positive and negative potential impacts which range in significance. The construction and the operation of the proposed Matai MVT Mine's positive impacts are mainly due to creation of employment opportunities, boosting of the local economy due to increased disposable income and contribution to the revenue for the Moses Kotane Local Municipality. Negative impacts may be experienced due to loss of agricultural land, physical and economic displacement, increased pressure on municipal infrastructure, increased social pathologies linked to influx of job workers and work seekers, increased nuisance factors and changed sense of place.

From a social perspective, some of the most significant cumulative impacts relate to the following aspects:

- The cumulative impacts associated with the creation of employment and business opportunities and training during the construction phase, are that there is an opportunity for employment seekers to improve their skills;
- The cumulative impacts associated with the influx of job seekers include the long-term impacts on family structures and social networks of communities. In the case of HIV/AIDS or unwanted pregnancies the impacts might be permanent and have permanent cumulative impacts on the affected individuals, families and the community;
- An influx of workers (direct) and job-seekers (indirect) may lead to increased pressure on infrastructure and services and an increase in social pathologies. Matai Mining must make an effort to discourage influx by communicating early and widely that local residents will be given preference for employment.



Matai Mining must ensure that it collaborates with the relevant local authorities and mining operations to identify and actively participate in initiatives/ projects to improve capacity where required. While the potential impacts linked to influx can have negative consequences, this is a common and anticipated phenomenon that cannot be a reason for preventing further development;

- An increase in direct Project nuisance factors; namely, noise, air pollution, traffic and visual disturbances could further impact negatively on the sense of place for some receptors. Implementation of suitable mitigation measures has been proposed by the relevant specialist to reduce and manage these nuisance factors.

The specialist recommends that the proposed project is approved based on the assurance that potential negative impacts on the receiving socio-economic environment will be mitigated and managed as far as possible, and that potential positive impacts are enhanced to ensure the greatest value.





Table of Contents

1.	Introduction.....	13
1.1	Project Description	14
1.2	Project Location	14
1.3	Objective of the Specialist Study	15
1.4	Terms of Reference.....	16
1.5	Details and Expertise of Specialist	17
2	Overview of the Matai Project Mining Process	18
3.	Infrastructure	19
4.	Legislative and Policy Framework.....	20
4.1	The South African Constitution	21
4.2	National Environmental Management Act, 1998 (NEMA).....	21
4.3	Mineral and Petroleum Resources Development Act, 2002 (MPRDA).....	21
4.4	South African Mining Charter.....	22
4.5	White Paper on Local Government (1998)	22
4.6	Municipal Systems Act (Act No. 32 of 2000)	22
4.7	Extension of Security of Tenure Act (ESTA) (Act No. 62 of 1997).....	23
4.8	The Department of Mineral Resources Consultation Guidelines	23
5.	Approach and Methodology	23
5.1	Definition.....	23
5.2	Purpose of the SIA Report.....	24
5.3	Benefits of SIA.....	25
5.4	Approach	25
5.5	Methodology	25
5.5.1	Definition of the Study Area.....	25
5.5.2	Data Collection.....	26
5.5.3	Desktop Review	26





5.5.4	Field Visit.....	27
5.5.5	Literature Review, Baseline Data Review and Analysis.....	27
5.5.6	Profiling.....	27
5.5.7	Information from the Public Consultation Process.....	28
5.6	Limitations and Assumptions.....	28
5.7	Confidentiality.....	29
6.	Impact Assessment Methodology.....	29
6.1	Part A: Defining Consequence in Terms of Magnitude, Duration and Spatial Scale:.....	30
6.2	Part B: Determining Consequence Rating:.....	30
6.3	Part C: Determining Significance Rating:.....	31
7.	Socio-Economic Baseline Profile.....	31
7.1	Administration.....	32
7.1.1	Political Structures of Government.....	32
7.1.2	Tribal Authorities.....	32
7.2	Regional Setting: North West Province.....	32
7.3	Bojanala District.....	33
7.4	Moses Kotane Local Municipality.....	34
7.4.1	Population Demographics.....	34
7.4.2	Education Levels.....	35
7.4.3	Local Economy.....	35
7.4.4	Infrastructure.....	35
7.4.5	Service Delivery.....	38
7.4.6	Tourism.....	42
7.4.7	Crime.....	43
7.4.8	Mining Industry Profile.....	44
8.	Impact Assessment.....	46
8.1	Employment opportunities- Economic Process.....	47
8.1.1	Construction impact:.....	48





8.1.2	Operation impact:	49
8.1.3	Decommissioning impact:	50
8.2	Multiplier impacts on the local economy- Economic process.....	50
8.2.1	Construction impact.....	51
8.2.2	Operation impact.....	52
8.2.3	Decommissioning impact:	52
8.3	Community development and Social Upliftment through LED projects- Economic process	53
8.3.1	Construction impact:.....	53
8.3.2	Operation impact.....	54
8.3.3	Decommissioning impact	54
8.4	Health and Safety Impacts.....	54
8.4.1	Construction impact.....	56
8.5	Change in movement patterns-Geographic/Socio-cultural process.....	58
8.5.1	Construction impact.....	58
8.5.2	Operation impact.....	59
8.6	Loss of and/or Damage to Agricultural Land and Infrastructure-Geographical process	60
8.6.1	Construction impact.....	60
8.6.2	Operation impact:	61
8.7	Physical and economic displacement - Economic process	61
8.7.1	Construction impact.....	62
8.7.2	Operation impact.....	63
8.7.3	Decommissioning impact:	63
8.8	Increased pressure on municipal services - Institutional, legal, political and equity	63
8.8.1	Construction impact.....	64
8.8.2	Operation impact:.....	65
8.9	Effects from Population Influx.....	65
8.9.1	Increased markets for local entrepreneurs	66
8.9.2	Recommended mitigation measures.....	67





8.10	Increased social pathologies linked to influx of workers and job seekers-Demographic change/Socio-cultural wellbeing process.....	67
8.10.1	Construction impact	69
8.10.2	Operation impact	70
8.10.3	Decommissioning impact.....	70
8.11	Increased Nuisance Factors and Changed Sense of Place - Socio-cultural wellbeing.....	71
8.11.1	Construction impact	72
8.11.2	Operation impact	73
8.11.3	Decommissioning phase.....	73
8.11.4	Visual/ noise/ vibration/ air quality/health impacts.....	74
8.12	Impact on the Local Tourism Industry.....	74
8.13	Dependency on mine for sustaining local economy (during closure).....	75
9.	Cumulative Impacts.....	78
10.	Social Management Plans and Monitoring	80
10.1	Stakeholder Engagement Plan	80
10.1.1	Purpose of a SEP:	80
10.2	Grievance Mechanism.....	81
10.3	Resettlement Action Plan	81
10.4	Livelihood Restoration Plan.....	82
11.	Stakeholder Engagement	82
12.	Assessment of Alternatives	83
12.1	The “No-go” option and Land Use Alternatives.....	83
12.1.1	The No-go Option	83
12.1.2	Alternative Land Use Options	83
12.2	Mine Plan, Infrastructure Layout and Affected Land Uses.....	84
13.	Potential Social Risks	85
13.1	Community Expectations.....	85
13.1.1	Employment.....	85



13.1.2	CSI Projects.....	86
13.1.3	Social Unrest and Community Opposition	86
13.1.4	Political Tensions.....	87
13.1.5	Failure to Acquire a Social License to Operate.....	87
14.	Conclusion and Recommendations	87
15.	Legal Requirements: Specialist Checklist.....	89
16.	References	91

List of Tables

Table 5-1: Consequence Rating Methodology.....	30
Table 5-2: Consequence Rating Methodology.....	31
Table 5-3: Significance Rating Methodology.....	31
Table 13-1: Specialist Checklist.....	89

List of Figures

Figure 3-1: Location of the proposed Matai Mining Project.....	15
Figure 1-1: Proposed mine layout.....	19
Figure 4-1: Surface mine layout.....	20
Figure 10-1: Donkey cart as mode of transport.....	36
Figure 10-2: Typical type of housing in the Project area and surrounds	38
Figure 10-3: Population by water source and supplier	39
Figure 10-4: Population by electricity access	40
Figure 10-5: Population by toilet facilities.....	41
Figure 10-6: Population by refuse disposal.....	42
Figure 11-1: Subsistence cattle farming in the proposed Matai Mining Project area	71

Appendix A: Focus Group Discussion Questionnaire



1. Introduction

Environmentalists have studied the impact of development on natural resources extensively. Since the 1970's, it became clear that development also impacts on the human environment (compare Dietz, 1987:54; Burdge & Robertson, 1990:81; Finsterbusch, 1995: 229; Henry, 1990: 91; Freudenburg & Keating, 1982:71). The White Paper on an Environmental Management Policy for South Africa (Government Notice 794 of 1998) introduced a new paradigm of sustainable development based on integrated, coordinated environmental management with a focus on people's quality of life, access to land and resources, integration of economics, development, social justice and environmental sustainability and participative governance. Sustainable development requires local governments to integrate environmental, economic and social planning. The World Commission on Environment and Development defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Atkinson, 2000:2). Social, economic and biophysical impacts are interconnected and a change in one will lead to change in the others. Socio-economic Impact Assessment plays an important role in creating social awareness and bringing home the fact that the environment does not only comprise of natural phenomena, but also incorporates human nature.

Matai Mining is the holder of the prospecting right NW 30/5/1/1/2/11277 PR granted and issued in terms of Section 11(1) of the Mineral and Petroleum Resources Development Act 28 of 2002 as amended by Act 49 of 2008 ("MPRDA"). The primary right NW 30/5/1/1/2/2679 PR was originally granted to Rise Africa Mining and Exploration (Pty) Ltd on the 06 December 2011, which remained in force up until 5th of December 2013. Rise Africa Mining and Exploration (Pty) Ltd applied in terms of section 102 of the MPRDA to amend the granted right to include iron ore and titanium, the application was granted on the 8th of September 2013. Rise Africa Mining and Exploration (Pty) Ltd applied for renewal of the right on the 18th of October 2013 and was granted on the 26th of August 2015, with reference number: NW30/5/1/1/2/11277 PR. Rise Africa Mining and Exploration (Pty) Ltd applied for ministerial consent in terms of section 11 of the MPRDA of 2002, to cede the same right in favour of Matai Mining the consent was approved on the 3rd of November 2014. Matai Mining at the time owned by Yanbing Zhang -74% and Jayamma Zhang 26%. Matai Mining applied for ministerial consent in terms of section 11 of the MPRDA to have change in the shareholding by disposing all shares owned by Yangbing Zhang and transfer them to Camp Brave Limited; and consent was approved on the 09th of November 2015. Matai Mining hereby apply for a Mining right in terms of the Section 23 (a), (b) and (c) read together with regulation 11(1) (g) of the MPRDA (ACT 28 of 2002).

In addition to the MRA, an application will also be submitted for environmental authorisation for the envisaged project activities. An Environmental Impact Assessment (ESIA) will be submitted in support of this application. This report is the outcome of the Social/ (Socio-economic) Impact Assessment (SIA), which is one of several specialist assessments that were undertaken as part of the EIA. The SIA Report forms part of the Environmental





Impact Report (EIR). The EIR details the Impact Assessment Phase of the EIA process, which is aimed at investigating the potential impacts of the proposed Matai Mining Project on the receiving environment.

Niara Environmental Consultants (Pty) Ltd was appointed by Kimopax (Pty) Ltd to undertake a Socio-economic Impact Assessment of the mining operations and associated activities of the proposed Matai Mining Project (Matai Mining Project). The proposed Matai Mining Project area is situated in the Moses Kotane Local Municipality within the Mankwe Magisterial District of Northwest Province. The mining right is held on the farm Wildebeestkuil 7 JQ, and certain portions of the farms Magazynskraal 3 JQ, Haakdoorn 6 JQ, Syferkuil 9 JQ and Middelkuil 8 JQ. The main objective of the assessment is to evaluate the impact of the proposed mining operations on the socio-economic conditions of the surrounding areas.

1.1 Project Description

Matai Mining is applying for a mining right on the farms, certain portion of farm Magazynskraal 3 JQ, certain portion of farm Haakdoorn 6 JQ, the farm Wildebeestkuil 7 JQ, certain portion of the remaining extent of portion 1, certain parts of the remaining extent of portion 2, certain parts of the remaining extent of portion 5, certain parts of 6, portions 11, 12 and 13 (part of portion 2) and the remaining extent of the farm Syferkuil 9 JQ, the remaining extent of portion 1, portion 2, portion 3 (a portion of portion 1), the remaining extent of the farm Middelkuil 8 JQ.

1.2 Project Location

The Matai Mining Project is located in the Moses Kotane Municipality, Bojanala Platinum District Municipality, North West Province, South Africa. It lies about 13 km south-west of the closest town Northam, approximately, 70 km north of Rustenburg and 150 km north-west of Johannesburg. The Pilanesberg Nature Reserve lies approximately 13 km to the south of the proposed pit area. Other large sources of particulate matter in the area include the Union North and South Mines, the Pilanesberg Platinum mine, and the Dishaba Mine, all of which mine for platinum group minerals, and the Kalaka Mine which extracts limestone (Figure 1-1).

The Matai Mining Project area is characterised by mining, rural communities, grazing areas and portions of cultivated land.



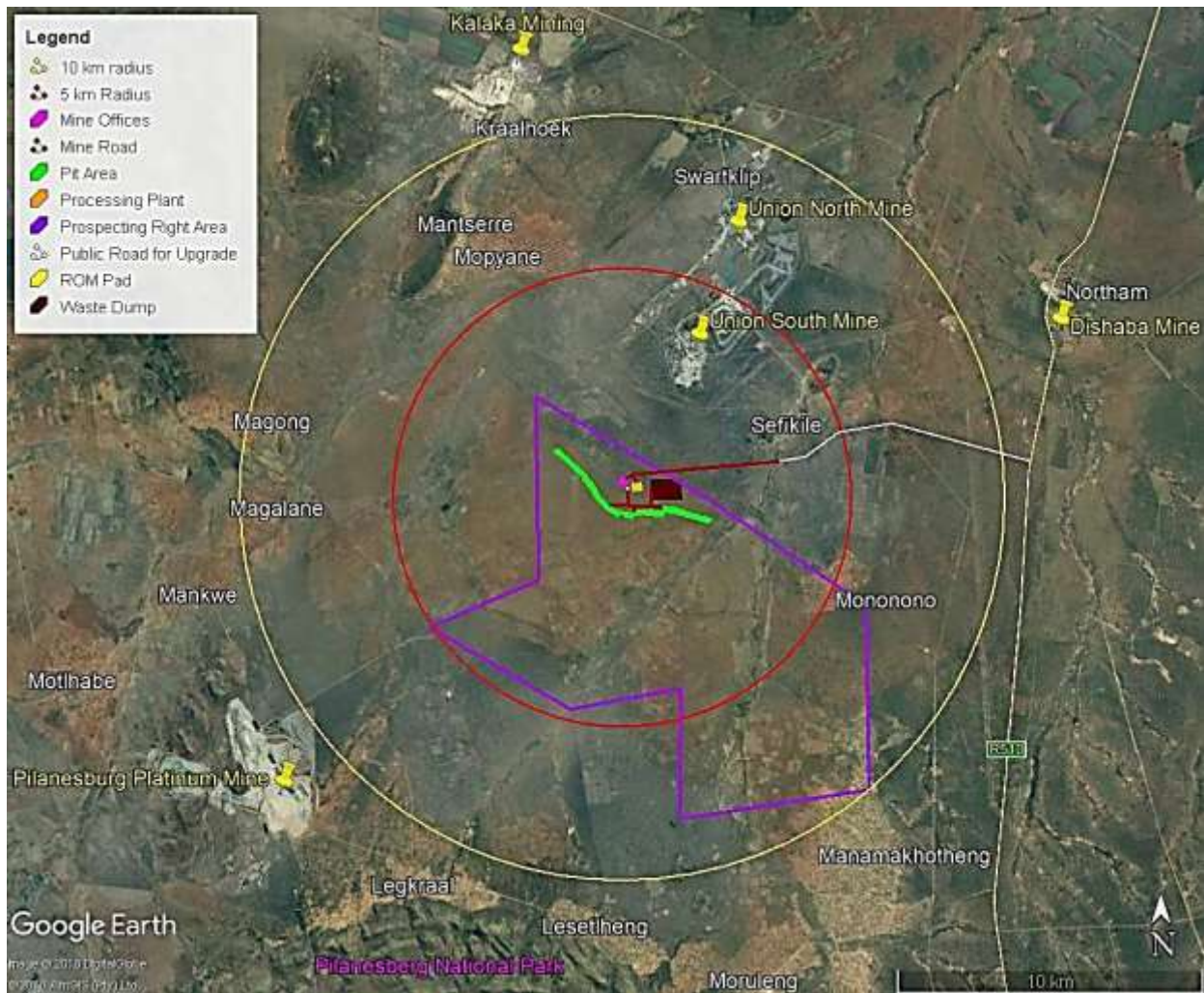


Figure 1-1: Location of the proposed Matai Mining Project.

Sensitive receptors within a 10 km range of the Matai Mining Project open pit area include the residential areas of Sefikile, Mantserre, Mopyane, Mononono, Magong, Magalane, Kraaihoek, Legogolwe and parts of Manamakhotheng. The remainder of the land-use surrounding the mine is predominantly agricultural characterised by a few farmsteads.

The topography immediately surrounding the site is gently undulating with no prominent topographic features in the proposed Matai Mining Project area. The Pinesberg formation to the south, rises from the surrounding plains and consists of the crater of a long extinct volcano fringed by three concentric ridges or rings of hills.

1.3 Objective of the Specialist Study

The objective of this study is to understand and describe the socio-economic activity that shapes communities living directly on and adjacent to the proposed Matai Mining Project area. The question asked is, how will the proposed mining activity contribute to or detract from the economic progress, stagnation or regression of these communities (and or economic sectors) and their livelihoods.

In addition to describing the receiving environment and anticipating potential impacts, the study takes cognisance of National, Provincial and Local Government development priorities for the region. This provides a development context against which economic activities in the region are evaluated.

1.4 Terms of Reference

The issues raised in the scoping phase of an EIA, which cannot be effectively addressed with the currently available information, form the basis for the terms of reference of specialist studies (DEAT, 2002).

The SIA provides a baseline description of the proposed Matai Mining Project area, specifically focussing on the communities living and working in close proximity to the proposed project area. The potential impacts of the proposed Matai Mining Project on the social environment will be identified and assessed in terms of an assessment methodology. Mitigation measures will be proposed to enhance the positive impacts and reduce the significance of the negative impacts.

The process included the following:

- Confirmation of study area;
- Review of available secondary data;
- Social and economic baseline description of the potentially impacted areas;
- Communication with landowners of alternative sites and conducting a site visit;
- Identifying and assessing potential direct, indirect and cumulative impacts, both positive and negative;
- Reviewing other specialist studies, as impacts that are not classified as social impacts can result in social impacts;
- Identifying measures to enhance positive social impacts and mitigate negative social impacts; and
- Making a recommendation on whether the proposed Matai Mining Project should proceed from a social perspective.

Categories of impacts to be considered (Vanclay 2003: 84-89) include:

- Health and social wellbeing
 - Death; Nutrition; Actual health and fertility; Perceived health; Mental health; Aspirations for future; Autonomy; Stigmatization; Feelings in relation to the project.
- Quality of the living environment
 - Physical quality – exposure to noise, dust, risk, odour etc.; Leisure and recreation opportunities; Aesthetic quality; Availability of housing; Qidpuality of housing; Physical & social infrastructure; Personal safety & hazard exposure; Crime & violence.
- Economic impacts & material wellbeing

- Workload; Standard of living; Economic prosperity and resilience; Income; Property values; Employment; Replacement cost of environmental functions; Economic dependency.
- Cultural impacts
 - Change in cultural values; Violation of culture; Experience of being culturally marginalized; Commercial exploitation of culture; Loss of local language; Loss of natural and cultural heritage.
- Family and community impacts
 - Alterations in family structure; Obligations to family/ancestors; Family violence; Social networks – interaction with others in community; Community connection –sense of belonging; Community cohesion; Social differentiation and inequity; Social tension and violence.
- Institutional, legal, political and equity impacts
 - Capacity of government agency to handle workload generated by project; Integrity of government agencies – absence of corruption and competence of agency; Legal rights; Human rights; Participation in decision making; Access to legal advice; Fairness of distribution of impacts across community.
- Gender relations
 - Woman's physical integrity – decide about own body; Personal autonomy of woman – independence in all aspects; Gendered division of labour – income, household, childbearing and rearing of children.; Access to resources & facilities; Political emancipation of woman.

This SIA Report will form an appendix to the main EIA Report.

1.5 Details and Expertise of Specialist

Vumile Dlamini-Ribeiro is currently the Director of Environmental Management Services at Niara Environmental Consultants (Pty) Ltd. Vumile has 12 years of professional experience in Environmental Assessment and Management. Her roles include the executive management responsibilities of Niara Environmental Consultants, project management, client and business development, marketing and quality assurance as well as corporate compliance.

Having worked for a multi-disciplinary advisory firms and environmental consultancies, Vumile has a competent understanding of the work effort and cross collaboration required for a successful multidisciplinary organisation. Vumile has been involved in a number of Environmental Impact Assessments and has a particular interest in health impacts assessments, water resource management, mining, energy and stakeholder engagement. Vumile has considerable experience across a range of developmental and environmental sciences and has worked in South Africa, Mozambique, Sierra Leone and Liberia and is familiar with Regulatory Environmental Legislation in other parts of Africa.



Vumile is very well versed in the IFC Environmental and Social Performance Standards (including IFC PS 2012) and the associated Equator Principles, which have informed the approach and standard for a number of ESIA processes that she has been involved in. Vumile is skilled at organising and driving effective project teams at a scale relevant to the project's requirements. She has technical experience and is able to quickly identify the most pertinent issues of a particular project whilst focussing on driving project success by rigorously implementing project management tools.

Vumile has experience ranging over several aspects of social research, including the planning and execution of social surveys, participatory rural appraisal, sustainable livelihoods assessments, data management and statistical analysis, capturing and management of spatial data, stakeholder identification and community facilitation. She has acted as project manager and/or task leader on a number of social impact studies in Africa. Social impact studies included both mining development and linear projects.

2 Overview of the Matai Project Mining Process

Opencast mining starts with the stripping of usable soil and soft overburden material using a fleet of diesel trucks and shovels. This topsoil and overburden is stockpiled for use in the rehabilitation of the area once the mining is completed. A process of roll-over or strip mining is then followed in which the overburden of each strip is drilled and blasted and then placed in the excavation produced by the previous strip. This backfilling and rehabilitation will be undertaken as the mining progresses. The ore will be mined from the open pit using excavators, bulldozers, trucks, bowl scrapers and shovels.

Crushers will be used to reduce large rocks into smaller rocks, gravel, or rock dust. Three stages of crushing are planned. Trucks will deposit material into a receiving bin at the primary tip. A single jaw crusher will be used as the primary crusher. A static grizzly is placed at the primary tip to remove oversize material, with a vibrating grizzly placed before the crusher to screen off the fines before it enters the crusher. For the purposes of this report, it was assumed that this primary crushing will take place in the pit. From there, apron feeders will be utilised to extract ore from the bins and feed it to downstream equipment at a predetermined rate. Cone crushers or toothed roll crushers will be used for the secondary and tertiary crushing phases at the processing plant to reduce the size of the material to less than 32mm. Conveyors will also be used to transport the overburden (Kimopax, 2018).

A tripper conveyor will also be used to stack ore onto the stockpile. The ore will be removed from the stockpile by means of bottom extraction. This consists of a tunnel underneath the stockpile with a travelling rotary plough feeder and a conveyor (Kimopax, 2018).



From the crushing plant, ore will be transported in trucks on a gravel road to the R510, and from there by tarred road to its final destination. The final void will be backfilled with the overburden from the initial boxcut.

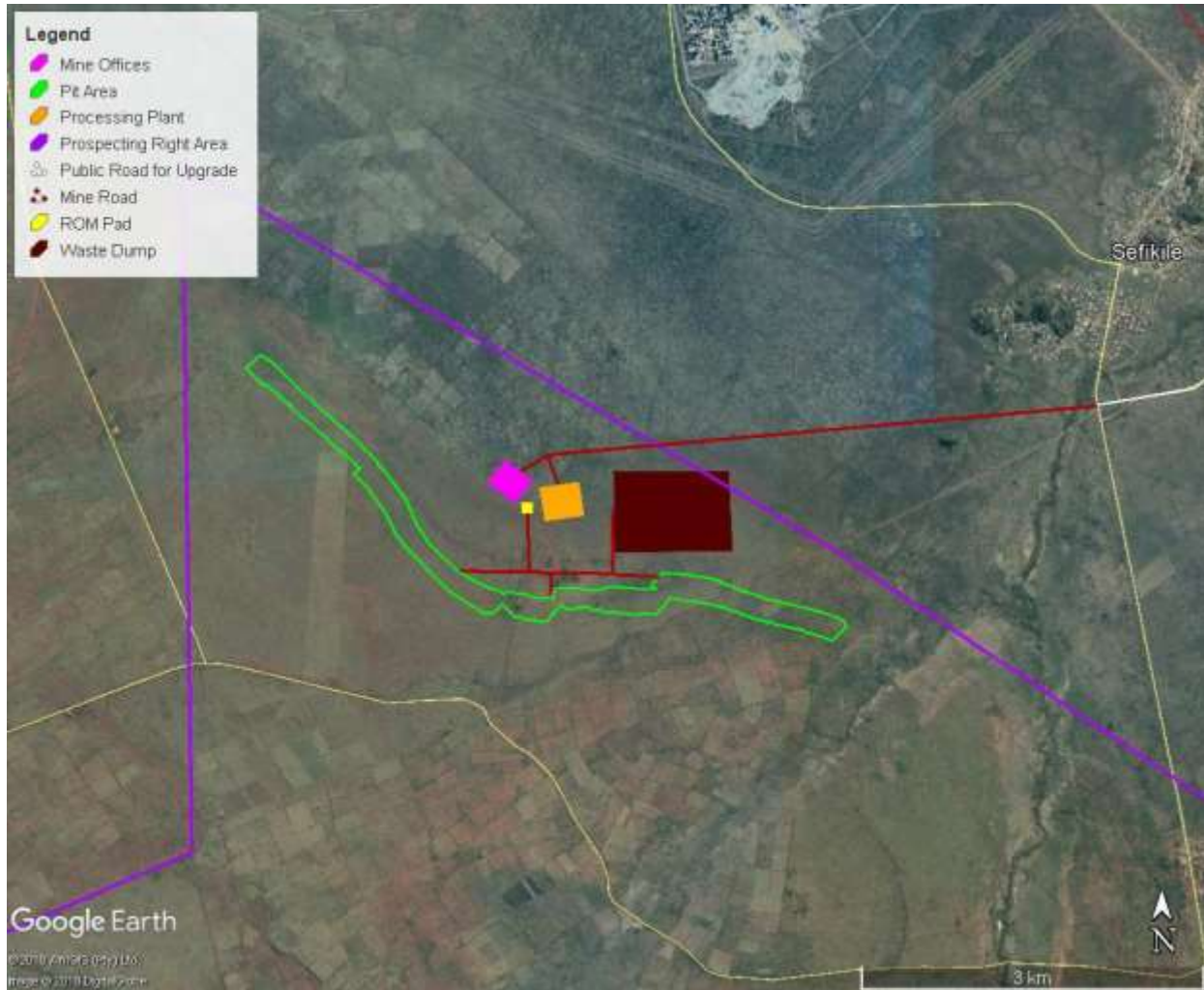


Figure 2-1: Proposed mine layout.

3. Infrastructure

It is estimated that the mine infrastructure (offices and workshop facilities) will require an area of approximately 2 hectares (“Ha”). This is situated to the north of the mining operations, as shown in Figure 3-1. This was placed outside of the 500m blasting exclusion zone. The infrastructure area will be linked to the mining operation using a 15.5m wide haul road.

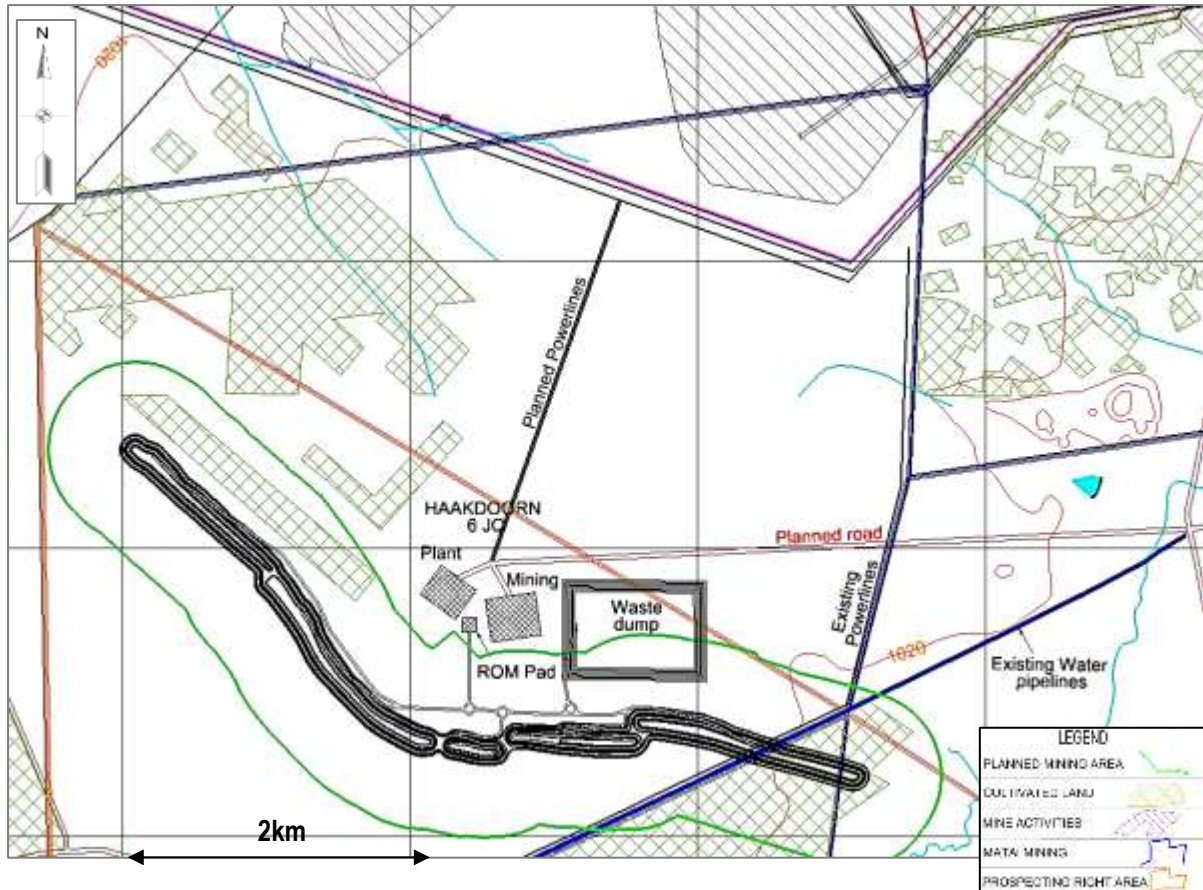


Figure 3-1: Surface mine layout

Electrical power is from the existing power line as part of the process plant infrastructure for workshops and office requirements. A site access road is required to link the site to the national road system. The nearest national road is the R510 which is approximately 15 kilometers (km) to the east of the site. The current gravel road (9km) requires upgrading at an estimated cost of R 0.3 million per kilometer and the remaining 6km requires a new road at a cost of R1 million per kilometer. In addition, the east portion of the pit mines through an existing power line and water pipe at the beginning of year 17. These will need to be re-routed at an estimated cost of R15 million.

4. Legislative and Policy Framework

This section is dedicated to the institutional and legislative framework relevant to the assessment and management of socio-economic impacts related to the proposed Matai Mining Project. It commences with a discussion of international best practice regarding social sustainability. This is followed by an overview of national legislation and policies that has bearing on the assessment and management of socio-economic impacts that are usually associated with mining projects.

There is no legislation in South Africa specific to Socio-economic Impact Assessments. There is however legislation, in the form of the National Management Act, 1998 (NEMA) (Act No. 107 of 1998) detailing the type, extent and timeframes for public participation or stakeholder engagement during the EIA phase of a project. Similarly NEMA states that social aspects of projects must be considered at the EIA phase (outlined below). There is also a number of other important South African legislation which informs the social content in which SIA's are compiled and which are outlined below.

This SIA is guided by the following legislation which is discussed further below:

- The Constitution of South Africa (Act 108 of 1996);
- National Environmental Management Act, 1998 (Act 107 of 1998);
- Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002);
- North West Spatial Development Framework;
- Spatial Development Framework (Bojanala and Moses Kotane);and
- Integrated Development Plan (Bojanala and Moses Kotane).

4.1 The South African Constitution

Section 25 of the Constitution provides that expropriation of property is permissible to effect land redistribution, or in order to achieve some other public purpose or for the public interest. However, Section 25 prohibits arbitrary deprivation of property as well as the expropriation of property without payment of just and equitable compensation, which has either been agreed upon or which has been decided by a court of law.

4.2 National Environmental Management Act, 1998 (NEMA)

This Act provides that sustainable development requires the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions so as to ensure that development serves present and future generations. The Act further sets out the process for public participation.

4.3 Mineral and Petroleum Resources Development Act, 2002 (MPRDA)

Upon the acceptance of an application for a mining right, the applicant is required to prepare an Environmental Management Programme (EMP) in accordance with requirements of the MPRDA, to mitigate both bio-physical and social impacts of the proposed development. The MPRDA states that “any mining operation must be conducted in accordance with generally accepted principles of sustainable development by integrating social, economic and environmental factors into planning and implementation”. The MPRDA also identifies the timeframes and manner, in which the public should be consulted (refer to the PPP report, 2009). The MPRDA states that mining or prospecting must be conducted in accordance with general accepted principles of

sustainable development by integrating social, economic and environmental factors into the planning and implementation of prospecting and mining projects.

The MPRDA furthermore requires that mining companies assess the social impacts of their activities from start to closure and beyond. Companies must also develop and implement a comprehensive Social and Labour Plan (SLP) to promote socio-economic development in their host communities and to prevent or lessen negative social impacts.

4.4 South African Mining Charter

The Act focuses on sustainable transformation of the mining industry. The Mining Charter seeks to achieve the following objectives:

- (a) To promote equitable access to the nation's mineral resources to all the people of South Africa;
- (b) To substantially and meaningfully expand opportunities for HDSA to enter the mining and minerals industry and to benefit from the exploitation of the nation's mineral resources;
- (c) To utilise and expand the existing skills base for the empowerment of HDSA and to serve the community;
- (d) To promote employment and advance the social and economic welfare of mine communities and major labour sending areas;
- (e) To promote beneficiation of South Africa's mineral commodities; and
- (f) Promote sustainable development and growth of the mining industry.

Social management and mitigation measures, to be developed as part of the SIA, will be aligned to the Mining Charter.

4.5 White Paper on Local Government (1998)

This White Paper sets the framework for a developmental local government system that is committed to working with citizens, groups and communities to create sustainable human settlements, which provide for a decent quality of life and meet the social, economic and material needs of communities in a holistic fashion.

4.6 Municipal Systems Act (Act No. 32 of 2000)

The Municipal Systems Act provides for the principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities, and to ensure universal access to essential services that are affordable to all.

4.7 Extension of Security of Tenure Act (ESTA) (Act No. 62 of 1997)

This Act confers certain rights to non-landowning residents of a property, where such rights are linked to the period of time in which persons have been resident on the land. The Act applies to all rural areas in South Africa, regardless of whether the land is used for farming or mining purposes. No occupier can be evicted unless the provisions of ESTA have been strictly followed and a Court Order has been obtained.

4.8 The Department of Mineral Resources Consultation Guidelines

The above Guidelines were compiled for use by applicants for prospecting and mining rights. It provides that Interested and Affected Parties include, amongst others, host (or receiving) communities, land owners, traditional authorities, land claimants; lawful occupiers, any other person whose socio-economic conditions may be directly affected by proposed prospecting or mining activities.

The required authorisation processes for the proposed Matai Mining Project include the following: In terms of the National Environmental Management Act (NEMA) EIA Regulations, published in Government Notice Regulation (GN R543) and promulgated on 2 August 2010, the activities requiring authorisation, and triggered by the proposed Matai Mining Project, are those described in GN R544 (Listing Notice 1) and GN R545 (Listing Notice 2).

In accordance with GN R718, published under National Environmental Management Waste Act (NEM: WA), waste management activities that have, or are likely to have a detrimental effect on the environment, will require environmental authorisation. Envisaged activities will include the construction of facilities for:

- The temporary storage of hazardous wastes (such as hydrocarbon contaminated materials) and general solid wastes at the mine;
- The construction of stockpiles, including topsoil, overburden and emergency stockpiles;
- The storage of waste tyres at the mine; and
- The treatment of effluent, waste water and/or sewage at the mine.

5. Approach and Methodology

5.1 Definition

In order to define Socio-economic Impact Assessment, it is important to understand the difference between Social Impact Assessment and Socio-economic Impact Assessment. Internationally, Social Impact Assessment (SIA) is seen as an overarching framework that embodies the evaluation of all impacts on humans and on all the ways in which people and their communities interact with their socio-cultural, economic and bio-physical environment. SIA has strong links with a wide range of specialist sub-fields involved in the assessment of areas

such as: aesthetic impacts, archaeological and heritage impacts, community impacts, cultural impacts, demographic impacts, development impacts, economic and fiscal impacts, gender assessment, health impacts, indigenous rights, infrastructural impacts, institutional impacts, political impacts, poverty assessment, psychological impacts, resource issues, tourism impacts and other impacts on societies (Vanclay, 2003: 7). Social Impact Assessment variables include the economic environment (compare Vanclay, 2003: 85-89; Burdge, 2004:101; Taylor, Bryan & Goodrich, 2004: 75). Social Impact Assessments and Economic Impact Assessments are often undertaken separately, but they are complementary and sometimes overlap. The social and economic environment cannot be separated, as these environments are closely entwined.

The current practice in South Africa is similar to the international practice as described in the previous paragraph, and Social Impact Assessments generally include social as well as economic impacts. The terms Social Impact Assessment and Socio-economic Impact Assessment are often confused and refer to the same assessment in many instances. The University of Wisconsin defines Socio-economic Impact Assessment as an examination of how a proposed development will change the lives of current and future residents of a community. The Australian Government Department of the Environment and Heritage (2005:5) states that Socio-economic Impact Assessment is a useful tool to help understand the potential range of impacts of a proposed change, and the likely responses of those impacted on if the change occurs. The International Association for Impact Assessment (2003) defines Social Impact Assessment as including the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programmes, plans, projects) and any social change processes invoked by these interventions. The primary purpose of SIA is to bring about a more sustainable and equitable biophysical and human environment.

From an international perspective, Socio-economic Impact Assessment falls under the umbrella of Social Impact Assessment. A Social Impact Assessment will look at the social environment in more depth than a Socio-economic Impact Assessment. For South African purposes, the two terms are generally used as one and the same. Social and economic impacts should be integrated in order to provide a comprehensive and cost-effective outcome and avoid duplication. For the purpose of this Report the term Socio-economic Impact Assessment will be used.

5.2 Purpose of the SIA Report

The purpose of the SIA study is to

- Assess the social impacts of the proposed Matai Mining Project including any impacts on local infrastructure and services;
- Recommend mitigation measures to minimise adverse impacts and maximise benefits of the Project; and
- Facilitate the consideration of alternatives.

5.3 Benefits of SIA

Considering potential social impacts of proposed developments have numerous benefits. The benefits of assessing social impacts are (Bezuidenhout, 2013):

- It enriches the decision-making process by potentially resulting in a different, better informed decision than the one that would otherwise have been made.
- Decision-making criteria are applied consistently.
- A more holistic view of developments and their impacts are obtained.
- Provision of mitigation measures for negative social impacts, which are included as conditions for issuing an authorisation, and thereby ultimately enforced.
- Enhancement of positive social impacts that a development may have.
- Promotion of transparency and accountability in all applications for new developments.
- Social learning by developers, planners, decision-makers and the community, resulting in successful implementation of projects.
- Contributing to sustainability because development is more successful and sustainable if it has the “buy-in” of the communities that are affected by it –a “social licence to operate”.

5.4 Approach

Socio-economic Impact Assessments are directly related to decision-making (Branch *et al.*, 1984:6). Probable undesirable social and economic effects of development need to be identified before they occur in order to make recommendations for mitigation (Interorganizational committee, 2004: 94). According to Henry (1990:93) SEIA intends to minimise negative impacts due to mismatches between people and projects by indicating the social and economic impact of projects prior to implementation, by facilitating project modification and mitigation through public input or by incorporating social values and priorities such as social equity. SEIA that involves the community minimizes local resistance to projects and therefore reduce disruption; they increase project success and they prevent major planning disasters and associated costs (Burdge, 2004:248).

5.5 Methodology

The SIA used both quantitative and qualitative data collection techniques. In terms of the quantitative data, data from Statistics SA was used to understand the local social circumstances of the proposed Matai Mining Project area. In terms of the qualitative method focus group meetings and in-depth interviews were conducted to understand the affected communities' perceptions, how they view themselves and the environment around them.

5.5.1 Definition of the Study Area

Socio-economic impacts can usually be divided into three broad categories, namely:

- Physical intrusion, which refers to Project infrastructure and Project-related activities' material presence in an area. These could lead to changes in, for example, land ownership, noise, dust, and changes in the visual landscape. Such changes typically extend to land uses within a few kilometres from the Project site;
- Economic pull occurs when a Project exerts changes and impacts on job creation, in-migration of workers and job-seekers, multiplier effects in the local and regional economy – all of which can lead to an increased risk of social pathologies and community conflict. These impacts can typically be expected in settlements and towns closest to the Project; and
- Indirect or induced impacts are by-products of the abovementioned categories and can include aspects such as increased pressure on local services and resources, macro-economic benefits, etc. These impacts could have a wide geographic reach and include major towns or cities up to 50 km from the Project site.

The methodology followed in undertaking the study included the following:

5.5.2 Data Collection

The approach taken to data collection – and to the SIA in general – was to capitalise as much as possible on collaboration with other members of the Niara and Kimopax teams involved in the EIA and supporting specialist studies. Particular instances of such collaboration included the following:

- Investigative site visit was undertaken in February 2018;
- Statistics South Africa data;
- A literature review of the Integrated Development Plan, Spatial Development Framework;
- Scan and analysis of the Final Scoping Report, Matai Mining's SLP document, Comments and Responses Report and various specialist studies;
- Information obtained by the Kimopax stakeholder engagement team (e.g. during meetings with local government officials and other local and regional stakeholders) was used to inform the social baseline and impact assessment; and
- The findings of other specialist studies were reviewed to identify cross-disciplinary linkages, i.e. impacts assessed by one specialist discipline that could give rise to indirect or induced impacts relevant to another discipline. As an example, project induced changes in groundwater quality and quantity could cause social impacts by altering the availability and/or quality of water for domestic consumption. Specific data collection activities undertaken during this study are outlined below.

5.5.3 Desktop Review

Available public documents were reviewed to obtain relevant information on current and planned Project activities, on baseline socio-economic conditions

5.5.4 Field Visit

A field visit was undertaken in February 2019 with the purpose to:

- Familiarise themselves with the project area and surrounding environments and to collect primary data. Semi-structured interviews were set up with Government and Community Stakeholders and the community centres and health facilities were visited. The consultant also wanted to obtain an overview of the social characteristics of the study area and visit farms within the proposed Matai Mining Project area.
- Conduct interviews with affected farm dwellers.

5.5.5 Literature Review, Baseline Data Review and Analysis

The review of existing data assisted the consultant in confirming the social setting and characteristics of the study area, as well as the key economic activities. Data studied included information from the Provincial, District and Local Municipalities Strategic Planning Documents such as their Provincial Growth and Development Strategy (PGDS), Integrated Development Plan (IDP) for Moses Kotane Local Municipality and other Sector Plans. Articles pertaining to mining and tourism within the South African context were also considered.

5.5.6 Profiling

Profiling provides a summary of the social demographic and economic characteristics of the area being assessed. The purpose is to establish an understanding of; the resident communities and their livelihoods, land-use patterns, analyse demographic data and thereby identify those characteristics that will be influenced, both positive and negative, by the proposed Matai Mining Project.

Such information could include:

- Demography
- Cultural diversity
- Population movement
- Housing and households
- Employment
- Income levels
- Farming characteristics
- Social infrastructure and
- Social capital

5.5.7 Information from the Public Consultation Process

As part of the data collection process, the SIA made use of information gathered during public consultations. The relevance of this data lies in the fact that the public participation process serves as a stage where stakeholders air their concerns and perceptions about the Project. This allows for the early identification and confirmation and assessment of social impacts. The Comment and Response Report (CRR) compiled as part of the public consultation process was reviewed as part of the data collection process.

5.6 Limitations and Assumptions

- This report and assessment are dependent on the accuracy of the publicly available secondary information; such as Statistics South Africa (StatsSA, 2011 and community survey, 2016). Where possible, the information was verified during a site visit. The data was considered sufficient for the purpose of this study;
- The study is based on data obtained from the community survey, 2016, which may not reflect accurate information;
- Not every individual in the community could be interviewed therefore only key people in the community were approached for discussion;
- It should be noted that the social environment is a dynamic, constantly changing entity. It is therefore not always possible to predict all social impacts to a very high level of accuracy. Care has been taken to identify the most likely and significant impacts in the most appropriate way for the current local context;
- Social impacts can be experienced by affected communities on an actual or a perceptual level. It is therefore not always possible to quantify social impacts properly;
- It should be noted that predictions concerning the characteristics of the receiving socio-economic environment at the time of decommissioning are subject to a large margin of error, thus significantly reducing the accuracy of impact assessment- the specialist has attempted to assess (where possible) the impact during the decommissioning phase;
- Individuals view possible social impacts differently due to their association with the anticipated impact. Impacts could therefore be perceived and rated differently than those contained in the Health Assessment Report. Further public participation can be used to refine findings; and
- Socio-economic impacts associated with the eventual decommissioning of the mine at the end of its life are briefly discussed but are not subject to detailed assessment. This omission is motivated by the fact that predictions concerning the characteristics of the receiving socio-economic environment at the time of decommissioning (30 years in the future) are subject to a large margin of error, thus significantly reducing the accuracy of impact assessment.

5.7 Confidentiality

Due to the sensitivity and controversial nature of mining developments, it is often found in consultation sessions with members of the public and private sector, that people who contribute to a better understanding of the social and economic issues at hand, require confidentiality. A number of people interviewed indicated that they do not wish to be implicated in any way and would not like to have their names mentioned/ published in any report. For this reason, Niara cannot publish a complete list of all individuals and organisations interviewed. A number of people in various private and public sector positions indicated that they do not mind if their names are published as being part of the consultation process, but that they want no direct link to their inputs and comments.

In a number of cases, it was found that the person interviewed had a different opinion than those of the institution he or she represents or works for, or the community he/she lives in. For example, a person may be the owner of a small trading business and feel that the development of the Matai MVT Mine will bring more clientele/ customers to the business and hence they support the proposed Matai Mining Project fully. The same person however, indicated that he/she would not like other business owners to know that he/she is in support, because not all business owners feel that way and that might cause conflict that he/she does not want.

6. Impact Assessment Methodology

The impact significance rating process serves two purposes: firstly, it helps to highlight the critical impacts requiring consideration in the management and approval process; secondly, it shows the primary impact characteristics, as defined above, used to evaluate impact significance. The methodology below will be used when determining the significance of impacts associated with the proposed Matai Mining Project.

The impact significance rating process serves two purposes: firstly, it helps to highlight the critical impacts requiring consideration in the management and approval process; secondly, it shows the primary impact characteristics, as defined above, used to evaluate impact significance.

The impact significance rating system is presented in Table 6-1, Table 6-2 and Table 6-3 and involves three parts:

- 1 **Part A:** Define impact consequence using the three primary impact characteristics of magnitude, spatial scale/ population and duration;
- 2 **Part B:** Use the matrix to determine a rating for impact consequence based on the definitions identified in Part A; and
- 3 **Part C:** Use the matrix to determine the impact significance rating, which is a function of the impact consequence rating (from **Part B**) and the probability of occurrence.

6.1 Part A: Defining Consequence in Terms of Magnitude, Duration and Spatial Scale:

Use these definitions to define the consequence in Part B.

Table 6-1: Consequence Rating Methodology

Impact Characteristics	Definition	Criteria
Magnitude	Major -	Substantial deterioration or harm to receptors; receiving environment has an inherent value to stakeholders; receptors of impact are of conservation importance; or identified threshold often exceeded
	Moderate -	Moderate/measurable deterioration or harm to receptors; receiving environment moderately sensitive; or identified threshold occasionally exceeded
	Minor -	Minor deterioration (nuisance or minor deterioration) or harm to receptors; change to receiving environment not measurable; or identified threshold never exceeded
	Minor +	Minor improvement; change not measurable; or threshold never exceeded
	Moderate +	Moderate improvement; within or better than the threshold; or no observed reaction
	Major +	Substantial improvement; within or better than the threshold; or favourable publicity
Spatial scale or population	Site or local	Site specific or confined to the immediate project area
	Regional	May be defined in various ways, e.g. cadastral, catchment, topographic
	National/ International	Nationally or beyond
Duration	Short term	Up to 18 months.
	Medium term	18 months to 5 years
	Long term	Longer than 5 years

6.2 Part B: Determining Consequence Rating:

Rate consequence based on definition of magnitude, spatial extent and duration.

Table 6-2: Consequence Rating Methodology

		Spatial Scale/ Population			
		Site or Local	Regional	National/ International	
MAGNITUDE					
Minor	DURATION	Long term	Medium	Medium	High
		Medium term	Low	Low	Medium
		Short term	Low	Low	Medium
Moderate	DURATION	Long term	Medium	High	High
		Medium term	Medium	Medium	High
		Short term	Low	Medium	Medium
Major	DURATION	Long term	High	High	High
		Medium term	Medium	Medium	High
		Short term	Medium	Medium	High

6.3 Part C: Determining Significance Rating:

Rate significance based on consequence and probability.

Table 6-3: Significance Rating Methodology

		Consequence		
		Low	Medium	High
PROBABILITY (of exposure to impacts)	Definite	Medium	Medium	High
	Possible	Low	Medium	High
	Unlikely	Low	Low	Medium

7. Socio-Economic Baseline Profile

Baseline conditions are the existing conditions and past trends associated with the human environment in which the proposed activity is to take place (DEAT, 2006).

Establishing the baseline conditions is essential for describing the receiving environment, the status quo and for identifying and predicting potential impacts. "A prediction of change can only be as effective as the baseline information from which it is derived. It is thus important that the specialist puts the proposed Matai Mining Project in perspective by comparing the current state with the potential future state" (DEAT, 2002a).

This Section describes the socio-economic characteristics of the potentially affected area in order to develop an understanding of the broad social and economic conditions of the environment. The proposed Matai Mining Project has the potential to result in both positive and negative social impacts. As such, it is important that the socio-economic baseline conditions are understood to ensure accurate identification and assessment of potential impacts associated with the proposed Matai Mining Project. This Section provides an overview of the socio-economic baseline for North West Province, Bojanala District Municipality and Moses Kotane Local Municipality (MKLM).

7.1 Administration

There is a dual system of governance in the province i.e. the political structures of governance and the traditional authorities, each of the administrative structures is briefly described below.

7.1.1 Political Structures of Government

South Africa is a constitutional democracy with a three-tier system of government and an independent judiciary. The national, provincial and local levels of government all have legislative and executive authority in their own spheres.

The provincial government is responsible for providing the strategic vision and framework for the province. They are responsible for ensuring cooperation and collaboration between municipalities and ensuring that each municipality performs their respective functions. District municipalities are responsible for the development of IDP and for the overall provision of services and infrastructure within the districts, including for the local municipalities. The purpose of district and local municipalities sharing the responsibility for local government is to ensure that all communities, particularly disadvantaged communities, are afforded equal access to resources and services.

7.1.2 Tribal Authorities

Traditional authorities refer to mainly rural areas whereby chiefs and their councils are responsible for administrative tasks at a community level and in mobilising local communities if there are any investment Projects within their area of jurisdiction. The Matai Mining Project itself is located within a traditional area Mmantserre Traditional Authority (MTA). There is also another traditional authority in close proximity to the proposed Project area namely Bakgatla-BaKgafela Traditional Authority (BBKTA).

7.2 Regional Setting: North West Province

The proposed Matai Mining Project area is located in the Northwest Province, the Bojanala Platinum District, and the Moses Kotane and Rustenburg Local Municipalities.

The Northwest Province covers a geographical area of 105,238 km² and with a 2018 population estimate of almost 4 million people, is the 7th largest province in South Africa (based on population size). A population density of 37.8 people per km² is indicative of the largely rural nature of the province. Urban centres can be found around Mahikeng (the provincial capital), Klerksdorp, Potchefstroom and Rustenburg where the population density is expected to be much higher. The majority of the population is Black African (91.6%), followed by White (6.4%). There is an almost equal split between males and females, with males in the slight majority at 50.9%. According to Community Survey 2016, the majority of the province's residents are native to the Northwest Province (81.2%).

More than half of the province's gross domestic product is generated by the mining industry. It produces 5.7% of South Africa's GDP through its mining, agriculture and manufacturing sectors. Tourism is regarded as the fourth most important sector, after those mentioned above. Domestic tourism is an important source of the province's revenue and employment, contributing approximately 52% of total tourism consumption. According to the South African Annual Tourism Report (2014), the Northwest is one of three least visited destinations in South Africa, both in terms of domestic and international visitors with a 5.3% market share in tourist arrival. Even so, this is an indication of quantitative growth in the province's tourism profile as it represents an increase of 15,340 tourists over a year period (Northwest Department of Tourism, Annual Performance Plan, 2018/19).

Growth and development in the province are guided by the North West Development Plan (NWDP). The NWDP adopted 8 development priorities which constitute the first 5-year cycle of economic transformation. These are:

- ⇒ Economy and employment;
- ⇒ Economic infrastructure;
- ⇒ An integrated and inclusive rural economy;
- ⇒ Human settlement and spatial transformation;
- ⇒ Improving education, training and innovation;
- ⇒ Building a capable and development state;
- ⇒ Fighting corruption; and
- ⇒ Transforming society and uniting the province.

7.3 Bojanala District

The Bojanala Platinum District Municipality (BPDM) is one of four districts in the Northwest province. It covers an area of 18,333 km² (17.4% of the province) and in 2016, was home to just over 1.5 million people (44.2% of the province's total population). At 89.6 persons per km², the population density of the district is more than double that of the province as a whole, but still indicative of a largely rural area. Similar to the province, the largest population group in 2016 was Black African (93.8%), followed by White (5.3%). More than half of the population are male (52.9%). Although a higher percentage of the population migrated from neighbouring Gauteng (8.7%),

the majority of the district's population (71.8%) are native to the Northwest. Low out-migration rates are indicative of strong place attachment to an area.

The district's main economic drivers are agriculture, tourism, manufacturing, mining and the service industry. In 2015 the mining sector was the largest within the district, accounting for 51.8% (R61.1bn) of the local GVA. Agriculture is the smallest economic sector, contributing an estimated R1.37bn (or 1.2%) of the total GVA. Overall the BPDM contributed 54.29% to the province's GDP of R226bn in 2014 (BDPM IDP, 2018/19). Tourism and marketing development is one of the core objectives of the district's local economic development KPA.

7.4 Moses Kotane Local Municipality

The Moses Kotane Local Municipality (MKLM) is a category B4 local municipality, which refers to a municipality that is mainly rural with communal tenure. The municipality covers an area of approximately 5,738 km² (31.3% of The Municipality is an EXCO-type with 31 Wards. It is led by Council, made up of 75 Councillors comprising Dikgosi, Ward and PR Councillors. The joint senior political leadership, commonly referred to as TROIKA, consists of the Speaker, Mayor and the Single Whip. The Mayor is the head of a 10-member Executive Committee (EXCO), who head various Portfolio Committees. The Municipality consists of 107 villages and 2 formal towns (Mogwase and Madikwe). The N4 Corridor which is the east-west bound road connecting Rustenburg and Pretoria runs to the south of Moses Kotane Local Municipality. The R510 north south bound road connect the Municipality to the north.

7.4.1 Population Demographics

In 2016, the MKLM was home to 243,648 people. This represents a marginal increase from 2011's population size of 242,554 at an average population growth rate of 0.1% per annum. Close on two thirds (53%) of the population fall within the economically active age range (ages 18-64). Although this is a large majority of the population, it represents a 2.3% decrease in this age bracket (61.8% in 2011), which is indicative of an out-migrating economically active population – likely in search of employment opportunities elsewhere. As a largely traditional area with communal tenure, the MKLM is made up almost exclusively of Black Africans (99.3%), with females in the slight majority (50.2%) as trend which has remained consistent since 2011. It is estimated that 39% of the population consists of children under the age of 18 years. Most of its population (90.2%) are native to the Northwest province. The majority of the population in MKLM (84%) are of South African nationality with is slightly higher than the number of South African born persons living in Bojanala District Municipality (95.8%). The primary language spoken is Setswana.

Just under a third (30.3%) of the MKLM's economically active population are employed primarily in the formal sector. Approximately 1 in every 5 individuals (19.5%) are unemployed and a further 5.8% regard themselves as discouraged work seekers. The MKLM IDP (2017-2022) puts the unemployment rate in the municipality as high

as 51% (data source unknown) and states in this regard that the need for skills development and job creation is very high and that all role-players who reside in and/or do business in the municipal boundary, should become active participants in the MKLM's local economic development plans.

7.4.2 Education Levels

Level of education attained is used as an indicator of human capital and is measured by the percentage distribution of the adult population and the highest level of schooling they completed. South Africa's National Qualification Framework (NQF) recognises three bands of education namely; general education and training, further education and training and higher education and training.

In MKLM, 63.3% of the population completed Grade 9 or higher and only 35% completed Matric or higher. This rate is similar to the rate for Bojanala which is 38.7%. School attendance however is high with 94.8% of children between ages 5 to 17 years attending school which is an increase of 24.8% since 2011. This rate is comparable to both Bojanala (94.9%) and Northwest (94.8%). A survey of 17 years olds during the Community Survey in 2016 indicated that 88% had some form of secondary school education.

7.4.3 Local Economy

The economy of Moses Kotane is mainly characterised by tourism, mining and agriculture, owing to its location within the major tourism and mining belt of the North West province, namely Pilanesberg and Sun City. Industry and social services also form a critical part of the local economy.

7.4.4 Infrastructure

The majority (79.8%) of the population with the local municipality get water from a regional or local service provider, 40% have access to piped water in their yard (Community Survey, 2016) a substantial increase from 18.7% in 2011. A very small portion of the population (3.2%) have no access to the electricity and the majority of the households (90%) have a pre-paid meter in the house.

Approximately 79% of the population make use of pit toilets and according the Community Survey of 2016 of 15.2% of the population have access to flush or chemical toilets. This is significantly lower the rate in Bojanala which is 39.3%. Access to basic sanitation remains problematic as indicated in the IDP 2016/2017.

In terms of refuse disposal, 82.4% of the population are getting refuse disposal from either the local authority, private company or community members on a regular basis. This rate is 1.3 times higher than the rate in Bojanala (64.2%).

A concern noted in the in IDP 2016/2017 was the waste management as the medical waste from most clinics is reportedly dumped into open areas due to the lack of suitable incinerators. An additional need for waste

management is limited to the disposal of general waste in the towns of Madikwe and Mogwase where large amounts of waste are produced and contributing to littering.

10.3.4.1 *Roads*

In terms of road provision, the IDP 2016/2017 states that some areas the roads infrastructure and maintenance are poor, roads are in a dilapidated condition, have potholes and some tar roads need patching (SDF, 2014-2034). The IDP from 2016/2017 identified 19.6% of its road where in need of immediate repairs as the current condition restricted movement in terms of safe driving speeds. A further 51.4% of the roads are in fair condition but would requirement re-sealing in the near future.

The immobility of communities within the local municipality area was noted to be a concern. Car ownership within the municipal area is low and commuters depend on public transportation. The majority of the population mostly uses public transport services (bus and taxi operations). In addition to formal vehicle use, donkeys with trailers are also commonly seen traversing between vehicles and on the side of roads. Donkeys and trailers have been a traditional mode of transport and while the 'horse and carriage' is privately owned, it is very often leased out for business purposes (Sanral, 2012).



Figure 7-1: Donkey cart as mode of transport

10.3.4.2 *Housing*

The Moses Kotane housing market has experienced an increase in housing due to the mining industry in the neighbouring towns. The mining towns provide stable incomes, new housing investment, and in particular, a thriving housing market. This is likely due to continued growth and expansion of the mining sector and jobs along the Platinum District, and the increasing urbanisation of previously undeveloped or rural areas within the municipality. Recent growth has surged a bit, creating an opportunity for markets to be carefully assessed in order to best position the next wave of growth.

According to the Community Survey 2016, there are approximately 80 654 households in MKLM of which approximately 77% are considered formal settlements a decrease of 4% since 2011. The number of households has increased from 75 195 recorded in the 2011 census. 10.9% live in informal settlements (i.e. shacks) which is more the half of the percentage of households that are informal dwellings in Bojanala District Municipality (26.8%). The IDP (2018-2019) has reported that the municipality is experiencing shortages of houses. The Community Survey of 2016 indicated that 79.9% of the households are either fully owned or being paid off with is 25% high than the rate for the Northwest Province.

The majority of households are headed by men (59%) and it is estimated that 425 households are headed by children under the age of 18 years. Of the child-headed households approximately 26.8% live in informal dwellings, which is comparable to the rates in Bojanala (28.8%). The majority of child-headed households (72%) are headed by boys.

The average household income is about half the average found in Bojanala at R14 600. The majority of the households (84%) earn less the R 75 000 on average. Almost all the households (91%) have access to a cell phone (used to access the internet) and the majority of homes also have access to a fridge (80%), stove (84%) and TV (80%). A limited number of households had access to a car (22%) and computers (13%).



Figure 7-2: Typical type of housing in the Project area and surrounds

7.4.5 Service Delivery

The Constitution of the Republic of South Africa (Act 108 of 1996) provides all South African's with basic human rights, which includes the rights to access basic infrastructure and services. Free Basic Municipal Services (FBS) are provided by the government to those South African households who cannot afford these services. These services are assumed to be sufficient to cater for the basic needs of a poor household.

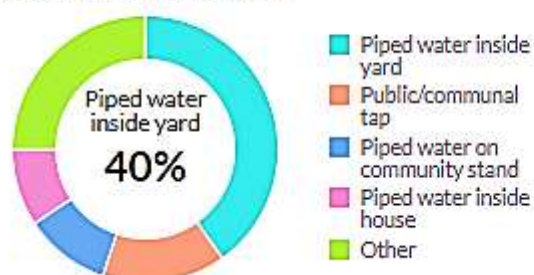
This section reports on household access to public service delivery and the status of civil infrastructure, which facilitates these services, within the MKLM area and the site-specific study area.

10.3.4.3 Water

Safe drinking water is a basic necessity for good health, as unsafe drinking water can be a significant carrier of diseases such as trachoma, cholera and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful effects on human health. Results derived from the 2016 Community Survey indicates that most households throughout the MKLM have access to piped water inside or outside the yard (40% inside the yard). It is concerning that some households within the site-specific area has no access to piped water, and likely rely on municipal water tankers or water sourced from boreholes (CS, 2016).

	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12
Water						
Blue Drop Score	n/a	n/a	n/a	55.87	n/a	68.59
Is the municipality responsible to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality have infrastructure to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality actually provide?	Yes	Yes	Yes	Yes	Yes	Yes
Is the service outsourced/commercialised?	No	No	No	No	No	No
Number of households and non-domestic customers to which provided	74 300	74 300	74 300	74 300	63 459	62 544
Number of domestic households/delivery points	74 059	74 059	74 059	74 059	62 966	62 051
Inside the yard	40 000	40 000	40 000	40 000	20 952	20 268
Less than 200m from yard	28 900	28 900	28 900	28 900	36 783	36 783
More than 200m from yard	5 159	5 159	5 159	5 159	5 231	5 000
Domestic households with access to free basic service	20 591	19 398	17 250	74 059	62 966	62 051

Population by water source



Population by water supplier

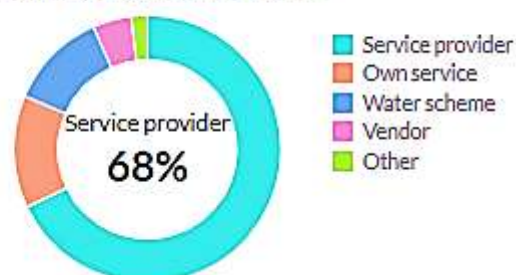


Figure 7-3: Population by water source and supplier

10.3.4.4 Electricity

The supply of electricity to households throughout the country is central to the governments' aim of improving quality of life (SA Handbook, 2011). The cost of energy in South Africa is amongst the lowest in the world (as a result of a heavy reliance on coal power); however, the demand is growing due to increase in macro-economic activities and industrialisation (SA Handbook, 2011). Electricity services in South Africa are at crossroads. National economic growth has outstripped available generation capacity, while the regulatory uncertainty has undermined effective management of distribution assets at the municipal level. Like many municipalities, the MKLM being a small municipality in population size, consumers are now experiencing significant price rises that are necessary to pay for expanding generation capacity coupled with financial and operational challenges in securing municipal distribution networks. The municipal distribution network covers households, businesses and

municipal own consumption. The municipality with the assistance of Department of Energy has electrified rural areas, which comprise a larger proportion of the backlogs identified by Census 2011. The majority of households within the MKLM (90%) have access to electricity (in-house prepaid metre) for lighting purposes and cooking purposes.

Electricity						
Is the municipality responsible to provide?	Yes	No	No	Yes	Yes	Yes
Does the municipality have infrastructure to provide?	No	Yes	Yes	No	No	No
Does the municipality actually provide?	No	No	No	No	No	No
Is the service outsourced/commercialised?	Yes	Yes	Yes	Yes	Yes	Yes
Number of households and non-domestic customers to which provided	66 946	66 946	65 193	65 193	65 193	63 000
Domestic households with access to free basic service	20 591	19 398	17 250	12 160	2 189	2 911

Population by electricity access

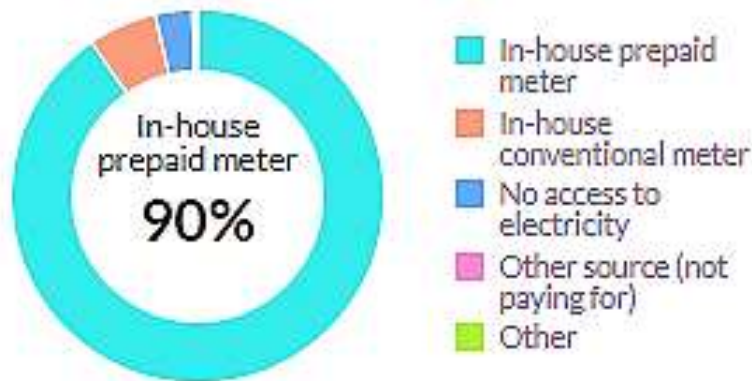


Figure 7-4: Population by electricity access

10.3.4.5 Sewage and Sanitation

The availability of sanitation facilities not only improves the dignity of people, but also promotes their health. Areas without proper sanitation systems give rise to water borne diseases like cholera, diarrhoea, and typhoid. It is therefore important that as a municipality, prioritisation should be given to this service, particularly taking into account any backlogs.

Sewerage and Sanitation						
Green Drop Score	n/a	n/a	n/a	n/a	0	0
Is the municipality responsible to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality have infrastructure to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality actually provide?	Yes	Yes	Yes	Yes	Yes	Yes
Is the service outsourced/commercialised?	No	No	No	No	No	No
Number of households and non-domestic customers to which provided	25 219	25 219	24 219	24 219	18 494	18 494
Number of households using:						
Flush toilet - public sewerage	6 793	6 793	6 793	6 793	6 793	6 793
Flush toilet - septic tank	0	0	0	0	0	0
Ventilated pit latrine	18 185	18 185	17 185	17 185	11 460	11 460
Bucket system	0	0	0	0	0	0
Other	0	0	0	0	0	0
Domestic households with access to free basic service	1 190	1 033	965	911	785	727

The following chart shows the sanitation facilities that are available in the MKLM. 79% of the households in MKLM mostly rely on pit latrines for sanitation purposes.

Population by toilet facilities

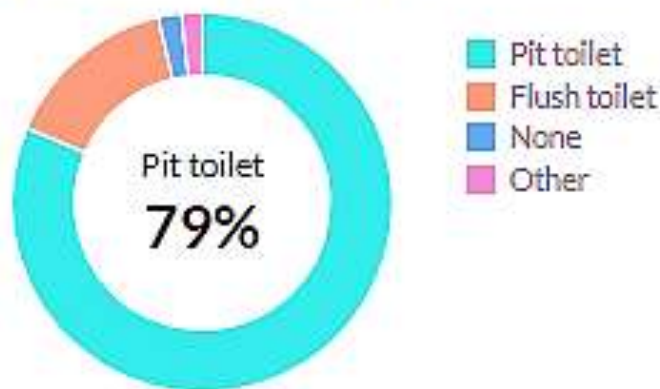


Figure 7-5: Population by toilet facilities

10.3.4.6 Refuse Removal

South Africa generates 19 million tons of waste per year and this is often harmful to the environment and people's health. According to Section 24 of the national constitution, all South Africans have the right to an environment that is not harmful to a person's health and wellbeing. The pollution and waste management act gives the local municipalities the responsibility on waste removal.

Solid Waste Services						
Is the municipality responsible to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality have infrastructure to provide?	Yes	Yes	Yes	Yes	Yes	Yes
Does the municipality actually provide?	Yes	Yes	Yes	Yes	Yes	Yes
Is the service outsourced/commercialised?	No	No	No	No	No	No
Number of households and non-domestic customers to which provided	75 193	75 193	63 000	63 000	63 000	63 000
Domestic households with access to free basic service	20 591	18 212	965	911	785	727

Population by refuse disposal

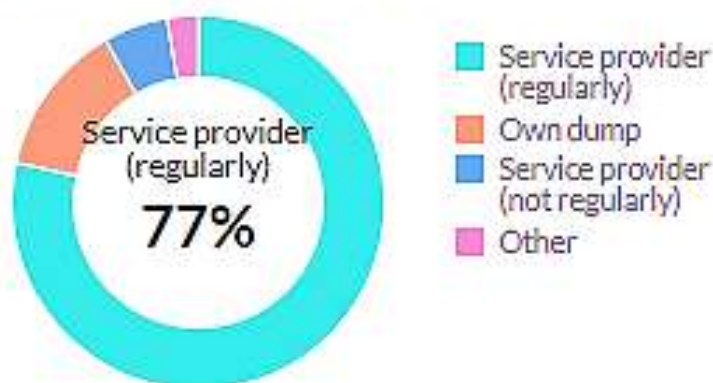


Figure 7-6: Population by refuse disposal

7.4.6 Tourism

Tourism is an important contributor to South Africa’s economy and job creation. Tourism forms part of other sectors contributing to the GDP such as trade, transport and finance (Urban-Econ, 2006). According to the World Travel and Tourism Council (2016) the tourism economy contributed R375 billion (9.4 percent) to South African Gross Domestic Product (GDP) in 2015 and the World Economic Forum (2015) confirmed that the South African tourism economy is the most competitive in sub-Saharan Africa. The South African tourism industry was also responsible for 702 824 direct jobs in 2015. However, when indirect and induced jobs are taken into account, a total of over 1.5 million jobs are linked to the tourism industry, representing 9.9 percent of all employment in South Africa in 2015. South Africa is ranked top tourism destination in sub-Saharan Africa, and the second most popular destination in Africa, after Morocco.

Of particular interest is that South Africa ranks in 20th place for its cultural resources, 22nd for its natural resources, 15th for its positive business environment, 25th for wildlife and 15th for its World Heritage Sites. South Africa also ranks 24th overall in online searches for nature related activities (National Tourism Sector Strategy, 2017).

The Pilanesberg Nature Reserve and the Sun City / Lost City Complex are the main tourist attraction centres in Moses Kotane. Apart from these, there are a number of smaller isolated nature reserves like the Madikwe, Impala, Kwa Maritane, Manyane and Bakgatla Game Reserves. These nature reserves are actively utilized through activities such as game lodges, walking trails, holiday resorts, game hunting, etc. Other tourism facilities comprise of the Molatedi Dam, Madikwe Dam, the Roodeval Farm where there are rock paintings, and the Kolotwane River Valley near Silwerkraans.

Furthermore, the proposed Pilanesberg / Madikwe Corridor (Heritage Park) represents a major new tourism initiative within Moses Kotane. This initiative has the potential to act as a catalyst for greater economic investment in the municipality. As part of awareness creation of this project, Heritage Park Walk event is organised annually. The walk usually starts from Pilanesberg National Park and end at Madikwe Game Reserve. This annual event takes place during the first week of June, as per practice, and includes World Environment Day. The event also seeks to attract participants from all-over the country to take part in the event as a way of creating awareness beyond the affected communities.

The Moses Kotane area is strategically located in terms of important provincial tourism routes and is ideally positioned to benefit from provincial tourism activities and initiatives. The area is directly influenced by two of the primary provincial tourism nodes in the NW Province i.e. the Sun City complex and the Pilanesberg National Park. The Sun City complex is situated adjacent to Pilanesberg National Park and consists of several Hotels, an artificial beach with a water adventure park, several conference centres, adult entertainment centers and a golf courses. Sun City has evolved from a resort targeting the domestic gaming market to an integrated resort servicing a high number of high yield markets.

Several high profile events are regularly hosted at Sun City and include events such as the Nedbank Million Dollar Golf Challenge and regular performances of several international celebrities have performed at the Sun City Superbowl. The artificial beach and water adventure park is a main attraction in various tourist events such as beach parties, the hosting of beauty pageants and surfing competitions. Sun City attracts more than a million visitors and Pilanesberg National Park more than 350,000 visitors a year.

7.4.7 Crime

The BPDM has three policing clusters across its five local municipalities namely Rustenburg, Brits and Mmakau. There are three police stations in MKLM. The most dominant crimes across BPDM are robbery with aggravating circumstances, commercial crimes, sexual crimes, stock theft and carjacking. According to BPDM IDP Report (2012/2017), the presence of the mining industry generates the potential for criminal activities.

According to MKLM representatives and ward councillors, common crimes in the broad area include robbery/ theft (specifically of cattle/ stock which are used at funerals and social gatherings) and rape. It was further

indicted that mining and mining related activities have caused instability (in-fighting and protests) in the municipality due to competition for the perceived benefits offered by the mines (e.g. jobs, procurement opportunities, and Social Labour Plan (SLP) Projects). The villages of Mmantserre, Mopyane and Sefikile are crime hotspots within the municipality due to high poverty levels caused by low levels of education, the rural setting of the area, and close proximity to the mines. Mogwase Police Station services these villages, however it is located approximately 40km away.

Migration into the municipality, due to the existence of mines, has led to increased crime rates; notably robberies, rape, hijacking, and consistent protests. The representatives of MKLM indicated that the people in the area are frustrated by high poverty levels and the poor standard of living

7.4.8 Mining Industry Profile

- Moses Kotane is part of the platinum mining belt of the North West, which has the largest deposits of platinum produced by various mining companies, namely: Anglo Platinum, an Anglo American company; Sedibelo/ Barrick Platinum; Xstrata and Wesizwe Platinum.
- The major residential nodes and mines are adjacent and in close proximity to Provincial Road (R510), which extends from Rustenburg, Mogwase and Northam to Thabazimbi. The majority of the mines are located between Thabazimbi and Northam, and thus for Moses Kotane Local Municipality, they are cross-border mines, servicing both Moses Kotane and Thabazimbi Municipality.
- The large area of the municipality can be classified as rural with very low densities, which makes the provision of basic services very difficult and expensive.
- The regional economy is dominated by the mining industry, which forms the backbone of the provincial economy, contributing 42% to the GDP and 39% to the employment figure.
- The expansion of mining activities and influx of workers have increased the housing backlog in and around Moses Kotane.
- Mining companies are increasingly putting pressure on the Moses Kotane Local Municipality to provide housing and infrastructure for their workers.

MOSES KOTANE LOCAL MUNICIPALITY



5 738 km²

Population: 243 648

107 villages
2 towns



50.2% Female



99% Black Africans

Language Setswana



51% Unemployment

Average household income

R14 600



96.8% of population have access to electricity

35% with Matric or higher



82.4% access to refuse disposal

94.8% school attendance of children ages 5 to 17

water strained area

80 654 households



79.8% with access to potable water

77% formal dwellings

79% use pit toilets

10.9% informal dwellings

59% men-headed households

40% with piped water in yard

425 child-headed households



97% have access to electricity

Households with access to cellphones

91%



Environmental Consultants



8. Impact Assessment

Socio-economic impacts have to be identified and assessed so that it can be understood and communicated to the impacted communities and decision makers. Unlike biological and physical impacts, socio-economic impacts are to a large extent based on and responsive to people's perceptions and therefore the intensity and significance could change over time as new perceptions are formed (e.g. people might oppose a housing development during the EIA process but once the housing development is constructed and assimilated into the baseline, people don't notice it anymore and their animosity is reduced).

Determining socio-economic impacts is a challenging process because the elements that combine to form an impact are generally multi-dimensional and interrelated. The linkages between project-induced changes are also complex and mutually reinforcing, e.g. employment creation can be an important Project benefit, but at the same time it could also contribute so social conflict or excessive in-migration. Socio-economic impacts also have the potential to spread further to other (sometimes unrelated) areas, e.g. project-induced in migration could place pressure on local services (i.e. the Project itself did not create the impact but caused a by-product that caused an impact). This is what Vanclay (2002) refers to as change processes.

The assessment of socio-economic impacts was categorised as per the following change processes:

- Demographic processes: changes and impacts related to the composition of local communities;
- Economic processes: changes and impacts on the way in which the local people make a living and the economic activities in the society;
- Geographical processes: changes and impacts on land use patterns;
- Institutional and Legal processes: changes and impacts that affect the efficiency and effectiveness of local authorities; and
- Socio-cultural processes: changes and impacts that affect the culture of the local society, i.e. the way that people live together.

The discussion of each impact is structured as follows:

- Description of the expected change(s) to the baseline profile and resultant impact(s);
- Description of mitigation or augmentation measures to minimise or avoid negative impacts and enhance positive ones; and
- A table presenting the rating of an impact, summarising the recommended mitigation/augmentation measures, repeating the rating exercise after the application of mitigation/augmentation to determine the effectiveness thereof.

Where findings from other specialist studies are applicable, these have been included, particularly where such findings may contribute to the identified social impacts.

It is expected that the proposed Matai Mining Project will result in social changes which may positively and negatively affect communities within the study area. In terms of the social changes that have been assessed, the following social impacts are have been identified:

- Employment opportunities;
- Multiplier impacts on the local economy
- Change in movement patterns;
- Loss of agricultural land and infrastructure;
- Physical and economical displacement;
- Impacts on the local tourism industry
- Increased pressure on Municipal infrastructure;
- Increased social pathologies linked to influx of workers and job seekers;
- Increased nuisance factors and changed sense of place.

Although it is necessary to keep the complexity of social impacts in mind, it is also necessary to produce an SIA Report that will be accessible to a non-specialist audience and meet the requirements of the proponent, as well as international best practice. For this reason, predicted impacts have been categorised within the project phase (construction, operation and decommissioning) it is likely to originate, recognising that many impacts will span over more than one project phase.

8.1 Employment opportunities- Economic Process

Employment opportunities include direct employment by the Project, indirect employment through the Project's suppliers, and induced employment generated through spending and associated job creation in the economy. Project related employment has the potential to considerably improve the livelihoods and income stability of future employees and their dependants. It is anticipated that the proposed Matai Mining Project will create job opportunities for community members within the study area. Creation of employment opportunities is likely to occur during the construction phase. The study area is characterised by high unemployment rate with a majority of households living below the poverty line.

It should be taken into account that expectations regarding employment opportunities are very high, particularly among the youth within the study area. Questions regarding employment opportunities were raised at the Focus Group Discussions.

8.1.1 Construction impact:

NATURE OF THE IMPACT: EMPLOYMENT OPPORTUNITIES		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Long term
Magnitude	Moderate +	Major +
Probability	Definite	Definite
Calculated Significance Rating	Medium	High
Impact Status:	Positive	Positive
Reversibility:	Not applicable	
Irreplaceable loss of resources:	Not applicable	
Can impacts be enhanced:	Yes	
Residual impacts ➤ The residual impacts associated with the creation of employment and business opportunities and training during the construction phase is that the workers can improve their skills by gaining more experience.		
Mitigation measures ➤ Establish targets for the employment and training; ➤ Train workforce for longer term employment; ➤ Adopt recruitment strategies that ensure local people are given employment preference; ➤ Effective implementation of training and skills development initiatives; ➤ The recruitment process has to be transparent and equitable; ➤ Maximise and monitor local recruitment; ➤ Consult local labour recruitment offices; ➤ Prevent nepotism/corruption in local recruitment structures; ➤ Promote employment of women and youth; ➤ Formulate a labour recruitment strategy that would minimise impact on other sectors (e.g. do not recruit unskilled labour at wage levels above the wages paid in the agricultural sector); and ➤ Establish a liaison point with the adjacent farming community to monitor the impact on their local labour force.		



8.1.2 Operation impact:

NATURE OF THE IMPACT: EMPLOYMENT OPPORTUNITIES		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Moderate +	Major+
Probability	Possible	Definite
Calculated Significance Rating	Medium	High
Impact Status:	Positive	Positive
Reversibility:	Not applicable	
Irreplaceable loss of resources:	Not applicable	
Can impacts be enhanced:	Yes	
Residual impacts <ul style="list-style-type: none"> ➤ The residual impacts associated with the creation of employment and business opportunities and training during the operational phase is that it benefits the local economy; ➤ Acquired transferable skills that could potentially be used with other businesses 		
Mitigation measures <ul style="list-style-type: none"> ➤ If possible, a training and skills development programme for the local workers should be initiated prior to the operational phase. ➤ Effective implementation of training and skills development initiatives; ➤ Recruitment should be formalised and co-ordinated through the Department of Labour- avoid appointments at the gate of the mining operation. ➤ Prevent nepotism/corruption in local recruitment structures ➤ Promote employment of women and youth ➤ Collaborate with Department of Labour and local business entities to develop/share skills database/registers ➤ Prioritise local labour in the recruitment process – this will also limit project-induced in- migration to some extent. ➤ Unskilled workers are recruited from the local villages and should be developed (up-skilled) during operations. ➤ Medium skilled workers should where possible be recruited from the local villages surrounding Mankwe District; and ➤ Locals should also be allowed an opportunity to be included in a list of possible local suppliers and service providers for e.g. security services. 		





8.1.3 Decommissioning impact:

Closure will involve large scale downscaling and retrenchment of the workforce over a number of years. Although there will be downscaling during this phase, some community members would have worked on the mine, and will constitute a reserve of trained workforce.

8.2 Multiplier impacts on the local economy- Economic process

The proposed Matai Mining Project may result in several economic benefits for local communities through direct and multiplier effects stimulated by capital expenditure and construction activities. The mine is likely to generate contracts for the purchase of equipment and other goods and services. The majority of these contracts will be for specialist goods and services, which will be provided by businesses within the project area. Procuring of specialist goods and services will likely generate more opportunities for Small, Medium and Micro sized Enterprises (SMMEs), provided they are formalised and able to meet the procurement requirements as set out by the mine.



8.2.1 Construction impact

NATURE OF THE IMPACT: MULTIPLIER IMPACTS ON THE LOCAL ECONOMY		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Long term
Magnitude	Low +	Major +
Probability	Definite	Definite
Calculated Significance Rating	Medium	High
Impact Status: (positive or negative)	Positive	Positive
Reversibility: (Reversible or Irreversible)	N/A	
Irreplaceable loss of resources: (Yes or No)	No	
Can impacts be enhanced: (Yes or No)	Yes	
Residual impacts ⇒ Developed local economy;		
Mitigation measures <ul style="list-style-type: none"> ⇒ Development of a register of local SMMEs; ⇒ Linkages with skills development/ Small, Medium and Micro Enterprises (SMME) development institutions and other mining operations; ⇒ SMME skills development as part of mine SLP/LED commitments ⇒ Create synergies with other mining/electricity enterprises LED/CSR projects ⇒ Preference should be given to capable subcontractors who based within the local municipal area; ⇒ Align skills development to build capacity of SMMEs; ⇒ Monitoring of sub-contractors procurement; ⇒ Development of a register of local SMME; and ⇒ Local procurement targets should be formalised in Matai's procurement policy. 		



8.2.2 Operation impact

NATURE OF THE IMPACT: MULTIPLIER IMPACTS ON THE LOCAL ECONOMY		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Long term
Magnitude	Minor +	Major +
Probability	Possible	Definite
Calculated Significance Rating (Low, Medium, High)	Low	High
Impact Status: (positive or negative)	Positive	Positive
Reversibility: (Reversible or Irreversible)	Not applicable	
Irreplaceable loss of resources: (Yes or No)	Not applicable	
Can impacts be enhanced: (Yes or No)	Yes	
Residual impacts		
<ul style="list-style-type: none"> ➤ Local suppliers will have gained experience and exposure to meeting standards of quality and scale that could be transferrable to business opportunities 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Preference should be given to capable subcontractors who based within the local municipal area ; and ➤ Measures recommended to maximise benefits from local employment, skills and economic development. 		

8.2.3 Decommissioning impact:

The closure of the mine will result in the termination of procurement contracts associated with operations. This may have significant implications for businesses that have become dependent on the mine. It is expected that there will be a moderate negative impact on the affected population during closure –provided that the LED projects under the SLP will kick off to ameliorate this.



8.3 Community development and Social Upliftment through LED projects- Economic process

8.3.1 Construction impact:

NATURE OF THE IMPACT: COMMUNITY DEVELOPMENT THROUGH LED PROJECTS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Long term
Magnitude	Minor +	Major +
Probability	Possible	Definite
Calculated Significance Rating (Low, Medium, High)	Low	High
Impact Status:	Positive	Positive
Reversibility:	N/A	
Irreplaceable loss of resources:	N/A	
Can impacts be enhanced:	Yes	
Residual impacts <ul style="list-style-type: none"> ➤ Improved economic development; ➤ Increased capacity to develop and maintain livelihood strategies 		
Mitigation measures <ul style="list-style-type: none"> ➤ Ensure that there is stakeholder buy-in; ➤ Aligning LED projects with those of other development role-players; ➤ Liaison with beneficiaries to ensure needs are met; ➤ Collaboration with other developmental role players (e.g. local and district municipalities, neighbouring mines and NGOs) during implementation of envisaged projects, and where possible aligning envisaged development projects with existing ones; ➤ Expanding its skills development and capacity building programmes for non-employees ➤ Monitoring system to regulate Historically Disadvantaged South African procurement ➤ Where feasible, training should be NQF Accredited; and ➤ A record of training courses completed per individual should be kept. 		

8.3.2 Operation impact

NATURE OF THE IMPACT: COMMUNITY DEVELOPMENT THROUGH LED PROJECTS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Long term
Magnitude	Minor +	Major +
Probability	Possible	Definite
Calculated Significance Rating (Low, Medium, High)	Low	High
Impact Status:	Positive	Positive
Reversibility:	N/A	
Irreplaceable loss of resources:	N/A	
Can impacts be enhanced:	Yes	
Residual impacts		
<ul style="list-style-type: none"> ➤ Developed local economy; ➤ Increased capacity to develop and maintain livelihood strategies 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Maximise benefits from local employment, skills and economic development 		

8.3.3 Decommissioning impact

Closure of the Project is expected to significantly reduce economic development and diversification. Some people will have increased capacity to continue to develop and maintain livelihood strategies while others may struggle with the transition. As such, it is expected that there will be a moderate to major negative impact on the affected population during closure.

8.4 Health and Safety Impacts

The proposed Matai Mining Project will be required to adhere to legislated safety and health management standards. The scope of these standards covers all operational activities that have the potential to affect the safety and health of employees and contractors.

An assessment of socially-related safety and health impacts (e.g. noise and air quality impacts) is provided in separate specialist studies, with the findings utilised in the compilation of this SIA. It is important that these

impacts are mentioned in the context of this social impact study, as increased risks of these occurring could pose safety issues to surrounding communities.

Increased traffic volumes could pose safety risk to surrounding communities. Insofar as traffic impacts affect the lives and well-being of people, it thus also qualifies as a social impact.

Construction and operational activities are likely to result in an increase in traffic volumes on certain roads in the vicinity. This could lead to damage of roads and increased speeding through residential areas, thereby impacting on the safety of residents in surrounding communities. In particular, traffic could pose a risk to the safety of people using and/or crossing this road.

Other safety and health-related risks associated with the proposed Matai Mining Project include the following:

- Air quality and dust: The mining activities will likely increase the amount of dust in the environment which could negatively affect respiratory health to those who inhale this dust;
- Surface water quality: Leakage of contaminants (i.e. hydrocarbons) associated with mining facilities. This was identified in the surface water report as being an impact, with potential risk to community health, particularly if communities make use of surrounding streams. Existing impacts from surrounding mining may be worsened through the development of the proposed Matai Mining Project;
- Noise impacts: Those living in the vicinity of the proposed Matai Mining Project may be affected by noise levels associated with traffic and the mining activities;
- Unauthorised access: If members of surrounding communities gain unauthorised access to the proposed Matai Mining Project site, they could be at risk of injury;
- Hazardous material: If hazardous material is stored on site there is a risk of this being stolen and could be exposed to the greater community; and
- Damage to infrastructure: The increased risk of vandalism to the pipelines may result in the damage to these pipelines. This may pose a health and safety risk to community members and construction workers by exposing them to hazardous slurry, should these pipelines leak or rupture.

8.4.1 Construction impact

NATURE OF THE IMPACT: HEALTH AND SAFETY IMPACTS RESULTING FROM CONSTRUCTION ACTIVITIES		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Moderate -	Minor -
Probability	Definite	Definite
Calculated Significance Rating	Medium	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible	
Irreplaceable loss of resources: (Yes or No)	N/A	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ☛ Increase in injuries and possible loss of lives. 		
Mitigation measures		
<ul style="list-style-type: none"> ☛ Access control to all project elements, including fencing; ☛ Personal Protective Equipment for mine workers; ☛ Notification of blasting schedules; ☛ Blasting and storage of hazardous materials to adhere to prescribed regulation; ☛ Measures suggested minimising the impact of flyrock on surrounding roads and structure; ☛ Measures suggested in the Health Impact Assessment to minimize traffic related accidents; ☛ Traffic calming measures to prevent speeding (e.g. speed humps); ☛ Road maintenance; ☛ Provide safe road crossing points and fencing of the main road and the mine site; and ☛ Community education to sensitize community members to potential traffic and blasting safety risks. 		

The following measures are recommended to mitigate potential impacts described above:

- ☛ Traffic:
 - ☛ Safe travelling speeds must be determined for access routes close to populated areas, and measures implemented to ensure that these restrictions are enforced. Such measures may include monitoring vehicle speeds, erecting speed limit signs and installing speed humps;



- Roads must be adequately maintained to prevent deterioration of roads surfaces due to heavy vehicle traffic. When damage to roads is noticed this should be fixed as soon as possible to prevent further damage; and
- The mine's Health and Safety Management Plan should include exact measures to manage/promote road safety and traffic control, taking into account the cumulative effects of traffic generated by multiple development Projects.
- Unauthorised access: Unauthorised access to the mine site should be prevented through appropriate fencing and security.
- Veld fires: It is recommended that the making of fires by construction workers is restricted to areas where tight control can be exerted, or that the making of fires be prohibited.
- Community education:
 - It is recommended that a community awareness campaign be implemented in the surrounding communities to sensitise community members to traffic safety risks and the need to prevent children and animals from wandering into the mine site;
 - Increase awareness of the mine's complaints and grievance procedures;
 - Activities undertaken as part of awareness campaigns and mine communication programme should be recorded and reflected in a formal progress report compiled on a quarterly basis;
 - Mechanisms must be established to ensure that problems are dealt with promptly. In this regard, it is proposed that a community liaison officer be the primary resource; and
 - Regular feedback sessions should be arranged with community forums to assess the impact of this programme in terms of knowledge, attitudes and behaviour.

In accordance with best practice requirements, the Project should implement ensure that a formal grievance mechanism is established to address community concerns and build/improve community relations. It is recommended that this grievance mechanism also record and address traffic and safety related concerns/claims.





8.5 Change in movement patterns-Geographic/Socio-cultural process

8.5.1 Construction impact

NATURE OF THE IMPACT: CHANGE IN MOVEMENT PATTERNS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Moderate -	Minor -
Probability	Definite	Definite
Calculated Significance Rating	Medium	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible	
Irreplaceable loss of resources: (Yes or No)	N/A	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ➤ Altered sense of place and breakdown of existing social networks 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Where possible ensure that access to fields and grazing areas are uninterrupted by providing alternative access routes and/or temporary access points during construction activities; ➤ Matai MVT Mine should ensure that residents are kept informed on a day-to-day basis of construction progress and of when access will be blocked; ➤ Measures to prevent deterioration of roads; ➤ suggested in Traffic Impact Assessment (e.g. drivers to report road deterioration to the NW Province Department of Transport); ➤ Regulation of traffic at intersections and access roads to the site; ➤ Road upgrading measures should be investigated and implemented in conjunction with the relevant government department (e.g. repairing and rehabilitating the main roads and sealing the roadway to increase its capacity for Heavy Moving Vehicles); ➤ Inform communities of planned construction activities that would affect vehicle/pedestrian traffic; ➤ Ensure that access to key services are uninterrupted by providing alternative access routes in cases where construction activities restricts or disrupt movement ➤ Construction of cattle crossings at suitable intervals should be incorporated into project design 		





8.5.2 Operation impact

NATURE OF THE IMPACT: CHANGE IN MOVEMENT PATTERNS			
	Impact Rating Without Mitigation	Impact Rating With Mitigation	
Extent	Local	Local	
Duration	Long term	Long term	
Magnitude	Minor -	Moderate -	
Probability	Definite	Definite	
Calculated Significance Rating (Low, Medium, High)	High	Medium	
Impact Status: (positive or negative)	Negative	Negative	
Reversibility: (Reversible or Irreversible)	N/A		
Irreplaceable loss of resources: (Yes or No)	N/A		
Can impacts be enhanced: (Yes or No)	No		
Residual impacts			
<ul style="list-style-type: none"> ➤ Altered sense of place and breakdown of existing social networks 			
Mitigation measures			
<ul style="list-style-type: none"> ➤ Where possible ensure that access to fields and grazing areas are uninterrupted by providing alternative access routes and/or temporary access points during construction activities; ➤ Matai should ensure that residents are kept informed on a day-to-day basis of construction progress and of when access will be blocked. 			



8.6 Loss of and/or Damage to Agricultural Land and Infrastructure- Geographical process

The proposed Matai Mining Project will involve the development of surface facilities. It is anticipated that the proposed Matai Mining Project will not affect the existing surface activities (e.g. agriculture, residential, roads).

8.6.1 Construction impact

NATURE OF THE IMPACT: LOSS OF AND/OR DAMAGE TO AGRICULTURAL LAND AND INFRASTRUCTURE		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Major -	Moderate -
Probability	Definite	Definite
Calculated Significance Rating (Low, Medium, High)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	Yes	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts ⇒ Loss of grazing land.		
Mitigation measures ⇒ Ensure that the project design and associated layout seeks to minimise the project footprint, thus minimising the loss of agricultural land; engage with each directly affected landowner with the intention to acquire only the required servitude area; ⇒ Should Matai MVT Mine acquire the full farm and the project footprint only affects a portion of the land, the surrounding usable land should be utilised for agricultural purposes – potentially as part of a lease agreement; ⇒ Where damage is incurred, suitable compensation must be negotiated with the affected farmer; ⇒ Prepare a site Rehabilitation Plan that will be implemented as part of the decommissioning phase.		

8.6.2 Operation impact:

NATURE OF THE IMPACT: LOSS OF AND/OR DAMAGE TO AGRICULTURAL LAND AND INFRASTRUCTURE		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Major -	Moderate -
Probability	Definite	Definite
Calculated Significance Rating (Low, Medium, High)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	Yes	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ⇒ Loss of grazing land. 		
Mitigation measures		
<ul style="list-style-type: none"> ⇒ Ensure that the project design and associated layout seeks to minimise the project footprint, thus minimising the loss of agricultural land; engage with each directly affected landowner with the intention to acquire only the required servitude area; ⇒ Should Matai MVT Mine acquire the full farm and the project footprint only affects a portion of the land, the surrounding usable land should be utilised for agricultural purposes – potentially as part of a lease agreement; ⇒ Where damage is incurred, suitable compensation must be negotiated with the affected farmer; Prepare a site Rehabilitation Plan that will be implemented as part of the decommissioning phase. 		

8.7 Physical and economic displacement - Economic process

Physical displacement refers to a situation where people or households have to be moved to a different location to make way for project infrastructure or due to considerable risk to personal safety. The acquisition of land for the purpose of mining may leave farm workers displaced from their current accommodation, as well as their livelihood activities and source of income. The displacement and relocation of households causes social and psychological disruption to those involved. These households are considered to be vulnerable and are unlikely to have the means to relocate from their homes, re-establish their livelihoods and survive without intervention and significant support. **Economic displacement** refers to a loss of access to cultivated land or other livelihood resources.

This impact will occur at the commencement of the construction phase and it will persist for the life of the operation. It is possible that post-closure the land may be farmed again, and people will be employed and potentially housed on the land; however, it is unlikely that the same individuals will benefit.

8.7.1 Construction impact

NATURE OF THE IMPACT: PHYSICAL AND ECONOMIC DISPLACEMENT		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Medium term
Magnitude	Major -	Moderate
Probability	Possible	Possible
Calculated Significance Rating	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible, impact cannot be reversed for the affected households	
Irreplaceable loss of resources: (Yes or No)	Yes	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts ➤ Displaced farm workers; ➤ Loss of livelihoods.		
Mitigation measures ➤ Suitable mitigation measures should be defined that protect the farm workers and ensure that they are adequately provided for and supported should they be moved or lose their employment. ➤ A Resettlement Action Plan and associated Livelihood Restoration Plan may be required. ➤ Implement surface lease agreements with all community members who have grazing or ploughing land, this will minimise the impact of economic displacement. ➤ Implement a Grievance Mechanism to ensure ongoing, proactive engagement and effective management of grievances.		

8.7.2 Operation impact

NATURE OF THE IMPACT: PHYSICAL AND ECONOMIC DISPLACEMENT		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Major -	Moderate -
Probability	Possible	Possible
Calculated Significance Rating	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible, impact cannot be reversed for the affected households	
Irreplaceable loss of resources: (Yes or No)	Yes	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts <ul style="list-style-type: none"> ➤ Displaced farm workers; ➤ Loss of livelihoods. 		
Mitigation measures <ul style="list-style-type: none"> ➤ Suitable mitigation measures should be defined that protect the farm workers and ensure that they are adequately provided for and supported should they be moved or lose their employment. ➤ A Resettlement Action Plan and associated Livelihood Restoration Plan may be required. ➤ Implement surface lease agreements with all community members who have grazing or ploughing land, this will minimise the impact of economic displacement. ➤ Implement the Grievance Mechanism to ensure ongoing, proactive engagement and effective management of grievances. 		

8.7.3 Decommissioning impact:

During the decommissioning and closure phases, it is possible that the land will be rehabilitated and continue as agricultural land. As such, new farm workers may be employed and potentially housed on the land.

8.8 Increased pressure on municipal services - Institutional, legal, political and equity

One of the key challenges within Moses Kotane were inadequate infrastructure and services, limited waste removal and degraded road infrastructure and informal settlements. The combined pressure resulting from the



proposed Matai Mining Project activities, workers, and the influx of job-seekers will exert additional pressure on infrastructure and services for the duration of the construction phase.

8.8.1 Construction impact

NATURE OF THE IMPACT: INCREASED PRESSURE ON MUNICIPAL SERVICES		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Major-	Moderate -
Probability (<i>Definite, Possible, Unlikely</i>)	Possible	Possible
Calculated Significance Rating (Low, Medium, High)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	Yes, strain on infrastructure and services is likely to persist.	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ☛ Strain on the existing infrastructure which is already inadequate. 		
Mitigation measures		
<ul style="list-style-type: none"> ☛ To limit, as far as reasonably possible, additional pressure on existing infrastructure and services; ☛ To work in partnership with government, industry, and relevant organisations to enhance the existing infrastructure and services; ☛ To liaise openly and frequently with affected stakeholders to ensure they have information about the proposed Matai Mining Project; and ☛ Liaison with district and local municipalities well in advance to ensure needs are met ☛ Ensure that municipalities take into account expected population influx ☛ Promotion of mining methods to allow for surface development ☛ Influx management to make available, maintain and effectively implement a grievance/complaint register that is easily accessible to all neighbours and affected stakeholders. 		



8.8.2 Operation impact:

NATURE OF THE IMPACT: INCREASED PRESSURE ON MUNICIPAL SERVICES		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Major-	Moderate -
Probability (<i>Definite, Possible, Unlikely</i>)	Possible	Possible
Calculated Significance Rating (<i>Low, Medium, High</i>)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	Yes, strain on infrastructure and services is likely to persist.	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ⇒ Strain on the existing infrastructure which is already inadequate. 		
Mitigation measures		
<ul style="list-style-type: none"> ⇒ To limit, as far as reasonably possible, additional pressure on existing infrastructure and services; ⇒ To work in partnership with government, industry, and relevant organisations to enhance the existing infrastructure and services; ⇒ To liaise openly and frequently with affected stakeholders to ensure they have information about the proposed Matai Mining Project; and ⇒ to make available, maintain and effectively implement a grievance/complaint register that is easily accessible to all neighbours and affected stakeholders. 		

8.9 Effects from Population Influx

As news regarding the proposed Matai Mining Project spreads or when mining-related activities increase, expectations regarding possible employment opportunities at the mine (and power plant) will increase. Consequently, the areas surrounding the proposed Matai Mining Project area and neighbouring villages/settlements will experience an influx of job seekers and opportunists. The magnitude of this impact will, amongst others, be influenced by the severity of poverty and unemployment in surrounding communities, coupled with the history of observable influx that has occurred over the last number of years due to other mines such as the Northam Platinum Mine.

Poverty and unemployment are challenges for communities such as Sefikile, Mantserre, Mopyane, and Mononono amongst others. The regional social profile indicates that poverty and unemployment are widespread throughout the primary and secondary zones of influence. It can be expected that many job seekers (and even whole family units), as well as entrepreneurs and opportunists, will move to the broader Project area. This impact may commence prior to construction, and is likely to continue long after construction has ceased.

As far as possible, 90% of the labour force will be sourced from the local communities in and around mine, which is situated close to the mine and as such, they will not need accommodation to be provided by the mine on site (Kimopax, 2017). A contractor's camp will be developed on the main premises, during construction phase with sufficient capacity to house all contractors. This approach will be used to eliminate the formation of squatter camps due to the focused local recruitment.

In the event that a portion of the workforce is recruited from outside the local area, their presence will constitute an additional influx of people. This impact will likely be limited to the construction phase as the proposed Matai Mining Project will not provide permanent housing on site. However, unsuccessful job seekers from outside the Project area may decide to settle in the Project area.

The influx of construction workers, job-seekers and others is expected to have a variety of social consequences.

- On the positive side, population influx could present improved opportunities for local entrepreneurs, and could offer other benefits for the economy in the project area. This is related to the potential multiplier effect discussed under Section 8.2;
- On the negative side, the presence of a large workforce that does not originally come from the villages/settlements surrounding the proposed Matai Mining Project area, could lead to a variety of negative social consequences;
- General population influx, resulting from increased economic activities in the proposed Matai Mining Project area, could also lead to social pathologies, conflict and competition between locals and newcomers, increased pressure on local infrastructure and services, and possibly, the growth of informal settlements.
- Some construction workers could decide to permanently reside in the area, which could further increase pressure on local infrastructure and services (although this will likely be insignificant).

These impacts are discussed in greater detail below.

8.9.1 Increased markets for local entrepreneurs

As was mentioned, the project may result in an influx of people to the area, especially during the construction phase. These additional settlers (either construction workers or job seekers) will require consumable items such as food, entertainment and clothes, as well as accommodation to which local residents will likely respond by

renting out rooms on their properties. Guest house owners around Northam and Pilanesberg may build additional rooms to accommodate short- to medium term workers and/or service providers. Taxi operators in nearby towns may expand their fleet. The above present opportunities for new businesses to emerge and for existing ones to reposition themselves according to the changing market requirements.

In addition, migrants could bring assets and skills to the local economy, while skilled people, who previously out-migrated to seek work elsewhere, but whose families are resident in the local area, may return in the hope to find employment at the mines. Local small businesses may experience improved markets and increased numbers of customers depending on the magnitude of the population influx. This will particularly be the case if migrants have higher- level occupations and relatively high disposable incomes.

Thus, while many of the social consequences of population influx could be negative, it could also have positive effects on the local economy. Both the nature and magnitude of impacts associated with population influx would depend on the number of people involved, their skill sets, behaviours, employment expectations and family status, as well as the response of people in the local study area.

8.9.2 Recommended mitigation measures

The measures suggested above to enhance the positive economic effects of the Project may also assist in increasing the extent to which local entrepreneurs are able to benefit from the growth of new markets and customers. Depending on the spatial development priorities of the responsible local and district municipalities for the Project area, the Project could consider including these areas into its LED and SMME programmes. The proposed Matai Mining Project should also allocate certain procurement opportunities at the Project to local suppliers and work with those suppliers to meet the Project's supply chain requirements

8.10 Increased social pathologies linked to influx of workers and job seekers-Demographic change/Socio-cultural wellbeing process

The proposed Matai Mining Project is located in an area where mining, agriculture and tourism are the most dominant economic activities. Based on feedback from key stakeholders there has been significant influx resulting from new mines and mine expansions; this assertion is supported by the demographic structure of the population. Instability (in-fighting and protests) in the area is common and has been attributed to the perceived benefits (e.g. employment, procurement, SLP Projects) of having mines in the vicinity. Crime is common, most notably in poorer communities (e.g. Mmantserre and Sefikile); low levels of education, high levels of unemployment, high dependency of women on men, and close proximity to the mines were reasons given for high crime rates. Theft (notably stock theft), domestic abuse, and rape are commonly reported crimes.

The relatively large construction workforce will be working in the area for ~24 months, and the comparatively smaller operational workforce will be present for the life of the Project (no less than 30 years). Construction and

operation phase workers will not be accommodated on site, they will reside in the surrounding communities and in town (Northam). This will increase the levels of interaction with the local population. The majority of workers are likely to be male and living away from their families specifically, during the construction phase.

The construction and operation of the proposed Project will result in influx of workers as well as jobseekers into the area. As a worst-case scenario, these changes can increase levels of crime/ theft, drug and alcohol abuse, increase the incidence of sex work, spread of sexually transmitted infections (STIs) and HIV/AIDS, domestic violence, and general conflict. These impacts typically occur as a result of increased competition for jobs, limited access to basic resources and services, increased income, and different cultural backgrounds/ beliefs.

The most likely social ills that may occur as a result of the increased number of workers and job-seekers are described below:

- Theft of livestock is already problematic on farms located in the proposed Matai Mining Project area. It is likely that stock theft will continue and possibly increase, specifically during the construction phase due to the high number of workers and job-seekers.
- Petty theft may be exacerbated as there will be an increased number of people in the area with no employment and therefore no income.
- Trespassing on surrounding properties and possible damage to property resulting from vandalism. An increase in disposable income within the proposed Project area (among workers) could result in an increase in alcohol and drug abuse, increased incidences of prostitution and casual sexual relations. These activities could lead to an increased incidence of HIV/AIDS and increased numbers of teenage and unwanted pregnancies. The increased prevalence of HIV/AIDS would affect contractors, employees, local residents and the families and sexual partners of anyone becoming infected in the proposed Project area.
- General unrest may be further exacerbated as a result of increased pressure for resources, resentment towards those who secure employment and procurement opportunities as well as benefits from SLP Projects (specifically if the beneficiaries are from outside the area), and an increase in alcohol abuse.
- Devaluation of properties that may occur as a result of a combination of one or more the abovementioned social ills. These factors contribute in defining one's sense of place and potential value attached to the property.

8.10.1 Construction impact

NATURE OF THE IMPACT: INCREASED SOCIAL PATHOLOGIES LINKED TO INFLUX OF WORKERS AND JOB SEEKERS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude (Major, Moderate, Minor)	Major -	Moderate -
Probability (Definite, Possible, Unlikely)	Possible	Possible
Calculated Significance Rating (Low, Medium, High)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	This impact can result in consequences that will have irreplaceable losses of a physical and psychological nature.	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ➤ The impact may be reversible over time as workers and job-seekers leave the area, consequences such as HIV/AIDS and unwanted pregnancies will be permanent. 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Limit, as far as reasonably possible, social ills caused by influx of workers and job-seekers; ➤ Liaise openly and frequently with affected stakeholders to ensure they have information about the Project; ➤ Extensive HIV/AIDS awareness and general health campaign. It should be noted that Matai MVT Mine has no control over activities related to workers' behaviour, however It is recommended that HIV/AIDS campaigns are conducted within the affected area; ➤ Discourage influx of job-seekers by prioritising employment of unemployed members of local communities; ➤ Liaise with Moses Kotane Local Municipality, and Traditional Authority to ensure that expected population influx is taken into account in infrastructure development and spatial development planning; ➤ Create synergies with local government IDP and other companies' SLP/CSR projects to promote infrastructure development; ➤ Clear identification of workers –prevention of loitering; ➤ Liaison with police or establish/ support community policing forum; ➤ Promote projects providing housing, especially low-cost housing, to link with the proposed Matai MVT mine; ➤ Community education; and ➤ Implement measures to address potential conflict between locals and non-locals. 		

8.10.2 Operation impact

NATURE OF THE IMPACT: INCREASED SOCIAL PATHOLOGIES LINKED TO INFLUX OF WORKERS AND JOB SEEKERS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Medium Term
Magnitude (Major, Moderate, Minor)	Major -	Moderate -
Probability (Definite, Possible, Unlikely)	Possible	Possible
Calculated Significance Rating (Low, Medium, High)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	This impact can result in consequences that will have irreplaceable losses of a physical and psychological nature.	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ➤ The impact may be reversible over time as workers and job-seekers leave the area, consequences such as HIV/AIDS and unwanted pregnancies will be permanent. 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ To limit, as far as reasonably possible, social ills caused by influx of workers and job-seekers; ➤ To liaise openly and frequently with affected stakeholders to ensure they have information about the Project; and ➤ To make available, maintain and effectively implement a grievance/complaint register that is easily accessible to all neighbours and affected stakeholders. 		

8.10.3 Decommissioning impact

During the decommissioning and closure phases, it is likely that workers will remain in the area as they may seek employment locally and are likely to have established networks and become connected after a long period of time. Given the high levels of uncertainty regarding the actions of people or nature of the socio-economic environment, it is not possible to assess this project phase.

8.11 Increased Nuisance Factors and Changed Sense of Place - Socio-cultural wellbeing

The proposed Matai Mining Project area is characterised by subsistence farms (primarily crop farming and livestock farming –see Figure 8-1), mines, and residential areas.



Figure 8-1: Subsistence cattle farming in the proposed Matai Mining Project area

The proposed surface infrastructure will be located on land that is currently used for agriculture; the area will be transformed due to the construction of the project's surface infrastructure. As a result of the proposed Matai Mining Project activities, there will be an increase in the noise, air pollution, traffic and visual impacts resulting from the construction, operation and decommissioning/closure activities at the facility. The combined effect of the noise, air quality, visual and traffic impacts are likely to have a negative impact on the sense of place for some stakeholders. In addition, the influx of workers and job-seekers is likely to result in further disruptions to the sense of place through the generation of a range of nuisance factors.



8.11.1 Construction impact

NATURE OF THE IMPACT: The increase in nuisance factors and associated changed sense of place will be negative, and direct as a result of Project activities, and indirect as a result of migrant job-seekers		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Medium term	Short Term
Magnitude	Moderate-	Minor -
Probability (<i>Definite, Possible, Unlikely</i>)	Possible	Possible
Calculated Significance Rating (Low, Medium, High)	Medium	Low
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible	
Irreplaceable loss of resources: (Yes or No)	This impact can result in consequences that will have irreplaceable losses of a physical and emotional nature	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ➤ Altered sense of place 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Minimise all nuisance factors such as noise, air quality, traffic, and visual-Implement all mitigation measures as specified in the relevant specialist studies; ➤ Make available, maintain and effectively implement a grievance/complaint register that is easily accessible to all neighbours and affected stakeholders; ➤ Liaise openly and frequently with affected stakeholders to ensure they have information about activities that will generate nuisance factors. 		



8.11.2 Operation impact

NATURE OF THE IMPACT: THE INCREASE IN NUISANCE FACTORS AND ASSOCIATED CHANGED SENSE OF PLACE WILL BE NEGATIVE, AND DIRECT AS A RESULT OF PROJECT ACTIVITIES, AND INDIRECT AS A RESULT OF MIGRANT JOB-SEEKERS		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude	Medium-	Minor -
Probability	Possible	Possible
Calculated Significance Rating (Low, Medium, High)	Medium	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Irreversible	
Irreplaceable loss of resources: (Yes or No)	This impact can result in consequences that will have irreplaceable losses of a physical and emotional nature	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts ⇒ Altered sense of place.		
Mitigation measures ⇒ To minimise all nuisance factors such as noise, air quality, traffic, and visual; ⇒ Implement all mitigation measures as specified in the relevant specialist studies; ⇒ To make available, maintain and effectively implement a grievance/complaints register that is easily accessible to all neighbours and affected stakeholders; ⇒ To liaise openly and frequently with affected stakeholders to ensure they have information about activities that will generate nuisance factors.		

8.11.3 Decommissioning phase

During the decommissioning and closure phases, the majority of the proposed Matai Mining Project aspects that resulted in a changed sense of place will no longer exist, the community is likely to have adapted to the existence of migrants in the area. Given the high levels of uncertainty regarding the actions of people or nature of the future socio-economic environment, it is not possible to assess this project phase; however, it is expected that the impact will largely be mitigated.

8.11.4 Visual/ noise/ vibration/ air quality/health impacts

The construction of the proposed Matai Mining Project will represent a significant intrusion into the surrounding physical environment, which could impact on surrounding communities in various ways. The following impacts are most likely to be prominent during the construction phase:

- The Noise Impact- potential noise impacts on the surrounding receptors;
- Air Quality Impact – potential dust impacts that could affect surrounding communities;
- Health- potential health impacts that might arise from construction activities;
- The Visual Impact Assessment -potential impact could alter the sense of place and the scenery;
- The Traffic Impact- potential traffic flows could pose negative impacts for surrounding communities

As a result of the proposed Matai Mining Project activities, there will be an increase in the noise, air pollution, traffic and visual impacts resulting from the construction, operation and decommissioning/closure activities. The combined effect of the noise, air quality, visual and traffic impacts are likely to have a negative impact on the sense of place for some stakeholders. The quantitative assessment of the abovementioned impacts has been conducted by the relevant specialists as part of the EIA study.

8.12 Impact on the Local Tourism Industry

Mining industries can contribute to pollution, resulting in land degradation, and can therefore have impacts on a wide range of other sectors such as agriculture and heritage tourism, impacting on small businesses and disrupting local economies and ecosystems (Nzimande and Chauke, 2012). The benefits of tourism to an area are broadly categorised as i) economic (direct and indirect employment opportunities and services), ii) environmental (improvement, encouragement of awareness, enhancement of management) and iii) socio-cultural (enhancement of infrastructure development, improved local and regional security, increase in civic pride, increased in-house development). The social benefits initiated by tourism can be extensive in scope and present a range of outcomes that exceed economic gain.

Mining activities, stockpiles and associated infrastructure are usually perceived to be visually unsightly. Excavators or other large machines present in the area would result in severe ground disturbances which would again result in visual impacts that produce contrasts of colour, form, height, texture, and lines. These activities could further produce dust emissions while operational and could create visible plumes. There would be extremely limited other emissions: diesel exhaust etc.

8.13 Dependency on mine for sustaining local economy (during closure)

While the proposed Matai Mining Project's operation can contribute significantly to economic development through its lifetime, this positive impact also has an adverse aspect, in that the Matai Mining Project will inevitably close, and this may have devastating consequences for an area that has not invested in economic diversification. A considerable number of people and their families will also become increasingly dependent on the proposed Matai Mining Project for their livelihood. Employment opportunities associated with the proposed Project will be lost at closure (a large percentage of whom will have been sourced from the local area or have become permanent residents in the area in accordance with the SLP), as will be the corresponding project benefits such as community development, LED and CSI programmes. Retrenchments before the end of life of the Project are another possibility and could be necessitated by downscaling as a result of external forces such as reduced profitability, and technical innovation. At such a time, project employees may not be able to secure alternative employment.

- Job losses and retrenchments would lead to loss of income and local expenditure. Unemployed staff may be unable to pay for municipal services and will be unable to service their debts, including any home loans/ mortgages they may have. Taking into consideration the likely dependency on employee income, the loss of income will have considerable negative impacts on the wellbeing of households, especially where employees were the sole breadwinners.
- Suppliers could also be affected as the opportunity to sell goods and services to the Matai Mining Project will be lost. This could furthermore affect those companies that supply these businesses with their goods and services. This impact will mostly be felt by suppliers at a local municipal level.
- Economic downturn and the resultant loss of employment could also result in increases in social pathologies, such as crime, prostitution and substance abuse (IFC, 2012).

Other socio-economic impacts usually associated with Project dependencies include:

- Impacts on the workforce – Psychological issues (distraction from normal activities with a potentially negative impact on performance and safety), and personal and family income issues (e.g. concerns about the effect of reduced income on family life); and
- Impacts on the wider community - the regional economy (e.g. impact on the viability of other indigenous industries due to the loss of locally produced outputs), financing of decommissioning (e.g. adequate funds may not have been provided for decommissioning and site rehabilitation); and infrastructure (e.g. possible requirement for reconfiguration of essential national systems to maintain stability and reliability in power supply to the communities who are benefitting from the supply).

Matai's SLP specifies that, in the event of retrenchments becoming unavoidable, the mine will develop strategies to introduce measures that could prevent job loss in the event of circumstances threatening guaranteed employment (Kimopax, 2018). If it becomes evident that the mine is entering a downscaling or closure phase, alternatives to save jobs and avoid downscaling will be investigated beforehand. In the event of downscaling or retrenchment, the mine will develop and implement turnaround strategies and mechanisms to save jobs and prevent unemployment (through exploring alternative employment avenues).

The SLP states that:

“Should prevailing economic condition cause the profit revenue ratio from the mine to be less than six (6) percent on average for a continuous period of twelve months, or if the operation is to be scaled down or to cease with the possible effect that 10 per cent or more of the labour force or more than 500 employees, whichever is the lesser, are likely to be retrenched in any 12-month period Matai Mining would initiate the following processes which must include, but not be limited to, the following:

- a) *Consultation with all relevant stakeholders;*
- b) *Implementing Section 189 of the Labour Relations Act, 1995;*
- c) *Notification to the Minerals and Mining Development Board; and*
- d) *Complying with Ministerial directive.*

The mine will comply with the Minister's directive and confirm how corrective measures have been taken.”

It is recommended that a Social Closure Plan be formulated at least five years before planned closure, including the undertaking of a SIA and stakeholder consultation process, which should focus on the following:

- Predicting the likely socio-economic impact on employee households, communities and the region;
- Identifying critical issues affecting the on-going sustainability of employees and communities during closure, by means of a detailed consultation process;
- Identification of alternative livelihood and socio-economic development opportunities and projects, which may become sustainable over the long term; and
- Mitigating and managing the adverse impacts of closure.

The Matai MVT Mine should make every effort to ameliorate the social and economic impact on individuals, regions and economies where retrenchment and closure of the mine are certain. Should downscaling and retrenchment take place, the mine should assist affected employees in finding alternative employment or livelihood opportunities. This should be done in cases where employees cannot be integrated or redeployed to any of the other mining operations, or where they are not of a retirement age.

Matai Mining, in partnership with the Department of Provincial and Local Government, should jointly manage any process of this nature. The integration of the workforce into various LED projects, if required, could be done in

collaboration with relevant municipalities, and other stakeholders serving on Municipal Development Forums, especial LED Forums. Where workers cannot be absorbed into LED initiatives, they should be furnished with portable skills training opportunities, enabling them to find alternative employment after decommissioning or retrenchment. Other initiatives could focus on assessment and counselling services for affected individuals.

NATURE OF THE IMPACT: DEPENDENCY ON MINE FOR SUSTAINING LOCAL ECONOMY DURING CLOSURE PHASE		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Extent	Local	Local
Duration	Long term	Long term
Magnitude (<i>Major, Moderate, Minor</i>)	Major -	Moderate -
Probability (<i>Definite, Possible, Unlikely</i>)	Possible	Possible
Calculated Significance Rating (<i>Low, Medium, High</i>)	High	Medium
Impact Status: (positive or negative)	Negative	Negative
Reversibility: (Reversible or Irreversible)	Partly reversible	
Irreplaceable loss of resources: (Yes or No)	This impact can result in consequences that will have irreplaceable losses of a physical and psychological nature.	
Can impacts be enhanced: (Yes or No)	No	
Residual impacts		
<ul style="list-style-type: none"> ➤ The impact may be reversible over time as workers and job-seekers leave the area, consequences such crime and other social pathologies will be permanent. 		
Mitigation measures		
<ul style="list-style-type: none"> ➤ Effect retrenchments according to procedures stipulated in approved SLP; ➤ The Mine's SLP should provide strategies and measures that prevent job loss; ➤ Support economic diversification through development of alternative markets; ➤ Develop a Mine Closure Plan; ➤ Proactively and effectively implement mine closure plan; ➤ Collaborate with adjacent mining companies to develop and implement sustainable community; ➤ Develop alternative and sustainable livelihoods; ➤ Alternatives to save jobs/avoid downscaling should be investigated beforehand; ➤ Proactively assess and manage the social and economic impacts on individuals, regions and economies where retrenchment and/or closure of the mine are certain; and ➤ Partner with the relevant government departments, to jointly manage Closure process. 		

9. Cumulative Impacts¹

Cumulative impacts are contextual and encompass a broad spectrum of impacts at different spatial and temporal scales (IFC, 2013) i.e. cumulative impacts can result from individually minor but collectively significant activities taking place over a period of time (Dutta, *et al.*, 2012). These are not new types of impacts but recognition that impacts from individual projects and activities can combine together in time and space. In some cases, cumulative impacts occur because a series of projects of the same type are being developed. In other cases, cumulative impacts occur from the combined effects over a given resource of a mix of different types of projects; for example, the development of a mine site, access roads, transmission lines, and other adjacent land uses.

The following cumulative impacts are expected:

- The cumulative impacts associated with the creation of employment and business opportunities and training during the construction phase, are that there is an opportunity for employment seekers to improve their skills;
- the proposed Matai Mining Project, together with other existing and planned mining operations will result in several economic benefits for local communities through direct and multiplier effects. These effects are usually stimulated by wage bills, local and regional procurement spend, and investment into LED. The proposed Matai Mining Project will add to the existing positive effect of mining on local economic development by applying best practice in terms of local employment and procurement, as well as LED;
- The cumulative impacts associated with the influx of job seekers include the long-term impacts on family structures and social networks of communities. In the case of HIV/AIDS or unwanted pregnancies the impacts might be permanent and have permanent cumulative impacts on the affected individuals, families and the community;
- An influx of workers (direct) and job-seekers (indirect) may lead to increased pressure on infrastructure and services and an increase in social pathologies. Matai Mining should make every effort to discourage influx by communicating early and widely that local residents will be given preference for employment. Matai Mining must ensure that it collaborates with the relevant local authorities and mining operations to identify and actively participate in initiatives/ projects to improve capacity where required. While the potential impacts linked to influx can have negative consequences, this is a common and anticipated phenomenon that cannot be a reason for preventing further development;
- It was mentioned in the baseline that communities adjacent to proposed Matai Mining Project site have until now maintained a predominantly rural character. The more “alien” elements that are added to a landscape, the more the character of the landscape will be altered. Thus, the effect of the proposed

¹ The impacts which combine from different projects and which result in significance change, which is larger than the sum of all the impacts.

mine on the area's sense of place cannot be considered in isolation from other current and planned activities. Surface infrastructure associated with the proposed Matai Mining Project will therefore represent a new wave in the transformation of the landscape from one dominated by rural communities and fields into one dominated by mine shafts and heavy equipment. The incremental change in the visual character of the area that will be brought about by the project can thus be interpreted as a cumulative impact on the sense of place stemming from the combined effect of the project and mining operations;

- An increase in direct project nuisance factors; namely, noise, air pollution, traffic and visual disturbances could further impact negatively on the sense of place for some receptors. Implementation of suitable mitigation measures has been proposed by the relevant specialist to reduce and manage these nuisance factors
- The other mines may contribute to the pollutant load on surface water systems. These changes may be substantial, affecting the regional water quality, though some mitigation is possible with practicable management systems. Changes in surface water quality impacts on the health various surface water users –drinking and recreational users. The development of the proposed Matai Mining Project may place pressures on existing sanitation and water supply systems because of the anticipated increase in population in the area.
- Ground water extraction at other mines may affect groundwater availability in the area. The change may be substantial, extend regionally, affect many people, and may be cumulative in nature causing an overall shortage of drinking water as majority of the settlements depend on groundwater resources.
- With regards to noise and vibration, some of the surrounding settlements s will be exposed to noise from the operations of various machines on the mine and trucks on the road. Extraction and transport operations of other mines will affect some the receptors. Though blasting will be carried out at other mines, the effects are not synergistic. With modern blasting technologies, the effects are likely to be small, localised, easy to mitigate, and non-cumulative.
- Changes in income level; education; health care; change in existing cultural pattern; alteration of location or distribution of human population in the area; change in housing.
- Potential health hazards; risk of accidents from explosion, release of oil, radioactive materials, toxic substances etc.

10. Social Management Plans and Monitoring

A monitoring plan, that is capable of identifying deviations from the proposed action and any important unanticipated impacts, should be developed. A monitoring plan should track project development and compare real impacts with projected impacts and should spell out the nature and extent of additional steps to be taken when unanticipated impacts or impacts larger than the projections occur (DEAT, 2005).

Based on impacts assessed, social management plans have been developed these plans include:

10.1 Stakeholder Engagement Plan

Social impacts already start in the planning phase of a project and as such it is imperative to start with stakeholder engagement as early in the process as possible. A Stakeholder Engagement Plan will assist in outlining the approach on how to effectively communicate with community members. It is recommended that the SEP is updated annually ensure that it stays relevant and that it addresses relevant concerns/comments raised by stakeholders. The following section provides key objectives to be included in the SEP.

10.1.1 Purpose of a SEP:

To identify and assess the processes and/or mechanisms that will improve the communication between local communities, the wider community and Matai Mining;

- Provide a guideline on how to effectively share information with community members- information must be communicated to stakeholders early in the decision-making process in ways that are meaningful and accessible, and this communication should be continued throughout the life of the project;
- Serves as a tool to facilitate grievance management – accessible and responsive means for stakeholders to raise concerns and grievances about the project must be established throughout the life of the project

The SEP should be aligned with the requirements of the Equator Principles (2013) and the IFC Performance Standards (2012). The plan should cover (but not be limited to) the following:

- Outline the aim and objectives of ongoing engagement;
- Describe all internal and external stakeholder groups (including levels of support and influence);
- Describe all stakeholder issues and concerns as known currently (this will require exploratory meetings with each stakeholder group);
- Define engagement techniques and protocols for each stakeholder group;
- Present a schedule that includes all identified stakeholders and topics;

- Outline resources required for implementation, timeframes, responsible people, monitoring mechanisms; and
- Layout process for undertaking and documenting engagement, including a clear process for registering and responding to issues and concerns raised

10.2 Grievance Mechanism

A grievance mechanism is a formal, legal or non-legal complaint process that can be used by individuals, workers, communities and/or civil society organisations that are being negatively affected by certain business activities and operations. A grievance mechanism plan aims to prevent, defuse and resolve community complaints and disputes.

The World Bank Group (2005:72) states that a company's grievance procedures should be communicated to all stakeholders, community members should be made aware of the procedures to follow (ie) people should know where to go and whom to talk to if they have a complaint and understand what the process will be for handling the complaint. Communication with stakeholders should be provided in a format and language that will be understood by stakeholders. It is recommended information is communicated orally in areas where literacy levels are low.

A grievance mechanism provides stakeholders with an opportunity to raise their concerns and provides them with confidence that their issues will be addressed- this encourages better community relations and good reputation for the company.

Matai Mining is to implement a grievance procedure that is easily accessible, culturally appropriate and scaled to the potential risks and impacts of the Project, through which complaints related to contractor or employee behaviour can be lodged and addressed. Matai Mining would respond to all such complaints. The grievance procedure should be aligned with the requirements of the Equator Principles, 2013 and the IFC Performance Standards, 2012. Key steps of the grievance mechanism include:

- Circulation of contact details of 'grievance officer' or other key contact;
- Awareness raising among stakeholders regarding the grievance procedure and how it works; and
- Establishment of an electronic grievance register which Matai Mining will update, including all escalation actions, responses and response times.

10.3 Resettlement Action Plan

In an instance where relocation ***might*** occur, or if physical or economic displacement might occur, a Resettlement Action Plan (RAP) needs to be compiled and implemented. A RAP is a detailed strategy that outlines how a particular resettlement process will be executed. The RAP details the processes of recording

baseline conditions, consulting affected people, and provides a detailed strategy for: (i) minimizing or avoiding resettlement; (ii) compensating for losses; (iii) relocating and rebuilding as necessary; (iv) ensuring that affected people are afforded the opportunity to improve the incomes, income-producing activities, and standards of living that they had before the project affected them (Vanclay *et al.*, 2015: 92)

10.4 Livelihood Restoration Plan

Livelihood is defined as a set of activities, involving securing water, food, fodder, medicine, shelter, clothing and the capacity to acquire above necessities working either individually or as a group by using endowments (both human and material) for meeting the requirements of the self and his/her household on a sustainable basis with dignity.

A Livelihood Restoration Plan is a plan produced as part of a resettlement process to restore and enhance people's and Enhancement Plan livelihoods after being resettled or economically displaced (Vanclay *et al.*, 2015:87). The main purpose of a Livelihood Restoration Plan is to prevent and mitigate the potential adverse impacts to the affected parties as a direct result of the resettlement process. (Vanclay *et al.*, 2015:24) states that any development that will cause physical or economic displacement must provide appropriate compensation, this means that adequate solutions aimed at ensuring the improvement, or at least re-establishment, of living conditions and livelihoods. Vanclay *et al.* adds that compensation should be understood not only as cash compensation, but as a set of interventions which include social assistance, training, etc. This is aimed at ensuring that the affected parties improves, or at least, restores his or her living conditions and livelihood.

11. Stakeholder Engagement

The stakeholder engagement process commenced prior to scoping and has continued throughout the environmental assessment process. As part of this process, authorities and interested and affected parties (IAPs) were notified of the project, given the opportunity to attend public meetings, submit questions and comments to the project team, and review the background information document, Scoping Report and now the EIA and EMP Report.

Comments related to the socio-economic environment were raised during the public consultation process as well as during focus group discussions and one-on-one interviews. These included concerns related to:

- Continuation of existing land uses;
- In-migration;
- Pressure on infrastructure and services;
- Job opportunities;
- Training and skills development;

- ☛ Noise
- ☛ Air quality; and
- ☛ Crime, safety and security.

The detailed comments and responses are included in the EIA Report currently being compiled by the Lead Consultant on the Project –Kimopax.

12. Assessment of Alternatives

It is a requirement in terms of current environmental legislation that practical project alternatives be considered during impact assessment. Two types of project alternatives are considered in this section:

- ☛ Alternatives to the project (in terms of the “no-go” option and alternative uses of the project area in the event that the project is not implemented); and
- ☛ Alternatives involving the Project (in terms of alternative mining methods and infrastructure layout).

12.1 The “No-go” option and Land Use Alternatives

12.1.1 The No-go Option

The most pertinent project alternative in the case of this project is the no-go alternative. The approach adopted in the assessment of impacts in this study entailed a comparison between anticipated future socio-economic conditions, with and without the project. Hence the no-go alternative would essentially imply that none of the impacts described in Section 8 would materialise, and that socio-economic conditions in the study area would continue to display the characteristics and trends described in the socio-economic baseline profile (see Section 7).

12.1.2 Alternative Land Use Options

When considering the allocation of land for development and in deciding applications for planning permission affecting agricultural land, the agricultural implications must be considered together with the environmental, cultural and socio-economic aspects. In particular, prime quality land should normally be protected against permanent development or irreversible damage.

Consideration of land use alternatives is one of the cornerstones of community planning. Land use decisions must be evaluated in terms of sustainability, broadly defined as balancing environmental, economic and social equity concerns. The primary land use categories that encompass basic functions are residential, industrial, recreational, institutional and (subsistence) agricultural uses. Optimal land use is determined by a number of factors, including climate, resources, population growth, economic activity and topography. When considering a

new development for an area, it is required that other land use alternatives are considered to ensure that the development is justified and viable.

If not used for mining (the no-go option), possible alternative land uses for the project site might include housing, agriculture and grazing. These land use alternatives is also not necessarily precluded by the proposed Matai Mining Project: after mine closure and rehabilitation of mined areas, the land capability may return to a state, which would allow the continuation of the aforementioned uses.

With regards to agriculture, during site visit, it was observed that a large part of the project footprint is situated on land which is suitable (and some currently used) for agriculture, however large scale crop production and the financial gain thereof was not considered during the investigation –farming was assessed to be of subsistence levels and not commercial farming. It is however assumed that the land area available for agriculture in the project footprint will not be able to produce to the same economic benefits as the proposed Matai MVT mine. Due to the increasing prevalence of mining in the surrounding area, the viability of using the proposed Matai Mining Project site for residential / housing purposes is increasing as housing demand increases. It should be noted that the current mine will be an opencast operation, which means that surface land uses will be affected.

Mining appears to be the most viable and appropriate land use option from a social perspective, as it will result in considerably more economic growth than other land uses, by offering the following:

- Direct and indirect employment opportunities for local community members;
- Promotion of sustainable LED, enhancing the skills base among local community members and thereby allowing for income generating activities not directly related to mining;
- Increased economic contribution to the area, enabling better development of the towns and surrounding areas; and
- Enhanced socio-economic stability in the area.

12.2 Mine Plan, Infrastructure Layout and Affected Land Uses

The scope for mine plan and infrastructure layout alternatives is limited by the geographical characteristics of the area; that is to say, the location of ore largely determines the mine plan, as does the location of wetlands and floodplains. The layout of the site was however selected based on considerations made for the surrounding environment where possible, ease of operations and mining activities on site as well as minimal disturbance to the community near the site (Kimopax, 2018). The site/land area for run of activity was selected based on the size (according to the geology of the area), and position and of the mineral reserves to be exploited. The preferred layout was more considered more importantly owing to the availability of the vanadium, titanium and iron ore minerals, the land ownership, the geo-hydrological impacts and the ease and available transport modes

and routes therefore the proposed layout is therefore the most suitable and economically/environmental viable option for the open pit mining.

During the assessment the location of all alternative infrastructure options were taken into consideration; this implies that changes to the mine plan and layout of infrastructure will not significantly change the impacts predicted for the social environment.

13. Potential Social Risks

The objective of this section is to identify any aspects of the receiving socio-economic environment that would represent significant risks to the proposed Matai Mining Project development. These may constitute constraints that would have to be accommodated during the Project design phase, or concerns and disputes that would require appropriate management and mitigation. Social risk is linked to a project's stakeholders and can either be a risk to a project as a result of the impact on stakeholders or stakeholders' impact on the project. In most cases a risk can be financial, delay or reputational.

- Financial: A financial risk can result in a project being financially unfeasible due to costs.
- Delay: could result in a delay to a project at any stage.
- Reputational: could cause damage to a company's reputation, which could result in delays or have financial implications.

The potential social risks, which the project might be exposed to are discussed below.

13.1 Community Expectations

Community expectations regarding the proposed Matai Mining Project are most frequently related to employment and CSI Projects. When such hopes are not met with interventions or addressed with appropriated communication it may lead to potential stakeholder opposition and public mobilisation against the project. These are discussed in turn below.

13.1.1 Employment

In a context of widespread unemployment, local residents (and especially people in the proximate area to the proposed Matai Mine development footprint) will be dissatisfied if access to the finite construction phase jobs and the provision of associated services is perceived to be biased and preferential. In other words employment of locals is a sensitive issue and social mobilisation against the project as a result of perceived unfair practices can be a real threat to mining companies in the area.

Matai intends to source a significant proportion of its labour force from local labour sending areas. According to their SLP (Kimopax, 2018):



“As the entire workforce to be employed at the mine is yet to be appointed and it is not possible to document the exact labour sending areas at this early stage. However, the Company’s policy of encouraging local recruitment wherever possible requires that the workforce, including contractors, to be employed mainly from the Moses Kotane Local Municipality (MKLM)”.

This will represent a considerable positive spin-off of the proposed Matai Mining Project because employment will provide opportunities for local people to be trained and gain experience. Achieving local employment targets could, however, be difficult considered the low literacy levels and the small proportion of the population who are skilled to work in the mining sector; this will especially be this case if Matai’s skills development initiatives² are not successful. Communicating this number to communities and not delivering on this promise might damage community relations even further and exacerbate any existing issues there may be between the Project proponent and communities.

Most of the surrounding communities will be expecting to benefit from the potential employment opportunities created by the proposed Matai Mining Project, although they all are not equally affected. For instance, there are a certain number of villages under the jurisdiction of the Mmantserre Tribal authority, although only a portion of these might be directly affected. This situation must be resolved during future stakeholder consultation and public participation processes. This also applies to the procurement of services and goods from local businesses.

13.1.2 CSI Projects

As was evidenced in recent public meetings held in the area, communities living around the mine are generally well-acquainted with the obligations that mining companies have to develop labour sending communities through CSI and SLP. Expectations of communities must be managed by informing them as to exactly what to expect from Matai in terms of CSI.

13.1.3 Social Unrest and Community Opposition

It is possible that if expectations of the surrounding communities are not carefully managed that social discontent will form. It is essential that communication channels are open between the communities and the proposed Matai Mining Project so that stakeholders can lay complaints and discuss concerns with the Project. Although the existing CLO will go a long way in aiding such communication; it is still recommended that stakeholder engagement and public participation is on-going in order to manage expectations, allow for stakeholder input into the Project, inform and educate stakeholders about the project, and allow for open discussions. This will assist in anticipating any potential social issues, which may be a risk to the Matai Mining +Project and to implement measures to avoid those risks.

² Matai Mining will comply with the requirements of the Skills Development Act, which includes the submission of a Workplace Skills Plan and an Annual Training Report as per the Sector Education and Training Authority’s requirements.



It is possible that regardless of the Matai Mining Project's efforts for free, prior and informed consent that there will still be stakeholders who are dissatisfied with the process or use publicity of demonstrations as leverage either against the Project or for ulterior reasons

This potential for local instability should be taken into account together with the recent nationwide mining strikes. Community members may have a negative attitude towards the mining sector as they may have spouses, friends or relatives that have been retrenched or treated unjustly by other mining operations. When combining these dynamics, it can be argued that affected communities might become resistant or hostile towards the proposed Matai Mining Project, if not treated in a socially justifiable manner.

13.1.4 Political Tensions

In order to reduce the risk of being caught up in local political conflicts, Matai should at all times avoid creating the impression of being biased towards any particular faction. The company should also keep abreast of all political developments that have a potential to spill over into local conflict, where project-related consultation could be used as a platform for furthering ulterior agendas. One way of keeping up-to-date with relevant political developments is by implementing a press-tracking system, which would send an automated alert to relevant parties whenever press releases appear that contain keywords related to the area, the company and/or the project.

13.1.5 Failure to Acquire a Social License to Operate

Failure to avoid any of the aforementioned risks might detract from the Project proponent's "social licence to operate." A social license to operate may be defined as the on-going approval and acceptance from a local community and stakeholders for a mine or project to operate. A social license to operate is intangible and dynamic. It is granted by the communities, in which a mine operates and is rooted in stakeholder perceptions and opinions about the project. A social license to operate is earned through on-going, transparent communications and mutual trust. It is therefore earned and needs to be maintained as opinions and perceptions can change. A social license to operate is gained through free, prior informed consent from local communities and stakeholders. Gaining a social licence to operate for a mine can therefore be a critical factor a project's success and an important component to human rights.

14. Conclusion and Recommendations

The findings of this report take into consideration the proposed Matai Mining Project's activities, location of the proposed Matai Mining Project, the status of the existing socio-economic environment, and the ultimate effect that the Project will have on this environment.



From this summary, it is apparent that the construction phase is typically characterised by negative impacts – though these are principally as a result of the various types of activities that take place during construction phase and because this particular phase is limited to approximately 5 years, anticipated to be mostly temporary in nature. None of these negative impacts are considered irreversible or expected to cause irreplaceable damage to the socio-economic environment.

In contrast, the operations phase, is considered to bring about more positive impacts that are, similarly, expected to last for the duration of Project life (LoM). These impacts mostly related to the sustainable development of not only the local economy), but also the region as a whole (through an increase in the national tax base).

The proposed Matai Mining Project area is already marked by large-scale mining and agricultural operations, and a number of existing tourist facilities that continue to operate. Influx associated with these industries is common and is likely to continue as a result of this Project, generating increased pressure on the already strained infrastructure and services, exacerbating the growth of informal settlements and aggravating social ills (such as stock theft and HIV/AIDS). In combination, the noise, air quality, visual, traffic and increase in influx will further degrade the overall sense of place. With effective implementation of the proposed mitigation measures, it is expected that the significance of the social impacts will be reduced to levels that are considered to be acceptable in the context of the receiving environment.

Therefore, the impacts of the construction phase that are short-term and mostly limited to the local area, will be outweighed by the more longer-term, widespread positive impacts of the operational phase. Adequate mitigation measures are expected to reduce the significance of negative impacts to acceptable levels, while positive impacts will be enhanced in order to maximise benefits to surrounding settlements.



15. Legal Requirements: Specialist Checklist

In terms of the NEMA 2014 EIA Regulations contained in GN R982 of 04 December 2014 all specialist studies must comply with Appendix 6 of the NEMA 2014 EIA Regulations (GN R982 of 04 December 2014). The table below show the requirements as indicated above.

Table 15-1: Specialist Checklist

EIA REGULATIONS 2017 GNR 327, 325 and 324 Appendix 6 CONTENT OF THE SPECIALIST REPORTS	Completed according to the EIA Regs	Cross-reference in this scoping report
(a) details of— the specialist who prepared the report; and the expertise of that specialist to compile a specialist report including a curriculum vitae;	X	Section 1.5
(b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	X	Page 3
(c) an indication of the scope of, and the purpose for which, the report was prepared	X	Section 1.4
<u>(CA) an indication of the quality and age of Base Data used for the specialist report</u>	X	Section 5.5.3
<u>(CB) a description of existing impacts on the site, cumulative impacts of the proposed development and the levels of acceptable change</u>	X	Section 8 and 9
(d) the date and season of the site investigation and the relevance of the season to the outcome of the assessment;	X	Section 5.5.4
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process <u>inclusive of equipment and modelling used</u> ;	X	Section 5.5
(f) <u>Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives.</u>	X	Section 6
(g) an identification of any areas to be avoided, including buffers;	X	N/A
(h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	X	N/A
(i) a description of any assumptions made and any uncertainties or gaps in knowledge;	X	Section 5.6
(j) a description of the findings and potential implications of such findings on the impact of the proposed activity <u>or activities</u>	X	Section 7
(k) any mitigation measures for inclusion in the EMPr	X	Section 8
(l) any conditions for inclusion in the environmental authorisation;	X	N/A
(m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	X	Section 0



EIA REGULATIONS 2017 GNR 327, 325 and 324 Appendix 6 CONTENT OF THE SPECIALIST REPORTS	Completed according to the EIA Regs	Cross-reference in this scoping report
(n) a reasoned opinion— i. whether the proposed activity, <u>activities</u> or portions thereof should be authorised; and <u>(iA) regarding the acceptability of the proposed activity or activities; and</u> ii. if the opinion is that the proposed activity, <u>activities</u> or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	X	Section 14
(o) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	X	Section 11
(p) any other information requested by the competent authority	X	N/A



16. References

- Becker, D.R., Harris, C.C., Nielsen, E.A. & McLaughlin, W.J. 2004. A comparison of a technical and participatory application of social impact assessment. *Impact Assessment and Project Appraisal*. 22(3): 177-189.
- Bezuidenhout, H. (2009). An improved social impact evaluation framework for the completion of SIA sections during the environmental impact assessment process for residential developments in South Africa. Pretoria: MA dissertation, University of Pretoria.
- Branch, K., Hooper, D.A., Thompson, J. and Creighton, J. 1984. *Guide to Social Assessment: A Framework for Assessing Social Change*. Westview Press: London.
- Burdge, R.J. 1998. *A Conceptual approach to Social Impact Assessment*. Revised Edition. Social Ecology Press: Middleton.
- Burdge, R.J. and Vanclay, F. (1996). *Social Impact Assessment: a contribution to the state of the art series*. *Impact Assessment*, 14, 59-86.
- Carley, M. (1983). A review of selected methods. In K. L. Finsterbusch, *Social Impact Assessment Methods* (pp. 35-54). London: Sage Publications.
- Constitution of the Republic of South Africa, 1996 (Act no. 108 of 1996). (n.d.).
- DBSA, 2007. *Social Accounting Matrix for North West Province*, s.l.: Development Bank of Southern Africa.
- DEAT. (2002a). *Specialist Studies. Information Series 4*. Pretoria: Department of Environmental Affairs and Tourism (DEAT).
- DEAT. (2002b). *Impact Significance, Integrated Environmental Management. Information Series 5*. Pretoria: Department of Environmental Affairs and Tourism (DEAT).
- DEAT. (2006). *Socio-Economic Impact Assessment. Integrated Environmental Management Series 22*. Pretoria: Department of Environmental Affairs and Tourism (DEAT).
- Du Pisani, J.A. and Sandham, L.A. (2006). Assessing the performance of SIA in the EIA context: a case study of South Africa. *Environmental Impact Assessment Review*, 26(8), 707-724.
- Hasenfuss, M., 2018. Sun City: The Star of the Sun Group, <https://www.businesslive.co.za/bd/companies/transport-and-tourism/2018-03-19-no-payout-for-sun-internationals-investors-but-there-may-be-a-rights-issue/>: Business Day.

Henry, R. 1990. Implementing social impact assessment in developing countries: A comparative approach to the structural problems. *Environmental Impact Assessment Review*. 10(1): 91 - 102.

International Association for Impact Assessment. 2003. *Social Impact Assessment: International Principles*. Special Publication Series no.2. IAIA: Fargo.

Interorganizational Committee on Principles and Guidelines for Social Impact Assessment. 2004. *US Principles and Guidelines – Principals and guidelines for social impact assessment in the USA*. In Burdge, R.J. *The Concepts, Process and Methods of Social Impact Assessment*. Wisconsin. Social Ecology Press

Malan, L. 2001. *Social Impact Assessment Basics*. International Association of Impact Assessment Workshop, CSIR. Pretoria. 3 September 2001.

Mercury Financial Consultants, 2016. *Siyanda Chrome Smelting Company (Pty) Ltd - Economic Impact Assessment*.

MKLM, 2016. *Reviewed IDP for the Financial Year 2016/2017, Mogwase: Moses Kotane Local Municipality*.

Moses Kotane Local Municipality *Integrated Development Plan, 2014/15*.

Newtown Landscape Architects, 2015. *Siyanda Chrome Smelting Company (SCSC), Proposed New Ferrochrome Smelter, Thabazimbi Local Municipality, Limpopo Province: Visual Impact Assessment*.

Open Up, 2017. *Wazimap updated with 2016 Municipal Election Results and new municipalities*. [Online] Available at: <https://openup.org.za/articles/wazimap-2016-update.html> [Accessed 15 February 2019].

SAPS, 2014. *South African Police Services: Contact Us*. [Online] Available at: <https://www.saps.gov.za/contacts/stationdetails.php?sid=306> [Accessed 15 February 2019].

Statistics South Africa, 2011. *Statistics by Place*. [Online] Available at: http://www.statssa.gov.za/?page_id=964 [Accessed 20 February 2019].

Statistics South Africa, 2011. *Statistics by Place*. [Online] Available at: http://www.statssa.gov.za/?page_id=964 [Accessed 15 February 2019].

Stats SA, 2017. *Detailed GDP Tables 2010-2015, s.l.: Statistics South Africa*.

Stats SA, 2017. *Detailed GDP Tables 2010-2015, s.l.: Statistics South Africa*.

Synergistics Environmental Services (2016), *Social Impact Assessment Report for the Proposed Siyanda Ferrochrome Smelter on the farm Grootkuil 409 KQ Near Northam, SLR Project No.: 7AY.19057.00006, Report No.: 1, Revision No.1, August 2016, Siyanda Chrome Smelting Company (Pty) Ltd*



The Centre for Affordable Housing Finance (CAHF) in Africa (2015), www.housingfinanceafrica.org Coordinated by Karishma Busgeeth & Johan Minnie for the HDA

Vanclay, F. 1999. Social Impact Assessment. (In Petts, J. ed. Handbook of Environmental Impact Assessment, Volume 1. Oxford: Blackwell. p. 301-306).

Vanclay, F. 2002. Conceptualising social impacts. Environmental Impact Assessment Review. 22: 183-211

Vanclay, F. 2003. Conceptual and methodological advances in Social Impact Assessment. In Vanclay, F. & Becker, H.A. 2003. The International Handbook for Social Impact Assessment. Cheltenham: Edward Elgar Publishing Limited.

Wazimap, 2017. Wazimap. [Online] Available at: <https://wazimap.co.za/> [Accessed 25 January 2018]

Wazimap, 2017. Wazimap. [Online] Available at: <https://wazimap.co.za/> [Accessed 15 February 2019].

Young Larance, L. 1996. Fostering Social Capital through NGO Design. International Social Work, 24(1): 7-18.





Environmental Consultants



Appendix A: Focus Group Discussions Questionnaire



Environmental Consultants



Project Code: KIM03

Stakeholder Questionnaire for the proposed Matai Mining Development within the Magisterial District of Mankwe, North West Province

Name of interviewer:

Name

Date of interview:

Date

Location:

Please may we ask a few questions related to the socio-economic and health situation in your community? We will ask a number of questions related to social structures, living conditions, livelihoods, as well as challenges you face in your community, the local health care services, the decision making in accessing the services and the general satisfaction of the available facilities. Please note that there are no right or wrong answers. Everyone's opinion is valued and important to us. Please let everyone speak and if you do not agree with a person then express this openly but without criticism as they are entitled to their opinion.

Please note that we do not represent Matai Mining (Pty) Ltd and thus cannot make commitments on their behalf. So questions related to requests or commitments that Matai Mining (Pty) Ltd may have made should not be discussed. If you have any questions for us please feel free to ask.

Questionnaire	Response
Community structure	
Are there political and public organisations/associations in your community? If yes, which of the following:	
• political	
• trade unions	
• entrepreneurial	
• women's	
• public funds/organisations	
• youth	
• children	
• other	
Do they somehow influence the life of the community? If yes, please specify the type of influence.	
Are you a member of any political or public organisation/association? If yes, indicate which one?	
Please name people who have most respect/authority/power in your community and why?	
Life values of community residents and their relationships	
What do you value most of all in your life?	
What are the relationships between the community residents?	
Were the relationships always like that?	
What is the attitude of the residents towards newcomers?	
Why was this relationship established?	
What are the relationships between the community residents and the authorities?	
What forms of open conflict were there in your community in the last few years? Mark and give characteristic of each case:	
• strikes	
• walkouts	
• demonstrations	
• meetings	
• pickets	
• other	
Social issues in the community	

Healthcare	
What do you see as the important health concerns in your community? (expect answers, which relate to both the medical illnesses and the structure of medical practice).	
List problems, associated with health of the population in your community?	
Do you have any health concerns about yourself or your family? What are these concerns?	
Do you consult a doctor every time you are ill?	
Where (in what health care facility) do you and your family normally get medical care?	
Where is the nearest health facility? (Also ask if there is any mobile clinic facility in the area and how frequently it comes to the community. Also inquire whether medical staff do home visits, e.g. during emergencies. Inquire about the presence of an ambulance) How long does it take to walk there? How long does it take you to get there by car/ taxi?	
What type of care is available at this facility (e.g., acute treatment, preventive, immunisations etc.?)	
Are you happy with this facility? If not why? Are there any changes you would like to occur?	
Is non-traditional medicine common in your community? In what form does it exist? What sort of reasons will take you to the traditional healer?	
Where do you and community residents source your drinking water?	
Does every household have its own latrine? Note the type of latrine	
Have there been any health problems related to contamination of drinking water in your community? If sewerage contamination not mentioned ask the following: Have there been any health problems related to contamination of drinking water with sewerage?	
How do you find out if there is a particular problem with the drinking water?	
In this area have many people had any illnesses which you relate to the environment, such as diseases caused by ticks?	
Do many people smoke in this community?	
Is there any concern about smoking in the community?	
Are there any problems in the community associated with alcohol use? What sort of problems?	
Are there any other substances, except for alcohol used in the community? (drugs)	
Is domestic violence common in your community?	
Do you have any concerns about the effect that the project could have on people in this community?	
Have you heard about the disease called HIV/AIDS?	
What is it?	
Do you think it is a serious problem in your community? (Why do they think it is/isn't such a serious problem?)	
When you hear the word protection/prevention- what does it mean to you? (Discuss methods of prevention)	
Do people use condoms?	
Are they easily accessible?	
Why do people use/ not use them?	
Is there much commercial sex?	
<i>These questions below are to guide the conversation</i>	
What different kinds of commercial sex are there? Who are the sex workers and where do they work? Who are the clients and where do they work?	
Are there categories of men who are known to have many sexual partners?	
<i>These questions below are to guide the conversation</i>	
Which categories are these? Who do they have sex with and why? Are some categories of men riskier than others and why?	
Are young people having sex?	
<i>These questions below are to guide the conversation</i>	
If so, at what age? Who are their partners? Why are they having sex so early?	
Is it possible for a healthy-looking person to have HIV/AIDS?	

Would you buy food from somebody who you knew had HIV/AIDS?	
If someone in your family had HIV/AIDS would you keep it a secret?	
Education	
What problems related to education does your community face?	
Are you satisfied with the level of student preparation in your community?	
• in school	
• in technical colleges and primary professional colleges	
• in the university	
Do many school graduates go to universities, technical and professional colleges, and why?	
Do many people return to your community after finishing education?	
Culture and sport, recreation and leisure time	
How do people in your community normally spend leisure time?	
How do you normally spend your leisure time?	
Are there any mass cultural and sport events/festivals conducted in your community? Could you list them? (The interviewer suggests clarifying Where? When? How often? Organisers and sources of financing?)	
What cultural and sport establishments (facilities) are there in your community? Could you list them?	
Do you have any wishes/suggestions regarding cultural/sport life of your community?	
List historical and cultural sites in your community.	
What traditions and customs exist in your community?	
What are the most common nature places people go to? it's better to mark a particular place	
Are there restaurants, cafes, nightclubs, bars, etc in the community? What are the most popular ones? Why?	
What is their capacity (load)?	
Are there enough restaurants, cafes, bars, etc. for your community?	
What newspapers (journals) do you and your family read most often?	
Social Support	
What social support institutions are there in your community (pension's houses, orphanages, shelters, and houses for disabled people, etc.)?	
Are there many people in need of social support in your community?	
• homeless	
• disabled	
• lower-income	
• single-mothers	
• other	
What social problems in your community should be solved first of all?	
What objects of social sphere that do not exist in your community should be created/restored?	
Law enforcement authorities and crime issues	
How do you estimate the level of crime in your community?	
Has the level of crime changed in your community lately and why?	
What types of crime are committed most often in your community and why?	
What categories of population commit crimes most often and why?	
Characterise local police authorities (performance of duties, competence, professionalism, sufficiency of equipment, etc.)?	
Have you or the members of your family ever fall the victim of policemen's unlawful actions?	
Public Safety	

What do you do in case of fire?	
How fast and qualified is aid normally administered by fire-fighting brigade?	
What are the main reasons of fires?	
Is there a gas service in the community? How does it work?	
Transportation	
How do you find the condition of local roads?	
What difficulties of transportation between your community and other Mankwe communities do you experience at present?	
How often do traffic accidents happen in your community?	
What are their main causes?	
Where do these accidents usually happen? (On what segments of the road?)	
Housing (provision and utilities)	
What is the condition of housing facilities in your community?	
How do you estimate housing utilities and power supply in your community?	
• water supply	
• heating supply	
• housing repairs	
• power supply	
• technical services (wastes disposal from the common area (yard), in the house)	
• wastes utilisation (availability and condition of land fills)	
Are there abandoned houses? How many?	
What is the average price of a house in your community (specify by types)?	
How have prices of houses changed in the last years in your community?	
Do many people rent houses in your community? What kind? For what price? (specify by types)	
If the number of those willing to rent houses grows will it be possible to satisfy this growing demand in your community?	
Employment and unemployment	
What is the number of unemployed people in your community?	
Who prevails among unemployed people (graduates, young people, people in the right age to work, retired persons, women, men, people of what nationality, former military people, etc.)?	
What are the reasons of unemployment in your community?	
How do people search for jobs in your community?	
Living standards of people	
What are the types of income you and your family get? List them. What is the percentage of each of them in the total income of the family?	
• salary (main job)	
• retirement pension	
• additional jobs	
• income from own business	
• other (specify)	
What kinds of expenditure are most typical for your family? List them.	
What is the percentage of each of them in the total expenditures of the family?	
• savings	
• food	
• housing utilities payments	

• non-food purchases for every-day life (household necessities, etc.)	
• clothes	
• footwear	
• medical services and medicines	
• long-use purchases (furniture, car, electronic equipment, etc.)	
• hobby, leisure time	
• other (specify)	
What food products prevail in your family everyday ration?	
What food products do you only eat on holidays?	
Where do you and the rest of people in your community usually buy food? Why?	
Does your plot include:	
• vegetable garden	
• cattle breeding	
• pig breeding	
• poultry breeding	
• other	
Do you gather wild plants, marine products? (mark what's applicable)	
Do you hunt? (mark what's applicable)	