



Social Impact Assessment Report for the Proposed
Siyanda Ferrochrome Smelter on the farm Grootkuil
409 KQ Near Northam

SLR Project No.: 7AY.19057.00006

Report No.: 1

Revision No.1

August 2016

Siyanda Chrome Smelting Company (Pty) Ltd

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SOCIAL IMPACT ASSESSMENT REPORT FOR THE PROPOSED SIYANDA FERROCHROME SMELTER ON THE FARM GROOTKUIL 409 KQ NEAR NORTHAM

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ACRONYMS AND ABBREVIATIONS

Acronyms / Abbreviations	Definition
AIDS	Acquired Immunodeficiency Syndrome
AQIA	Air Quality Impact Assessment
ASSA	Actuarial Society of South Africa
BBKTA	Bakgatla-Ba-Kgafela Traditional Authority
BPDM	Bojanala Platinum District Municipality
EclA	Economic Impact Assessment
EIA	Environmental Impact Assessment
EIA and EMPr	Environmental Impact Assessment and Environmental Management Programme report
EIAR	Environmental Impact Assessment Regulations
ESMS	Environmental and Social Management System
EP	Equator Principles
EPPS	Equator Principles Performance Standards
ESMP	Environmental and Social Management Plan
FeCr	Ferrochrome
HIV	Human immunodeficiency virus
IDP	Integrated Development Plans
IFC	International Finance Corporation
GDP	Gross Domestic Product
LP	Limpopo Province
MKLM	Moses Kotane Local Municipality
MTA	Mmantserre Traditional Authority
NEMA	National Environmental Management Act
NIA	Noise Impact Assessment
NWP	North West Province
PGGP	Province's Gross Geographic Product
PPP	Public Participation Process
SCSC	Siyanda Chrome Smelting Company (Pty) Ltd
SDP	Spatial Development Plan
SIA	Social Impact Assessment
SLP	Social Labour Plan
SMD	Statistics Modelling Report
StatsSA	Statistics South Africa
TIA	Traffic Impact Assessment
TLM	Thabazimbi Local Municipality

UG2	Upper Group 2 Reef
USM	Union Section Mine
VIA	Visual Impact Assessment
WDM	Waterberg District Municipality

SOCIAL IMPACT ASSESSMENT REPORT FOR THE PROPOSED NEW FERROCHROME SMELTER NEAR THE TOWN OF NORTHAM

1 INTRODUCTION

1.1 INTRODUCTION TO THE PROPOSED PROJECT

Siyanda Chrome Smelting Company (Pty) Ltd (SCSC) is a subsidiary of Siyanda Resources (Pty) Ltd (Siyanda). Siyanda is a resource investment company, formed in 2004 by black mining engineers and black professionals. Siyanda's focus is on the development and acquisition of mining and beneficiation Projects, including management of these assets to ensure optimal performance.

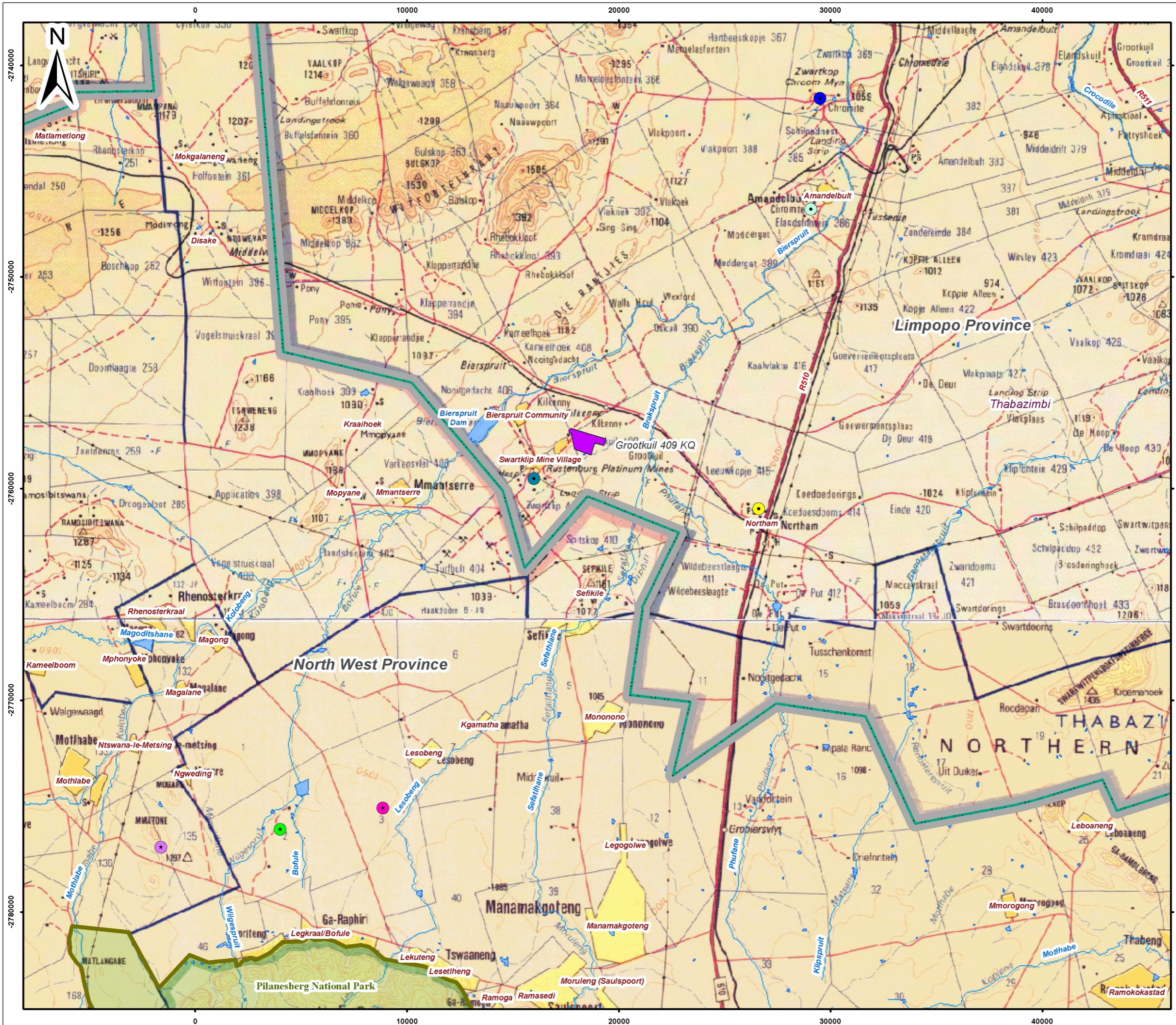
SCSC's focus is on developing new and innovative beneficiating capacity in South Africa to capitalise on opportunities created from the processing of Upper Group 2 Reef (UG2) chrome concentrate by SCI, the increasing abundance of UG2 chrome concentrate available in South Africa and the changing legislative environment in respect of the export of this ore for beneficiation offshore.

SCSC proposes to construct a new ferrochrome (FeCr) smelter complex near the town of Northam in Limpopo Province. The regional setting of the Project is presented in Table 1 and Figure 1 below, Figure 2 illustrates the local setting.

TABLE 1: REGIONAL SETTING OF THE PROJECT

Aspect	Detail
Province	Limpopo Province (LP)
Magisterial district	Northam
District authority	Waterberg District Municipality (WDM)
Local authority	Thabazimbi Local Municipality (TLM)
Municipal wards	Ward 5
Farms on which Project will take place	Portion 3 of the Farm Grootkuil 409 KQ
Current land use	Previously farming, currently not actively farmed
Nearest towns	Northam, approximately 8km to the south-east
Presence of servitudes	Powerline, water pipeline and railway line
Use of immediately adjacent land	Mining, crop farming, game reserve, residential
21 digit Surveyor General Code for each farm portion	Portion 3 of the farm Grootkuil 409 KQ Surveyor General Code: T0KQ0000000040900003
Co-ordinates	Point A: 24° 55' 22.39" S and 27° 12' 28.77" E (start point of access road corridor) Point B: 24° 55' 9.77" S and 27° 10' 27.56" E (western corner of preferred smelter infrastructure area) Point C: 24° 55' 42.41" S and 27° 10' 39.67" E (southern corner of

Aspect	Detail
	<p>preferred smelter infrastructure area)</p> <p>Point D: 24° 55' 24.86" S and 27° 11'26.17" E (eastern corner of preferred smelter infrastructure area)</p> <p>Point E: 24° 57' 55.86" S and 27° 13' 40.15" E (start point of powerline)</p>



Legend

- Project Infrastructure Area
- Dams
- Rivers
- Roads
- Villages
- Municipal Boundaries
- Provincial Border
- Amandelbult Mine
- Northam Mine
- Union Section Mine
- Zwartkop Mine
- Magazynskraal Platinum Mine (Proposed)
- Sedibelo Platinum Mine
- Pilanesberg Platinum Mine

Reserves

Existing

- Pilanesberg National Park (Including Black Rhino Game Reserve)

0 2 4 6 8 Kilometers

Scale: 1:175 000 @ A3

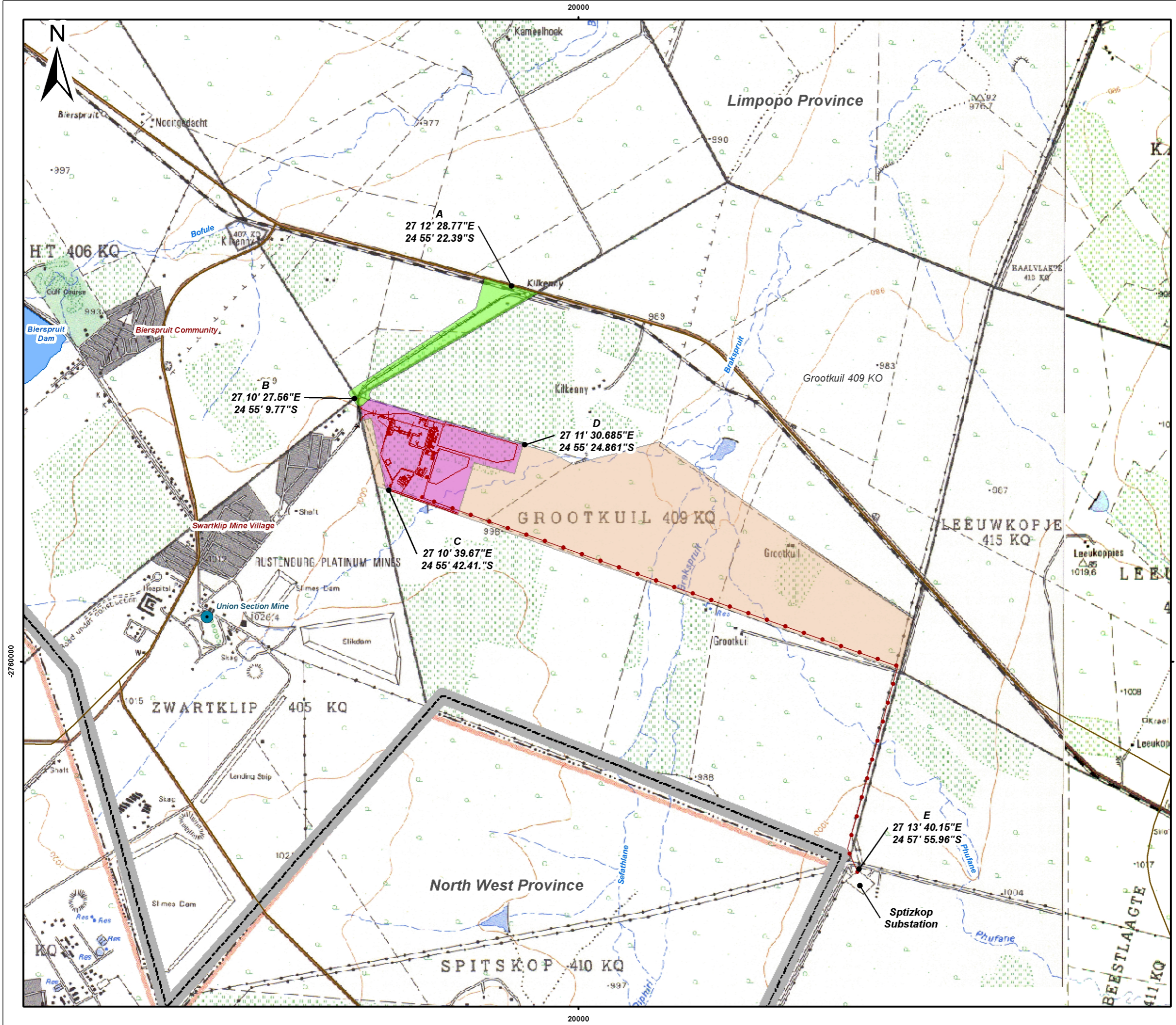
Projection: Transverse Mercator
Datum: Hartbeeshoek, LO27

Siyanda Chrome Smelting Company (Pty) Ltd

Figure 1
Regional Setting

SLR

SLR Consulting (Africa) (Pty) Ltd
P O Box 1596, Cramerview, 2060, South Africa
Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978



- Legend**
- Project Infrastructure Area
 - Road Access Corridor
 - Farm Portion 3 of Grootkuil 409 KQ
 - Proposed Powerline Route
 - Proposed Infrastructure Layout
 - Rivers and Streams
 - 20m Contour Lines
 - Dams
 - Roads
 - Marsh and Vlei
 - Cultivated Land
 - Provincial Border

0 0.5 1 1.5 Km
 Scale: 1:80 000 @ A3
 Projection: Transverse Mercator
 Datum: Hartbeeshoek, LO27

Siyanda Chrome Smelting
 Company (Pty) Ltd

Figure 2
Local Setting

SLR
 SLR Consulting (Africa) (Pty) Ltd
 P O Box 1596, Cramerview, 2060, South Africa
 Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978

1.2 TERMS OF REFERENCE

Synergistics Environmental Services (Pty) Ltd (Synergistics), a part of SLR Group of companies, was appointed by SCSC to undertake a Social Impact Assessment (SIA). The main objective of this study is to advise the Environmental Impact Assessment (EIA) of the potential social impacts associated with the proposed Project.

The terms of reference for the study are outlined below:

- describe the baseline social conditions of the Project area;
- identify, describe and assess the potential social impacts;
- define measures to mitigate and manage the potential social impacts;
- comply with the National Environmental Management Act, 107 of 1998 (NEMA); and
- comply with Equator Principles Performance Standards (EPPS).

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

1.3 SPECIALIST DETAILS AND DECLARATION OF INDEPENDENCE

The SIA Project team for this study is outlined in Table 2.

TABLE 2: THE SIA TEAM

Names of the specialists	Qualifications	Relevant experience
Kerryn McKune Desai	MA Geography and Development	14 years
Stella Moeketse	Master of Social Sciences in Environmental and Geographical Studies	7 years

Neither Synergistics nor the above-mentioned Project team members have any interest in the proposed Project other than fair remuneration for consulting services rendered as part of the SIA process. Personal *curriculum vitae* in support of their qualifications, expertise and experience to undertake studies of this nature, are attached in Appendix A.

1.4 POLICY, LEGAL AND ADMINISTRATION FRAMEWORK

This SIA has been compiled in accordance with requirements of the National Environmental Management Act, 107 of 1998 (NEMA) and the Environmental Impact Assessment Regulations (EIAR) (733 of 2014) Appendix 6 outlining the specific requirements for specialist reports. Table 3 below indicates the location of each requirement in this report.

TABLE 3: REQUIREMENTS OF SOCIAL IMPACT ASSESSMENT REPORT

No.	NEMA Regs (2014) - Appendix 6	Reference to relevant section in report
1	A specialist report or a report on a specialised process prepared in terms of these Regulations must contain	
(a) i	the person who prepared the report	Section 1.3
(a) ii	the expertise of that person to carry out the specialist study or specialised process	Section 1.3
(b)	a declaration that the person is independent in a form as may be specified by the competent authority	Section 1.3
(c)	an indication of the scope of, and the purpose for which, the report was prepared	Section 1.2.
(d)	the date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 1.3 Seasonality is not relevant for SIA
(e)	a description of the methodology adopted in preparing the report or carrying out the specialised process	Section 1.3
(f)	the specific identified sensitivity of the site related to the activity and its associated structures and infrastructure	Section 3 No specific sensitivity identified
(g)	an identification of any areas to be avoided, including buffers	None identified
(h)	a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	Section 1.1 and 3.1
(i)	a description of any assumptions made and any uncertainties or gaps in knowledge	Section 1.4.
(j)	a description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment	Section 2.2 and 4.
(k)	any mitigation measures for inclusion in the EMPr	Section 4.
(l)	any conditions for inclusion in the environmental authorisation	Stated mitigation measures
(m)	any monitoring requirements for inclusion in the EMPr or environmental authorisation	As per EMPr
(n)	a reasoned opinion -	
.i	as to whether the proposed activity or portions thereof should be authorised	Section 5.
.ii	if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 4.
(o)	a description of any consultation process that was undertaken during the course of carrying out the study	Section 1.5

(p)	a summary and copies if any comments that were received during any consultation process	PPP feedback included in the EIA, see Appendix B.
(q)	any other information requested by the competent authority.	None requested

The SIA process and report has been undertaken in accordance with the requirements for social performance as outlined in the Equator Principles (EP) (2013) and the International Finance Corporation's (IFC) Performance Standards of 2012. Most notably, the SIA aimed to align with:

- Equator Principle 2: Environmental and Social Assessment;
- Equator Principle 3: Applicable Environmental and Social Standards;
- Equator Principle 4: Environmental and Social Management System and Equator Principles Action Plan;
- Equator Principle 5: Stakeholder Engagement;
- Equator Principle 6: Grievance Mechanism;
- IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
- IFC Performance Standard 2: Labour and Working Conditions; and
- IFC Performance Standard 4: Community Health, Safety and Security.

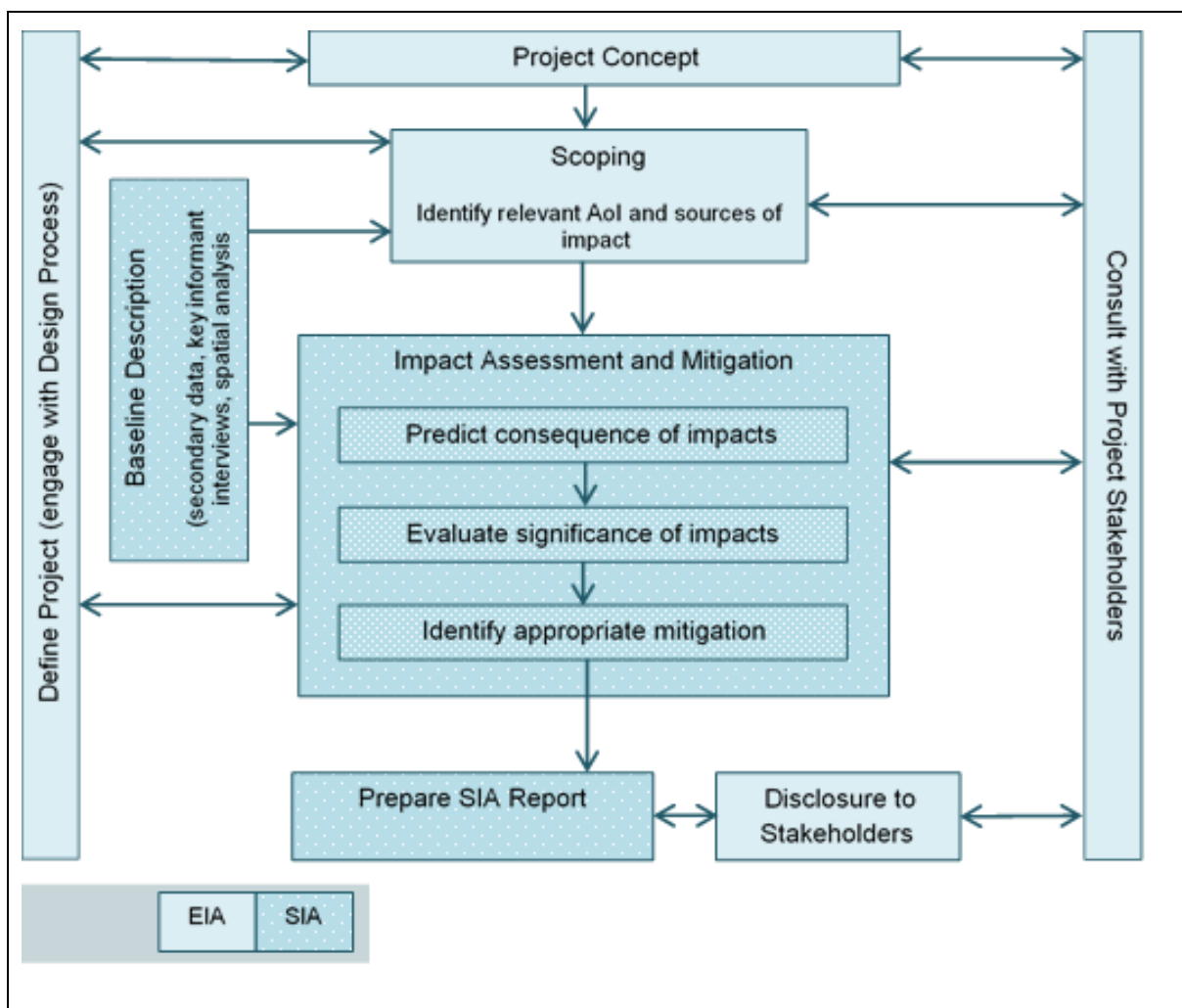
IFC Performance Standard 5: Land Acquisition and Involuntary Resettlement and IFC Performance Standard 7: Indigenous People do not apply to this Project.

1.5 PROJECT METHOD

1.5.1 OVERVIEW

An overview of the SIA process, as it fits broadly into the EIA process, is presented in Figure 3 below. The parallel EIA activities are crucial to the SIA process as they inform the scope of the study and communicate the findings to the relevant stakeholders via the Public Participation Process (PPP). Feedback from stakeholders was continuously used to inform the SIA. The limitations of the process are provided in Section 1.6.

FIGURE 3: SIA PROCESS



1.5.2 DATA GATHERING AND ANALYSIS

Relevant secondary data sources were reviewed to compile a baseline for the affected Project area and ensure comprehensive identification and coverage of relevant issues. Sources included:

- statistical data from Census 2011 and 2001;

- relevant planning and policy frameworks for the area, such as the Integrated Development Plans (IDPs), Spatial Development Plans (SDP), and Actuarial Society of South Africa's (ASSA) 2011 Statistics Modelling Report (SMR);
- maps and aerial photographs of the area;
- noise impact assessment;
- air quality impact assessment;
- visual impact assessment; and
- traffic impact assessment.

To supplement existing secondary data, a site visit was undertaken in March 2016 and meetings were held with key stakeholders (face-to-face and telephonic); these included:

- telephonic meeting with Mr Masood Mahommed: 22 March 2016;
- telephonic meeting with Ms Marietjie Schoeman: 22 March 2016;
- focussed meeting with relevant officials; Moses Kotane Local Municipality Offices, 29 March 2016;
- focussed meeting with Ward Councillors for Wards 7 and 8: Moses Kotane Local Municipality: Nodal Office in Mantserre, 29 March 2016;
- focussed meeting with relevant official; Thabazimbi Local Municipality Offices, 30 March 2016; and
- focussed meeting with Ward Councillor for Wards 5; Northam Taxi Rank Offices, 30 March 2016.

Feedback from the PPP was reviewed and incorporated into the SIA to inform the baseline, impact identification and impact description. The initial PPP was undertaken by means of public and focussed meetings with various stakeholders by the EIA team in July 2015 (see Table 4 and Table 5). The key issues raised by the stakeholders include:

- noise;
- air quality;
- traffic and transport;
- visual;
- waste management;
- continuation of existing land uses;
- in-migration;
- pressure on infrastructure and services;
- job opportunities;
- training and skills development;
- tourism; and
- crime, safety and security.

The detailed comments and responses as related to the SIA are included in Appendix B; the full set of comments and responses are included in the EIA, Appendix C.

TABLE 4: PUBLIC AND FOCUSED MEETINGS

Venue	Date	Time	Meetings held
Mantserre Traditional Office	21 Jul 2015	11h00	General public meeting
Swartklip Recreational Centre	21 Jul 2015	16h00	General public meeting
Kwetsheza Community Meeting Point	22 Jul 2015	09h00	General public meeting
Northam Town Hall	23 Jul 2015	09h00	General public meeting

TABLE 5: INFORMED CONSULTATION MEETINGS

Venue	Date	Time	Meetings held
Union Section Mine	13 May 2015	11h00	Focussed meeting with Union Mine
Swartklip Recreational Centre	23 Jul 2015	09h00	Focussed site meeting with the regulatory authorities

1.5.3 IMPACT IDENTIFICATION, MITIGATION AND ASSESSMENT

The identification, description and assessment of impacts and formulation of mitigation measures, drew on relevant secondary documentation, key informant interviews, scoping level PPP, Project description provided and professional judgement of the social specialists. All socio-economic comments received from interested and/ or affected parties (I&APs) were incorporated and addressed accordingly in the report (See Chapter 4 and Appendix B).

Each of the identified impacts has been assessed based on the impact rating methodology provided by SLR in order to determine their likely significance, where $\text{Significance} = \text{Consequence (Severity, Spatial Extent and Duration)} \times \text{Probability}$. The methodology used to assess impacts and the proposed mitigation measures is presented in Chapter 4. Impacts have been assessed for the construction, operation and decommissioning/closure phases. Mitigation measures are proposed that will be implemented to avoid, minimise or reduce any adverse impacts. Assuming effective implementation of the measures, each impact was re-evaluated using the same assessment criteria to determine the significance of the residual impacts following mitigation.

1.6 ASSUMPTIONS AND LIMITATIONS

1.6.1 ASSUMPTIONS

- It is anticipated that social impacts will be incurred during the construction, operational and decommissioning/ closure phases of the Project.
- The SIA assumes that all mitigation measures defined in the economic, noise, air quality, visual and traffic impact assessments will be implemented by SCSC.

1.6.2 LIMITATIONS

- It was assumed that information provided by SCSC and SLR EIA team was accurate and that the technical specifications of the Project and site selection are in accordance with the relevant requirements.
- This report and assessment are dependent on the accuracy of the publicly available secondary information; such as Statistics South Africa (StatsSA, 2011). Where possible, the information was verified during a site visit. The data was considered sufficient for the purpose of this study.
- The opinions expressed during the PPP were sourced from the members of the public who attended the meetings or through written comment. These opinions can therefore not be taken to represent the views of all the community members who are based around the Project area.
- The local context assessment is limited to communities within 10km from the proposed Project location, which includes wards 5, 7 and 8 of TLM in the LP and wards 5 and 7 of the MKLM in the North West Province (NWP).
- The social environment constantly changes and adapts to change. It is therefore difficult to predict impacts to a high level of accuracy.

1.7 REPORT LAYOUT

The remainder of this report is presented as follows:

- Section 2: Project description;
- Section 3: Social and economic environment;
- Section 4: Impact assessment and proposed mitigation;
- Section 5: Conclusion;
- Section 6: References;
- Appendix A: Specialist CVs;
- Appendix B: Comments from interested and/ or affected parties (I&APs);
- Appendix C: Site Layout Alternatives; and
- Appendix D: Photos of surrounding communities.

2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

SCSC proposes to establish a stand-alone smelter complex to process UG2 chrome concentrate from surrounding chrome recovery plants in and around the town of Northam in order to extract ferrochrome. The proposed smelter complex will comprise the following surface infrastructure:

- two 70 MW DC furnaces;
- crushing and screening plant;
- raw materials offloading area;
- railway siding;
- slag dump
- baghouse slurry dam and
- material storage stockpiles and related handling areas (raw materials, product stockpiles, fuel, lubricants, process materials, general and hazardous substances).

Additional supporting surface infrastructure required as part of the proposed smelter complex includes:

- workshops and stores;
- power lines and pipelines;
- water management (clean and dirty water dams, clean and dirty storm water controls);
- communication and lighting facilities;
- offices;
- change houses and ablutions facilities; and
- security facilities.

Site activities associated with construction and operational phases are outlined below.

Key construction activities associated with the proposed Project include:

- clearing of vegetation;
- stripping and stockpiling of soil resources and earthworks;
- site establishment of temporary offices, portable toilets, clinic, contractor lay down area; temporary workshops, stores, wash bay, laboratory, and temporary non-mineralised waste storage facilities;
- establishment of stormwater management facilities;
- installation of potable and process water tanks and fire water tank;
- establishment of access road, internal roads, weighbridges, powerline and pipelines;
- construction of stockpile areas;
- construction of crushing and screening plant; and

- construction of security control gates.

Key operational activities associated with the proposed Project include:

- transportation of chrome concentrate to Siyanda via rail and road;
- use of weighbridges;
- temporary storage of concentrate and reductants prior to use;
- operation of the furnace and smelting of the concentrate;
- crushing and screening of chrome;
- storage of mineralised waste (slag and baghouse dust slurry);
- operation of conveyor;
- transportation of chrome to the various destinations via rail;
- transportation of slag and baghouse dust slurry to the disposal facilities; and
- operation of offices and security gates.

Additional Project information relevant to the SIA is provided below:

- It is estimated that approximately 700 **construction phase jobs** and 280 **operational phase jobs** will be created. All workers (contractors and full-time employees) will be expected to provide **accommodation** for themselves. In this case, it is likely that the majority of them will be located in nearby communities and in Northam town. SCSC is currently considering various options regarding housing support; however, this will be confirmed at a later stage of the Project. SCSC will engage relevant authorities, town planners and other stakeholders in this regard.
- It is proposed that **transportation** of materials to and from site will be by road and rail. Road access to site will be via D869 (Brits Road) (which runs between Northam and Dwaalboom). Within the site boundary, haul roads, conveyors and pipelines will be used. SCSC will construct a railway siding for the purposes of the proposed Project which will merge onto the existing Union Section Mine railway line which meets the main Spoornet railway line at the Kilkenny station/siding approximately 2km north of the Project area (see Figure 2 and Figure 4). This railway line will be used to transport incoming chrome concentrate and flux/reductant and will also be used to despatch product to market. Employees and contractors will use buses, minibus taxis or private vehicles during both construction and operational phases of the proposed Project.
- It is proposed that **potable water** will be made available from the adjacent Union Section Mine (USM); Only limited process water will be required for the proposed smelter Project. As with potable water, process water will be sourced from the adjacent USM.
- General and hazardous non-mineralised **waste** generated by the proposed Project will be collected on site, temporarily stored in designated areas and disposed at off-site permitted waste disposal

facilities. Mineralised waste (slag and baghouse dust) will be disposed of onto two separate facilities. Sewage will be treated at the municipal sewage treatment facility.

- **Power** will be sourced from the Eskom substation at Spitskop (southeast of the farm Grootkuil) via a 275 kV line which will be run along a single support structure. The powerline will, as far as is practically possible, traverse existing servitudes and Siyanda property.
- **Project timeframes:** If approved, construction is planned to commence in the first half of 2017. It is estimated that the construction phase will be 24 months and will comprise one shift per day from 07h00 to 17h00 from Monday to Sunday. Processing activities will reach full production within 18 months. The life span of the proposed Project is currently estimated to be approximately 30 years minimum. The uncertainty around the life span is centred around the fact that the operation phase will be dependent on market conditions as well as the availability of required supply of the product from suppliers. The proposed smelter complex will operate 24 hours a day, 7 days a week (Monday to Sunday) and will consist of two twelve hour shifts (06h00 to 18h00 and 18h00 to 06h00) per day.

2.2 PROJECT ALTERNATIVES RELEVANT TO THE SIA

Alternatives for the proposed Project have been dealt with in detail in the EIA report; however, the road access alternatives are relevant to this study as there may be potential social impacts associated with one of the alternatives (although it is not the preferred option). In this regard, the location of the smelter complex (as indicated in Figure 2) determined the routing alternatives considered for the access road. The access road will need to originate from the D869 (Dwaalboom road), north of the site, to provide access to the smelter complex. As a result, three access road alternatives were considered (see Appendix C).

Alternatives two and three were considered in response to IAP concerns regarding alternative one. In addition, the relative length of alternative one (when compared to alternatives two and three) resulted in a larger footprint with greater impacts. Alternative one was therefore not considered further.

Alternative two is the preferred alternative, however the development of alternative two will depend on third party land access as well as agreement from Transnet in support of a new railway level crossing. In the event that third party land access and agreement from Transnet cannot be obtained, alternative three is the next preferred alternative. In this respect, alternative three required a limited built access road and construction of a new extension. The built stretch of the access road would be located approximately 150m east of privately owned residences (home to the land owner and a farm worker). Should alternative two not be approved, alternative three would result in direct impacts to the residents; inclusive of, but not limited to, noise, air quality and visual impacts.

3 SOCIAL AND ECONOMIC BASELINE DESCRIPTION

This Chapter describes the socio-economic characteristics of the potentially affected area in order to develop an understanding of the broad social and economic conditions of the environment. The proposed Project has the potential to result in both positive and negative socio-economic impacts. As such, it is important that the socio-economic baseline conditions are understood to ensure accurate identification and assessment of potential impacts associated with the proposed Project.

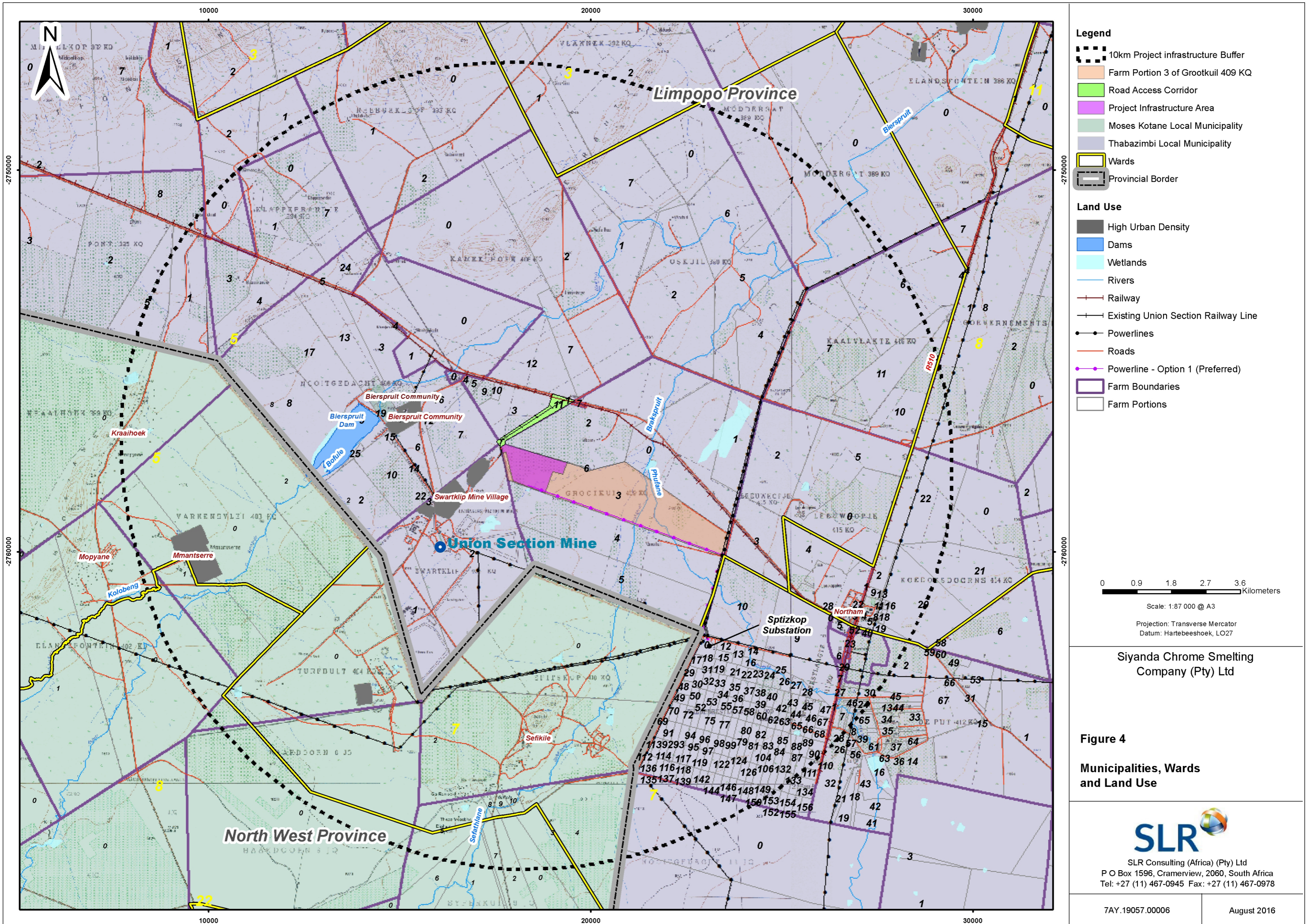
3.1 AREA OF INFLUENCE

For the purpose of this SIA, the proposed Project's indirect and direct areas of influence (hereafter referred to as the Project area), are described below.

Indirectly affected area: The Project has the potential to generate national, provincial and municipal level impacts, it is located on the LP and NWP boundary (see Figure 1). The Project footprint is in the TLM, which is in WDM of the LP. Project impacts will extend into the neighbouring MKLM, in BPDM of NWP. Some of the positive economic impacts (addressed in the Economic Impact Assessment) may be experienced at the national level, while most of the negative impacts are likely to affect the more immediate area.

Directly affected area: The proposed Project is located on portion 3 of the farm Grootkuil 409 KQ. The preferred powerline and access route to the site traverse portions 3 of the farm Grootkuil 409 KQ and portions 1 and 11 of the farm Kameelhoek 408 KQ, respectively. As previously mentioned (Section 2.2), there is a possibility that the access road will traverse portion 3 of the farm Kameelhoek 403 KQ should alternative three be selected (see Appendix C).

Neighbouring farms and local communities located within a 10km radius may experience a range of impacts related to the proposed Project; as such, these farms and local communities are considered to represent the direct area of influence (see Figure 4). The proposed Project is located in Ward 5 of the TLM, other wards located within a 10km radius of the proposed Project include Wards 7 and 8 in TLM, and Wards 5, 7 and 8 in MKLM (see Figure 4).



3.2 ADMINISTRATION

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

3.2.1 POLITICAL STRUCTURES OF GOVERNMENT

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

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

3.2.2 TRADITIONAL AUTHORITIES

Traditional authorities refer to mainly rural areas whereby chiefs and their councils are responsible for administrative tasks at a community level and in mobilising local communities if there are any investment Projects within their area of jurisdiction. The Project itself is not located within a traditional area; however, there are two traditional authorities in close proximity to the proposed Project area namely Bakgatla-Ba-Kgafela Traditional Authority (BBKTA) and Mmantserre Traditional Authority (MTA) in the NWP.

3.3 POPULATION

According to StatsSA (Census 2011), LP has a population of approximately 5,4 million residents, with an average household size of 3.7. The WDM is geographically, the largest municipality in the LP but has the smallest population compared to the other districts. The WDM population constitutes 12.6% of the total provincial population with an average household size of 3.5. The TLM constitutes approximately 12.5% of the total population of the WDM with an average household size that is lower than the above-mentioned at 2.8. Between 2001 and 2011, the population growth rate was 0,8% at the Provincial level followed by 1,2% at the District level and TLM has the highest rate of 2,6% (Census 2011).

NWP has a population of approximately 3,5 million residents, with an average household size of 3.2 and growth rate of 1,6%. The BPDM population constitutes 42% of the provincial population with an average

household size of 2.9 and 2,2% growth rate. MKLM population constitutes approximately 16% of the District Municipality population with an average household size of 3.2 (same as the province) and 0,2% growth rate (Census 2011).

The overall population in LP is young with the majority (60%) being below 35 years of age and there are more females than males (54% and 46%, respectively) (Census 2011). At the municipal levels, the population is also young, where approximately 65% are less than 35 years. Contrary to the Province, there are more males in WDM (50,5%) and TLM (58,5%). According to StatsSA (Census 2011), Black Africans compromise the majority of the population (96,8%) in the Province followed by Whites (2,6%), and Coloureds and Indian/Asians (0,3%). A similar pattern is observed at the municipal levels. The majority of the population in LP, WDM and TLM (59,8%, 64,3% and 63%, respectively) is within the working age group (15 to 64 years); there is a notably higher percentage at the District and Local Municipality levels, probably linked with in-migration in search of employment opportunities (Census 2011). Dependency ratios in LP, WDM and TLM are estimated to be 67,3%, 55,5% and 30,8%, respectively; the significant difference in dependency is likely to reflect the high number of migrants in TLM.

Similar to the LP statistics above, the population of NWP, BPDM and MKLM is also young with an average of 58% being under 35 years of age (Census 2011). There are also more men in the Province (50,7%) and in BPDM (57,8%). Contrary to the Province and District municipality, there are marginally more females in MKLM (50,2%). Black Africans compromise the majority population group in the Province (90%) followed by Whites (7,3%), Coloureds (2%), and Indian/Asians (0,6%). A similar pattern is also observed at the municipal levels. The majority of the population in NWP, BPDM and MKLM (64,7%, 68% and 63%, respectively) is within the working age group. Dependency ratios in NWP, BPDM and MKLM are estimated at 54,5%, 47,3% and 58,6% respectively; these are quite different to those observed in LP, WDM and TLM.

Table 6 and Table 7 below present statistical information for the wards located within the Project area.

TABLE 6: TLM WARDS 5, 7 AND 8 POPULATION INFORMATION

Aspect	Ward 5	Ward 7	Ward 8
Population	1,192	4,053	1,542
Males	57,8%	58,4%	64%
Females	42,2%	41,6%	36%
Black Africans	55%	91%	91%
Whites	42,7%	7%	7%
Other Races	2,3%	2%	2%

StatsSA (Census 2011)

TABLE 7: MKLM WARDS 5, 7 AND 8 POPULATION INFORMATION

Aspect	Ward 5	Ward 7	Ward 8
Population	10,393	7,287	7,137
Males	49,6%	56%	53%
Females	50%	44%	47%
Black Africans	99%	99,5%	99%
Whites	-	-	-
Other Races	1%	.5%	1%

StatsSA (Census 2011)

3.4 LANGUAGE

According to StatsSA (Census 2011), the majority of the population in LP and WDM speaks Sepedi (Northern Sotho) (52,9% and 56,4%) whilst the majority of the population in TLM speaks Setswana (54%). The majority of the population in NWP, BPDM and MKLM speaks Setswana (63,4%, 55,3% and 81,6%). The informal settlement, Kwetsheza, which is associated with Sefikile Village in MKLM has many Xhosa speaking people. Given the diversity in the area resulting from in-migration, many languages are spoken.

3.5 EDUCATION

Over 17% of the working age population (15 to 64 years) in LP has no formal education and only 22,4% has obtained a grade 12/matric education (Census, 2011). The WDM closely follows the Province with 12,5% of the working age population having no formal education and 23,3% having obtained a grade 12/matric education. Both the Province and District have 9% of the working age population with tertiary level education. Although TLM cannot be considered to have high levels of education, its population has higher education levels as compared to the Province and District, this is most likely due to the number of qualified employees working at the various mining operations. Nearly 9% of the working age population has no formal education, 56,4% has obtained a grade 12/matric education and 8% have higher educational training. According to Waterberg District IDP Report (2012/13), there are 333 schools in the WDM and 67 of them are based within the TLM.

Nearly 12% of the working age population in the NWP has no formal education, 25,2% has a grade 12/matric education and 7,7% has higher educational training. Approximately 20% of the BPDM and 33% of MKLM's working age population have completed matric whilst 5,6% and 10,4%, respectively, has no formal education. The remainder has some form of formal education. The education levels are very low across all levels¹.

¹ Information relating to the number of schools in the NWP, BPDM and MKLM could not be located.

3.6 ECONOMIC OVERVIEW

3.6.1 ECONOMIC ACTIVITIES

According to WDM IDP Report (2013), mining plays an important role in LP's economy, it is currently the most dominant contributor to the Province's Gross Geographic Product (GGP) at 29,4%. The sectors with the smallest contribution to the GGP are manufacturing, agriculture, forestry and fishing and the construction industry at 2.5% each. WDM's main GDP contribution comes from mining (47,4%) and agriculture (21%); another significant contributor is tourism (WDM IDP, 2011/12). Mining activities in WDM include minerals such as platinum, iron ore, coal and diamonds. WDM is home to a world-renowned biosphere and as a result, tourism plays a major role in the economy. The WDM's agricultural activities comprise 30% of the Province's agricultural activities, contributing over 4% to the Districts GGP. These activities include crop, cattle and game farming.

Similar to the Province and District, TLM's economy is driven by three pillars; mining, agriculture and tourism² (Thabazimbi Local Municipality Agriculture Strategy Report, 2012). Although mining constitutes the lowest land use in the TLM, statistics indicate that it contributes significantly to the Gross Domestic Product (GDP) and employment rates. TLM contributes 36% to the District's GDP. According to TLM IDP Report (2015), mining has been instrumental through its recruitment practices in driving significantly in-migration into the municipal area, thereby contributing significantly to the current population profile. Agriculture and eco-tourism also contribute fairly significantly to the economy; agricultural activities constitute 40% of the District's agricultural activities. According to WDM IDP Report (2013) maize, sorghum, sunflowers, wheat, soya beans, groundnuts, paprika, potatoes, tomatoes, onions, cabbage and citrus fruits are commonly grow in TLM. Cattle farming including cattle ranches and poultry and pig production are also common in TLM. Game farming activities within TLM include auctioning of animals, hunting and processing food items (Thabazimbi Local Municipality Agriculture Strategy Report, 2012).

Similar to LP above, mining plays an important role in NWP, BPDM and MKLM's economy and it is the most dominant sector contributing to the economy (59,9%) (BPDM IDP, 2012/17). Other important sectors in BPDM are manufacturing, wholesale and retail trade and community, social and personal services. The sectors with the smallest contributions to the Province's economy are electricity and water as well as agriculture, forestry and fishing and construction industry. BPDM is the economic growth engine of NWP and contributes the vast majority of total production output (BPDM IDP, 2012/17). The economy of MKLM is directly linked to its location within the major tourism and mining belt of the NWP, Pilanesberg and Sun City (BPDM IDP, 2012/17).

² No industry specific percentages we provided for the Thabazimbi Local Municipality

3.6.2 EMPLOYMENT AND INCOME

Consistent with low education levels in LP, the current unemployment rate in the Province is 38.9%. Both the District and Local municipalities' unemployment rates are lower than the Province's and are estimated at 28,1% and 20,6%, respectively. Similar to the Province, mining is a major source of employment at the District level³. Agriculture employs approximately 2.2% of the permanent employees and 4.6% of seasonal employees in LP (Thabazimbi Local Municipality Agriculture Strategy Report, 2012). Although mining has small area coverage in terms of land use in TLM and only contributes 16% in terms of employment, it is by far the biggest contributor to the GDP in TLM (TLM IDP Report, 2015). Unlike the District, agriculture creates more jobs (30%) in TLM. According to Stats SA (Census 2011), the average annual household income for LP, WDM and TLM is R56,841, R72,421 and R101,058, respectively.

Consistent with low education levels in NWP, the current unemployment rate in the Province is 31,6%, 30,7% in BPDM and 38% in MKLM. According to BPDM IDP (2012/17), 43% of the BPDM's economically active population is employed in the mining sector making it the District's major source of employment. Manufacturing accounts for 6,1%, wholesale and retail trade 15,4%, and community, social and personal services 13,6%. BPDM contributes the majority of employment opportunities within NWP; where, 0.12% of households earn less than R2,400 per household per annum, and nearly 60% earn between R2,500 and R10,000 per month. Nearly 27% of households earn more than R11,000 monthly (BPDM, IDP 2015). It is also indicated in the IDP Report that the average annual per capita income in the District increased dramatically from approximately R8,498 per capita in 1996 to R33,858 in 2010. There are very low levels of economically active people in BPDM, especially in MKLM. Between 1996 and 2010, one of the lowest annual per capita income rates has consistently been recorded in MKLM at R21,136 per capita; however these have been increasing at steady rate.

At the ward level, 44%, 40% and 38% of the residents in Wards 5, 7 and 8 of TLM are employed. In all the wards, 40% of individuals earn between R38,201 and R153,3600 per annum. There are far lower rates of employment in MKLM at 24%, 30% and 28% in Wards 5, 7 and 8, respectively. Thirty-one (31%) of the employed residents in Ward 5 earn between R9,600 and R76,400 per annum, 63% from Ward 7 earn between R19,600 and R153,360 per annum and 83% from Ward 8 earn between R9,600 and R153,360 per annum (Census 2011).

3.7 INFRASTRUCTURE AND SERVICES

3.7.1 HOUSING

The majority of the population of LP (89.9%) reside in formal dwellings, nearly 6% reside in informal dwellings and 4,5% reside in traditional dwellings. Similar to the Province, the majority of the WDM and

³ The related statistical information could not be found

TLM population (87,6% and 77,9%) live in formal dwellings and a greater percentage than the Province lives in informal dwellings (11,2% and 20,6%). Approximately 2% of the population in TLM reside in traditional dwellings and 1,2% in WDM. At the ward level, 80% of the residents in Ward 5, ~88% in Ward 7 and 61% in Ward 8 live in formal settlements. The remainder of the population live on farms, smallholdings, and 10% of the population of Ward 8 live in industrial areas.

As compared to LP, a far lower percentage of the population live in formal houses in NWP (77%), BPDM (69,4%) and MKLM (78,5%), and a higher percentage live in informal structures at ~22% in NWP, ~30% in BPDM and 20% in MKLM. Less than 2% of the population live in traditional dwellings. All the residents in Wards 5 and 8 and 93% of residents in Ward 7 reside in traditional settlements (mixture of housing types), the remaining 7% of Ward 7 residents live in industrial areas.

3.7.2 POWER

The most dominant source of energy for lighting in LP is electricity at ~88%. Considerably fewer people in the WDM and TLM make use of electricity compared to the Province. Approximately 55% of households in the District use electricity for lighting, ~7% for cooking and 38% for heating. In TLM, only 35% of the population use electricity for lighting, 33,5% for cooking and 31% for heating purposes, respectively.

The majority of the population in the NWP, BPDM and MKLM use electricity for lighting (75%, 77,2% and 75%, respectively). According to MKLM representatives and ward councillors (interviews held in March 2016), some of the population that reside in Khwetsheza; are not catered for by the municipality's IDP due to people trickling into the municipality after the IDP had been approved and budgeted. Informal dwellings are often associated with illegal power connections; Eskom does not upgrade power allocation regularly and as a result, these illegal connections disrupt power supply and reduce capacity.

3.7.3 WATER AND SANITATION

Access to safe potable water varies between the Provinces. Households with greatest access to piped water (either inside their dwelling or at a communal stand) are in NWP (92%) as compared to ~85% in LP. At the local level, WDM and TLM have the highest percentage of households with access to piped water at ~94% and ~95%, respectively, as compared to BPDM (~90%) and MKLM (80%). Many households have no access to piped water (14% in LP, ~6% in WDM and TLM, ~8% in NWP, ~10% in BPDM, and ~6% in MKLM).

At the ward level in TLM, fewer people have access to piped water as compared to the Local Municipality; access was lowest in Ward 8 (82%) and highest is Ward 7 (89%). Access to piped water in Wards 5, 7 and 8 in MKLM varied considerably at ~87%, 91% and 64%, respectively. Other water sources used included boreholes and water vendors/ tankers. According to MKLM representatives and

ward councillors (interviews held in March 2016), all the villages get their water from the municipality and complement it with borehole water where possible. Furthermore, it was raised that the main problem across all the villages is loss of water through illegal connections that often lead to leakages that affect water supply, reduce water volumes and interrupt supply in some areas.

Approximately 68% of households in LP use pit toilets, ~45% in WDM and 21% in the TLM. In terms of flush toilets, 68% of households in TLM have flush toilets, ~48% in WDM, followed by the Province with ~22%. The Province has the highest number of households without access to toilets at ~7% followed by the Local Municipality with ~6%, and the District at nearly 4%. It was raised in one of the public scoping meetings held in July 2015 that the current Northam sewage plant does not have capacity to cater for the current population as well as the proposed Project. According to a TLM representative (interview held in March 2016), the above-mentioned sewage treatment plant is currently under review and construction work is expected to resume in due course.

Nearly 44% of the households in NWP with toilet facilities utilise flush or chemical toilets, ~39% in BPDM and 1% in MKLM. Sixty-four percent of households in MKLM use pit latrines, 56% in BPDM and ~46% in NWP. Approximately 1% of households in NWP, BPDM and MKLM use bucket toilets and the remainder of households do not have toilets.

3.7.4 REFUSE COLLECTION

Refuse collection in the broad Project area is poor. Limpopo Province has particularly low levels of formal weekly refuse removal at 21% as compared to ~46% in TLM and 63% in WDM. In NWP and BPDM approximately 50.5% of households have refuse removed weekly, whereas in MKLM, 83% have weekly refuse removal. The remaining households use communal or own refuse dumps or have no access to refuse disposal. In all Project affected wards, weekly refuse removal is provided. However, the nearest landfill site, Northam waste landfill site, is heavily over utilised. This site attracts many squatters and salvagers resulting in litter being spread within 1km of the landfill site (EIA Team, Scoping meetings, July 2015).

3.7.5 Roads and Railway

The main roads around the Project site are in good condition and are heavily used by the general public to access USM, surrounding communities, farms, and the town of Northam; they are major routes facilitating cross-province movement (between Limpopo and North West Provinces).

Tarred roads surrounding the Project site include (see Figure 2 and Figure 4 for all the roads):

- Road D869 (Brits Road) which runs in an east-west direction, north of the proposed Project site;
- Swartklip Mine Village/ USM access road that runs in a southerly direction (off Road D869); and

- R510 that runs between Northam and Amandelbult as well as between the Limpopo and North West Provinces.

The roads within and between the communities and farms surrounding the Project site are dirt roads, they are in poor condition with many potholes. During the rainy season the villages are often inaccessible to an extent that people miss work and children miss school.

There is a cargo railway line connecting Northam to Dwaalboom, it runs adjacent to the above-mentioned Road D869 (Brits Road) and is located within an existing servitude.

3.7.6 CRIME

There are 25 police stations in the WDM and six of them are located within the TLM. Common crimes that are committed at the local and district levels include sexual abuse, robbery (including stock theft), motor theft, hijacking and public violence.

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

According to MKLM representatives and ward councillors (interviews held in March 2016), common crimes in the broad area include robbery/ theft (specifically of cattle/ stock which are used at funerals and social gatherings) and rape. It was further indicated that mining and mining related activities have caused instability (in-fighting and protests) in the municipality due to competition for the perceived benefits offered by the mines (eg. jobs, procurement opportunities, and Social Labour Plan (SLP) Projects). The villages of Mmantserre, Mopyane and Sefikile are crime hotspots within the municipality due to high poverty levels caused by low levels of education, the rural setting of the area, and close proximity to the mines. Mokgwase Police Station services these villages, however it is located ~40km away.

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

3.8 DISEASES AND ACCESS TO HEALTH CARE FACILITIES

According to WDM IDP Report (2015/16), South Africa is affected by four epidemics; namely:

- human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS);

- injury (both accidental and non-accidental);
- infectious diseases such as tuberculosis (TB); and
- diarrhoea and pneumonia.

Population growth in WDM is low due to high levels of HIV/AIDS related mortality, which slows population growth rates, decreases birth rates and decreases life expectancy (WDM IDP, 2015/16). There are currently 11 hospitals, 57 clinics, 29 mobile clinics and 1 community health centre within the WDM. Of the above, 1 hospital, 10 clinics and four mobile clinics are located within the TLM⁴.

According to BPDM IDP Report (2012/17), the municipality and its local municipalities are faced with challenges relating to long travelling distances from rural areas to hospitals, service delivery problems at existing clinics including operating hours, insufficient equipment, staff shortages and insufficient ambulance services particularly in the rural areas of the District.

3.8.1 HIV/AIDS PREVALENCE

According to the Actuarial Society of South Africa's (ASSA) provincial HIV/ AIDS statistics modelling and related estimates conducted in 2011, LP is ranked the third lowest province affected by the HIV epidemic in the country with approximately 7.6% of the LP population living with HIV and only 2.2% of the population is on anti-retroviral treatment (ART). WDM has the highest HIV prevalence rate in the province at 30.3%. Approximately 6,3% of TLM population was tested and 1,2% tested positive for HIV.

In NWP, approximately 12% of the population live with HIV and nearly 4% are receiving ART. NWP is ranked the fourth highest province affected by HIV; 14% and 15% of the BPDM and MKLM, respectively, have tested positive for HIV. Similar to the provincial level, 1% of both the District and Local Municipalities' residents passed away from AIDS related illnesses. According to the BPDM IDP Report (2012/17), mining activities and associated socio-economic conditions often exacerbate HIV/AIDS prevalence.

3.9 LAND USE IN THE IMMEDIATE VICINITY OF THE PROPOSED PROJECT

The general area consists of flat plains descending in a southerly direction with a background of wooded hills in the north-west and northern parts of the proposed Project area. The vegetation in the area is dominated by various Acacia and grass species. The area is generally green and tranquil with main sources of noise being from trains and traffic on Road D869 (Brits Road) and the Railway line that runs alongside it. According to a TLM representative and the ward councillor (interviews held in March 2016), the area is comprised of privately owned farms, which are used for a range of activities such as game,

⁴ Statistical information relating to the number of clinics and hospitals NWP, BPDM and MKLM could not be found from the relevant IPD report.

crop and cattle farming, as well as tourism related activities. Tourism related facilities near the proposed Project site are presented below:

- Kameelhoek Game Ranch (~2.3 km to the north-west);
- Kameeldoring Lodge (~3.4 km to the north-west);
- Tiramogo Lodge owned by Anglo (~4 km south of the site);
- Oppikoppi Lodge (~6 km north-west of the proposed Project area); this facility is known for hosting the annual Oppikoppi Music Festival in August; it attracts hundreds of artists and thousands of fans; and
- Phufane Lodge (~7.4 km to the south-east).

Refer to Figure 2, Figure 4 and Appendix C For the location and land uses near the proposed Project site.

3.9.1 THE PROJECT SITE

The proposed Project will be located on Portion 3 of Farm Grootkuil 409 KQ; the farm is 625 hectares in size and is situated in Ward 5 of TLM (see Figure 4). The portion is owned by SCSC and was previously used for agricultural activities including livestock grazing and small-scale cropping. This farm is currently unused. It is estimated that approximately 120 hectares (19,2%) of the property (western part) will be used for the proposed smelter complex and related infrastructure. This estimate excludes the access road and powerline servitudes. The remainder (80,8%) of the land could potentially be used for game farming and/ or agricultural activities. These activities will be undertaken in agreement and/ or collaboration with SCSC to ensure alignment with the Project planning and surrounding land uses.

According to a TLM representative (interview held in March 2016), the southern and western parts of TLM are earmarked/ zoned for mining and related activities as well as a major infrastructure corridor; as such, the proposed Project is aligned with TLM's Spatial Development Framework (interview held in March 2016).

3.9.2 IMMEDIATELY SURROUNDING PROPERTIES AND ASSOCIATED LAND USES

The nearest properties and related land uses are outlined below:

- Portion 0 of the farm Grootkuil is privately owned by a Trust and is located north-east of the proposed Project site. This farm is currently used for cattle and game farming. No one resides on this portion because all employees and their families are based on portion 1 of the farm Grootkuil located across Road D869 (Brits Road), immediately north of portion 0.
- Portions 2 and 6 of the farm Grootkuil are also privately owned, they are located immediately north of the proposed Project site and adjacent to Portion 0. These farm portions are situated north of the

proposed surface infrastructure and are currently used for crop and livestock grazing activities. There are farm buildings scattered across Portion 2.

- Portions 3 and 9 of the farm Wildebeestlaagte 411 KQ are owned by Northam Investments (Pty) Ltd. These portions are located east-south-east of the proposed Project site. In addition, Northam Investments owns ~1,000 hectares of urban land in Northam, some of it is already laid out as townships, comprising residential, commercial, business, community (hospital, schools) and associated sites. There are a further ~13,000 housing units planned in town; this Project is currently on hold due to the incomplete upgrades to the Northam sewage treatment facility. This Project is located over 5km from the proposed smelter complex.
- Portion 10 of the farm Wildebeestlaagte 411 KQ is privately owned, it is located south-east of the proposed Project site. This portion is mainly used for cattle and game farming as well as for the operation of the family owned and run lodge, Phufane Lodge. This is a self-catering lodge and has 14 different types of game animals including kudu, impala, etc. The family of 12 and 2 employees reside on the farm. There are plans to use this farm as part of a proposed solar Project which aims to supply additional power into Eskom's existing power grid; the land has been earmarked to develop housing for the solar Project (during construction and operations phases).
- Portions 4 and 5 of the farm Grootkuil are owned by Rustenburg Platinum Mines a subsidiary of Anglo American Platinum and are located south of the of the proposed Project site. These farm portions are used as game farms with Tiramogo Lodge operating on Portion 4.
- Benhaus Aviation Pty Ltd and Samancor Chrome Ltd. own Portion 3 of the farm Kameelhoek 408 KQ and Portion 7 of the farm Nooitegadacht 406 KQ, respectively. These properties are located north and west of the proposed Project site. These properties were previously used for mining operations and are currently used for crop and livestock farming. There are hostels and scattered houses on these properties.
- Anglo Platinum's USM and its self-contained community (Swartklip Mine Village) are located west of the proposed Project site, on Portions 1, 2 and 3 of Zwartklip 405 KQ. The mine village has shopping centres, banking facilities, schools, healthcare and recreational facilities. The community is independent from TLM regarding infrastructure and services (eg. water, sanitation, electricity, roads and stormwater). The residential units are owned by Anglo and are allocated to employees based on level of seniority. Approximately 30% of the houses are empty since the mine has recently undergone some cut backs. Residents would typically reside in the houses for 3-5 years and in rare cases, 5 to 10 years. Once their employment at the mine ends, they are expected to move out of the mine houses.

- Bierspruit community is located on Portion 1 of the farm Nooitegadacht 406 KQ owned by Anglo and is situated approximately 2.6 km west-north-west of the proposed Project site. There is also a recreational dam with fishing, basic water sports and a treed campsite on the waterline. The dam is located on Portion 19 of the farm Nooitegadacht owned by Anglo. There is an 18-hole golf course available for both members and visitors.

3.9.2.1 The Town of Northam

The town of Northam is the second biggest town in TLM after Thabazimbi. It is located south-east of the site about 8km from the proposed Project footprint. Northam is a mine town that functions as a link between Limpopo Province and North West Province; it provides services to Northam residents, residents from surrounding communities, and local industry. Most of the households in this town comprise of Africans (97,7%), Whites (1%) and others (1,3%) of the residents are employed and 61% earn between R76 401 and R307,600 per annum. Approximately 98% of the residents live in formal settlements and 2% in industrial areas (see Appendix C). The majority of the population (98%) are serviced with water and the remainder uses other means including boreholes, water tankers and rain water tanks.

3.9.2.2 Sefikile, Mmantserre and Surrounding Villages

Sefikile, Khwetsheza, Atamelang and Ga-Ramosidi communities are located approximately 6.5km south of the proposed Project. These communities are located in Ward 7 of MKLM, and they fall within the jurisdiction of the BBKTA; all the residents live in traditional settlements with the exception of residents of Khwetsheza who reside in an informal settlement (see Appendix C).

Mmantserre, Mopyane, Baleng, Dikgabong and Ntswetsweu/ Kraalhoek communities are located approximately 8.8km to the west of the proposed Project. These communities are also located in Ward 5 of MKLM and fall within the jurisdiction of MTA; residents live in traditional settlements (see Appendix C).

The population of the Sefikile communities are almost all Africans (99,5%) and there are more males (56%) than females (44%). Twenty seven percent of the residents are employed and 81% earn between R9,600 and R153,360 per annum. Approximately 89% of the residents are serviced with water, 4% use water tankers and, 3% use boreholes.

The population of the Mmantserre communities are also all African (99,5%) and there are almost equal number of men and women. Unlike, Sefikile communities, only 16% of the residents are employed and they earn significantly less than the Sefikile communities (83% earn between R9,600 and R76,400 per annum). Access to water is the same as the Sefikile communities.

Some members of these communities own livestock, which graze in and around the villages. There are churches, clinics, schools and several village shops/ cafes scattered across the villages. The villages of

Mmantserre and Sefikile have clinics however, they only operate between 08h00 and 14h30 from Monday to Friday due to safety and security reasons (interviews held in March 2016).

4 IMPACT ASSESSMENT AND PROPOSED MITIGATION

4.1 IMPACT ASSESSMENT AND PROPOSED MITIGATION

The focus of the impact assessment is on the impacts that the proposed Project will have on the socio-economic environment as described in the baseline chapter (Chapter 3) and on ways in which the impacts can be mitigated. Each impact has been assessed using SLRs impact rating methodology for the construction, operation and decommissioning/ closure phases of the Project. The significance of an impact is defined as a combination of the Consequence (Severity, Spatial Scale and Duration) of the impact occurring and the Probability that the impact will occur (see Table 8 below).

TABLE 8: CRITERIA FOR ASSESSING IMPACTS

Note: Part A provides the definition for determining impact consequence (combining severity, spatial scale and duration) and impact significance (the overall rating of the impact). Impact consequence and significance are determined from Part B and C. The interpretation of the impact significance is given in Part D.

PART A: DEFINITION AND CRITERIA*		
Definition of SIGNIFICANCE	Significance = consequence x probability	
Definition of CONSEQUENCE	Consequence is a function of severity, spatial extent and duration	
Criteria for ranking of the SEVERITY of environmental impacts	H	Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action.
	M	Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints.
	L	Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	L+	Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	M+	Moderate improvement. Will be within or better than the recommended level. No observed reaction.
	H+	Substantial improvement. Will be within or better than the recommended level. Favourable publicity.
Criteria for ranking the DURATION of impacts	L	Quickly reversible. Less than the Project life. Short term
	M	Reversible over time. Life of the Project. Medium term
	H	Permanent. Beyond closure. Long term.
Criteria for ranking the SPATIAL SCALE of impacts	L	Localised - Within the site boundary.
	M	Fairly widespread – Beyond the site boundary. Local
	H	Widespread – Far beyond site boundary. Regional/ national

PART B: DETERMINING CONSEQUENCE

SEVERITY = L

DURATION	Long term	H	Medium	Medium	Medium
	Medium term	M	Low	Low	Medium
	Short term	L	Low	Low	Medium

SEVERITY = M

DURATION	Long term	H	Medium	High	High
	Medium term	M	Medium	Medium	High
	Short term	L	Low	Medium	Medium

SEVERITY = H

DURATION	Long term	H	High	High	High
	Medium term	M	Medium	Medium	High
	Short term	L	Medium	Medium	High
			L	M	H

Localised Within site boundary Site	Fairly widespread Beyond site boundary Local	Widespread Far beyond site boundary Regional/ national
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SPATIAL SCALE

PART C: DETERMINING SIGNIFICANCE

PROBABILITY (of exposure to impacts)	Definite/ Continuous	H	Medium	Medium	High
	Possible/ frequent	M	Medium	Medium	High
	Unlikely/ seldom	L	Low	Low	Medium
			L	M	H
CONSEQUENCE					

PART D: INTERPRETATION OF SIGNIFICANCE

Significance	Decision guideline
High	It would influence the decision regardless of any possible mitigation.
Medium	It should have an influence on the decision unless it is mitigated.
Low	It will not have an influence on the decision.

***H = high, M= medium and L= low and + denotes a positive impact.**

4.2 POTENTIAL IMPACTS IDENTIFIED FOR THE PROJECT

As a result of the proposed Project activities and the nature of the surrounding socio-economic environment, the following potential impacts (see **Box 4-1**) have been identified and will be described and assessed in Section 4.4.1 to Section 4.4.5. A qualitative comment is provided on the potential cumulative impacts.

Box 4-1 Social Impacts

- Increased pressure on infrastructure and services;
- Growth of informal settlements;
- Increased social ills linked to influx of workers and job-seekers;
- Increased nuisance factors and changed sense of place;
- Cumulative impacts.

4.3 RELATED IMPACTS

A number of impacts that are closely linked to the social impacts have been described and assessed in other specialist studies. The SIA draws on the findings of those studies to inform some of the social impacts but the findings are not repeated here. The related studies are listed below, each study defines mitigation measures for implementation, the SIA presumes implementation of all proposed mitigation measures:

- The Economic Impact Assessment (EclA) describes and assesses the impacts related to employment (direct, indirect and induced), skills development, benefits to the local economy, and the impact on surrounding land uses and values (Mercury Financial Consultants, 2016).
- The Noise Impact Assessment (NIA) describes and assesses the potential noise impacts on the surrounding receptors (Airshed, 2016).
- The Air Quality Impact Assessment (AQIA) considers the impacts of the proposed Project on air quality in the area (Airshed, 2016).
- The Visual Impact Assessment (VIA) describes, illustrates and assesses the potential impact of the proposed Project (Newtown Landscape Architects, 2015).
- The Traffic Impact Assessment (TIA) measures existing and potential traffic flows and determines the significance of the proposed Project (Siyazi, 2016).

4.4 SOCIO-ECONOMIC IMPACTS, ASSESSMENT AND MITIGATION

4.4.1 INCREASED PRESSURE ON INFRASTRUCTURE AND SERVICES

4.4.1.1 Impact Description

In the Project area, the existing infrastructure and services are inadequate and do not meet the needs of the existing population (refer to Section 3.7). Most notably the existing sewage treatment facility in TLM lacks capacity to handle the current demand, water supply and management is inadequate and road quality is rapidly deteriorating. In addition, electricity supply, healthcare services and policing are not satisfactory. In the area immediately surrounding the proposed Project, the communities located in MKLM demonstrate inadequate access to infrastructure and services; and in TLM, the majority of the area is occupied by privately owned farms and the only settlement is Northam town. The inadequacy of infrastructure and services has largely been attributed to the rapid population growth linked to natural population growth and influx of migrant workers and job-seekers.

With the addition of the proposed Project activities, as well as workers (700 during the construction phase and 280 during the operational phase), and job-seekers that are likely to migrate to the area, additional pressure will be placed on the already strained existing infrastructure.

Direct Impacts

During the construction phase (~24 months), the proposed Project will source process and potable water from the adjacent Union Section Mine (municipal water), waste will be removed and managed by approved waste handling companies; sewage will be taken to the local sewage treatment facility, and generators will be used as the primary power supply. The Northam waste landfill site, is currently heavily over utilised and is expected to be upgraded in due course. SCSC has indicated that it will make provision for an on-site sewage treatment facility in the event that the Northam sewage plant does not have capacity and/ or cannot cater for SCSC's needs. However, the use of an off-site plant remains the preferred option.

Construction traffic will make use of the proposed access road via Road D869 (Brits Road).

Operation is expected to continue for approximately 30 years. As with the construction phase, process and potable water will be sourced from Union Section Mine, power will be sourced from the Spitzkop substation and sewage will be removed by an accredited service provider. Mineralised waste will be managed on site in accordance with Regulation 704 (4 June 1999) and non-mineralised waste will be handled as in the construction phase. Road D869 (Brits Road) will be the major public road used to access the site, and the railway will be used to transport incoming chrome concentrate and flux/reductant and to despatch product to market.

During all phases, workers will not be housed on site; they will reside in existing communities or in town; they will make use of public buses and taxis to get to work. There will be limited first aid facilities on site during working hours; workers and their families will be part of Plat health (an existing medical aid scheme) in the area. Children of the workers will attend existing schools in the area.

Indirect Impacts

The proposed Project area has seen significant influx of job-seekers as related to the high incidence of mines and large scale industry/ commercial agriculture. It is likely that there will be further influx as a result of this Project. The majority of people are most likely to begin migrating to the area pre-construction and at the start of the construction phase; it is possible that influx will continue throughout the construction phase and into operation, albeit at a far slower rate.

4.4.1.2 Assessment

The combined pressure resulting from the proposed Project activities, workers, and the influx of job-seekers will exert additional pressure on infrastructure and services for the duration of the construction and operational phases.

TABLE 9: CONSTRUCTION IMPACT: INCREASED PRESSURE ON INFRASTRUCTURE AND SERVICES

Issue/ Impact/ Nature	The increased pressure on infrastructure and services will be negative , and direct as a result of the proposed Project and the presence of construction workers, and indirect as a result of the influx of job-seekers.
<u>S</u> everity	Severity will be high given that the infrastructure and services are already strained and the existing population do not have adequate access to basic services. In addition to the proposed Project, the high number of workers and job-seekers will place further strain on the services as they will be living in the local communities. Many stakeholders raised concern about this impact occurring.
<u>D</u> uration	The disruption will be experienced for the full construction phase and may extend beyond this time if the job-seekers remain in the area; therefore, the duration will be medium . The impact may be reversible over time as workers and job-seekers leave the area.
Spatial Scale/ <u>E</u> xtent	The impact will be experienced in the local municipalities (TLM and MKLM). As such, the extent will be medium .
<u>C</u> onsequence (S+D+E)	MEDIUM
<u>P</u> robability	It is definite (high) that additional pressure will be placed on the already strained infrastructure.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.
Irreplaceable loss / enhancement of receptors	Strain on infrastructure and services is likely to persist.
Avoidable, manageable, mitigatable?	The impact is manageable and partly mitigatable, however, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Mitigation Measures	See Section 4.4.1.4
Post-Mitigation Significance Rating	Following mitigation, the severity of the impact may be reduced and the probability may reduce; however, in terms of the impact assessment methodology, the significance rating remains one of medium negative significance. It is the specialist's opinion that despite the impact assessment rating, with the application of mitigation, SCSC can reduce this impact to one of LOW NEGATIVE significance.

TABLE 10: OPERATION IMPACT: INCREASED PRESSURE ON INFRASTRUCTURE AND SERVICES

Issue/ Impact/ Nature	The increased pressure on infrastructure and services will be negative , and direct as a result of the proposed Project and the presence of operational workers, and indirect as a result of the influx of job-seekers.
<u>S</u> everity	Severity will be high given that the infrastructure and services are already strained and the existing population do not have adequate access to basic services. In addition to the Project, the high number of workers and job-seekers will place further strain on the services as they will be living in the local communities. Many stakeholders raised concern about this impact occurring.
<u>D</u> uration	The disruption will be experienced for the full life of the Project and beyond should the job-seekers remain in the area; therefore, the duration will be high . The impact is likely to be permanent given that the workers and job-seekers who moved to the area will have established their lives in the area.
Spatial Scale/ <u>E</u> xtent	The impact will be experienced in the local municipalities. As such, the extent will be medium .
<u>C</u> onsequence (S+D+E)	HIGH
<u>P</u> robability	It is definite (high) that the additional pressure will be placed on the already strained infrastructure.
Significance Rating (CxP)	Based on the above, this will be a HIGH NEGATIVE impact.

Irreplaceable loss / enhancement of receptors	Strain on infrastructure and services is likely to persist.
Avoidable, manageable, mitigatable?	The impact is manageable and partly mitigatable, however, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Enhancement Measures	See Section 4.4.1.4
Post-Mitigation Significance Rating	Following mitigation, the severity of the impact may be reduced and the probability may reduce; however, in terms of the impact assessment methodology, the significance rating remains one of high negative significance. It is the specialist's opinion that despite the impact assessment rating, with the application of mitigation, SCSC can reduce this impact to one of MEDIUM NEGATIVE significance.

During the decommissioning and closure phases, this negative impact will largely be eliminated given that the direct Project activities will cease and some of the workers/ job-seekers may leave the area in search of alternate employment. It is, however, likely that some workers and job-seekers will remain in the area as they may seek employment locally or want to remain in the area where they will have established networks and become connected. There is no available information about Project demand for infrastructure and service use during the decommissioning and closure phases, and it is not possible to determine the number of people who will remain or the state and availability of municipal services. It is expected that the decommissioning/ closure phase impact significance will be one of low negative significance given that some of the workers and job-seekers will remain in the area.

4.4.1.3 Impact Rating Summary

Unmitigated Impact						
Phase	Severity	Duration	Spatial Scale/ Extent	Consequence	Probability	Significance
Construction	H	M	M	M	H	M
Operation	H	H	M	H	H	H
Mitigated Impact						
Construction	M	M	M	M	M	L*
Operation	M	H	M	H	M	M*

* It is the specialist's opinion that despite the impact assessment methodology, the impact significance can be reduced through implementation of effective mitigation.

4.4.1.4 Mitigation Measures

The objectives of mitigation are:

- to limit, as far as reasonably possible, additional pressure on existing infrastructure and services;
- to work in partnership with government, industry, and relevant organisations to enhance the existing infrastructure and services;
- to liaise openly and frequently with affected stakeholders to ensure they have information about the Project; and
- to make available, maintain and effectively implement a grievance/complaints register that is easily accessible to all neighbours and affected stakeholders.

Mitigation measures are outlined below.

Recruitment procedures to enhance local employment

- SCSC will advertise the number and details of available positions, as well as the minimum requirements to qualify for jobs. Adverts should state that preference will be given to people originating from the proposed Project affected local municipalities.
- Communication about employment needs and the criteria for employment should be undertaken well in advance of the construction and operation phases; SCSC to prepare a fact sheet for use by all those engaging with stakeholders. Sharing of this information can take many forms (eg. formal and informal engagement activities, radio interviews/ adverts, printed media/ adverts, amongst others).
- Local employment must be maximised to reduce the extent of influx. SCSC will confirm the percentage commitment to local employment (this figure should be as high as possible). The company's commitment to employing local people will be communicated in all advertisements and public meetings.
- No hiring will take place 'at the gate', only formal recruitment channels will be followed. SCSC to identify and use suitable local and national recruitment channels.
- Contractors should be required to apply the same recruitment measures to maximise the employment of local people.
- All recruitment procedures to be undertaken in accordance with South African relevant legislative requirements and IFC Performance Standard 2 of Labour and Working Conditions (2012).

Planning and partnering to alleviate pressure

- SCSC will engage with all relevant government departments to confirm the needs and constraints, and to establish the areas in which direct and indirect proposed Project activities will increase pressure to an extent that the municipalities are unable to accommodate. To date these have been identified as water, sewage, roads, electricity, healthcare and policing, however these must be confirmed.
- SCSC will develop a strategy and associated implementation plans to address the identified areas of need. These will be developed in consultation with the relevant government departments and businesses and aligned with the Integrated Development Plans (IDPs) and other relevant plans. The plans will outline objectives, specific commitments, partnerships and monitoring procedures. The strategy and the plans will:
 - define objectives that commit to making contributions that strive for sustainability;
 - define a process for selecting Projects;
 - outline processes for consulting with relevant stakeholders to identify key needs;
 - present accurate budgets and identify additional resource requirements;
 - outline a Project implementation schedule in agreement with the authorities and other partners;
 - specify planned partnerships, including roles and responsibilities (can be in the form of signed Memorandums of Understanding);
 - identify how the plan will be communicated to beneficiaries as a way of managing expectations;
 - and
 - describe monitoring measures for all interventions.

- SCSC will update these plans on an annual basis and make them available to the authorities for their input and final approval.
- SCSC to participate in existing and future working groups and task teams initiated by government or other businesses that address infrastructure and service constraints. These should be identified in consultation with authorities and potential partners. One known forum is the Northam Sewage and Waterworks Task Team.
- SCSC will clearly communicate with communities the ambit of SCSC responsibilities versus those of government and other business.
- SCSC will keep records of all meetings, commitments and results.

Corporate Social Investment/ Local Economic Development

- SCSC to identify corporate social investment (CSI)/ local economic development (LED) opportunities that strive to improve infrastructure and services available in the Project area. These are to be identified in collaboration with the relevant authorities and the IDPs.
- Detailed implementation plans to be developed to guide implementation activities, schedules, resource needs, monitoring activities, and communication with relevant stakeholders. SCSC to implement the Projects identified in a manner that maximises efficiencies and benefits.
- SCSC to commit resources, financial and other (as required) to undertake these Projects.

Ongoing engagement and grievance management

- SCSC to develop a Stakeholder Engagement Plan (SEP) that is revised and updated on an annual basis. The SEP should be aligned with the requirements of the Equator Principles (2013) and the IFC Performance Standards (2012). The plan should cover (but not be limited to) the following:
 - outline the aim and objectives of ongoing engagement;
 - describe all internal and external stakeholder groups (including levels of support and influence);
 - describe all stakeholder issues and concerns as known currently (this will require exploratory meetings with each stakeholder group);
 - define engagement techniques and protocols for each stakeholder group;
 - present a schedule that includes all identified stakeholders and topics;
 - outline resources required for implementation, timeframes, responsible people, monitoring mechanisms; and
 - layout process for undertaking and documenting engagement, including a clear process for registering and responding to issues and concerns raised.
- SCSC to implement a grievance procedure that is easily accessible, culturally appropriate and scaled to the potential risks and impacts of the Project, through which complaints related to contractor or employee behaviour can be lodged and addressed. SCSC would respond to all such complaints. The grievance procedure should be aligned with the requirements of the Equator Principles, 2013 and the IFC Performance Standards, 2012. Key steps of the grievance mechanism include:
 - circulation of contact details of 'grievance officer' or other key contact;
 - awareness raising among stakeholders regarding the grievance procedure and how it works; and

- o establishment of an electronic grievance register which SCSC will update, including all escalation actions, responses and response times.

4.4.2 GROWTH OF INFORMAL SETTLEMENTS

4.4.2.1 Impact Description

Formal housing is most dominant in the Project area, specifically at the provincial level, however, informal settlements are increasing and notably more prevalent at the district and local levels than the provincial level. BPDM has the highest percentage of people living in informal dwellings at 30%, followed by both local municipalities at 20%. There are concerns amongst key stakeholders that the growth of the mining sector and associated influx of workers and job-seekers has led to an expansion of informal settlements in the Project area, notably in MKLM and in and around Northam. Informal settlements are associated with health and safety concerns, including a lack of effective disaster management, and poor standards of living.

SCSC will not be providing housing for the construction or operation phase workers; it is expected that workers will reside in the surrounding communities and town (Northam). Workers and job-seekers typically move to areas with work opportunities without their families, as such they seek accommodation that is suitable for individuals and does not generate significant additional financial strain as they usually send income back home to their families. It is most likely that the majority of workers will live in low-income or informal type dwellings.

Employment of local people who already reside in the area will minimise this impact given that they already have housing in the area.

4.4.2.2 Assessment

It is expected that this impact will commence and be most intense during the construction phase given the higher number of workers (700) and the initial influx of job-seekers. During the operational phase the impact will persist as there will be approximately 280 people employed, influx will subside and some of the migrant job-seekers may leave the area.

TABLE 11: CONSTRUCTION IMPACT: GROWTH OF INFORMAL SETTLEMENTS

Issue/ Impact/ Nature	The growth of informal settlements will be negative , and direct as a result of construction workers, and indirect as a result of migrant job-seekers.
Severity	Severity will be high given that there are already many people living in informal dwellings and this is likely to increase as a result of direct and indirect Project related activities. Many stakeholders raised concern about this impact occurring.
Duration	The growth of informal settlements will be experienced for the full construction phase and may extend beyond this time if workers and job-seekers remain in the area; therefore, the duration will be medium . The impact may be reversible over time as workers and job-seekers leave the area.
Spatial Scale/ Extent	The impact will be experienced in the local municipalities (TLM and MKLM). As such, the extent will be medium .

Consequence (S+D+E)	MEDIUM
Probability	It is definite (high) that the impact will occur with the influx of workers and job-seekers and the already high rate of people living in informal dwellings.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.
Irreplaceable loss / enhancement of receptors	N/A
Avoidable, manageable, mitigatable?	The impact is manageable and partly mitigatable, however, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Mitigation Measures	See Section 4.4.2.4
Post-Mitigation Significance Rating	Following mitigation, the severity of the impact may be reduced and the probability may reduce; however, in terms of the impact assessment methodology, the significance rating remains one of medium negative significance. It is the specialist's opinion that despite the impact assessment rating, with the application of mitigation, SCSC can reduce this impact to one of LOW NEGATIVE significance.

TABLE 12: OPERATION IMPACT: GROWTH OF INFORMAL SETTLEMENTS

Issue/ Impact/ Nature	The growth of informal settlements will be negative , and direct as a result of operational workers, and indirect as a result of migrant job-seekers.
Severity	Severity will be low given that there will be 280 direct employees, influx will decline or cease and some migrant job-seekers may leave the area. Many stakeholders raised concern about this impact occurring.
Duration	The growth of informal settlements will be experienced for the full operational phase and may extend beyond this time if workers and job-seekers remain in the area; therefore, the duration will be high . The impact is likely to be permanent given that the workers and job-seekers who moved to the area will have established their lives in the area.
Spatial Scale/ Extent	The impact will be experienced in the local municipalities (TLM and MKLM). As such, the extent will be medium .
Consequence (S+D+E)	MEDIUM
Probability	It is definite (high) that the impact will occur given that the workers and remaining job-seekers will require housing, and informal housing is prevalent.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.
Irreplaceable loss / enhancement of receptors	N/A
Avoidable, manageable, mitigatable?	The impact is manageable and partly mitigatable, however, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Enhancement Measures	See Section 4.4.2.4
Post-Mitigation Significance Rating	Following mitigation, the severity of the impact may be reduced and the probability may reduce; however, in terms of the impact assessment methodology, the significance rating remains one of medium negative significance. It is the specialist's opinion that despite the impact assessment rating, with the application of mitigation, SCSC can reduce this impact to one of LOW NEGATIVE significance.

During the decommissioning and closure phases, it is likely that workers will remain in the area as they may seek employment locally and are likely to have established networks and become connected after a long period of time. Given the high levels of uncertainty regarding the actions of people or nature of the

socio-economic environment at the time, it is not possible to assess this Project phase in detail. It is expected that the growth of informal settlements will cease; however, some of the ex-workers and job-seekers may remain. The post-mitigation significance rating is likely to be one of low negative significance during the decommissioning/ closure phases.

4.4.2.3 Impact Rating Summary

Unmitigated Impact						
Phase	Severity	Duration	Spatial Scale/ Extent	Consequence	Probability	Significance
Construction	H	M	M	M	H	M
Operation	L	H	M	M	H	M
Mitigated Impact						
Construction	M	M	M	M	M	L*
Operation	L	H	M	M	M	L*

* It is the specialist's opinion that despite the impact assessment methodology, the impact significance can be reduced through implementation of effective mitigation.

4.4.2.4 Mitigation Measures

The objective of mitigation is to limit, as far as reasonably possible, the establishment and further growth of informal settlements.

Mitigation measures are outlined below.

Recruitment procedures to enhance local employment

- Apply all mitigation measures as described in Section 4.4.1.4 to enhance local employment. This will serve to reduce the number of workers from outside the area in need of housing, and discourage influx.

Planning and partnering to alleviate pressure

- SCSC will engage with relevant authorities and planners in both Project affected municipalities to discuss the housing situation and establish whether the proposed Project will place additional pressure on housing capacity (directly and indirectly).
- Based on the outcome of interactions with the authorities, plans will be established that aim to minimise the growth of informal settlements. SCSC will focus on initiatives that will support construction and operation phase workers. SCSC to implement and monitor these plans.

Workforce support

- Following discussions with the authorities, SCSC to develop and implement a local housing strategy and plan that aims to provide some support to its direct Project workers. The purpose of the plan should be to limit the likelihood of SCSC workers constructing and living in informal dwellings; thus exacerbating the existing problem.

Corporate Social Investment/ Local Economic Development

- CSI/ LED planning will consider housing as one of the key areas for investment when identifying Project opportunities.

4.4.3 INCREASED SOCIAL ILLS LINKED TO INFLUX OF WORKERS AND JOB-SEEKERS

4.4.3.1 Impact Description

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

The relatively large construction workforce will be working in the area for ~24 months, and the comparatively smaller operational workforce will be present for the life of the Project (no less than 30 years). Construction and operation phase workers will not be accommodated on site, they will reside in the surrounding communities and in town (Northam). This will increase the levels of interaction with the local population. The majority of workers are likely to be male and living away from their families specifically, during the construction phase.

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

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

- **Theft of livestock** is already problematic on farms located in the proposed Project area. It is likely that stock theft will continue and possibly increase, specifically during the construction phase due to the high number of workers and job-seekers.
- **Petty theft** may be exacerbated as there will be an increased number of people in the area with no employment and therefore no income.
- **Trespassing** on surrounding properties and possible damage to property resulting from vandalism.

- An increase in disposable income within the proposed Project area (among workers) could result in an **increase in alcohol and drug abuse, increased incidences of prostitution and casual sexual relations**. These activities could lead to an increased incidence of HIV/AIDS and increased numbers of teenage and unwanted pregnancies. The increased prevalence of HIV/AIDS would affect contractors, employees, local residents and the families and sexual partners of anyone becoming infected in the proposed Project area.
- **General unrest** may be further exacerbated as a result of increased pressure for resources, resentment towards those who secure employment and procurement opportunities as well as benefits from SLP Projects (specifically if the beneficiaries are from outside the area), and an increase in alcohol abuse.
- **Devaluation of properties** that may occur as a result of a combination of one or more the above-mentioned social ills. These factors contribute in defining one's sense of place and potential value attached to the property. The assessment of the impact on property values is dealt with in the aforementioned EclA study.

4.4.3.2 Assessment

It is expected that this impact will commence pre-construction phase as job-seekers begin migrating to the area. The impact will persist through the construction and operation phases; it is likely to be more intense during the construction phase when there are a greater number of workers and job-seekers. During the operation phase, the number of workers declines and some job-seekers may leave the area. Given the nature of the impact some consequences will persist indefinitely, eg. HIV/AIDS and unwanted/unplanned pregnancies.

TABLE 13: CONSTRUCTION IMPACT: INCREASED SOCIAL ILLS

Issue/ Impact/ Nature	The increase in social ills will be negative and direct as a result of construction workers, and indirect as a result of migrant job-seekers.
Severity	Severity will be high given that there will be a relatively large number of workers and influx is expected to occur. Workers will not be housed on site, therefore SCSC will have little control over their activities outside the workplace. Many stakeholders raised concern about this impact occurring.
Duration	The impact will be experienced prior to the commencement of construction, through the construction phase and may extend beyond this time if workers and job-seekers remain in the area; therefore, the duration will be medium . The impact may be reversible over time as workers and job-seekers leave the area, consequences such as HIV/AIDS and unwanted pregnancies will be permanent.
Spatial Scale/ Extent	The impact will be experienced in the local municipalities. As such, the extent will be medium .
Consequence (S+D+E)	MEDIUM
Probability	The historical trend and the existence of these social ills indicates that this impact will definitely occur (high) due to the presence of workers and job-seekers.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.

Irreplaceable loss / enhancement of receptors	This impact can result in consequences that will have irreplaceable losses of a physical and psychological nature.
Avoidable, manageable, mitigatable?	The impact will be difficult to manage, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Mitigation Measures	See Section 4.4.3.4
Post-Mitigation Significance Rating	Following mitigation, the severity of the impact may be reduced; however, in terms of the impact assessment methodology, the significance rating remains one of MEDIUM NEGATIVE significance. It is the specialist's opinion that SCSC must make every effort to mitigate this impact despite the limited effect their interventions are likely to have. Without mitigation, the negative impact could worsen.

TABLE 14: OPERATION IMPACT: INCREASED SOCIAL ILLS

Issue/ Impact/ Nature	The increase in social ills will be negative and direct as a result of operational workers, and indirect as a result of migrant job-seekers.
<u>S</u> everity	Severity will be low given the relatively small number of workers and some migrant job-seekers may leave the area. Workers will not be housed on site, therefore SCSC will have little control over their activities outside the workplace. Many stakeholders raised concern about this impact occurring.
<u>D</u> uration	The impact will be experienced through the operational phase and may extend beyond this time if workers and job-seekers remain in the area; therefore, the duration will be high . The impact may be reversible over time as workers and job-seekers leave the area, consequences such as HIV/AIDS and unwanted pregnancies will be permanent.
Spatial Scale/ <u>E</u> xtent	The impact will be experienced in the local municipalities. As such, the extent will be medium .
<u>C</u> onsequence (S+D+E)	MEDIUM
<u>P</u> robability	The historical trend and the existence of these social ills indicates that this impact will definitely occur (high) due to the presence of workers and job-seekers.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.
Irreplaceable loss / enhancement of receptors	This impact can result in consequences that will have irreplaceable losses of a physical and psychological nature.
Avoidable, manageable, mitigatable?	The impact will be difficult to manage, SCSC does not have control to fully mitigate or manage the impact. The authorities and neighbouring businesses are also responsible.
Enhancement Measures	See Section 4.4.3.4
Post-Mitigation Significance Rating	Following mitigation, the significance rating is expected to remain one of MEDIUM NEGATIVE significance. It is the specialist's opinion that SCSC must make every effort to mitigate this impact despite the limited effect their interventions are likely to have. Without mitigation, the negative impact could worsen.

During the decommissioning and closure phases, it is likely that workers will remain in the area as they may seek employment locally and are likely to have established networks and become connected after a long period of time. There are high levels of uncertainty regarding the actions of people and the future status of the socio-economic environment. However, it is anticipated that post-mitigation, the significance of the increased social ills linked to ex-workers and job-seekers during the decommissioning/ closure phase will be of medium to low negative significance.

4.4.3.3 Impact Rating Summary

Unmitigated Impact						
Phase	Severity	Duration	Spatial Scale/ Extent	Consequence	Probability	Significance
Construction	H	M	M	M	H	M
Operation	L	H	M	M	H	M
Mitigated Impact						
Construction	H	M	M	M	H	M
Operation	L	H	M	M	H	M

4.4.3.4 Mitigation Measures

The objectives of mitigation are:

- to limit, as far as reasonably possible, social ills caused by influx of workers and job-seekers;
- to liaise openly and frequently with affected stakeholders to ensure they have information about the Project; and
- to make available, maintain and effectively implement a grievance/complaints register that is easily accessible to all neighbours and affected stakeholders.

Mitigation measures are outlined below.

Recruitment procedures to enhance local employment

- Apply all mitigation measures as described in Section 4.4.1.4 to enhance local employment. This will serve to reduce the number of workers from outside the area, and discourage influx.

Planning and partnering to alleviate pressure

- Apply all mitigation measures as described in Sections 4.4.1.4 and 4.4.2.4 with regards to planning for and managing influx related impacts.

Ongoing engagement and grievance management

- Apply all mitigation measures as described in Section 4.4.1.4 to ensure ongoing, proactive engagement and effective management of grievances.

Workforce and security management

- There will be one access point to the site where entry and exit procedures are strictly adhered to. The access point should be located as far away as possible from neighbouring properties.
- The site will be fenced to ensure that no unauthorised access will be possible at any point other than the security controlled access point.
- SCSC and its appointed contractors to develop an induction programme, including a Code of Conduct, for all workers (SCSC and contractor's workers) directly related to the Project. A copy of the Code of Conduct (CoC) will be presented to all workers and signed by each person. The CoC must address the following aspects:
 - respect for local residents;
 - respect for farm infrastructure and agricultural activities;

- no trespassing on private properties;
 - no hunting or unauthorised taking of products or livestock;
 - zero tolerance of illegal activities by workers including: littering, unlicensed prostitution; illegal sale or purchase of alcohol; sale, purchase or consumption of drugs; illegal gambling or fighting;
 - compliance with the Traffic Management Plan and all road regulations; and
 - description of disciplinary measures for infringement of the Code and company rules.
- If workers are found to be in contravention of the CoC, which they signed at the commencement of their contract, they will face disciplinary procedures that could result in dismissal. Stock theft should be noted as a dismissible offence.
 - SCSC and its contractors will develop and implement an HIV/AIDS policy and information document for all workers directly related to the proposed Project. The information document will address factual health issues as well as behaviour change issues around the transmission and infection of HIV/AIDS. SCSC will make condoms available to employees and all contractors.

4.4.4 INCREASED NUISANCE FACTORS AND CHANGED SENSE OF PLACE

4.4.4.1 Impact Description

The proposed Project area is largely rural in nature, characterised by large commercial farms (primarily game and cattle farming with some crop farming), mines, and residential areas (scattered villages and the more densely populated town of Northam). The area is considered to be disturbed and generally of medium to low visual quality and sensitivity; the broader area located north of Road D869 (Brits Road) is of medium visual quality, and high visual quality where associated with the hills (NLA, 2015). The Project site currently has no largescale infrastructure on it as it was most recently used for agriculture, the western area of the site will be transformed as the proposed ferrochrome smelter is a large industrial facility.

The proposed facility is located in proximity to the following potentially affected receptors (the distance to the receptors listed below has been measured from the centre point of the proposed smelter complex since it is assumed that this is where the main impacts will emanate):

- ~600m from Swartklip Mine Village (residential units) at Union Section Mine (located west of the proposed Project site on Portions 1, 2 and 3 of the farm Zwartklip 405 KQ);
- ~1.5 km from privately owned residential structures that are home to the land owner and farm worker/s (located north-west of the proposed Project site on Portion 9 of the farm Nooitgedacht 406 KQ)⁵;
- ~1.8 km from Road D869 (Brits Road) (located north of the proposed Project site and traverses Portions 0, 1 and 2 of the farm Grootkuil 409 KQ and 1, 3 and 7 of the farm Kameelhoek 408 KQ);

⁵ Should the preferred access road (alternative 2) not proceed and the alternate access road (alternative 3) be selected, it will be located 150m from these residential structures. This impact will be experienced most negatively by these households. As such, SCSC would need to negotiate appropriate measures to mitigate impacts on this receptor.

- ~2 km from a residential structure (possible staff house) owned by Rustenburg Platinum Mines Ltd (located north-west of the proposed Project site on Portion 4 of the farm Nooitgedacht 406 KQ);
- ~2.3 km from Kameelhoek Game Ranch (located north-west of the proposed Project site on Portion 0 of the farm Nooitgedacht 406 KQ);
- ~2.6 km from Bierspruit residential area (located west of the proposed Project site on Portion 1 of the farm Nooitgedacht 406 KQ);
- ~3.4 km from Kameeldoring Lodge (located north-west of the proposed Project site on Portion 1 of the farm Nooitgedacht 444 KQ);
- ~4 km from Union Section's 'Tiramogo lodge' (located south-west of the proposed Project site on Portion 4 of Grootkuil 409 KQ. It should be noted that the proposed powerline will run within 150 m of the lodge at the closest point);
- ~4.2 km and 2 km from scattered farm residences located north of the proposed Project site on Portions 0 and 2 of the farm Grootkuil 409 KQ, respectively;
- ~6.5 km from Sefikile and Kwetsheza (located south of the proposed Project site on Portions 0 and 2 of the farm Spitskop 410 KQ);
- ~6.5 km from Oppikoppi Lodge (north-west);
- ~7.2 km south east of the Project area (south of Northam) is a sectional title development known as the Wildebeeslaagte (located on Portions 3 and 9 of the farm Wildebeeslaagte 411 KQ);
- ~7.4 km from Phufane Lodge (located south-east of the proposed Project site on Portion 10 of the farm Wildebeestlaagte 411 KQ);
- ~8 km from Northam town (located east-south-east of the proposed Project site on Portions 22 and 28 of the farm Leeuwkopje 415 KQ); and
- ~8.8 km from Mmantserre and Mopyane (located south-west of the proposed Project site on Portions 0 and 1 of the farm Varkensvlei 403 KQ and Portion 0 of the farm Elandsfontein 402 KQ).

As a result of the proposed Project activities, there will be an increase in the noise, air pollution, traffic and visual impacts resulting from the construction, operation and decommissioning/closure activities at the facility⁶

The noise and air quality assessments found that the impacts are largely going to be experienced on site, with some exceedances being experienced at the closest sensitive receptor, namely Swartklip Mine Village (~600m from the facility). The residents at Swartklip Mine Village are senior employees at Union Section Mine, the current occupancy rate is 70% as the mine has recently undergone staff cut backs. Typically, employees stay in these houses for 3-5 years and in some cases 5-10 years after which they move out of the houses at the end of their contracts. With the application of the prescribed mitigation measures, it is expected that the noise and air quality impact can be effectively reduced.

⁶ For details of these impacts, refer to the Noise, Air Quality, Traffic and Visual Impact Assessments.

The Visual Impact Assessment concluded that the visual impacts are expected to be moderate during the construction and decommissioning phases and high during the operational phase given the scale, size and form of the Project facilities and the effects of night lighting and the two flares. With effective mitigation, it is possible to reduce the operational impact to one of moderate negative significance, decommissioning significance to low, and construction phase impacts are expected to remain moderate for the 24-month construction phase.

The Traffic Impact Assessment (TIA) concluded that the the proposed Project will have a manageable impact on the relevant roads network as long as all recommended mitigation measures are implemented. The only intersection that will require upgrades is where the proposed access road meets Road D869 (Brits Road); all other intersections will not require further upgrades.

While each of the above mentioned impacts are considered to be largely mitigatable, the combined effect of the noise, air quality, visual and traffic impacts are likely to have a negative impact on the sense of place for some stakeholders and potentially on the property values. The assessment of the impact on property values is dealt with in the Project EclA study.

In addition, the influx of workers and job-seekers is likely to result in further disruptions to the sense of place through the generation of a range of nuisance factors, including increased competition for the already strained infrastructure and services (including housing) (see Sections 4.4.1 and 4.4.2), increased levels of crime/ unrest, and health related concerns (see Section 4.4.3).

The stakeholders likely to be affected are the residents at Swartklip Mine Village (short-term occupancy), residents living in the farm dwellings on Portions 0 and 2 of Farm Grootkuil, tourist facilities and tourists visiting local lodges/ hunting facilities in the broader area, road users (specifically tourists) travelling along Road D869 (Brits Road), and residents of surrounding communities.

Should the preferred access road (alternative 2) not proceed and the alternate access road (alternative 3) be selected, it will be located 150m from residential structures on Portion 9 of the farm Nootgedacht 406 KQ. This impact will be experienced most intensively by these households, specifically as a result of traffic⁷.

4.4.4.2 Assessment

It is expected that this impact will commence pre-construction phase as job-seekers begin migrating to the area and will persist through the construction and operation phases, and begin to dissipate during the decommissioning phase. The impact will be experienced in different ways by different receptors given the diversity of the receptors, the relatively large geographic extent, and the complexity of the subject. An

⁷ This assessment has been undertaken based on the assumption that the preferred access road (Alternative 2) will proceed.

indicative assessment is provided; the significance rating is based on the worst case scenario for the majority of affected receptors.

TABLE 15: CONSTRUCTION IMPACT: NUISANCE FACTORS AND CHANGED SENSE OF PLACE

Issue/ Impact/ Nature	The increase in social ills and associated changed sense of place will be negative , and direct as a result of Project activities, and indirect as a result of migrant job-seekers.
Severity	Severity will be medium given the combined effect of the influx of workers and job-seekers, visual, noise, air quality and traffic impacts. The area is already relatively disturbed, however, there are some activities that rely on the appearance and sense of place of the surrounding area (eg. tourism and residential land uses). Many stakeholders raised concern about this impact occurring.
Duration	The impact will be experienced for the duration of the construction phase; therefore, the duration will be low . The impact may be largely reversible over time.
Spatial Scale/ Extent	The impact will be experienced in the local municipalities. As such, the extent will be medium .
Consequence (S+D+E)	MEDIUM
Probability	It is possible (medium) that the impact will occur for some sensitive receptors (specifically residents and tourists/ tourism facilities). Not all receptors will experience this impact in the same way.
Significance Rating (CxP)	Based on the above, this will be a MEDIUM NEGATIVE impact.
Irreplaceable loss / enhancement of receptors	This impact can result in consequences that will have irreplaceable losses of a physical and emotional nature.
Avoidable, manageable, mitigatable?	The impact is largely mitigatable for most stakeholders affected.
Mitigation Measures	See Section 4.4.4.4
Post-Mitigation Significance Rating	Following mitigation, the significance rating is likely to reduce to one of MEDIUM to LOW NEGATIVE significance. It is the specialist's opinion that despite the impact assessment methodology, the impact significance can be reduced slightly through implementation of effective mitigation.

TABLE 16: OPERATION IMPACT: NUISANCE FACTORS AND CHANGED SENSE OF PLACE

Issue/ Impact/ Nature	The increase in social ills and associated changed sense of place will be negative and direct as a result of Project activities, and indirect as a result of migrant job-seekers.
Severity	Severity will be high given the combined effect of the influx of workers and job-seekers, visual, noise, air quality and traffic impacts. The area is already relatively disturbed, however, there are some activities that rely on the appearance and sense of place of the surrounding area (eg. tourism and residential land uses). Many stakeholders raised concern about this impact occurring.
Duration	The impact will be experienced for the duration of the operational phase and potentially beyond as related to influx; therefore, the duration will be high . The impact may be largely reversible of time.
Spatial Scale/ Extent	The impact will be experienced in the local municipalities. As such, the extent will be medium .
Consequence (S+D+E)	HIGH
Probability	It is possible (medium) that the impact will occur for some sensitive receptors (specifically residents and tourists/ tourism facilities). Not all receptors will experience this impact in the same way.
Significance Rating (CxP)	Based on the above, this will be a HIGH NEGATIVE impact.

Irreplaceable loss / enhancement of receptors	This impact can result in consequences that will have irreplaceable losses of a physical and emotional nature ⁸ .
Avoidable, manageable, mitigatable?	The impact is largely mitigatable for most stakeholders affected.
Enhancement Measures	See Section 4.4.4.4
Post-Mitigation Significance Rating	Following mitigation, the significance rating is likely to reduce to one of MEDIUM NEGATIVE significance for most receptors. It is the specialist's opinion that despite the impact assessment methodology, the impact significance can be reduced through implementation of effective mitigation. The impact may remain high negative for some tourist facilities; however, the majority of facilities should not be affected given their proximity to the proposed Project and the already disturbed nature of the area immediately surrounding the proposed Smelter complex.

During the decommissioning and closure phases, the majority of the proposed Project aspects that resulted in a changed sense of place will no longer exist, the community is likely to have adapted (albeit unwillingly) to the existence of migrants in the area. Given the high levels of uncertainty regarding the actions of people or nature of the future socio-economic environment, it is difficult to assess this Project phase; however, it is expected that the impact will largely be mitigated.

4.4.4.3 Impact Rating Summary

Unmitigated Impact						
Phase	Severity	Duration	Spatial Scale/ Extent	Consequence	Probability	Significance
Construction	M	L	M	M	M	M
Operation	H	H	M	H	M	H
Mitigated Impact						
Construction	L	L	M	L	M	M-L*
Operation	M	H	M	H	M	M*

* It is the specialist's opinion that despite the impact assessment methodology, the impact significance can be reduced through implementation of effective mitigation.

4.4.4.4 Mitigation Measures

The objectives of mitigation are:

- to minimise all nuisance factors such as noise, air quality, traffic, and visual, and to manage as far as possible the indirect impacts linked to influx;
- to liaise openly and frequently with affected stakeholders to ensure they have information about activities that will generate nuisance factors; and
- to make available, maintain and effectively implement a grievance/complaints register that is easily accessible to all neighbours and affected stakeholders.

Mitigation measures are outlined below.

- Implement all mitigation measures as specified in the relevant 2015/6 specialist studies, namely:
 - noise impact assessment;

⁸ Potential financial losses on surrounding land uses are addressed in the Economic Impact Assessment.

- air quality impact assessment;
 - traffic impact assessment; and
 - visual impact assessment.
- Implement all mitigation measures as specified in terms of the following:
 - recruitment procedures to enhance local employment (Section 4.4.1.4);
 - planning and partnering to alleviate pressure on infrastructure and services/ housing (Sections 4.4.1.4 and 4.4.2.4);
 - ongoing engagement and grievance management (Section 4.4.1.4); and
 - workforce management (Section 4.4.3.4).
 - Note: If the preferred access road does not proceed and that alternate access road (Alternative 3) be selected, SCSC must agree on suitable mitigation with the affected households.

4.4.5 CUMULATIVE IMPACTS

The cumulative social impacts resulting from the proposed Project will occur as a result of Project induced influx and nuisance factors (including noise, air pollution, visual and traffic). Throughout the Project area, the economy is driven by the existence of mines, large-scale agriculture, and extensive tourism/ conservation activities. Together, these sectors have attracted and retained job-seekers and contribute to noise, air quality, traffic and visual impacts.

There are 2 notable Project aspects that may result in further cumulative impacts; they are described below.

An increase in direct Project nuisance factors; namely, noise, air pollution, traffic and visual disturbances could further impact negatively on the sense of place for some receptors. The preferred location for the proposed facility is immediately adjacent to Union Section Mine with the intended purpose of merging the visual impact as opposed to creating a second isolated visual disturbance. The increase in noise and air quality impacts are expected to largely remain within acceptable limits; implementation of suitable mitigation measures have been proposed to reduce and manage these nuisance factors as far as reasonably possible. Traffic impacts are expected to be manageable with mitigation.

An influx of workers (direct) and job-seekers (indirect) may lead to increased pressure on infrastructure and services, growth of informal settlements and an increase in social ills. SCSC should make every effort to discourage influx by communicating early and widely that local residents will be given preference for employment. SCSC to work together with the relevant local authorities and businesses to identify and actively participate in initiatives/ Projects to improve capacity where required. While the potential impacts linked to influx can have negative consequences, this is a common and anticipated phenomenon that cannot be a reason for preventing further development.

4.4.5.1 Additional Mitigation Measures

- SCSC is to ensure compliance with the Equator Principles (2013) and the IFC Performance Standards (2012) regarding social performance. In addition to the mitigation measures outlined above, the following overarching mitigation measures must be implemented.
- SCSC to undertake all Project management and mitigation measures in alignment with their overarching Environmental and Social Management System (ESMS).
- All Project activities, including management and mitigation of impacts should ensure respect for human rights.
- Workers are to be managed in accordance with the Basic Conditions of Employment Act 75 of 1997, as well as in accordance with the IFCs Performance Standard² on Labour and Working Conditions.
- As per the ESMS, SCSC to undertake regular internal and external monitoring to ensure compliance with the Environmental and Social Management Plan (ESMP).
- At least 10 years prior to decommissioning and closure, all potential social impacts should be re-identified and assessed, and suitable management measures should be put in place to minimise the negative impacts linked to closure and enhance the potential success of LED/CSI Project hand-over.

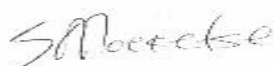
5 CONCLUSION

The application by SCSC for the construction and operation of a ferrochrome smelter complex (this Project) should be given due consideration in light of the neighbouring Union Section Mine and the processing of UG2 chrome concentrate from nearby mine operations that is currently stored as tailings.

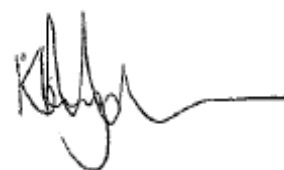
In order to undertake beneficiation at the proposed Project site, it is required that this Project be approved.

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

It is the reasoned opinion of the social specialist that the proposed Project be approved on condition that all mitigation measures described in the SIA be implemented and monitored regularly over the construction and operation phases.



Stella Moeketse
(Project Manager and Report Author)



Kerryn Desai
(Project Reviewer)

6 REFERENCES

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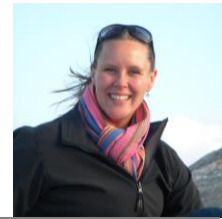
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APPENDIX A: PROJECT TEAM CURRICULUM VITAE

KERRY N MCKUNE DESAI

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SOCIO-ECONOMIC DEVELOPMENT SPECIALIST

I offer fourteen years of experience in the fields of socio-economic development and social performance in corporate, non-profit and academic environments. My social capabilities draw on my in-depth knowledge of the International Finance Corporation (IFC) Performance Standards and Equator Principals in order to provide the following key offerings:

- review and assessment of existing and planned social programmes at both the corporate and operational levels;
- social impact assessment;
- review/ gap analyses of existing reports and management plans;
- social risk identification and assessment;
- resettlement planning;
- auditing/ reviewing, specifically against IFC Performance Standards;
- auditing of social and labour/ working conditions;
- development and facilitation of training and capacity building; and
- stakeholder engagement planning and implementation.

I have diverse sector expertise, with specific focus in the mining, oil and gas, and power/ renewable energy sectors. I have worked throughout Africa, including South Africa, Botswana, Uganda, Cameroon, Ghana, Nigeria, Tanzania, Guinea, Zambia, Namibia, São Tomé and Príncipe, as well as in Albania and Turkey.

Going forward, I will continue to use my skills and experience to support companies and projects to plan for and manage their challenging socio-economic environments and the associated risks. The anticipated outcome would be to build trust based on best practice and a positive reputation, and the attainment of a regulatory and social license to operate.

CAREER HISTORY

- | | |
|------------------------------|---|
| April 2014 – current | Self-employed: Social Consultant |
| Nov 2005 - March 2014 | Environmental Resources Management (ERM): Principal Consultant |
| Jul 2003 - Nov 2005 | The Non-Profit Consortium: Development Officer & Researcher |
| Feb 2000 - Aug 2001 | Disaster Mitigation for Sustainable Livelihoods Programme, UCT: Risk Reduction Researcher |

HIGHER EDUCATION

Masters (Arts):	University of London, Royal Holloway - Geography and Development (2001/2002)
Honours BA (Hons):	University of Cape Town - Environmental & Geographical Science (1999)
Undergrad (SocSc):	University of Cape Town - Environmental & Geographical Science, Social Anthropology, and Archaeology (1995 – 1998)
Other:	University of South Africa - Microeconomics, Business Management, and Marketing Research (2003-2006)

SELECTED PROJECT EXPERIENCE

Social Impact Assessments, Namibia, NamPower, 2015-2016

Social Specialist for two Social Impact Assessments (SIA); a 400kV transmission line extending ~455km from near Windhoek to near Keetmanshoop, and a ~40km 132kV transmission line from Vioolsdrif/Noordoewer to Aussenkehr.

Social Impact Assessment, South Africa, Wesizwe, 2015-2016

Social Specialist for a Social Impact Assessment of an amendment to an approved platinum mine in North West Province.

Specialist Comment (Amendment) and Social Impact Assessment, South Africa, Mainstream, 2015-2016

Social Specialist providing comment for a proposed amendment and SIA for additional infrastructure on already authorised renewable energy facility near Beaufort West in the Western Cape Province.

Social Impact Assessment, South Africa, Platinum Waste Resources, 2014

Social Specialist for a SIA of Klinkerstene Clay Mine near Delmas in Mpumalanga Province, South Africa.

Social Impact Assessment, South Africa, ACSA, 2014

Developed the Socio-economic Impact Assessment for the realignment of the runway at Cape Town International Airport.

Resettlement Strategy Development, South Africa, Platreef Resources, 2013-2014

Project Manager for the development of a Resettlement Strategy to guide the upcoming Resettlement Action Plan development process for economic and physical displacement. Project undertaken in terms of IFS Performance Standards.

Resettlement Action Plan, South Africa, Anglo American Platinum, 2012 - 2013

Project Manager for the development of a Resettlement Action Plan for the Motlhotlo community located near Mokopane in the Limpopo Province.

Social Impact Assessment, South Africa, Black Mountain Mining, Zinc Mine Project, 2012 - 2013

Social advisor and reviewer for the Social Impact Assessment and Management Plan for a proposed Zinc Mine Project in South Africa's Northern Cape Province.

Environment and Social Compliance Review, Proparco/ Norfund on behalf of Confidential Client, Mozambique, Uganda, Zambia and Zimbabwe, 2012

Social Specialist for an IFC compliance review of the Environmental and Social Impact Assessment (ESIA), Management Plans and Licenses for a number of proposed agri-businesses.

Environmental and Social Management Plan, Botswana, Sasol CBM, 2012

Project Manager for the development of a high-level baseline, assessment and social management plan for an early exploration coalbed methane drilling Project.

Social Impact Assessment and Community Engagement, Ghana, Tullow Ghana Limited, 2012

Project Manager for the Social Impact Assessment and community level consultations for offshore exploration drilling. IFC compliant project.

Social Impact Assessment, Guinea, Rio Tinto, 2011-2012

Specialist assessment of the socio-economic impacts associated with the development of a mine, rail and port in Guinea. IFC compliant project; IFC was a partner and key funder.

Development of Anglo American's Socio-Economic Assessment Toolbox (SEAT), 2008 and 2012

Part of team that developed SEAT; a comprehensive guidance document to provide support to Operations wanting to assess and improve social performance at Anglo American operations.

Stakeholder Engagement Strategy, South Africa, Anglo American Thermal Coal (AATC), 2011

Project Manager for the development of a Stakeholder Engagement Strategy for a proposed coal mine located within the bufferzone of a World Heritage Site, Mapungubwe.

Resettlement Need Assessment and Gap Analysis, Abuja, Nigeria, Houses for Africa, 2010

Project Manager for a scoping visit to assess the extent of resettlement required and the work undertaken to date. Advised the client what activities were required to develop an IFC compliant Resettlement Action Plan.

Social Impact Assessment for seismic surveys, Cameroon, Kosmos, 2008 -2009

Lead Social specialist for Social Impact Assessment and community level consultations for exploration seismic surveys. Managed team of international and local social consultants for IFC aligned project.

Social Impact Assessment for Transmission Line, Cameroon, AES Sonel, 2008

Lead Social specialist for Social Impact Assessment and community level consultations for 113km transmission line. Managed team of international and local social consultants for IFC aligned project.

Other projects:

- Environmental and Social Due Diligence of the Proposed Coega Wind Energy Project, South Africa, Electrawind, 2011
- Social Impact Assessment, Albania, Trans-Adriatic Pipeline (TAP), 2011
- Socio-Economic Assessment Toolbox (SEAT) Training, South Africa, Various, 2006-2012
- Social Impact Assessments for 5 Wind Farms, Western and Northern Cape, South Africa, G7 Renewable Energies, 2010
- Social Impact Assessment for 8 Renewable Energy Facilities, Western and Northern Cape, South Africa, Mainstream Renewable Power South Africa, 2010
- Social Baseline, Risk Assessment and Engagement Plan, Botswana, AngloCoal, 2009 - 2010
- Reputational Risk Assessment, South Africa, Confidential Client, 2009
- Social Impact Assessment for a Gold Mine, Turkey, Anatolia Development Minerals Limited, 2009
- Social Baseline, Risk Assessment and Engagement Plan, South Africa, AngloCoal, 2008 - 2009
- Development of Exploration Phase Guidance Documents, South Africa, AngloCoal, 2008 - 2009
- Socio-Economic Overview and Key Risk Identification, Tanzania, Confidential Client, 2008
- Socio-Economic Impact Assessment for Offshore Exploration Drilling and an Early Production System in Lake Albert, Uganda, Tullow Oil, 2007 – 2008
- Social Audits for table grape farms, Kakamas, Fairfood, 2007

REFERENCES

David Shandler, Social Specialist (david.shandler@gmail.com)

Alison McCallum, Technical Director: Synergy Global Consulting Ltd (amccallum@synergy-global.net)

Libby Schroenn, IFC Consultant (LSchroenn@gmail.com)

Qualifications

Master of Social Sciences	2007	University of Cape Town – Environmental Management
Bachelor of Arts (Honours)	2004	University of Cape Town – Environmental Management
Bachelor of Arts	2003	National University of Lesotho – Urban and Regional Planning

Key Areas of Expertise

Key areas of Stella's expertise are summarised below.

Management of major and small scale environmental impact assessments	Countrywide for a wide variety of mining and prospecting developments
Stakeholder engagement management	Countrywide and other African countries for various mineral developments
Management of specialist investigations	Countrywide for a variety of mineral developments
Environmental auditing	Countrywide for a number of prospecting and mining operations
Closure and rehabilitation cost estimates	Countrywide for various mining and prospecting developments
Environmental input at pre-feasibility and bankable feasibility levels	Countrywide for a number of mineral developments
Report writing	Various reports as per the items above

Summary of Experience and Capability

Stella is an Environmental Consultant with SLR's South African offices and is responsible for various environmental assessment projects. Stella has seven years of experience within the Minerals sector. Stella has managed a wide range of environmental assessment projects for major and small scale minerals developments throughout South Africa. Since 2008 Stella has been involved in 50 projects and she has managed over 20 them. In addition to this, Stella advises clients on a wide range of environmental and associated legal issues.

Stella also specialises in the facilitation and undertaking of stakeholder engagement processes including liaison with Interested and/or Affected Parties (IAPs), regulatory authorities, local authorities, tribal authorities and non-government organisations. Her specialities includes managing of complex and difficult stakeholders.

Prior to joining Metago Environmental Engineers (now SLR Consulting) in 2008, Stella worked as an Environmental Consultant at EnviroXcellence Services Cc on a variety of non-mining related projects including review of environmental impact assessment and environmental management programme (EIA/EMP) reports submitted to the provincial

Departments of Environmental Affairs (DEA) for both North West and Limpopo Provinces and drafting the environmental authorisations.

Recent Project Experience

Key aspects of Stella's project experience are summarised below.

Project	Date	Stella's Role
Rhino Oil and gas exploration (Pty) Ltd: stakeholder engagement manager for exploration right application in Kwazulu Natal Province.	Current	Stakeholder Engagement Manager
Rhino Oil and gas exploration (Pty) Ltd: stakeholder engagement manager for exploration right application in the Eastern Cape Province.	Current	Stakeholder Engagement Manager
Marula Platinum (Pty) Ltd: Basic Assessment for waste activities at Marula Mine, Limpopo Province.	Current	Project Manager
Exxaro Coal (Pty) Ltd: Graves Relocation and Related Consultation Processes for Leeuwpan Coal Mine in Delmas, Mpumalanga Province.	Current	Project Manager
Hernic Ferrochrome (Pty) Ltd: Environmental Impact Assessment and Environmental Management Programme for waste activities at Bokone and Morula Mines in Brits, North West Province.	Current	Project Manager
Impala Platinum Limited: Environmental Management Plan Amendment for the transfer of prospecting properties near Steelpoort, Limpopo Province.	Current	Project Manager
Inkosi Platinum (Pty) Ltd: 2016 Financial Provision update for prospecting operations on the farm Hartebeestpoort B 410 JQ, North West Province.	2016	Project Manager
Rhino Oil and gas exploration (Pty) Ltd: stakeholder engagement manager for exploration right application in the Free State Province.	2015	Stakeholder Engagement Manager
Tharisa Minerals (Pty) Ltd: Environmental Management Programme Amendment for the mining operations at Tharisa Mine near Marikana, Rustenburg, North West Province.	2015	Public Consultation Facilitator and Co-Project Manager
Afplats (Pty) Ltd: 2014 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farms Wolwerkraal 408 JQ and Kareepoort 407 JQ, North West Province.	2014	Project Manager
Marula Platinum (Pty) Ltd: Amendment of the Environmental Management Programme for Marula Mine, Limpopo Province.	2014	Project Manager
Imbasa Platinum (Pty) Ltd: 2014 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farm Hartebeestpoort 410 JQ, North West Province.	2014	Project Manager
Inkosi Platinum (Pty) Ltd: 2014 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farm Hartebeestpoort B 410 JQ, North West Province.	2014	Project Manager
Impala Platinum Limited: 2014 Financial Provision update for prospecting operations on the farms Kalkfontein, Tweefontein and Buffelshoek near Steelpoort, Limpopo Province.	2013	Project Manager
Impala Platinum Limited: 2013 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farm Hackney, Limpopo Province.	2013	Project Manager

Project	Date	Stella's Role
Impala Platinum Limited: 2013 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farm Klipgatkop, North West Province.	2013	Project Manager
Impala Platinum Limited: 2013 Environmental Management Plan performance assessment and Financial Provision update for prospecting operations on the farms Rooderkralsspruit and Doornspruit, North West Province.	2013	Project Manager
Hernic Ferrochrome (Pty) Ltd: Environmental Management Programme performance assessment for mining operations at Bokfontein and Maroelabult Mines in Brits, North West Province.	2012	Project Manager
Tamboti Platinum (Pty) Ltd: Environmental Management Plan performance assessment for prospecting operations on the farm Kalkfontein, Limpopo Province.	2012	Project Manager
Tharisa Minerals (Pty) Ltd: Environmental Management Plan for the proposed use of the existing Marikana Railway Siding, Rustenburg, North West Province.	2011	Project Manager
Pilanesberg Platinum Mine (Pty) Ltd: Amendment of the record of decision (RoD), Rustenburg, North West Province.	2010	Project Manager
Hernic Ferrochrome (Pty) Ltd: Prospecting right application for platinum group metals (PGM) in Brits, North West Province.	2010	Project Manager
Keaton Mining (Pty) Ltd: BA assessment for coal storage and loading facility at Hawerklip Railway Siding near Delmas, Mpumalanga Province.	2009- 2011	Project Manager
Gold Fields: BA assessment for the installation of a diesel tank at South Deep Gold Mine, Gauteng Province.	2009- 2010	Project Manager
Impala Platinum Limited: Closure of prospecting operations on the farms Reinkoyalskraal and Elandsheuvel, Rustenburg, North West Province.	2009	Project Manager
Mafla Coal Pty Limited: Closure of prospecting operations on the farms: Gowrie, Prestwick and Melrose, Dundee, Kwa Zulu Natal Province.	2009- 2010	Project Manager
Pilanesberg Platinum Mine (Pty) Ltd: BA assessment for groundwater supply Rustenburg, North West Province.	2008- 2009	Project Manager
Metorex Limited: Environmental and Social Impact Assessment and Environmental Management Programme for the proposed Musonoi Copper and Cobalt Mine in Kolwezi, in the Democratic Republic of the Congo (DRC).	2013	Project Assistant
Pilanesberg Platinum Mine (Pty) Ltd: Environmental Management Programme (EMP) Closure Objectives-Stakeholder Management, Rustenburg, North West Province.	2011	Public Consultation Facilitator
Gold Fields: Environmental Management Programme (EMP) performance at Driefontein East and West Mines, Gauteng Province.	2011	Project assistant
Impala Platinum (Pty) Ltd: EIA/EMP for the new tailings dam and opencast mining activities, Rustenburg, North West Province.	2012	Public Consultation Facilitator
Metorex Limited: The proposed Kinsenda and Lubembe copper mines in the DRC	2011	Project Assistant
Turquoise Moon 157 (Pty) Ltd: EIA/EMP and exploration activities for Moonlight Iron Ore Project, Dendron and Lephalale, Limpopo Province.	2010-2011	Public Consultation Facilitator and Project Assistant

Project	Date	Stella's Role
East Plats: Environmental Management Programme (EMP) performance for Crocodile River Mine, Brits, North West Province.	2010	Project Assistant
Lafarge Cement: EIA/EMP assessment for the expansion at Lafarge Cement Plant, Lichtenburg, North West Province.	2009-2011	Public Consultation Facilitator and Project Assistant
Impala Platinum Limited: Section 102 Application for Welbekend, Rustenburg, North West Province.	2010	Project Assistant
Xstrata Alloys South Africa (Pty) Ltd: EIA/EMP for the proposed platinum mining activities on portions 13 and 14 of the farm Schietfontein, Rustenburg, North West Province.	2010	Project Assistant
Aquarius Platinum South Africa (Pty) Ltd: Zondernaam seismic survey Lebowakgomo, Limpopo Province.	2010	Public Consultation Facilitator
Tamboti Platinum (Pty) Ltd: EIA for the proposed Kalkfontein platinum mine, Steelpoort, Limpopo Province.	2009	Public Consultation Facilitator
Hernic Ferrochrome (Pty) Ltd: EIA/EMP for the proposed Bokfontein smelter and concentrator plant, Brits, North West Province.	2010	Public Consultation Facilitator
Pilanesberg Platinum Mine (Pty) Ltd: Chrome expansion project, Rustenburg, North West Province	2010	Public Consultation Facilitator
Eastern Platinum Limited's Crocodile River Mine (CRM): EMP performance assessment, Brits, North West Province.	2010	Project Assistant
Hernic Ferrochrome (Pty) Ltd: EMP performance assessment, Brits, North West Province.	2010	Project Assistant
Gold Fields Driefontein East and West Mine: EMP performance assessment, Gauteng Province.	2010	Project Assistant
Mkhombi Mining (Pty) Ltd: Prospecting EMP, Mpumalanga Province.	2009	Public Consultation Facilitator and Project Assistant
Spirapix (Pty) Ltd: Prospecting EMP, Mpumalanga Province.	2009	Public Consultation Facilitator and Co-Project Manager
First Platinum- Brakspruit EIA/EMP, Rustenburg, North West Province.	2008	Public Consultation Facilitator and Project Assistant
Barplats Crocodile River Mine: Krokodilrift Prospecting application rights, Brits, North West Province.	2008	Public Consultation Facilitator
Impala Platinum Limited: Prospecting EMP performance assessment, Rustenburg, North West Province.	2008	Project Assistant
Impala Platinum Limited: Closure of prospecting operations on the farms Kookfontein and Turffontein, Rustenburg, North West Province	2008	Public Consultation Facilitator and Project Assistant

Publications: N/A

APPENDIX B: COMMENTS FROM INTERESTED AND/ OR AFFECTED PARTIES (I&APS)

SUMMARY OF ISSUES RAISED BY REGULATORY AUTHORITIES AND IAPs AS PART OF THE SCOPING PROCESS

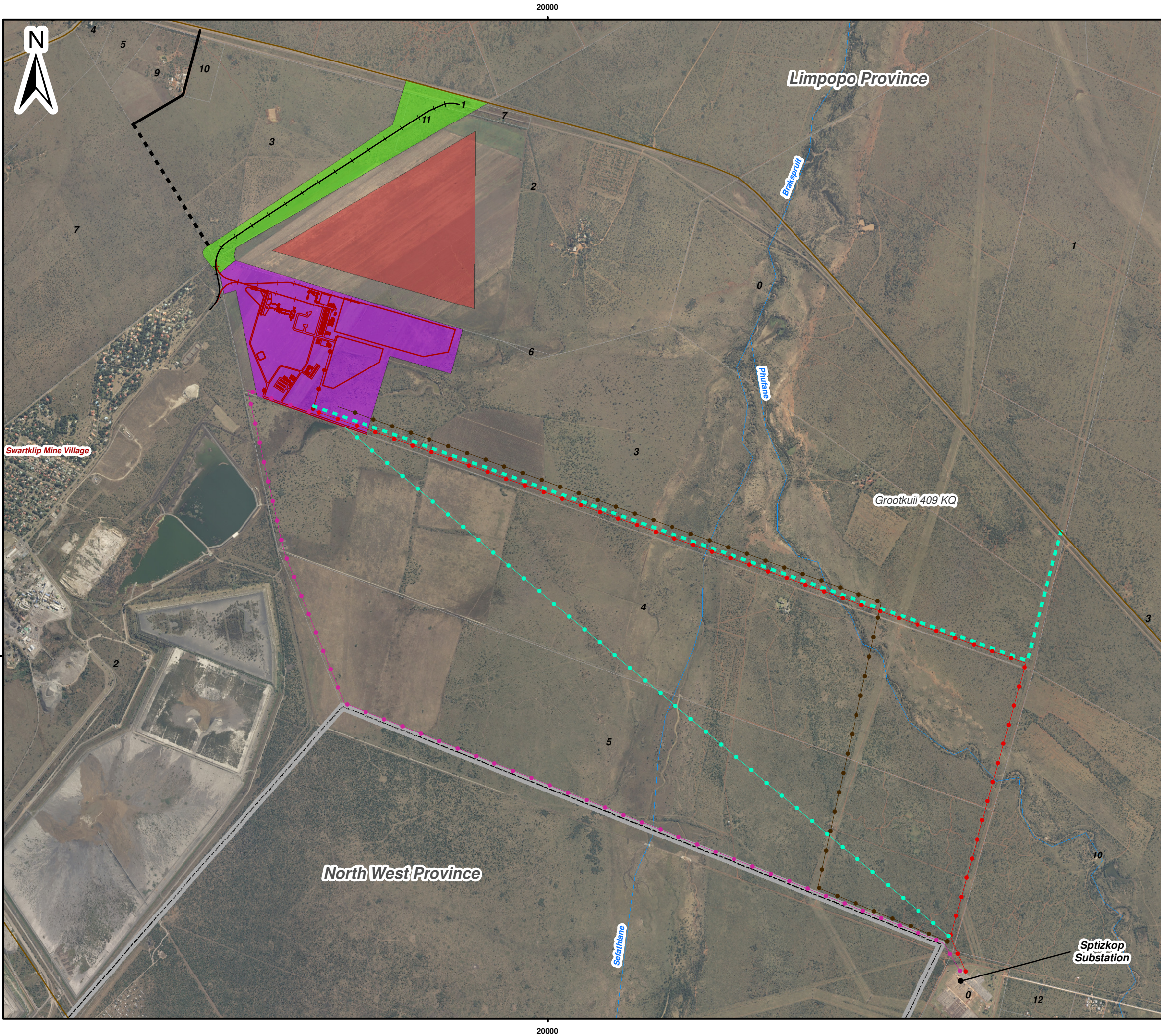
Note: All questions/comments/issues captured in blue were received during the review period of the draft scoping report/during follow up meetings with landowners potentially affected by the proposed scope change (third access road alternative)

ISSUE RAISED	BY WHOM AND WHEN	RESPONSE GIVEN BY PROJECT TEAM (as amended/incorporated for the purposes of the scoping report submission)
Socio-economic issues relating to influx of labour, pressure on services etc.		
The proposed project and its promised jobs will result in an influx of people to the area which will ultimately lead to the establishment of a new informal settlement and its associated impacts such as crime.	Comments raised by Sandy McGill, Mr and Mrs Schoeman at the scoping meeting, Swartklip Rec Centre, 21 July 2015	It is difficult to fully mitigate or manage many of the social impacts of a proposed project given that many of these impacts are indirect and cumulative in nature (e.g. in-migration of job-seekers and the associated social impacts).
The Hernic smelter in Brits is a perfect example of the housing invasion issues. The recent informal development (De Kroon) adjacent to the smelter is proof. The landowner forcefully demanded people to move from his property using bulldozers and as a result he was arrested for his actions.	Comment by Dirkie van der Westhuizen at focused meeting, on Johan Young's property (Kameelhoek ptn 9), 26 May 2016	The proposed Project is located in an area that is zoned for mining and large infrastructure; there are already numerous facilities of this nature in operation. The responsibility to manage indirect impacts is therefore the combined responsibility of the various operators and the authorities; it is difficult to isolate the impacts to one specific facility.
Previous experience with BCR mining has shown that increased traffic on this road leads to the establishment of informal settlements and people selling things along the side of the road with littering and issues such as stock theft.	Comment by Johan Young at focused meeting, on Johan Young's property (Kameelhoek ptn 9), 26 May 2016	It is important for each operator to put in place mitigation and management measures that aim to discourage influx and the associated exacerbation of existing social problems; e.g. growth of informal settlements, pressure on existing infrastructure and services, the increase in social ills, and the changed sense of place. In this regard, SCSC has committed to implementing a number of mitigation and management measures that in combination aim to address these complex social impacts. The economic impacts associated with the proposed Project have been addressed in the Economic Impact Assessment. A number of associated mitigation measures have been included in the SIA, largely to serve to discourage the influx of job-seekers thereby alleviating the indirect impacts associated with influx.

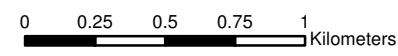
ISSUE RAISED	BY WHOM AND WHEN	RESPONSE GIVEN BY PROJECT TEAM (as amended/incorporated for the purposes of the scoping report submission)
		Detailed mitigation measures are outlined in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 of the SIA report.
Socio-economic issues relating to access control and security		
<p>We experienced first-hand all the issues related to the use of this road as an access road for mines. One of the biggest issues for us as the neighbouring landowners is crime and safety. The trucks would line up on the access road and often use it as a truck stop which would lead to a number of issues such as public ablution, littering and also cutting our fences to get water from our property</p>	<p>Comments by Johan Young at focused meeting, on Johan Young's property (Kameelhoek ptn 9), 26 May 2016</p>	<p>As mentioned above, it is difficult for a single operator to fully control influx of job-seekers and the associated social impacts. Mitigation measures have been proposed that aim to discourage influx and to promote partnerships with various local actors to address, as far as reasonably possible, the indirect and cumulative social concerns.</p>
<p>Access control is also an issue for us. Residents from Smash Block will walk straight through all our properties to gain access to the smelter.</p>		<p>With regards to crime, safety and security concerns, SCSC has committed to implementing a number of measures that aim to formalise site entry and exit to one strictly controlled security access point; the site will be fully fenced to prevent unauthorised access from any other point. In addition, measures have been stipulated that serve to manage the workforce and enable effective grievance submission and redress.</p>
<p>With the entrance right next to my farm people will be crossing my farm to gain entry and this is a huge issue. In the past people would leave my gates open allowing my cattle to cross the main road which then becomes my issue if this had led to any accidents on the roads.</p>	<p>Comment raised by Sandy McGill, Mr and Mrs Schoeman at the scoping meeting, Swartklip Rec Centre, 21 July 2015</p>	<p>Detailed mitigation measures are outlined in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 of the SIA report.</p>
<p>Please clarify aspects of security.</p>	<p>Comment raised by Ingrid Morrison, via email, 20 July 2015</p>	
<p>Siyanda should assist in the maintenance of the boundary fence between portions 3 and 4 of Grootkuil</p>	<p>Comment by Philip Schoeman and Pier De Vries during focused scoping meeting with Union Mine, 13 May 2015</p>	
<p>Siyanda needs to ensure that there is no unauthorised access (via pedestrians) to site otherwise workers will trespass on our and other privately owned land.</p>	<p>Comments raised by Johan Young at scoping meeting, Northam Town Hall, 23 July 2015</p>	
<p>What are Siyanda's plans to control inward</p>	<p>Comments raised by Sandy McGill, Mr</p>	

ISSUE RAISED	BY WHOM AND WHEN	RESPONSE GIVEN BY PROJECT TEAM (as amended/incorporated for the purposes of the scoping report submission)
<p>migration of people in search of job opportunities? This will lead to new informal settlements being established in the area such as the situation next to Marulasfontein.</p> <p>We are concerned about our security. Siyanda must convince private landowners that no informal settlements will be established since not everyone will be guaranteed a job at the plant and those that do not get jobs will become desperate and therefore target private landowners.</p>	<p>and Mrs Schoeman at the scoping meeting, Swartklip Rec Centre, 21 July 2015</p>	
<p>I am concerned about the influx of labour and the associated social impacts such as informal settlements, security and littering.</p>	<p>Comments raised by Johan Young at scoping meeting, Northam Town Hall, 23 July 2015</p>	

APPENDIX C: SITE LAYOUT ALTERNATIVES



- Legend**
- Proposed Infrastructure Layout
 - Dams
 - Rivers
 - Roads
 - Existing Union Section Railway Line
 - Provincial Border
- Options**
- Project Infrastructure Area - Option 1 (Preferred)
 - Project Infrastructure Area - Option 2 (Preferred)
 - Access Road Corridor - Option 2 (Preferred)
 - - - Access Road - Option 1
 - Access Road - Option 3 - (Already Built)
 - - - Access Road - Option 3 - (Extension)
 - Powerline - Option 1 (Preferred)
 - Powerline - Option 2
 - Powerline - Option 3
 - Powerline - Option 4



Scale: 1:26 500 @ A3

Projection: Transverse Mercator
Datum: Hartbeeshoek, LO27

Siyanda Chrome Smelting
Company (Pty) Ltd

Figure 5
Site Layout Alternatives



SLR Consulting (Africa) (Pty) Ltd
P O Box 1596, Cramerview, 2060, South Africa
Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978

APPENDIX D: PHOTOS OF SURROUNDING COMMUNITIES

PHOTOS OF SURROUNDING COMMUNITIES

SWARTKLIP MINE AND BIERSPRUIT COMMUNITIES

Food Zone Shopping Centre in Bierspruit Community



Swartklip Shopping Centre



Crèche in Swartklip Mine Village



Swartklip Mine Entrance/ Main Intersection



A house in Swartklip



A house in Bierspruit



Swartklip Post Office



Local Church in Bierspruit



TOWN OF NORTHAM

Homes in Mojuteng Township in Northam and the surrounds



Homes in Northam Extension 6



Home in Northam Extension 8



SEFIKILE AND MMANTSERRE COMMUNITIES

Kraalhoek Clinic



A village shop/ cafe



General internal roads, housing and livestock in the Mmantserre communities



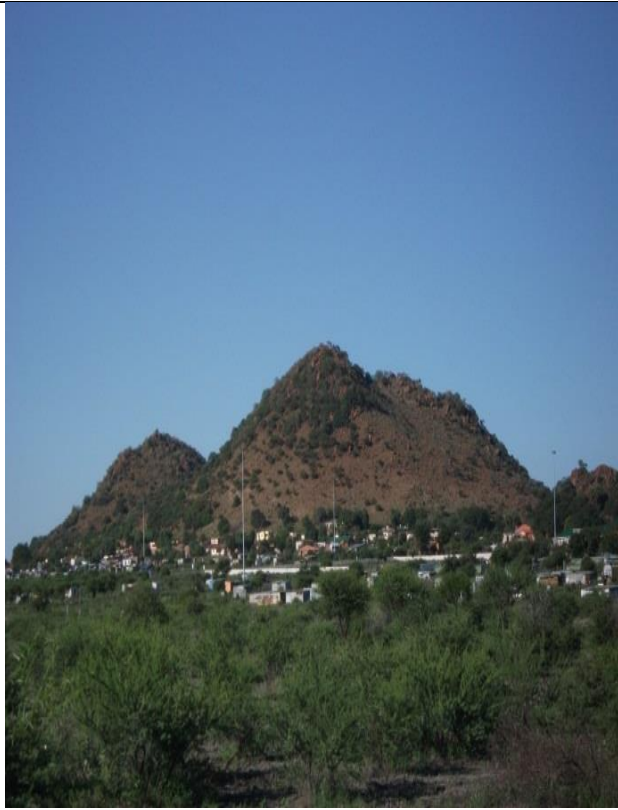
Kraalhoek Cemetery



Mopyane Zonal Office- Municipal



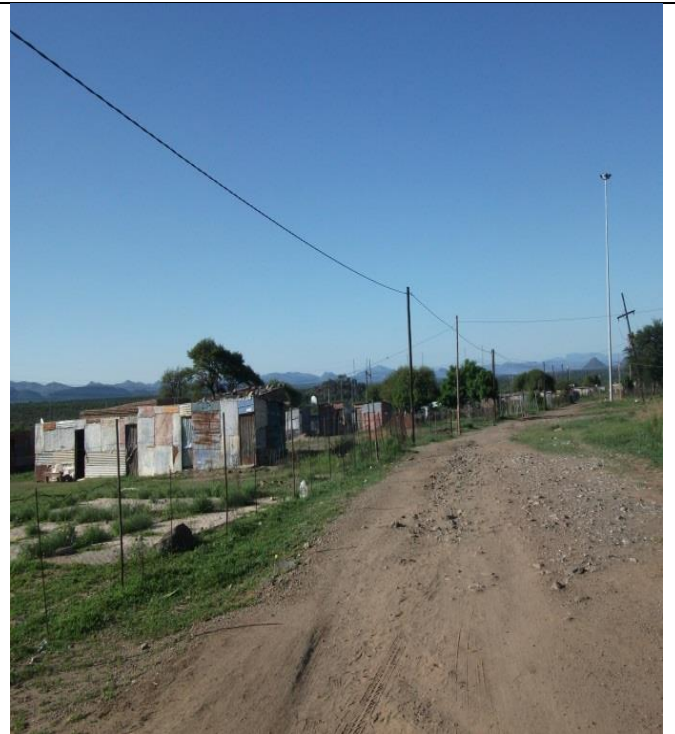
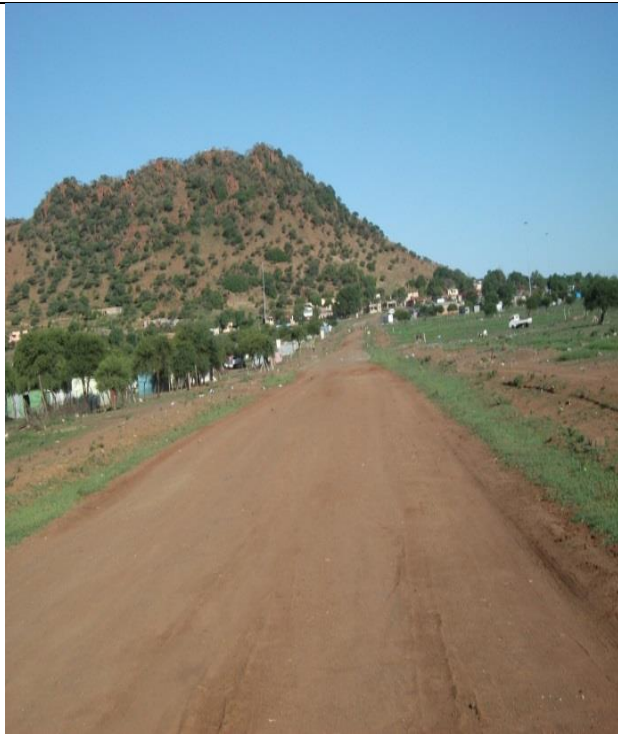
Sefikile and Ra-Mosidi villages from a distance



Sefikile Primary School



Khwetsheza Village





RECORD OF REPORT

SLR Reference:	7AY.19057.00006
Title:	Social Impact Assessment Report for the Proposed New Ferrochrome Smelter Near The Town of Northam
Site name:	Portion 3 of the farm Grootkuil 409 KQ
Report Number:	1
Client:	Siyanda Chrome Smelting Company (Pty) Ltd

Name	Entity	No. of copies	Date issued	Issuer

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