

REPORT N° 01

PROPOSED INSTALLATION OF SULPHUR DIOXIDE ABATEMENT EQUIPMENT AT MORTIMER SMELTER

DRAFT SOCIAL IMPACT ASSESSMENT REPORT

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PROPOSED INSTALLATION OF SULPHUR DIOXIDE ABATEMENT EQUIPMENT AT MORTIMER SMELTER

DRAFT SOCIAL IMPACT ASSESSMENT REPORT

Anglo American Platinum Limited

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1 INTRODUCTION

Anglo American Platinum Limited (AAP) proposes to install Sulphur Dioxide (SO₂) abatement equipment at the Mortimer Smelter. The Mortimer Smelter is located at the Rustenburg Platinum Mine - Union Section (RPM-US) Operations (**Figure 1**) which is approximately 17km west of the town of Northam in the North-West Province (**Figure 2**). The installation of an efficient SO₂ removal system is required to ensure compliance with the National Environmental Management Air Quality Act (No. 39 of 2004) (NEM:AQA) Minimum Emission Standards (MES).

WSP | Parsons Brinckerhoff, Environment and Energy, Africa (WSP | Parsons Brinckerhoff) has been appointed to undertake a Scoping and Environmental Impact Report (EIR) process in order to facilitate the environmental approvals required for the proposed Mortimer Smelter SO₂ abatement project.

AAP have requested that WSP | Parsons Brinckerhoff undertake a Social Impact Assessment (SIA) to ensure that the potential impact of the proposed project on the social receiving environment is investigated and assessed in line with the objectives of the Anglo American Socio-Economic Assessment Toolbox (SEAT) procedure.

1.1 SCOPE AND OBJECTIVES OF THE STUDY

The scope of the SIA was to determine the potential positive and negative impacts of the proposed project and alternatives, including the option of not implementing the proposed project (no-go option), on the local and regional landscape. Direct, indirect and cumulative impacts of the proposed project in relation to current and proposed activities within the local area have been considered.

The SIA has achieved the following objectives:

- à Development of a social profile for the proposed project area through the description of the socio-economic receiving environment that may be affected by the proposed activity;
- à Engagement with representatives of key stakeholder groups;
- à Identification, description and assessment of the potential socio-economic impacts associated with the proposed project; and
- à Provision of mitigation measures and recommendations to enhance the socio-economic sustainability of all phases of the proposed project.

1.2 LEGISLATIVE FRAMEWORK

There is no legal framework in South Africa that governs SIA processes; however, a guideline for SIA is included in the *Western Cape Department of Environmental Affairs and Development Planning Guideline for Involving Social Assessment Specialists in EIA Processes* (Barbour, 2007).

The National Environmental Management Act (No. 107 of 1998), as amended (NEMA) 2014 EIA Regulations provides the general requirements for consultants compiling specialist reports or undertaking specialist processes.

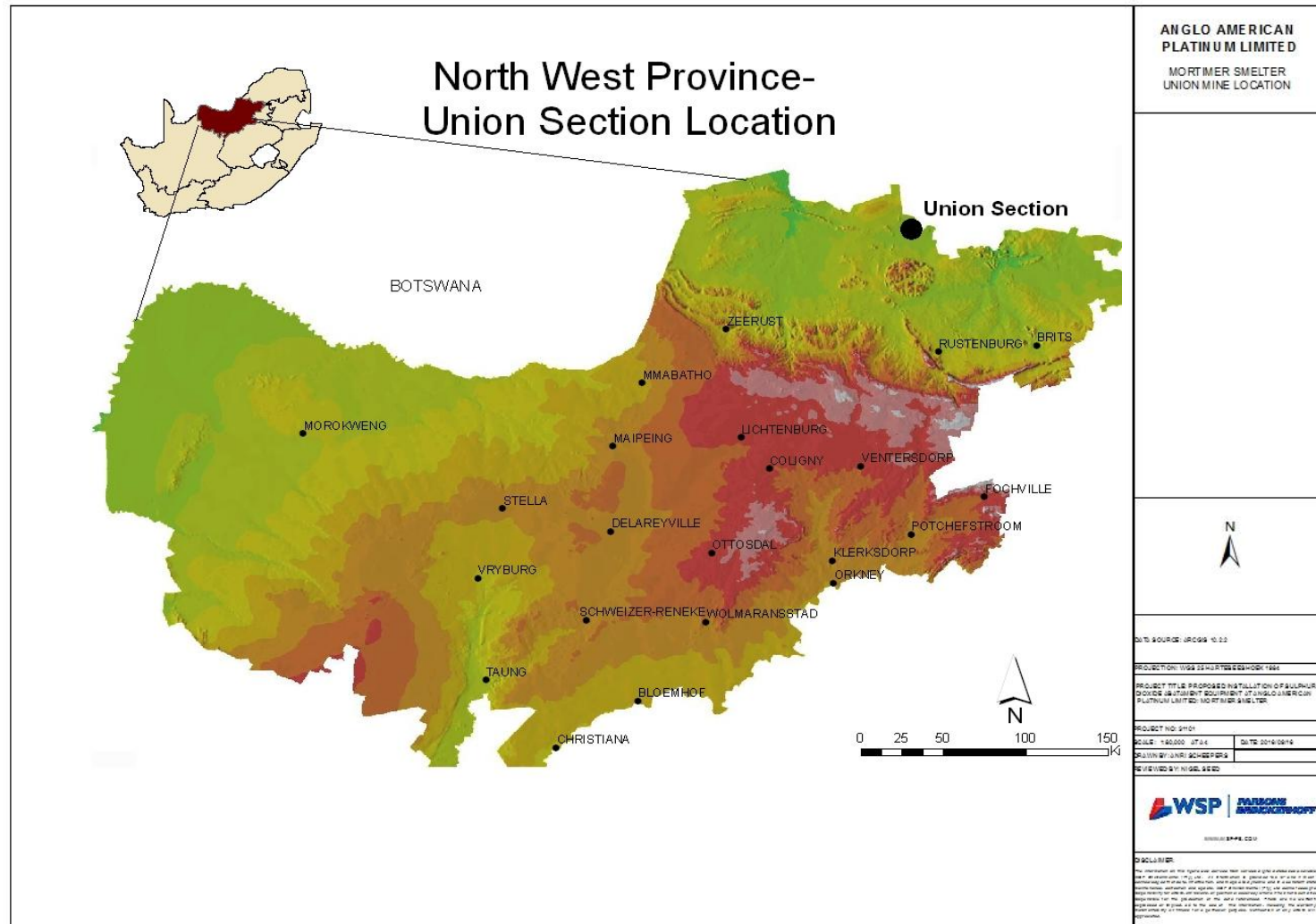


Figure 1: Location of Union Section Operation

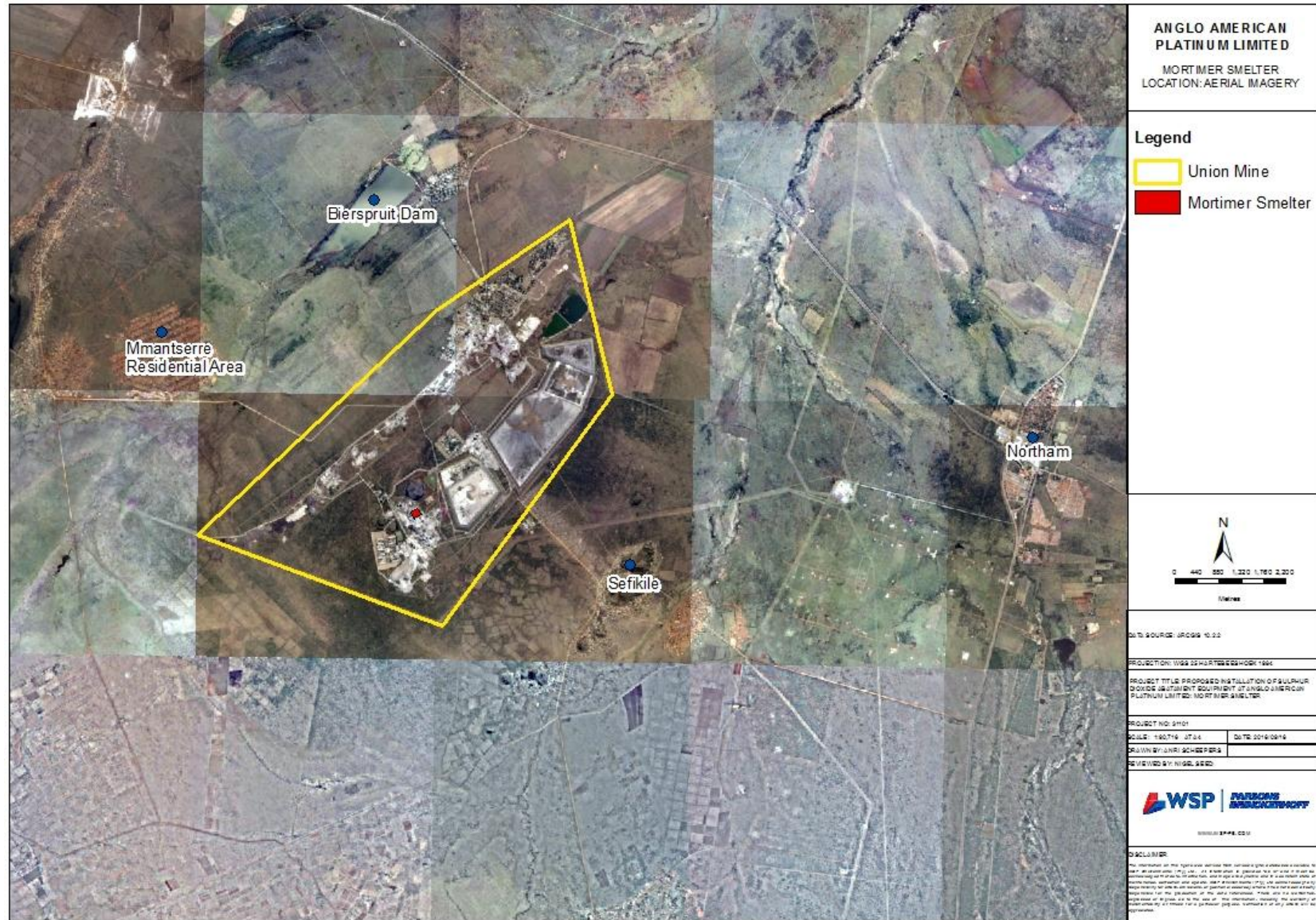


Figure 2: Location of Mortimer Smelter

In summary, a specialist must:

- à Be independent;
- à Have expertise in conducting the study, including knowledge of NEMA, the EIA Regulations and any relevant guidelines;
- à Perform the work in an objective manner, even if the findings are not favourable to the applicant;
- à Comply with all applicable legislation; and
- à Disclose to the applicant and competent authority all material information that may have the potential to influence:
 - < Any decision to be taken with respect of the application by the competent authority; or
 - < The objectivity of any report, plan or document to be prepared for submission to the competent authority.

1.3 METHODOLOGY

APPROACH

The approach to the SIA comprised of a combination of desktop and primary data collection, review and assessment. The collection of primary data was to ensure that site-specific issues and potential impacts could be identified and more accurately assessed. A site visit was undertaken in order to understand the existing socio-economic landscape to verify the general outcomes of the desktop information review.

DEVELOPMENT OF A SOCIAL PROFILE

In order to develop a social profile of the project area, WSP | Parsons Brinckerhoff undertook a desktop review of existing information on the area. The review included consideration of the following documents:

- à Statistics South Africa Census Data, 2011 census (published 2012);
- à North West Provincial Growth and Development Strategy 2004 to 2014;
- à Bojanala Platinum District Municipality 2011/2017 Draft Integrated Development Plan (IDP);
- à Waterberg District Municipality IDP 2016/2017;
- à Moses Kotane Municipality Reviewed IDP 2016/17;
- à Thabazimbi Local Municipality IDP 2016/2017 1st Edition;
- à Spatial Development Framework (SDF) 2015; and
- à Social and Labour Plan (SLP) Final Draft.

PRIMARY DATA COLLECTION

Primary data collection was deemed necessary to contribute to the understanding of the project area and the evaluation of the potential impacts of the proposed project.

A site visit was undertaken over a three-day period, from 03 to 05 April 2017. The purpose of the site visit was to obtain first-hand knowledge of the project site and the SIA study area. The fieldwork comprised observation of the project area and surrounding communities as well as interviews with key stakeholders.

Identification of surrounding local communities, spatial layout of communities and amenities, and surrounding land uses were observed during the site visit. The site visit did not include a visit to the Union Section or Mortimer Smelter operational areas. The SIA team did however visit the area of Swartklip which is located within the mine property.

Interviews and meetings were conducted through a series of informal, open-ended questionnaires with key individuals identified at the outset to represent the local communities and authorities. The questionnaires were developed to guide discussion only rather than for rigorous implementation. Individuals engaged with are outlined in **Table 1**, and notes of interviews held are provided in **Appendix A**.

Table 1: Interview Record

| ORGANISATION | DESIGNATION | NAME | DATE | LOCATION |
|---|---|--|---------------|-------------------|
| Moses Kotane Local Municipality | Environmental and Waste Unit IDP representatives | Tshepo Ramahoyo Refiloe Raditholo Thabo Mosime Gosteboana Sesinyi | 03 April 2017 | Municipal offices |
| Thabazimbi Local Municipality | Town Planning and IDP representatives | Piet van Rensburg Diketso Moyo Thsepho Makutu | 04 April 2017 | Municipal offices |
| | Ward Councillor (Ward 5 and 7) | Letta Modikwane Thato Motshegare | 03 April 2017 | Union Section |
| Baphalane Ba Mantserre Tribal Authority | Tribal Council Representatives | See attendance register in Appendix A | 04 April 2017 | Mantserre |

DATA ANALYSIS

The socio-economic issues were analysed from the information collected through the desktop and primary data collection phases. Potential positive and negative impacts associated with the proposed project were identified.

IMPACT ASSESSMENT METHODOLOGY

The EIA uses a methodological framework developed by WSP | Parsons Brinckerhoff to meet the combined requirements of international best practice and NEMA, 2014 EIA Regulations.

As required by the EIA Regulations, the determination and assessment of impacts will be based on the following criteria:

- à Nature of the Impact
- à Significance of the Impact
- à Consequence of the Impact
- à Extent of the impact
- à Duration of the Impact
- à Probability if the impact
- à Degree to which the impact:
 - < can be reversed;
 - < may cause irreplaceable loss of resources; and

- < can be avoided, managed or mitigated.

Following international best practice, additional criteria have been included to determine the significant effects. These include the consideration of the following:

- à Magnitude: to what extent environmental resources are going to be affected;
- à Sensitivity of the resource or receptor (rated as high, medium and low) by considering the importance of the receiving environment (international, national, regional, district and local), rarity of the receiving environment, benefits or services provided by the environmental resources and perception of the resource or receptor); and
- à Severity of the impact, measured by the importance of the consequences of change (high, medium, low, negligible) by considering inter alia magnitude, duration, intensity, likelihood, frequency and reversibility of the change.

It should be noted that the definitions given are for guidance only, and not all the definitions will apply to all of the environmental receptors and resources being assessed. Impact significance was assessed with and without mitigation measures in place.

METHODOLOGY

Impacts are assessed in terms of the following criteria:

- à The **nature**, a description of what causes the effect, what will be affected and how it will be affected

| NATURE OR TYPE OF IMPACT | DEFINITION |
|------------------------------|---|
| Beneficial / Positive | An impact that is considered to represent an improvement on the baseline or introduces a positive change. |
| Adverse / Negative | An impact that is considered to represent an adverse change from the baseline, or introduces a new undesirable factor. |
| Direct | Impacts that arise directly from activities that form an integral part of the Project (e.g. new infrastructure). |
| Indirect | Impacts that arise indirectly from activities not explicitly forming part of the Project (e.g. noise changes due to changes in road or rail traffic resulting from the operation of Project). |
| Secondary | Secondary or induced impacts caused by a change in the Project environment (e.g. employment opportunities created by the supply chain requirements). |
| Cumulative | Impacts are those impacts arising from the combination of multiple impacts from existing projects, the Project and/or future projects. |

- à The physical extent, wherein it is indicated whether:

| SCORE | DESCRIPTION |
|----------|---|
| 1 | the impact will be limited to the site; |
| 2 | the impact will be limited to the local area; |
| 3 | the impact will be limited to the region; |
| 4 | the impact will be national; or |
| 5 | the impact will be international; |

- à The duration, wherein it is indicated whether the lifetime of the impact will be:

| SCORE | DESCRIPTION |
|-------|---|
| 1 | of a very short duration (0 to 1 years) |
| 2 | of a short duration (2 to 5 years) |
| 3 | medium term (5–15 years) |
| 4 | long term (> 15 years) |
| 5 | Permanent |

à The **magnitude of impact on ecological processes**, quantified on a scale from 0-10, where a score is assigned:

| SCORE | DESCRIPTION |
|-------|---|
| 0 | small and will have no effect on the environment. |
| 2 | minor and will not result in an impact on processes. |
| 4 | low and will cause a slight impact on processes. |
| 6 | moderate and will result in processes continuing but in a modified way. |
| 8 | high (processes are altered to the extent that they temporarily cease). |
| 10 | very high and results in complete destruction of patterns and permanent cessation of processes. |

à The **probability of occurrence**, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale where:

| SCORE | DESCRIPTION |
|-------|---|
| 1 | very improbable (probably will not happen). |
| 2 | improbable (some possibility, but low likelihood). |
| 3 | probable (distinct possibility). |
| 4 | highly probable (most likely). |
| 5 | definite (impact will occur regardless of any prevention measures). |

à the **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;

à the **status**, which is described as either positive, negative or neutral;

à the degree to which the impact can be reversed;

à the degree to which the impact may cause irreplaceable loss of resources; and

à the *degree* to which the impact can be mitigated.

The **significance** is determined by combining the criteria in the following formula:

$$S = (E+D+M)*P$$

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The **significance weightings** for each potential impact are as follows:

| OVERALL SCORE | SIGNIFICANCE RATING | DESCRIPTION |
|---------------|---------------------|---|
| < 30 points | Low | where this impact would not have a direct influence on the decision to develop in the area |
| 31-60 points | Medium | where the impact could influence the decision to develop in the area unless it is effectively mitigated |
| > 60 points | High | where the impact must have an influence on the decision process to develop in the area |

The impact significance without mitigation measures will be assessed with the design controls in place. Impacts without mitigation measures in place are not representative of the project's actual extent of impact, and are included to facilitate understanding of how and why mitigation measures were identified. The residual impact is what remains following the application of mitigation and management measures, and is thus the final level of impact associated with the development of the Project. Residual impacts also serve as the focus of management and monitoring activities during Project implementation to verify that actual impacts are the same as those predicted in this EIA Report.

1.4 ASSUMPTIONS AND LIMITATIONS

The following assumptions in respect of this study have been identified:

- à Census and municipal data used for baseline information is assumed to be reflective the current situation (e.g. employment, household services).
- à The primary data collected (i.e. issues raised) is assumed to be representative of the sentiments of the broader stakeholders and communities in the vicinity of the site;
- à It is assumed that the proposed project represents the most technically suitable option for reducing emissions from the Mortimer Smelter.

Study limitations include:

- à The SIA was undertaken within a short timeframe, which limited the level of engagement that could be achieved, including engaging with a wider variety of stakeholders. This potentially limits the specialist's understanding of the local social context.
- à Representatives of the Bagkatla Ba Kgafela Tribal Authority were not interviewed. These representatives were not available to discuss the project during the site visit period (03 to 05 April 2017). During the fieldwork contact was made with the Head of Administration of the Bagkatla Ba Kgafela Tribal Authority who advised which representative of the Tribal Authority should be approached. Considerable effort was made to make contact telephonically after the site visit but unfortunately, these efforts were unsuccessful.
- à A meeting was scheduled with the Local Economic Development Manager of the Moses Kotane Local Municipality; however, the meeting was unfortunately cancelled. Contact was made after the site visit via email, however to date no response has been received.
- à Representatives of AAP were present (as observers, rather than participants) at the meeting with the ward councillors. This may have had an impact on the ward councillors' ability to speak freely or may have changed the manner in which they responded to questions posed.

1.5 DECLARATION OF INDEPENDENCE

Hilary Konigkramer (Director at WSP | Parsons Brinckerhoff) is a qualified social scientist with a Bachelor of Social Science Honours in Environmental Management obtained from the University of Natal in 1998. She has over 15 years' experience as a consulting social and environmental scientist. Hilary was responsible of the overall execution of the SIA study and production of this SIA Report. She was support by both Bathabile Msomi (WSP | Parsons Brinckerhoff) and Danielle Sanderson (Envital):

- à Bathabile Msomi (Consultant at WSP | Parsons Brinckerhoff) is a qualified social scientist with an Honours in Social Science obtained from the University of KwaZulu-Natal in 2011. Bathabile undertook the desktop review and developed the social profile for the project area. She assisted with the SIA fieldwork in April 2017; was responsible for compiling the record of engagement and contributed to the compilation of the SIA Report.
- à Danielle Sanderson (sub-consultant: Envital) is a qualified social scientist with a Masters of Social Science in Environmental Management obtained from the University of KwaZulu-Natal in 2006. She has over 8 years' experience in undertaking socio-economic impact assessments. Danielle was responsible for planning and executing the fieldwork component of the project.

Curriculum vitae for the SIA team are included in **Appendix B**.

Hilary Konigkramer, responsible for undertaking the study, and Bathabile Msomi and Danielle Sanderson who provided support during the study, are independent and do not have a vested or financial interest in the proposed Mortimer Smelter SO₂ abatement project being approved or not.

2 DESCRIPTION OF THE PROJECT

Anglo American Platinum Limited (AAP) owns and operates three smelting complexes, namely Polokwane, Mortimer and Waterval. This project relates to the Mortimer Smelter, which is located at the RPM-US Operations, straddling the Limpopo and North-West Provinces of South Africa. The Mortimer Smelter is situated within the North-West Province.

The Mortimer Smelter is an existing metallurgical industrial furnace where sulphide ores are smelted. Wet concentrate is received and dried in flash driers. The dry concentrate is smelted in a furnace, resulting in the recovery of platinum group metals (PGMs) and other base metals. The furnace matte is then tapped, cast and crushed. The resulting furnace slag is granulated and discarded.

The Mortimer Smelter has been upgraded, with Phase One of the upgrade occurring in 2008/2009 and Phase Two in 2011, resulting in an increase in the furnace power from 19 MW to 38 MW. The off-gas is currently being treated via 3 field electrostatic precipitator (ESP); exhaust from the ESP is vented into the atmosphere via a stack at 80m above the ground. The emissions include particulate matter (PM), SO₂ and nitrogen oxide (NO_x).

The NEM:AQA requires that existing furnaces at metallurgical industries be operated with efficient SO₂ removal systems by 2015, however Mortimer Smelter was given an extension until 2020. In order to comply with new South African legislation and associated more stringent emission standards, an SO₂ removal system must be installed at the Mortimer Smelter.

The proposed strategy to reduce SO₂ to achieve the MES is the installation of a Wet Gas Sulphuric Acid (WSA) Plant that will convert the SO₂ contained in the off-gas into commercial-grade concentrated sulphuric acid (H₂SO₄). The exhaust from the WSA plant (containing reduced SO₂

concentrations) will be vented into the atmosphere and the commercial grade sulphuric acid will be temporarily stored before being dispatched into the commercial market.

The area in which the WSA Plant and associated SO₂ abatement equipment (development) will be located is within the Mortimer Smelter complex.

2.1 PROPOSED PROJECT DEVELOPMENT ACTIVITIES

The proposed SO₂ abatement project will include the following activities:

- à Secondary Gas Cleaning including:
 - < Quencher
 - < Gas cooling tower
 - < Wet electrostatic precipitator (WESP)
- à WSA Plant
- à Effluent Treatment Plant
- à Acid plant cooling water (six towers)
- à Storage of acid (two tanks)
- à Lime storage and preparation silo
- à Additional roads

2.2 PROJECT ALTERNATIVES

SITE ALTERNATIVES

The development is located at the existing Mortimer Smelter because the technology needs to be installed and connected to the existing gas cleaning equipment. As the project is specifically targeted at achieving the legal compliance of the Mortimer Smelter, no site alternatives were considered.

DESIGN OR LAYOUT ALTERNATIVES

The Scoping Report (WSP | Parsons Brinckerhoff, 2017) outlines a number of layout alternatives that have been considered. The selection of the preferred layout for the proposed SO₂ abatement project (**Figure 3 and Figure 4**) was based on the following key criteria:

- à The existing plant would remain operational during construction of the new facilities;
- à The new acid storage facility is required to allow 20 days' storage for acid; and
- à The boundaries of the plant were based on the consideration of the following:
 - < Existing plant boundaries (i.e. the existing plant footprint cannot be extended);
 - < Location of existing ESP and stack;
 - < Existing plant buildings (furnace building, workshops, etc.); and
 - < Existing granulated slag conveyor leading to slag dump.

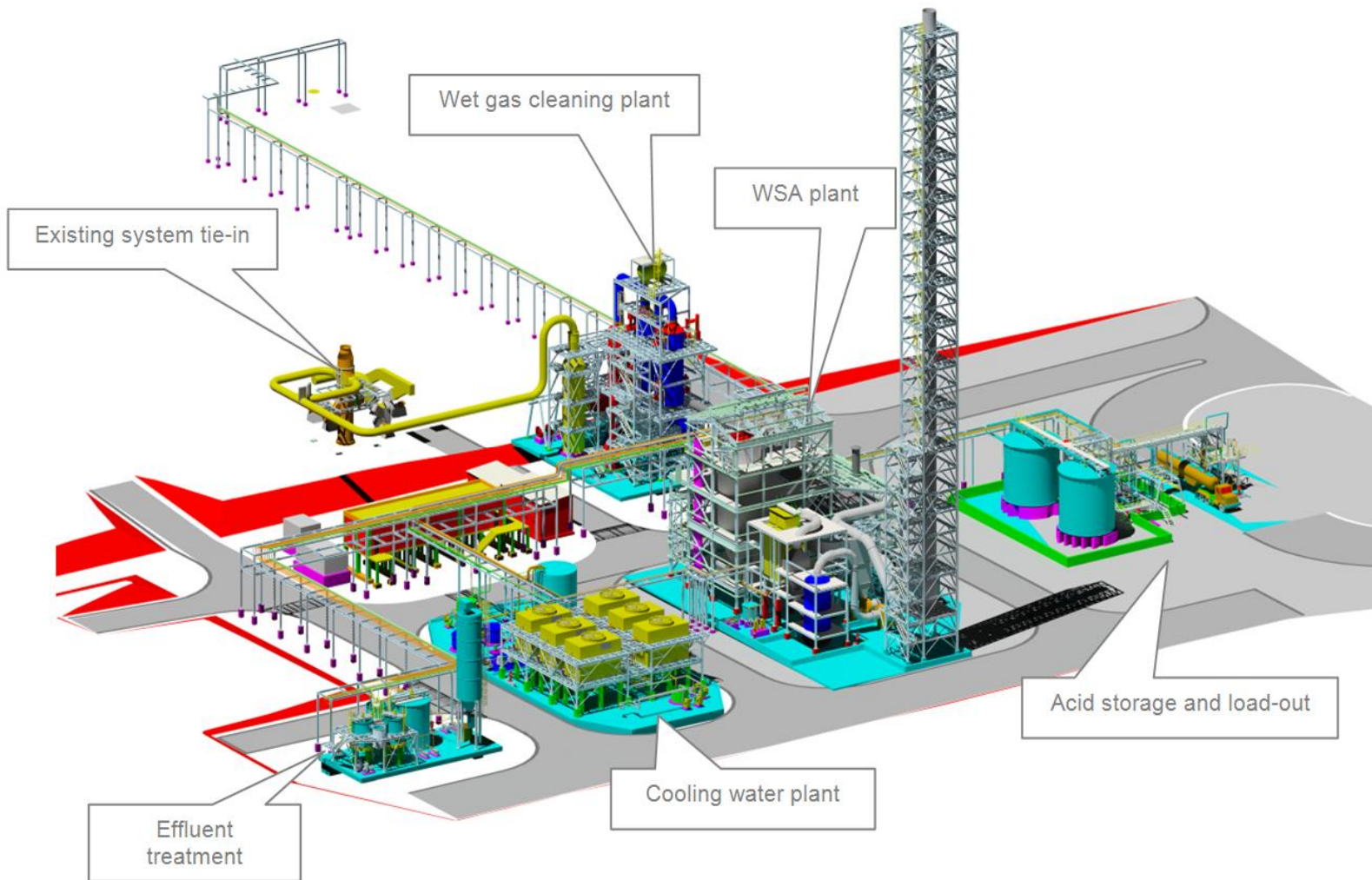


Figure 3: Proposed Layout

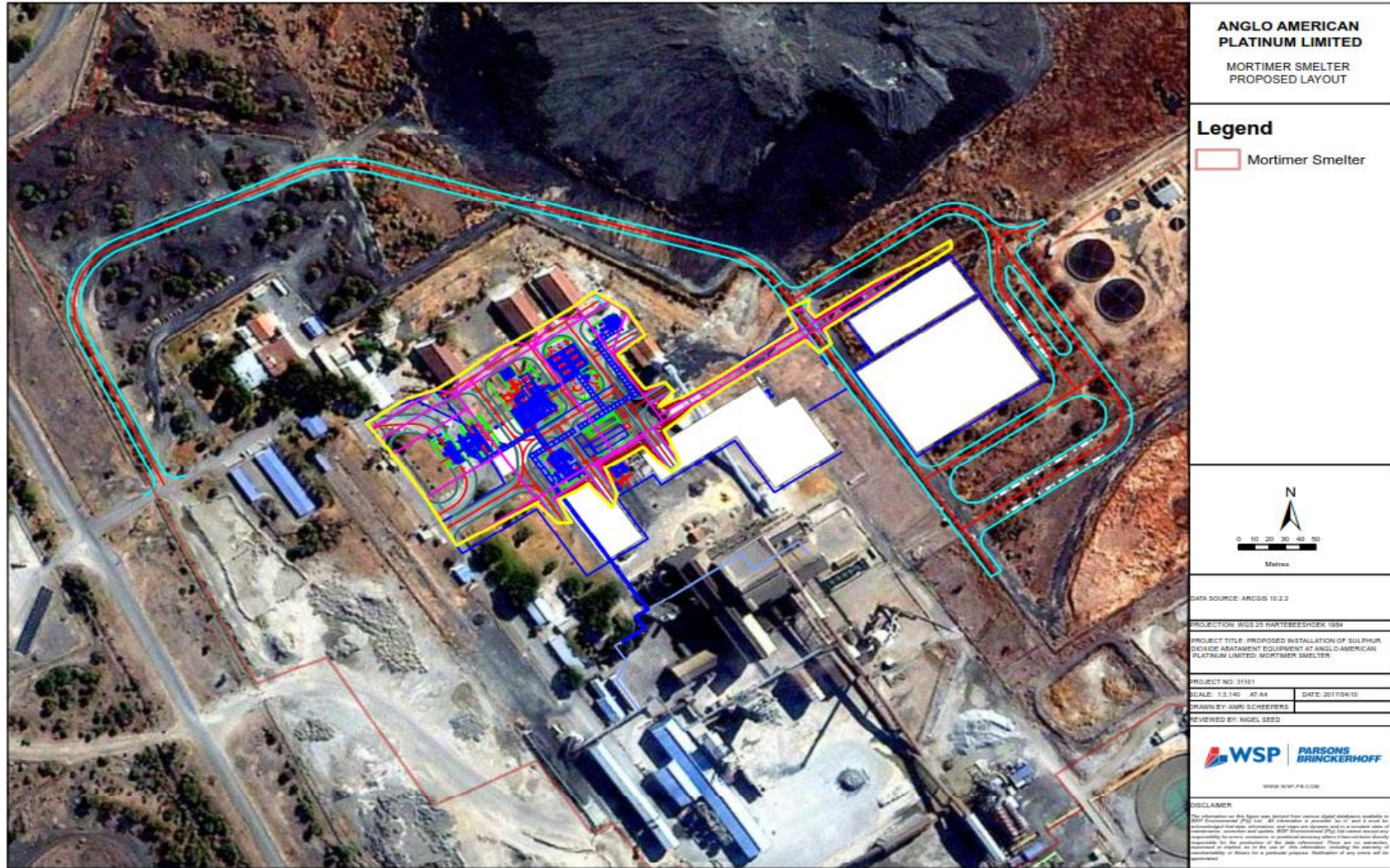


Figure 4: Proposed Layout within the Site Context

THE “DO-NOTHING” ALTERNATIVE

The proposed project is necessary to ensure that the Mortimer Smelter complies with the proposed MES requirements for SO₂ by 2020. The proposed project will result in a reduction in SO₂ emissions and the associated positive impact on air quality that will not be realised if the no development option is pursued. Should the project not go ahead, no SO₂ abatement technology would be installed at Mortimer Smelter. This would result in the Mortimer Smelter not meeting the 2020 MES for SO₂. This would constitute a legal non-compliance that may result in legal action being taken against AAP and potentially the closure of the facility. Closure of the Mortimer Smelter would have significant economic implications of AAP and secondary socio-economic impacts such as the loss of employment and local economic benefits.

3 DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 REGIONAL CONTEXT

The Mortimer Smelter is located at the RPM-US Operations, which straddles the Limpopo and North-West Provinces of South Africa. The Mortimer Smelter (proposed development site) falls only with the North-West Province (**Figure 5**) however due to the close proximity of Limpopo to the site, a regional description of both provinces (and associated districts) are profiled below for completeness.

NORTH WEST PROVINCE

The proposed project falls within the Moses Kotane Local Municipality within the Bojanala District Municipality of the North West Province. The North West Province is an inland province covering an area of 106 512km², that borders Botswana to the north and the Northern Cape, Free State, Gauteng and Limpopo to the west, south, east and north-east respectively.

The North West Province was formed in 1994 by the merger of the former homeland, Bophuthatswana, and the former Western Transvaal region. The largest centres within the province include Rustenburg, Brits, Potchefstroom, Orkney, and Klerksdorp which are key mining and economic centres for the province. In 2011, the total population was estimated to be 3,5million people and the Black African group (**Figure 6**) constitutes the majority of the population (Statistics SA, 2011).

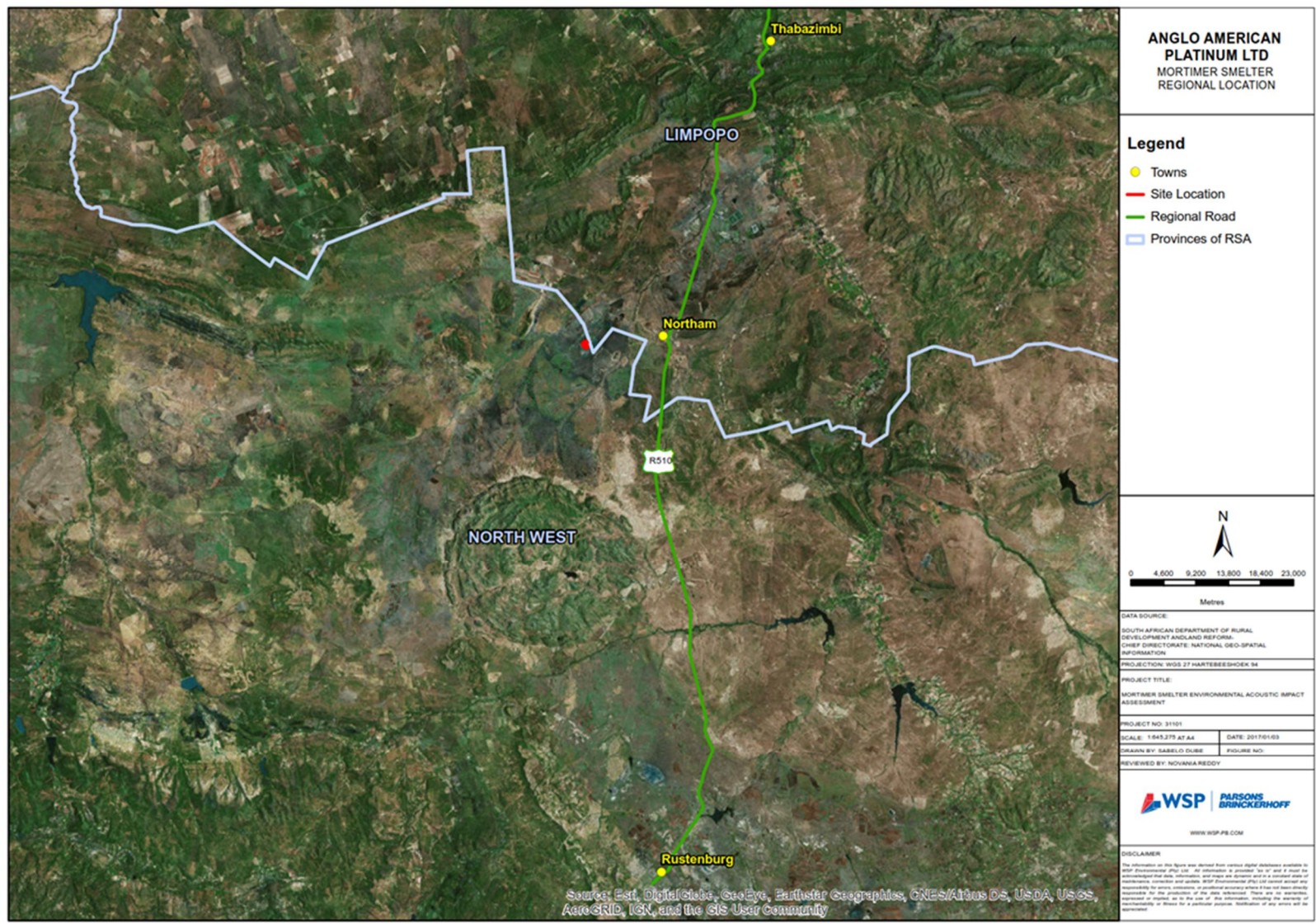


Figure 5: Regional location of the proposed site (WSP GIS, 2017)

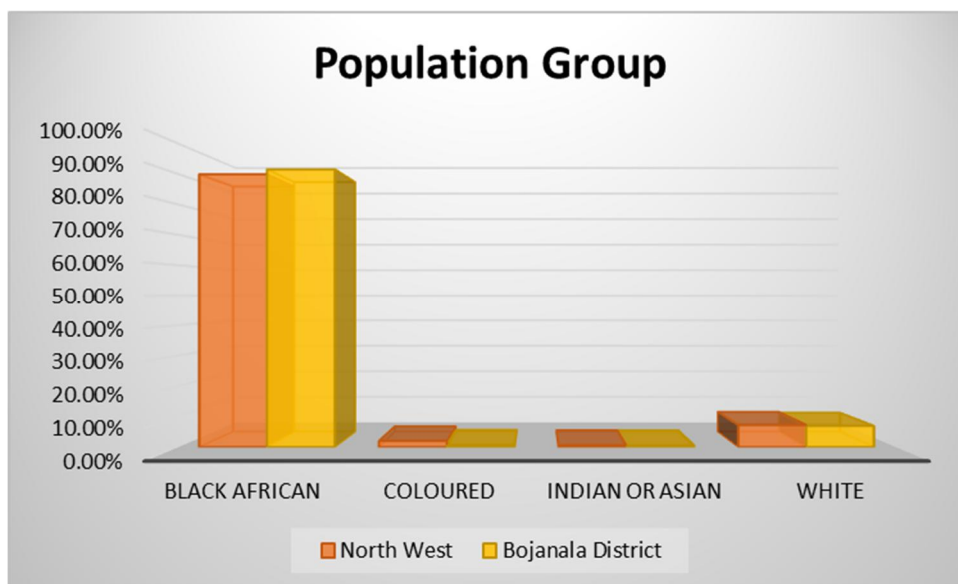


Figure 6: Population Group for the North West and Bojanala Platinum District Municipality (Statistics SA, 2012)

Mining and agriculture are the two key economic sectors with a comparative advantage in the province. Mining contributes 23.3% to the North West economy, and makes up more than a fifth of the South African mining industry as a whole. Key mining companies in the area include the Anglo American Platinum, Royal Bafokeng Platinum, Impala Platinum and Lonmin mining groups. These mining activities are concentrated around the Rustenburg and Brits area. The second largest contributor to the local economy is farming, including sheep, cattle and game farms in the northern regions, and maize, sunflowers, tobacco, cotton and citrus crops in the southern and eastern regions.

BOJANALA DISTRICT MUNICIPALITY

The Bojanala Platinum District Municipality comprises five local municipalities (Moretele, Madibeng, Rustenburg, Kgetleng and Moses Kotane) and covers an area of approximately 18 333km². The district municipality can be classed as being rural because 54% of the land falls under traditional areas (**Figure 7**) and 55.14% of the dwellings are traditional settlement types (Statistics SA, 2012).

The Black African (91.4%) population group dominates the Bojanala Platinum District Municipality with Setswana (54.27%) being the most spoken language followed by Xitsonga (7.9%) and Afrikaans (7.07%) (**Figure 8**). The population of the district municipality is male dominated (52.37%) which is an outcome of the prevalent economic activities (mining) in the region. A fair size of the population have some form of schooling and 19.2% have completed their Matric. A challenge is to increase the numbers of the skilled level group people with Matric and a Bachelor's degrees (0.53%) (Statistics SA, 2012).

The Bojanala Platinum District Municipality is the economic growth engine of the North West Province and contributes to majority of total production output and employment opportunities within the province. The mining sector is the biggest employer (43%) followed by trade (15.4%). and of 20.89% employed in the formal sector and 3.91% employed in the informal sector. The income levels within the district remain very low (**Figure 9**) with 43.7% having no income and 34.08% earning between R1- R3, 200 (Statistics SA, 2012).

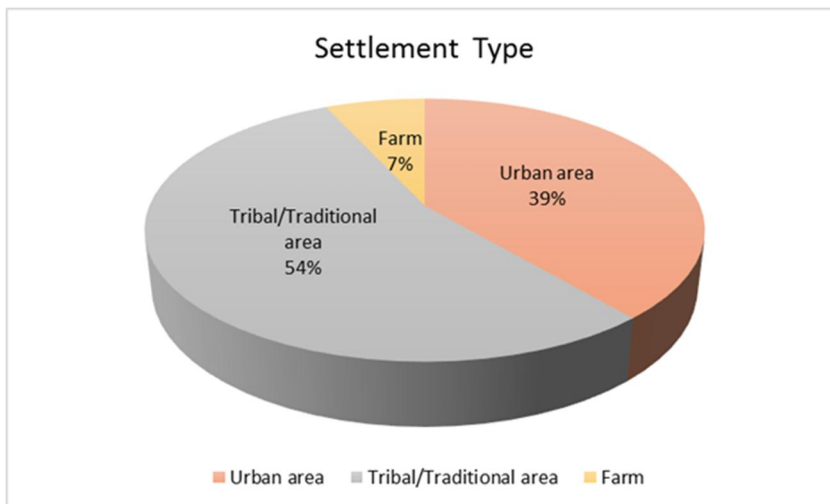


Figure 7: Bojanala Platinum District Municipality Settlement Type (Statistics SA, 2012)

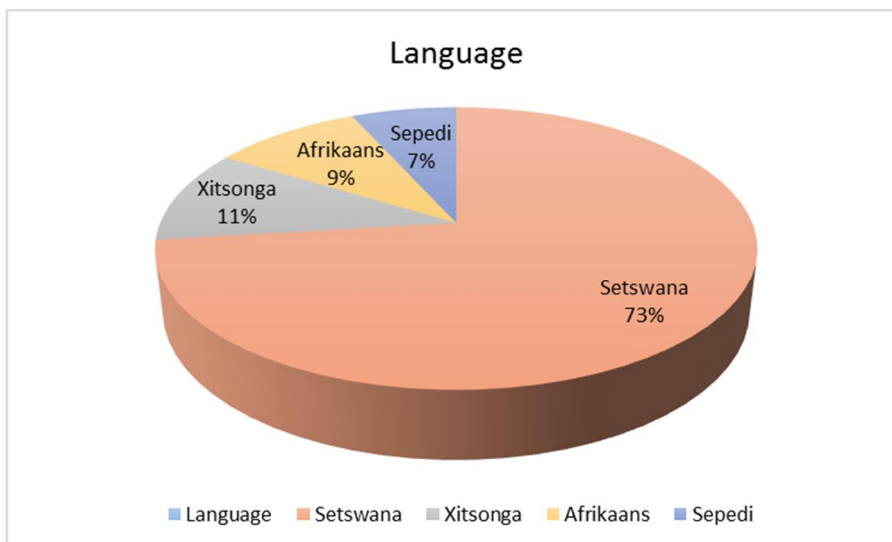


Figure 8: Dominant Languages within Bojanala Platinum District Municipality (Statistics SA, 2012)

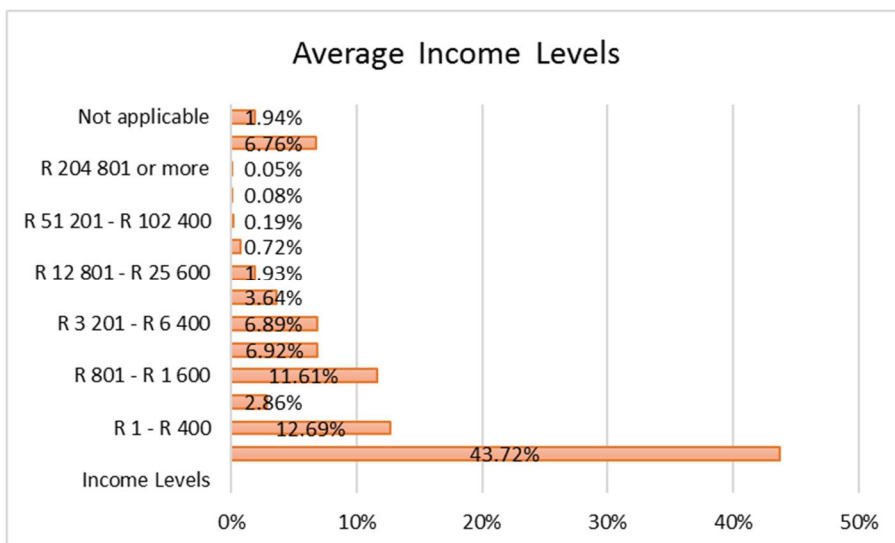


Figure 9: Average Household Income within Bojanala Platinum District Municipality (Statistics SA, 2012)

LIMPOPO PROVINCE

Limpopo is the northernmost province of South Africa and shares international borders with three countries namely Botswana, Zimbabwe and Mozambique. On its southern edge, Limpopo shares borders with Mpumalanga, Gauteng and the North West Provinces. The Limpopo Province has five district municipalities and covers and 125 754 km² making it the fifth largest province in South Africa. The population of Limpopo accounted for 10% of South Africa’s population in 2014 and currently sits at 5.8million people in 2016 (Limpopo Community Survey, 2016). The Black African group (97.3 %) (**Figure 10**) dominates the population of the province followed by the White group (Statics SA, 2012).

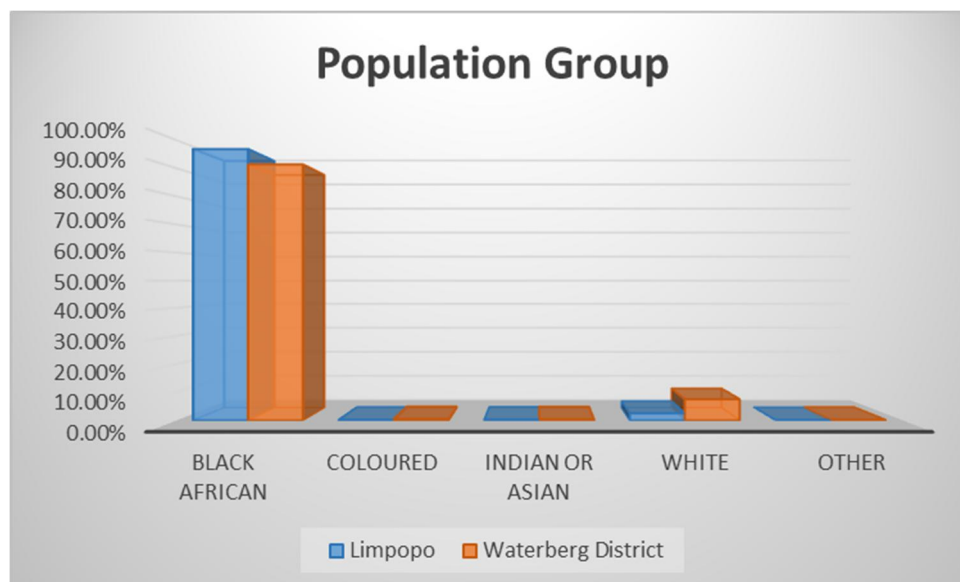


Figure 10: Population Group for the Limpopo and Waterberg District Municipality

The Limpopo Province has the largest number of residents in the former “homeland” areas in the country and is characterised by high levels of poverty. According to Statistics South Africa, Limpopo has the highest level of poverty of any South African province, with 79% of the population living

below the national poverty line. Limpopo is thus associated with a high out-migration of people to urban areas and to other provinces to seek employment opportunities (Provincial Review, 2016). The province is a developing region and is dominated by the primary economic sectors. Limpopo accounted for 24% of national mining output, 7% of national agriculture, 6% of national construction and 2% of national manufacturing. (Limpopo Provincial Review, 2016).

Limpopo is also known as the “garden of South Africa” and produces majority of South Africa’s mangoes, papayas, avocados, potatoes and tomatoes. The province also produces tea, citrus, bananas, and litchis. While Limpopo is one of South Africa’s poorest provinces, it is rich in wildlife and has a thriving tourism industry. It is home to the Mapungubwe Cultural Landscape, one of the country’s eight World Heritage sites. Approximately 80% of South Africa’s game hunting industry is found in Limpopo.

WATERBERG DISTRICT MUNICIPALITY

The Waterberg District Municipality is located on the Western part of Limpopo and covers an area of 44,913km². It is the largest district municipality in the Limpopo Province with its main towns including Bela-Bela, Amandebult Mine Town, Modimolle, Thabazimbi and Mokopane (previously Potgietersrus (Waterberg District Municipality Draft IDP, 2016). According to Statistics South Africa (2016), the population of Waterberg increased from 679 336 in 2011 to 745 758 people in 2016. The dominant population group is the Black African group (91.25%) followed by whites (7.56%) (**Figure 10**). Urban areas (**Figure 11**) within the district municipality account for 48.79%, and traditional areas make up 40.80% and farms cover 10.41% (Statistics SA, 2012).

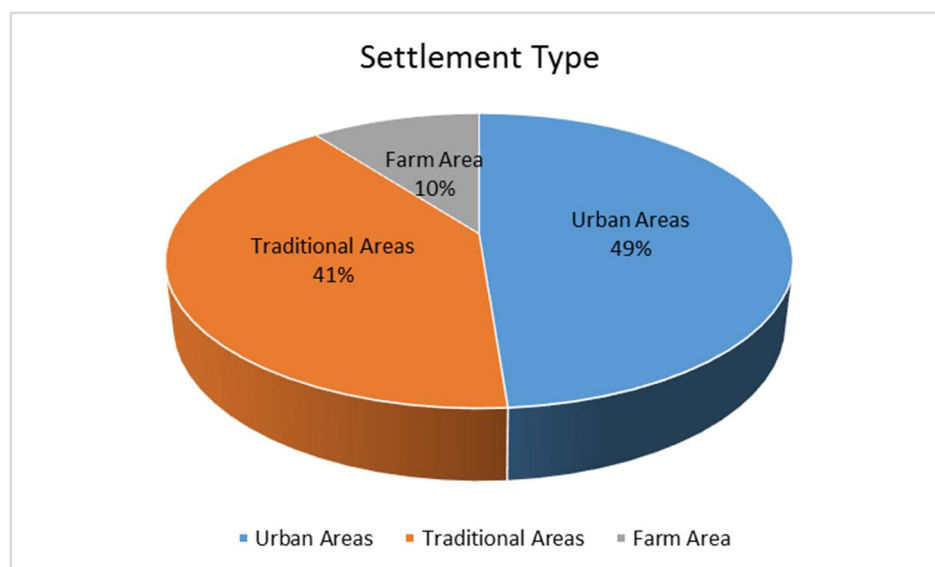


Figure 11: Waterberg District Municipality Settlement Type (Statistics SA, 2012)

Mining is the highest GDP contributor (47.4%) in the Waterberg District Municipality’s economy. The coal resource in the Waterberg field is estimated at 76 billion tons, which is more than 40% of the national coal reserve (Waterberg District Municipality IDP, 2016). Other mining activities include iron ore mining in the Thabazimbi area, and extensive platinum reserves in the Mokopane and Northam areas. Seventeen percent (**Figure 12**) of the labour force is employed within the formal sector and 3.9% within the informal sector (Statistics SA, 2012).

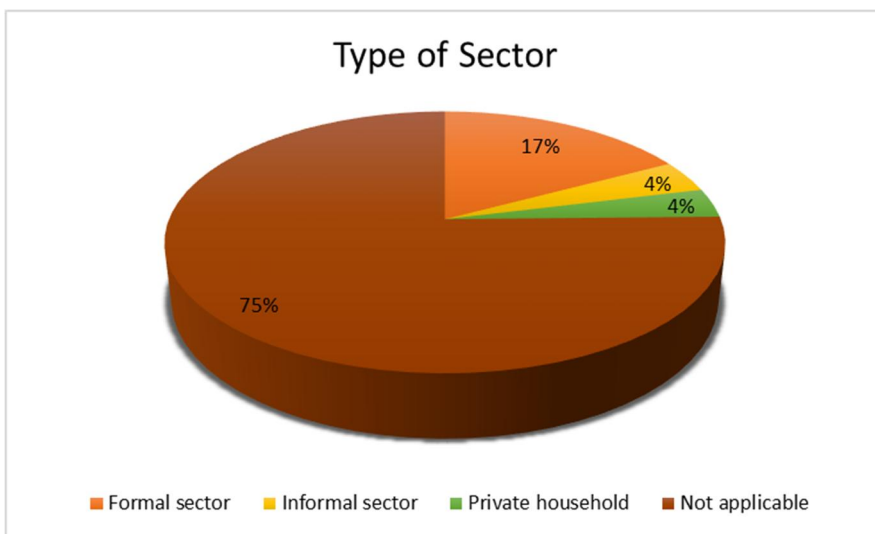


Figure 12: Dominant employment sector in Waterberg District Municipality (Statistics SA, 2012)

3.2 LOCAL CONTEXT

MOSES KOTANE

The local context refers to the area surrounding the site contextualised within the local municipality. The proposed project site is located within the Moses Kotane Local Municipality. Moses Kotane Local Municipality is bordered by Limpopo’s Thabazimbi Local Municipality in the north and the Kgetlengrivier and Rustenburg Local Municipalities to the south. The seat of local government is located in the town of Mogwase, and the main economic sectors are tourism, mining and agriculture.

The Moses Kotane Local Municipality covers an area of approximately 5,719km², has a population of approximately 242 554 people, and a population density of 42 person per square kilometre (Statistics South Africa, 2012). The dominant population group is the Black African (98,3%), followed by Whites (0.8%) and others (1%), as depicted in Error! Reference source not found.. The population has a slightly higher number of more (50.31%) than males (49.69%). The main languages spoken are Setswana (80.5%) and IsiZulu (4%) (Statistics South Africa, 2012) (Figure 13).

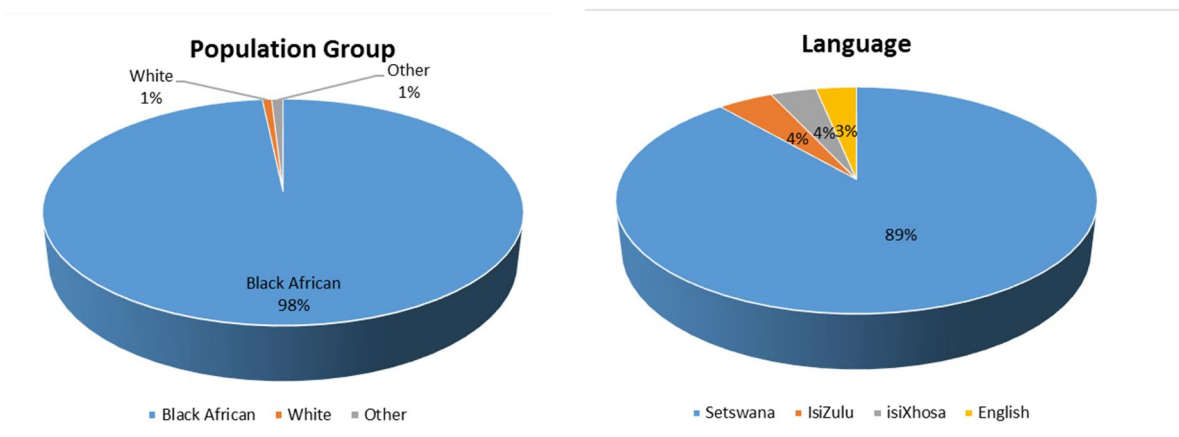


Figure 13: Dominant Population and Languages Spoken within Moses Kotane Local Municipality (Statistics SA, 2012)

The dependency ratio (the number of dependents ages zero to 14 years and over the age of 65 years as a percentage of the total population) is 58.6% which is relatively high compared to the National level of 52.14% in 2015 (Indexmundi, 2016), which could be explained by the proportionally high number of young adults (20 – 35 years) (Error! Reference source not found.).

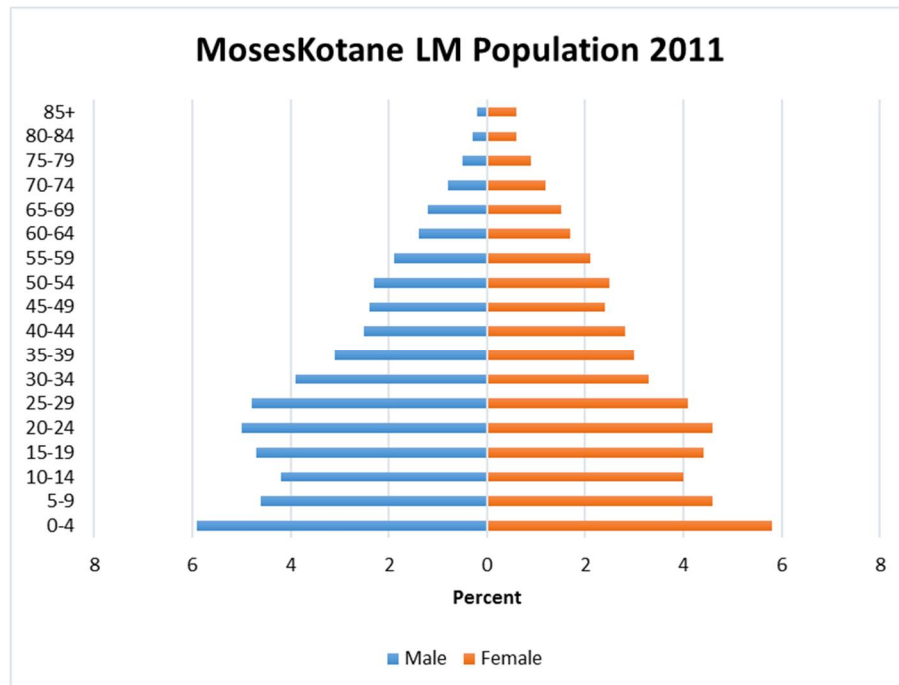


Figure 14: Moses Kotane Population Pyramid (Statistics SA, 2012)

The municipality is largely rural in nature and comprises of 107 villages and two formal towns, namely Mogwase and Madikwe. The largest concentration of settlements occur along the southern and eastern periphery of the Pilanseeberg. The human settlement is concentrated within tribal authority areas (92.4%) and only 7.4% living in urban areas. The main dwelling type is formal with 75.56% of houses being of bricks and 11.79% of informal settlements (Statistics South Africa, 2012).

Service delivery within the Moses Kotane Local Municipality varies, and the absence of services is largely due to a lack of infrastructure and underdevelopment. Access to electricity is good with 89.9% of the households having access to electricity for lighting, 89.9% for cooking and 63.5% for heating. However, sanitation levels are poor with only 12.3% having access to flush toilets and 67.6% of the population utilising pit toilets without ventilation. Water service provision is fairly good with 80% of potable water is provided by the municipality and other water service providers, and 9.7% is sourced from boreholes (Statistics South Africa, 2012).

The unemployment rate in the Moses Kotane Local Municipality is extremely high with 51% of the potential labour force being unemployed (IDP, 2017), compared with the current national unemployment rate of 25.4% (Statistics SA, 2016). The main economic sectors within the Moses Kotane Local Municipality are mining, agriculture, tourism, and community and social services. The majority (14.76%) of employed persons fall within the formal sector, and 2.62% within the informal sector (Statistics South Africa, 2012).

The education levels within the Moses Kotane local municipality are average with 30.9% of people over 20 having a matric and only 7.5% with no schooling. The education levels and skills training are key determinants of the income levels (**Figure 15**) with 39.5% of the population earning an income range between R9 601 – R38 200 (Statistics SA, 2012).

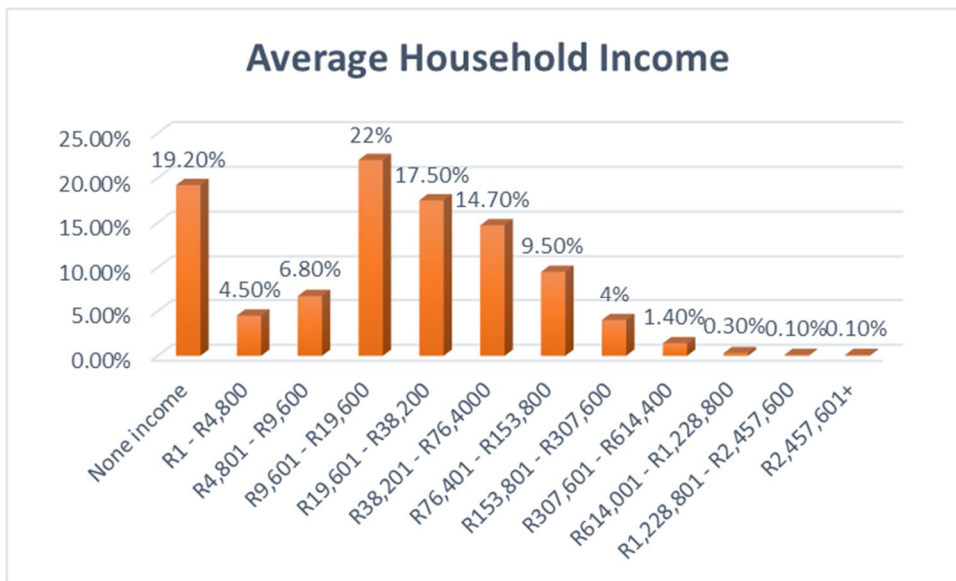


Figure 15: Average Household Income (Source: Statistics South Africa (2012))

THABAZIMBI

A portion of the RPM-US Operations where the site is located falls within the Thabazimbi Local Municipality, which falls within the Waterberg District Municipal region. The municipality is 320km away from Polokwane and 260km from Johannesburg. Thabazimbi covers an area of approximately 10, 882km² which makes up 21.97% of the district municipality (Thabazimbi Review Draft IDP, 2016).

The human settlement within the Thabazimbi Local Municipality is concentrated within urban areas (82.2%), with farming settlements (17.8%) dispersed across the municipality. The local municipality has a total population of 85 234 people, and a very low population density of 8 persons per square kilometre. The Black African group makes up 84.29% of the population followed by the White group making up 14.44% (Figure 16). The most-spoken first languages are Setswana (38%), Afrikaans (14.5%) and IsiXhosa (11.4%).

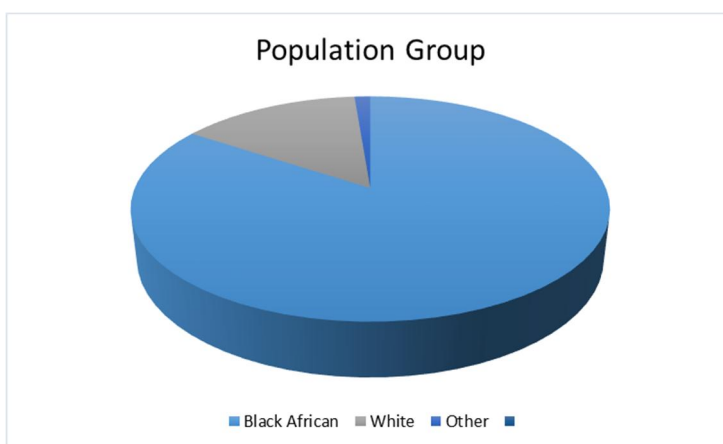


Figure 16: Dominant Population Group in Thabazimbi Local Municipality

The population of the Thabazimbi Local Municipality is male dominated (58.5%) with majority of the population falling within the 20- 34 years age group (Statistics SA, 2012). This is indicative of in-migration of youth in search of mining employment within the municipality (**Figure 17**).

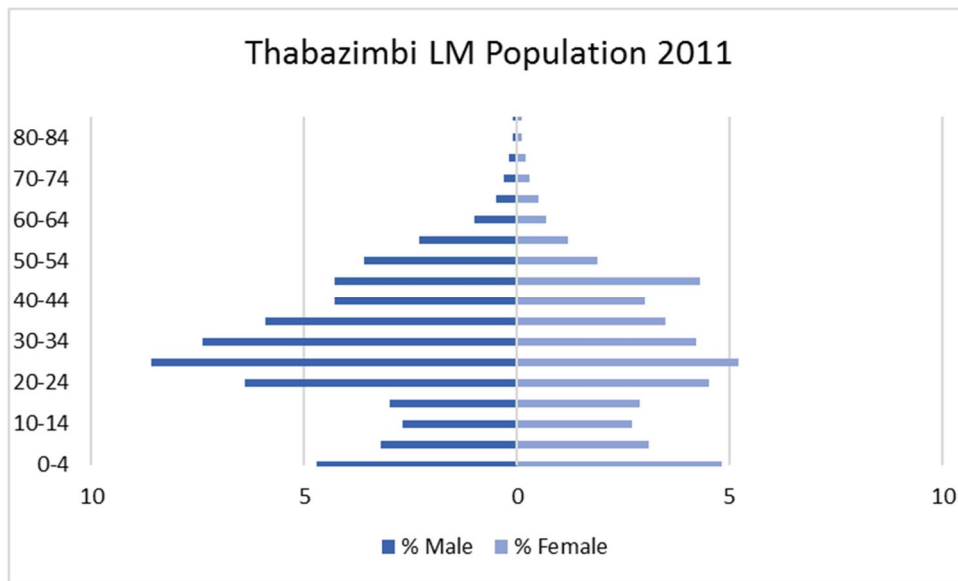


Figure 17: Thabazimbi Population Pyramid (Statistics SA, 2012)

Youth unemployment is currently 26.9%, which is lower than the national rate of 63.1% (Quarterly Survey, 2015). However, income levels are very low with 33% having no income and 19.73% earning between R1- R1600 (**Figure 18**). This is indicative of the largely rural nature of the municipality which lacks infrastructure and resources to generate employment opportunities. The dominant economic sector in Thabazimbi Local Municipality is mining, which contributes to more than 90.98% of the GVA of the municipality. The mining sector employs more than 58, 01% of the population (Housing Development Agency, 2014).

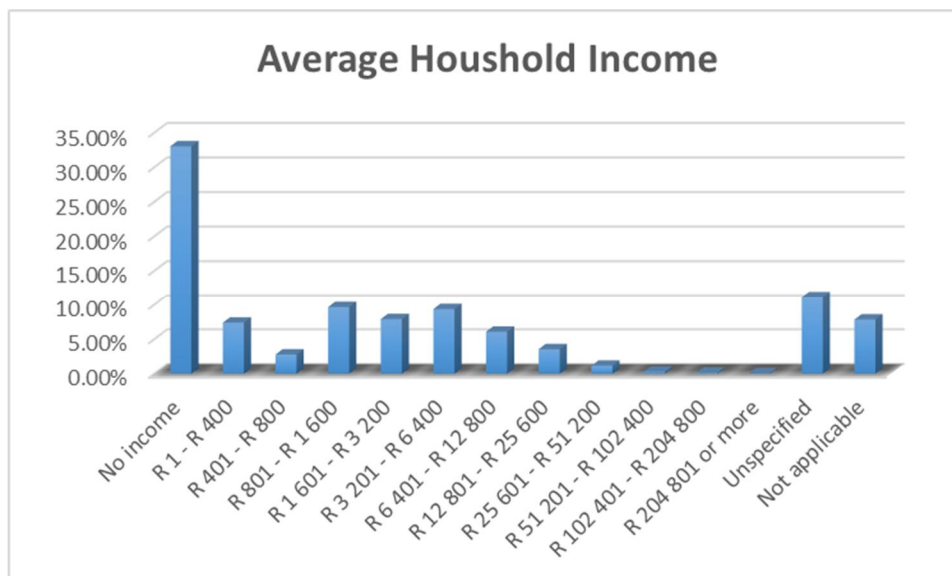


Figure 18: Average Household Income for the Thabazimbi Local Municipality (Statistics SA, 2011)

The majority of the population resides within an urban settlement with 76.8% of households having access to electricity for lighting, 73.1% for cooking and 68% for heating. Sixty percent of households have their refuse removed by the local authority, which indicates a moderate level of service. Sanitation levels are moderate with 63.1% having flush toilets connected to a sewer system and 4.9% using flush toilet with septic tanks (Statistics South Africa, 2012).

3.3 LOCAL ECONOMIC ACTIVITIES

MINING

MOSES KOTANE

The local economy is dominated by the mining sector, which forms the backbone of the provincial economy, contributing 42% to the GGP. Mining activities are mainly located in areas like Ledig, Sun City, Moruleng / Bakgatla in Motlhabe area, Pilanesberg Platinum Mine, Thabazimbi (cross boarder) for Mantserre Community, Swartklip JV for Bakgatla, Ga Raborifi Batlhako Mine, Xstrata Mine and Dwaalboom for Mokgalwana village which is also a cross boarder to Thabazimbi Local Municipality (Moses Kotane IDP, 2016).

THABAZIMBI

The mining sector is the largest employer compared to other sectors within the municipal area. Arcelor Mittal Steel (Arcelor Mittal South Africa) in Vanderbijlpark continue to extract much of their raw material from Thabazimbi Kumba Iron Ore mine. Apart from Iron Ore the Thabazimbi Local Municipality is surrounded by Platinum producing areas such as Northam Platinum Mine, Amandelbult and Swartklip Mines. Other minerals produced in the area include andalusite, which is mined by Rhino Mine and limestone for the production of cement by Pretoria Portland Cement (PPC) (Thabazimbi IDP, 2015).

AGRICULTURE

MOSES KOTANE

Agriculture is the second most important sector, contributing to 13% of the GGP and 18% of employment in the region. The municipality has 20 846 agricultural households and poultry production (42.4%) being the dominant agricultural activity (Statistics SA, 2012).

THABAZIMBI

Thabazimbi Local Municipality is characterised by abundant agricultural resources and is one of the country's prime agricultural regions in terms of livestock and game. The area is known for its comparative advantage wherein a wide variety of agricultural produce ranging from oilseeds to cereals, game, livestock and vegetables are produced (Thabazimbi Agricultural Development Strategy, 2012).

TOURISM

MOSES KOTANE

The Moses Kotane Local Municipality is strategically located in terms of important provincial tourism nodes. The Pilanesberg Nature Reserve and the Sun City are the main tourist attraction centres within the local municipality. Pilanesberg Game Reserve is less than 25km away from the project site and ranks amongst the world's outstanding geological wonders. There are a number of other smaller remote nature reserves such as the Madikwe, Impala, Kwa Maritane, Manyane and Bakgatla Game Reserves. Other tourism amenities include the Molatedi Dam, Madikwe Dam, the

Roodeval farm and the Kolotwane River Valley. The proposed Pilanesberg / Madikwe Corridor (Heritage Park) tourism initiative has the potential to act as a catalyst for greater economic investment into the Moses Kotane Local Municipality.

THABAZIMBI

Tourism activities in Thabazimbi Local Municipality are well established and include game farms, private resorts, lodges, hiking trails, and eco-tourism. The tourism sector is an important contributor to the local economy and a key in creating employment opportunities. Key attractions within Thabazimbi Local Municipality include the following:

- à Atherstone Nature Reserve
- à Ben Alberts Nature Reserve
- à Thabazimbi-Tholo Eco-Park
- à Marakele National Park

LOCAL COMMUNITIES

The key centres with the Moses Kotane Local Municipality are Mogwase and Madikwe. The town of Mogwase is closest to the site, approximately 40 km to the south. The Mortimer Smelter (proposed site) is surrounded by numerous communities, a summary of which is provided in **Table 2 (Figure 19)**. The majority of the labour for RPM-US are sourced from Sefikile, and to a lesser extent from Kraalhoek, Mantserre and some of the other community areas. Northam is the closest town situated approximately 12.5km to the east of the proposed site.

Table 2: Description of local communities

| COMMUNITY / TOWN | DESCRIPTION |
|------------------|--|
| Mantserre | Mantserre is located approximately 5.67km northwest of the proposed site within Ward 34. This community covers an area of 3.89 km ² and has 1 416 households. The population density is 1119 persons per km ² . The land is under traditional (tribal) ownership (Statistics SA, 2012). |
| Mopyane | Mopyane is situated approximately 7.86km northwest of the project site. Mopyane has 542 households and a total population of 1 836 people. Approximately 34.8% of the community has no source of income and 11.5% with an income between R1- R4 800 (Statistics SA, 2012). |
| Ga-Ramosidi | Ga-Ramosidi (Ward 7) is located approximately 4.35km southeast of the proposed site and is under traditional authority. There are 272 households and a population of 812 people. The population density is 541 persons per square kilometre (Statistics SA, 2012). |
| Kraalhoek | Kraalhoek is located within Ward 5 of the Moses Kotane Local Municipality and is approximately 9.19 km northwest of the proposed site. It has 491 households and a population of 1 553 people. The settlement comprises of 50.9% of formal dwellings with an average household size of 3.2 people (Statistics SA, 2012). |
| Sefikile | Sefikile (Ward 7) is located approximately 4.8km southeast of the proposed site. Sefikile has 2 061 households and a total population of 4 227 people. The settlement has a mix of formal and informal dwellings. Statistics SA, 2012). |
| Swartklip | Swartklip is located approximately 3.5km away from the project site within RPM-US boundary in Thabazimbi Local Municipality of Limpopo. It has total population of 3 517 people and covers an area of 22.31km ² . (Statistics SA, 2012). Swartklip is a fully functional township and entirely independent from |

| COMMUNITY / TOWN | DESCRIPTION |
|------------------------------|--|
| | Thabazimbi Municipality regarding infrastructure services, i.e. water, sanitation, electricity, roads and stormwater (Thabazimbi IDP, 2015). |
| RPM-US Workers Accommodation | Workers accommodation is located less than 1km southwest of the Mortimer Smelter. Mine employees are housed here. |
| Northam | Northam is located approximately 12.5km away from the project site within the Thabazimbi Local Municipality of Limpopo. |

The Moses Kotane Local Municipality is characterized by a dispersed settlement pattern accessed via gravel roads. The R510 Road connecting the North West to Limpopo is approximately 11km to the east of the project site. There are a number of farming related activities within the surrounding area.

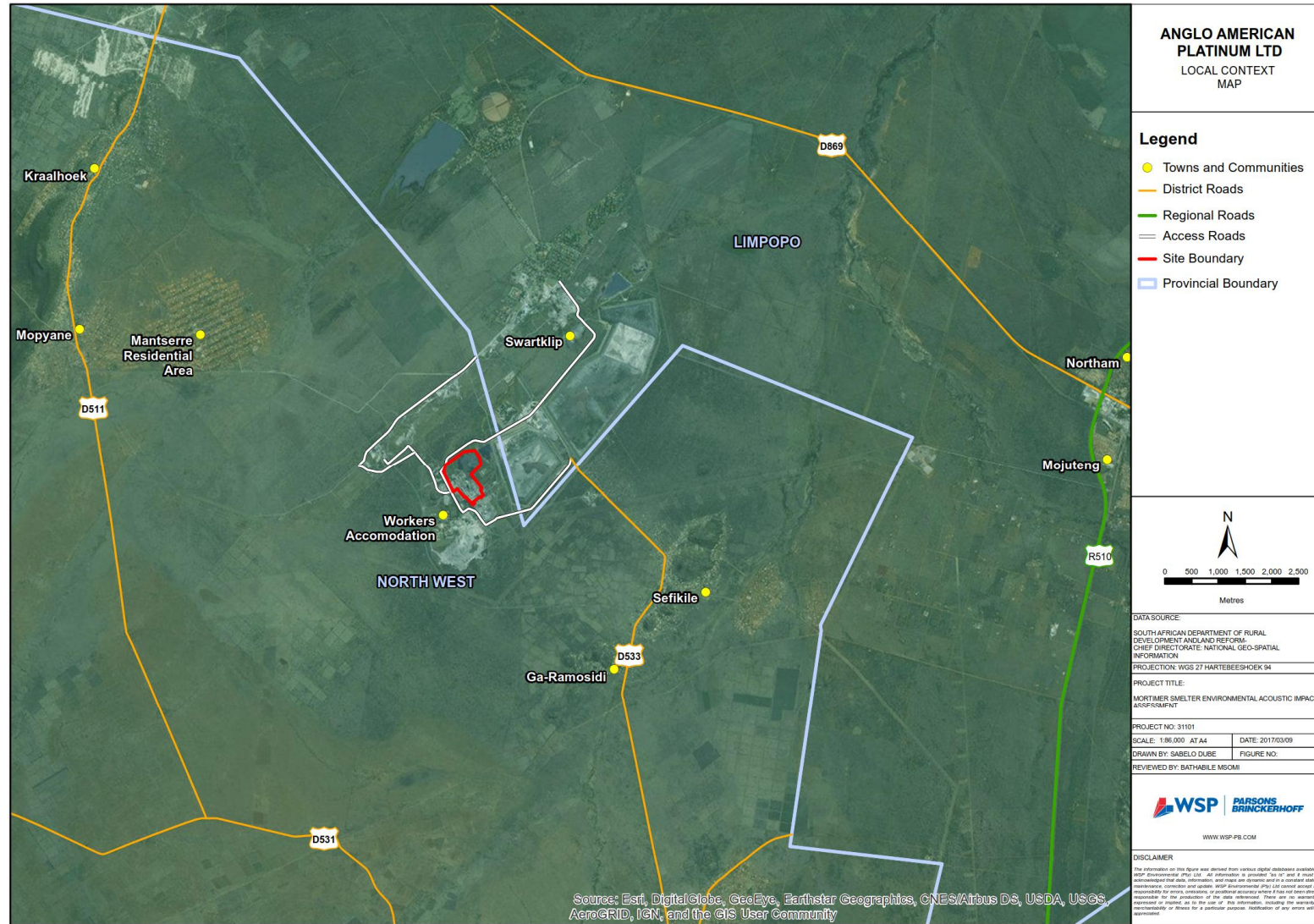


Figure 19: Local context of the proposed project (WSP GIS, 2016)

4 SOCIO-ECONOMIC POLICY AND PLANNING CONTEXT

4.1 NATIONAL POLICIES

BROAD BASED BLACK SOCIO-ECONOMIC EMPOWERMENT CHARTER FOR SOUTH AFRICAN MINING INDUSTRY

The Amended Broad-Based Socio-Economic Empowerment Charter for South African Mining Industry (2010) (Mining Charter) falls within the ambit of the MPRDA, and aims to promote the policy objectives of this piece of legislation. The need to have a common goal of promoting equitable socio-economic development and redress historical issues related to the mining sector under apartheid underpins the Mining Charter.

The Mining Charter was launched in 2002, and amended in 2010. The main aim of the Mining Charter is to facilitate the sustainable transformation and development of South Africa's mining industry. A review process was initiated in 2015 to align the Charter with the provisions of the Broad Based Black Economic Empowerment (BBBEE) Act 2003. The Draft Reviewed Broad Based Black Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry was published for comment in April 2016.

BBBEE means a viable economic empowerment of all black people, in particular women, workers, youth, people with disabilities and people living in rural areas through integrated economic strategies.

The objectives of the Mining Charter are:

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

The Mining Charter aims to address historical inequalities and create a sustainable mining industry for the future. It introduces the notion of sustainable development and social license to operate in terms of environmental, health and safety performance.

Mine communities form an integral part of the mining development. There needs to be meaningful contribution towards community development in order to comply with the principles of the social license to operate. The mining company is required to conduct an assessment to determine the developmental needs of the mining communities. Companies must identify projects that are within the communities' needs in collaboration with the relevant communities.

4.2 PROVINCIAL POLICIES

THE NORTH WEST PROVINCIAL DEVELOPMENT PLAN

Eight of the priorities identified in the National Development Plan were identified as key focus areas in the North West Provincial Development Plan (PDP). Economy and employment are one of the provincial priority areas and the mining sector has been identified as catalyst for economic growth. The mining sector is envisaged to create 55 000 additional jobs by 2030. This can be achieved by the following:

- à Downstream production (beneficiation) can raise the value of exports and should therefore, be promoted. However, due in part to the capital and cost intensive nature of beneficiation, more potential for employment creation exist in backward linkages such as equipment and chemicals manufacturing and engineering/ construction and other services. Since mining companies are obligated to not only procure local products and services, but also to facilitate local enterprise development, supplier industries and services should be prioritised.
- à Encourage and support focused research to enable improved extraction methods, better energy and water efficiency, and better use of metals/minerals in new energy systems and machinery.
- à Improve the SLP process of delivering human resource and economic development by mines in communities, by defining the roles of stakeholders more clearly.

LIMPOPO DEVELOPMENT PLAN (2015 – 2019)

The Limpopo Development Plan (LDP) Strategy is based on the 14 development outcomes of the National Medium-Term Strategic Framework (MTSF). The purpose of the LDP is to:

- à Outline the contribution from Limpopo Province to the NDP and national MTSF for this period;
- à Provide a framework for the strategic plans of each provincial government department, as well as the IDPs and sector plans of district and local municipalities;
- à Create a structure for the constructive participation of private sector business and organised labour towards the achievement of provincial growth and development objectives; and
- à Encourage citizens to be active in promoting higher standards of living in their communities.

The proposed development will improve the quality of living for communities within and near Anglo operations which will be in line with Outcome 10 (Environmental Protection) of the MTSF.

4.3 DISTRICT AND LOCAL MUNICIPALITY POLICIES

BOJANALA PLATINUM DISTRICT MUNICIPALITY INTEGRATED DEVELOPMENT PLAN 2012/2017

The overall strategic IDP objectives to support economic growth and investment in the Bojanala District Municipality are to:

- à Secure economic development that is sectorally and spatially diversified and benefits all people of the district, both in the first and second economies.
- à Develop and acquire institutional capacity, technology and skills that will facilitate and support rapid economic development.
- à Compete effectively at a regional, national, and international level for new investments, and retention of the existing investment base in the district.
- à Establish Private Public Partnerships that will improve the living and working conditions of employees in mining towns. Align any development plans within mining communities to be in alignment to integrated human settlements.

The District Local Economic Development (LED) Plan and District Growth and Development Strategy have the following objectives for the Mining sector:

- à Ensure that public sector investment in critical bulk infrastructure development supports potential extension programmes of mining groups.
- à Ensure that future spatial and infrastructure development takes cognizance of the impact of existing and future mining operations and mining rights and to ensure that infrastructure development is sensitive to the expected lifespan of large individual mining operations.

MOSES KOTANE LOCAL MUNICIPALITY INTEGRATED DEVELOPMENT PLAN 2016-2017

In terms of the Spatial Development Framework; Moses Kotane Environmental Management Policy need to be developed. In this respect, it will specifically endeavour to:

- à Encourage the reduced consumption of water, energy and other natural resources;
- à Pursue progressive waste reduction, reuse, recycling and recovering initiatives;
- à To reduce the amount of waste generated from Council activities;
- à Ensure and encourage the provision of effective waste management services to all the communities;
- à Encourage the prevention and minimization of environmental pollution to air, water and land by conducting environmental awareness campaigns, workshops and seminars.
- à To maintain and improve the health and welfare of the public;
- à Support the rehabilitation of polluted water and land areas;
- à Support sustainable agricultural practices;
- à Safeguard natural habitats and species and preserve the nature and character of the rural areas
- à To preserve cultural heritage; balance the need to enhance the built environment with measures which reduce the environmental impact of development;
- à Promote sustainable public transport; provide environmental education and training to communities and all staff members; to encourage and promote implementation and education of environmental policy to the community; to conduct community satisfactory surveys for monitoring and evaluation.

The proposed SO₂ abatement technology will help reduce emissions at the Mortimer Smelter which is in line with the Environmental policy's objective to encourage the prevention and minimization of environmental pollution to air.

THABAZIMBI LOCAL MUNICIPALITY INTEGRATED DEVELOPMENT PLAN 2016-2017

The Thabazimbi Local Municipality programmes are aligned to the National and Provincial Development Objectives. The IDP includes the following strategies:

- à Ensure economic growth
- à Attract, develop and retain human capital
- à Enhance financial viability and accountability
- à Resource management, infrastructure and services for access and mobility
- à Promote the well-being of all communities

The proposed SO₂ abatement technology will help reduce emissions at the Mortimer Smelter improving the wellbeing of the communities.

5 FINDINGS

5.1 CURRENT LOCAL SOCIAL ISSUES

Various current social and socio-economic issues exist within the Moses Kotane Local Municipality. These include the current social, cultural and political landscape and the existing mining activities. An overview of these issues, as identified through the SIA process, is provided below. Note that the high level description may not necessarily cover all potential issues of concern to local communities.

UNEMPLOYMENT

The unemployment rate within the Moses Kotane Local Municipality currently sits at 51% which is extremely high compared with the national unemployment rate of 25.4% (Statistics SA, 2016). This is a result of the low education and skills development levels within the region. The dominant employment sector in the local area is mining and mining related activities. The skills set required for the mining sector is not necessarily available within the population of neighbouring communities and settlements. This has resulted in mining companies employing skilled individuals who have migrated into the area from other parts of South Africa, or from neighbouring countries, in search for work.

Other formal economic sectors such as tourism, farming and social services have a limited number of available employment opportunities, and so are not able to offset the high levels of unemployment. The lack of resources and infrastructure also hinders development of employment from these sectors. The Kraalhoek community have significant land available but no resources (such as water and equipment) to support agricultural activities. There is high youth unemployment in this area (and at a broader level within the Moses Kotane and Thabazimbi Local Municipalities), which is due to a lack of formal educational institutions. There are no Technical and Vocational Education and Training (TVET) Colleges within the rural areas surrounding the site, and community members have to travel to Mogwase (over 1 hour drive from site) for further skills development. The high employment rate results in a reliance on government grants as the sole form of income for many households (Pers comm, Ward 7 Councillor, 2017).

COMMUNITY PUBLIC SAFETY

Crime is another social challenge faced by the local communities. The high levels of unemployment and the continuous influx of job seekers from outside the area, results in poverty, which in turn increases crime rates. During SIA discussions with the Ward Councillors, it was indicated that there was high levels of livestock theft due to a lack of the high light masts within the Kraalhoek community (Pers comm, Ward 7 Councillor). The Mantserre community reported high levels of burglary and break-ins, which may be attributed to jobseekers moving into the community (Pers comm, Baphalane Ba Mantserre Tribal Authority, 2017).

WATER RESOURCES

Access to potable water is a widespread issue for many communities (especially in rural settlements) within Moses Kotane Local Municipality. There are two main sources of water within the local area surrounding the site. Firstly piped water from Haartebeespoort Dam, which is reticulated (by Anglo American) from Haartebeespoort, past Northam to the Thabazimbi area in Limpopo. Only communities and urban centres near the pipeline, however, are able to make use of this source. The second source is groundwater drawn from boreholes, but which require resources

to develop and maintain. Neither sources are not always of good quality according to local representatives interviewed. The quantity and quality of available water therefore varies throughout the local area. The most vulnerable socio-economic groups, namely low-income and marginalised communities, are most affected by this shortage.

During the SIA fieldwork it was observed that there was a lack of water provision infrastructure within the local communities (Mansterre, Sefikile and Kraalhoek) and that majority of villages are dependent on ground water schemes. The issue was highlighted through the desktop review (Moses Kotane IDP) and confirmed in discussions with local community representatives and authorities. The three main causes of the current water deficit were identified as follows:

- 1) Inadequate water reticulation infrastructure within the municipality mainly sourced through boreholes and rural communities dependent on groundwater;
- 2) Water shortages caused by vandalism, depletion of boreholes and lack of maintenance; and
- 3) Communities refusing to pay for water billed by the Moses Kotane Local Municipality.

The Moses Kotane Local Municipality only has two formalised rural towns, Mogwase and Madikwe. Mogwase has never had provision of groundwater and has an inadequate bulk water supply infrastructure, which results in water supply interruptions. Given the rural nature of the local municipal area and the general lack of infrastructure, the rural communities have significant water availability challenges. The lack of water resources constrains the ability of rural communities to undertake both subsistence and commercial farming related activities. During the SIA fieldwork it was indicated that commercial farmers are moving out of the area as crop and livestock farming is becoming less viable due to water constraints (Pers. comm. Ward 7 Councillor and Thabazimbi Local Municipality representative, 2017).

LACK OF SERVICE PROVISION

The lack of basic and social services within the local municipality is a constraint to quality of life and socio-economic development within local communities. Key issues raised during the SIA, in addition to water services, include poor road quality, a lack of public lighting (for security), and a lack of accessible healthcare services. The clinic at the mine is only accessible to mine employees. The nearest health services in the area is the Moses Kotane Hospital, which is approximately 60km away. Constraints on the municipality to provide services include absent or degraded infrastructure, service delivery challenges as a result of socio-political conflict, protracted timeframes for the implementation of projects and lack of funding. This is further aggravated by the increasing number of informal settlements developing within the municipality related to mining sector activities.

There is a lack of adequate sanitation facilities within the rural areas of the municipality. A majority of these communities depend on groundwater from boreholes, which are often situated in close proximity to pit latrines thus increasing the risk of groundwater contamination. This poses a serious health risk for rural communities.

SOCIAL CONFLICT

The mining areas within the North West Province have at times been socially unstable. There are a number of factors that have caused this instability, including mining-related employment and compensation, political and cultural volatility, and lack of basic and social services. The available information (including primary and secondary sources) indicates that Moses Kotane Local Municipality experiences social conflict at a local level (community-specific). The factors that were identified as influencing this instability and conflict include:

- à Historical planning and practices – resulting in:
 - < Cultural and traditional processes in opposition to state-run processes;

- < Low levels of education and poor employment prospects; and
- < Intra- and inter-community cultural differences.
- à Influx of migrant labour and jobseekers – resulting in:
 - < Competition for employment opportunities;
 - < Competition for housing and other services; and
 - < Social resistance and conflicting cultural and social norms.

These aspects can result in heightened sensitivities to changes and could become triggers for social disruptions or unrest.

5.2 SOCIO-ECONOMIC IMPLICATIONS OF UNION SECTION OPERATIONS

EMPLOYMENT, LOCAL ECONOMIC DEVELOPMENT AND UPLIFTMENT

The current RPM-US Operations employs a large number of people throughout the operations. This has a positive impact on the local, regional and national economy through increased purchasing power, local economic benefits from mine-related services being procured locally, as well as ongoing socio-economic support through mine-related programmes. Projects run through the Mine's SLP have the potential to result in direct positive social benefits. The mine has also contributed to the improvement of road infrastructure within Sefikile community and built a community centre. There are various projects planned in alignment with and collaboration with the Moses Kotane Local Municipality aimed at economic and community empowerment.

LABOUR INFLUX

Almost all mining areas experience the influx of migrant labour, both as employees of the mines and job seekers, which are pursuing work in mining or related sectors. This influx results a number of social impacts on the receiving communities, including:

- à Increased competition for jobs;
- à Increased competition for housing and land, resulting in informal settlements;
- à Increased teenage pregnancy and spread of diseases;
- à Increase pressure on municipal and social services; and
- à Conflict of culturally accepted norms.

People come from as far as the Eastern Cape and Mozambique looking for employment at the mine. These issues are magnified by stressful living, working and home conditions. In addition, a lack of services and community support structures experienced by the migrant workers (being away from families and communities and in informal settlement or temporary housing) and a shortfall in state support, can result in significant social and economic disruptions (e.g. strikes and protests) and an increase in disease (such as Tuberculosis and HIV/AIDS). The Moses Kotane Local Municipality currently experiences a number of these issues and social and community conflict within settlements near the mine.

SOCIAL CONFLICT

The mine has resulted in segregation between the two tribal authorities namely the Bagkatla Ba Kgafela and Baphalane Ba Mantserre Tribal Authorities. The Baphalane Ba Mantserre community were relocated to the current Mantserre location in the 1960s from the Thabazimbi area by Anglo American due the development of the Amandebult Mine. The local Bagkatla Ba Kgafela community is therefore a much larger and more prominent source of employees and contractors for RPM-US. The majority of people employed at the mine are from the Bagkathla tribe. This has resulted in tension between the two communities. The Baphalane Ba Mantserre community is included in the

RPM-US SLP, due to its close proximity to the Mine, however, is less represented, and receives less funding from RPM-US, than the Bagkatla Ba Kgafela community. The Baphalane Ba Mantserre community does receive some benefits from the Amandebult Mine, as the majority of the community is located closer to Amandebult.

During the site visit for this SIA study, it was noted that there were community unrests within the Mantserre (Ward 4) and Sefikile (Ward 7) villages. The conflict was centred on the community not approving of the current ward councillor and the lack of service delivery (particularly related to the provision of housing). It is also understood that the communities want employment from mine and are upset that people from the Eastern Cape secure employment.

AIR QUALITY

The operational activities at RPM-US have the potential to decrease the ambient air quality in the area. Dust (from of mining and processing activities) has been reported as a huge problem for the surrounding communities of Sefikile and Mantserre villages. The community representatives indicated that the prevalence of dust in the area contributes to an increase of TB in these areas. During the SIA discussions the Chief at Mantserre noted that black smoke could be seen coming from the smelter operations, and stated that there was a need to reduce emissions from this facility.

5.3 IDENTIFIED SOCIAL IMPACTS

During the SIA fieldwork, stakeholders were asked whether they had any particular concerns relating to the proposed Mortimer Smelter SO₂ abatement projects. Both the local municipality and Baphalane Ba Mantserre Tribal Authority representatives voiced their support for the project because it will result in an improvement in local air quality. Other stakeholders engaged with did not have any specific concerns in respect of the proposed project. No significant potential social and socio-economic impacts identified in respect of the proposed Mortimer Smelter SO₂. A summary of the potential impacts associated with the proposed project and with the no-go alternative are provided below.

CONSTRUCTION PHASE

EMPLOYMENT OPPORTUNITIES

The construction phase it is anticipated that approximately 250 skilled and unskilled employment opportunities will be generated. The employment opportunities will not be full time and will vary over the during the construction phase, up to the estimated maximum of 250 individuals.

The majority of the employment opportunities are likely to be associated with contractors appointed to construct the proposed facility and associated infrastructure. It is anticipated, due to the nature of the project, that the installation of plant and equipment is likely to be implemented by specialist contractors. As contractors tend to use their own staff, the potential for new opportunities are limited. Potential employment opportunities for locals during the construction phase will be limited to unskilled opportunities and would only materialise should appointed contractor require additional short-term labour. The high unemployment rate (51%) indicates that the generation of local employment opportunities will have an impact on the local population, and it will be possible to source unskilled labour from the population living within the towns within the Moses Kotane Local Municipality. Employment for previously disadvantaged people could contribute to social upliftment and poverty alleviation.

The project is unlikely to generate significant interest from outside of the local area as such the influx of jobseekers in response to the project, during the construction phase, is considered improbable.

LOCAL ECONOMIC DEVELOPMENT OPPORTUNITIES

The local economic development opportunities associated with the construction phase are likely to be limited to the following:

- à Use of local contractors for construction phase activities;
- à Sourcing of construction phase materials, such as metal sheeting and cement, locally; and
- à The increase in demand for locally procured construction materials may result in an increase in job opportunities.

NUISANCE FROM NOISE, DUST AND TRAFFIC DISTURBANCES

The construction of the proposed project is likely to result in a number of localised disturbances including the generation of dust, noise and traffic. As the proposed project site is located within an existing mine development area, it is unlikely that noise and dust impacts will extend beyond the existing boundary. The Environmental Management Programme (EMPr) will include mitigation measures to reduce dust and noise generation during the construction phase in order to adequately mitigate the potential nuisance and ensure there is limited impact on social receptors.

Traffic impacts during the construction phase will be limited to the movement of construction materials to the site and limited site clearing associated with proposed road construction (within the facility boundary). Appropriate mitigation measures to reduce traffic impacts associated with traffic movements in and out of the area will be included in the EMPr.

OPERATIONAL PHASE

RETENTION OF EXISTING EMPLOYEES

The proposed project will not generate many additional employment opportunities during the operational phase. It is foreseen that approximately three new operators, and potentially additional maintenance staff, will be required to support the new plant. The proposed project will ensure that the facility meets the legal requirements associated with the MES. The proposed project will therefore ensure the continued operation of the Mortimer Smelter, thereby securing the continued employment of current staff at this facility.

IMPROVEMENT IN AIR QUALITY

The operational phase of the proposed project will result in an improvement in the ambient air quality in the vicinity of the Mortimer Smelter. The primary driver for the proposed SO₂ abatement project is to ensure that the SO₂ emissions from the smelter are reduced in order to facilitate adherence to the 2020 MES. This reduction in emissions will improve the air quality in the areas surrounding the site.

NO-GO ALTERNATIVE

LOST OPPORTUNITY TO IMPROVE AIR QUALITY

The primary driver for the proposed Mortimer Smelter SO₂ abatement project is to ensure that the facility meets the 2020 MES. Should the project not be implemented this would represent a lost opportunity to improve ambient air quality by a reduction in SO₂ emissions.

POTENTIAL RISK OF CLOSURE

In the event that the proposed SO₂ abatement project does not go ahead, the facility will not be able to meet the 2020 MES for SO₂. This legal non-compliance may result in legal action being

taken against AAP and the potential temporary or permanent closure of the facility. Closure of the Mortimer Smelter would have significant implications on AAP and would result in the loss of employment and local economic benefits.

5.4 IMPACT ASSESSMENT

This section provides a summary of the impact assessment of the identified potential social impacts discussed in **Section 5.3** in respect of the various project phases and the no-go alternative. The full assessment matrix is attached in **Appendix C**.

CONSTRUCTION PHASE

No significant socio-economic implications are anticipated during the construction phase of the proposed Mortimer Smelter SO₂ abatement project.

The positive impacts associated with the construction phase are the potential for employment and economic development opportunities, both of which are considered to be of low significance. There are a number of recommendations that can enhance of these impacts including appointment of local contractors and use of local labour as far as possible; and use of local suppliers and manufacturers.

The potential negative impacts are limited to minor nuisance factors such as noise, dust and traffic disturbances, all of which can be adequately addressed through the implementation of the EMPr.

Table 3 provides a summary of the significance of the potential social impacts associated with the construction phase of the proposed SO₂ abatement project.

Table 3: Summary of Construction Phase Impacts

| POTENTIAL IMPACT | SIGNIFICANCE WITHOUT MITIGATION | SIGNIFICANCE WITH MITIGATION |
|--|---------------------------------|------------------------------|
| Employment opportunities | Low (positive impact) | Medium (positive impact) |
| Local economic development opportunities | Low (positive impact) | Medium (positive impact) |
| Nuisance from noise, dust and traffic disturbances | Low (negative impact) | Low (negative impact) |

OPERATIONAL PHASE

No significant socio-economic impacts associated with the operational phase of the proposed project have been identified.

Whilst the operational phase of the proposed project will not result in new employment opportunities, it will ensure that existing jobs are retained at the Mortimer Smelter. Should the project not be implemented the facility is at risk of potential closure.

The proposed SO₂ project will contribute positively by improving the ambient air quality for the surrounding communities and contribute towards the combating of climate change.

Table 4 provides a summary of the significance of the potential social impacts associated with the operational phase of the proposed SO₂ abatement project.

Table 4: Summary of Operational Phase Impacts

| POTENTIAL IMPACT | SIGNIFICANCE WITHOUT MITIGATION | SIGNIFICANCE WITH MITIGATION |
|---|---------------------------------|------------------------------|
| Retention of existing employees and creation of 3 new opportunities | Low (positive impact) | Low (positive impact) |
| Improvement in ambient air quality | Medium (positive impact) | Medium (positive impact) |

NO-GO ALTERNATIVE

In the event that the proposed Mortimer Smelter SO₂ abatement project does not go ahead, the following socio-economic implications are anticipated:

- à Lost opportunity to improve ambient air quality (due to a reduction in SO₂ emissions).
- à The Mortimer Smelter will not be able to meet the 2020 MES for SO₂. This legal non-compliance may result in legal action being taken against AAP and potentially the closure of the facility. Closure of the Mortimer Smelter would have significant implications on AAP and would result in the loss of employment and local economic benefits.

Table 5 provides a summary of the significance of the potential social impacts associated with the no-go alternative.

Table 5: Summary of No-Go Alternative Impacts

| POTENTIAL IMPACT | SIGNIFICANCE WITHOUT MITIGATION |
|---|---------------------------------|
| Lost opportunity to improve ambient air quality | Medium (negative impact) |
| Potential risk of closure (resulting in loss of employment and local economic benefits) | Medium (negative impact) |

6

KEY RECOMMENDATIONS

The proposed Mortimer Smelter SO₂ abatement project is not anticipated to result in any significant socio-economic impacts. Socio-economic recommendation in respect of the proposed project have been identified in order to enhance the potential benefits of the project. It is recommended that these measures, outlined below, are included in the EMPr.

6.1 ENSURING LOCAL EMPLOYMENT AND PROCUREMENT

Should unskilled labour be required during the construction phase, this should be sourced from the local communities. This requirement must be specified within the contract signed by the contractor.

AAP is to ensure that any new or replacement employment and procurement opportunities maximise benefits to local communities. Currently, AAP has a local recruitment and procurement policy in place, which their contractors must adhere to and provide evidence thereof. This may be enhanced through consultation with local communities and leadership, as well as the Department of Labour. This engagement may include ascertaining the local skills levels and providing information on general and scarce skills needs, as well as procurement opportunities available at the AAP facility. This process would aim at encouraging local communities to develop skills for future employment at the Mortimer Smelter operations.

6.2 STAKEHOLDER COMMUNICATION

Currently, there is no formal Stakeholder Engagement Forum set up by AAP to directly engage with their labour sending or surrounding communities. This method of engagement is aligned with international best practice (International Monetary Fund requirements and Equator Principles). It is recommended that such a forum be established by AAP as outlined below

STAKEHOLDER ENGAGEMENT FORUM

The establishment of a Stakeholder Engagement Forum, with representatives from local community (including informal communities) is recommended. This should be developed into a structure to promote on-going discussions, and ensure actions are taken by AAP, the local communities, traditional leadership and the local municipality to ensure that issues raised are resolved over time. The outcomes of regular meetings should be tracked and managed to ensure that the information shared at forum meetings is meaningful and actions are implemented by the relevant parties.

In the event that a forum of this nature is not possible, it is recommended that AAP identify ways in which they can improve their engagement with stakeholder through other existing forums, improved communication and regular feedback mechanisms.

7 CONCLUSION

The SIA has not identified any negative social impacts that may result from the proposed Mortimer Smelter SO₂ abatement project. The project is an improvement project which will take place within the existing footprint of the RPM-US operations. The operational phase social impacts identified are limited to positive impacts namely improved air quality and retention of existing employees through the continued operation of the facility.

There are a number of external social issues within the local communities, including dissatisfaction with basic and social service provision, high unemployment, crime, and cultural and community conflict. The proposed SO₂ abatement project itself will not exacerbate these issues.

It is recommended that AAP develop internal measures for managing stakeholder and community concerns (e.g. establishing a stakeholder forum or improving communication through existing forums or feedback mechanisms). This has the potential to contribute towards the mitigation of potential future disruptions and conflict.

Appendix A

QUESTIONNAIRES AND ENGAGEMENT RECORDS

MEETING AGENDA

| | |
|----------------|--|
| Job Title | Mortimer Smelter SO2 Abatement Project: Social Impact Assessment |
| Project Number | 31102 |
| Date | 03 April 2017 |
| Time | 14:00 |
| Venue | Moses Kotane Local Municipality |
| Attendance | Tshepo Ramahoyo Refiloe Raditholo Thabo Mosime Gosteboana Sesinyi |
| Apologies | None |

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- 1. What are the key challenges/issues and key needs (local social and economic) for the local communities?**
 - Broad Municipal issues - Water scarcity and provision (dirty water). Seifikile reliant on underground water resources which are susceptible to pollution because of illegal connections to water systems
 - Water used to be billed by the municipality and community are no longer paying
 - Infrastructure – poor roads in villages roads and lack of water service infrastructure
 - No structural projects in place for the provision of services. People blame mines for lack of services.
 - Mine employing people from the outside (Eastern Cape)
- 2. Utilities, Infrastructure and services within the communities**
 - Settlement type comprises of RDP houses and informal settlements. Informal settlements are a problem as they are mushrooming (built to avoid paying rent).
 - Waste collected weekly. Some areas collection of waste is a challenge due to poor access roads
 - Sanitation systems utilised are pit toilets
- 3. Economy, livelihoods and labour force**
 - Very high levels of unemployment. Youth mainly employed at Mines. There are no farms in Seifikile. It is a low-income area. Locals do not look after cattle (seen as a lower class activity)
 - Education Levels- Limited opportunities to learnership programmes. Empowering of youth is needed to combat social issues such as teenage pregnancies
- 4. Community Liaison**
 - Communication is via ward councillors
 - No forums
- 5. Relationship with Anglo**
 - Engagements are through the IDP and LED planning for projects
 - 5.1 What are the issues and concerns that communities have about Anglo’s activities in the local area?
 - Community unrest – issue around the recruitment process followed by mines. They only want employment of locals
- 6. What are the main health issues in the community?**
 - There are High HIV/ Aids is an issue
 - Drinking water is an issue due to lack of water treatment facilities.

7. Safety and Security

- High crime rates and frequent community unrests. Rapid population growth within communities because from migrant workers seeking employment

8. Proposed Abatement Project

- No knowledge of the proposed project and have not engaged with anybody concerning the proposed development.

MEETING AGENDA

| | |
|----------------|---|
| Job Title | Mortimer Smelter SO2 Abatement Project: Social Impact Assessment |
| Project Number | 31102 |
| Date | 04 April 2017 |
| Time | 14:00 |
| Venue | Thabazimbi Local Municipality |
| Attendance | Piet van Rensburg Diketso Moyo Thsepho Makutu |
| Apologies | None |

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- 1. What are the key challenges/issues and key needs (local social and economic) for the local communities?**
 - The mines bring many issues such as squatter camps. Smashblock is the biggest informal settlement in the province. Smashblock was inherited with the extension of municipal boundaries. Approximately 27 000 people. Cannot be formalised because it is located within the 100 year floodline. Underlain by dolomite and there are some mining consents for the area. Must be moved outside of Northam
 - Mantserre community has tense conflict
- 2. Utilities, Infrastructure and services**
 - Mine Town Project is proposed to eradicate the informal settlement challenge- hectares of land has been set aside for the relocation of squatters.
- 3. Economy and livelihoods**
 - The presence of mines contribute positively to the economy. There are vast mineral deposits in the region along with platinum.
- 3.1 Do people still farm (veg/cattle) to support the families/households?**
 - Game farming and crop farming are prominent in the area however, people are moving away from farming dryland to game and cattle farming due to poor rainfall.
 - Land ownership is not under tribal authority.
 - Waterberg area- National Park
 - Population may use natural resources for firewood
- 4. Relationship with Anglo**
 - Municipality and Mine have a mutual understanding. Furniture within Municipal offices is owned by Mine (Sherriff repossessed Municipality assets)
 - Municipality has a town planner and engineer who's salary is paid by the mine
- 4.1 Does Anglo contribute to local communities and businesses?**
 - Northam Sewer Project (R30 million set aside for sewage plant)
 - Infrastructure projects (land, roads upgrade and tourism centre) Brick building project
- 4.2 What are the issues/ risks and concerns that communities have about Anglo's activities in the local area?**
 - Farmers complain about blasting impacting on communities
 - Old shafts have not been properly closed. People are able to access them (incident of death)
 - Water pollution

5. What are the main health issues in the community?

- Poor water and sanitation facilities increase health risks. Smashblock within the 100-year floodline. Sewer line cannot be placed there.
- Increase in HIV/Aids form migrant workers

6. Safety and Security

- Smashblock informal settlement is not safe at night. A lot of incidences occur there

7. Proposed Abatement Project

- No knowledge of the proposed SO2 Abatement project.

MEETING NOTES

| | |
|----------------|---|
| Job Title | Mortimer Smelter SO2 Abatement Project: Social Impact Assessment |
| Project Number | 31101 |
| Date | 03 April 2017 |
| Time | 14:00 |
| Venue | Swartklip |
| Attendance | Ward Councillors (Ward 7 & Ward 5) |
| Apologies | None |

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Ward 7 Councillor – Sefikile

1. **What are the key challenges/issues and key needs (local social and economic) for the local communities?**
 - Key challenges - Informal settlements, roads are mainly gravel and in bad condition. During heavy rains, pupils are not able to go to school
 - Houses are cracking. Ground tremors are a concern.

2. **What is the formal communications channels with the communities in your Ward – TA / other?**
 - Communication is through the TA

3. **Utilities, Infrastructure and services**
 - Settlements comprise of formal and informal houses
 - Community under tribal authority- Bakgatla Ba Kgafela
 - Community unrests - Few concerned groups causing conflict within the community. Some people do not support the councillor and the headman.
 - Sewage system - Pit ventilation toilets (100 were granted by the municipality)
 - Waste is discarded along the main road because it cannot be collected in some areas due to poor road access.
 - Sefikile have been recently granted a new crèche for 200 children by the municipality (currently under construction)

4. **Economy, livelihoods and labour force**
 - Employment is given to mine workers from the Eastern Cape. The locals are not given a chance. These mine workers reside within the villages (pay rent)
 - High unemployment - most people are dependent on social grants

5. **Relationship with Anglo**
 - Relationship with the mine is good. They have built the community centre, clinic, small bridge for access to high school and tar roads in some areas
 - Anglo has provided community with a football area but not fully developed
 - Community have uncertainties about job security as there are rumours of mine being sold.

- 4.1 **What are the issues and concerns that communities have about Anglo’s activities in the local area?**
 - Houses are cracking. Ground tremors are a concern.

6. **What are the main health issues in the community?**
 - Most people have TB – dust is an issue
 - HIV/Aids rate is high because of informal settlements (high number of people from the outside)
 - Clinic operates 7am- 2; 30pm. Community wants it to be 24 hours as nearest hospital is in Mogwase (>40km)

- There are many traditional healers as result of the mixed cultural groups. Some people continue to utilise them for medical purposes

7. Economy, livelihoods and labour force

- Employment of outsiders causes a lot of tension amongst local people.

6.1 What are the main skills gaps in the local area?

- No skills development programmes to empower the communities
- Sefikile- people have farms but lack resources to establish farms. Led to abandonment of activity

8. Proposed Abatement Project

- No knowledge of the proposed project and have not been consulted about it.

Kraalhoek – Ward 5

1. What are the key challenges/issues and key needs (local social and economic) for the local communities?

- Lack of water provision infrastructure water provided by Municipality pipeline from Northam. School facilities not conducive for learning

2. What is the formal communications channels with the communities in your Ward – TA / other?

- Communication directly with the community representatives through tribal authorities.
- People have lost confidence in traditional leadership

3. Utilities, Infrastructure and services

- Semi informal and informal settlements (Under traditional authority of Bagkatla Ba Kgafela)
- Water is sourced from boreholes
- Waste is collected weekly and is placed near the main road because of poor internal roads access. Cattle tear trash apart.

4. Economy, livelihoods and labour force

- Locals only employed as general workers labour due to lack of skills
- Very low income levels R1 – R1600
- High youth unemployment in the area – Pensioners taking care of children (households)
- Livestock and farming are an alternative source of income- however reliant on rainfall and there is lack of infrastructure

3.1. What are the main skills gaps in the local area?

- Limited employment opportunities
- Bursaries and funding for youth are needed. Skills training centre is also needed as the nearest FET College in Mogwase. We would love to see youth qualify as health professionals and work at our health Clinic.

5. Local Business

- SMME not given business opportunity at the mine
- No start-up or business empowerment
- Skills development is needed to alleviate poverty and for communities to sustain themselves. This will relieve demand from government.
- There are small business (construction and civils works) within the community who are not given opportunity to provide services at the Mine.
- There are farms available but are not utilised. Assistance with agricultural skills and capital can be provided to the local communities to enhance agricultural potential.

6. Safety and Security

- High levels of livestock theft due to lack of high mast lights (crime prevalent during the nights)
- Cables are stolen from households

7. Relationship with Anglo

- Anglo engages through tribal authorities however, information shared or outcomes of engagement do not reach the lower ground. No community engagement.
- What is the mines social responsibility to the local communities?
- Hoping to engage with new company to discuss issues communities are facing (employment, assistance with road infrastructure)

7.1 What are the issues and concerns that communities have about Anglo's activities in the local area?

- Majority of the local woman are unemployed and hence get into relationships with the migrant workers. There is an increase in children with no fathers and other social problems

8. What are the main health issues in the community?

- Chronic diseases, lack of exercising and people are not eating well.
- HIV/Aids and TB rates are high.

9. NGO's

- Home based care organisations
- Lefa Labantwana (children organisation)
- CPF – established based on SAPS capacitation promise. Currently not operational as people lack training skills and resources.

10. Proposed Abatement Project

- No knowledge of the proposed project and have not been consulted about it.

MEETING AGENDA

| | |
|----------------|---|
| Job Title | Mortimer Smelter SO2 Abatement Project: Social Impact Assessment |
| Project Number | 31101 |
| Date | 04 April 2017 |
| Time | |
| Venue | Mantserre Tribal Office |
| Attendance | Baphalane Mansterre Traditional Council |
| Apologies | None |

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TRADITIONAL AUTHORITY

1. Communications

1.1. How does the TA communicate with the local communities?

Communication meetings are held with community representatives

1.2. Does the TA interact with the ward councillors?

Yes

1.3. Are there community /municipal forums on which the TA are represented?

Yes.

2. Communities

2.1. What is the TA's role in the local communities and local area?

Traditional authority responsible for land allocation and resolving grievances. Community empowerment

2.2. What are the communities' key issues at the moment? i.e. what are meetings about / What problems are the people concerned about? Services, social, economic, etc

Unemployment is an issue and housing,

3. Relationship with Anglo:

3.1. How would you describe your relationship with Anglo (specifically Mortimer Smelter)

Anglo only comes to the community when they need to facilitate their environmental applications. Once permits are obtained, they do not return to the communities

Relationship with Union mine is not great – No communication

3.2. How does Anglo communicate with the TA and / or community representatives / community in general (formal or informal)? Are there regular meetings / forums for information sharing and raising of issues/concerns?

Baphalane BaMantserre Board of Trusts have communication with Amandebult mine. There used to be a forum at Union Mine but it no longer exists. There are no communications with Union Mine.

3.3. In general, is Anglo considered a good neighbour in the local area? Please provide reasons.

No - Operation of mine increase population, which puts pressure on the community. Mantserre village does not benefit from the mine even though it is within a +/- 15km radius. People are referred to Amandebult Mine. Union Mine is located on Spatskop Farm and the Bagkatla tribe are the owners hence have more benefits in comparison to the Baphalane BaMantserre even though we fall within

the +/- 15km radius. The Mantserre community is not included in the social labour plan budget as we are from a different TA.

4. Anglo Operations

4.1. Are there safety or environmental risks associated with Anglo's operations? If so, what are these? Can measures be taken to address these risks?

- Air quality- Statistics at the clinic indicate high TB rates because of the dust from the mine
- Rivers are polluted and this affects cattle and children swimming in rivers
- Operation of mines increase population, which puts pressure on services such as clinics. Increases safety risks and increases water stress

4.2. Have there been incidents of tension between local residents and the Anglo operation?

Youth has attempted to mobilise each other to head to Anglo to voice their concerns

4.3. Are local residents given access to Anglo services (schools, medical services etc.)?

The clinic at the mine only services mineworkers

4.4. Is there any social instability associated with the Anglo operations?

Anglo mainly provides people from the Bagkatla TA with employment. Union Mine is located on Spatskop Farm and the Bagkatla tribe are the owners hence have more benefits in comparison to the Baphalane BaMantserre even though we fall within +/- 15km radius.

5. Local Livelihoods

5.1. What is the main source of income for people in the TA's communities?

Mining is the major employer as there are limited available alternatives. Major Towns are far away

Unemployment is very high approx. 60%.

Majority dependent on grants. Average Income is <3000 per month.

Community receives some food parcels from the local municipality others have part time jobs (gardening and domestic workers)

Cattle and goats (grazing land is limited)

6. Health

6.1. What are the main health issues in the community?

TB (various types) and HIV Aids, Chronic diseases for the elderly

Foreigners bring diseases into village increasing our problems

6.2. Describe health facilities, services and programmes in the local area and are these accessible to the majority?

Local clinic belongs to the Department of Health. It has been recently upgraded and renovated. Operates 5 days a week. There is no emergency response vehicle available. In case of an emergency, one must pay R1500 to hire car to take them to Mogwase Hospital.

6.3. To what extent are traditional healers and medicines used in the local area, and are they used with or instead of medical practices?

The use of traditional healers is minimal. Majority of the population rely on Clinic and Medical Practitioners

6.4. What are the major reasons for poor health in the local area

The poor standard of living in Mantserre does not help improve health conditions makes illnesses worse.

6.5. How is Anglo / local authority / other business responding to health issues in the area?

7. Utilities, infrastructure and services

7.1. What are the primary infrastructure needs in the community?

Roads are in a bad condition and electricity is much needed. Water shortages a challenge for various villages. Mines to assist municipality with water supply. Partial equipment has been bought by municipality

People fighting with the ward councillor demanding houses.

Waste collected by municipality every week

8. Safety and Security

8.1. How safe is the local area for the general population? What safety issues are there?

Increase in house break-ins and business break-ins within Mantserre village due to influx of people. This affects our lifestyle and have to change our ways of living

8.2. In the local area, is security provided by police, private security companies and / or criminal elements?

South African Police Services

9. Proposed Abatement Project

9.1. Are you aware of the SO2 Abatement project?

NO

9.2. What do you understand about the proposed project?

9.3. Has there been communication / consultation has been held with the TA in respect of the project, if so what has taken place?

NO

9.4. How do you think it will affect the community?

10. Other relationships:












10.1. What is the TA's association/relationship with the Local Municipality?

10.2. What other community structures are there operating in/with the local communities – to raise issues, funding, NGOs, etc?

No NGO's

ATTENDANCE REGISTER

Meeting Title: Anglo SO2 Abatement SIA
Venue: Baphalane Bammantserre Tribal Office
Date: 04 April 2017

| Name | Organisation | Contact Number | Email | Signature |
|--------------------|-------------------|----------------|----------------------------------|---|
| BATHABE MOOMI | WSP ENVIRONMENTAL | 031 240 8852 | bathabale moomi |  |
| DANIELLE SANDERSON | WSP ENVIRONMENTAL | 072 259 8319 | danielle@envital |  |
| L.W. DESONE | TRIBAL FENCIL | 076 86 40119 | - |  |
| S.T. Ramoakaka | TRIBAL FENCIL | 078 844 9845 | - |  |
| D.S. RAMOKA | BBMTC | 083 529 9460 | sobale@ramokas.com @gmail.com |  |
| S.B. MORISHE | TRIBAL COUNCIL | 0734394970 | - |  |
| Amel Makgopela | B.B.H.T.C | 0784462423 | - |  |
| Sivan Diate | BBMTC | 076717 8812 | - | S.M. Scaale |
| Sello Magoelo | BBMTC | 07814 72314 | - |  |
| Dipuo Tsau | CLERK DIPUO | 0827103439 | - |  |
| KENNELIE PHUR | BBCLERK | 071969 8884 | - |  |
| S.S. NTSHABELG | TRIBAL REP. | 082725 4058 | - |  |

Appendix B

CV'S OF SIA TEAM MEMBERS

HILARY KONIGKRAMER, B.SocH., EAP

DIRECTOR (ENVIRONMENTAL SCIENCE), ENVIRONMENT & ENERGY



CAREER SUMMARY

Hilary is a Director with 15 years' experience as a consulting social and environmental scientist with extensive experience in integrated environmental management in a variety of sectors including petrochemical, paper and pulp, general industrial, commercial and infrastructure.

Hilary has thorough working knowledge of current environmental laws and policies and a comprehensive understanding of environmental processes. She has experience in undertaking pre-feasibility assessments, legal reviews, and the co-ordination of a wide range of application processes (Basic Assessment and Scoping and EIA processes, Section 24G, and Waste Management License applications). Hilary has been involved in a number of high profile projects for Transnet SOC Ltd; Engen Petroleum Limited, Sappi Southern Africa, and Exxaro Coal Mpumalanga (Pty) Ltd Mpumalanga (Pty) Ltd. She has excellent verbal communication skills in terms of authority consultation, stakeholder engagement and client liaison.

Specialist social science expertise includes conducting Social Impact Assessments (SIA) involving social profiling, social sensitivity mapping, development and implementation of questionnaires, co-ordination of social surveys, stakeholder workshops and focus group sessions. A number of key SIA studies have been undertaken over the past few years for a variety of waste, industrial and mining projects in South Africa, as well as stakeholder engagement for a large residential and tourism development in the Seychelles.

Stakeholder engagement has become a key focus of her capability in recent years. She recognises the value of the development of targeted stakeholder engagement strategies to ensure stakeholder engagement processes are implemented effectively. Recent stakeholder engagement experience includes directing and managing the stakeholder engagement process in the early phases of the proposed Durban Dig-Out Port for Transnet Capital Projects

EDUCATION

BSoc Sci (Hons) Environmental Management, University of Natal, Durban, South African 1998

BSoc Sci Geography, Environmental Management, University of Natal, Durban, South African 1997

ADDITIONAL TRAINING

Sustainability Framework Learning Programme, IFC 2012

PROFESSIONAL MEMBERSHIPS

Member of the International Association for Impact Assessment South Africa IAIAsa

Certified Environmental Assessment Practitioner (10/2010) EAP

YEARS WITH THE FIRM

11

YEARS TOTAL

16

PROFESSIONAL QUALIFICATIONS

EAP

AREAS OF PRACTICE

Environmental Impact Assessment Experience

Specialist Environmental Support

Specialist Stakeholder Engagement and Social Impact Assessment Experience

HILARY KONIGKRAMER, B.SocH., EAP

PROFESSIONAL EXPERIENCE

Environmental Impact Assessment Experience

- à Expansion of polyester manufacturing plant, Durban, KwaZulu-Natal, South Africa (2015): Project Director. Hosaf operates a polyester production facility in Jacobs (South Durban) and proposed to increase polyethylene terephthalate (PET) production at the facility through the expansion of the plant and installation of a second processing facility. The project involved a Basic Assessment process for the amendment of their Atmospheric Emissions License. Client: Hosaf, a division of PG Bison (Pty) Ltd.
- à Expansion of the Island View Fuel Storage, Durban, KwaZulu-Natal, South Africa (2014-2015): Project Director. Engen Petroleum Limited proposed the expansion of fuel storage and modification of the Engen Island View D site, located within the Port of Durban. The project entailed a Basic Assessment process, application for Atmospheric Emissions License, and close coordination with consulting and client engineers. Client: Engen Petroleum Limited.
- à Decommissioning of the pulp mill and associated structures including tanks at the Sappi Southern Africa Limited: Enstra Mill in Springs, Gauteng, South Africa (2014-2015): Project Director. This project involves the undertaking of a Basic Assessment process in order to gain Environmental Authorisation for the proposed decommissioning of the Pulp Mill and associated structures including tanks. Client: Sappi Southern Africa Limited.
- à Green Energy Power Project - Tugela Mill, KwaZulu-Natal, South Africa (2013-2015): Project Director. Environmental Authorisation and Waste Management License procedure associated with the generation of 40WM of electrical power to supply the Tugela Mill and the national grid. Client: Sappi Southern Africa Limited.
- à Sappi Ngodwana Expansion Project – Ngodwana Mill, Mpumalanga, South Africa (2013-2014). Project Director. Environmental Authorisation and Waste Management License for the expansion of the existing specialised cellulose production and construction of a sawmill at the Ngodwana Mill. Client: Sappi Southern Africa Limited.
- à Green Energy Power Project – Ngodwana Mill, Mpumalanga, South Africa (2012-2013): Project Director. Environmental Authorisation and Waste Management License procedure for the installation of a biomass boiler, condensing turbine and associated biomass handling equipment, collectively termed the green energy power project. Specialist studies included air quality, visual, traffic, noise and socio-economic impact assessments. Client: Sappi Southern Africa Limited.
- à Eerstelingsfontein Open Cast Coal Mine, Mpumalanga, South Africa (2010-2013): Project Manager. The project involved facilitating receipt of an Environmental Authorisation for the proposed open cast coal mining activity. The study included an extensive range of specialist inputs, comprehensive authority engagement, stakeholder engagement and project management. Client: Exxaro Coal Mpumalanga (Pty) Ltd Mpumalanga (Pty) Ltd.
- à Cato Ridge Regional Landfill Site, KwaZulu Natal, South Africa (2010-2011): Project Director. An EIA process, including a Waste License Application, was undertaken for the development of a regional landfill site to service the west of the eThekweni Municipality. The study included a wide range of specialist

HILARY KONIGKRAMER, B.SocH., EAP

inputs, and extensive stakeholder engagement and project management.
Client: eThekweni Cleansing and Solid Waste Department.

- à Sanibonani Mixed Development, Himeville, KwaZulu-Natal, South Africa (2005-2011): Project Director. The project commenced with an environmental pre-feasibility assessment in order to clarify the legal requirements and determine opportunities and constraints associated with the proposed mixed housing and commercial development between the towns of Underberg and Himeville. An Environmental Authorisation procedure was undertaken which included significant project management and co-ordination of a large team of specialists. Client: Retsol Holdings (Pty) Ltd.
- à Closure and Remediation of the Guernica Chemicals Site in Cato Ridge, KwaZulu-Natal, South Africa (2009-2010): Project Manager. A Basic Assessment process was undertaken for the closure and remediation of the Guernica Chemicals site in Cato Ridge. The focus of this Basic Assessment process is the identification of the best technology to treat and dispose of mercury contaminated material on site, and prepare implementation plans for the rehabilitation of this site. The site has been covered widely in both local and national media for over 15 years. Client: Guernica Chemicals (Pty) Ltd (formally Thor Chemicals).
- à Back of Berth Upgrade at the Island View Complex, and a Tank Replacement at the Engen Refinery, KwaZulu-Natal, South Africa (2008-2010): Project Director. The project involved the upgrade of back of berth pipeline infrastructure within the Durban Harbour, as well as a tank replacement at the Engen Refinery. The challenge with the project was addressing impacts associated with two locations within one application, with one of the locations being within the contentious South Durban area. The Environmental Authorisation process involved significant authority and stakeholder engagement. Client: Engen Petroleum Limited.
- à Alkylation Unit Upgrade at the Engen Refinery, South Durban, KwaZulu-Natal, South Africa (2006-2009): Project Manager. Environmental Scoping and Environmental Management Plan was undertaken for the proposed upgrade of the Alkylation Unit at the Engen Refinery. This project involved significant public and authority consultation and a detailed technical component. Stakeholder engagement was a significant challenge within the South Durban context, and an innovative approach was required in order to ensure those who were likely to be directly affected by the project were afforded an opportunity to engage in the process. Client: Engen Petroleum Limited.
- à Ngwadini Reservoir, KwaZulu-Natal, South Africa (2007-2009): Project Manager. Environmental Scoping and EMP for the proposed off-stream earth embankment dam in the Ngwadini Valley, to ensure a reliable supply of water to the Sappi Saiccor Mill located in Umkomaas, KwaZulu-Natal. The Environmental Authorisation process included extensive stakeholder and authority engagement, and the management of a wide range of specialist. Client: Sappi Saiccor (Pty) Ltd.
- à Permit Amendment for the Existing H:H Landfill Site, Newcastle, KwaZulu-Natal, South Africa (2007-2008): Project Manager. A Basic Assessment process was followed for the permit amendment of the existing H:H landfill at the Arcelor Mittal South Africa Ltd Steel Newcastle Plant. This permit amendment allow for certain waste types generated at the Arcelor Mittal South Africa Ltd Vereeniging Plant to be transported and disposed of at the Newcastle Plant. Client: Arcelor Mittal South Africa Ltd.

HILARY KONIGKRAMER, B.SocH., EAP

Specialist Environmental Support

- à Environmental support associated with the Richards Bay Oil Spill, KwaZulu-Natal, South Africa (2014-2015): Project Manager. Provision of strategic support in respect of clean-up operations and longer terms monitoring support in respect to the Heavy Fuel Oil spill which occurred in the Port of Richards Bay. Client: Confidential.
- à Environmental input into a technical report and Preliminary Economic Assessment for the Enchi Gold Project, Ghana (2015): Project Manager. An environmental screening assessment was undertaken to identify key environmental issues associated with the proposed gold project, and environmental legal review to identify the regulatory requirements and processes applicable to the project.

Specialist Stakeholder Engagement and Social Impact Assessment Experience

- à Proposed Durban Dig-Out Port, early planning phase Stakeholder Engagement, Durban, KwaZulu-Natal, South Africa (2012-2013): Stakeholder Engagement Director and Project Manager. The proposed Durban Dig-Out Port is a large infrastructure project of national strategic importance. WSP has been responsible for stakeholder engagement in the early phase (FEL1) of the project planning lifecycle. A Stakeholder Engagement Strategy was developed to ensure the stakeholder engagement process was implemented effectively. Stakeholder identification, mapping and evaluation was undertaken throughout the project. A series of discussion sessions were arranged with key representatives of the various stakeholder groups in order to develop relationships and trust, share information and obtain feedback (key issues) early in the planning process. This early engagement has developed the foundation for future engagement (EIA phase). Client: Transnet Capital Projects.
- à Umhlanga Tidal Pool, KwaZulu-Natal, South Africa (2013): Social Impact Assessment (SIA) Project Director. eThekweni proposed to construct a tidal pool at Umhlanga Beach within the northern eThekweni region. The SIA was commissioned due to public request, and involved extensive surveys and interviews. The outcome included the identification of the most socially acceptable site, and recommendations regarding development and management of the tidal pool in the short to long term. Client: eThekweni Municipality.
- à Re-Processing of the Waterval Tailings Storage Facility, Rustenburg, North West Province, South Africa (2013): SIA Project Director. An SIA was required in support of the Environmental Authorisation process for the amendment of the Environmental Management Programme. The existing social climate in and around the Rustenburg mining operations was potentially unstable at the time of the study, due to historical and on-going issues between labour and mining companies. The SIA aimed to establish both direct and indirect impacts of the proposed project, and establish the significance of these impacts within the local socio-economic landscape, and included a review of existing information and the collection of primary data through interviews with key local stakeholders. The SIA ultimately determined that there would be no direct significant negative impacts on the local communities, although certain measures would need to be put in place to ensure that any negative impacts would be mitigated during the construction and operational phases. Client: Anglo American Platinum Limited.

HILARY KONIGKRAMER, B.SocH., EAP

- à SIA for Proposed Yzermyn Coal Mine, Mpumalanga, South Africa (2013): SIA Project Director. In support of an Environmental Authorisation procedure for the proposed underground coal mine, an SIA was undertaken to assess the socio-economic impacts of the activity. A variety of techniques, including household surveys, stakeholder interviews, and group meetings were used to establish the potential issues, impacts and recommendations. The social impacts of the proposed mine were determined to be of significance to the local population, and firm measures were provided to prevent excessive loss of local sense of place and livelihoods, and ensure economic stability for the local communities. Client: Atha-Africa Ventures (Pty).
- à Tumela Central Shaft, Thabazimbi, Limpopo, South Africa (2013): SIA Project Director (2013): In support of the EIA process for the proposed new shaft at the Amandelbult Section, a social screening was undertaken to establish potential socio-economic impacts of the proposed development. The site, being located a number of kilometres away from populated areas, was unlikely to have a significant social impact. To ensure independent assessment, and given the instability of mining communities, the social screening reviewed existing data, and interviewed a number of key local stakeholders to determine the possible issues, impacts and recommendations. Client: Anglo American Platinum Limited.
- à Sasol New Energy Holding Concentrated Solar Park, Upington, Northern Cape, South Africa (2012): SIA Project Director. Sasol New Energys Holding proposed the construction of a solar power generation complex near Upington in the Northern Cape. The SIA was undertaken to determine the socio-economic impact of the proposed project. The objective of the SIA was to identify and assess potential impacts of the proposed SSP on the socio-economic receiving environment. The SIA determined that there were a number of key socio-economic benefits of the proposed project, and provided sound recommendations regarding the development of community trusts, small business opportunities and education programmes, in order to maximise these social benefits. Client: Sasol Energy.
- à Social Impact Assessment of the Proposed Green Energy Project at Sappi Ngodwana Mill, Mpumalanga, South Africa (2012): SIA Project Director. Sappi Southern Africa (Pty) Ltd proposes the installation of a biomass boiler to generate electricity, a portion of which will be fed into the national grid. The SIA focuses on the identification and assessment of the direct socio-economic impacts of the proposed project. Client: Sappi Southern Africa (Pty) Ltd.
- à Coal Mine Social Impact Assessment, Eerstelingsfontein, North West Province, South Africa (2011): SIA Project Director. Exxaro proposed to mine an area of agricultural land for the extraction of high-quality coal. The social impact assessment (SIA) team undertook a detailed assessment of the immediate communities, local government and broader social and economic issues through surveys of the local community and farmers, assessment of other specialist studies in terms of the potential social impacts, and the provision of mitigation measures and a social management plan for the construction and operation of the mine. The presence of an established community on the site provided a significant social hurdle; however, the team provided a social management strategy to manage and mitigation potential social impacts on the local communities. Client: Exxaro Coal Mpumalanga (Pty) Ltd.
- à Social Impact Assessment of the Town of Nottingham Road – Implications of the Proposed Rawdons and Hillside Developments, KwaZulu-Natal, South

HILARY KONIGKRAMER, B.SocH., EAP

Africa (2008): SIA Project Director. A socio-economic assessment of the proposed Rawdons extension and the Hillside developments was undertaken. Of particular consideration were the cumulative social impacts and the future growth of the town of Nottingham Road. Client: Afzelia Environmental Consultants CC.

- à SIA for Proposed Relocation of Denel's Philippi Munitions Facility, Western Cape, South Africa (2007): Social Consultant. A qualitative methodology was employed during the SIA study in order to identify the social issues associated with the relocation of the Philippi munitions facility. The study sought to understand the differing issues and concerns of the stakeholders likely to be affected by the project. The methodology included a social review of the project areas, primary data collection in the form of questionnaires and stakeholder meetings, and the identification and assessment of potential impacts. Client: Denel Munitions (Pty) Ltd.
- à Proposed Cato Ridge Regional Landfill Site, KwaZulu-Natal, South Africa (2007): Social Consultant. The eThekweni Municipality propose the development of a large regional general landfill site to meet the future waste management requirements of the municipality. This SIA study involved the identification and assessment of potential social issues associated with the development of the landfill site. The study included a desktop socio-economic review of the area, primary data collection in the form of questionnaires and stakeholder workshops. Client: eThekweni Cleansing and Solid Waste Department.
- à Public Impact Assessment for the Proposed Île Aurore Development, Mahé, Seychelles (2007): Social Consultant. A public impact assessment was undertaken as a specialist component of the Scoping study for the development of an exclusive golf course and casino development on the island of Île Aurore, Seychelles. The purpose of the study was to consult with the local community who would be most affected by the development, document the key issues and identify the likely impacts. Client: Pinnacle Point Holdings (Pty) Ltd.
- à Social Probe for the Proposed Ngwadini Reservoir, KwaZulu-Natal, South Africa (2006): Social Consultant. Sappi Saiccor proposed the construction of an off-stream storage reservoir, with a design capacity of 10 million cubic meters of water, to supplement water supply to the Saiccor Mill during period of low river flow. The reservoir footprint is 73 hectares, located within a rural context. The social probe provided a description of the social environment surrounding the proposed Ngwadini Reservoir site, thereby identifying possible social issues associated with the proposed project. The report included a description of social impacts, preliminary assessment of impacts and recommendations. Client: Sappi Saiccor (Pty) Ltd.

BATHABILE MSOMI, B.Soc.H.

ENVIRONMENTAL CONSULTANT (ENVIRONMENTAL SCIENCE), ENVIRONMENT & ENERGY



YEARS WITH THE FIRM

4

YEARS TOTAL

5

AREAS OF PRACTICE

Basic Assessments

Stakeholder Engagement

Strategic Environmental Planning

Water Use Licence Applications

LANGUAGES

Zulu

CAREER SUMMARY

Bathabile Msomi completed her Honours in Social Science at the University of KwaZulu-Natal in 2011 specialising in Environmental Management and Geographic Information System. She completed her Bachelor of Social Science in Environmental Management at the University of KwaZulu-Natal in 2010. Bathabile has 4 years' experience in the field of environmental consulting involved with stakeholder engagement and management, report writing, project administration and environmental authorisation processes.

EDUCATION

| | |
|---|------|
| Bachelor of Social Science (Honours), Geography and Environmental Management, University of KwaZulu-Natal, South Africa | 2011 |
| Bachelor of Social Science, Environmental and Geographical Science, University of KwaZulu-Natal, South Africa | 2010 |

ADDITIONAL TRAINING

| | |
|---|------|
| Safety, Health and Environmental Representative, Safety Risk Management | 2017 |
| Defensive Driving and Traffic Psychology Course, Toyota | 2016 |
| Amendments to Legislation Workshop, Tabacks Attorneys | 2014 |
| Diploma (S4): Project Management, Unischool, South Africa | 2013 |

PROFESSIONAL MEMBERSHIPS

| | |
|--------|------|
| IAIAsa | 2015 |
|--------|------|

PROFESSIONAL EXPERIENCE

Stakeholder Engagement

à Transnet Proposed Durban Dig Out Port Stakeholder Engagement, Durban, KwaZulu-Natal, South Africa (2012-2013): Assistant Consultant. Reviewing documents and summarising issues, assisting project leader and team with administrative tasks, development of a stakeholder engagement database and capturing data (meeting minutes, comments). Client: Transnet Port Terminals.

Basic Assessment

- à Proposed Steel Forging Facility Scaw Metals, Kitwe, Copperbelt Province Zambia (2015): Assistant Consultant. Development of Environmental Project Brief Report. Client: SCAW South Africa (Pty) Ltd.
- à Proposed Comrie Dam Expansion, Donnybrook, KwaZulu-Natal, South Africa (2015): Assistant Consultant. Basic Assessment report and stakeholder management. Client: Sappi Southern Africa Limited.

BATHABILE MSOMI, B.Soc.H.

- à Afrox Site Decommissioning, Durban, KwaZulu-Natal, South Africa (2014): Assistant consultant. Report development and stakeholder management. Client: African Oxygen Ltd.
- à Proposed Expansion and Decommissioning of Storage Tanks, Ngodwana, Mpumalanga, South Africa (2014): Assistant consultant. Stakeholder engagement and report development. Assisting in application process. Sappi Southern Africa Limited.
- à Proposed Hammarsdale (MR385) Bridge and Road Widening, Hammarsdale, KwaZulu-Natal, South Africa (2014): Assistant consultant. Stakeholder engagement and report development. Assisting in application process. Client: eThekweni Municipality.
- à Proposed Lilani Springs Refurbishment, Lilani Springs, KwaZulu-Natal, South Africa (2014): Role on Project. Assistant consultant in the application process, stakeholder engagement and report development. Client: Abakali (Pty) Ltd.
- à Tongaat Hulett Maudstone Waste Licence Application, Tongaat, KwaZulu-Natal, South Africa (2013): Assistant consultant. Public participation process and report development. Assisting in application process. Client: Tongaat Hulett Sugar Limited.
- à Proposed Construction of Dormac Floating Drydock, Durban, KwaZulu-Natal, South Africa (2013): Assistant consultant. Stakeholder engagement and report development. Assisting in application process. Client: Dormac a division of Southey Holdings (Pty) Ltd.
- à Proposed Sappi Ngodwana Mill Expansion, Ngodwana, Mpumalanga, South Africa (2013): Assistant Consultant. Site visits to assess and understand the potential impacts of the proposed project. Responsible for the developing and distributing Public Participation Process (PPP) material (notices and adverts). Assisting with application process. Client: Sappi Southern Africa Limited.
- à Proposed Sappi Tugela Green Energy Power Project, Tugela, KwaZulu-Natal, South Africa (2013): Assistant consultant. Site visits to assess and understand the potential impacts of the proposed project. Responsible for developing and distributing Public Participation Process (PPP) material (notices and adverts). Assisting with application process. Client: Sappi Southern Africa Limited.

Water Use Licence Applications

- à Proposed Comrie Dam Expansion, Donnybrook, KwaZulu-Natal, South Africa (2015): Assistant Consultant. Completion of Application Forms. Client: Sappi Southern Africa Limited.
- à BrightSource Water Use Licence, Kimberly, Northern Cape, South Africa (2014): Assistant consultant: Completion of application forms. Client: BrightSource Energy.
- à Foskor Water Use Licence, Richards Bay, KwaZulu-Natal, South Africa (2014): Assistant consultant. WULA application process and report development. Client: Foskor (Pty) Ltd.
- à Hammarsdale M50 Water Use Licence, Hammarsdale, KwaZulu-Natal, South Africa (2014): Assistant consultant. WULA application process and report development. eThekweni Municipality.

Strategic Environmental Planning

- à Southern Public Transport Corridor Densification Framework, KwaZulu-Natal, South Africa (2013-ongoing). Assistant consultant. Identifying densification

BATHABILE MSOMI, B.Soc.H.

opportunities and constraints within a defined corridor in South Durban including Umlazi, Isipingo / Reunion, Clairwood / Merebank and Congella / Umbilo.
Client: Strategic Planning Resources.

TERTIARY EDUCATION AND QUALIFICATIONS

2003 – 2006 MSocSci Environmental Management, University of KwaZulu-Natal, Durban

Thesis: Coastal Sensitivity Indicators for Decision Support Systems: A case study of the Greater St Lucia Wetland Park.

2002 BSocSci (Hons) Environmental Management, University of Natal, Durban

Including: Environmental Impact Assessment, Coastal Management, Tourism, Geographical Information Systems, and Research Methods.

Research Paper: The La Lucia – Umhlanga Ridge as an Emerging 'Edge City'.

1999 – 2001 BSocSci Geography, Environmental Management, University of Natal, Durban

PROFESSIONAL CERTIFICATION AND TRAINING

- Shepstone & Wylie's Environmental Law half-day seminar: 2014 EIA Regulations in Context.
- Leadership Development Programme and Personal Mastery
- National Department of Water Affairs - Section 21 (c) and (i) water uses, Dr Wietsche Roets
- National Environmental Management: Waste Act: Key Updates, WSP Environmental
- Sharpening the Tool: New Techniques and Methods in Environmental Impact Assessment (Sean O'Beirne, SE Solutions)
- International certificate course in emotion, outrage and public participation, International Association of Public Participation (IAP2)
- Integrating HIV and Gender Related Issues into the EA Process – SAIEA, UNDP and IAIAAsa certificated course
- Sustainable Livelihoods Where Social and Natural Systems Meet – International Association of Impact Assessors, South Africa (IAIAAsa) certificated course
- The Integrated Coastal Management Act seminar, Shepstone & Wylie
- IAIAAsa - Attendance and participation at IAIAAsa National conference since 2004, and all KZN branch events since 2012 (including legal, ECO, MiniSaSS, coastal management, Green building, Water Use Licensing, Strategic Environmental Assessment, etc.)

EMPLOYMENT HISTORY

**Present Envital
Social and Environmental Consultant**

2008 – 2017 Senior Environmental Consultant (2012 – 2017)

Environmental Consultant (2010 – 2012)

Assistant Consultant (2008 – 2010)

WSP Environmental (Pty) Ltd, Durban, Republic of South Africa

- Successfully manage medium to large EIA projects with international clients and multi-disciplinary teams
- Undertake Social Impact Assessments in line with IFC requirements

- Able to design scientifically defensible studies / assessment to provide relevant solutions
- Stakeholder engagement and community participation
- Key client management and provide bespoke solutions to meet client needs
- Mentor colleagues through daily interactions and informal training
- In-depth disciplinary knowledge and up to date with industry trends

2007 – 2008 Employment whilst travelling – London, United Kingdom

- Visual Response Ltd – Local and International Logistics Assistant
- Elsevier Publishing – Administration and Events
- Able & Cole – Customer Services

**2006 – 2007 Assistant Social and Environmental Consultant
Real Consulting, Durban, Republic of South Africa**

- Integration of sustainability into municipal policy
- Stakeholder engagement and community participation
- Assisted with a variety of local economic development and assessment projects

VOLUNTEER COMMITTEES

- International Association of Impact Assessors, South Africa (IAIAsa)
 - National Executive Committee Member
 - Continued Professional Development Portfolio (2014/15)
 - National Conference Chair Portfolio (2015/16)
 - KZN Chair (2016-18)
- IAIAsa KwaZulu-Natal Branch Committee
 - Events Coordinator (2012 – 2015)
 - Incoming / Vice Chair (2015/16)
 - Chair (2016-2018)

KEY SKILLS

- Strong verbal and written communication skills
- Self-disciplined and professional
- Strong project and administration skills
- Dedicated and enthusiastic
- Valuable team member and strong leadership skills
- Adaptable and welcomes new ideas
- Able to build upon and learn from experiences by applying new knowledge
- Engage with new and challenging assignments for continuous self-development

SELECTED PROFESSIONAL EXPERIENCE

Social Impact Assessments

- Expansion of existing chrome mine, North West
- Several proposed photovoltaic and concentrated solar power generation facilities (125 – 250 MW), Northern Cape
- Multiple proposed (125 mw) wind power generation facilities, Western Cape
- Construction and operation of an industrial facility, Free State
- Expansion of an existing mill, Mpumalanga
- Expansion of a colliery, Mpumalanga
- New shaft at an existing platinum mine, Limpopo
- New underground coal mine, Mpumalanga
- Re-processing of the tailings storage facility, North West
- Consternation and operation of a tidal pool, KwaZulu-Natal
- Biomass boiler renewable energy project, Mpumalanga
- Effluent pipeline diversion, Free State
- Multiple housing and mixed used developments, KwaZulu-Natal

Environmental Authorisation Processes

- Concentrated solar power, Northern Cape
- Expansion of the fuel storage depot, KwaZulu-Natal
- Bulk ore storage, KwaZulu-Natal
- Decommissioning of underground storage tanks, KwaZulu-Natal
- Decommissioning for redundant steel mill, KwaZulu-Natal
- Expansion of polyester manufacturing plant, KwaZulu-Natal
- Multiple river crossing access bridges, KwaZulu-Natal
- Community healthcare center, KwaZulu-Natal
- Construction and operation of a 10MW gas turbine, KwaZulu-Natal
- Expansion of a public hospital, KwaZulu-Natal
- Upgrade of 40 000cubic meter gas storage facility, KwaZulu-Natal
- Photovoltaic Solar Facility, KwaZulu-Natal
- Provincial bulk water pipeline, KwaZulu-Natal
- Upgrade of public open space, KwaZulu-Natal
- Construction of telecommunications masts, KwaZulu-Natal
- Multiple road and highway upgrades, KwaZulu-Natal

Waste Management Licensing

- Recycling of used black oil, KwaZulu-Natal
- Community healthcare center, KwaZulu-Natal
- Industrial operational waste review and licensing, KwaZulu-Natal
- Public hospital expansion, KwaZulu-Natal

Curriculum Vitae
Danielle Sanderson

MSoc.Sci. Environmental Management

- Effluent treatment plant, KwaZulu-Natal

Coastal Planning and Permitting

- Coastal waters discharger permit for reverse osmosis plant, Western Cape
- Coastal waters discharger permit for industrial facility, KwaZulu-Natal
- Stakeholder engagement for developing coastal setback lines, Western Cape
- Development of a shoreline management plan, KwaZulu-Natal
- Environmental management input for expansion of a yacht mole, KwaZulu-Natal

Auditing

- Environmental Control Officer for the development of an oil and gas port, Pemba, Mozambique
- Authorisation and best practice audits of oil recycling and drum reconditioning facilities, KwaZulu-Natal
- Environmental Control Officer for the redevelopment of a soccer stadium, KwaZulu-Natal
- Environmental Control Officer for the decommissioning of redundant steel mill, KwaZulu-Natal
- Environmental Control Officer for bulk water pipelines, KwaZulu-Natal
- Environmental Control Officer for the restoration of fuel pipelines, KwaZulu-Natal

Appendix C

IMPACT ASSESSMENT MATRIX

| Construction Phase | | | | | | | | | |
|--|--|--|-----------------|------------------|--------------------|-------------------------------|------------------------|------------|------|
| Mortimer Smelter | | | | | | | | | |
| Potential Impact | | Extent (E) | Duration (D) | Magnitude (M) | Probability (P) | Significance (S=(E+D+M)*P) | Status (+ve or -ve) | Confidence | |
| Employment Opportunities | Nature of impact: | Short term employment of approximately 250 individuals, most of which will be existing contract labour. Limited unskilled employment opportunities for local community members | | | | | | | |
| | Without Mitigation | 3 | 2 | 4 | 3 | 27 | Low | + | High |
| | degree to which impact can be reversed: | N/A | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | Appointment of local contractors; Employment of local labour as far as possible, particularly for semi and unskilled opportunities | | | | | | | |
| | With Mitigation | 3 | 2 | 4 | 4 | 36 | Medium | + | High |
| Local economic development opportunities | Nature of impact: | Generation of construction phase LED opportunities such as use of local contractors and materials sourced locally | | | | | | | |
| | Without Mitigation | 3 | 2 | 4 | 3 | 27 | Low | + | |
| | degree to which impact can be reversed: | N/A | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | Prioritisation of local contractors and sourcing of materials locally as far as possible | | | | | | | |
| | With Mitigation | 3 | 2 | 4 | 4 | 36 | Medium | + | High |

| | | | | | | | | | |
|--|---|---|---|---|---|----|-----|---|------|
| Nuisance from noise, dust and traffic disturbances | Nature of impact: | Localised disturbance as a result of dust, noise and traffic | | | | | | | |
| | Without Mitigation | 2 | 2 | 4 | 3 | 24 | Low | - | High |
| | degree to which impact can be reversed: | Medium - Implementation of EMPr measures to reduce noise, dust and traffic related impacts, but unlikely to negate completely | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | Air quality, noise and traffic related mitigation measure recommended by relevant specialist and included in the EMPr | | | | | | | |
| | With Mitigation | 2 | 2 | 2 | 2 | 12 | Low | - | High |

| Operational Phase | | | | | | | | | |
|---|---|--|--------------|---------------|-----------------|----------------------------|---------------------|------------|------|
| Mortimer Smelter | | | | | | | | | |
| Potential Impact | | Extent (E) | Duration (D) | Magnitude (M) | Probability (P) | Significance (S=(E+D+M)*P) | Status (+ve or -ve) | Confidence | |
| Improvement in ambient air quality | Nature of impact: | The implementation of the project will result in an improvement in the local ambient air quality | | | | | | | |
| | Without Mitigation | 2 | 4 | 4 | 4 | 40 | Medium | + | High |
| | degree to which impact can be reversed: | N/A | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | None | | | | | | | |
| | With Mitigation | 2 | 4 | 6 | 4 | 48 | Medium | + | High |
| Employment, skills and local economic development | Nature of impact: | Implementation of the project will result in limited new employment opportunities (3 operators). It will however ensure the continued operation of the Mortimer Smelter and therefore ensure existing jobs are retained. | | | | | | | |
| | Without Mitigation | 2 | 4 | 2 | 3 | 24 | Low | + | High |

| | degree to which impact can be reversed: | N/A | | | | | | | |
|---|--|--|--------------|---------------|-----------------|----------------------------|---------------------|------------|------|
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | None | | | | | | | |
| | With Mitigation | 2 | 4 | 2 | 3 | 24 | Low | + | High |
| No-Go | | | | | | | | | |
| Potential Impact | Mitigation | Extent (E) | Duration (D) | Magnitude (M) | Probability (P) | Significance (S=(E+D+M)*P) | Status (+ve or -ve) | Confidence | |
| Lost opportunity to improve ambient air quality | Nature of impact: | If the project does not go ahead the opportunity to improve the ambient air quality will not be achieved | | | | | | | |
| | Without Mitigation | 2 | 3 | 4 | 4 | 36 | Medium | - | High |
| | degree to which impact can be reversed: | N/A | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | None | | | | | | | |
| | With Mitigation | | | | | | | | |
| Potential risk of closure (resulting in loss of employment and local economic benefits) | Nature of impact: | There is the potential for the Mortimer Smelter to be temporarily or permanently closed as a result of not meeting the 2020, this closure would result in the loss of employment, and local economic benefits currently supported by the current operations. | | | | | | | |
| | Without Mitigation | 3 | 4 | 4 | 3 | 33 | Medium | - | High |
| | degree to which impact can be reversed: | N/A | | | | | | | |
| | degree of impact on irreplaceable resources: | N/A | | | | | | | |
| | Mitigation Measures | None | | | | | | | |
| | With Mitigation | | | | | | | | |

