BEESHOEK IRON ORE MINE:

PROPOSED BEESHOEK OPTIMISATION PROJECT: POSTMASBURG AREA, NORTHERN CAPE PROVINCE

SOCIAL IMPACT ASSESSMENT: DRAFT REPORT

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##### **GLOSSARY OF ABBREVIATIONS**

CV’s: Curriculum Vitae

DEA: Department of Environmental Affairs

DMR: Department of Mineral Resources

EAP: Environmental Assessment Practitioner

ECO: Environmental Control Officer

EIA: Environmental Impact Assessment

EMPr: Environmental Management Programme

EMPR: Environmental Management Programme Report

IDP: Integrated Development Plan

LOM: Life of Mine

MPRDA: Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

NEMA: National Environmental Management Act, 1998 (NEMA) (Act 107 of 1998)

NWA: National Water Act, 1998 (NWA) (Act 36 of 1998).

PCD: Pollution Control Dam

RoM: Run of Mine

RWD: Return Water Dam

SDF: Strategic Development Framework

SIA: Social Impact Assessment

SLP: Social and Labour Plan

SMMEs: Small, Medium and Micro Enterprises

StatsSA: Statistics South Africa

TLM: Tsantsabane Local Municipality

WHIMS Plant: Wet High Intensity Magnetic Separator Plant

WRD: Waste Rock Dump

##### **DOCUMENT STATUS**

|  |  |
| --- | --- |
| **SOCIAL IMPACT ASSESSMENT: Draft SIA Report** | |
| **Date:** | August 2021 |
| **Author:** | Ms. Ingrid Snyman: Batho Earth |
| **Signature:** |  |

# INTRODUCTION

## Background

The Iron Ore Division of Assmang (Pty) Ltd (hereafter referred to as Assmang) is made up of the Beeshoek Iron Ore Mine (hereafter referred to as Beeshoek) and the Khumani Iron Ore Mine in the Northern Cape Province. The Beeshoek Mine is situated near Postmasburg in the Northern Cape Province. Assmang proposes various projects as part of the future development of the mine. These projects require Environmental Authorisations prior to its implementation. Envirogistics (Pty) Ltd. was appointed by Assmang as Environmental Assessment Practitioner (EAP) to undertake the necessary Environmental Authorisations for the proposed Beeshoek Mine Optimisation Project.

A Social Impact Assessment (SIA) will be conducted as part of the Environmental Authorisation Process.

## Definition of a Social Impact Assessment

Burdge (1995) describes a Social Impact Assessment as the “…systematic analysis in advance of the likely impacts a development event (or project) will have on the day-to-day life (environmental) of persons and communities.” A SIA therefore attempts to predict the probable impact of a development (before the development actually takes place) on people’s way of life (how they live, work, play and interact with one another on a daily basis), their culture (their shared beliefs, customs and values) and their community (its cohesion, stability, character, services and facilities), by:

* Appraising the social impacts resulting from the proposed project;
* Relating the assessed social impacts of the project to future changes in the socio-economic environments that are not associated with it. This would serve to place the impacts of the project into context;
* Using the measurements (rating) to determine whether the impacts would be negative, neutral or positive;
* Determining the significance of the impacts; and
* Proposing mitigation measurements.

An SIA is thus concerned with the human dimensions of the environment, as it aims to balance social, economic and environmental objectives and seeks to predict, anticipate and understand the potential impacts of development.

The SIA can assist the project proponent to conceptualise and implement a project in a manner which would see the identified negative social impacts addressed through avoidance or mitigation and the positive impacts realised and optimised. It would also allow the community to anticipate, plan for and deal with the social changes once they come into effect. In this sense then, the SIA is an indispensable part of the EIA, the Environmental Management Plan (EMP) and any participative activity (e.g. community involvement in mitigation and monitoring during planning and implementation).

## Purpose of the Report

The purpose of the SIA report is therefore to provide the findings of the SIA undertaken during the EIA Phase through the following.

* Determining the current socio-economic status of the area and the social characteristics of the receiving environment;
* Indicating the anticipated core impact categories and impact areas (possible hot spots);
* Identifying anticipated positive socio-economic impacts of the proposed project, including positive impacts and provide management measures for these impacts;
* Identifying and highlighting negative social impacts (social hot spots) of the proposed project and indicate mitigation measures to deal with these impacts; and
* Presenting the findings, recommendations and conclusions of the social study.

## The Proposed Project

Beeshoek Iron Ore Mine is situated on Portion 0 of the farm Beesthoek 448 RD and Portion 4 of the farm Olynfontein 475 RD in the Kuruman Registration Division (RD). Postmasburg, Boichoko and Newtown is situated approximately 7 km to the east.

The land surrounding the mine is relatively flat terrain scrubland, and the majority of this land is used for mining activities and cattle grazing.

The mine has been in operation since 1964 with various extensions and infrastructure developments implemented since its inception. Beeshoek Mine includes:

* The Northern mining area (North Mine) that comprises small quarries and mine residue dumps of various categories, the existing iron ore beneficiation plant, tailings storage facility (slimes dam), as well as the North Opencast Pit (BN Opencast Pit);
* Main Offices, village (since demolished) and recreational area; and
* Southern mining area (South Mine) that comprises large opencast pits and associated waste rock dumps (WRDs), the Village Opencast Pit and associated WRD, a crushing and screening area as pre-preparation of the Run of Mine (ROM) and overland conveyor to the iron ore beneficiation plant located at North Mine[[1]](#footnote-2).

The mining method currently entails an opencast mining operation, which consists of five (5) active opencast pits namely:

* Village Opencast Pit;
* HF Opencast Pit;
* BF Opencast Pit;
* East Opencast Pit; and
* BN Opencast Pit.

Some opencast pits are dormant. The current resources of the Mine are approximately 87 million tonnes with a reserve of about 26 million tonnes[[2]](#footnote-3).

Beeshoek Mine has investigated opportunities for the continued and sustainable mining of iron ore reserves within the approved Mining Rights Area. This application specifically gives effect to that and includes the following projects as part of the Beeshoek Mine Optimisation Project:

* Amendments to certain conditions which have been identified in the NEMA Regulation 34 Audit as “not sufficient or not practical” to address activities on;
* Project 1: Specific Demarcation and consolidation of Run of Mine (ROM) Stockpiles on South Mine;
* Project 2: Amendments to the design of existing WRDs in terms of the increase in heights, and allowance for final slope, which will result in extension of footprints;
* Project 3: Increase of Opencast Pit footprint areas, as well as the undertaking of detrital mining;
  + The Village Pit (VP North) will be expanded by 203ha in the future to 269ha and will further include two satellite pits namely Pit East and Pit South, each with an area of about 37ha and 22ha respectively. Clearance of vegetation will be required. The depth of the VP North is planned at 180m, with VP East and VP South 160m and 60m respectively. The size of the proposed expansion of the Village Pit to the west of the current pit has been reduced, since the start of the study, to allow a buffer of at least 500m from the Kolomela access road. The area previously earmarked within the 500m buffer area will currently only be considered for exploration activities. Only upon the completion of exploration further considerations on pit expansions will be given into this area.
  + The EP Opencast Pit will not result in an increase in the footprint but rather in the depth of mining within the mining shell. The depth of East Pit is planned at approximately 220m.
  + The proposed Future Pit to the south of the mine, that was previously considered, has been excluded due to the presence of various cryptic wetlands and a recharge system which requires further investigation. This area has now been identified as a strategic exploration area to ensure that the applicant continues with strategic drilling activities to identify the most strategic resources in consideration of the sensitive ecosystems present.
  + The BF Pit will be expanded from about 30ha (comprising of 3 pits) to about 86ha. Approximately 25ha may require clearance. The dept of the BF Pit is planned at 180m.
* Project 4: Development of a Jig Plant (this area will be located in the vicinity of the current plant) for the beneficiation of discard and low-grade Iron Ore.
* Project 4: Development of a WHIMS Plant for the beneficiation of slimes.
* Project 4: Development of a new surface water dam for the purposes of the Beneficiation Optimisation Projects (Jig and WHIMS Plants).
* Project 5: Water management which will include the development of storage tanks and processing water tanks.
* Project 6: Development of a 2.8km railway link line between the existing Beeshoek Siding and the Transnet Freight Rail (TFR) siding that services Kolomela Mine. The proposed plan is to cross the R385 by constructing a road bridge over the railway link line.

The development of supporting infrastructure such as power lines, roads, pipelines and improvements to storm water management systems where applicable would also be undertaken.

The proposed Beeshoek Optimisation Project will allow Beeshoek Mine to enhance its mining process and reduce mineral waste on site through the implementation of the proposed WHIMS Plant to rework the existing slimes from the Slimes Dam and a new Jig Plant to rework the existing low-grade stockpile (Discard Dump).

All the projects are proposed within the existing mining area and activities will take place in the mining footprint.

## The study Area

Figure : Beeshoek Mine Location

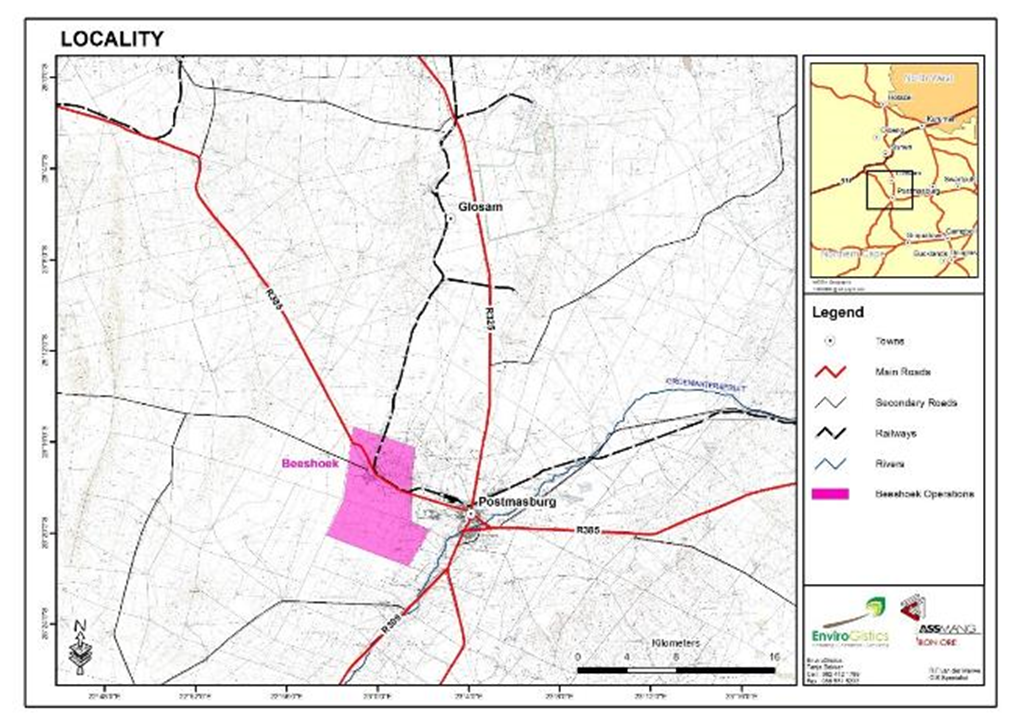


Figure : Proposed Project Layout

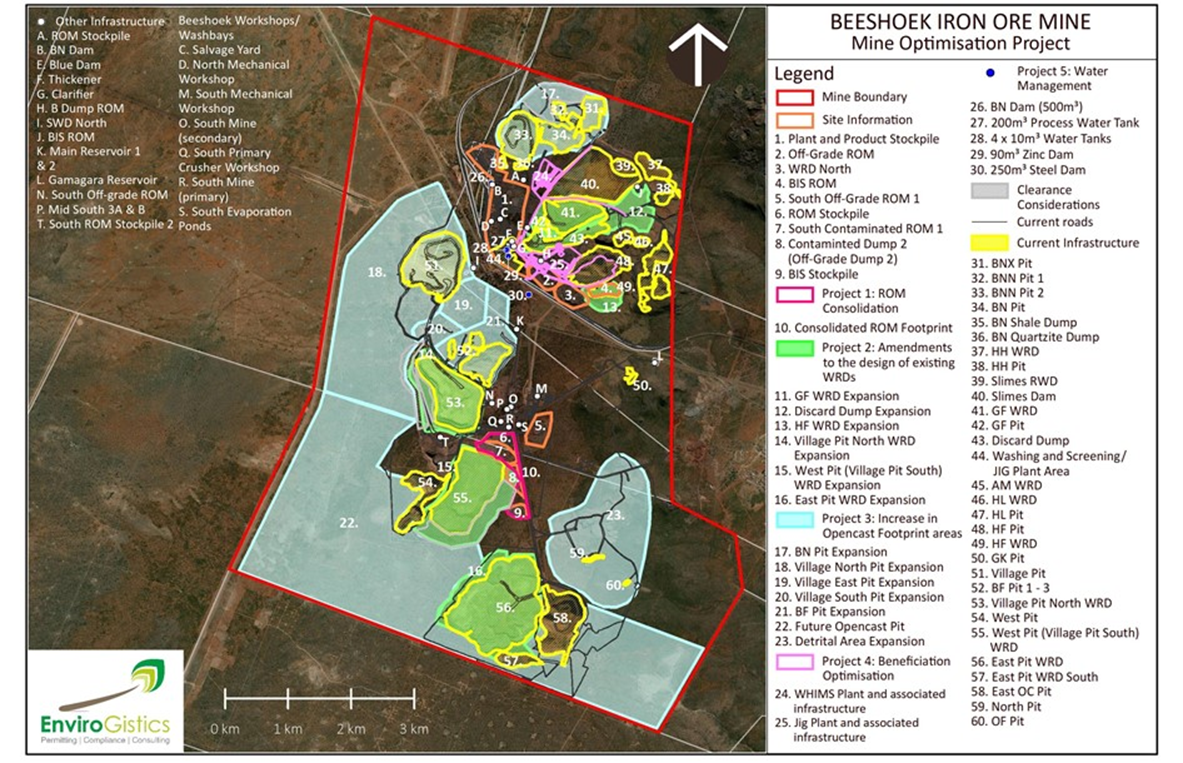


Figure : Beeshoek proposed railway line layout

Map

Description automatically generated

# LEGAL REQUIREMENTS AND GUIDELINES

## General

In South Africa, the National Environmental Management Act, 1998 (NEMA), provides the legal framework for the correct use and management of the environment. Many developments undertaken by both public and private sector organisations require, by legislation, an Environmental Impact Assessment (EIA). In specific, Section 24 of NEMA provides for both the Minister and MEC to identify activities or areas in which certain activities may not be undertaken in absence of an environmental authorization.

An EIA is depended on the type, scale and size of the specific development. The National Environmental Management Act, Environmental Impact Assessment Regulations, GN R543 (“NEMA EIA Regulations”) were published on 18 June 2010 and came into operation on 2 August 2010. These Regulations has been superseded with the 2014 EIA Regulations, GNR 982 published on 4 December 2014 and came into operation on 8 December 2014.

Together with the NEMA EIA Regulations, the assessment of the social environment came into place and thus the origin for undertaking a Social Impact Assessment (SIA). The guidelines from NEMA thus also apply to an SIA.

Other applicable legislation (Acts and Guidelines) include:

* Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA);
* National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and associated Environmental Impact Assessment Regulations, 2014, as amended in 2017 (EIA Regulations);
* National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008 / Regulation 921 of 2013 (as amended) (NEM:WA);
* National Water Act, 1998 (Act No. 36 of 1998) (NWA)
* The Social and Labour Plan required by MPRDA and MPRDA Regulations GN R527 (Part II Regulations 40 to 46); and
* Guidelines and Principles for Social Impact Assessment published by the International Association of Impact Assessment (2003).

## Checklist: Requirements for Specialist Reports, as Contained in the 2014 EIA Regulations, as amended

**Table 1: Requirements for specialist reports, as contained in the 2014 EIA Regulations, as amended**

| **EIA REGULATIONS 2014 GNR 982 Appendix 6**  **CONTENT OF THE SPECIALIST REPORTS** | **Status / Cross-reference in this Report** |
| --- | --- |
| 1. details of the specialist who prepared the report; and the expertise of that specialist to compile a specialist report including a curriculum vitae; | Sections 15.1 |
| 1. a declaration that the specialist is independent in a form as may be specified by the competent authority; | Section 15.2 |
| 1. an indication of the scope of, and the purpose for which, the report was prepared | Sections 1 and 3 |
| cA) an indication of the quality and age of base data used for the specialist report | Statistics from Census 2011 were used. Where available statistics from Household Survey of 2016 (StatsSA) were used. |
| cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change | Section 6**.** |
| 1. the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment; | Section 4.1 |
| 1. a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used; | Section 4 |
| 1. 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; | Sections 7 and 8**.** |
| 1. an identification of any areas to be avoided, including buffers; | Sections 7,8 and 11 |
| 1. 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 | Section 1.5 |
| 1. a description of any assumptions made and any uncertainties or gaps in knowledge; | Section 3 |
| 1. a description of the findings and potential implications of such findings on the impact of the proposed activity or activities; | Sections 7 and 8**.** |
| 1. any mitigation measures for inclusion in the EMPr | Section 11 |
| 1. any conditions for inclusion in the environmental authorisation; | Sections 11 and 13 |
| 1. any monitoring requirements for inclusion in the EMPr or environmental authorisation; | Section 10 |
| 1. a reasoned opinion  * whether the proposed activity, activities or portions thereof should be authorised; * regarding the acceptability of the proposed activity or activities; and * if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan; | Section 12 |
| 1. a description of any consultation process that was undertaken during the course of preparing the specialist report; | Refer to the public participation Process |
| 1. a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and | Refer to the public participation Process |
| 1. any other information requested by the competent authority | N/A |
| 2) Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply. | - |

# GAPS, LIMITATIONS AND ASSUMPTIONS

With regards to the SIA undertaken, the following should be noted:

* The SIA included consultations with stakeholders and potentially affected parties as part of the public participation process.
* A SIA aims to identify possible socio-economic impacts that could occur in future. These impacts are based on existing baseline information. There is thus always an uncertainty with regards to the anticipated impact actually occurring, as well as the intensity thereof. Impact predictions have been made as accurately as possible based on the information available at the time of the study.
* Sources consulted are not exhaustive and additional information can still come to the fore to influence the contents, findings, ratings and conclusions made.
* Socio-economic baseline information was mainly based on official statistics from StatsSA, as well as municipal documentation. Sub-municipal data was only available for 2011. The lack of more recent official socio-economic data is therefore seen as a limiting factor, although it is not anticipated to influence the outcome of the report.
* Technical and other information provided by the EAP is assumed to be correct.
* An overall rating for the possible decommissioning and closure phase impacts was included although it is recommended that the socio-economic impacts be re-assessed at the time of decommissioning as the local dynamics would have changed.

# SCOPE OF WORK AND METHODOLOGY

## Methodology

### Site Visit

The area was visited in May 2021 as part of the public participation process.

### Scope of the Assessment

This involves an investigation to identify the framework of the project through the identification and demarcation of the study area. Once the study area has been determined, an evaluation framework was developed which assisted in identifying the main anticipated social impacts. Scoping further involves an outline of the social characteristics of the area which included the following:

* Background of the study area;
* Existing social characteristics of the affected communities;
* Culture, attitudes and socio-psychological conditions;
* Population characteristics and demographics;
* Community and institutional structures;
* Community resources; and
* A broad economic profile of the area.

### Literature Review, Analysis and Desktop Studies

The literature review assisted the consultants to establish the social setting and characteristics of the study area, as well as the key economic activities. Secondary data, which was not originally generated for the specific purpose of the study, were gathered and analysed for the purposes of the study. Such data included maps, census data, internet searches, and the Integrated Development Plan (IDP) of the Tsantsabane Local Municipality.

### Consultation

The consultant is involved in the public participation process. Information was gathered and social issues were identified and verified through the public participation process. As part of the public participation process, specific information related to the social environment and insight into community and stakeholder perceptions with regards to the proposed development are obtained.

### Profiling

Profiling serves to build on information generated during the scoping process. It involves a description of the social characteristics and history of the area being assessed, an analysis of demographic data, changes in the local population, and the land-use pattern in the study area, as well as any other significant developments in the area and thus social character over time. The profiling process is a combination of secondary and primary research, site visit and consultation. This could include information on:

* Historical background;
* Social characteristics;
* Culture, attitudes and socio-psychological conditions;
* Population characteristics;
* Community and institutional structures;
* Community resources; and
* Broad economic impacts.

The broad profiling will typically include descriptions regarding the following:

* The social trends and current conditions;
* The land-use in the area;
* The demographical profile and social characteristics of the host community;
* Other potential developments in the area;
* The local and regional economy; and
* Potential economic links between the proposed project and its environs.

### Projecting Anticipated Impacts

A baseline assessment indicates the current reality in the social and related aspects of the affected environment. A baseline assessment is necessary to enable a logical and theoretically sound analysis of social impacts. It forms part of the process of identifying important cause-and-effect relationships and a comparative framework for anticipated changes and impacts.

# EVALUATION CRITERIA

The evaluation of impacts is conducted in terms of the criteria detailed in Table 2 to Table 7. The various environmental impacts and benefits of this project are discussed in terms of impact status, extent, duration, probability, and intensity. Impact significance is regarded as the sum of the impact extent, duration, probability and intensity. A numerical rating system has been applied to evaluate the significance of the impacts. Therefore, an impact magnitude and significance rating is applied to rate each identified impact in terms of its overall magnitude and significance (Table 7).

In order to adequately assess and evaluate the impacts and benefits associated with the project, it was necessary to develop a methodology that would scientifically achieve this and to reduce the subjectivity involved in making such evaluations. To enable informed decision-making, it is necessary to assess all legal requirements and clearly defined criteria in order to accurately determine the significance of the predicted impact or benefit on the surrounding natural and social environment.

## Status

The nature or status of the impact is determined by the conditions of the environment prior to construction and operation. A discussion on the nature of the impact will include a description of what causes the effect, what will be affected and how it will be affected. The nature of the impact can be described as negative, positive or neutral.

**Table 2: Status of Impact**

|  |  |  |
| --- | --- | --- |
| **Rating** | **Description** | **Quantitative Rating** |
| Positive | A benefit to the receiving environment | P |
| Neutral | No cost or benefit to the receiving environment | - |
| Negative | A cost to the receiving environment | N |

## Extent

The extent of an impact is considered as to whether impacts are either limited in extent or if it affects a wide area or group of people. Impact extent can be site specific (within the boundaries of the development area), local, regional or national and/or international.

**Table 3: Extent of Impact**

| **Rating** | **Description** | **Quantitative Rating** |
| --- | --- | --- |
| Low | Site Specific; Occurs within the site boundary | 1 |
| Medium | Local; Extends beyond the site boundary; Affects the immediate surrounding environment (i.e. up to 5 km from the Project Site boundary). | 2 |
| High | Regional; Extends far beyond the site boundary; Widespread effect (i.e. 5 km and more from the Project Site boundary). | 3 |
| Very High | National and/or international; Extends far beyond the site boundary; Widespread effect | 4 |

## Duration

The duration of the impact refers to the time scale of the impact or benefit.

**Table 4: Duration of Impact**

|  |  |  |
| --- | --- | --- |
| **Rating** | **Description** | **Quantitative Rating** |
| Low | Short term; Quickly reversible; Less than the project lifespan; 0 – 5 years. | 1 |
| Medium | Medium term; Reversible over time; Approximate lifespan of the project; 5 – 17 years. | 2 |
| High | Long term; Permanent; Extends beyond the decommissioning phase; >17 years | 3 |

## Probability

The probability of the impact describes the likelihood of the impact actually occurring.

**Table 5: Probability of Impact**

|  |  |  |
| --- | --- | --- |
| **Rating** | **Description** | **Quantitative Rating** |
| Improbable | Possibility of the impact materialising is negligible; Chance of occurrence <10%. | 1 |
| Probable | Possibility that the impact will materialise is likely; Chance of occurrence 10 – 49.9% | 2 |
| Highly Probable | It is expected that the impact will occur; Chance of occurrence 50 – 90%. | 3 |
| Definite | Impact will occur regardless of any prevention measures; Chance of occurrence >90%. | 4 |
| Definite and Cumulative | Impact will occur regardless of any prevention measures; Chance of occurrence >90% and is likely to result in in cumulative impacts | 5 |

## Intensity

The intensity of the impact is determined to quantify the magnitude of the impacts and benefits associated with the proposed project.

**Table 6: Intensity of Impact**

| **Rating** | **Description** | **Quantitative Rating** |
| --- | --- | --- |
| Maximum Benefit | Where natural, cultural and / or social functions or processes are positively affected resulting in the maximum possible and permanent benefit. | +5 |
| Significant Benefit | Where natural, cultural and / or social functions or processes are altered to the extent that it will result in temporary but significant benefit. | +4 |
| Beneficial | Where the affected environment is altered but natural, cultural and / or social functions or processes continue, albeit in a modified, beneficial way. | +3 |
| Minor Benefit | Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are only marginally benefited | +2 |
| Negligible Benefit | Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are negligibly benefited. | +1 |
| Neutral | Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are not affected. | 0 |
| Negligible | Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are negligibly affected | -1 |
| Minor | Where the impact affects the environment in such a way that natural, cultural and / or social functions or processes are only marginally affected. | -2 |
| Average | Where the affected environment is altered but natural, cultural and / or social functions or processes continue, albeit in a modified way. | -3 |
| Severe | Where natural, cultural and / or social functions or processes are altered to the extent that it will temporarily cease. | -4 |
| Very Severe | Where natural, cultural and / or social functions or processes are altered to the extent that it will permanently cease. | -5 |

## Significance

The impact magnitude and significance rating is utilised to rate each identified impact in terms of its overall magnitude and significance.

**Table 7: Impact Magnitude and Significance Rating**

| **Impact** | **Rating** | **Description** | **Quantitative Rating** |
| --- | --- | --- | --- |
| Positive | High | Of the highest positive order possible within the bounds of impacts that could occur. | +12-16 |
| Medium | Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. Other means of achieving this benefit are approximately equal in time, cost and effort | +6-11 |
| Low | Impacts is of a low order and therefore likely to have a limited effect. Alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming | + 1–5 |
| No Impact | No Impact | Zero Impact | 0 |
| Negative | Low | Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural, and economic activities of communities can continue unchanged. | -1-5 |
| Medium | Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly possible. Social cultural and economic activities of communities are changed but can be continued (albeit in a different form). Modification of the project design or alternative action may be required | -6-11 |
| High | Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time-consuming or a combination of these. Social, cultural and economic activities of communities are disrupted to such an extent that these come to a halt. | -12-16 |

# DESCRIPTION OF THE BASELINE ENVIRONMENT

Each community is unique as it is shaped by its social networks, cultural influences, values and norms, politics and the infrastructure in the area. The report therefore provides an overview of the social characteristics of the area in order to determine its current capacity and its ability to manage change.

## General Description of the Study Area

The study area falls within the boundaries of the ZF Mgcawu District Municipality and under the jurisdiction of the Tsantsabane Local Municipality.

Beeshoek Iron Ore Mine is situated west of the town of Postmasburg, Boichoko and Newtown. The mine has been in operation since 1964 with various extensions and infrastructure developments implemented since its inception. Beeshoek mine has been developed on the farms Beesthoek and Olynfontein. The mining method currently entails an opencast mining operation, which consists of three opencast pits. The current resources of the mine are 98 million tonnes with a reserve of 46 million tonnes. Broadly Beeshoek can be categorised as the Northern and Southern mining areas.

The R385, as well as the Sishen–Saldanha railway line (also referred to as the Ore Export Line (OREX)) traverse the Beeshoek site. The overall area is characterised by intensive mining development and associated infrastructure. Various servitudes are present which traverse the site, which includes roads, telephone lines, and electricity lines.

The Kolomela Iron Ore Mine (previously referred to as the Sishen South Project) developed since 2008 and is now at full scale production capacity. The Kolomela Mine is located to the south of Beeshoek Mine and to the southwest of Postmasburg.

The farm Doornfontein is situated to the north of the existing Beeshoek Mine’s mining activities.

### ZF Mgcawu District Municipality

The ZF Mgcawu District Municipality[[3]](#footnote-4) was formerly known as the Siyanda District Municipality. It lies within the mid-northern section of the Northern Cape Province, bordering with Botswana in the north and Namibia in the west and covers an area of 102 484 km2.

The ZF Mgcawu District comprises five Local Municipalities namely:

* Dawid Kruiper Local Municipality;
* Kai !Garib Local Municipality;
* !Kheis Local Municipality; and
* Tsantsabane Local Municipality; and
* Kgatelopele Local Municipality.



Figure : ZF Mgcawu District Municipality – Local Municipalities

The main towns that are scattered through the area are Beeshoek, Brandboom, Danielskuil, Eksteenskuil, Groblershoop, Kakamas, Keimoes, Kenhardt, Lime Acres, Mier, Postmasburg, Rietfontein, and Upington. The latter serves as the district municipal capital where the municipal government is located.

Agriculture, mining, and tourism form the key economic drivers in this area. The spatial vision of the ZF Mgcawu District Municipality thus include[[4]](#footnote-5):

* Tourism: Cultural, wilderness, floristic, river tourism ranging from the Kgalagadi international trans frontier park to the culture of the Riemvasmaak community to river tourism on the Orange River;
* Mining and mining beneficiation;
* Agriculture: Riverbank vineyards and expansive stock and game farming in the Kalahari; and
* Renewable energy technology opportunities.

### Tsantsabane Local Municipality

The Tsantsabane LM falls under the jurisdiction of the ZF Mgcawu District Municipality formerly known as the Siyanda District Municipality. The extent of the geographical area of the municipality is 18 317 km2. It is bordered by the John Taolo Gaetsewe and the Pixley-ka-Seme District Municipalities. Furthermore, Tsantsabane Municipality is bordered by Siyancuma LM, //Khara Hais LM, !Kheis LM, Gamagara LM and Kgatelopele LM.

The municipal area falls in the Gamagara Corridor. The Northern Cape Provincial Spatial Development Framework **(**NCPSDF) (2012) defines the Gamagara Corridor as “comprises the mining belt of the John Taolo Gaetsewe and ZF Mgcawu districts and runs from Lime Acres and Danielskuil to Hotazel in the north. The corridor focuses on the mining of iron and manganese[[5]](#footnote-6).

Postmasburg is the main town within the Tsantsabane LM, with various other small rural settlements such as Jenn-Haven, White City, Groenwater and Skeyfontein. New settlements developments include Mountainview, Greenfields, and Postdene Phase 1 & 2[[6]](#footnote-7).

Postdene is situated to the north of Postmasburg and just east of the R325. Newtown is to the west of Postmasburg and south of the R385 (Main Road) with Boichoko further west of both these settlements. Biochoko and Postdene settlement is spatially separated from Postmasburg town, while residents of Newtown access Postmasburg via R385, Main Road and Boom Street.

The main routes in the area, namely the N14, R385 and R31 from Kimberley that runs through Beeshoek, the R309 and the R325 to Kathu are characterised by high levels of movement. This opens up economic opportunities for the TLM along these routes.

Economically, Tsantsabane is known for being rich in minerals, and for its mining, agriculture, manufacturing and farming sectors. Tsantsabane has become one of the leading investment areas in the Northern Cape.

### Wards and settlements in the study area

The municipality is divided into seven wards, as listed in the table below**[[7]](#footnote-8)**.

The study area falls within Ward 6 and a section of Ward 7 with Wards 1, 2, 3, 4 and 5 in very close proximity.

Table : Wards and settlements in the study area

| WARDS | AFFECTED SETTLEMENTS IN WARD |
| --- | --- |
| Ward 1 | Part of Postdene and Carnation |
| Ward 2 | Newtown |
| Ward 3 | Groenwater, Jenn Haven, part of Postdene and Kolomela houses |
| Ward 4 | Boichoko |
| Ward 5 | Skeifontein, Soetfontein, Strathmore, Part of Boichoko and Postmasburg Town |
| Ward 6 | White City, Glossom, Maremane, Beeshoek, Stasie |
| Ward 7 | Maranteng, Kanonbult |

### Development Priorities

The key Municipal priorities as set out in the TLM’s IDP include:

* Bulk Infrastructure services;
* Revenue Collection and Enhancement;
* Provision of Sustainable Basic Services (Water, Electricity & Sanitation);
* Local Economic Development and Job Creation;
* Education: access to land for educational purposes;
* Access to land for residential and business erven;
* Library services for rural areas;
* Refurbishment of community halls; and
* Access to health services.

## Social Profile

### Population Figures

The total population of the Tsantsabane Local Municipality is 39 344 individuals based on the Community Survey of 2016. There is an average 2.1 person population density per km2 and the number of households totals 11 820. The average household size is 3.5.

These population figures are in line with medium to high growth rate predictions made in 2011 based on the population figures at that stage. The high-growth scenario of Postmasburg took into account the trend breaks which could occur due to the increase in mining activities in the Postmasburg area up until 2035[[8]](#footnote-9).

### Age Groups and Gender

The TLM’s population indicates a predominantly young age structure with 34% of the population under 18 years and 62% between 18 and 64 years. The median age is 26 years with the highest percentage (23%) of people falling between 20 and 29 years of age. Those within the working age category (18-64 years) are approximately 10% higher than the rate in the Northern Cape and also slightly higher than the district rate[[9]](#footnote-10). These figures indicate the critical need for employment opportunities within the area.

The male population (21 086 individuals) within the municipality are at 54%. The main reason for this situation in the area is attributed to the influx of various workers from outside the province in search of work at the different mining and solar developments and mining being a more male dominant employment industry. The number of males within the study area is thus again approximately 10% higher than the rate within the province and slightly higher than the district rate[[10]](#footnote-11).

### Population Stability

Approximately 11% of the population within the TLM area are from outside the province[[11]](#footnote-12). The population stability is thus influenced by the in-migration of outsiders to the area, mainly due to the presence of various mining activities and sources of employment within this sector. These outsiders consist of foreigners, as well as individuals from other areas within South Africa.

This in-migration, which is thus mostly attributed to people in search of employment, has further socio-economic consequences such as additional pressure on the TLM and the business sector to provide employment opportunities, as well as the provision of social infrastructure and services. Residents have further indicated that small businesses are mainly owned by foreigners limiting opportunities for locals in this regard[[12]](#footnote-13).

### Education and Skills Levels

The proportion of the adult population within the Tsantsabane Local Municipal area with no schooling amounts to 7%, with only 2% having obtained a tertiary level of education. Approximately 36%, however has a matric certificate, which is about 20% higher than the rate in the district and 10% higher than the provincial rate.

The statistics indicate that although a high number of students enroll for primary school, a very low number of students complete Grade 12. Furthermore, only 5% of those who enrolled for Grade 1 endure it into a tertiary level.

With the low number of the population having a tertiary qualification or having completed Grade 12, it can be assumed that the skills levels are also low. This results in a very low probability for employment. Unemployment and low skills remain a major concern within the TLM area.

Within the TLM, the educational profile of those of 20 years and older is as follows[[13]](#footnote-14):

Table : Educational Profile of Population in TLM

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| EDUCATIONAL PROFILE: TLM | | | | | |
| **No Schooling** | **Some primary** | **Completed primary** | **Some secondary** | **Completed secondary** | **Higher** |
| 1 853  (7.3%) | 2 326  (9.1%) | 1 500  (5.9%) | 9 185  (36%) | 9 165  (36%) | 262  (2.2%) |

It must, however, be noted that the education level is further being negatively affected by the urbanisation process, with a lack of sufficient schools for the increase in people coming to Postmasburg and surrounds in search of employment[[14]](#footnote-15). Learners from all over the TLM area are transported to attend school in Postmasburg. Overcrowding in the classrooms is a serious challenge which hampers the learning experience. There is thus an urgent need for additional school facilities, especially primary schools. The challenges in this regard relate to:

* An urgent need for additional school facilities in Newtown (Postmasburg) and Groenwater / Skeyfontein;
* Lack of a Setswana medium school/s;
* Lack of specialised schools focusing on specialised traits i.e. Technical or Agricultural;
* Lack of proper water and sanitation services at schools;
* Not enough classrooms and high learners and teacher ratio; and
* A need for an additional technical high school that will respond/address for the needs of the mining sector.

Beeshoek Mine, as part of the SLP, is assisting with learner empowerment, teacher development (skills development) and capacity building (life skill training), as well as school infrastructure[[15]](#footnote-16).

## Employment and Income

The mining sector, followed by the agricultural sector, is the main employment sectors within the local study area. The mining industry’s contribution to the GDP of TLM increased from R1,5bn in 2002 to R3,9bn in 2012. During 2012 the mining industry employed 54.5% (6 648 persons) of the employed population[[16]](#footnote-17).

The employment profile of persons 15 years and older is as follows:

Table : Employment Profile[[17]](#footnote-18)

| EMPLOYMENT PROFILE | | | | |
| --- | --- | --- | --- | --- |
| Area | Employed | Unemployed | Discouraged work-seeker | Other non-economically active |
| **Tsantsabane Local Municipality** | 10 760  (45.3%) | 3 795  (16%) | 419  (1.8%) | 8 764  (36.9%) |
| **ZF Mgcawu District** | 74 449  (47.3%) | 17 696  (11.3%) | 4 961  (3.2%) | 60 210  (38.3%) |
| **Northern Cape Province** | 282 791  (38.4%) | 106 723  (14.5%) | 39 913  (5.4%) | 306 291  (41.6%) |

Although various mines operate in the TLM area (e.g. Kolomela Mine, Beeshoek Mine and other smaller mining companies) these mines cannot accommodate all the jobseekers. According to the Census of 2011, the employment rate in the municipality is slightly less compared to the district rate, but significantly higher than the provincial rate. The non-economically active people are still of concern as they would thus be dependent on the employed. Due to the existing socio-economic circumstances in South Africa as a result of the negative impact of Covid-19, the unemployment figures can now even be higher. More up to date figures, however, was not available. Job creation in the TLM among the youth will remain a challenge with limited sectors available.

The average annual income in the TLM is calculated at R57 700 per annum[[18]](#footnote-19), approximately 29% of the households within the TLM fall within the lower bound income brackets of below R20 000 per year. The average annual income is almost double that of the Northern Cape Province (R30 000) and the district figures. Employment figures for the TLM, is again slightly lower than that of the District, but higher than the Provincial figures.

Poverty levels in the study area remain high which indicates a higher dependency ratio and it can lead to higher crime rates.

## Community Resources and Infrastructure

### Land-Use

The larger study area is characterised by various type of infrastructure such as railway lines, power lines, communication masts, roads and various different type of mining infrastructure, mining developments and agricultural farming practices (commercial livestock and subsistence grazing), with limited game farming.

### Natural Resources

The proposed Beeshoek Optimisation Project is located within an area that is semi-arid with no large dams or rivers. There is a dependency on the existing limited groundwater sources for agricultural activities and provision of water to some settlements.

In Tsantsabane the natural resource base is threatened or under pressure due to the mining developments. Concerns relate to habitat transformation and degradation, the generation and disposal of various types of waste, the invasion of alien species, air quality impacts, impacts on ground and surface water sources, as well as the overall climate change. The management of these is critical in ensuring effective conservation and sustainable use of the biodiversity. Further issues of concern in the TLM area relate to the over-exploitation of natural resources and the pressure on development also places additional strain on water as natural resource.

To ensure sustainable livelihoods, it is important that economic opportunities are expanded in local areas, in a way that takes both people and biodiversity into account. Nature-based tourism should encourage local economic development. There is also a huge need to expand the skills of local communities and encourage entrepreneurs in the tourism industry, the game farming industry and commercialization enterprises, through training and support on access to finances and marketing[[19]](#footnote-20).

### Safety, Security and Health

Postmasburg has one police station which has to serve the entire municipal area, except for the Maremane area which is attended to by the Dingleton and Kathu Police Stations. Police are understaffed and lack enough vehicles to respond to all the crime related issues. Due to the influx of more individuals to the area, as well as an increase in alcohol and drug abuse, the crime levels in the study area have increased over the past couple of years.

There are no disaster management services as part of the TLM. The communities are dependent on Assmang Mine to provide firefighting services.

Postmasburg has one hospital that is usually functioning at capacity, three Primary Health Care clinics (Postdene, Boichoko and Newtown) and four mobile clinics[[20]](#footnote-21). The hospital received some upgrades in 2019 undertaken by Anglo American Group of Companies’ Kumba Iron Ore (Kolomela Mine) as part of their community investment programme. These included the construction of an additional primary health care facility next to the hospital and mobile care for rural areas; retention and attraction of key health professionals as well as the construction of doctor’s living unit; and a focus on secondary healthcare which included the hospital upgrade[[21]](#footnote-22).

However, there remains additional needs for more clinics and even mobile clinics. The TLM should work with provincial departments to ensure the development of community infrastructure such as schools and clinics is properly co-ordinate the development of these with the informal settlements upgrade programme.

Further health challenges that were highlighted in the Assmang Iron Ore Social and Labour Plan are:

* HIV/AIDS increase and Tuberculosis (TB) increase;
* High rate of teenage pregnancies;
* Lack of sufficient and qualified staff with limited skills amongst current nurses and nursing sisters;
* Lack of sufficient facilities to render a proper health service to all communities; and
* Lack of necessary health equipment and medication at clinics[[22]](#footnote-23).

### Housing and Related Infrastructure

Human settlements are scattered throughout the municipal area resulting in some areas still lacking services and infrastructure in comparison to other areas in the Municipality. Due to the increase in mining activities, the demand for housing has also increased[[23]](#footnote-24)

There are 9,839 households in TLM, with an average household size of 3.5 people. 72% of the residents live in formal dwellings. According to the Community Survey of 2016, this figure increased with approximately 80% of the residents live in formal dwellings[[24]](#footnote-25). 67% of households use a flush toilet connected to sewerage and 45% have piped water inside. 57% receive weekly refuse removal. 59.6% of the houses have been fully paid off”.[[25]](#footnote-26)

The TLM is continuously aiming to address the issues of basic service delivery and the provision of housing and the TLM has made some progress with regards to the provision of housing, but due to the influx of outsiders to the area, it seems as if the need remains higher than the actual approved allocations.

Challenges in this regard that still remain include:

* Proper maintenance of existing infrastructure;
* Economic and social development at risk due to infrastructure deterioration,
* Adherence to statutory plans such as the Strategic Development Framework (SDF),
* Verification process as per the Department of Human Settlement’s Standards,
* Housing need (demand) that is higher than the actual approved allocation (supply)

However, projects are underway to supply the residents with improved services and infrastructure.

In line with the Mining Charter, Assmang Ltd. through its Khumani Housing Development Company (Pty) aims to facilitate and assist with the process of homeownership for its employees. Beeshoek Iron Ore Mine has to date built 357 homes in the main residential areas of Postmasburg, namely Boichoko (51), Postdene (163) and Airfield (143)[[26]](#footnote-27).

### Basic Service Delivery

Currently the municipality is experiencing high development backlogs as a result of increasing population figures and socio-economic growth underpinned mainly by the solar and mining sector investments. This has resulted in massive pressure on the delivery of basic services within the TLM area[[27]](#footnote-28).

There are 11 820 households in the municipality and these households have access to the following basic services[[28]](#footnote-29):

* 91.2% of the households have access to water from a regional or local service provider;
* 82.8% of the households have access to flush or chemical toilets;
* 91% have access to electricity which includes in-house pre-paid meters, in-house conventional meters and other sources;
* 67% of households have access to different types of internet facilities, although the majority of these obtain access via their cellular telephones; and
* 64.7% of households are getting refuse disposal from a local authority, private company or community members.

The above figures should take note of the fact that approximately 20% of the households in the TLM live in informal type of dwellings and that these households might not have access to the above services. The rural settlements and the informal settlements of TLM mostly do not have access to solid waste removal systems and services, which results in polluted informal settlements Internal settlement roads are also in poor conditions. There is furthermore a need to develop and upgrade and register landfill sites in order to prevent environmental degradation and to meet the needs of the communities. Waste water treatment plants would require upgrading[[29]](#footnote-30).

## Tourism Industry

Some of the local tourist attractions in the Postmasburg area include:

* The Howitzer Gun Civic Centre honouring those who lost their lives in WWII;
* Blinkklipkop, meaning “Shining Rock Hill” which boasts indications that the Khoisan attempted mining in this area as early as 700 AD;
* The Postmas Diamond Mine (the old mine is 45m deep, filled with water and stocked with fish);
* The Reformed Church, a blue dolomite stone building and the statue of Rev. J. Postma;
* The Anglican Church constructed in 1905 in Postmasburg;
* Postmasburg Primary School dating back to 1917;
* Cave on the farm Soetfontein
* The Lohatlha Military Base; and
* The Witsand Nature Reserve, situated 80km south-west of Postmasburg.

A focused tourism strategy needs to be developed in order to create a tourism package comprising of a number of activities in the areas, rather than the current fragmented approach towards tourism[[30]](#footnote-31).

The Northern Cape Province Growth and Development Strategy stated that the tourism potential in the Northern Cape has not been exploited to its full potential. A Tourism Master Plan to address this issue is being developed. Some niche tourism markets would most probably be pursued such as adventure tourism, green tourism and the wildlife experience.

## Local Economic Profile

As with the province’s economy, the economies of the ZF Mgcawu District Municipality and the TLM are largely dominated by mining, agriculture and manufacturing. Mining in TLM is the highest contributor to both its economic growth and job creation. In 2014 it was indicated that the primary sector contributed 74% of all the sectors’ contribution to the GDP of TLM. Mining was then still the single biggest contributor of all industries within the district and province. Expansions in the mining sector over the past couple of years led to the growth in the local economy. However, downscaling in this regard, however also had a significant impact on the local economies dependent on mining with long term negative consequences.

According to the TLM IDP, mining accounts for 55% of the GDP within the region[[31]](#footnote-32). Postmasburg, and the surrounding area, had positive local business related impacts from mining due to the development of the Kolomela Mine and the constant input from the Assmang Beeshoek Mine. Individual new businesses, include retail and wholesale (53%), personal services (19%), transport (16%), catering and accommodation (6%), as well as financial services (3%).

Furthermore, tourism could be a relatively small but important contributor to the local economy as more tourists are attracted to the distinguishing desert landscape with relative accessibility. This sector, however, was also negatively impacted by the Covid-19 Pandemic and associated lockdown restrictions.

Financial resources of the TLM are further limited due to ongoing poor payment levels by consumers. This has resulted in declining cash inflows for the municipality, which has necessitated restrained expenditure to ensure that cash outflows remain within the affordability parameters of the Municipality’s finances[[32]](#footnote-33). The effect of the COVID-19 pandemic further resulted in inability for them to effectively implement credit control and debt collection measures. In 2020 Eskom identified the TLM as one of the defaulting Northern Cape Municipalities that failed to pay Eskom large amounts for the service delivery. Continued stable electricity provision thus hangs in the balance. Possible future disconnections of electricity supply may cause undue hardship to consumers and members of the community, and may adversely affect the delivery of other services.

In order to ensure further economic growth in the region, the TLM’s Local Economic Development strategy should ensure the utilisation of the economic potential to the benefit of the broader community. Projects would include supporting the establishment of various industries and businesses and the promotion of tourism through the development of a Tourism Marketing Strategy.

The above could link with the efforts to identify skills to be developed to respond to the economic opportunities in the municipality. In this regard, the municipality, with the assistance of Kumba Resources, established the Tsantsabane Youth Service Centre in 2009. The focus of the Centre is skills development of youth in the area in order to empower them to play a vital role in the economy of the area. Specific programmes include life skills training, leadership training, computer training and so forth.

As part of local growth further key investment opportunities within the TLM relate to:

* public-private partnerships to speed up development in the area;
* developmental assistance to the agricultural sectors with the focus on the emerging farmers;
* the development of a manufacturing strategy including the availability of serviced plots and the development of local skills;
* identification of export opportunities and international markets;
* the establishment of a permanent working group between the mining companies and the municipalities to ensure an effective relationship together with the development of skills training and support programmes;
* investigating and exploiting activities related to road-transport routes or corridors due to the suitable location of the municipality;
* The establishment of a local business support centre for the benefit of local entrepreneurs and informal traders;
* Exploit possible benefits of solar development projects in the area (e.g. Lesedi, Jasper and Red Stone projects) to the benefit of the local communities; and
* The development and implementation of an aggressive tourism marketing strategy.

# SOCIO-ECONOMIC IMPACTS DURING CONSTRUCTION

The construction phase refers to the start-up (pre-construction, initial and early works) and construction activities proposed as part of the Beeshoek Mine Optimisation Project. These activities would include fencing of the mining sections, possible soil stripping and earth clearing activities (for e.g. areas allocated for new Jig and WHIMS Plant sites and the servitude for the proposed railway line), railway link line construction, haul road construction and decommissioning, as well as possible service relocations.

## Temporary employment and income

The construction phase focuses on the employment creation associated with the erection, management and maintenance of the required infrastructure and activities associated with the new developments that were not previously authorised such as the Jig and WHIMS Plants. Therefore, it is anticipated that the Beeshoek Mine Optimisation Project would result in additional employment opportunities, although limited and varying at different stages of the project.

It is anticipated that between 4 to 18 skilled individuals and approximately 23 to 72 unskilled personnel would be required on a monthly basis during the construction/start-up period of approximately 8 months. Approximately 18 to 34 existing employees within management positions would also be involved. Overall, the construction phase (initial and early works) of approximately 8 months would, during its peak periods, result in 122 positions of which 70 would fall in the unskilled category, 18 in the skilled and 34 in management positions[[33]](#footnote-34). The construction of the railway link line and bridge at the R385 would add to the total job opportunities and could increase the construction staff complement. It should, however, be noted that a portion of these would still consist of the existing permanent employees.

A temporary increase in the concentration of workers will thus occur e.g., during the construction of the haul roads and decommissioning of the existing sections of haul roads, construction of the railway link line as well as the service relocations. New opportunities for short-term contract work could thus be generated for some periods of time as there would be around 20-70 unskilled personnel required at certain stages for the new mining infrastructure. This figure could increase with the construction of the railway link line and bridge at the R385. Locals could be part of the specialist contractor teams involved in the short-term contracts.

Contractors are expected to house their employees in existing housing facilities in Postmasburg and surrounds. Due to the number of individuals that would be involved on a temporary basis, no new accommodation facilities would be required.

**Table 11: Rating of Employment and Income Opportunities**

|  |  |  |
| --- | --- | --- |
| **THEME: TEMPORARY EMPLOYMENT AND INCOME OPPORTUNITIES** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Positive (+) | Positive (+) |
| **Extent** | Local and regional (3) | Local and regional (3) |
| **Duration** | Short term: (1) | Short term: (1) |
| **Probability** | Probable (2) | Highly probable (3) |
| **Intensity** | Beneficial (3) | Beneficial (3) |
| **Significance** | Medium (9) + | Medium (10) + |
| **Enhancement:**   * Prioritise any possible new local labour in the recruitment process as part of the company’s own recruitment policy or as part of the contractor management plan and stipulate the procurement of new employees, especially in the unskilled category, from the local communities. * Provide up-skilling opportunities for unskilled and semi-skilled local workers during the construction phase to allow them to become more employable for operational activities. * Explore possible placement of local construction workers in mining operations. | | |
| **Expected areas of impact:** Postmasburg, Beeshoek, Boichoko, Newtown, Postdene and possibly areas further located from Beeshoek Mine within the larger TLM area | | |
| **Cumulative impacts:**   * Other mining applications proposed by different applicants within the area, and other companies in the TLM area could have a cumulative impact on skilled labour availability and mining construction supplies if not pro-actively managed. | | |
| **Residual impacts:**   * None | | |

## Population influx

This variable refers to the inflow of temporary workers, the inflow of individuals to the study area in search of employment, as well as the potential conflict between locals and individuals from outside the study area during the construction/start-up phase.

Over time, the TLM has experienced high development backlogs as a result of the increasing population and socio-economic growth driven by the inflow of outsiders to the area in search of employment in the solar and mining sectors. This has resulted in massive pressure on the delivery of basic services within the municipal area.

The proposed Beeshoek Optimisation project, however, has as purpose the continuation of the mining activities within the existing mining rights boundary and to sustain the existing production capacity over time. No new areas will be opened up for mining, no new significant open cast pits will be developed and mining activities will be undertaken within the existing mine boundary. As indicated under Section 7.1, there will be limited new employment opportunities during the construction period with subsequent limited direct and controlled inflow of people to the area.

The informal population influx is difficult to mitigate and cannot be attributed to the Beeshoek Optimisation project, as it is an existing impact in the region. However, construction related projects and mining focused areas usually attract jobseekers from within the study area or even from other provinces even prior to construction commencing. This situation is usually worsened by exaggerated rumours of possible employment opportunities. It is thus likely that the area continues to have an informal inflow of some jobseekers to the Postmasburg and surrounding area, due to the various mining activities within the area, but no significant additional formal and informal inflow of jobseekers is expected as a *direct* result of this project.

**Table 12: Population influx**

|  |  |  |
| --- | --- | --- |
| **THEME: POPULATION INFLUX** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local and regional (3) | Local and regional (3) |
| **Duration** | Short term (1) | Short term (1) |
| **Probability** | Probable (2) | Probable (2) |
| **Intensity** | Minor (-2) | Negligible (-1) |
| **Significance** | Medium (8) (-) | Medium (7) (-) |
| **Mitigation:**   * Maximise the use of local labour and contractors where possible by developing a strategy to involve local labour in the construction process. * The development, publication and widespread dissemination of a recruitment policy could serve to encourage local employment and reduce the potential influx of jobseekers to the area. * The communication strategy should ensure that unrealistic employment expectations are not created. * A representative of Beeshoek Mine could liaise with the local leaders and local councillors to either attend key community meetings arranged within the affected wards to discuss the possible employment and recruitment process; or liaise with the local leaders and local councillors to ensure that the correct information regarding this issue is portrayed to the communities. * Beeshoek Mine should, where possible, support efforts by TLM to limit squatting and sub-letting in the area, e.g., no informal settlements should be allowed within the mining rights area. * As per the Beeshoek SLP, the Beeshoek Mine has through the Khumani Housing Development Company, built 357 homes in the main residential areas of Postmasburg, namely Boichoko (51), Postdene (163) and Airfield (143). Beeshoek Mine plans to continue with this strategy and has stipulated the plans in the SLP. * Beeshoek Mine must continue with their assistance in the provision of housing infrastructure as discussed in the Assmang Iron Ore Social and Labour Plan for Beeshoek Iron Ore Mine: 2019-2024. * Review and updates of the SLP after 2024 must specify efforts by Beeshoek Mine to continue to seek sustainable and collective solutions to the issue of housing for employees and other housing challenges in the area. * There should be ongoing engagements between Beeshoek Mine, the relevant housing forums and working groups, as well as the TLM with regards to housing policies, models and challenges. | | |
| **Expected areas of impact:** Postmasburg, Beeshoek, Boichoko, Newtown, Postdene and possibly areas further located from Beeshoek Mine within the larger TLM area | | |
| **Cumulative impacts:**   * Continued inflow of outsiders to the area as a result of various mining activities and expansions of other mines, as well as Solar Photovoltaic Power Projects. | | |
| **Residual impacts:**   * Continued pressure of the delivery of basic services and housing as a result of the cumulative impacts, although not as a direct result of the proposed Beeshoek Optimisation Project. | | |

## Intrusion Impacts

### Traffic Movement

During the construction phase, the movement of heavy machinery and vehicles are anticipated to take place within the mining area boundaries (e.g., construction of new haul roads to and from WRD’s and Jig Plant to link with existing haul roads) with limited movement of construction vehicles on the provincial (R385) road and local access roads. Vehicles making use of the public roads will include personnel transport and construction material delivery.

Traffic movement will be disturbed and possibly be delayed during the construction of the temporary road deviation when construction of the road bridge associated with the railway link line on the R385 commences. The R385 is used to access Beeshoek Mine, as well as Postmasburg. It further serves as link road to the access road to Kolomela Mine. The R385 thus serves public users, as well as mine related traffic volumes. The negative impact on the road users, however, will be of a short duration.

Table 13: Traffic Movement

|  |  |  |
| --- | --- | --- |
| **THEME: TRAFFIC MOVEMENT** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Short term (1) | Short term (1) |
| **Probability** | Definite (4) | Highly Probable (3) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. * Mining areas must be secured and fenced. * All construction vehicles should be in a good condition and adhere to road worthy standards. * Construction vehicles must keep to speed limits. * Limit construction hours to daylight hours e.g., 6am to 6 pm. * Road users must be notified if delays would be experienced due to the road bridge construction. * Warning signs with regards to the construction activities need to be erected at strategic places along the R385 and must be clearly visible at night. * Road deviations must be clearly indicated by road signs and must be clearly visible at night. | | |
| **Expected areas of impact:** Mining area and R385 | | |
| **Cumulative impacts:**  None anticipated | | |
| **Residual impacts:**   * None anticipated. | | |

### Railway Link Line

The proposed railway link line will comprise a 2.8km main link line of approximately 5.5m in width with a 5m bulk fill (varies along the alignment). The line will tie in from the existing TFR Postmasburg line at the Beeshoek Iron Ore Mine, crossing over the road which provides access to the Tommy’s Field Airport. The existing R385 will be lifted into the road over rail system to allow for the railway line to cross under the R385 regional tar road before linking to the existing TFR Yard that services Kolomela Mine.

During the construction phase, the Tommy’s Field airport will be closed for a period of time to allow for the construction of the road crossing. A temporary road deviation (of less than 1km), will be provided for vehicles travelling on the R385 during the construction of the road bridge.

Kolomela Mine raised concerns with regards to the impact of the railway link line on the traffic making use of the R385 and the subsequent impact on the access on the Olifantshoek road. This access road will be used for their future access to Kolomela Mine’s Heuningkrans project.

Even though the negative construction related impacts will be of a short duration, mitigation and management measures must be put in place to limit the negative impacts and ensure as normal traffic flow patterns as possible and to limit any negative impacts on existing infrastructure and services.

Table : Railway Link Line

|  |  |  |
| --- | --- | --- |
| **THEME: RAILWAY LINK LINE** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Short term (1) | Short term (1) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (9) (-) | Medium (7) (-) |
| **Mitigation:**   * Construction vehicles must keep to speed limits. * Limit construction hours to daylight hours e.g., 6am to 6 pm. * Road users must be notified if delays would be experienced due to the road bridge construction. * Warning signs with regards to the construction activities need to be erected at strategic places along the R385 and must be clearly visible at night. * Road deviations must be clearly indicated by road signs and must be clearly visible at night. * Access to the R385 and Olifantshoek Road to Kolomela Mine must be ensured at all times. * Access to the Tommy’s Field Airport must be ensured at all times. * Temporary closure of the Tommy’s Field Airport and the impact on flight patterns should be communicated to all parties involved and alternative available airport options must be finalised. * Speed limits around the construction sites should be lowered for the duration of the construction period. * The construction schedule of the railway link line and bridge on the R385 must be discussed and finalised in consultation with directly affected landowners and Kolomela Mine. | | |
| **Expected areas of impact:** Mining area, R385 and Olifantshoek Access Road | | |
| **Cumulative impacts:**   * None anticipated | | |
| **Residual impacts:**   * None anticipated. | | |

### Dust Impacts

Construction activities will mainly include site clearing and preparation of the sites for e.g. the larger WRD footprint areas, the construction of the new Village haul road, the railway link line and bridge on the R385, excavations and the establishment of the required infrastructure on site.

The construction activities and site establishment, as well as the movement of vehicles will result in some emissions and dust pollution. It is anticipated that the increased dust impacts would materialise within the mining boundary, with the exception of the temporary road deviation at the R385 and the construction of the railway link line underneath the road. The type of construction machinery that is usually used for the railway link line and road construction can increase the dust levels at the construction sites for short periods of time. Some negative dust impacts could thus be experienced by road users.

Should any significant negative impacts be caused during the construction phase, mitigation measures should be implemented to limit the impact on sensitive receptors.

Table : Dust Impacts

|  |  |  |
| --- | --- | --- |
| **THEME: DUST IMPACTS** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Short term (1) | Short term (1) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (9) (-) | Medium (7) (-) |
| **Mitigation:**   * Dust suppression (e.g. wetting of road) to be implemented on the road deviation during windy conditions and peak traffic periods, if feasible. * Construction vehicles should keep to speed limits. * Concurrent rehabilitation to be undertaken e.g., establishment of vegetation or covers (where feasible) to assist with dust suppression. * Dust management plan and recommendations of the Air Quality Assessment should be strictly implemented. | | |
| **Expected areas of impact:** Construction sites. | | |
| **Cumulative impacts:**   * Possible overall increase in dust generated due to Beeshoek’s mining activities and other mining activities in the area | | |
| **Residual impacts:**   * Possible continued cumulative dust impact. | | |

### Noise Impacts

The area can, from a social perspective, be classified as an area with existing low ambient noise levels. Concentrated noise is currently generated at the existing Beeshoek Mining operations and other mining operations within the larger study area, as well as traffic from the R325, R385 and R309. The residential areas of Postmasburg, Postdene, Newtown and Boichoko, as well as the rural sections within the area can also be described as relatively quiet.

Noise from the construction phase would mainly include noise from the operation of heavy machinery and the movement of construction related vehicles. Noise levels on-site will increase, with lower increases at off-site locations and/or where sensitive receptors are situated. It is not anticipated that residents of Postmasburg, Postdene, Newtown and Boichoko would be negatively affected by any increase in noise due to the distance of these residential areas to the proposed Beeshoek Optimisation project area.

Noise levels at the road bridge construction site and at the railway link line will increase for a short period of time. These increased levels will also be intermittent with some negative impact on road users. Again limited negative impacts on the surrounding landowners are anticipated.

To limit noise pollution and to prevent possible exceedances above any stipulated thresholds, mitigation measures must be implemented.

**Table 16: Noise Impacts**

|  |  |  |
| --- | --- | --- |
| **THEME: NOISE IMPACTS** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Short term (1) | Short term (1) |
| **Probability** | Probable (2) | Improbable (1) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (8) (-) | Medium (6) (-) |
| **Mitigation:**   * The mitigation measures with regards to noise impacts as discussed as part of the EIA Report should be implemented. * All construction vehicles should be in a good condition and adhere to road worthy standards. * Maintenance of vehicles and machinery should be done regularly. * Limit construction hours to daylight day hours e.g., 6 am to 6 pm where possible. | | |
| **Expected areas of impact:** On site, with limited impacts off-site and at nearby residential areas | | |
| **Cumulative impacts:**   * Possible overall increase in noise generated due to Beeshoek’s mining activities, as well as other mining activities in the area. | | |
| **Residual impacts:**   * Possible continued impact of cumulative noise. | | |

# SOCIO-ECONOMIC IMPACTS DURING OPERATION

The following section provides a description of the social impacts anticipated to occur during the operational phases of the proposed Beeshoek Mine Optimisation Project.

## Continuation of employment and income opportunities

The existing Life of Mine (LoM) of the Beeshoek Mine is anticipated to be five years. In 2018, Beeshoek mine employed 766 employees and 207 core contractor employees, totalling 973 employees[[34]](#footnote-35). The majority of employees (62%) from Beeshoek Mine are from the Northern Cape Province of which approximately 24% are sourced from the Tsantsabane Local Municipality area.

The aim of the different projects planned as part of the Beeshoek Optimisation Project is to sustain the existing production capacity of the mine. For purposes of the assessment, it is thus assumed that the Beeshoek Optimisation Project will result in the continuation of the activities on the same level and with similar impacts that were experienced during the last e.g. five years. Other activities associated with the optimisations such as the new Jig Plant and WHIMS Plant would mainly entail mechanical operations. These associated activities would therefore be seen as extensions of the existing mining activities and open cast mining and are not anticipated to create significant additional employment.

The existing employment profile and staff compliment will be sustained during the operational period. No significant additional inflow of workers is thus expected. Beeshoek will function in a way as to continue the constant positive impact in terms of employment through their procurement and Human Resources department, who manages the employment in line with the relevant Score Cards.

The SLP (2019-2024) for the Beeshoek Mine sets out targets to reach the Mining Charter (2018) procurement target of mining goods of 70% from South African companies with 21% spent on majority HDI owned companies (current contribution 6%); 5% on women and or youth owned companies (current contribution 1%) and 44% to be spent on Broad Based Black Economic Empowerment (B-BBEE) compliant companies (current contribution 13%). In terms of procurement of services the SLP sets a target of 80% procurement from South African based groups in line with the Mining Charter (2018) of which 50% must be spent on majority HDI owned companies; 15% on women owned companies; 5% youth owned companies and 10% to be spent on Broad Based Black Economic Empowerment (B-BBEE) complaint companies.

Further continued economic benefits to the area will materialise through taxes, procurement of local goods and services, continued spending of employees and downstream employment creation. The latter can include the production of mining supplies (e.g. tools, protective clothing, steel and chemical products etc.) and other types of services to the mine e.g. catering, security services and so forth.

**Table 17: Continuation of Employment and Income Opportunities**

|  |  |  |
| --- | --- | --- |
| **THEME: Continuation of Employment and Income Opportunities** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Positive (+) | Positive (+) |
| **Extent** | Local and regional (3) | Local and regional (3) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly probable (3) | Highly probable (3) |
| **Intensity** | Beneficial (3) | Significant benefit (4) |
| **Significance** | Medium (11) + | High (12) + |
| **Enhancement:**   * Beeshoek Mine must continue to prioritise local labour in the recruitment process as part of the company’s own recruitment policy or as part of the Contractor Management Plan. * Sub-contractors should adopt a recruitment policy to enhance employment positive impacts, limit in-migration of outside jobseekers and mitigate the potential impact of residual in-migration. * Communities within the TLM area should be given preference if any new employment opportunities will be created, as these communities will be mostly affected by the existing approved mining activities and proposed infrastructure development. The ideal objective should be to reach 100% recruitment of additional/ new unskilled labour from local communities where skills are locally be available. * Beeshoek Mine, through their SLP, must continue to provide skills development opportunities for employeesthat could include functional literacy and numeracy programmes, career progression plans, up-skilling for hard to fill vacancies and management positions, bursary and internships and portable skills training. * Develop a database of SMME’s for the procurement of goods and services that could potentially be outsourced to the local community. * Beeshoek Mine to continue to adhere to the Statutory Plans such as the Spatial Development Framework (SDF) with regards to infrastructure and housing. * Beeshoek Mine to continue with the mine’s LED programme with the aim of strengthening the local economy and assist with socio-economic upliftment through sustainable initiatives. * Beeshoek Mine to continue to adhere to the Social and Labour Plans as per the Regulation 46 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) and the Mining Charter (2018). | | |
| **Expected areas of impact:** TLM area and beyond | | |
| **Cumulative impacts:**   * Other mining activities in the area. | | |
| **Residual impacts:**   * Up-skilled labour force (positive) | | |

## Impact on socio-economic development through continued operations

The area is characterised by relative high levels of unemployment and non-economic active individuals, as well as high poverty levels (e.g. households with inadequate access to food and low income levels). Concerns are thus that the Covid-19 pandemic and associated lockdown restrictions had a severe negative impact on households in the Postmasburg area in terms of employment, income and food security.

The Beeshoek Optimisation project will extend the Life of Mine and will result in the continuation of the existing operations and will therefore enable the following:

* The continuation of job and income opportunities with subsequent positive economic spin-offs;
* Continuation of central tax revenues;
* Positive impact in terms of the socio-economic development of the area and reducing poverty levels through continued employment; and
* Socio-economic investments targeted at the local community through local economic development projects, as well as through capacity building and training.

In addition to the large number of employment opportunities created by Beeshoek Mine in the local area, the SLP for Beeshoek Mine also details skills development programmes, career progression plans, mentorship and coaching plans, internship and bursary programmes as well as an employment equity programme. Beeshoek is further involved in various LED Programmes which ranges from community and enterprise development to infrastructural projects.

The capacity of the two plants is to ensure a sustainable product supply in order to achieve the 2.8Mt/annum production requirement. The two plants have the capacity to provide 1Mt/a to ensure a sustainable supply.

The proposed Beeshoek Optimisation project will thus ensure continued job creation, continued mining production contributing to the Gross Geographical Product (GGP) with resulting regional and local economic benefits and by creating other economic spin-offs benefiting the entire region. Local benefits could accrue to the municipality through the implementation of LED and infrastructural projects as included in the Beeshoek Mine SLP, as well as by means of the input to the tax base and service provisions to the mine increasing the capacity of the municipality.

The existing socio-economic impact of Beeshoek Mine on the area is clear through the SLP and LED programmes supported by Beeshoek Mine. The existing socio-economic conditions further emphasise the need for the continued positive impact that the Beeshoek Optimisation Project could have on the area through the continuation of employment opportunities and the subsequent socio-economic spin-offs.

**Table 18: Impact on socio-economic development through continued operations**

|  |  |  |
| --- | --- | --- |
| **THEME: IMPACT ON SOCIO-ECONOMIC DEVELOPMETN THROUGH CONTINUED OPERATIONS** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Positive (+) | Positive (+) |
| **Extent** | Local and regional (3) | Local and regional (3) |
| **Duration** | Short term (1) | Medium term (2) |
| **Probability** | Probable (2) | Highly probable (3) |
| **Intensity** | Beneficial (3) | Significant benefit (4) |
| **Significance** | Medium (9) (+) | High (12) (+) |
| **Enhancement:**   * Beeshoek Mine must continue to prioritise local labour in the recruitment process as part of the company’s own recruitment policy or as part of the Contractor Management Plan. * Sub-contractors should adopt a recruitment policy to enhance employment positive impacts, limit in-migration of outside jobseekers and mitigate the potential impact of residual in-migration. * Communities within the TLM area should be given preference if any new employment opportunities will be created, as these communities will be mostly affected by the existing approved mining activities and proposed infrastructure development. The ideal objective should be to reach 100% recruitment of additional/ new unskilled labour from local communities where skills are locally be available. * Beeshoek Mine, through their SLP, must continue to provide skills development opportunities for employeesthat could include functional literacy and numeracy programmes, career progression plans, up-skilling for hard to fill vacancies and management positions, bursary and internships and portable skills training. * Develop a database of SMME’s for the procurement of goods and services that could potentially be outsourced to the local community. * Beeshoek Mine to continue to adhere to the Statutory Plans such as the Spatial Development Framework (SDF) with regards to infrastructure and housing. * Beeshoek Mine to continue with the mine’s LED programme with the aim of strengthening the local economy and assist with socio-economic upliftment through sustainable initiatives. * Beeshoek Mine to continue to adhere to the Social and Labour Plans as per the Regulation 46 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) and the Mining Charter (2018). * Beeshoek Mine to continue with its Local Economic Development (LED) programme to strengthen the local economy and assist with projects that will uplift the community as a whole with local, sustainable initiatives relating to community and enterprise development, as well as infrastructural development. * Beeshoek Mine’s Social Development Fund to be aligned with the requirements as set out in the Mining Charter of 2018. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Other mining activities in the area | | |
| **Residual impacts:**   * Continued employment opportunities although limited | | |

## Sense of place

The social impact associated with the impact on the sense of place relates to the change in the landscape character and permanent visual impact of the proposed mining infrastructure and activities. A detailed Visual Impact Assessment was undertaken for the project. The following discussion should thus be read from a social perspective as the impact on the sense of place, but also in conjunction with the Visual Impact Assessment.

The Beeshoek Mine and Postmasburg area falls within the Gamagara Corridor which comprises the mining belt of the John Taolo Gaetsewe and ZF Mgcawu Districts and runs from Lime Acres and Danielskuil to Hotazel in the north. The corridor focuses on the mining of iron and manganese. The sense of place is further defined by scattered rural communities and Postmasburg and adjacent residential areas as service centre of the surrounding mines, farming community and rural settlements.

As indicated large areas of mining activities are present in the area. The mining activities and infrastructure possibly had an initial adverse impact on the landscape character as mining activities and infrastructure are usually perceived by many as visually unsightly. However, it should be noted that the mines have become an infrastructural feature in the area over time due to the dominance of mining in the area surrounding Postmasburg.

The existing mining infrastructure of Beeshoek Mine such as the above ground infrastructure, open pits and WRDs thus added to the visual character of the area over a long period of time and one could argue that the Beeshoek infrastructure forms part of the existing sense of place.

The Beeshoek Optimisation Project will include changes in the heights and slopes, as well as footprints of the existing Waste Rock Dumps (WRDs). The height of the Village Pit North Waste Rock Dump will be increased to 112m (increase of 19m). In addition, the other Waste Rock Dumps will also increase in height, which will include the GF WRD (height increase of 29m), the East Pit WRD (height increase of 54m), West Pit WRD (now referred to as the Village South WRD (rehabilitation height of 106m), HF WRD (rehabilitation height of 63m), and the Discard Dump (rehabilitation height of 60m). The increase in the heights, which will materialise during the extended Life of Mine, will also require the increase in the footprint areas, to allow for the correct slope at closure and to enable proper rehabilitation. The increased height of footprint areas of the WRD’s will have the most significant impact on the visual character and overall sense of place, as the rehabilitated WRD’s will remain in the area after closure.

Possible additional lighting at the facilities especially at Village Pit South WRD (previously known as the West Pit WRD) and East Pit WRD, were noted as concern by the landowners located to the south and west of the mining infrastructure.

The proposed 2.8km railway link line and associated access road, detrital mining and vegetation clearing as part of the detrital mining and at Village North Pit, BF Pit and BN Pit will result in further visual impacts. The construction of the Village Pit haul road (approximately 1 km), as well as the WHIMS and Jig plants and associated infrastructure, will be located within disturbed areas with existing mining activities and haul roads. The visual impact of the new proposed haul roads and the Jig and WHIMS plants with their associated infrastructure is however deemed to be of a low significance.

As the area has been characterised by long term historical mining activities, the proposed Optimisation Project is not expected to change the existing visual characteristics of the area. The new mining development should also not be seen in isolation. Considering the overall quality of the environment and the absence of sensitive receptors in close proximity to the infrastructure and limited residential areas in close proximity to the mine, the impact of the Beeshoek Optimisation Project on the visual quality of the area is considered to be of a limited significance.

**Table 19: Sense of Place**

|  |  |  |
| --- | --- | --- |
| **THEME: SENSE OF PLACE** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * The mitigation measures of the Visual Impact Assessment should be implemented. * Concurrent rehabilitation to be undertaken where feasible. Mining areas should be rehabilitated as soon as the Mining Works Programme allows. * Un-rehabilitated and poorly rehabilitated mining areas must not be allowed to remain. * Environmental management of the mining activities must adhere to environmental regulations and strive towards international best practice. * Landscaping mitigation measures as recommended by the Visual Impact Assessment must be considered. * The eradication of alien invasives, aimed at ensuring the integrity of the biodiversity, should form part of the mitigation to limit further negative impacts on the overall sense of place. * Placement of lighting at infrastructure such as the WRD’s should be reconsidered to ensure optimal placement with the least negative visual impacts possible. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Visual impacts of various other mining activities and solar plants in the larger area | | |
| **Residual impacts:**   * Mining characteristics of the area; rehabilitated mining areas | | |

## Impact on Resource Use

As a result of the low rainfall over the area, the groundwater is mainly used for rural domestic water supplies, stock watering and water supplies to towns and settlements. Recharge of groundwater is limited, and only small quantities can be abstracted on a sustainable basis. Careful groundwater utilisation is thus important in the area and constitutes the only source of water over much of the rural areas[[35]](#footnote-36).

Energy and water infrastructure in the municipal area is under pressure in terms of challenges related to the provision of bulk infrastructure development, high electricity and water distribution losses as well as high municipal debts to Eskom and Sedibeng Water. Representatives of the TLM raised a concern that the impact of mining on the groundwater sources forces the municipality to source water from Sedibeng Water to fulfil the needs of the growing population, with the subsequent financial implications for the TLM. The TLM is thus concerned that the extended Life of Mine of Beeshoek Mine will further impact on the groundwater resources which would indirectly impact on the service delivery ability of the TLM.

The proposed Beeshoek Optimisation Project will however not increase the demand for additional water. Beeshoek Mine will continue to use their approved boreholes and the water allocated to them by Sedibeng Water and the mine is not applying for any increase in groundwater abstraction or supply water from groundwater abstraction.

The preliminary groundwater study indicated that there will be no dewatering plume beyond the mining boundary towards the Boichoko properties due to the Beeshoek Mining activities. No drawdown is further expected for future mining of the East Pit. Drawdown at Village pit is predicted to extend to 2k from the pit but mostly in a westerly direction for a drawdown of 5-10 m.  The study further states that HF Pit is predicted to have a minor impact limited to the immediate surroundings of the pit itself.  The study currently does not foresee any impact based on this optimisation project on the community. The impact on the groundwater resources is from a social impact assessment thus considered to be relatively low.

**Table 20: Impact on Resource Use**

|  |  |  |
| --- | --- | --- |
| **THEME: IMPACT ON RESOURCE USE** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * Beeshoek Mine can develop a resource use plan with the specific objective to minimise the mining operations’ energy and water use as far practical. * Beeshoek Mine to ensure that the water quality and quantity issues are managed appropriately through engineering controls and through regular and required quality and quantity groundwater monitoring. * The management and mitigation measures of the Hydrological Assessment and Numerical Groundwater Assessment must be strictly implemented. * A forum can be established (if not yet in place) where the TLM, Sedibeng Water, DWS and all mining companies in the Postmasburg area can discuss mitigation measures and the way forward in terms of the impacts of mining on the water resources. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Various mining activities in the larger area | | |
| **Residual impacts:**   * Impact of mining in the larger TLM area and the impact of these activities on the water resources. | | |

## Community Safety and Security Related Impacts

As limited additional employees are foreseen and as the optimisation projects would be located within the mining rights area, few added safety and security risks are foreseen in the long term.

Neighbouring residents however would remain concerned about the possible indirect impact of the increase in crime and trespassing on private properties due to a possible increase in people movement. Increased criminal activity (due to mining activities in the area and in general) could have increased negative impacts on livestock farming due to increased security costs such as electric fencing, additional costs to safeguard livestock and so forth.

Concerns are further that some individuals involved with mining activities (e.g. casual labour) and/or jobseekers do remain in the area. Such practices result in unauthorised sub-letting which, if not contained, could not only become an indirect intensifying safety and security problem but also cause additional environmental pollution in the residential areas.

Various heavy vehicles and general traffic make use of the R385 and the construction activities associated with the road bridge and railway link line could increase the risk of accidents. Warning signs would have to be posted to alert residents and road users to possible dangers.

General occupational safety risks and the risk of fires would also remain.

**Table 21: Community Safety and Security Risks**

|  |  |  |
| --- | --- | --- |
| **THEME: COMMUNITY SAFETY AND SECURITY RISKS** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * A Fire/Emergency Management Plan should be developed and implemented, if not yet in place. It would be important to regularly review the functionality and efficiency of such a plan in conjunction with the local emergency teams, mine management and affected communities as well as neighbouring landowners. * Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. * Mining areas must be secured and fenced. * Warning signs would have to be posted to alert residents and road users to possible dangers associated with the construction of the road bridge on the R385. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Various other mining activities and solar plants in the larger area | | |
| **Residual impacts:**   * Possible increase in population due to in-migration to the area. | | |

## Intrusion Impacts

### Traffic Movement

The overall production capacity associated with the Beeshoek Optimisation project would remain the same. It is thus not anticipated that the transportation of material to and from the site would significantly escalate. The same number of trucks is expected to transport the product and waste material from the mining sites along the haul roads within the mining area. Different routes due to the proposed new haul road or modifications to existing haul roads at the Jig Plant and Village Pit could result in changes in the possible dust pollution patterns.

A buffer of 500m will be placed around the Village Pit expansion. The Kolomela access road will be outside of this buffer and will thus not be affected.

The transportation of the product would be along the railway link line that will feed into the Sishen–Saldanha railway line with no impact on the traffic patterns and volumes of public roads surrounding the mining sites.

The proposed Beeshoek Optimisation project is thus not perceived to result in new impacts on the daily living and movement patterns of residents in the area as their way of life has developed around mining activities over time. The additional impact on the daily living and movement patterns are thus perceived to be of a relative low significance to the residents of the larger study area.

Table 22: Traffic Movement

|  |  |  |
| --- | --- | --- |
| **THEME: TRAFFIC MOVEMENT** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. * Mining areas must be secured and fenced. * All mining vehicles should be in a good condition and adhere to road worthy standards. * Mining vehicles must keep to speed limits. * Mining vehicles must not be overloaded. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Various other mining activities and solar plants in the larger area | | |
| **Residual impacts:**   * None anticipated. | | |

### Dust Impacts

The TLM IDP indicated that due to the major increase in mining developments over the last few years there is an increased impact on air quality and pollution in the area[[36]](#footnote-37).

Dust will be created by the movement of waste material, the movement of vehicles and the operation of mechanical equipment. The construction of the extended WRD’s is expected to take place in a phased approach throughout the life of the facility. Windblown dust from these facilities will vary according to the season, with possible higher levels and frequency during the windy months. The predominant wind direction is northwest to north-northeast.

Representatives of the TLM indicated that, over time, concerns have been raised by residents from Boichoko with regards to the air quality and the impact of the various mining activities on their respiratory health. Landowners to the south and west of the Beeshoek Mine also raised concerns with the overall air quality due to all mining activities within the larger area. They are further concerned that blasting would increase the dust impacts.

The dust pollution can be a nuisance factor to nearby communities and can impact negatively on the vegetation. The findings of the Air Quality Assessment indicated that the predicted concentrations (PM2.5 and PM10) and dust fallout are significantly below the respective NAAQS for all sensitive receptors. The impacts of the dust concentrations associated with the RoM consolidation and the WRD amendments, as well as for the Jig Plant and WHIMS would only occur in the immediately vicinity of these individual sources and within the mine boundary. These impacts were thus rated as low.

The Air Quality Impact Assessment further found that the dust impacts in the vicinity of the Village Pit will mainly occur within the mine boundary, but can exceed over the southern and eastern mine boundary. The relatively high predicted concentrations are as a result of dust generated on the haul roads. These dust impacts, however, are not anticipated to reach residential or business areas. The impact was rated as medium prior to mitigation measures being implemented.

Should there be any possible increase in the air pollution (dust) over time, these sensitivities should be adequately dealt with and mitigated.

Table 23: Dust Impacts

|  |  |  |
| --- | --- | --- |
| **THEME: DUST IMPACTS** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Highly Probable (3) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (10) (-) | Medium (8) (-) |
| **Mitigation:**   * Beeshoek Mine to keep a grievance register that is easily accessible and regularly monitored. * Dust suppression methods as recommended in the Air Quality Assessment should be strictly implemented as required. * The approved dust management plan should be amended to incorporate the Beeshoek Optimisation Project. The erection of additional dust buckets can be considered. * On-going dust fall out monitoring must be undertaken to monitor emissions from the project. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Various other mining activities in the larger area | | |
| **Residual impacts:**   * Negative impact on air quality due to mining activities in the area. | | |

### Noise

From a social perspective, the area be classified as an area with existing low ambient noise levels. The mining activities of the existing Beeshoek Mine create on-site noise with limited impacts off site. Noise levels will increase with the implementation of the Beeshoek Mine Optimisation Project and will mainly be from the general mining activities, sirens, operating of heavy vehicles, machinery and the movement of workers. The level of noise will differ at different operating times.

Blasting could result in disturbing negative noise impacts, especially in this rural type area characterised by relatively low ambient noise levels. Those that could be affected by the blasting noise would include the actual construction workers, farmers and labourers residing in the vicinity of the mining site and residents of nearby communities such as Boichoko, Postdene and Postmasburg. As blasting is not a continuous noise, the negative noise impact associated with blasting could be classified as of a low significance.

Potentially sensitive receptors include the residents of Boichoko and Postmasburg, as well as homesteads in close proximity to the mining boundaries e.g. Aucampsrus. It is anticipated that noise annoyance levels will be relatively low and that the ambient noise levels would not change significantly. Therefore, no noise complaints would be expected.

Table 24: Noise Impacts

|  |  |  |
| --- | --- | --- |
| **THEME: NOISE** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Probable (2) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (9) (-) | Medium (8) (-) |
| **Mitigation:**   * Minimise noise impacts and implement all mitigation measures as specified in the relevant noise assessment. * All vehicles should be in a good condition and adhere to road worthy standards. * Maintenance of vehicles and machinery should be done regularly. * Limit noise generating activities to normal daytime hours e.g. 6 am to 6 pm. * Blasting schedules to be pro-actively communicated to the surrounding landowners and stakeholders that could be affected by the noise. | | |
| **Expected areas of impact:** TLM area | | |
| **Cumulative impacts:**   * Various other mining activities and solar plants in the larger area | | |
| **Residual impacts:**   * As worst case scenario: possible overcrowding, unauthorised sub-letting and development of informal settlements due to jobseekers remaining in the area. | | |

### Blasting

This section does not aim to provide the technical aspects with regards to the possible impact of blasting, but refers to the possible negative social impacts associated with blasting on the surrounding landowners and nearby communities. Blasting could thus result in long term negative social and economic consequences if it was scientifically found to impact on the stability of the structures.

Due to the existing mining activities of various mines in the area, community members, as well as nearby landowners with farm dwellings have already raised concerns in this regard. Kolomela Mine also raised concerns about the impacts of blasting on the stability of the Olifantshoek access road and possible fly rock.

Any possible impact due to blasting is unlikely due to the location of the Village Pit, and depth of East Pit, as well as location of HF pit.

To mitigate the concerns, it is recommended that vibration monitoring be undertaken on the boundary of the mine. Crack surveys could also be undertaken, if feasible, to produce a baseline scenario.

**Table 25: Blasting**

|  |  |  |
| --- | --- | --- |
| **THEME: BLASTING** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Probable (2) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (9) (-) | Medium (8) (-) |
| **Mitigation:**   * Blasting arrangements and procedures must be in place to ensure that surrounding landowners are informed of blasting schedules. * Road closures due to blasting need to be noted and road users should be informed timeously and pro-actively. * A Blasting and Vibrations Study must be considered. The aim of such as study would be to record and assess the conditions of the current structures in the area and how it could be affected by blasting activities. * Blasting activities should be restricted to non-intrusive times (e.g. blasting on Sundays and during the night should be avoided). * The impact of blasting on nearby properties (dwellings) should be frequently monitored. * Property owners whose dwellings have been negatively affected should be compensated by the responsible mining company once it has been scientifically determined that such structures have been negatively affected by blasting activities related to mining activities. | | |
| **Expected areas of impact:** Mainly on-site and possibly at select areas within surrounding area | | |
| **Cumulative impacts:**   * Other mining activities in the area | | |
| **Residual impacts:**   * None anticipated | | |

## Health Related Risks

Concerns could revolve around the possible public health impact of the general mining activities due to possible air/dust pollution, as well as noise pollution and a possible impact on the water quality. Should it be found that any pollution occurs, the existing health services such as the clinics in Postmasburg, Boichoko and Postdene would come under additional pressure especially in light of the Covid-19 pandemic which also puts strain on the health services.

In mining areas there are concerns relating to migrant employees bringing health risks and nowadays the threat of Covid-19 infection to small towns. Postmasburg and surrounds is already characterised by vulnerable households and inadequate public health services that cannot always effectively deal with the health risks associated with the pandemic. It will thus remain the responsibility of mining companies such as Beeshoek Mine to continue their support to surrounding communities to reduce vulnerability.

As part of the proposed Beeshoek Optimisation Project, mineral waste on site would be reduced by implementing two additional Beneficiation Projects, namely a new WHIMS Plant to rework the existing slimes from the Slimes Dam and a new Jig Plant to rework the existing low grade stockpile (Discard Dump). The reworking of mineral waste would reduce waste to be landfilled with subsequent indirect health benefits.

The storage of hazardous substances (diesel and explosives) on site furthermore creates safety risks. Even though all precautionary safety measures will be implemented with regards to the storage, transportation and handling of these substances, this remains a concern as there are limited firefighting services provided by the TLM. The residents are mainly reliant on the service provided by mining companies.

**Table 26: Health Related Risks**

|  |  |  |
| --- | --- | --- |
| **THEME: Health Related Risks** | | |
|  | **Without mitigation** | **With mitigation / enhancement** |
| **Status** | Negative (-) | Negative (-) |
| **Extent** | Local (2) | Local (2) |
| **Duration** | Medium term (2) | Medium term (2) |
| **Probability** | Probable (2) | Probable (2) |
| **Intensity** | Average (-3) | Minor (-2) |
| **Significance** | Medium (9) (-) | Medium (8) (-) |
| **Mitigation:**   * The Social and Labour Plan (SLP) of Beeshoek Mine should make provision for addressing any possible direct health related risks and providing a supporting role to minimise the vulnerabilities of the communities, without having to take over the role of the local health services and municipality. * On site, all the appropriate health, hygiene and distancing measures aimed at protecting the employees’ safety and health, must be implemented. * Beeshoek Mine should continue to support to the local clinics through their community support programmes and SLP initiatives. * Educational videos on COVID-19, and general health and hygiene measures associated with the pandemic should be provided to employees. * Beeshoek Mine can, through their formalised community support programmes, support efforts to ensure greater access to water and sanitation and support measures to maintain household food security. * Beeshoek Mine can consider during the SLP update to redirect corporate social investment (CSI) and social and labour plan (SLP) funding to Covid-19 lockdown mitigation. * Care should be taken to limit any possible health related impacts by striving towards international best practice. | | |
| **Expected areas of impact:** Mainly on-site and possibly at select areas within surrounding area | | |
| **Cumulative impacts:**   * Other mining activities in the area | | |
| **Residual impacts:**   * None foreseen. | | |

# SOCIO-ECONOMIC IMPACTS DURING DECOMMISIONING AND POST-CLOSURE

Decommissioning refers to the actual closure of the mine, the dismantling of the infrastructure and/or replacement of the infrastructure with newer technology, as well as the final rehabilitation process.

The proposed Beeshoek Optimisation Project will assist in extending the life of mine. The mining activities can thus continue for some time until the entire facility will be completely decommissioned. This would depend on the economic feasibility of the various options.

Possible social impacts to be experienced during decommissioning (closure of the mine) could include the following:

* Job losses due to mine closure;
* Decline in the sustainability of the local economy as a result of the loss of employment, household income and capital investments;
* Reduced economic activities within the area with subsequent negative impacts on smaller businesses;
* A decline in the local economy would also have a direct impact on the financial status of the TLM;
* Negative impact on the revenue base of the TLM;
* Population changes and out-migration of people from the area, as well as relocation of families;
* Negative impact on the social fabric and social networks;
* A new class of jobseekers targeting other mines in the area;
* Skilled workers moving out of the area in search of employment elsewhere;
* Decrease in the quality of life of the surrounding communities due to the discontinuation of social development support and local economic development programmes;
* Negative impact on infrastructure development and maintenance;
* A change in community infrastructure;
* Disruptions and nuisance factors associated with the actual decommissioning such as noise, visual and traffic related impacts;
* Increased safety risks associated with the decommissioning of the infrastructure;
* Possible negative impact on the crime levels due to increased unemployment rate;
* Remnants of possible environmental impacts; and
* Remaining visual impact as a result of mining.

Decommissioning and its associated closure programmes must ensure that communities are not left stranded without alternative forms of livelihoods, with subsequent degradation of the communities’ socio-economic quality of life.

As the timing with regards to decommissioning or the replacement of the infrastructure cannot be determined at this stage, it is recommended that a detailed Social Impact Assessment be undertaken at the time of decommissioning to determine the actual impacts on the changing social environment at that stage. No rating will thus be provided, but mitigation measures have been included as part of Section 11: Socio-economic Risk Management and Monitoring Plan.

# THE NO-GO ALTERNATIVE

Should the proposed project not proceed, the status quo in terms of the existing social impacts in the area would therefore remain. The Life of Mine would then not be extended and the mine would cease to operate over a shorter period of time.

The most significant social impact with regards to the no-go alternative relates to the loss in employment opportunities and the overall direct and indirect economic impacts for the region.

As the Beeshoek mine is involved in various corporate social investment programmes these would not be further implemented and no impacts on poverty alleviation would occur as a result of such programmes. The potential loss in terms of employment and economic benefits to the local communities is considered as a critical negative impact.

The ‘no-go alternative’ should thus not be considered from a social point of view as the negative social impacts anticipated with the Beeshoek optimisation project are deemed low. The negative impacts would further respond to mitigation as proposed. The proposed activities further fall within the mining rights area and the area is already characterised by and surrounded by various mining infrastructure.

# THE SOCIO-ECONOMIC RISK MANAGEMENT AND MONITORING PLAN

From a social perspective the following objectives and measures, as summarised in Table 27, should be included as part of the Socio-Economic Risk Management Plan (SMP) as part of the Environmental Management Plan (EMP).

**Table 27: Socio-Economic Risk Management and Monitoring Plan**

| **SOCIO-ECONOMIC RISK MANAGEMENT AND MONITORING PLAN** | | | | |
| --- | --- | --- | --- | --- |
| **Objective 1:** | **Maximise local employment opportunities and local procurement during construction and operation and minimise job losses during decommissioning and closure; impact on socio-economic development through continued operations** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| Prioritise any possible new local labour in the recruitment process as part of the company’s own recruitment policy or as part of the contractor management plan and stipulate the procurement of new employees, especially in the unskilled category, from the local communities. | | | Beeshoek Mine and contractor | Construction and Operations |
| Provide up-skilling opportunities for unskilled and semi-skilled local workers during the construction phase to allow them to become more employable for operational activities. | | | Beeshoek Mine and contractor | Construction |
| Explore possible placement of local construction workers in mining operations | | | Beeshoek Mine and contractor | Construction |
| Beeshoek Mine must continue to prioritise local labour in the recruitment process as part of the company’s own recruitment policy or as part of the Contractor Management Plan. | | | Beeshoek Mine and contractor | Construction and Operations |
| Sub-contractors should adopt a recruitment policy to enhance employment positive impacts, limit in-migration of outside jobseekers and mitigate the potential impact of residual in-migration. | | | Beeshoek Mine and contractor | Construction and Operations |
| Communities within the TLM area should be given preference if any new employment opportunities will be created, as these communities will be mostly affected by the existing approved mining activities and proposed infrastructure development. The ideal objective should be to reach 100% recruitment of additional/ new unskilled labour from local communities where skills are locally be available. | | | Beeshoek Mine and contractor | Construction and Operations |
| Beeshoek Mine, through their SLP, must continue to provide skills development opportunities for employeesthat could include functional literacy and numeracy programmes, career progression plans, up-skilling for hard to fill vacancies and management positions, bursary and internships and portable skills training. | | | Beeshoek Mine | Construction and Operations |
| Develop a database of SMME’s for the procurement of goods and services that could potentially be outsourced to the local community. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine to continue to adhere to the Statutory Plans such as the Spatial Development Framework (SDF) with regards to infrastructure and housing. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine to continue to adhere to the Social and Labour Plans as per the Regulation 46 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) and the Mining Charter (2018). | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine to continue with its Local Economic Development (LED) programme to strengthen the local economy and assist with projects that will uplift the community as a whole with local, sustainable initiatives relating to community and enterprise development, as well as infrastructural development. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine’s Social Development Fund to be aligned with the requirements as set out in the Mining Charter of 2018. | | | Beeshoek Mine | Construction and Operations |
| **Monitoring** | Annually as per the agreed commitments and procurement strategies | | | |
| **Objective 2:** | **Minimise any potential negative impacts associated with the inflow of workers and jobseekers** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| Maximise the use of local labour and contractors where possible by developing a strategy to involve local labour in the construction and operational process. | | | Beeshoek Mine and contractor | Construction and Operations |
| The development, publication and widespread dissemination of a recruitment policy could serve to encourage local employment and reduce the potential influx of jobseekers to the area. | | | Beeshoek Mine | Construction and Operations |
| The communication strategy should ensure that unrealistic employment expectations are not created. | | | Beeshoek Mine and contractor | Construction and Operations |
| A representative of Beeshoek Mine could liaise with the local leaders and local councillors to either attend key community meetings arranged within the affected wards to discuss the possible employment and recruitment process; or liaise with the local leaders and local councillors to ensure that the correct information regarding this issue is portrayed to the communities. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine should, where possible, support efforts by TLM to limit squatting and sub-letting in the area, e.g., no informal settlements should be allowed within the mining rights area. | | | Beeshoek Mine and TLM | Construction and Operations |
| As per the Beeshoek SLP, the Beeshoek Mine has through the Khumani Housing Development Company, built 357 homes in the main residential areas of Postmasburg, namely Boichoko (51), Postdene (163) and Airfield (143). Beeshoek Mine plans to continue with this strategy and has stipulated the plans in the SLP. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine must continue with their assistance in the provision of housing infrastructure as discussed in the Assmang Iron Ore Social and Labour Plan for Beeshoek Iron Ore Mine: 2019-2024. | | | Beeshoek Mine | Construction and Operations |
| Review and update of the SLP after 2024 must specify efforts by Beeshoek Mine to continue to seek sustainable and collective solutions to the issue of housing for employees and other housing challenges in the area. | | | Beeshoek Mine | Construction and Operations |
| There should be ongoing engagements between Beeshoek Mine, the relevant housing forums and working groups, as well as the TLM with regards to housing policies, models and challenges | | | Beeshoek Mine | Construction and Operations |
| **Monitoring** | Beeshoek Mine and TLM annually | | | |
| **Objective 3:** | **Minimise intrusion impacts** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| * Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. | | | Beeshoek Mine and contractor | Construction and Operation |
| Mining areas must be secured and fenced. | | | Beeshoek Mine and contractor | Construction and Operations |
| All construction vehicles should be in a good condition and adhere to road worthy standards. | | | Beeshoek Mine and contractor | Construction |
| Construction vehicles must keep to speed limits. | | | Beeshoek Mine and contractor | Construction |
| Limit construction hours to daylight hours e.g., 6am to 6 pm. | | | Beeshoek Mine and contractor | Construction |
| Road users must be notified if delays would be experienced due to the road bridge construction. | | | Beeshoek Mine and contractor | Construction |
| Warning signs with regards to the construction activities need to be erected at strategic places along the R385 and must be clearly visible at night. | | | Beeshoek Mine and contractor | Construction |
| Road deviations must be clearly indicated by road signs and must be clearly visible at night. | | | Beeshoek Mine and contractor | Construction |
| Access to the R385 and Olifantshoek Road to Kolomela Mine must be ensured at all times. | | | Beeshoek Mine and contractor | Construction |
| Speed limits around the construction sites should be lowered for the duration of the construction period. | | | Beeshoek Mine and contractor | Construction |
| The construction schedule of the railway link line and bridge on the R385 must be discussed and finalised in consultation with directly affected landowners and Kolomela Mine | | | Beeshoek Mine and contractor | Construction |
| Dust suppression (e.g., wetting of road) to be implemented on the road deviation during windy conditions and peak traffic periods, if feasible. | | | Beeshoek Mine and contractor | Construction |
| Access to the Tommy’s Field Airport must be ensured at all times. | | | Beeshoek Mine and contractor | Construction |
| Temporary closure of the Tommy’s Field Airport and the impact on flight patterns should be communicated to all parties involved and alternative available airport options must be finalised | | | Beeshoek Mine and contractor | Construction |
| Concurrent rehabilitation to be undertaken e.g., establishment of vegetation or covers (where feasible) to assist with dust suppression. | | | Beeshoek Mine | Construction and Operation |
| Dust management plan and recommendations of the Air Quality Assessment should be strictly implemented | | | Beeshoek Mine | Construction and Operation |
| Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. | | | Beeshoek Mine | Construction and Operation |
| Beeshoek Mine should inform the TLM, community representatives and affected stakeholders of the proposed construction schedule and development plan through various forums including the forums stipulated by the Environmental authorisation application process. | | | Beeshoek Mine | Construction and Operation |
| Beeshoek Mine to communicate openly and frequently with the TLM, community representatives and affected stakeholders to ensure they are informed about activities that will generate nuisance factors. | | | Beeshoek Mine | Construction and Operation |
| Beeshoek Mine to keep a grievance register that is easily accessible and regularly monitored. | | | Beeshoek Mine | Construction and Operation |
| Dust suppression methods as recommended in the Air Quality Assessment should be strictly implemented as required. | | | Beeshoek Mine | Construction and Operation |
| The approved dust management plan should be amended to incorporate the Beeshoek Optimisation Project. The erection of additional dust buckets can be considered | | | Beeshoek Mine | Construction and Operation |
| On-going dust fall out monitoring must be undertaken to monitor emissions from the project | | | Beeshoek Mine | Construction and Operation |
| A Fire/Emergency Management Plan should be developed and implemented, if not yet in place. It would be important to regularly review the functionality and efficiency of such a plan in conjunction with the local emergency teams, mine management and affected communities as well as neighbouring landowners | | | Beeshoek Mine | Construction and Operation |
| **Monitoring** | Annual environmental performance audits | | | |
| **Objective 4:** | **Mitigate impact on sense of place** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| The mitigation measures of the Visual Impact Assessment should be implemented. | | | Beeshoek Mine | Construction and Operations |
| Concurrent rehabilitation to be undertaken where feasible. Mining areas should be rehabilitated as soon as the Mining Works Programme allows. | | | Beeshoek Mine | Construction and Operations |
| Un-rehabilitated and poorly rehabilitated mining areas must not be allowed to remain. | | | Beeshoek Mine | Operation and Decommissioning |
| Environmental management of the mining activities must adhere to environmental regulations and strive towards international best practice. | | | Beeshoek Mine | Construction and Operation |
| Landscaping mitigation measures as recommended by the Visual Impact Assessment must be considered. | | | Beeshoek Mine | Construction and Operation |
| The eradication of alien invasives, aimed at ensuring the integrity of the biodiversity, should form part of the mitigation to limit further negative impacts on the overall sense of place. | | | Beeshoek Mine | Construction and Operation |
| Placement of lighting at infrastructure such as the WRD’s should be reconsidered to ensure optimal placement with the least negative visual impacts possible | | | Beeshoek Mine | Construction and Operation |
| **Monitoring** | Annual environmental performance audits | | | |
| **Objective 5:** | **Minimise risks to community safety** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| A Fire/Emergency Management Plan should be developed and implemented, if not yet in place. It would be important to regularly review the functionality and efficiency of such a plan in conjunction with the local emergency teams, mine management and affected communities as well as neighbouring landowners. | | | Beeshoek Mine | Construction and Operations |
| Unauthorised entry onto the mining area must not be allowed. Access control should continue to be implemented. | | | Beeshoek Mine and contractor | Construction and Operations |
| Mining areas must be secured and fenced. | | | Beeshoek Mine and contractor | Construction and Operations |
| **Monitoring** | Beeshoek Mine, SAPS and TLM annually | | | |
| **Objective 6:** | **Minimise health related risks** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| The Social and Labour Plan (SLP) of Beeshoek Mine should make provision for addressing any possible direct health related risks and providing a supporting role to minimise the vulnerabilities of the communities, without having to take over the role of the local health services and municipality. | | | Beeshoek Mine | Construction and Operations |
| On site, all the appropriate health, hygiene and distancing measures aimed at protecting the employees’ safety and health, must be implemented | | | Beeshoek Mine and contractor | Construction and Operations |
| Beeshoek Mine should continue to support to the local clinics through their community support programmes and SLP initiatives. | | | Beeshoek Mine | Construction and Operations |
| Educational videos on COVID-19, and general health and hygiene measures associated with the pandemic should be provided to employees. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine can, through their formalised community support programmes, support efforts to ensure greater access to water and sanitation and support measures to maintain household food security. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine can consider during the SLP update to redirect corporate social investment (CSI) and social and labour plan (SLP) funding to Covid-19 lockdown mitigation | | | Beeshoek Mine | Construction and Operations |
| Care should be taken to limit any possible health related impacts by striving towards international best practice. | | | Beeshoek Mine and contractor | Construction and Operations |
| **Monitoring** | SLP Programmes and Corporate Social Investment initiatives | | | |
| **Objective 7:** | **Management of Impact on Resource Use** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| Beeshoek Mine can develop a resource use plan with the specific objective to minimise the mining operations’ energy and water use as far practical. | | | Beeshoek Mine | Construction and Operations |
| Beeshoek Mine to ensure that the water quality and quantity issues are managed appropriately through engineering controls and through regular and required quality and quantity groundwater monitoring. | | | Beeshoek Mine | Construction and Operations |
| The management and mitigation measures of the Hydrological Assessment and Numerical Groundwater Assessment must be strictly implemented. | | | Beeshoek Mine | Construction and Operations |
| A forum can be established (if not yet in place) where the TLM, Sedibeng Water, DWS and all mining companies in the Postmasburg area can discuss mitigation measures and the way forward in terms of the impacts of mining on the water resources. | | | Beeshoek Mine, DWS, TLM, other mining companies | Construction and Operations |
| **Monitoring** | | Beeshoek Mine annual environmental performance audits | | |
| **Objective 8:** | **Management of Decommissioning / Closure Impacts** | | | |
| **Mitigation: Action/Control** | | | **Responsibility** | **Timeframe** |
| Develop mechanisms to assist employees, prior to retrenchment date, in the transition phase after closure of the operations. This includes offering portable skilled development programmes during the operational phase of the project, providing assistance in accessing available and suitable jobs with other local mines or companies, providing positions during the Aftercare and rehabilitation phase etc. | | | Beeshoek Mine | Operations, Decommissioning and Closure |
| Focus on non-core related local supply links during the operational phase to facilitate easier transitioning of local suppliers to other industries | | | Beeshoek Mine | Decommissioning and Closure |
| Develop and implement an exit strategy of any social projects that was implemented during the operational phase well in advance (2 years) before closure of the Project: For example hand-over of projects that does not generate their own income to relevant organisations that can ensure sustainable implementation | | | Beeshoek Mine | Decommissioning and Closure |
| Follow a clear communication strategy to inform the local community of arrangements made related to any social spending and project closure. The communication strategy should commence two years prior to project closure | | | Beeshoek Mine | Decommissioning and Closure |
| Commence discussions with local community related to post-closure land-use. Final agreement with the representative community forum on the post-closure management will be needed before signing off on the project closure | | | Beeshoek Mine and community representatives | Decommissioning and Closure |
| Pollution control measures must be implemented over a long period of time | | | Beeshoek Mine | Decommissioning and Closure |
| **Monitoring** | | Beeshoek Mine annual environmental performance audits | | |

# SUMMARY OF SOCIO-ECONOMIC IMPACT RATINGS

Table 25 below provides a summary of the ratings for the different impact categories. The positive impacts associated with the proposed project are the continuation of employment and income generation, impact on poverty reduction, impact on tax revenue and social investment in the local communities, as well as stimulation of economic growth.

There are however several potential negative socio-economic impacts of the proposed project that may affect surrounding landowners and residential areas. These negative impacts associated with the proposed project include the impact on sense of place, nuisance factors (dust levels, noise and traffic movement), and community safety impacts (health risks and concerns, and general community safety).

The social impacts associated with the mining operations are not viewed as a major threat to the quality of life of the residents of the area. The negative socio-economic impacts remain at a medium rating after mitigation measures have been applied. Although the rating level remains the same, the impacts can be successfully mitigated.

Mitigation is mainly dependent on appropriate and successful environmental management, as well as the strict implementation of pro-active mitigation and management measures.

**Table 28: Summary of Socio-Economic Impact Ratings**

| **Socio-economic Impact** | **Phase** | **Significance of Impact** | |
| --- | --- | --- | --- |
| **Pre-mitigation** | **Post-mitigation** |
| Temporary employment and income generation | Construction | Medium (9) + | Medium (10) + |
| Population influx | Construction | Medium (8) - | Medium (7) - |
| Traffic Movement | Construction | Medium (10) (-) | Medium (8) (-) |
| Railway Link Line | Construction | Medium (9) (-) | Medium (7) (-) |
| Dust | Construction | Medium (9) (-) | Medium (7) (-) |
| Noise | Construction | Medium (8) (-) | Medium (6) (-) |
| Continuation of employment and income generation | Operations | Medium (11) + | High (12) + |
| Impact on socio-economic development through continued operations | Operations | Medium (9) (+) | High (12) (+) |
| Sense of place | Operations | Medium (10) - | Medium (8) - |
| Impact on resource use | Operations | Medium (10) (-) | Medium (8) (-) |
| Community safety and security | Operations | Medium (10) - | Medium (8) - |
| Traffic Movement | Operations | Medium (10) (-) | Medium (8) (-) |
| Dust | Operations | Medium (10) (-) | Medium (8) (-) |
| Noise | Operations | Medium (9) (-) | Medium (8) (-) |
| Blasting | Operations | Medium (9) (-) | Medium (8) (-) |
| Health Related Risks | Operations | Medium (9) - | Medium (8) - |

# CONCLUSION AND RECOMMENDATION

Based on the social assessment, the following concluding remarks should be noted:

* In view of the fact that mining activities are already undertaken in the area and that the Beeshoek Optimisation Project would be situated within the mining rights area, the proposed mining activities do not constitute a separate activity. It would rather be perceived as development associated with an existing activity.
* The mining activities and associated infrastructure by itself will thus not introduce new social risks and hazards, but only increase the probability and scale of those already associated with the existing mining activities.
* Limited direct negative impacts on the social environment are, at this stage, anticipated.
* From a social perspective it can be concluded that the socio-economic benefits associated with the project outweigh the negative social impacts. The Beeshoek Optimisation project is anticipated to facilitate the continuation of economic benefits to the local area, currently faced with high rates of unemployment and poverty.
* No negative social impacts that could be classified as fatal have been identified and there are also no impacts of such a high significance that they could prevent the project from continuing. It is thus concluded that the proposed project is acceptable from a social point of view, provided that mitigation measures are implemented.
* Mitigation and enhancement measures proposed should be noted as recommendation measures and should be included as part of the EMPr.
* The use of local labour, if any additional labour would be required, should be maximised as it could assist in mitigating various other social impacts, but would also enhance the potential benefits of the proposed project to the local community members.
* Local procurement, especially during the operational phase, would have various trickle down positive socio-economic impacts on the beneficiary communities and local businesses. This aspect should thus be pursued as far as possible.
* Capacity building and skills training among employees are critical and would be highly beneficial to those involved, especially if they receive portable skills to enable them to also find work elsewhere and in other similar environments.
* The mine should engage the TLM to develop a culture of cooperative support and accountability in order to continue to facilitate and support a variety of socio-economic needs in the area.
* Local residents, with the focus on the surrounding landowners and communities, should receive accurate information with regards to the project status, timeframes for construction and other relevant information about issues that could influence their daily living and movement patterns.
* Socio-economic issues and concerns could arise during the implementation of the project. These should be thoroughly dealt with taking the sensitivities into consideration.

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# ANNEXURE A

## CURRICULUM VITAE OF SPECIALIST

**CURRICULUM VITAE OF THE SOCIAL SPECIALIST: INGRID SNYMAN**

Ms. Ingrid Snyman holds a BA Honours degree in Anthropology. She has 20 years’ experience in the social field. Ms. Snyman has been involved in various Social Impact Assessments during her career as social scientist. These project themes consist of infrastructure development, waste management, road development, water and sanitation programmes, township and other residential type developments. She has also been involved in the design and management of numerous public participation programmes and communication strategies, particularly on complex development projects that require various levels and approaches.

**CURRICULUM VITAE: INGRID SNYMAN**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name:** | **Ingrid Helene Snyman** |  |  |
| **Profession:** | Social Development Consultant | **Name of firm:** | Batho Earth |
| **Years of Experience:** | 20 + years |  |  |

**KEY QUALIFICATIONS**

* Social Impact Assessment (SIA)
* Public Participation programmes
* Communication, development of community structures and community facilitation
* Community-based training and
* Workshop reports

**EDUCATION**

1992: B A (Political Science) University of Pretoria

1995: B A (Hons) Anthropology University of Pretoria

1996 - 1997: Train the Trainers Centre for Development Administration – UNISA

**EXPERIENCE RECORD**

2000 to date Independent Development Consultant: Batho Earth

1996 to 2000 Social Consultant: Afrosearch (Pty) Ltd.

**PROJECT EXPERIENCE**

**Mining Industry**

* SEIA and PPP for the proposed Theta Hill Gold Mining Project near Pilgrim’s Rest, Mpumalanga (ongoing)
* SIA for the proposed Khulu TSF at Dwarsrivier Mine, near Steelpoort, Limpopo Province (ongoing)
* Social Risk Assessment for Dwarsrivier Chrome Mine, near Steelpoort, Limpopo Province
* SIA for the proposed Vandyksdrift Central (VDDC) Mining: Infrastructure Development, Mpumalanga (ongoing)
* PPP for the development of various additional listed activities at the Dwarsrivier Chrome Mine, near Steelpoort, Limpopo Province
* SIA and Public Participation for the proposed Project 10161 and Project 10167 (Gold Mining) by Stonewall (Pty) Ltd., near Sabie and Pilgrims Rest, Mpumalanga
* SIA for the proposed Tharisa Mine UG1 Project, near Marikana, North West Province
* SIA for the Manganese Mine North West of Hotazel, Northern Cape (Mukulu Environmental Authorisation Project)
* SIA for the proposed South32 SA Coal Holdings Middelburg Colliery Environmental Management Plan (EMP) and Water Use Licence (WUL) Application Project (Life of Asset Open Cast Expansion and Dispatch Rider Project), Middelburg, Mpumalanga
* SIA for the proposed Manganese Mine on the Remaining Extent of the Farm Paling 434, Northern Cape Province: Revision And Amendment Of Existing Approved Environmental Management Programme (EMP) For A Mining Right
* SIA and Public Participation for the proposed Western Bushveld Joint Venture Project (Maseve Platinum Mine), North West Province
* Public Participation for Sable Platinum for the proposed prospecting application on the farm Doornpoort, Pretoria, Gauteng
* Public Participation for the prospecting application on the farms Frischgewaagd and Kleinfontein, Mpumalanga Province for PTM
* SIA to determine the impact of the Tharisa Mine on the neighbouring properties and property owners, Buffelspoort area, near Marikana, North West Province
* Public Participation for the prospecting application on the farm Klipfontein, Gauteng for PTM
* SIA as part of the Basic Assessment for the extension of the Komati coal stockyard, Mpumalanga
* SIA for the proposed Dorstfontein Mine Western Expansion Project, Kriel, Mpumalanga
* SIA for the proposed Grootboom Platinum Mine, Steelpoort, Limpopo Province
* SIA for the proposed Dorstfontein Mine Expansion Project, Kriel, Mpumalanga

**Bulk Infrastructure and Supply**

* SIA for the proposed Integrated Public Transport Network for the Mangaung Metropolitan Municipality (ongoing)
* SEIA for the proposed K43 Road Construction near Lenasia, Gauteng (ongoing)
* SIA for the proposed Mangaung Bus Depot for the Integrated Public Transport Network (IPTN) in Bloemfontein, Free State
* SEIA for the proposed Greenwich Landfill Site, Newcastle, KwaZulu Natal
* SIA for the proposed Mangaung Gariep Water Augmentation Project, Free State
* SIA for the proposed development of the new Tshwane Regional General Waste Disposal Facility (Multisand Landfill), Pretoria, Gauteng Province
* SIA as part of the Basic Assessment for the proposed K97 Road northbound of the N4 at Bon Accord and investigation with regards to the possible resettlement of business premises, Pretoria, Gauteng
* SIA for the proposed extension of the Wemmershoek Wastewater Treatment Works (WWTW), decommissioning of the Franschhoek WWTW and construction of a transfer and outfall sewer between the two works, Franschhoek, Western Cape
* SIA for the proposed Lefaragathle, Mogono, Rasimone, Chaneng outfall sewer and Chaneng sewer treatment plant, Rustenburg (Phokeng), North West Province
* SIA for the proposed upgrading of railway stations and railway line for Metrorail in Mamelodi, Gauteng
* SIA for the proposed ACSA Remote Aprons Project, O.R. Tambo International Airport, Gauteng
* Public Participation and SIA as part of the Environmental Scoping Study for the proposed upgrading of the Waterval Water Care Works

**Ecosystem Services Review**

* Proposed Ngonye Falls Hydro-Electric Power Plant Project, Western Province, Zambia: Biodiversity Assessment: Stakeholder Engagement Plan and Social Assessment for the Ecosystem Services Review (ESR)

**Projects related to electricity generation, transmission and distribution**

* SIA for the proposed Crowthorne-Lulamisa power line, Midrand, Gauteng
* SIA as part of the Basic Assessment for the proposed Crowthorne Underground Cable, Gauteng
* SIA as part of the Basic Assessment for the proposed Diepsloot East Servitude and substation, Gauteng
* SIA for the proposed Mitchells Plain-Firgrove-Stikland Transmission Line project and investigation with regards to the possible resettlement of individuals within Mitchells Plain, Western Cape
* SIA for the proposed 400 kV Transmission Power Line for approximately 10km to the west of the existing Marathon Substation and possible resettlement of homesteads, Nelspruit area, Mpumalanga
* SIA as part of the Basic Assessment for the proposed construction of a 400 kV transmission line between the Ferrum substation (Kathu) and the Garona substation (Groblershoop), Northern Cape Province
* SIA as part of the Basic Assessment for the proposed construction of the Eskom Rhombus-Lethabong 88kv Powerline and Substation, North West Province
* SIA for the proposed Aberdeen-Droerivier 400 kV Transmission Power Line, Eastern and Western Cape Province
* SIA for the proposed Houhoek Substation Upgrade and Bacchus-Palmiet Loop-In and Loop-Out, near Botrivier, Western Cape Province
* SIA for the proposed Arnot-Gumeni 400 kV Transmission Power Line, Mpumalanga
* SIA for the proposed Aggeneis-Oranjemond Transmission Line project, Northern Cape Province
* SIA for the proposed Ariadne-Venus Transmission Line, KwaZulu Natal
* SIA for the proposed Dominion Reefs Power Line project, North West Province
* SIA for the proposed Kyalami Strengthening Project, Kyalami, Gauteng
* SIA for the proposed Apollo Lepini 400 kV Transmission Line Project, Tembisa, Gauteng
* Public Participation for the proposed new Medupi (then referred to as Matimba B) coal-fired power station in the Lephalale area, Limpopo Province
* Public Participation and SIA for the proposed Poseidon-Grassridge No. 3 400 kV Transmission line and the extension of the Grassridge Substation, Eastern Cape Province
* Public Participation and SIA for the proposed construction of power lines between the Grassridge Substation (near Port Elizabeth) and the Coega Industrial Development Zone, Eastern Cape Province
* Public Participation and SIA for the Matimba-Witkop No. 2 400 kV Transmission line in the Limpopo Province

**Photovoltaic and Wind Energy Facilities**

* SIA for the proposed Christiana PV facility on the farm Hartebeestpan, North West Province
* SIA for the proposed Hertzogville PV facility on the farms Albert and Wigt, Free State Province
* SIA for the proposed Morgenzon PV facility on the farm Morgenzon, Northern Cape Province
* SIA as part of the Basic Assessment Process for the Exxaro Photovoltaic Facility, Lephalale, Limpopo Province
* SIA for the Upington Solar Energy Facility, Northern Cape Province
* SIA for the Kleinbegin Solar Energy Facility, Northern Cape Province
* SIA for the proposed Ilanga solar thermal power plant facility on a site near Upington, Northern Cape Province
* SIA and public participation for the proposed Karoo Renewable Energy Facility, Northern Cape
* SIA for the Wag’nbiekiespan Solar Energy Facility, Northern Cape Province
* SIA for the proposed Kathu and Sishen Solar Energy Facilities, Northern Cape Province
* Public Participation and SIA for the proposed Thupela Waterberg Photovoltaic Plant, Limpopo Province
* SIA for the proposed Kannikwa Vlakte Wind Farm Project, Northern Cape

**Township Developments**

* SIA for the proposed Wildealskloof Mixed Use Development near Bloemfontein, Free State (ongoing)
* SIA for the proposed Mixed Land Use Township Establishment on the Remainder of Portion 406 of the Farm Pretoria Town and Townlands 351 JR, and investigation with regards to the possible resettlement of households, Salvokop, Tshwane CBD
* SIA for the proposed Mixed Land Use Development situated on the Remainder of Allandale 10 IR, known as Rabie Ridge Ext 7, Midrand, Gauteng
* SIA as part of the Basic Assessment for the proposed development of Project One (1) of the Vosloorus Extension 9 High Density Housing Project, Ekurhuleni Metropolitan Municipality
* SIA for the proposed Mapochsgronde Residential Development, Roossenekal, Limpop Province
* SIA for the proposed Cullinan Estate Development, Cullinan, Gauteng
* SIA for the proposed Vlakfontein Residential Development and investigation with regards to the possible resettlement of individual households, Brakpan, Gauteng
* SIA for the proposed township development/eco-estate on the farm Grants Valley, Eastern Cape

**Public Participation**

* Public participation for the proposed Theta Project, near Pilgrim’s Rest, Mpumalanga
* Public Participation for Dwarsrivier Chrome Mine (Pty) Ltd.: Environmental Authorisation Application for various Listed Activities at the Dwarsrivier Chrome Mine, Near Steelpoort, Limpopo Province (ongoing)
* Public Participation for the proposed piggery near Modimolle, Limpopo Province
* Public Participation for the proposed development of a Truck Stop, Buffelspoort, North West Province
* Public Participation for the upgrading of the Menlyn Road Network and the investigation, as well as negotiations with regards to the resettlement of households, Pretoria, Gauteng
* Public participation and SIA for the proposed Platinum Highway Project from the N1 (Gauteng) to the Botswana Border (North West Province), including investigations with regards to the possible resettlement of individual households
* Public participation assistance for the proposed construction of a brewery and associated industrial activities for Heineken Supply Co (Pty) Ltd, Kempton Park, Gauteng.

## DECLARATION OF INDEPENDENCE

In terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), as amended in respect of the EIA Regulations of December 2014, and GNR 982 published on 4 December 2014, an independent consultant must be appointed to act on behalf of the client. In this regard Batho Earth submit that they have:

* The necessary required expertise to conduct a Social Impact Assessment, including the required knowledge and understanding of any guidelines or policies that are relevant to the proposed process;
* Undertaken all the work and associated studies in an objective and independent manner, even if the findings of these studies are not favourable to the project proponent;
* No vested financial interest in the proposed project or the outcome thereof, apart from remuneration for the work undertaken under the auspices of the above-mentioned regulations;
* No vested interest, including any conflicts of interest, in either the proposed project or the studies conducted in respect of the proposed project, other than complying with the required regulations; and
* Disclosed any material factors that may have the potential to influence the competent authority’s decision and/or objectivity in terms of any reports, plans or documents related to the proposed project as required by the regulations.

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