Proposed Lephalale Railway Yard in Limpopo Province

Social Impact Assessment

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March 2019

Executive Summary

The purpose of this document is to provide a baseline description of the receiving socio-economic environment and to identify social and economic impacts for the proposed Lephalale Railway Yard.

The following stakeholder groups have been identified for the project:

- Government
    - Limpopo Provincial Government;
    - Waterberg District Municipality;
    - Lephalale Local Municipality;
- Civil society
    - Surrounding towns and communities
        - Lephalale
        - Marapong
        - Steenbokpan (Lesedi Community)
    - Civil Society Forums
- Business and industry
    - Resgen Biokarabelo Mine
    - Eskom
        - Medupi Power Station
        - Existing infrastructure
    - Local businesses

        - Lephalale Development Forum
        - Lephalale Business Chamber
    - Other mining companies
- Farmers
    - Directly adjacent farms
    - Neighbouring farms
    - Farm workers
- Transnet

The receiving environment is located in Ward 3 of the Lephalale Local Municipality that is located in the Waterberg District Municipality in the Limpopo Province. The proposed site is located approximately 30 km west of the town of Lephalale, in the rural area of Steenbokpan. The Waterberg region is regarded as a strategic growth node for various activities within the Mining and Minerals sectors. The main economic sectors in the municipal area are mining, electricity and agriculture. Hunting and tourism are the main tourism activities and there are a number of hunting farms in the Steenbokpan area.

The population in the municipality showed an increase of about 18% between 2011 and 2016, while the number of households have increased with just over 40%. Together with the increase in construction and mining activities in the area, this suggests an increase in the number of migrant workers in the area, which is also supported by the high proportion of households that consists of one or two members.

Despite the apparent increase in economic activity in the area, levels of poverty have increased. Potential reasons for this are that the people who migrated to the area by far outnumber the available employment opportunities, or that contract workers who are only in the area for a relatively short period of time start families, which

they leave behind when they move to the next contract, and the family that stays behind then struggles without their financial contribution. Another possible reason is price increases due to a high demand for certain items.

The majority of the population in the municipality belong to the Black population group, but in the ward there is a high proportion of people belonging to the White population group. This suggests that the ward is culturally more diverse than the municipal area as a whole. People in the ward tend to be older, and as such can be expected to be in a different life stage than the average municipal resident. The main languages spoken in the ward are Afrikaans, Setswana and Sepedi, making the ward culturally different from the municipal area.

Education levels on ward level is higher than on municipal level and unemployment levels are lower. The household income levels on ward level are higher than on municipal level and suggest a greater variety of skills levels. There is a high demand for rental units, and this is supported by the relatively high proportion of households that rent their dwellings as well as the high incidence of informal dwellings (in backyards and informal settlements) on municipal and ward level.

The following social impacts have been identified during the SIA process:

Impact	Pre-construction phase	Construction phase	Operational phase	Decommissioning phase
Community expectations	X	X	X	X
Sense and spirit of place		X	X	
Creation of jobs		X	X	
Secondary economic opportunities		X	X	
Nuisance like dust, noise and light		X	X	
Loss of livelihoods		X	X	
Safety impacts		X	X	
Roads and transport		X	X	

From a social perspective the most severe negative impacts can be associated with the sense and spirit of place, livelihood impacts and transport. Some of these impacts can be mitigated to lessen their severity. Job creation is a significant positive

impact. The most impacts will be experienced in the construction and operation phase of the project. A number of mitigation measures have been recommended in this report

The proposed Transnet Lephalale Railway Yard will be constructed in a rural area, away from communities. In the broader economic context of South Africa, the project will have a positive impact and also have the potential to unlock other industrial development. On a site level, the project will impact negatively on the directly affected landowners and some of their livelihood activities. Given this situation, the following recommendations are made:

- Transnet must appoint a community relations manager that is trusted by the community and have the necessary skills and education before construction commences;
- Transnet must develop a community-friendly external grievance mechanism in conjunction with communities;
- Transnet must develop a community relations strategy to plan for and guide its involvement with the community. The strategy should include feedback mechanisms about aspects of concern to the community;
- Transnet must share the skills that will be required with the Lephalale Development Forum as soon as possible to allow the LDF to prepare for the construction and operation phase;
- Transnet should establish a labour desk and put measures in place to ensure the most effective local employment strategy;
- Transnet must ensure social requirements as specified in the mitigation measures are included in their contracts with sub-contractors;
- Transnet must ensure traffic impacts are minimised in accordance with the recommendations made in the traffic impact assessment;

- Transnet must engage with farmers directly about aspects that may affect their livelihoods and compensate them in a fair manner if any assets are lost or compromised.

It is recommended that the list of recommendations should be included in the environmental authorisation. Given the positive impact on national level, it is recommended that this project is given environmental permission to proceed.

Declaration of Independence

Equispectives Research and Consulting Services declare that:

- All work undertaken relating to the proposed project were done as independent consultants;
- They have the necessary required expertise to conduct social impact assessments, including the required knowledge and understanding of any guidelines or policies that are relevant to the proposed activity;
- They have undertaken all the work and associated studies in an objective manner, even if the findings of these studies were not favourable to the project proponent;
- They have no vested interest, financial or otherwise, in the proposed project or the outcome thereof, apart from remuneration for the work undertaken under the auspices of the abovementioned regulations;
- They have no vested interest, including any conflicts of interest, in either the proposed project or the studies conducted in respect of the proposed project, other than complying with the relevant required regulations;
- They have disclosed any material factors that may have the potential to influence the competent authority's decision and/or objectivity in terms of any reports, plans or documents related to the proposed project as required by the regulations.

Record of Experience

This report was compiled by Ilse Aucamp and San-Marié Aucamp.

Ilse Aucamp holds a D Phil degree in Social Work obtained from the University of Pretoria in 2015. She also has Masters' degree in Environmental Management (Cum Laude) from the Potchefstroom University for Christian Higher Education which she obtained in 2004. Prior to that she completed a BA degree in Social Work at the University of Pretoria. She is frequently a guest lecturer in pre- as well as post-graduate programmes at various tertiary institutions. Her expertise includes social impact assessments, social management plans, social and labour plans, social auditing, training as well as public participation. She is the past international chairperson of the Social Impact Assessment section of the International Association of Impact Assessment (IAIA) as well as a past member of the National Executive Council of IAIA South Africa. She advises the Centre for Environmental Rights on social issues, and is also on the advisory panel of the SIAhub, an international website aimed at SIA practitioners. She is a co-author of the *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* document published by the International Association for Impact Assessment published in 2015.

San-Marié Aucamp is a registered Research Psychologist with extensive experience in both the practical and theoretical aspects of social research. She has more than 20 years of experience in social research and she occasionally presents guest lectures on social impact assessment. Her experience includes social impact assessments, social and labour plans, training, group facilitation as well as social research. She is a past council member of the Southern African Marketing Research Association (SAMRA).

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GLOSSARY OF TERMS

Sense of place: Defining oneself in terms of a given piece of land. It is the manner in which humans relate or feel about the environments in which they live.

Social impact: Something that is experienced or felt by humans. It can be positive or negative. Social impacts can be experienced in a physical or perceptual sense.

Social change process: A discreet, observable and describable process that changes the characteristics of a society, taking place regardless of the societal context (that is, independent of specific groups, religions etc.) These processes may, in certain circumstances and depending on the context, lead to the experience of social impacts.

Social Impact Assessment: The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by these interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.

Social license to operate: The acceptance and belief by society, and specifically local communities, in the value creation of activities.

Social risk: Risk resulting from a social or socio-economic source. Social risk comprises both the objective threat of harm and the subjective perception of risk for harm.

LIST OF ABBREVIATIONS

DM	District Municipality
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESOMAR	European Society for Opinion and Marketing Research
FPL	Food Poverty Line
HDSA	Historically Disadvantaged South African
IDP	Integrated Development Plan
LBPL	Lower Bound Poverty Line
LM	Local Municipality
NEMA	National Environmental Management Act
SAMPI	South African Multidimensional Poverty Index
SAMRA	Southern African Marketing Research Association
SIA	Social Impact Assessment
UBPL	Upper Bound Poverty Line
UNEP	United Nations Environmental Programme

1 Project overview

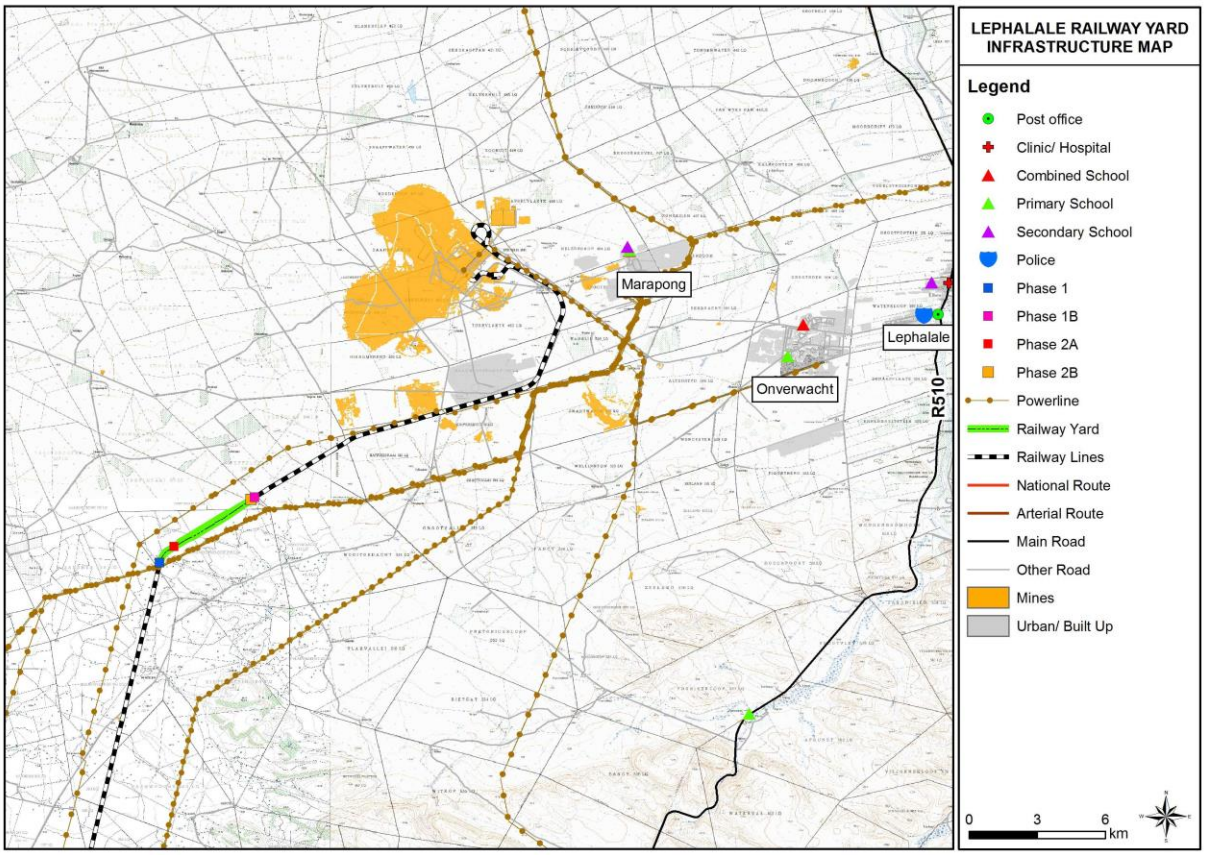
Transnet plans to expand the rail transportation from the Waterberg region in stages to meet the potential expansion of the mining activities, coal transportation and transportation of other commodities (Scope of Works document, 18 June 2018). The Waterberg Railway Corridor starts in Lephalale, passes through Thabazimbi, Rustenburg, Pyramid South and links to the existing Ermelo railway line, which provides linkage to the main coal export terminal at Richards Bay Harbour.

The coal reserves in the Mpumalanga area, that accounts for about 80% of coal production in South Africa, are progressively depleting. Coal reserves were discovered in the Waterberg region in Limpopo and in order to meet the anticipated transportation of coal volumes from this area, additional freight capacity is required. Furthermore, the Waterberg complex is regarded as a strategic growth node for various activities within the Mining and Industrial sectors. Adequate rail infrastructure capacity is seen as critical to unlock the potential of this economic hub.

The proposed Lephalale Railway Yard forms part of the endeavour to increase capacity. The purpose of the yard is to allow compilation of 100 wagon trains from the surrounding mines, refuel diesel locomotives, sanding, crew change and on track inspections of rolling stock. The yard will be located approximately 30 km west of the town of Lephalale on the single railway line between Thabazimbi and Lephalale, in the rural area of Steenbokpan. The project area is located in the Lephalale Local Municipality, which falls within the jurisdiction of the Waterberg District Municipality in the Limpopo Province.

Figure 1 shows the proposed location for the project.

Figure 1: Locality of the proposed Lephalale Railway Yard.



The railway yard would cover the following land parcels:

- Portion 1 of the farm Geelhoutkloof 359LQ;
- Portion 2 of the farm Geelhoutkloof 359LQ;
- Geelhoutkloof 717LQ (former Remainder of Geelhoutkloof 359LQ);
- Enkeldraai 319LQ (GIS show 314LQ);
- Kringgatspruit 318LQ (GIS show 699LQ); and
- Buffelsjagt 317LQ.

The purpose of the Social Impact Assessment (SIA) report is to provide baseline information regarding the socio-economic environment, to identify possible social impacts that may come about as a result of the proposed project, and to suggest ways in which these impacts can be mitigated and managed. This will assist decision-makers on the project in making informed decisions by providing information on the

potential or actual consequences of their proposed activities. The process entailed the following:

- A baseline socio-economic description of the affected environment;
- Identification of potential social change processes that may occur as a result of the project; and
- Identification of potential social impacts; and
- Identification of social mitigation measures.

Social impact assessment (SIA), a form of social research, can assist with identifying possible social impacts and risks. Disregarding social impacts can alter the cost-benefit equation of a development and in some cases even undermine the overall viability of a project. A proper social impact assessment can have many benefits for a proposed development (UNEP, 2002) such as:

- Reduced impacts on communities of individuals;
- Enhanced benefits to those affected;
- Avoiding delays and obstruction – helps to gain development approval (social license);
- Lowered costs;
- Better community and stakeholder relations; and
- Improved proposals.

Naledzi Environmental Consultants has appointed Equispectives Research and Consulting Services to investigate potential social impacts as part of the Environmental Impact Assessment study for the proposed project. This report represents the findings and recommendations of the social impact assessment.

2 Study approach

2.1 Information base

The information used in this study was based on the following:

1. A literature review (see list provided in the References);
2. Interviews with key stakeholders; and
3. Professional judgement based on experience gained with similar projects.

2.2 Assumptions and limitations

The following assumptions and limitations were relevant:

1. Not every individual in the community could be interviewed therefore only key people in the community were approached for discussion. Additional information was obtained using existing data.
2. The social environment constantly changes and adapts to change, and external factors outside the scope of the project can offset social changes, for example changes in local political leadership or economic conditions. It is therefore difficult to predict all impacts to a high level of accuracy, although care has been taken to identify and address the most likely impacts in the most appropriate way for the current local context within the limitations.
3. Social impacts can be felt on an actual or perceptual level, and therefore it is not always straightforward to measure the impacts in a quantitative manner.
4. Social impacts commence when the project enters the public domain. Some of these impacts will occur irrespective of whether the project continues or not. These impacts are difficult to mitigate, and some would require immediate action to minimise the risk.
5. There are different groups with different interests in the community, and what one group may experience as a positive social impact, another group

may experience as a negative impact. This duality will be pointed out in the impact assessment phase of the report.

6. Social impacts are not site-specific but take place in the communities surrounding the proposed development.

2.3 Methodology

Scientific social research methods were used for this assessment. In order to clarify the process to the reader, this section will start with a brief explanation of the processes that have been used in this study.

2.3.1 Defining of concepts

The theoretical model used for this impact assessment was developed by Slootweg, Vanclay and Van Schooten and presented in the International Handbook of Social Impact Assessment (Vanclay & Becker, 2003). This model identifies pathways by which social impacts may result from proposed projects. The model differentiates between social change processes and social impacts, where the social change process is the pathway leading to the social impact. Detail of how the model works is not relevant to this study, but it is important to understand the key concepts, which will be explained in the following paragraphs.

Social change processes are set in motion by project activities or policies. A social change process is a discreet, observable and describable process that changes the characteristics of a society, taking place regardless of the societal context (that is, independent of specific groups, religions etc.) These processes may, in certain circumstances and depending on the context, lead to the experience of social impacts (Vanclay, 2003). If managed properly, however, these changes may not create impacts. Whether impacts are caused will depend on the characteristics and history of the host community, and the extent of mitigation measures that are put in place (Vanclay, 2003). Social change processes can be measured objectively, independent of the local context. Examples of social change processes are an increase in the population, relocation, or the presence of temporary workers. Social

change processes relevant to the project will be discussed before the possible social impacts will be investigated.

For the purpose of this report, the following social change process categories were investigated:

- Demographic processes;
- Economic processes;
- Geographic processes;
- Institutional and legal processes;
- Emancipatory and empowerment processes;
- Socio-cultural processes; and
- Other relevant processes.

The International Association for Impact Assessment (2003) states that Social Impact Assessment includes the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by these interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment. The Inter-organizational Committee on Principles and Guidelines for Social Impact Assessment (2003) defines Social Impact Assessment in terms of “efforts to assess, appraise or estimate, in advance, the social consequences likely to follow from proposed actions”.

A **social impact** is something that is experienced or felt by humans. It can be positive or negative. Social impacts can be experienced in a physical or perceptual sense. Therefore, two types of social impacts can be distinguished:

- **Objective** social impacts – i.e. impacts that can be quantified and verified by independent observers in the local context, such as changes in employment patterns, in standard of living or in health and safety.

- **Subjective** social impacts – i.e. impacts that occur "in the heads" or emotions of people, such as negative public attitudes, psychological stress or reduced quality of life.

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

For the purpose of this SIA, the following Social Impact Assessment categories were investigated:

- Health and social well-being;
- Quality of the living environment;
- Economic impacts and material well-being;
- Cultural impacts;
- Family and community impacts;
- Institutional, legal, political and equity impacts; and
- Gender impacts.

Relevant criteria for selecting significant social impacts included the following:

- Probability of the event occurring;
- Number of people that will be affected;
- Duration of the impact;
- Value of the benefits or costs to the impacted group;

- Extent to which identified social impacts are reversible or can be mitigated;
- Likelihood that an identified impact will lead to secondary or cumulative impacts;
- Relevance for present and future policy decisions;
- Uncertainty over possible effects; and
- Presence or absence of controversy over the issue.

For the purpose of this study, the model was adapted to suit the South African context, and where processes and impacts were not relevant to the study, it was omitted. Each category has a number of sub-categories, which also have been investigated. The Equator Principles, International Finance Corporation Performance Standards and World Bank Environmental, Health and Safety guidelines were consulted in the writing of this report and the mitigation suggested adheres to these requirements.

2.3.2 Literature study

A literature search was undertaken to obtain secondary data for the baseline description of the socio-economic environment. The information in this report was acquired via statistical data obtained from Statistics South Africa, SIA literature (see References), previous SIA studies conducted in the area and information from reputable sources on the World Wide Web.

2.3.3 Research approach

Traditionally there are two approaches to SIA, a technical approach and a participatory approach. A technical approach entails that a scientist remains a neutral observer of social phenomena. The role of the scientist is to identify indicators, obtain objective measures relevant to the situation and provide an expert assessment on how the system will change (Becker, Harris, Nielsen & McLaughlin, 2004). A participatory approach uses the knowledge and experiences of individuals most affected by the proposed changes as the basis for projecting impacts. In this

case the role of the scientist is facilitator of knowledge sharing, interpretation and reporting of impacts (Becker et al, 2004).

The findings presented in this report are based on secondary (desk) research and limited primary research. A qualitative approach was followed for the primary research, while qualitative and quantitative data were used for the secondary research.

The layperson sometimes criticises qualitative research as “subjective” or “not really that scientific”. For this reason, it is vital to understand the distinction between qualitative and quantitative research and their respective areas of application.

Qualitative research as a research strategy is usually characterised by the inference of general laws from particular instances, forms theory from various conceptual elements, and explains meaning (David & Sutton, 2004). It usually emphasises words rather than quantification in the collection and analysis of data. Data collection takes place by using methods such as unstructured or semi-structured interviews, focus groups, observations, etc. Data is not recorded in any standardised coding format but is usually reported according to themes. Qualitative data express information about feelings, values and attitudes. This approach is used where insight and understanding of a situation is required (Malhotra, 1996). Participants are selected based on their exposure to the experience or situation under review. The aim of qualitative research is to understand, not to quantify and as such it is extremely suitable for assessing social impacts. A potential impact has to be understood before it can be assessed appropriately.

Quantitative research as a research strategy usually makes inferences of particular instances by reference to general laws and principles and tends to emphasize what is external to or independent of the mind (objective) and incorporates a natural science model of the research process (David & Sutton, 2004). This usually makes it easier for a person with a natural or physical sciences background to relate to. This approach usually emphasises quantification in the collection and analysis of data. Data collection take place by using methods such as structured questionnaires and

data is recorded in a numeric or some other standardised coding format. Data is expressed in numerical format and statistical techniques are usually used to assist with data interpretation. This approach is used when information needs to be generalised to a specific population and participants are usually selected using probability sampling techniques (although non-probability methods can be used depending on the characteristics of the target population).

Although in theory the qualitative phase of this project could be followed by a quantitative phase, for a number of reasons it was not done. A quantitative phase would be more resource intensive in terms of labour, time and cost and the incremental precision obtained in terms of generalisability would not warrant the additional investment. Due to the strong emotional component relating to the perceived impacts, respondents may intentionally magnify the intensity of the impacts or indicate all impacts are equally severe in an attempt to bias the results in their favour, which will reduce the utility of quantitative results as part of the primary research process.

2.3.4 Ethical issues

The fact that human beings are the objects of study in the social sciences brings unique ethical problems to the fore. Every individual has a right to privacy which is the individual's right to decide when, where, to whom, and to what extent his or her attitudes, beliefs and behaviour will be revealed (Strydom, 2002). Every person interviewed for the purposes of this report has been ensured that although the information disclosed will be used, their names will not be disclosed without their permission. Therefore, to protect those consulted and to maintain confidentiality, the people interviewed for this report will not be named in the report. Records of the interviews have been kept. This is in line with international as well as national research practice such as the ESOMAR and SAMRA codes of conduct.

3 Baseline description of the receiving environment

According to the National Environmental Management Act (NEMA, 1998) environment refers to the surroundings in which humans exist. When viewing the environment from a socio-economic perspective the question can be asked what exactly the social environment is. Different definitions for social environment exist, but a clear and comprehensive definition that is widely accepted remains elusive. Barnett & Casper (2001) offers the following definition of human social environment:

> *"Human social environments encompass the immediate physical surroundings, social relationships, and cultural milieus within which defined groups of people function and interact. Components of the social environment include built infrastructure; industrial and occupational structure; labour markets; social and economic processes; wealth; social, human, and health services; power relations; government; race relations; social inequality; cultural practices; the arts; religious institutions and practices; and beliefs about place and community. The social environment subsumes many aspects of the physical environment, given that contemporary landscapes, water resources, and other natural resources have been at least partially configured by human social processes. Embedded within contemporary social environments are historical social and power relations that have become institutionalized over time. Social environments can be experienced at multiple scales, often simultaneously, including households, kin networks, neighbourhoods, towns and cities, and regions. Social environments are dynamic and change over time as the result of both internal and external forces. There are relationships of dependency among the social environments of different local areas, because these areas are connected through larger regional, national, and international social and economic processes and power relations."*

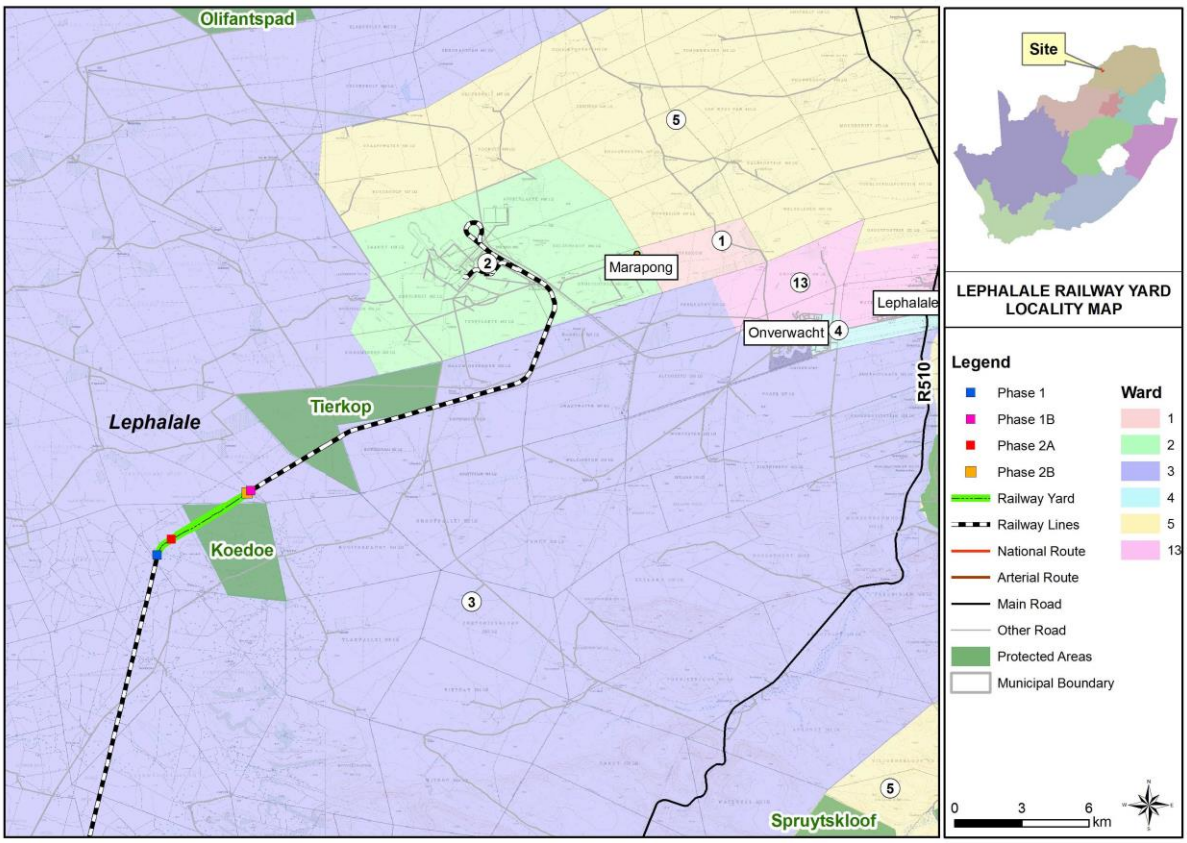
Environment-behaviour relationships are interrelationships (Bell, Fisher, Baum & Greene, 1996). The environment influences and constrains behaviour, but behaviour

also leads to changes in the environment. The impacts of a project on people can only be truly understood if their environmental context is understood. The baseline description of the social environment will include a description of the area within a provincial, district and local context that will focus on the identity and history of the area as well as a description of the population of the area based on a number of demographic, social and economic variables.

3.1 Description of the area

The proposed project will be located in Ward 3 of the Lephalale Local Municipality that falls under the Waterberg District Municipality in the Limpopo Province. For the baseline description of the area, data from Census 2011, Community Survey 2016, municipal IDP's and websites were used.

Figure 2: Locality of the proposed project.



The **Limpopo Province** is South Africa's most northern province and covers an area of 125 754 km^2 (www.municipalities.co.za). It shares an international border with Mozambique, Zimbabwe and Botswana. It also borders the Gauteng, Mpumalanga and North West Provinces. The capital of the province is Polokwane. Other major

cities and towns include Bela-Bela, Lephalale, Makhado, Musina, Thabazimbi and Tzaneen.

Mining is the main driver of the economy and mineral deposits include platinum-group metals, iron ore, chromium, high and middle-grade coking coal, diamonds, antimony, phosphate, and copper. Mineral reserves include gold, emeralds, scheelite, magnetite, vermiculite, silicon and mica.

Crops grown in Limpopo include sunflowers, cotton, maize, peanuts, bananas, litchis, pineapples, mangoes, pawpaws, a variety of nuts, as well as tea and coffee. The Bushveld is known for cattle, where controlled hunting is often combined with ranching.

Limpopo is divided into five districts, namely Capricorn, Mopani, Sekhukune, Vhembe and Waterberg.

The **Waterberg District Municipality** is located in the western part of the Limpopo Province (www.municipalities.co.za) and covers an area of 44 913 km^2. It shares a border with the North West and Gauteng Provinces. It is the biggest district in the provinces and shares five border control points with Botswana. Main towns in the area are Amandelbult Mine Town, Bela-Bela, Lephalale, Modimolle, Mokopane, Mookgophong, Pienaarsrivier, Thabazimbi and Vaalwater. The main economic sectors are mining, agriculture and tourism. The district consists of five local municipalities, namely Bela-Bela, Lephalale, Modimolle-Mookgophong, Mogalakwena and Thabazimbi.

The **Lephalale Local Municipality** is the largest municipality in the district and covers an area of 13 794 km^2 (www.municipalities.co.za). The town of Lephalale is a recognised gateway to Botswana and other Southern African countries. Mining, electricity generation and agriculture are the greatest contributors to the area's GDP (Integrated Development Plan 2018/2019). Agriculture is the sector that employs the largest part of the workforce, followed by community services. Tourism forms an important part of the economy of the area and is a potential future growth area. Hunting and ecotourism are the main tourism activities. Tourism attractions in the

area include the Marakele National Park, D'Nyala Nature Reserve, and the Mokolo Dam and Nature Reserve. The Waterberg coal fields that are located in Lephalale contains more than 40% of the total coal reserves of South Africa.

3.2 Description of the population

The baseline description of the population will take place on three levels, namely provincial, district and local. Impacts can only truly be comprehended by understanding the differences and similarities between the different levels. The baseline description will focus on the Limpopo Province, Waterberg District Municipality, Lephalale Local Municipality and Ward 3 of the Lephalale Local Municipality. The data used for the socio-economic description was sourced from Census 2011. Census 2011 was a de facto census (a census in which people are enumerated according to where they stay on census night) where the reference night was 9-10 October 2011. The results should be viewed as indicative of the population characteristics in the area and should not be interpreted as absolute.

In some municipalities the ward boundaries have changed in 2016 and StatsSA made Census 2011 data available that is grouped according to the 2016 boundaries. The ward level data will be shown for the 2016 ward delineations.

The following points regarding Census 2011 must be kept in mind (www.statssa.co.za):

- Comparisons of the results of labour market indicators in the post-apartheid population censuses over time have been a cause for concern. Improvements to key questions over the years mean that the labour market outcomes based on the post-apartheid censuses have to be analysed with caution. The differences in the results over the years may be partly attributable to improvements in the questionnaire since 1996 rather than to actual developments in the labour market. The numbers published for the 1996, 2001, and 2011 censuses are therefore not comparable over time and are higher from those published by Statistics South Africa in the surveys designed specifically for capturing official labour market results.

- For purposes of comparison over the period 1996–2011, certain categories of answers to questions in the censuses of 1996, 2001 and 2011, have either been merged or separated.

- The tenure status question for 1996 has been dropped since the question asked was totally unrelated to that asked thereafter. Comparisons for 2001 and 2011 do however remain.

- All household variables are controlled for housing units only and hence exclude all collective living arrangements as well as transient populations.

- When making comparisons of any indicator it must be taken into account that the time period between the first two censuses is of five years and that between the second and third census is of ten years. Although Census captures information at one given point in time, the period available for an indicator to change is different.

Where available, the Census 2011 data will be supplemented with data from Community Survey 2016.

3.2.1 Population and household sizes

According to the Community Survey 2016, the population of South Africa is approximately 55,7 million and has shown an increase of about 7.5% since 2011. The household density for the country is estimated on approximately 3.29 people per household, indicating an average household size of 3-4 people (leaning towards 3) for most households, which is down from the 2011 average household size of 3.58 people per household. Smaller household sizes are in general associated with higher levels of urbanisation.

The greatest increase in population since 2011 has been on local level (Table 1), more than double than the national average. Population density refers to the number of people per square kilometre. In the study area the population density has increased since 2011.

Table 1: Population density and growth estimates (sources: Census 2011, Community Survey 2016)

Area	Size in km^2	Population 2011	Population 2016	Population density 2011	Population density 2016	Growth in population (%)
Limpopo Province	125,754	5,404,868	5,799,090	42.98	46.11	7.29
Waterberg DM	44,913	679,336	745,758	15.13	16.60	9.78
Lephalale LM	13,794	115,767	136,626	8.39	9.90	18.02

The number of households in the study area has increased on all levels (Table 2), especially on municipal level, where the increase in households was more than double the increase in population. The average household size has shown a decrease on all levels, which means there are more households, but with less members.

Table 2: Household sizes and growth estimates (sources: Census 2011, Community Survey 2016)

Area	Households 2011	Households 2016	Average household size 2011	Average household size 2016	Growth in households (%)
Limpopo Province	1,418,102	1,601,083	3.81	3.62	12.90
Waterberg DM	179,866	211,471	3.78	3.53	17.57
Lephalale LM	29,880	42,073	3.87	3.25	40.81

The total dependency ratio is used to measure the pressure on the productive population and refer to the proportion of dependents per 100 working-age population. As the ratio increases, there may be an increased burden on the productive part of the population to maintain the upbringing and pensions of the economically dependent. A high dependency ratio can cause serious problems for a country as the largest proportion of a government's expenditure is on health, social grants and education that are most used by the old and young population.

The total dependency ratio for Ward 3 is much lower than on local, district or provincial level (Table 3). The same trend applies to the youth, aged and employment dependency ratios. Employed dependency ratio refers to the proportion of people dependent on the people who are employed, and not only those of working age. The employed dependency ratio for Ward 3 is much lower than on provincial, district or local level. This is most likely due to the high incidence of farms in the ward where people reside at their place of employment with at least

one household member being employed and the high incidence of urban areas in the ward.

Table 3: Dependency ratios (source: Census 2011).

Area	Total dependency	Youth dependency	Aged dependency	Employed dependency
Limpopo Province	67.26	56.79	10.47	83.61
Waterberg DM	55.50	46.45	9.05	75.30
Lephalale LM	43.47	37.60	5.87	69.83
Ward 3	27.77	22.85	4.92	49.07

Poverty is a complex issue that manifests itself on economic, social and political ways and to define poverty by a unidimensional measure such as income or expenditure would be an oversimplification of the matter. Poor people themselves describe their experience of poverty as multidimensional. The South African Multidimensional Poverty Index (SAMPI) (Statistics South Africa, 2014) assess poverty on the dimensions of health, education, standard of living and economic activity using the indicators child mortality, years of schooling, school attendance, fuel for heating, lighting and cooking, water access, sanitation, dwelling type, asset ownership and unemployment.

The poverty headcount refers to the proportion of households that can be defined as multi-dimensionally poor by using the SAMPI's poverty cut-offs (Statistics South Africa, 2014). The poverty headcount has increased on all levels since 2011 (Table 4).

The intensity of poverty experienced refers to the average proportion of indicators in which poor households are deprived (Statistics South Africa, 2014). The intensity of poverty has increased on all levels. The intensity of poverty and the poverty headcount is used to calculate the SAMPI score. A higher score indicates a very poor community that is deprived on many indicators. The SAMPI score has increased on all levels, indicating that households might be getting poorer.

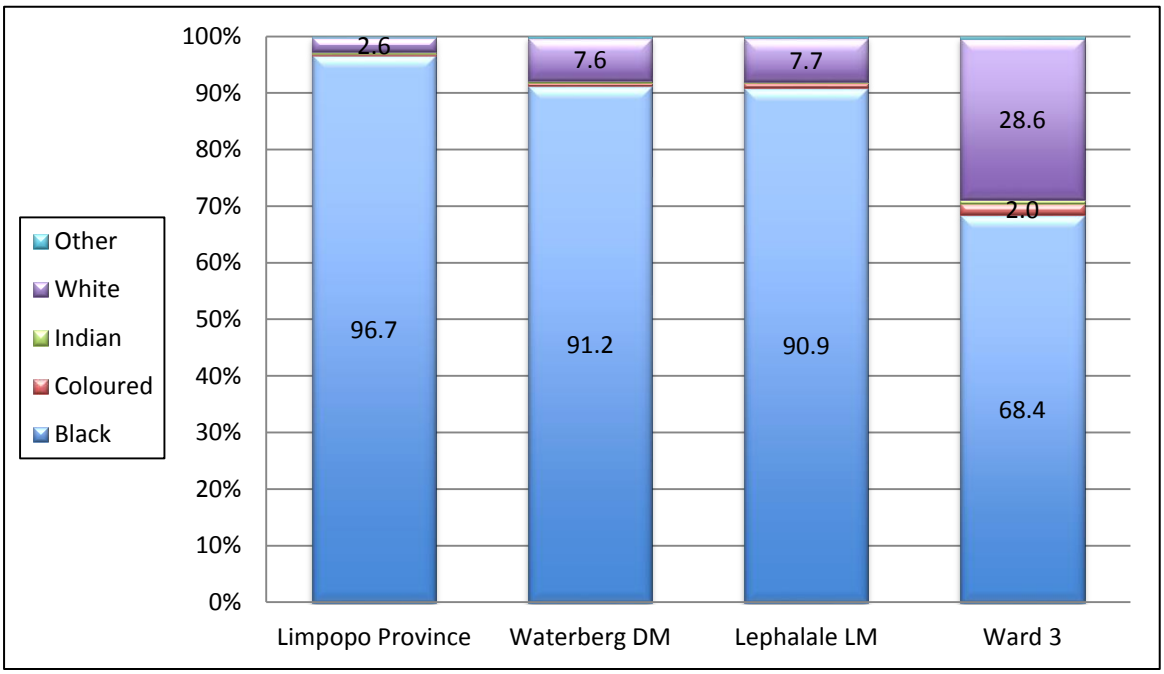
Table 4: Poverty and SAMPI scores (sources: Census 2011 and Community Survey 2016).

Area	Poverty headcount 2011 (%)	Poverty intensity 2011 (%)	SAMPI 2011	Poverty headcount 2016 (%)	Poverty intensity 2016 (%)	SAMPI 2016
Limpopo Province	10.1	41.6	0.042	11.5	42.3	0.049
Waterberg DM	6.5	41.6	0.027	9	42.7	0.038
Lephalale LM	5.4	41.9	0.023	9	44.4	0.040

3.2.2 Population composition, age, gender and home language

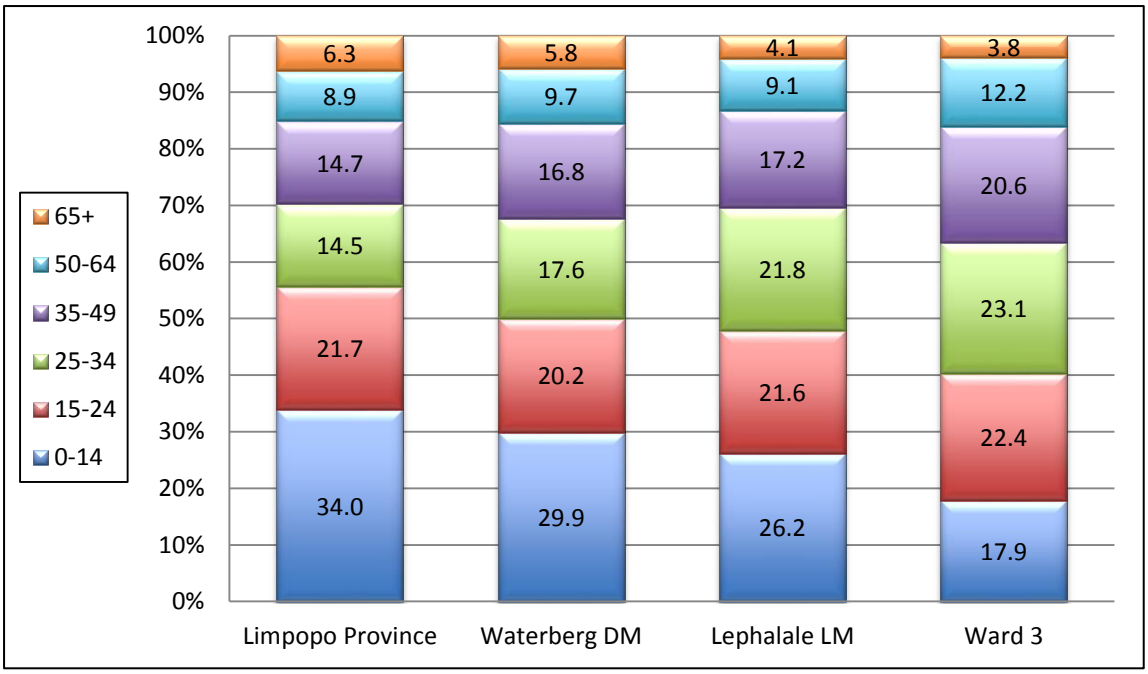
In Ward 3 just over two thirds of the population belong to the Black population group (Figure 3), while over a quarter belongs to the White population group. Ward 3 has a lower proportion of people belonging to the Black population group than on local or district level.

Figure 3: Population distribution (shown in percentage, source: Census 2011)



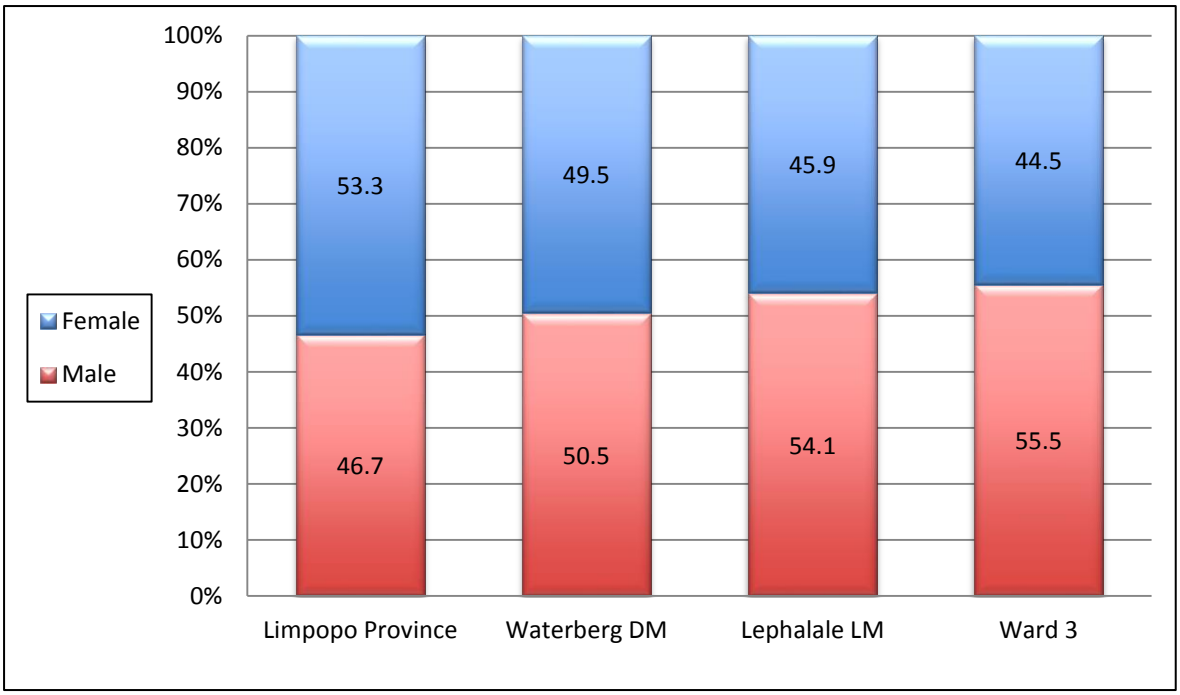
The average age in the local municipality is 27.61 years, which is more or less the same than on district level (27.79). The average age on provincial level (26.47) is lower than on local level, while the average age on ward level (30.66) is higher. Less than a fifth of the population in Ward 3 is aged 14 years or younger, compared to more than a quarter on local level (Figure 4). There are a greater proportion of people on ward level in the age groups 35 – 64 years, than on any other level.

Figure 4: Age distribution (shown in percentage, source: Census 2011)



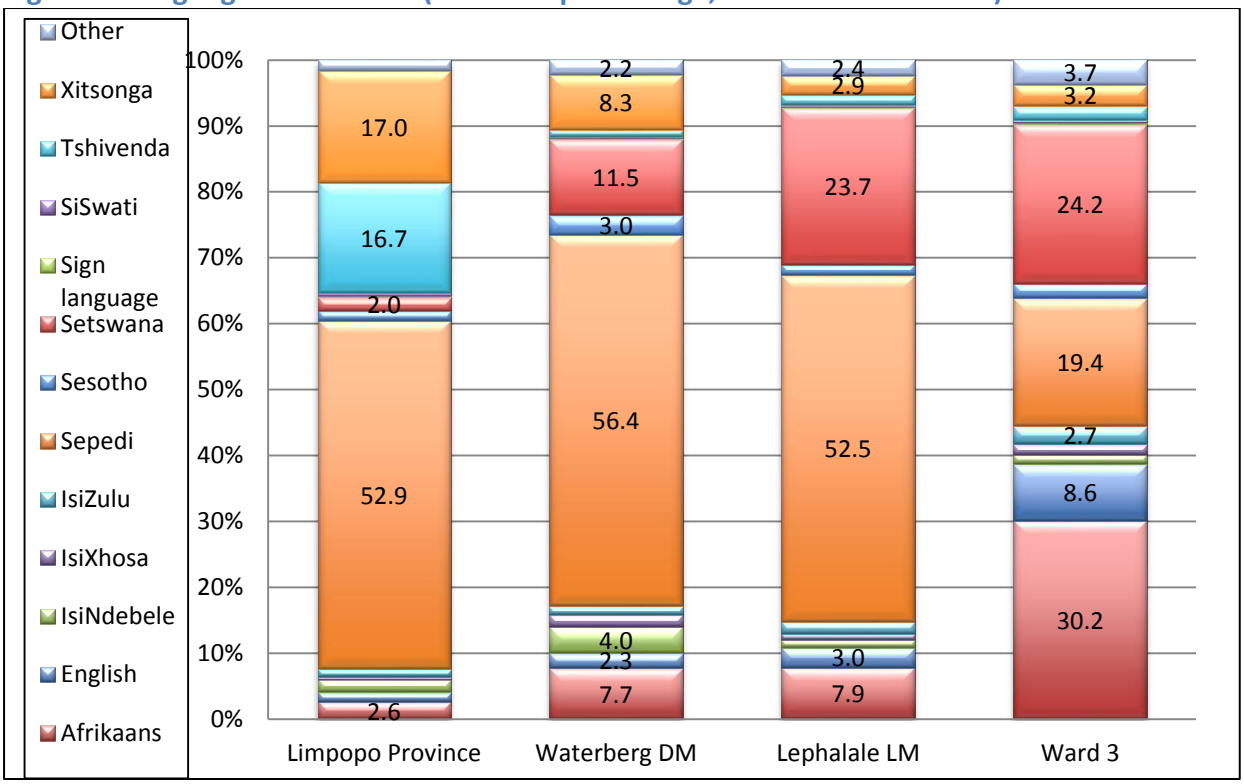
The sex distribution is more or less equal on district level (Figure 5) but is biased towards females on provincial level and males on local and ward level. This can most likely be attributed to economic and employment activities in the area such as mining, construction and agriculture that tends to favour males.

Figure 5: Sex distribution (shown in percentage, source: Census 2011)



Afrikaans is the home language of almost a third of the population in Ward 3, while almost a quarter has Setswana as home language (Figure 6). Almost a fifth of the population on Ward 3 has Sepedi as home language. The language profile in Ward 3 is very different from the profiles on local, district or provincial level where more than half of the population has Sepedi as home language.

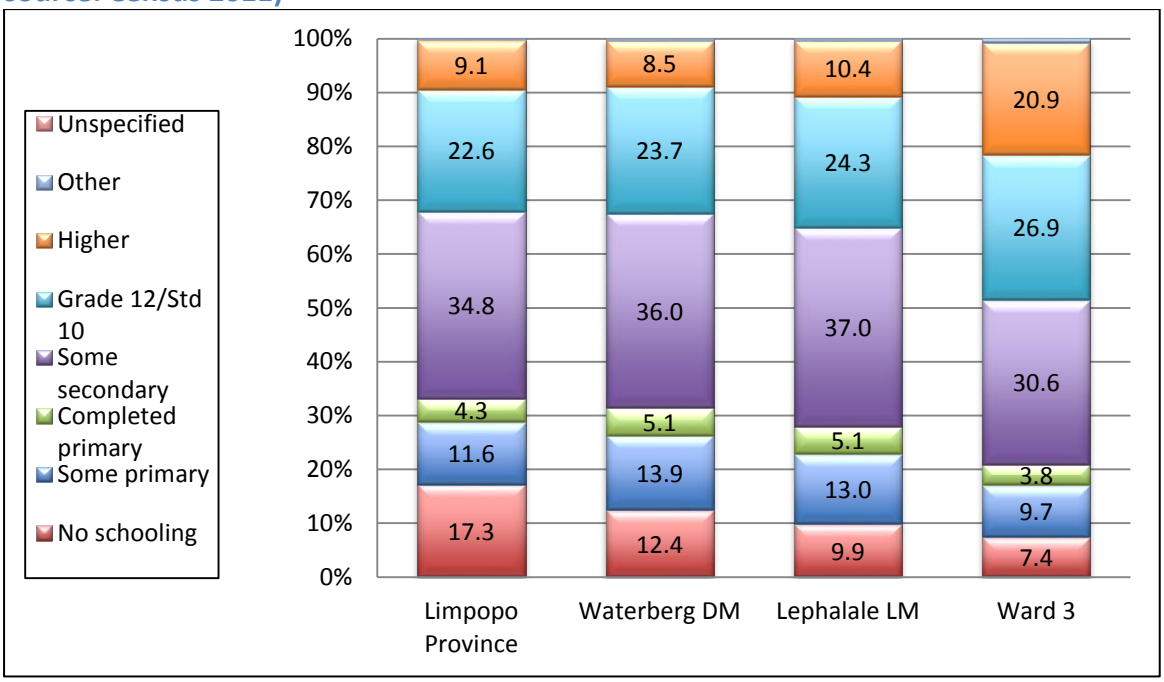
Figure 6: Language distribution (shown in percentage, source: Census 2011)



3.2.3 Education

About a fifth of the people in Ward 3 aged 20 years or older have completed an education higher than Grade 12 (Figure 7), which is much higher than on local, district or provincial level. Just over half of the population in the Ward has not completed secondary schooling (Grade 12 or equivalent). This is a lower proportion than on local, district or provincial level.

Figure 7: Education profiles (those aged 20 years or older, shown in percentage, source: Census 2011)



3.2.4 Employment, livelihoods and economic activities

About two thirds of people aged between 15 – 65 years in Ward 3 are employed (Figure 8), with more than 70% of this group being employed in the formal sector (Figure 9). The level of employment on ward level is much higher than on local, district or provincial level.

Figure 8: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011)

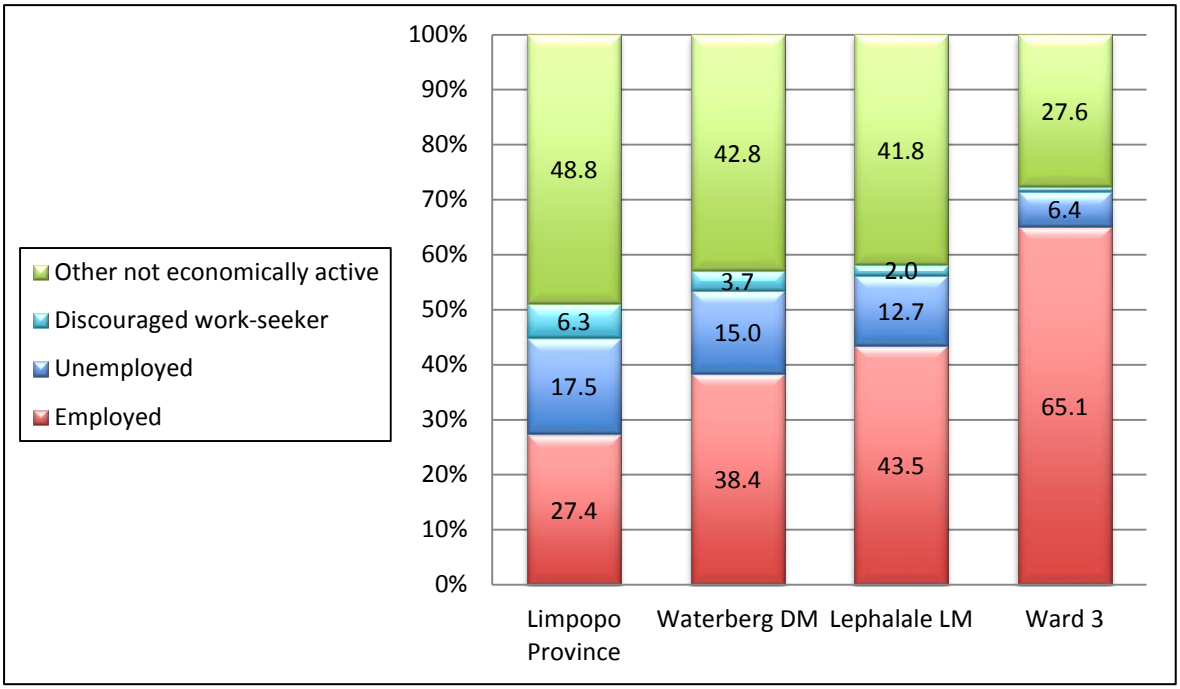
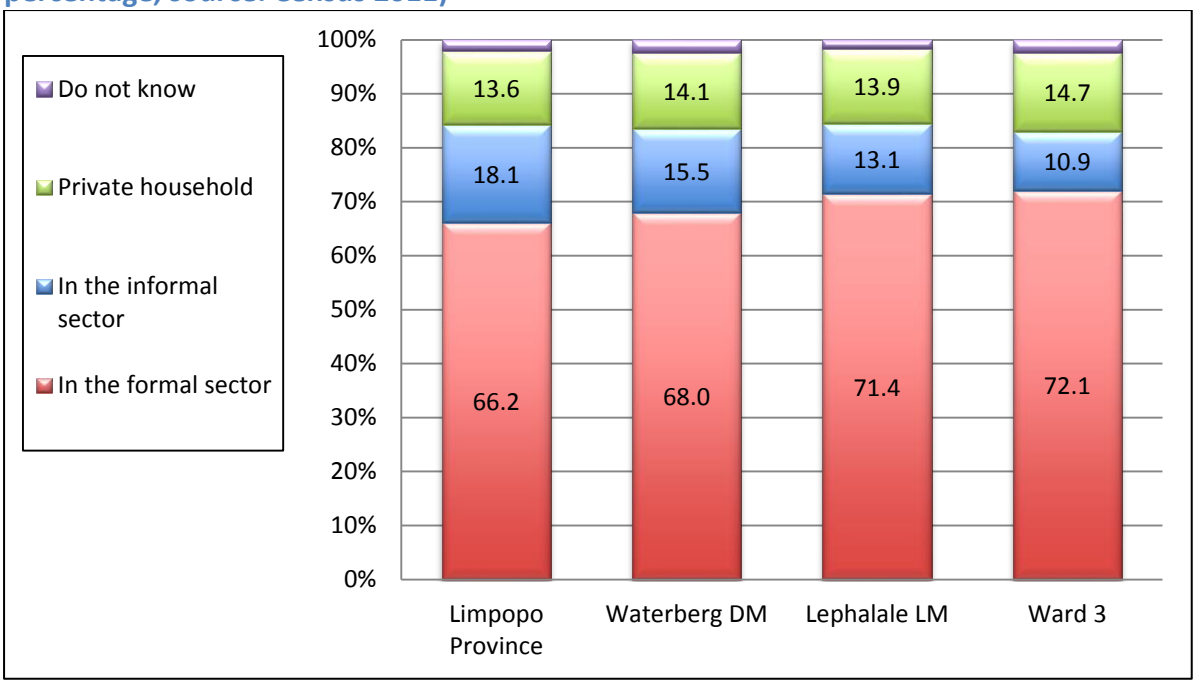
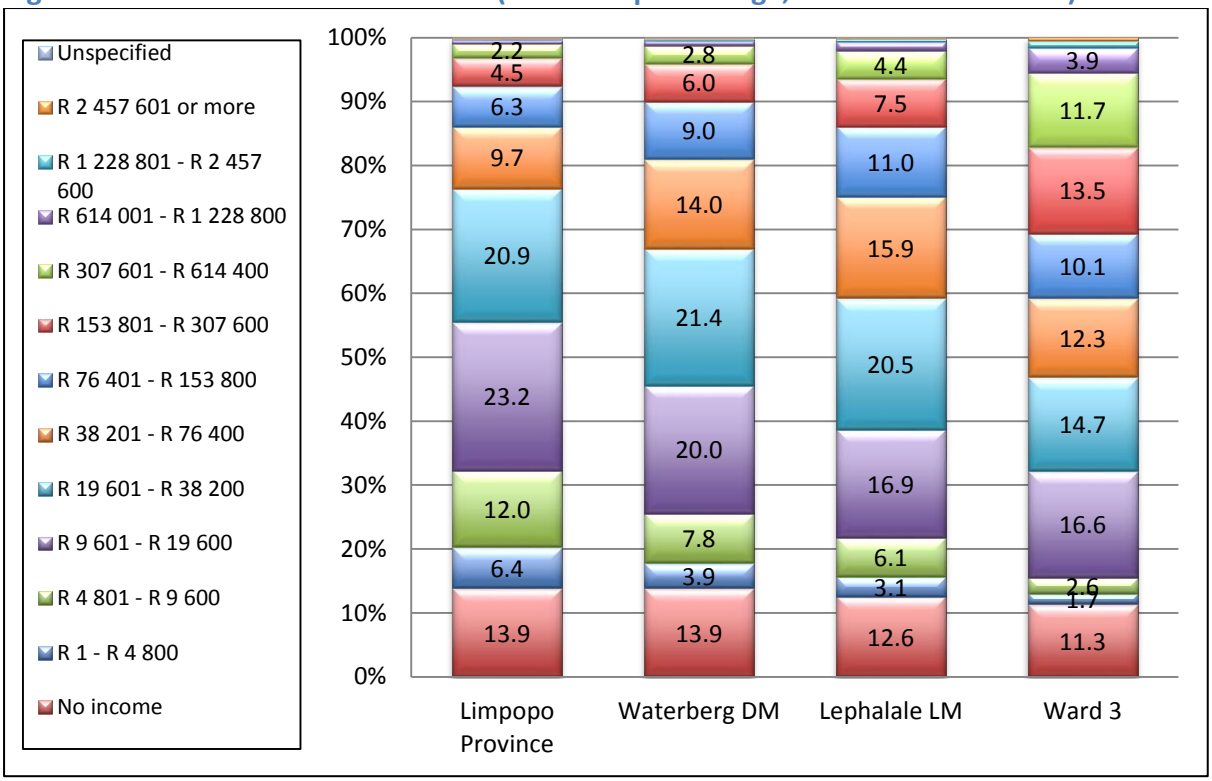


Figure 9: Employment sector (those aged between 15 - 65 years, shown in percentage, source: Census 2011)



The lowest proportion of people with no annual household income is on ward level (Figure 10). Less than 50% of the households in Ward 3 had an annual household income of below R38 201 in 2011.

Figure 10: Annual household income (shown in percentage, source: Census 2011)



Statistics South Africa (2015) has calculated the Food Poverty Line (FPL) for the Limpopo Province as R338 per capita per month for 2011 where the FPL is the Rand value below which individuals are unable to purchase or consume enough food to supply them with the minimum per-capita-per-day energy requirement for good health. The FPL is one of three poverty lines, the others being the upper bound poverty line (UBPL) and the lower bound poverty line (LBPL). The LBPL and UBPL both include a non-food component. Individuals at the LBPL do not have enough resources to consumer or purchase both adequate food and non-food items and are forced to sacrifice food to obtain essential non-food items, while individuals at the UBPL can purchase both adequate food and non-food items. The LBPL for the Limpopo Province was R485 per capita per month in 2011 and the UBPL R627 per capita per month respectively. More recent poverty lines than the rebased poverty lines for 2011 are not available. Based on this, a household with four members needed an annual household income of approximately R17 000 in 2011 to be just above the FPL. When comparing this with the SAMPI data it seems as if there are slightly more households below the poverty lines in the area than who are multi-dimensionally poor. This is due to the poverty lines using a financial measure and do

not take into consideration payment in kind and livelihood strategies such as subsistence farming. If there were to be converted into a Rand value, the poverty line picture may have a closer resemblance to the SAMPI data.

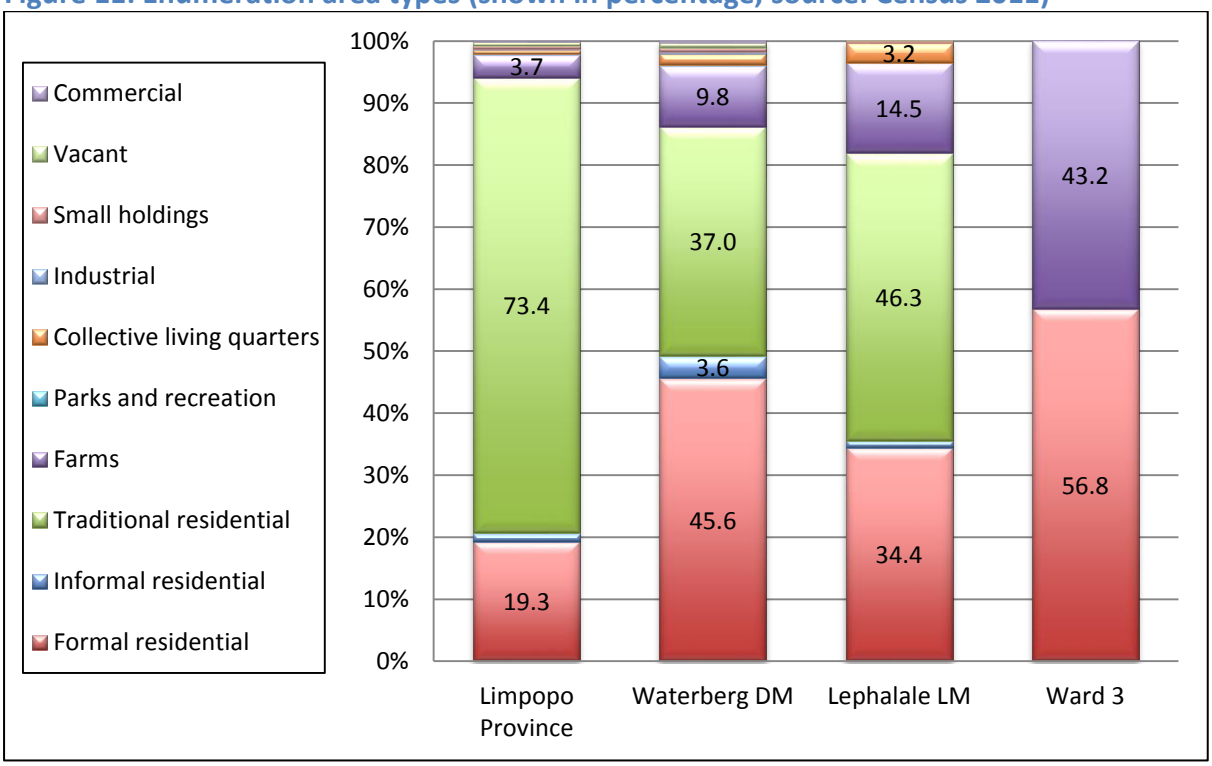
3.2.5 Housing

Ward 3 has both the largest proportion households that live in urban areas and that live on farms (Table 5). Although the majority of Ward 3 covers farms, a part of Onverwacht is included in the ward. No areas in Ward 3 are classified as traditional residential(Figure 11).

Table 5: Geotypes (source: Census 2011, households)

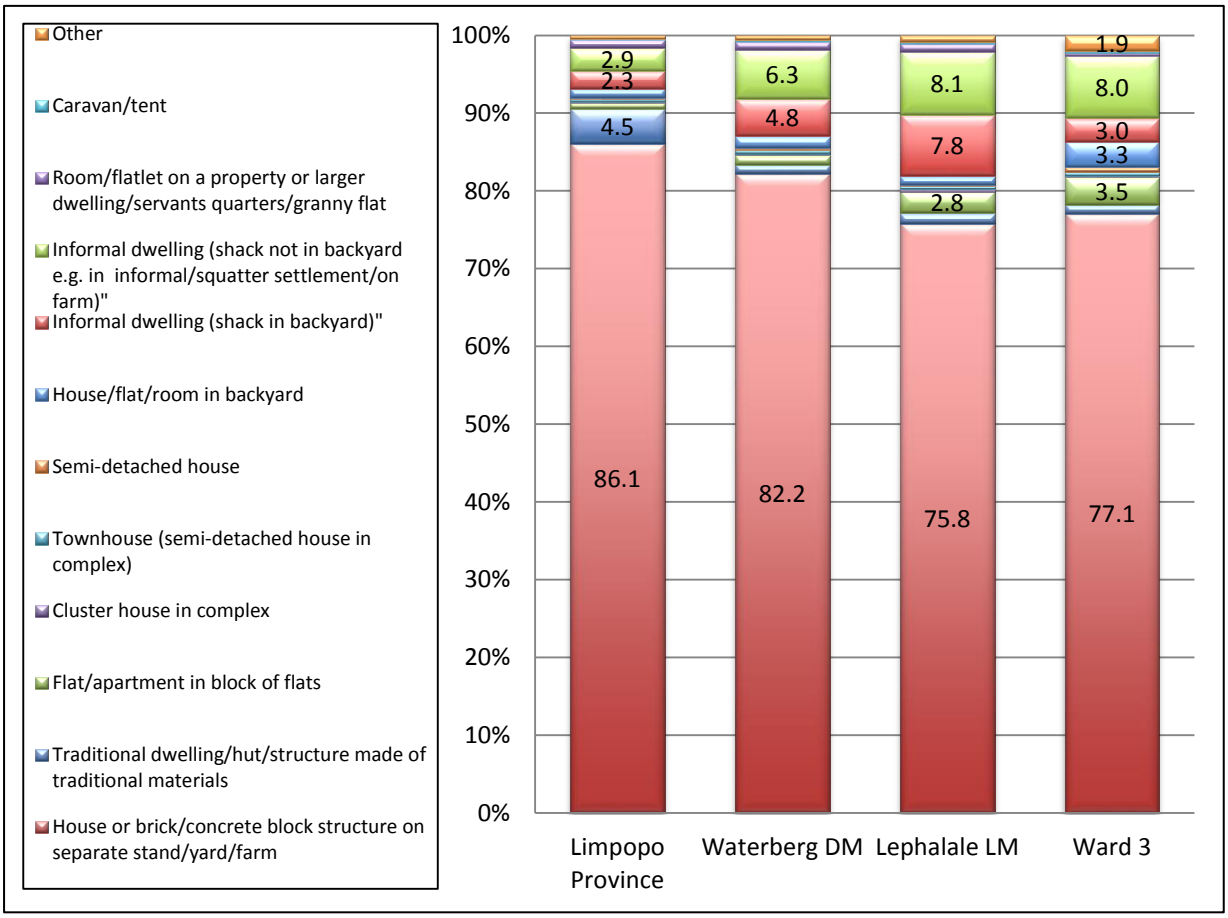
Area	Urban	Tribal/Traditional	Farm
Limpopo Province	17.9	77.7	4.4
Waterberg DM	48.8	40.8	10.4
Lephalale LM	38.8	46.7	14.5
Ward 3	56.8	0.0	43.2

Figure 11: Enumeration area types (shown in percentage, source: Census 2011)



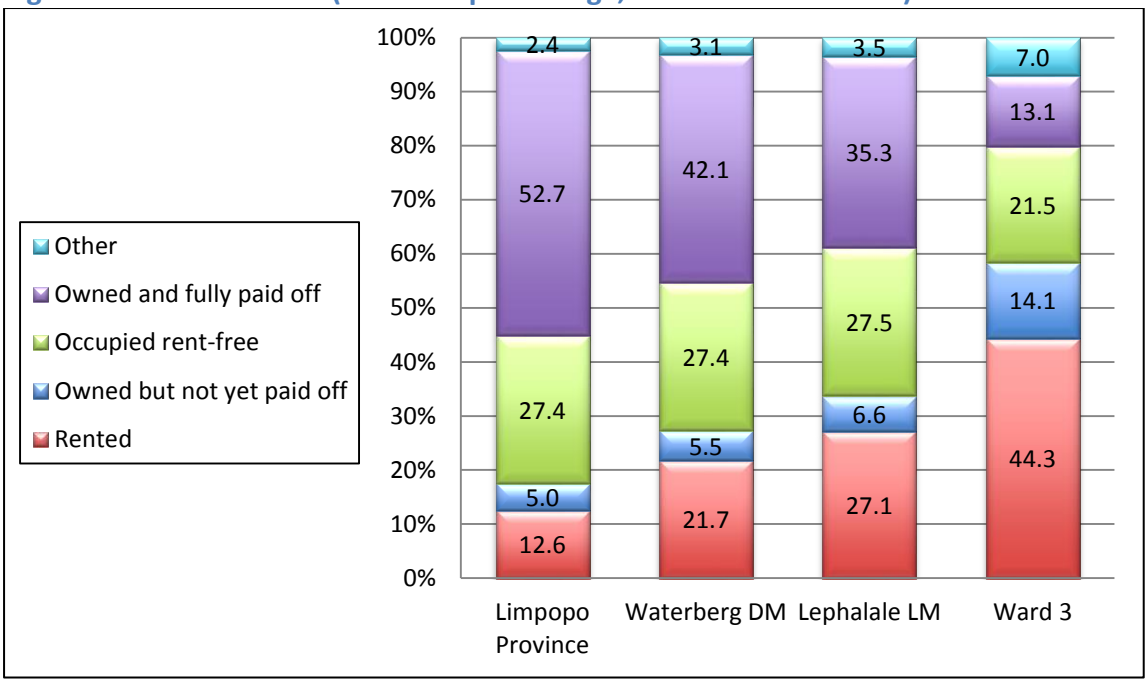
More than three quarters of households in Ward 3 live in houses or brick structures on separate stands or yards (Figure 12), with informal dwellings the second most used dwelling type.

Figure 12: Dwelling types (shown in percentage, source: Census 2011)



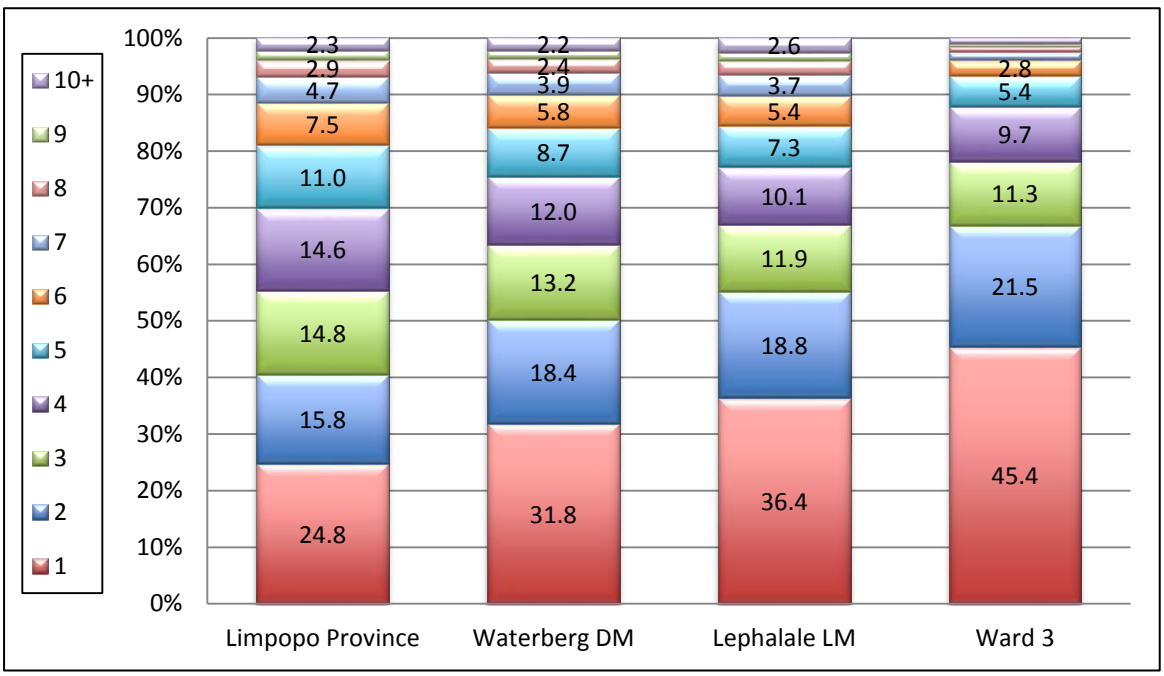
The incidence of households renting their dwellings is much higher on ward level than on local, district or provincial level (Figure 13). This might be as a result of mining and construction activities in the area. Just over a fifth of households on ward level has indicated that they occupy their dwellings rent-free. These households consist most likely of farm workers and households living in informal dwellings.

Figure 13: Tenure status (shown in percentage, source: Census 2011)



Households in ward level tend to consist of less members than on local, district or provincial level (Figure 14), with about two thirds of the households consisting of only one or two members. This can most likely be attributed to mining and construction activities in the area that attract migrant workers.

Figure 14: Household size (shown in percentage, source: Census 2011)

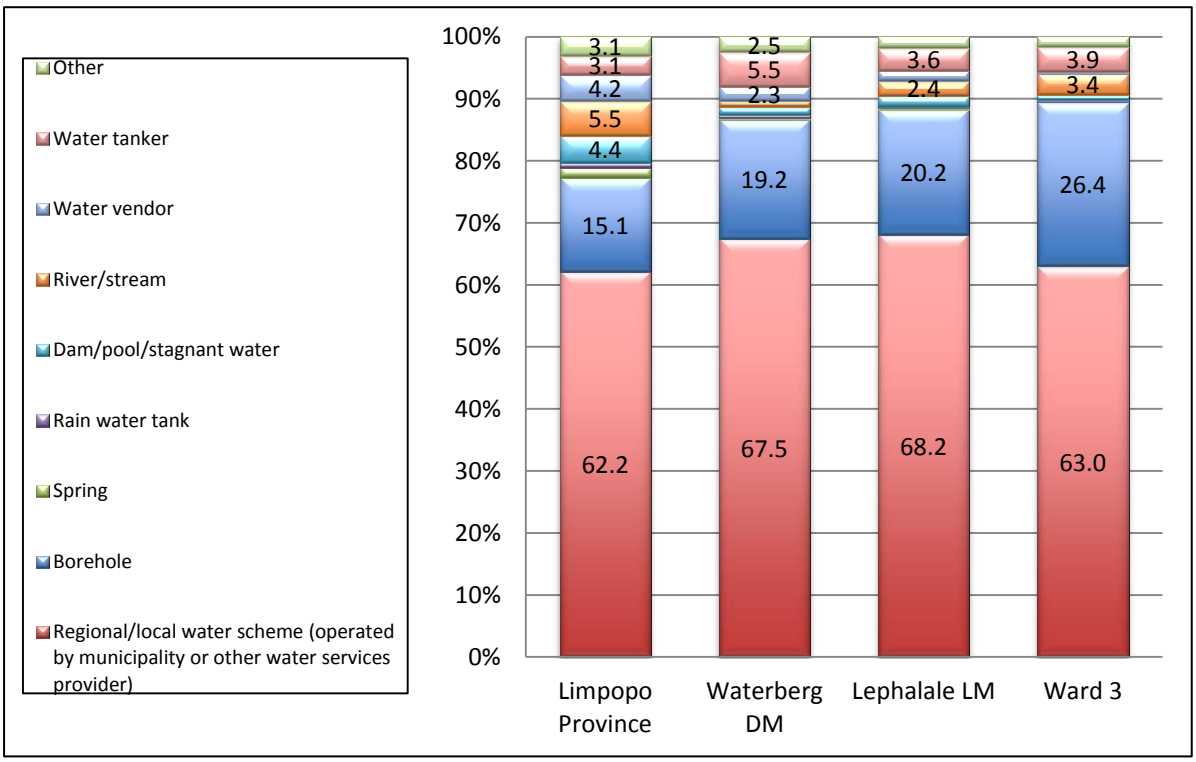


3.2.6 Access to basic services

Access to basic services such as water, sanitation and electricity relate to standard of living according to SAMPI (Statistics South Africa, 2014). Households that use paraffin, candles or nothing for lighting; or fuels such as paraffin, wood, coal, dung or nothing for cooking or heating; have no piped water in the dwelling or on the stand and do not have flush toilets can be described as deprived in terms of these basic services.

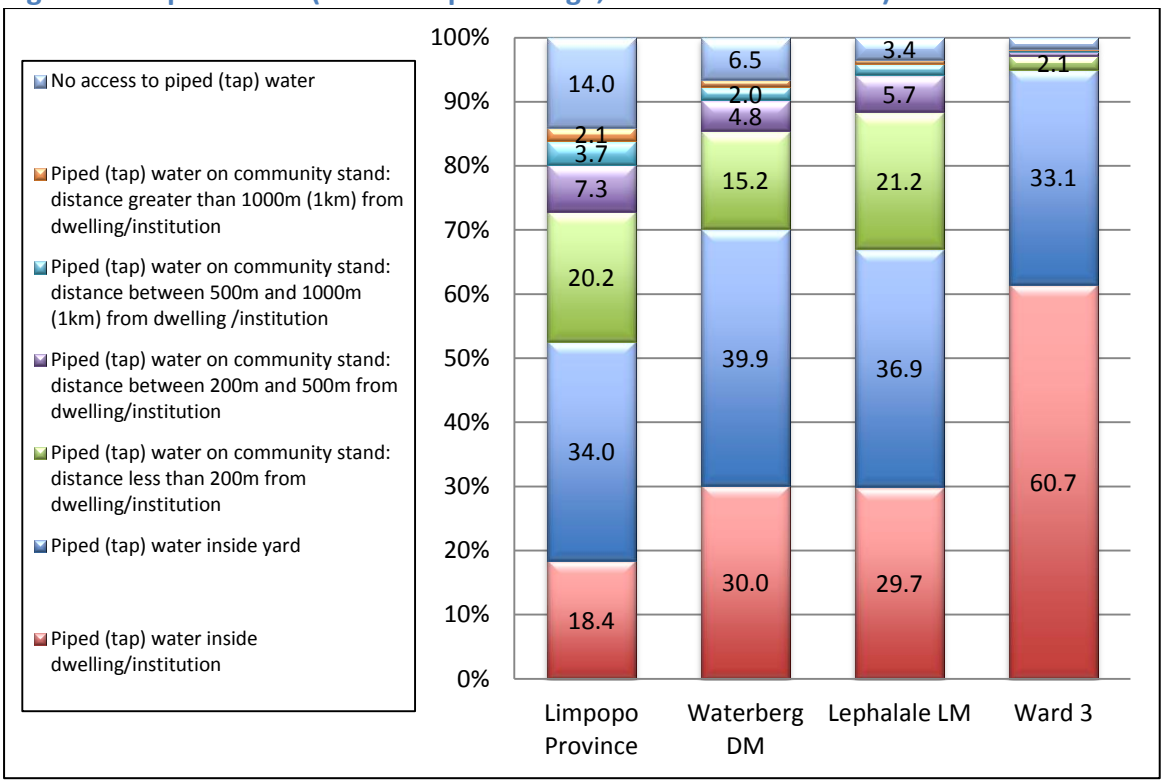
About two thirds of the households in Ward 3 get their water from a regional or local water scheme (Figure 15), while just over a quarter get their water from a borehole. The proportion of households that get their water from boreholes is much higher than on local, district or provincial level.

Figure 15: Water source (shown in percentage, source: Census 2011)



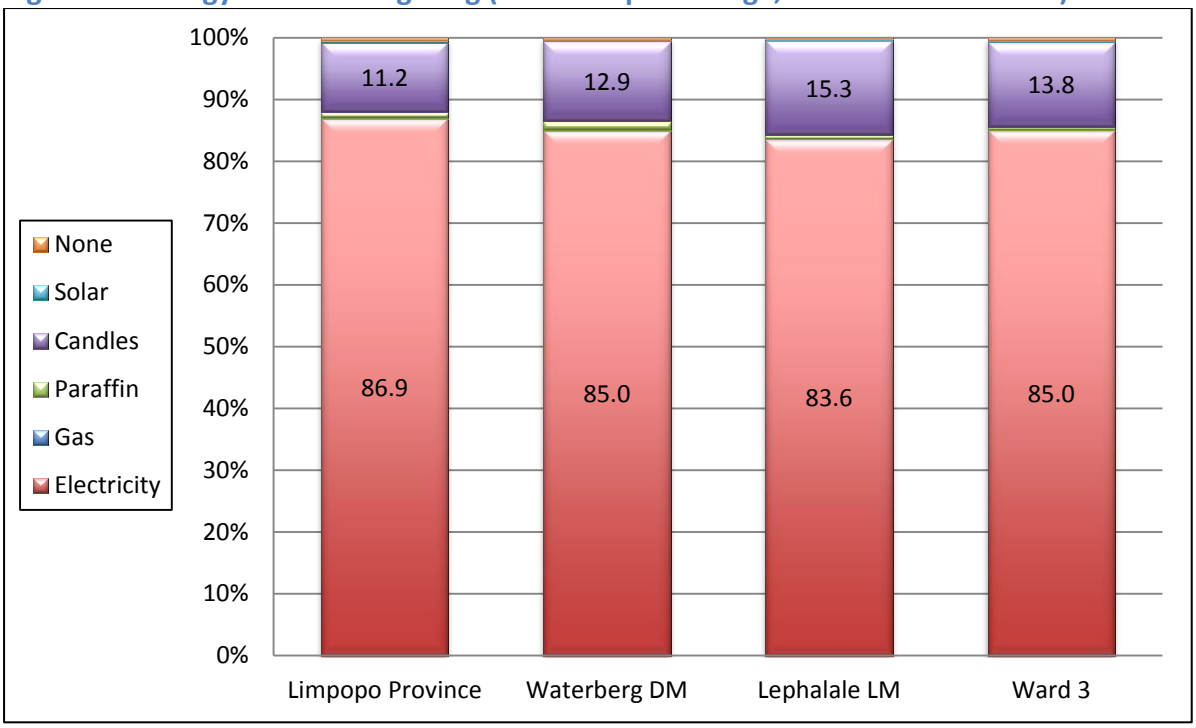
About 60% of households in Ward 3 have access to piped water inside their dwellings (Figure 16), a much higher proportion than on local, district or provincial level, while about a third of the households have access to piped water inside their yards.

Figure 16: Piped water (shown in percentage, source: Census 2011)



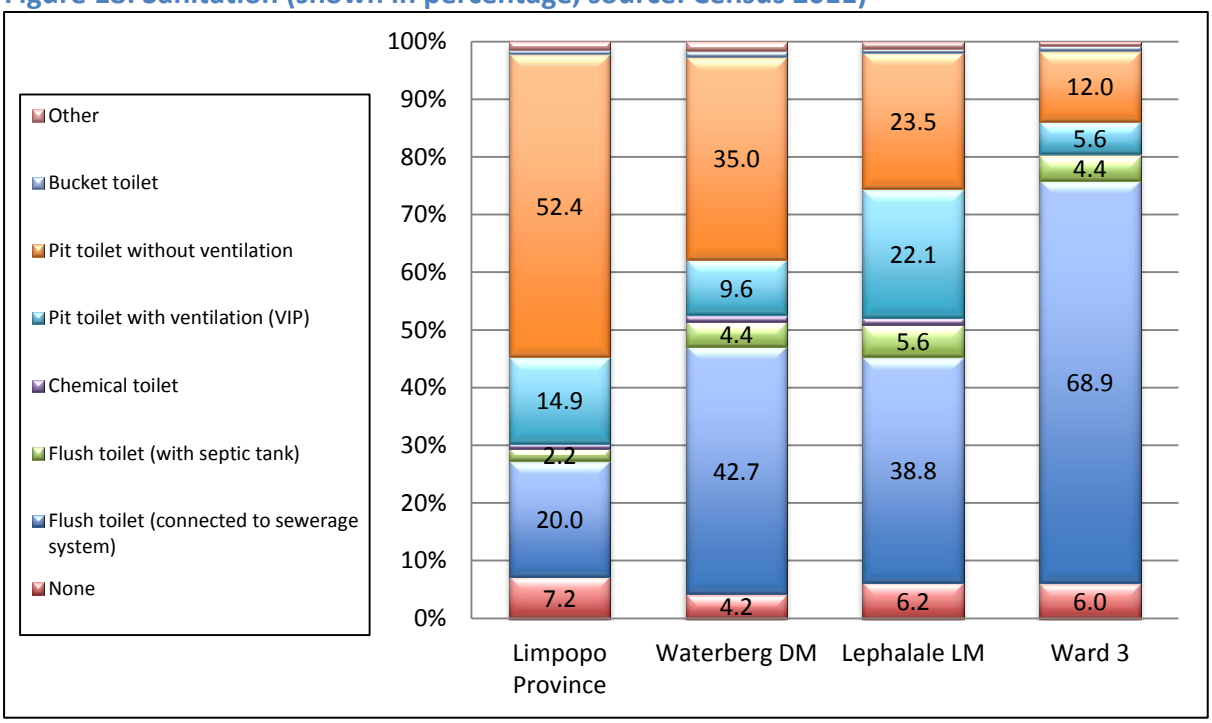
Access to electricity for lighting purposes give an indication of whether a household has access to electricity, as poor households sometimes only use electricity for lighting, but use other sources of energy for heat and cooking. The incidence of households with access to electricity on ward level is slightly higher than on local level (Figure 17), but similar to district and provincial level with about 85% of households having access to electricity for lighting purposes.

Figure 17: Energy source for lighting (shown in percentage, source: Census 2011)



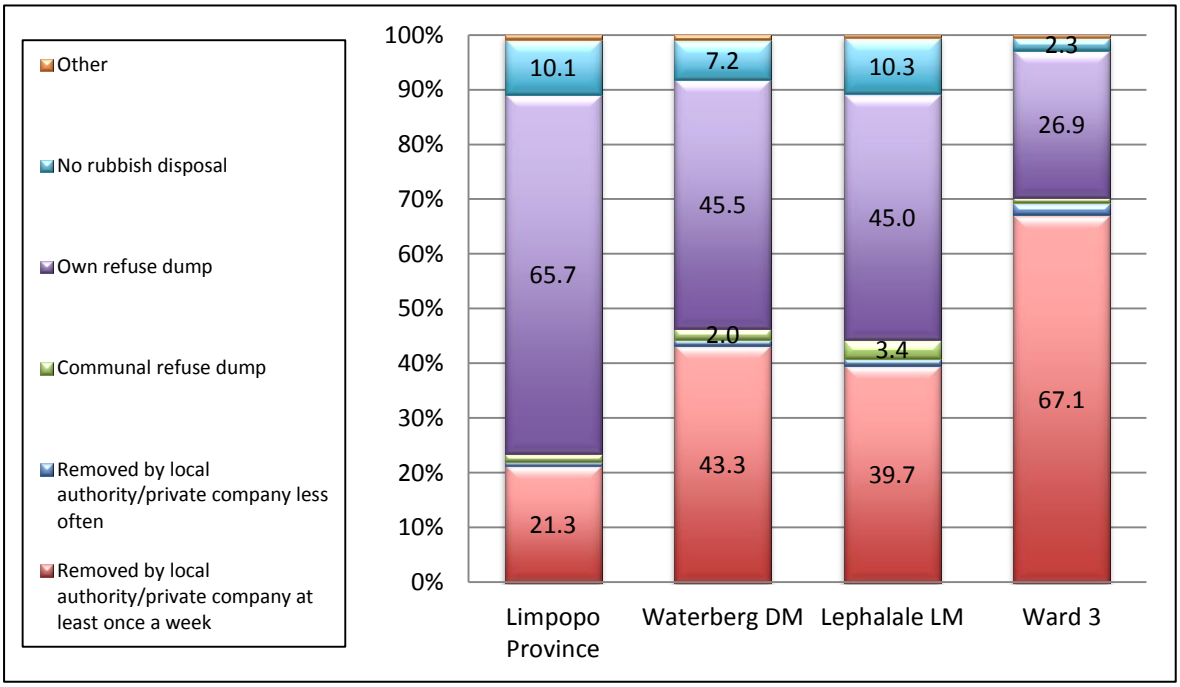
More than two thirds of households on ward level have access to flush toilets that is either connected to a sewerage system (Figure 18), this is much higher than on local, district or provincial level.

Figure 18: Sanitation (shown in percentage, source: Census 2011)



Just over two thirds of the households on a ward level have their refuse removed by a local authority at least once a week (Figure 19), while about a quarter has indicated that they had their own refuse dumps. Households on farms tend to have their own refuse dumps.

Figure 19: Refuse removal (shown in percentage, source: Census 2011)



3.3 Discussion of receiving environment

The receiving environment is located in Ward 3 of the Lephapale Local Municipality that is located in the Waterberg District Municipality in the Limpopo Province. The proposed site is located approximately 30 km west of the town of Lephalale, in the rural area of Steenbokpan. The Waterberg region is regarded as a strategic growth node for various activities within the Mining and Minerals sectors. The main economic sectors in the municipal area are mining, electricity and agriculture. Hunting and tourism are the main tourism activities and there are a number of hunting farms in the Steenbokpan area.

The population in the municipality showed an increase of about 18% between 2011 and 2016, while the number of households have increased with just over 40%. Together with the increase in construction and mining activities in the area, this suggests an increase in the number of migrant workers in the area, which is also

supported by the high proportion of households that consists of one or two members.

Despite the apparent increase in economic activity in the area, levels of poverty have increased. Potential reasons for this are that the people who migrated to the area by far outnumber the available employment opportunities, or that contract workers who are only in the area for a relatively short period of time start families, which they leave behind when they move to the next contract, and the family that stays behind then struggles without their financial contribution. Another possible reason is price increases due to a high demand for certain items.

The majority of the population in the municipality belong to the Black population group, but in the ward there is a high proportion of people belonging to the White population group. This suggests that the ward is culturally more diverse than the municipal area as a whole. People in the ward tend to be older, and as such can be expected to be in a different life stage than the average municipal resident. The main languages spoken in the ward are Afrikaans, Setswana and Sepedi, making the ward culturally different from the municipal area.

Education levels on ward level is higher than on municipal level and unemployment levels are lower. The household income levels on ward level is higher than on municipal level and suggest a greater variety of skills levels. There is a high demand for rented accommodation, and this is supported by the relatively high proportion of households that rent their dwellings as well as the high incidence of informal dwellings (in backyards and informal settlements) on municipal and ward level.

The detailed description of the area highlights the following important aspects:

- Documentation used for communicating about the project should be available in English, Afrikaans, Setswana and Sepedi;
- Due to the high incidence of mining and construction activities, as well as education levels, it is likely that a variety of the required skills would be available on local level.

- Housing for contractors may not be freely available and might be costly if available. Consideration should be given in advance to the accommodation of construction workers and employees.

4 Stakeholder Identification and Analysis

Stakeholders include all individuals and groups who are affected by, or can affect, a given operation. Stakeholders consist of individuals, interest groups and organizations (Vanclay, Esteves, Aucamp & Franks, 2015). Stakeholder analysis is a deliberate process of identifying all stakeholders of a project - the individuals and groups that are likely to impact or be impacted by it - and understanding their concerns about the project and/or relationship with it (Vanclay et al, 2015). Stakeholder analysis assists the proponent with understanding the local cultural and political context. It is acknowledged that different stakeholder groups have different interests, and that there are individual differences within stakeholder groups. The purpose of this section of the report is to introduce the stakeholder groups that will be affected by the proposed project.

The stakeholder groups for this project are also stakeholders in other developments, and there are significant cumulative impacts to consider. The purpose of this section of the report is to introduce the stakeholder groups that will be affected by the proposed project and to give a snapshot of historical and current conditions and impacts. The following key stakeholder groups were identified:

- Government
    - Limpopo Provincial Government;
    - Waterberg District Municipality;
    - Lephalale Local Municipality;
- Civil society
    - Surrounding towns and communities
        - Lephalale
        - Marapong
        - Steenbokpan (Lesedi Community)

- Civil Society Forums

- Business and industry
  - Resgen Biokarabelo Mine
  - Eskom
    - Medupi Power Station
    - Existing infrastructure
  - Local businesses
    - Lephalale Development Forum
    - Lephalale Business Chamber
  - Other mining companies
- Farmers
  - Directly adjacent farms
  - Neighbouring farms
  - Farm workers
- Transnet

4.1 Stakeholder groups

4.1.1 Government

South Africa has a three-tier government consisting of national, provincial and local government. All three levels of government have legislative and executive powers in their own domain (RSA, 2013) and are responsible for a different aspect of service delivery.

4.1.1.1 Limpopo Provincial Government

The provincial government is responsible for housing, schools and clinics (NCP, 2012). In the past, the influx of people into the area due to all the development has created pressure on social infrastructure. There are three hospitals and seven clinics in the area. The Marapong clinic needs an upgrade, as it is currently serving three times more patients than it was designed for. There is an over-supply of houses in the higher income segment, but a shortage of RDP houses. There are sufficient schools in the area (Lephalale IDP 2018-2019).

4.1.1.2 Waterberg District Municipality and Lephalale Local Municipality

District and local municipalities are responsible for planning, water delivery, electricity, sanitation and refuse removal (NPC, 2012). The integrated planning and distribution of resources takes place on district level and the district municipality must assist the local municipality with providing and maintaining services. The district municipality should provide financial, technical and administrative support to the local municipality to allow it to provide services to its people (SALGA, 2016). There is only one registered waste site in Lephalale, and waste management in the area is a challenge due to inadequate infrastructure. Water supply and sanitation services are under pressure due to the fact that the infrastructure has reached its capacity and need to be extended. Electricity supply is also at capacity and need to be extended to provide for the needs of all residents.

All South African municipalities are demarcated into wards, and a ward councillor and ten elected members lead each ward. The Transnet Railway Yard falls in Ward 3 of the LLM. Ward 3 includes Steenbokpan and the rural areas. The ward councillor resides in Lephalale and is represented by ward committee members in Steenbokpan. There is some socio-political tension in the Lephalale area. There are reported to be tension between political parties on municipal level, with some groups expressing distrust in the mayor (http://www.mogolpos.co.za/news/total-shutdown-stick-to-the-law/). There is also tension in the communities, which can be attributed to competition for jobs and scarce resources. This results in strikes and protests about job opportunities, xenophobic incidents (especially if community

feels outsiders benefit more from job opportunities than locals) and conflict about political power when it comes to sharing of information about potential economic opportunities. There have been a number of violent strikes in Lephalale in the last five years related to wage negotiations, job losses, working conditions, service delivery, employment policies and bonuses amongst others. These strikes are present in all commercial sectors, ranging from retail to industrial (http://www.mogolpos.co.za/tag/strike/).

4.1.2 Civil society

Three urban or peri-urban areas will be affected by the proposed project. These areas are Lephalale town, Marapong and Steenbokpan. There is also an active civil rights group in the area named the Waterberg Environmental Justice Forum. The geographical area where the Transnet Lephalale Railyard is situated has been exposed to intensive development in the past decades. The construction of the Medupi Power Station caused a significant influx of people in the area, with approximately 18 000 construction workers at the peak of construction. That number has been steadily decreasing, with an estimated number of 7 000 workers remaining in December 2018 (https://citizen.co.za/news/south-africa/1961797/eskoms-medupi-coal-power-plant-nears-completion/). Apart from this development, there were also other developments taking place in the area, such as the construction of the water pipeline associated with the Mokolo Crocodile Water Augmentation Project, the Biokarabelo Mine, numerous power lines and the expansion of the Grootegeluk Mine, amongst others.

4.1.2.1 Surrounding towns and communities

The town of **Lephalale** is about 30km west of the Lephalale Railway Yard and is the closest big town. Lephalale has experienced typical boom and bust cycles, which entails a process of economic expansion and contraction that occurs repeatedly. During the boom the economy grows, there are abundant jobs and the market brings high returns to investors. In the subsequent bust the economy shrinks, people lose their jobs and investors lose money. Boom-bust cycles last for varying lengths of time; they also vary in severity (https://www.investopedia.com/terms/b/boom-and-

bust-cycle.asp). The area is currently in a bust phase with less opportunities due to the downscaling of current construction projects, but there are bigger projects such as mining development and the second phase of the Mokolo Crocodile Water Augmentation Project in the pipeline, which could lead to significant economic growth in the area. It is likely that most of the workforce will reside in Lephalale or Marapong. These towns should be able to accommodate the workforce during the operational phase of the project, and it is anticipated that most of the jobs could be done by local residents.

Marapong was founded in 1986 to provide affordable housing for the black workers at the power station and mine. There was a significant influx of people into Marapong when the construction of the Medupi Power Station commenced in 2007. There is a high number of unskilled workers in Marapong, but also skilled workers that did contract work on the development projects in the area. There are informal settlements in Lephalale, Marapong and Steenbokpan. The townships were developed in a scattered manner due to Apartheid planning, and the current focus of township development is to fill in open areas between the existing townships. It is not anticipated that the proposed expansion of the Lephalale Railway yard will have a major impact on the residents of Lephalale or Marapong. The biggest potential impact is the creation of additional traffic on the already busy intersection of the Afguns road and Mandela road. There is also an expectation that most of the unskilled labour should be sourced from Marapong.

Steenbokpan is a small rural settlement approximately 45km from Lephalale. According to a representative of the ward committee between 80-90% of the residents are unskilled. The school in Steenbokpan only caters for learners between Grade 1 and Grade 9. From Grade 10 onwards pupils must travel to Marapong, and this leads to a high percentage of children dropping out if high school. Many people living in the Lesedi community in Steenbokpan used to live on farms in the area. When the mines bought these farms for development, the residents were forced to move to Steenbokpan. About 60% of the residents work on farms in the area, and they are either collected and dropped daily, or return to the community on weekends. It is estimated that about 1% of the community works at Medupi, and a

very small percentage at Exxaro. The remaining residents survive on social grants. There are no créches in the community, only the combined school. Sasol donated a multi-purpose centre (Lesedi Thukudu Thusong Centre) to the community. Two rooms are allocated to the clinic, which operates from Monday to Friday under the care of a nursing sister, with a doctor visiting on Tuesdays only. It is a peaceful community, with community unrest only taking place when there is competition for work. There are historic issues with the development taking place in the area, and the community feels as if the impact of this development on the community is not recognised, although the cumulative impacts on the community are significant. The community of Steenbokpan feels as if they had been lied to in terms of the benefits of development. According to the Steenbokpan community they receive little recognition from the municipality. There is also some political tension, since Steenbokpan falls within Ward 3, which belongs to the Democratic Alliance (DA), whilst the municipality is governed by the African National Congress (ANC). The crime rates in Steenbokpan are generally low, but alcohol abuse and related incidents increase during weekends. Although there are sport fields in the community, there are no sport equipment available, and as a result the fields are not used. During March to September, the traditional hunting season, there are more opportunities available and the number of employed people increase. Most of the people in the community have skills related to the hunting industry and farm work. The majority of people speak Setswana. The Steenbokpan community is approximately 17km south west of the project site as the crow flies, but it is much further by road, as there is not a direct link road between the Lephalale Railway Yard and Steenbokpan. There are high expectations amongst the residents of Steenbokpan about job opportunities related to the expansion of the Lephalale Railway Yard, especially because the development falls within their ward. It must be recognised that expectations of the Steenbokpan community have not been managed in the past, and that this has been the cause of discontent in the community. The community is overwhelmed with information about all the different potential projects, and this is causing confusion and disgruntlement. The community struggles to differentiate between the different projects and proponents active in the area.

4.1.2.2 Civil Society Forums

Due to the turbulent socio-political environment in Lephalale, there are a few active civil society forums that engage with social and environmental justice issues. The two most prominent forums are the Lephalale Community Justice Movement and the Waterberg Environmental Justice Forum. Lephalale Community Justice Movement is a community-based organisation with the aim of encouraging socio-economic development and keeping the community informed about things happening in the area. Their focus is on jobs, business development and training. The Waterberg Environmental Justice Forum is a community-based organisation that focuses on environmental rights, education and awareness within the Waterberg Region. Both these organisations are a-political but engage in activist behaviour when they feel that environmental or social rights are impinged. Steenbokpan also has a community forum.

4.1.3 Business and industry

The economy of Lephalale is largely based on mining, power generation, supporting industries, tourism (especially business travellers), hunting and agriculture (game and cattle farming). Due to the location of the Lephalale Railway Yard the focus of this discussion will be on the surrounding industries. The stakeholders affected in terms of agriculture will be discussed in the section about farmers.

Resgen Boikarabelo mine is a two-phased open-cut coal mine being developed in the Waterberg coalfield, north east of Lephalale. Coal production is expected to start in the first quarter of 2019 (https://www.mining-technology.com/projects/boikarabelo-coal-mine-limpopo-province/). Resgen Boikarabelo Coal Mine is currently constructing a 36 km rail link next to and from the existing Lephalale-Thabazimbi railway track to its Resgen Plant. The rail link was approved in 2012 by LEDET as part of the Boikarabelo Coal Mine Environmental Assessment. Transnet will augment the existing Transnet infrastructure and Resgen rail link holding yard with the development of the Lephalale Railway Yard to accommodate a further 100 train wagons to increase load and capacity. The construction of the Resgen rail link has been reported to be challenging from a

community perspective. It took approximately two months to get people on site, because there were community protests about the recruitment process that was not perceived as fair and transparent by the community. Due to the competition for jobs, community members were opposed to re-hiring people, and wanted to involved new people. Taking into account that all workers need to undergo training and health and safety screening, this added significant time and cost restraints. The conflict between the communities and the municipality about local investment exacerbate the labour issues.

Eskom plays an important role in the economy of Lephalale. Its infrastructure includes power stations, substations and power lines. **Medupi** Power Station is one of two Eskom-owned power stations in the Lephalale area. Its construction started in 2007. When completed, it will be the fourth largest coal-fired power plant and the largest dry-cooled power station in the world (https://www.esi-africa.com/s-africa-medupi-power-station-synchronises-fifth-unit/). Medupi is a direct neighbour of one of the two directly affected farmers, and as such this farmer is already subjected to impacts such as run-off water, coal dust, noise and power lines that emanate from Medupi.

The 22kV Theunispan Stockpoort line runs south of the existing railway yard. Transnet will need to accommodate this line in the design of the railway yard, since relocation of the line will not be feasible due to the significant cost associated with the relocation. Transnet is also seeking an alternative site for Borrow Area 1 further away from the Medupi Spitskop 1400kV power line to avoid any impact on the servitude.

The local business community in Lephalale is divided. According to one of the local business chambers, there are about seven types of business forums in Lephalale. Most of these operate independent from each other. There seems to be some political interference, as interviewees claimed that the municipality controls business opportunities, and that people who are not politically connected will struggle to get opportunities. The business community agrees that supporting local businesses is important, and that it should be protected from outsiders. There are

skilled people in the area. At the moment business in the area is slowing down, and there is a lot of uncertainty, as people wonder what will happen after the completion of Medupi. There are a number of new developments in the pipeline and the business community are waiting for these projects to commence. The anticipate a quiet time, especially in the light of the national election in May 2019.

The **Lephalale Business Chamber** (LBC) is one of the more active Chambers in the area. It consists of approximately 50-70 active members, but have about 300 members on its books, all of which are small businesses. The aim of the LBC is to open up opportunities for local businesses, and to protect the interest of local business people. The LBC sees the development of local businesses as key to building the local economy. Local procurement, skills development and good communication are essential considerations for any new project proponent entering the area.

The **Lephalale Development Forum** (LDF) was established in July 2008. It brought various public and private stakeholders such as Eskom, Exxaro and the Lephalale Municipality together as partners in growth. Initially the aim of the forum was to review the impact of the development of the Medupi power station and the Grootegeluk Mine expansion (GMEP) on the town, as economic growth placed major strain on the existing rural infrastructure. Currently the LDF identifies and facilitates projects that benefit the Lephalale community.

The LDF was established as a neutral stakeholder forum to work towards an integrated development drive within the Lephalale municipal area to which all of the stakeholders contribute. It consist of five working groups that address issues such as local economic development, infrastructure and housing needs, social needs and challenges, labour- and skills development requirements, and environmental sustainability challenges (http://www.noordnuus.co.za/articles/news/27346/2014-10-13/lephalale-development-forum-makes-great-strides). The LDF is an important stakeholder in the Transnet Lephalale Railway Yard project, as it can act as a liaison organisation. The LDF has access to a local technical training facility, and if the skills that will be required for the construction and operation of the yard are known, it can

assist with developing the required skills to coincide with the implementation of the project.

Apart from Resgen, a number of mining companies are present in the area, either through active mining, mining rights or prospecting rights. Companies known to be in the area are Exxaro, Sasol, Anglo, Sekoko Coal, Platinum Group Metals, Gleneagles Gold Ltd, Vuselela Mining and Nozala Coal. There is therefore significant potential for cumulative impacts once all these mines become operational.

4.1.4 Farmers

The existing Lephalale Railway Yard is situated in a rural game farming area. The line was first extended from Thabazimbi to Lephalale in 1980 (http://www.safiri.co.za/lpfdb/rail-infrastructure.html). The current operational railway yard is situated in the Koedoe Private Nature Reserve. There are two farmers whom will be **directly affected** by the proposed expansion of the railway yard. The affected farms belong to Mr Tjaart Sauer, and Mr Hendri Hills. No land needs to be acquired from Mr Sauer, but approximately 22 hectares must be acquired from Mr Hills. Both of the borrow pits are planned on Mr Hill's property. Neither Mr Sauer nor Mr Hills live on the properties. Mr Hills has a farm manager that resides on the property. Mr Sauer's mother visits the farm almost on a daily basis to ensure that everything on the farm is taken care of.

Mr Sauer uses his farm for game breeding and hunting. The farm provides a livelihood to Mr Sauer and his mother. The family first rented the farm in 1929, and bought it in 1944, before any of the present developments took place. They are concerned that there may be an increase in poaching due to the presence of more people in the area during the construction and operation of the expanded railway yard. They also have concerns about the impact of the noise on the breeding habits and movement patterns of their game. The farm is used for commercial hunting, and Mr Sauer has several concerns about the impact of the expansion of the yard on their hunting activities. Firstly there is a concern about the safety of people moving around the railway yard during hunting season, and the probability of them being shot, and secondly they are concerned about the impact of more industrial activities

on the sense of place. Hunters want to experience a quiet bush environment, and noise and construction activities do not contribute to such an environment. Giving that hunting is their main source of income, the Sauers are concerned about the impact on their livelihoods. Other concerns about safety include potential theft or poaching, and the physical safety of the people on the farm.

Mr Hills used to farm with cattle, but currently farms with game such as buffalo, sable, nyalas and kudu. He also breeds with exotic game such as golden wildebeest and black impala. The farm is approximately 5 800 hectares, which was bought and build up over the past 30 years to build a unit. It shares a border with Medupi power station. Mr Hills see it as his legacy to his children, who hope to make a living from the farm in the future (next 10 years). Apart from the breeding activities, the farm is also used for hunting, which takes place right through the year. Veterinarians visit the farm and give educational tours to children. There are two hunting lodges on the farm, one can host 16 people, and the other 27 people. The hunting lodges are popular with tourists, and are booked out during school holidays, and about 25 -30 weekends each year. People who do not hunt also use the facilities. The smaller hunting lodge is about 1.8km from the railway line, and the larger lodge about 2.4 km. The house of Mr Hills' farm manager is about 837m from the existing railway yard. There are also four holding pens for game on the farm. The game is transported from these pens once it is sold. The income generated by the hunting lodges and holding pens are the primary source of income of the farm.

There are already servitudes for water, electricity and rail running across the property. Some of the concerns that Mr Hills has include the economic impact on his property and livelihood, the safety of game and people, the impact of noise on animals and people, access control, impact of construction on existing infrastructure such as boreholes, electricity cables and water pipes, industrial action (strikes) from Transnet employees, dust, lights at night and access across the railway, since the farm is on both sides of the existing line.

Given the proximity of the railway yard and the distance between the yard and the **neighbouring properties**, it is unlikely that these properties will be affected by the proposed development. Their main concerns are noise, light at night and safety.

There are eight permanent farm workers living on Mr Hills' property. They have been living there for an extended period of time. During peak times Mr Hills bring workers from his other farm near Brits to assist with the workload.

4.1.5 Transnet

As the proponent, Transnet is also a key stakeholder. While its activities have an impact on the other stakeholders, the behaviour of other stakeholders also impacts on Transnet. There are high levels of expectations about job creation and social investment from the communities of Marapong and Steenbokpan. Transnet will need to manage these expectations. It will also need to implement mitigation measures to ensure that the impacts of the proposed development are mitigated and managed. Given the location of the development, Transnet need to invest in relationships with the directly affected land owners to ensure good communication and the quick resolution of any issues that may arise.

5 Social Impact Assessment

"Almost all projects almost always cause almost all impacts. Therefore, more important than predicting impacts is having on-going monitoring and adaptive management." Frank Vanclay.

5.1 Impact assessment criteria

It must be stated that the impact tables and ratings have been adapted from the environmental sciences and that it is not always possible to compartmentalise the social impacts. For the sake of consistency this has been attempted, but it is not innate to social sciences. Allowance for the changing and adaptive nature of social impacts should be made when interpreting the impact tables.

5.1.1 Impact Assessment Methodology

In order to ensure uniformity, a standard impact assessment methodology will be utilised so that a wide range of impacts can be compared.

The proposed criteria and rating scales to be used in the assessment of potential impacts are indicated in Table 6 below:

Table 6: Proposed assessment criteria and rating scales

Mitigation Type	
Control & Remedy	
Modify	to reduce or lessen in degree or extent; moderate; soften:
Remedy	something that corrects the impact of any kind.
Control	to control the impact/regulate

Criteria: EXTENT		
"Extent" defines the physical extent or spatial scale of the potential impact		
RATING		**DESCRIPTION**
1	Site specific	Impacts extending only as far as the activity, limited to the site and its immediate surroundings
2	Local	Impacts extending within 5km from site boundary
3	Regional	Impacts extending to the district (20km from boundary of the site)
4	Provincial	Impacts extending to provincial scale eg. Limpopo Province
5	National	Impacts extending to within the country i.e. South Africa.
6	International	Impacts extending beyond international border / the borders of South Africa
Stop		to restrain, hinder, or prevent

Criteria: DURATION		
"Duration" defines the temporal scale		
RATING		**DESCRIPTION**
1	Immediate	Less than 1 year
2	Short term	1-5 years
3	Medium term	6-15 years
4	Long term	Between 16 – 30 years
5	Permanent	Over 30 years. Where mitigation either by natural processes or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.

Criteria: INTENSITY			
"Intensity" establishes whether the impact would be destructive or benign.			
Status	**RATING**		**DESCRIPTION**
Negative	0	Negligible	Where impacts do not really affect the environment and no mitigation is required
	1	Low	Where impacts will result in short term effects on the social and/or natural environment. These impacts are not deemed largely substantial and are likely to have little real effect. (marginally affected)
	2	Medium	Where impacts will result in medium term effects on the social and/or natural environment. These impacts will need to be considered as constituting a fairly important and usually medium term change to the environment, these impacts are real but not substantial. Impacts are fairly easy to mitigate
	3	High	Whereby effects will be long term on social, economic and/or bio-physical environment. These will need to be considered as constituting usually long term change to the environment. Mitigation is considered challenging and expensive
	4	Very High	Where impacts should be considered as constituting major and usually permanent change to the environment, and usually result in severe to very severe effects. Mitigation would have little to now effect on irreversibility

Criteria: INTENSITY			
Status	**RATING**		**DESCRIPTION**
Positive	0	Negligible	Where impacts affect the environment in such a way that natural, cultural and social functions and processes are not greatly and in instances no mitigation measures will be required. (environment not really affected)
	1	Low	Minor improvements are anticipated over a short term on the social and/or natural environment.

	2	Medium	Where moderate improvements are anticipated over a medium- to long-term on the social and/or natural environment.
	3	High	Where large improvements are anticipated over a long term on social, economic and/or bio-physical environment.
	4	Very High	This results in permanent improvements of the social/or natural environment.

Criteria: STATUS		
"Status of impact" - describes whether the impact would have a negative, neutral or positive effect on the affected environment		
RATING		**DESCRIPTION**
+	Positive	Benefit to the environment
=	Neutral	Standard / impartial
-	Negative	cause damage to the environment

Criteria: PROBABILITY		
"Probability" describes the likelihood of the impact occurring.		
RATING		**DESCRIPTION**
0	Improbable	Where the possibility of the impact occurring is low.
1	Probable	Where there is a distinct possibility that the impact will occur.
2	Highly probable	Where it is most likely that the impact will occur.
3	Definite	Where the impact will occur regardless of any prevention measures.

Criteria: SIGNIFICANCE		
"Significance"- attempts to evaluate the importance of a particular impact with mitigation measures included and also excluded. The significance was calculated using the following formula: **Significance = (Extent + Duration + Intensity) X Probability**		
RATING		**DESCRIPTION**
0-4	Very Low	Where the impacts will not influence the development, social, cultural or natural environment
5 -12	Low	Where impacts will result in short term effects on the social and / or natural environment. The impacts merits attention however are not deemed largely substantial are likely to have little real effect
13-25	Medium	Where impacts will have a medium-term effect on the social and/or natural environment. These impacts need to be considered as constituting a fairly important and usually medium term change to the environment, these impacts can be mitigated by implementing effective mitigation measures.

26-44	High	Whereby effects will be long term on social economic and or bio-physical environment. The impacts could have a major effect on the environment. This may bring forth the consideration of no-go areas/open areas on the development land regardless of mitigations implemented. Mitigation is however possible.
45	Very High	Whereby effects will be permanent on the social economic and or bio-physical environment. Such impacts cannot be mitigated.

5.2 Impacts identified, mitigation and social management plan

This section describes and assesses the specific social impacts that will be associated with the proposed upgrade of the Transnet Lephalale Railway Yard. When the mitigation and management of social impacts are considered, one must take into consideration that social impacts occur in communities surrounding the proposed project, and although the project proponent may be the catalyst for some impacts, there may be a number of external factors contributing to the impact. This is especially important in the Waterberg area that has been exposed to rapid development in the past decades. Many of these factors are outside the control of the project proponent. Many of the social impacts the proponent cannot mitigate alone, and partnerships with local government and Non-Profit Organisations are often required. Social impacts must be managed in the long term. This complex process requires insight in the social environment and community dynamics. The social environment adapts to change quickly, and social impacts therefore evolve and change throughout the project cycle.

5.2.1 Existing and cumulative impacts

Given that the Transnet Lephalale Railway Yard is an existing facility, the existing impacts must be acknowledged. There are also existing social impacts in the communities that are closest due to the development in the area. When considering existing impacts, the complexity of the social environment must be contemplated. Social impacts are not site-specific, but occur in communities surrounding the site, or where people are. The high concentration of industrial activities taking place in the area surrounding the project site has caused a number of impacts. From a social

perspective it is not possible to pinpoint which percentage of any given impact result from a specific activity or proponent. For example, industrial and mining activities may cause an influx of people into an area due to the possibility of employment creation. It is not possible to say, for example, that 30% of people moving into the area looked for an industrial job, and 70% for a mining job. It is however possible to say that all these industries contributed to the honeypot effect (project-induced in-migration where people move to the project site in search of work or economic opportunities that arise from the project) that is experienced in the area. Transnet Lephalale Railway Yard, and its activities, is not the only party responsible for the existing social impacts in the area, but does contribute to these impacts, and will continue to do so through the construction and operation of the railway yard. The following existing impacts that are associated with development are experienced in the community:

5.2.1.1 Impacts from the existing railway yard

The existing railway line has been there for about 40 years. During this time, there has been significant development in the area. The land owners are used to the impacts created by the railway line and can live with it as it is currently operated. The most significant impact relates to the noise from the trains. The game camp of the Sauer family is directly adjacent to the railway line. People also occasionally move in the servitude, but mostly there are only trains passing by. There is also evidence of coal dust next to the rail track, but it is not seen as a significant impact.

5.2.1.2 Impacts from other development on the affected land owners

Mr Hills has servitudes for a water pipe, powerlines and the existing railway line crossing his property. Mr Sauer has an Eskom servitude crossing his property, and the railway line is on the border of his property. All the servitude holders have the right to access his property for maintenance purposes. The servitudes also limit the activities that can be executed on the land – for example no trees are allowed under the power lines and on the water pipeline. The power lines create a visual impact, and the railway line divides the property. A significant impact is from Medupi power station, which borders his property. There are issues with storm water running into

the property, eroding the roads and polluting the veld. They cannot keep game in the area directly adjacent to Medupi, and it cannot be used by the hunters due to the visual impact of the power station and the power lines.

5.2.1.3 Economic impacts

Due to the economic boom in the Waterberg district, there was an increase **in job creation** in the last decade. Especially in the lower socio-economic groups, each income can support a number of family members and dependants through remittances. However, job opportunities in the Lephalale area has declined significantly in the last 5 years due to the completion of several big projects.

South Africa had an unemployment rate of 27.1% in January 2019, one of the highest in the world. There is a **high demand for available jobs**. Due to the high illiteracy levels in the community, there is an over-supply of unskilled labour. Although there are some skilled labourers that live in the community, there are not always enough skilled labourers to meet the needs of the industries. Therefore, people from outside the area are employed to fill these positions, something that the local community is critical about. They feel that the local community does not get enough benefit from the presence of industries.

A number of the bigger industries have invested in **skills development**, but it remains a major need in the area. Due to the industrial development in the area, there are some training facilities locally available. The Lephalale Development Forum indicated that Transnet should let them know the number and level of skills that will be required, and that they can assist with training people in preparation for the project.

Many of the industries in the area has invested in **Corporate Social Investment** (CSI) projects in the area, for example, Sasol built a multi-purpose centre in Steenbokpan. Other CSI projects include donations of clinics/wellness centres, school programmes, road upgrades and training centres amongst others.

5.2.1.4 Impacts on infrastructure

Due to the influx of people into the area there are existing impacts on infrastructure. The Waste Water Treatment Works in Lephalale is currently over capacity and dysfunctional. There is no capacity for it to receive any waste water. The landfill in Lephalale is not registered, and there is some concern about the landfill management. Steenbokpan has no secondary school, and children are transported by bus to schools in Lephalale and Marapong. There is a significant housing backlog in Lephalale.

5.2.1.5 Community-based impacts

The development boom in the area, and the presence of mines created high **community expectations** about contributions from companies with developments in the area, especially in Steenbokpan. Mines must have Social and Labour Plans which force them to invest in the local community, and community members often do not understand that there is no similar requirement for other developers

The **relationship** between the municipality and the communities, especially in Steenbokpan, is tense. The tension can be attributed to the mistrust between the communities and the municipality, especially about employment opportunities. The tension has resulted in volatile meetings and strikes. Industrial role players are also targeted with strikes about labour issues, which often turns violent.

The constant movement of trucks and buses impacts on the community's **road safety**. Contractors that must be transported daily from town to the construction sites such as Medupi, workers working at the power stations and mines, and children being transported to the closest schools have caused an increase in traffic in the area.

There has been a significant **influx of people** into the area. This created pressure on infrastructure and caused the formation of informal settlements. People coming in from outside threaten the safety of community members and there has been an increase in crime on all levels (WDM IDP, 2017/2018).

There are existing **health impacts** in the Lephalale area. High numbers of teenage pregnancies are reported. There are also high levels of respiratory diseases and allergies, which residents attribute to the presence of the power stations and the burning coal at Grootegeluk Mine. Tuberculosis infections are declining in all areas of South Africa, with the exception of the Lephalale area. Statistics indicates that in Lephalale TB/HIV co-infection stands at about 65%, compared to the national average of 55%. The disease is spreading rapidly in areas like Marapong where there is an increase in informal settlements (http://www.lephalale.gov.za/news/docs/Deputy%20President%20visits%20Lephalale.pdf). HIV/AIDS, sexually transmitted and communicable diseases are all current issues in the affected communities.

The local economy is heavily dependent on the industrial development that has taken place in the area. Many of the developments are approaching the end of their construction phase, which means a decline in job opportunities. There is the promise of significant mining developments in the area, and another power station, but environmental groups are rallying against the development of further coal-based infrastructure and there are levels of uncertainty associated about the timing of these developments, some of which already received approval to go ahead from an environmental perspective. Agriculture in the form of game and cattle farms, and tourism are other important economic role players in the area. Although these industries are more sustainable in the long run, it does not offer the rapid economic growth that has been provided by the industrial development. The current **lack of diversification** in the economy is a further concern.

5.2.2 Social impacts specific to the expansion of the Transnet Lephalale Railway Yard

The following impacts will be triggered by the expansion of the Transnet Lephalale Railway Yard. Some of the impacts are existing impacts but have been included here because it will be exacerbated by activities associated with the expansion.

5.2.2.1 Community expectations

As discussed in the stakeholder analysis and section about existing impacts, there are high expectations about project benefits in the surrounding communities. Previous projects in the area, and the construction of the Resgen railway line illustrated that communities resort to violent protests if they feel that they are not being heard. There is a risk that lives can be in endangered and property damaged during these protests, and Transnet should have emergency procedures in place should there be protests of this nature. Through their actions, communities can potentially cause significant delays in the construction phase, and also cause shutdowns in the operational phase of the project. Given that the railway yard will share an access road with some land owners, there is a possibility that innocent people may end up in an unsafe situation, and emergency procedures should be in place to deal with these situations, should it arise.

Although some of the community expectations are realistic, the extent to which Transnet can meet the some of the expectations are limited. The expectations include that Transnet provide skills development and training to prepare the community for new business opportunities, investing in a secondary school for Steenbokpan, donating sports equipment, employ more local people, give bursaries to local people, sending people to training centres and ensuring people get opportunities to get work experience. Unless the expectations of the community are managed carefully, this impact may pose a significant risk to Transnet, on different levels. The mitigation measures are captured in Table 7 below.

Table 7: Mitigation measures for impacts relating to community expectations.

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Transnet must assign the role of Community Relations Manager (CRM) that is responsible for all the social aspects of the Lephalale Railway Yard to a specific person. Given the size of the operation, it may not be feasible to appoint a specific person for this role, but the task must be given to someone close to the management team and form part of his/her job description. This person will also be the contact person that community members can contact in case of emergency or for any community related matters.	Design and planning Construction Operation Decommission	Commence in the planning phase and continue through to the decommission phase of the project	Transnet	N/A	Manage social and community aspects of the Lephalale Railway Yard	Appointment letter of CRM
2.	Transnet must develop a grievance mechanism to address and keep record of community grievances. It must include a grievance register. It is imported to have documented evidence of community/Transnet interactions. This will assist Transnet with tracking the issues, and the community to see what actions the Transnet has taken. The community must assist with developing the grievance mechanism.	Design and planning Construction Operation Decommission	Commence in the planning phase and continue through to the decommission phase of the project	Community Relations manager (CRM) Community groups Transnet management	Grievance register must be checked on a weekly basis. Feedback to community about grievances must be done on a monthly basis	Record, track and address grievances	Grievance register Monthly feedback reports

3	Transnet must include planning and budgeting for external conflict situations (such as road blocks or invasions) in their emergency response procedure. They must also compile a stakeholder engagement plan to guide their interaction with stakeholders	Design and planning Construction Operation Decommission	Commence in the planning phase and continue through to the decommission phase of the project	CRM Safety manager Land owners sharing access roads	Review the emergency response procedure and stakeholder engagement plan once a year	Ensure all staff knows what action to take in a conflict situation	Emergency response plan Stakeholder engagement plan

5.2.2.2 Sense and spirit of place

There is an existing railway yard with trains passing through the properties. At the moment this is not a problem for the people living close-by, as it is an intermittent noise. The current railway yard is small and limited to a single track. The surrounding farms are used for game breeding, tourism and hunting. The current residents and farm owners have a strong sense of place associated with the farms. Sense of place refers to an individual's personal relationship with his/her local environment, both social and natural, which the individual experiences in his/her everyday daily life (Vanclay et al, 2015). It is highly personal, and once it is affected, it cannot be restored. It is also difficult to quantify. Part of the sense of place is the emotional attachment that the farmers have to their properties, and the hopes that they have for it to serve future generations (their children).

The spirit of place associated with an area is an important factor in tourism and hunting and the marketing of these activities. Spirit of place refers to the unique, distinctive and cherished aspects of a place. Whereas 'sense of place' is the personal feelings an individual has about a place, spirit of place refers the inherent characteristics of the place (Vanclay et al, 2015).

Aspects that will impact on the sense and spirit of place include an increase in noise levels from trains stopping and starting, airbrakes, shunting, whistles and maintenance activities. Visual impacts such as more railway lines, buildings and light at night will also impact on the sense and spirit of place. Although there is noise and visual impact assessment reports that suggest mitigation, it must be acknowledged that the sense of place will be altered permanently, and given the personal experience of this impact, successful mitigation is extremely hard to do. In the eye of the affected parties the only thing that will not alter the sense and spirit of the place in this instance is to avoid any further development. The impact on the economic and livelihood activities associated with the spirit of place will be assessed in Section 5.2.2.3 and 5.2.2.4 below.

The mitigation measures are captured in Table 8 below.

Table 8: Mitigation measures for sense and spirit of place.

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	The noise and visual specialists will provide scientific mitigation measures for this aspect.	Pre - construction Construction Operation.	Commence in the planning phase and continue through to the operation phase of the project	Environmental Manager	As prescribed by specialists	Minimise the noise and visual impact on the neighbouring properties	Monitoring results from relevant specialist studies.

5.2.2.3 Economic impacts

During the construction phase the project will create between 50 and 80 job opportunities. Most of these opportunities will be for unskilled workers. There will be no construction camp, and Transnet aim to employ local people as far as possible. Transnet will provide transport for the construction workers. Permanent skilled construction staff that do not live locally will stay in local guest houses. During the operational phase between 50 and 100 people will be employed permanently. Most of the permanent jobs will require some skills. Transnet intends to find local people to fill these positions as far as possible.

Apart from the direct economic impacts of the proposed project, there will also be secondary economic opportunities that can potentially benefit local service providers. Opportunities include transport, domestic services, catering, security and fencing amongst others. The use of local service providers will ensure that the local economy benefits directly from the proposed project.

The mitigation measures are captured in Table 9: below.

Table 9: Mitigation measures for economic impacts from a social perspective.

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Create a labour desk that can communicate any available positions to the community. If existing mechanisms exist at the municipality, these can be utilised, but the labour desk should be easily accessible to the communities of Marapong and Steenbokpan. Jobs should be advertised in a manner accessible to local communities such as in the local newspaper, on local radio stations or on local information boards at community centres.	Pre - construction Construction Operation	Use the design and planning phase to get labour desk in place	CRM HR manager	During the start of the construction and operation phases of the project.	Indicate to the community that they will be informed about available jobs	Number of people of the local community employed by Transnet
2.	Transnet should ensure at least 70% of **secondary economic opportunities** are given to local contractors. A percentage of goods as determined by Transnet and the relevant stakeholders must also be **procured** locally. Services and goods must be procured locally as far as reasonably possible. Aspects of this positive impact will occur by default when the construction force lives locally and they utilise local services and support local shops.	Construction Operation Decommission Closure and rehabilitation		Transnet Local business chambers Lephalale Development Forum	Review supplier list on annual basis	To ensure Transnet contribute to the local economy through secondary opportunities	Signed service provider agreements
3.	Transnet should liaise with the Lephalale Development Forum (LDF) to determine which skills are locally available and which skills would be required for the project. Through the LDF Transnet can determine whether there are	Pre-construction Construction Operation	Before construction commence, throughout	Transnet Lephalale Development Forum	Monitor on a yearly basis as part	To ensure Transnet contributes to local education,	Requirements written into sub-consultant agreements Number of

	any opportunities to offer internships and practical experience for local students. Transnet should ensure that skills development requirements form part of their contracts with sub-consultants.		operation phase of the project			skills development and training	internships and on-the-job training opportunities offered

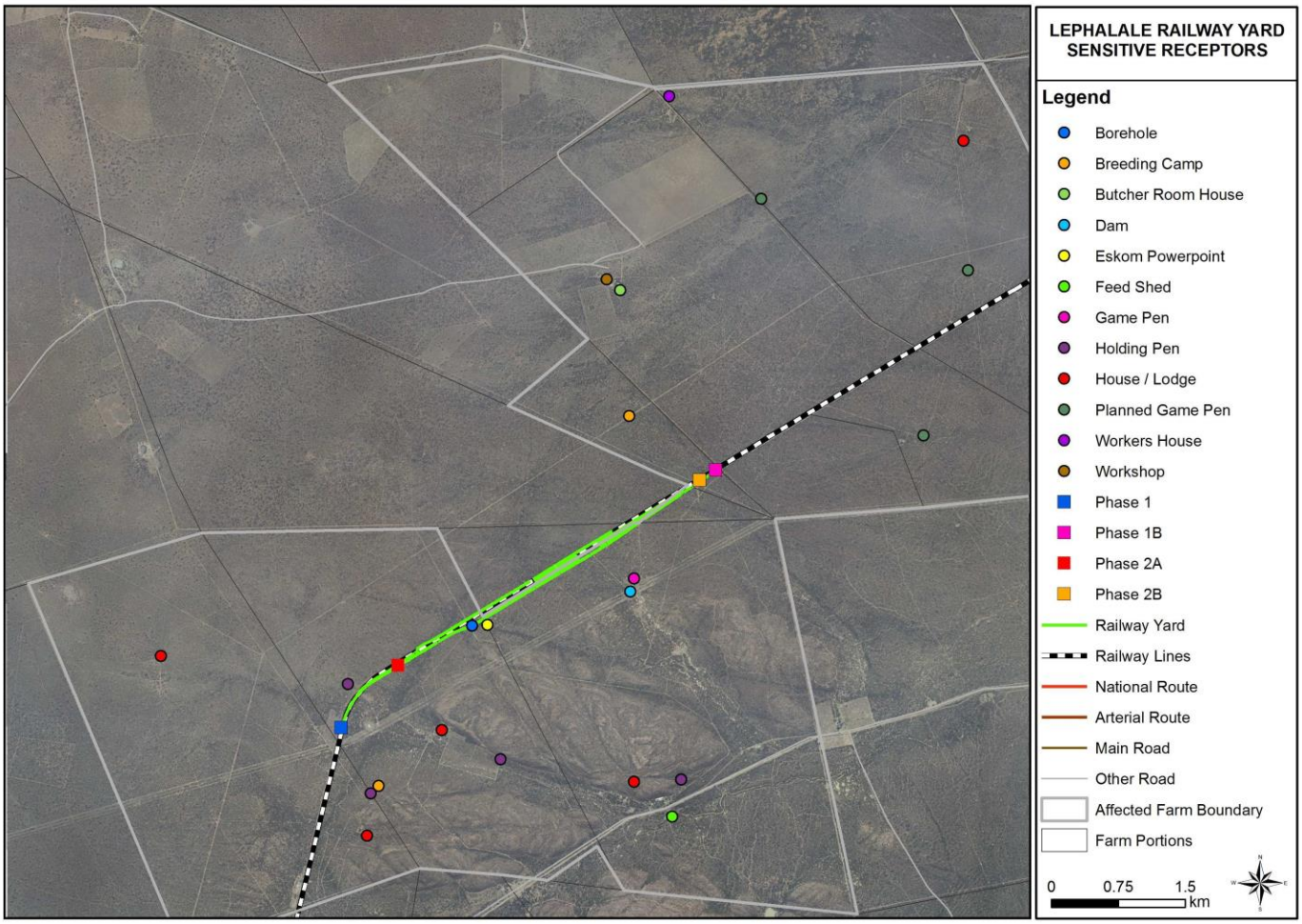
5.2.2.4 Impacts on livelihoods of farmers

Two farmers will be directly affected by the project. Mr Tjaart Sauer and Mr Hendrie Hills. Both the borrow pits will also be on Mr Hills' farm, and his properties are affected on both sides of the line. Mr Sauer farms with game, and the main source of income on the farm is from hunting. His game camp borders the railway yard, and commercial hunting takes place in this area. The current railyard activities do not interfere with the activities on Mr Sauer's farm.

Mr Hills uses the property for game breeding (including species such as black impala, golden wildebeest, sable, nyalas and kudu), hunting safaris (local and international hunters) and tourism. Two of his holding pens, a breeding camp, a lodge (Zandnek) and the manager's house are in close proximity of the development.

Figure 20 below indicates the sensitive receptors on Mr Hill's property.

Figure 20: Sensitive receptors in Mr Hill's property.



The current railway yard does not impact on the activities on the farm. The farm has exemption, and hunting takes place right through the year. They have removed most game from the camp directly adjacent to Medupi, as the noise and pollution had a negative impact on the game in the camp. The also do not use the camp for hunting, since the power lines impact on the hunters' sense of place. There is a concern that the expansion of the railway yard will have a negative impact on the hunting activities on the farm. The permanent presence of people in the area would mean that no hunting can be done in the vicinity of the railway yard due to safety concerns. This will limit the area available to hunt in. This concern is shared by Mr Sauer, who will lose a small portion of the area available for hunting on his farm because his property is next to the existing railway yard that will now be extended.

There is a holding pen for game directly adjacent to the railway line on Mr Hills' farm. There are various reasons that require game to be kept in temporary captivity at times. These include the rounding up of game before translocation, being under quarantine for reasons of disease management, adaptation to a new environment before release, treatment of sick animals or research. There are South African National Standards for holding pens (SANS 1884-1:2004) which spells out the minimum requirements that these structures should meet.

The Wildlife Campus mention a list of factors that should be considered when constructing holding facilities. The ones relevant to this study are: (http://www.wildlifecampus.com/Courses/WildlifeManagement/GameCaptureandTranslocation/GameinTemporaryCaptivity/48.pdf):

- The more peaceful and quieter the surroundings are, the less stressed the animals will be.
- During the first few days animals should not be able to see out the sides of the pens, as sudden movements could startle them. It is recommended that the sides of the pens be covered.

- The pens should be constructed in a way that provides effective draining of rain water.

It is evident that a holding pen close to the expanded railway yard would be detrimental to the health and wellbeing of the game, and should the project proceed, this holding pen should be relocated to a more suitable area. There is also a borehole that falls in the project area which would need to be relocated.

A second holding pen adjacent to a breeding camp and close to the Zandnek Lodge and farm manager's house may also be affected by the proposed expansion of the railway yard. The main concerns are the visual and noise impacts. The Environmental Noise Assessment (Van der Merwe, 2019) indicate that noise will be an impact for these receptors, but the impact is classified as medium. Due to the topography the yard will probably not be visible from these points. While permanent residents will get used to the noise, it will have a negative impact on tourists that visit the farm in terms of spirit of place. People on a hunting safari or weekend break may find the noises associated with the railway yard offensive, and this will have a knock-on effect on the tourism potential of the farm. Whilst visitors that do not hunt may be accommodated in the lodge further away, and could be kept away from the railway yard, hunters move around the farm and it will be difficult to avoid the area. Game breeding and the tourism lodges are the main economic activities on the farm. The proposed expansion of the Lephalale railway yard will have a negative economic impact on the livelihood activities that are currently sustaining the farms. The extent of this economic impact is difficult to determine at this stage. Some of the impacts can be mitigated by moving infrastructure around, but the direct financial impacts due to loss of revenue from hunting and tourism would need to be determined through a claims procedure that shows the actual losses. For this process actual numbers of hunters and tourists that visit the properties and the associated income from these streams must be known for at least a three-year period before the development commences. This can then be compared to numbers after the project has started. The information must be documented and audited. It must also be considered that the economic conditions in the country and other external factors

can affect these numbers, as tourist and hunters are less likely to spend their money on recreational activities when the economy is down.

Part of Mr Hills' farm Geelhoutkloof has been declared as the Koedoe Nature Reserve. As such it is declared and registered under the National Environmental Management: Protected Areas Act (Act No. 57 of 2003). Should the project proceed, Transnet must negotiate with Mr Hills to apply for the boundaries of the nature reserve to be amended.

Due to the way in which the road system on the farm works, the area where the current railway yard is situated is used as a crossing to access different areas within the property. Land on both sides of the railway line belong to Mr Hills. If they cannot use this crossing, it would mean that they need to drive extra kilometres to access parts of the property. The distance depends on which parts of the property they need to access. The current servitude is also used as an access route to town by the farm manager's family.

Mr Hills does not only use the farm as a livelihood source now, he also sees it as an investment in the future livelihoods of his children. At least two of his children's future career paths are directly linked to the farm. He is concerned that the proposed expansion of the railway yard will have a negative impact on the ability of his children to make a living from the farm.

The mitigation of the impacts on the farmer's livelihoods is not a simple matter, partially due to the fact that it is difficult to quantify and because there is an emotional component to it. It must be acknowledged that Transnet should enter into direct negotiations with the affected farmers and that it may take some time for the parties to agree on the most appropriate mitigation, therefore the mitigation suggested in this report aim to guide this process.

Table 10: Potential mitigation of impacts on farmer's livelihoods.

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	The holding pen close to the railway yard must be relocated. Given the specialist nature of constructing such a holding pen, the land owner must provide the technical design and standard of material. Transnet must bear the financial burden.	Pre - construction	Before construction start	Transnet Landowner	Once off inspection once the camp has been relocated to ensure it meets the standards	To avoid impacts on the livelihood of the affected land owner	Successful relocation of holding pen
2.	If the landowners suffer any physical losses due to project activities, the landowner should be compensated for their losses. Transnet must have a claims procedure that is communicated to the affected landowners. In order to receive compensation, the claim forms must be submitted to the CRM. Compensation should follow the IFC principles, which states that market related prices should be paid, and if anything is restored, it must be to the same or better standards than before	All phases	Commence in the planning phase and continue throughout the life of the project	Transnet CRM	As required – claims received by CRM and records of all claims must be kept	Ensures that landowners do not suffer actual losses as a result of the project.	Claims register Completed claim forms
3.	The borehole in the project area must be protected. Transnet must ensure that the farmer has access to the borehole at all times. If required, pipes must be laid from the borehole to a point in the landowner's property. Alternatively, a new borehole must be drilled inside the landowner's property.	Pre - construction	Before construction start	Transnet, with input from landowner	Once off inspection once infrastructure is installed	To ensure landowner have access to his borehole	Landowner satisfied with access to borehole
4.	The landowner must be given access to the other parts of his farm across the servitude. If it is not possible to do so when the railway yard is constructed, an alternative crossing in	Pre - construction	Before construction start	Transnet, with input from landowner	Once off inspection once roads are done and new gates have been installed	To ensure landowner have access to his property on	Landowner satisfied with access routes

	close proximity should be provided, including access roads and gates.					both sides of the railway without incurring additional costs	
5.	Transnet must negotiate with Mr Hills about amending the boundaries of the Koedoe Nature Reserve. Transnet must carry all the costs associated with this process.	Pre-Construction	Before construction start	Mr Hills, with support from Transnet	Once off documented proof that boundaries has been amended	To ensure the requirements of the Protected Areas Act are met	New boundaries for Koedoe Nature Reserve documented
6.	In order to assess the impact on the revenue of the hunting and tourism activities conducted on the affected properties, the landowners should provide Transnet with copies of the revenue for three consecutive years. This should be compared with the revenue from these activities during the construction and operation period of the project. This should be assessed by an independent financial advisor to see what the actual losses are, taking external economic conditions into account. Based on this, Transnet should negotiate compensation for loss of income with each affected landowner. The compensation could be in the form of a once off payment, or yearly payments for an agreed period.	Pre - Construction Construction Operation	Three years before construction start until 2 years into operation	Transnet Landowners Independent financial advisor	Yearly financial statements Report from independent financial advisor	To ensure landowners are fairly compensated for actual loss of income.	Audited financial statements Approved report from independent financial advisor Signed compensation agreements
7.	To mitigate the noise impacts, and to allow for hunting activities to continue, a barrier must be constructed between the railway yard and the affected properties. The dimensions and nature of the barrier should be determined by the engineering team and relevant specialist, with input from the landowner. The ability of	Pre-Construction Construction Operation	To be built before construction starts	Transnet Engineering team Noise specialist Visual specialist Landowner	Once off construction with quarterly inspections	To mitigate visual and noise impact, and to ensure safety of people moving in the area	Inspection sheets of quarterly inspections

	the structure to absorb impacts from bullets must be considered						

5.2.2.5 Safety impacts

Safety and security is a big concern of all of the affected landowners. The current socio-economic and political conditions in South Africa are such that people living in isolated areas such as farms are extremely vulnerable to crime and violence. The project will introduce unfamiliar people into the area who will be able to share current conditions with outsiders or opportunistic criminals.

There is also a risk that there may be an increase in poaching. All the farms adjacent to the railway yard are game farms. Poaching can be done through snares in the fences, or people cutting the fences and entering the properties. Given the location of the railway yard, there is a risk of poisonous snakes entering the areas where people work.

Given the socio-political tension in the area, there is a risk that there may be strikes at the construction site, or during the operation of the railway yard. Access to the site is via the Afguns road on dirt roads that passes through Mr Hills' farms. It would therefore be easy to block access to the site by blocking one of these roads. The farm owners and tenants make use of these roads to access their homes and to access town quicker.

Another safety concern is the hunting activities that take place on the adjacent farms. Although hunting is allowed throughout the year, hunting activities peak in the winter. With people permanently stationed on the railway yard, there is a risk that they may be in danger from stray bullets or hunting accidents. High calibre guns are used for hunting, especially for bigger game.

Table 11: Potential mitigation on safety impacts.

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Workers and contractors must be educated about safety aspects in areas where there are wild animals. This could be done through toolbox talks. At least one person on site need to be trained to remove poisonous snakes. Transnet must have a zero-tolerance policy w.r.t. poaching, and make it clear what the punishment and consequences would be. All poaching incidences must be reported to the local police.	Pre-construction Construction Operation	Throughout the life of the project	Transnet Safety officer Environmental officer Local police	Quarterly	To ensure worker safety, protect landowners' assets and discourage poaching	Content of toolbox talks
2.	All contractors and employees need to wear photo identification cards. Vehicles should be marked as construction vehicles and should have Transnet logo clearly exhibited. Entry and exit points of the site should be controlled.	All phases	Throughout the life of the project	Transnet Health and Safety officer	Security check-ins should be done on a monthly basis to ensure all aspects are attended to.	Ensure the safety and security of affected communities and land owners	All contractors and employees issued with photo identification cards. All vehicles marked Access control on site
3.	All vehicles entering and exiting the site must be searched to ensure that there are no firearms taken on site, and to discourage poaching. People entering and exiting the site must sign in and out.	All phases	Throughout the life of the project	Transnet Health and Safety officer	Daily	To discourage poaching and to keep a record of who enters the site	Entry and exit register
4.	Transnet must put procedures in place to respond to strikes as part of their emergency response procedures. These procedures must include communication with the affected landowners in an emergency situation, taking the weak cell phone signal on parts of the	Pre-construction Construction Operation	From the pre-construction phase throughout the	CRM Safety officer Landowners	Review quarterly	Ensure safety of all affected parties during strikes/ road blocks	Emergency response procedure

	farms into consideration		operation phase				
5.	A barrier must be constructed between the railway yard and the affected properties. The dimensions and nature of the barrier should be determined by the engineering team and relevant specialist, with input from the landowner. The ability of the structure to absorb impacts from bullets must be considered	Pre-construction Construction Operation	To be built before construction starts	Transnet Engineering team Landowner	Once off construction with quarterly inspections	To ensure safety of people moving in the area	Inspection sheets of quarterly inspections

5.2.2.6 Pressure on infrastructure: Roads and transport

There will be a significant increase in traffic along Mandela Drive and Afguns road during the operation phase of the railway yard. Trips will be generated by 50-100 staff members working at the yard during the operational phase, trucks delivering water for domestic purposes to site, fuel brought to site by truck including service provides collecting and removing waste or servicing infrastructure. The road that turns from the Afguns road is a dirt road. The affected farmers are concerned about the quality of the road, especially in the rainy season if it will be used by heavy vehicles. In addition, the vehicles will create dust that will settle on the plants adjacent the road, making it unpalatable for the game to eat. This access road is also used by the people living on the farms to access town on a daily basis.

Table 12: Potential mitigation impacts of pressure on infrastructure: Roads and transport

No	Mitigation Measures	Phase	Timeframe	Responsible party for implementation	Monitoring party (frequency)	Target	Performance indicators (monitoring tool)
1.	Transnet should compile and implement a traffic safety plan in accordance with recommendations from the traffic specialist. This plan should form part of the Health and Safety requirements for all contractors. Appropriate road signage must be used at the entry and exit points to the site. Although Transnet cannot take responsibility for all road users, they should include road safety toolbox talks.	Construction Operation	Commence before construction starts, for the life of the project	Transnet Provincial road authority	CRM to check if signage is visible and in place on weekly basis. Communicate with roads authority if there are any issues	To avoid any mortalities when turning of the Afguns Road	Signage on the Afguns Road Included in Health and Safety plans Toolbox talks
2.	Suppress the dust on the access road and maintain roads to a reasonable standard	Pre-construction Construction Operation	Life of project	Transnet Environmental officer Transport service providers	Quarterly road inspections Monthly environmental inspections	To minimise dust and to ensure the roads are in a good condition	ECO and monthly audit reports
3.	Provide transport for employees to minimise number of cars accessing the site	Construction Operation	Life of project	Transnet Transport service providers	Audited on a yearly basis to determine need	To ensure workforce have access to transport to work. Increase worker safety	Signed transport agreements

Table 13: Rating of construction phase impacts

	SIGNIFICANCE PRE-MITIGATION							SIGNIFICANCE POST MITIGATION							MITIGATION TYPE	MITIGATION
CONSTRUCTION PHASE																
Aspect, Activity & Potential Impact	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**	**(Modify, Remedy, Control, Stop)**	**Mitigation Measure**
Community expectations about project benefits (throughout life of project)	Negative	3	3	3	4	30	High	Negative	2	3	2	3	16	Medium	Control	See Table 7
Sense and spirit of place change due to noise and visual impacts (throughout life of project)	Negative	3	2	5	4	33	High	Negative	3	2	5	3	30	High	Control	See Table 8

Create 50-80 construction jobs	Positive	2	3	2	3	16	Medium	Positive	3	3	2	4	27	High	Modify	See Table 9
Create secondary economic opportunities and skills development	Positive	2	3	3	2	16	Medium	Positive	3	3	3	4	30	High	Modify	See Table 9
Loss of livelihoods	Negative	3	2	2	4	24	Medium	Negative	2	2	2	3	14	Medium	Control	See Table 10
Safety impacts	Negative	2	3	2	3	16	Medium	Negative	1	3	2	2	7	Low	Control	See Table 11
Roads and Transport	Negative	3	3	2	3	24	Medium	Negative	2	3	2	2	14	Medium	Remedy	See Table 12

Table 14: Rating of operational phase impacts

	SIGNIFICANCE PRE-MITIGATION							SIGNIFICANCE POST MITIGATION							MITIGATION TYPE	MITIGATION
OPERATIONAL PHASE																
Aspect, Activity & Potential Impact	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**	**(Modify, Remedy, Control, Stop)**	**Mitigation Measure**
Create between 50 and 100 permanent jobs	Positive	2	3	4	3	20	Medium	Positive	3	3	4	4	33	High	Modify	See Table 9
Secondary economic opportunities	Positive	2	3	4	3	20	Medium	Positive	3	3	4	4	33	High	Modify	See Table 9
Loss of livelihoods	Negative	3	2	5	4	33	High	Negative	2	2	4	3	18	Medium	Control	See Table 10

Safety impacts	Negative	2	3	4	3	20	Medium	Negative	1	3	4	2	9	Low	Control	See Table 11
Roads and transport	Negative	3	3	4	3	30	High	Negative	2	3	4	2	18	Medium	Remedy	See Table 12

Table 15: Social Impact Management Plan

SOCIAL IMPACT MANAGEMENT PLAN				
Phase	**Management action**	**Timeframe for implementation**	**Responsible party for implementation (frequency)**	**Responsible party for monitor/audit/review (frequency)**
Planning and Design Phase	Develop social impact management plan	As soon as project enters public domain	Applicant	CRM *Internal once appointed* Social expert *External but not legally required*
	Appoint appropriately qualified community relations manager (CRM) to deal with social aspects of the project throughout the life of the project	Before consultation with stakeholders start	Applicant Appointment for the life of the project	Not required apart from usual HR processes
	Develop community relations strategy	Before consultation with stakeholders start	Applicant Continued for the life of project	CRM *Internal* *No external review required*
	Develop protocols and grievance mechanism	In consultation with stakeholders	Applicant Continued for the life of project	CRM *Internal* *No external review required*
Construction Phase	Monitoring of social mitigation and management measures	Throughout construction	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
	Implementation of community relations strategy	Throughout construction	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
	Implement protocols (can be adapted as needs and social environment change) and grievance mechanism.	Throughout construction	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
Operation Phase	Monitoring of social mitigation and management measures	Throughout operation	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
	Implementation of community relations strategy	Throughout operation	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*

	Implement protocols and grievance mechanism policy.	Throughout operation	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
Decommissioning, Closure and Rehabilitation Phase	Implement protocols and grievance mechanism	Throughout decommissioning until all rehabilitation activities have ceased	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
	Continue community relations strategy until all activities on site cease and rehabilitation is completed	Throughout decommissioning until all rehabilitation activities have ceased	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*
	Implement social mitigation for closure	Throughout decommissioning	Applicant (CRM) Continued for the life of project	Management *Once a year or as required*

6 Stakeholder Engagement Plan

Social impacts already start in the planning phase of a project and as such it is imperative to start with stakeholder engagement as early in the process as possible. A stakeholder engagement plan will assist Transnet to outline their approach towards communicating in the most efficient way possible with stakeholders throughout the life of the project. Such a plan cannot be considered a once-off activity and should be updated on a yearly basis to ensure that it stays relevant and to capture new information. Stakeholders must provide input in the Stakeholder Engagement Plan.

The Transnet Stakeholder Engagement Plan should have the following objectives:

- To identify and assess the processes and/or mechanisms that will improve the communication between local communities, the wider community and Transnet.
- To improve relations between Transnet staff and the people living in the local communities.
- To provide a guideline for the dissemination of information crucial to the local communities in a timely, respectful and efficient manner.
- To provide a format for the timely recollection of information from the local communities in such a way that the communities are included in the decision-making process.

The Stakeholder Engagement Plan should be compiled in line with International Finance Corporation (IFC) Guidelines and should consist of the following components:

- Stakeholder Identification and Analysis – time should be invested in identifying and prioritising stakeholders and assessing their interests and concerns.

- Information Disclosure – information must be communicated to stakeholders early in the decision-making process in ways that are meaningful and accessible, and this communication should be continued throughout the life of the project.

- Stakeholder Consultation – each consultation process should be planned out, consultation should be inclusive, the process should be documented, and follow-up should be communicated.

- Negotiation and Partnerships – add value to mitigation or project benefits by forming strategic partnerships and for controversial and complex issues, enter into good faith negotiations that satisfy the interest of all parties.

- Grievance Management – accessible and responsive means for stakeholders to raise concerns and grievances about the project must be established throughout the life of the project.

- Stakeholder Involvement in Project Monitoring – directly affected stakeholders must be involved in monitoring project impacts, mitigation and benefits. External monitors must be involved where they can enhance transparency and credibility.

- Reporting to Stakeholders – report back to stakeholders on environmental, social and economic performance, both those consulted and those with more general interests in the project and parent company.

- Management Functions – sufficient capacity within the company must be built and maintained to manage processes of stakeholder engagement, track commitments and report on progress.

It is of critical importance that stakeholder engagement takes place in each phase of the project cycle and it must be noted that the approach will differ according to each phase. The stakeholder analysis done in Section 4 of this report must inform the stakeholder engagement strategy.

7 Proposed Grievance Mechanism

In accordance with international good practice Transnet should establish a specific mechanism for dealing with grievances. A grievance is a complaint or concern raised by an individual or organisation that judges that they have been adversely affected by the project during any stage of its development. Grievances may take the form of specific complaints for actual damages or injury, general concerns about project activities, incidents and impacts, or perceived impacts. The IFC standards require Grievance Mechanisms to provide a structured way of receiving and resolving grievances. Complaints should be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities and is at no cost and without retribution. The mechanism should be appropriate to the scale of impacts and risks presented by a project and beneficial for both the company and stakeholders. The mechanism must not impede access to other judicial or administrative remedies.

The grievance mechanism should be based on the following principles:

- Transparency and fairness;
- Accessibility and cultural appropriateness;
- Openness and communication regularity;
- Written records;
- Dialogue and site visits; and
- Timely resolution.

Based on the principles described above, the grievance mechanism process involves four stages:

- Receiving and recording the grievance;

- Acknowledgement and registration;
- Site inspection and investigation; and
- Response.

The grievance mechanism must be developed with input from the local communities.

8 Need and desirability of the project from a social perspective

The Department of Environmental Affairs released a guidance document in 2017 (DEA, 2017) that deals with the Need and Desirability in terms of the EIA regulations. This document presents certain questions to engage with to determine the need and desirability of a proposed project. The SIA deals with the need and desirability from a social perspective throughout the document, firstly by describing the socio-economic baseline environment and secondly through assessing impacts and suggesting mitigation measures.

Table 16: Need and desirability of project from social perspective

Question	Response
2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?: 2.1.1. The IDP and any other strategic plans, frameworks of policies applicable to the area, 2.1.2. Spatial priorities and desired spatial patterns, 2.1.3. Spatial characteristics, and 2.1.4. Municipal Economic Development Strategy ("LED Strategy").	Addressed in Section 3 of the report The project is a SIP1 identified by the PICC and main infrastructure requirement along the Waterberg Railway Corridor. The Lephalale IDP recognises the Transnet Railway Yard Project Phase 1 and 2 which is to increase rail capacity.
2.2. Considering the socio-economic context, what will the socio-economic impacts be of the development, and specifically also on the socio-economic objectives of the area? 2.2.1. Will the development complement the local socio-economic initiatives, or skills development programs?	Addressed in Section 3 and Section 5 of the report
2.3. How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?	The proposed development is in a rural area and the closest communities are in Steenbokpan and Lephalale. There are farmers and farm workers in closer proximity. Recommendations made in Section 5 of the report refers to this aspect.
2.4. Will the development result in equitable (intra-	The life of the project is not known. There is a possibility

and inter-generational) impact distribution, in the short- and long-term? Will the impact be socially and economically sustainable in the short- and long-term?	that the project could be expanded in future. The project will have a positive economic impact on the society in general in the long term. It will have a negative impact on the directly affected landowners. Whilst the negative economic impact on the landowners can be mitigated to an extent, the impact on the sense and spirit of place will be permanent. The aspirations of future generations related to the directly affected landowners are also impacted on negatively.
2.5. In terms of location, describe how the placement of the proposed development will:	
2.5.1. result in the creation of residential and employment opportunities in close proximity to or integrated with each other,	2.5.1. The project will create direct employment opportunities on site and secondary opportunities in the closest towns. There will be some long-term employment opportunities.
2.5.2. reduce the need for transport of people and goods,	2.5.2. Given that the site is far from town, the project will not reduce the need for transport of people and goods.
2.5.3. result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport),	2.5.3. Given the rural nature of the site there will be no impact on public transport.
2.5.4. compliment other uses in the area,	2.5.4. The project is needed to allow other industrial uses in the area to reach its full potential. It impacts on the current land use activities directly adjacent to site.
2.5.5. be in line with the planning for the area,	2.5.5. See question 2.1
2.5.6. for urban related development, make use of under-utilised land available with the urban edge,	2.5.6. N/A
2.5.7. optimise the use of existing resources and infrastructure,	2.5.7. It will expand existing infrastructure
2.5.8. opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for	2.5.8. N/A

the settlement that reflects the spatial reconstruction priorities of the settlement),	
2.5.9. discourage "urban sprawl" and contribute to compaction/densification,	2.5.9. N/A
2.5.10. contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,	2.5.10. N/A
2.5.11. encourage environmentally sustainable land development practices and processes,	2.5.11. The development will allow existing infrastructure to expand, and will use less land than would be required for a green-fields site
2.5.12. take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.),	2.5.12. The site for the proposed development has been chosen due to fact that there is existing infrastructure that can be expanded. It also offers easy access to other industries e.g. Resgen's Boikarabelo railway
2.5.13. the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential),	2.5.13. The investment will bring significant economic opportunities to the area, and will benefit existing and new industrial role players, with a knock-on positive effect on the economy of the country.
2.5.14. impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and	2.5.14. See Section 5.2.2.2
2.5.15. in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?	2.5.15.N/A.
2.6. How were a risk-averse and cautious approach applied in terms of socio-economic impacts?:	

2.6.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?	2.6.1. See Section 3.2.
2.6.2. What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge?	2.6.2. See Sections 5.2.1.5, 5.2.2.3, 5.2.2.4 and 5.2.2.5 where these aspects are discussed and assessed.
2.6.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	2.6.3. The information used in the SIA is based on the official data received from the municipalities and StatsSA. Given that municipalities are subject to public consultation processes, the assumption is made that the data is correct. A conservative approach was taken to the identification of impacts in the scoping phase. In the impact assessment phase of the project the impacts presented in the scoping reports were triangulated through a participation process to ensure that the assumptions were correct, and to close any gaps in the data. Recommendations about consulting vulnerable parties such as the Steenbokpan community were made to the PP team, and a special meeting was conducted. Given the nature of the project, no critical social resources should be affected, and once commissioned, there is a relatively low risk for social disruption. Communities were consulted about the social mitigation measures during the impact assessment phase to ensure that the measures suggested are acceptable to the communities affected by the project.
2.7. How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following:	

2.7.1. Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts? 2.7.2. Positive impacts. What measures were taken to enhance positive impacts?	2.7.1. See Sections 5.2.1.5, 5.2.2.5 2.7.2. See Sections 5.2.2.3
2.8. Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)?	It is not anticipated that the social impacts resulting from the proposed project will have significant ecological impacts.
2.9. What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?	The information provided in the SIA were fed into the other specialist studies and used to ensure that the best practical environmental option was chosen, whilst the social aspects were also considered.
2.10. What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice, do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?	Given the proximity of the project from communities, the adverse environmental impacts do not have social or environmental justice implications.
2.11. What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?	The environmental resources affected by the proposed development where not used by local communities.
2.12. What measures were taken to ensure that the responsibility for the environmental health and	Environmental health and safety are legal requirements and will also be written into the project specifications. Also see

safety consequences of the development has been addressed throughout the development's life cycle?	Section 5.2.2.5
2.13. What measures were taken to: 2.13.1. ensure the participation of all interested and affected parties, 2.13.2. provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, 2.13.3. ensure participation by vulnerable and disadvantaged persons, 2.13.4. promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means, 2.13.5. ensure openness and transparency, and access to information in terms of the process, 2.13.6. ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge, and 2.13.7. ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were be promoted?	See public participation section in Naledzi EIA report. The SIA did additional consultation to the EIA public consultation. The one-on-one interviews ensured that there was time to explain the project in a non-threatening environment. People were interviewed in the language of their choice. Through the process vulnerable groups were identified, and additional measures have been developed to make sure that they can participate effectively. Woman and youth were specifically included in the consultation to ensure that their voices are heard.
2.14. Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?	The area has been exposed to boom-bust development, and it is anticipated that there will be significant development in the area in the next decades, depending on economic conditions. The project will create some employment opportunities, including unskilled jobs. The area has high unemployment rates. The project will facilitate movement in other industries, and can assist with stimulating the local economy, which will result in much needed employment opportunities
2.15. What measures have been taken to ensure that current and/or future workers will be informed of	Will form part of the Transnet operational procedures in line with South African legislation

work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?	
2.16. Describe how the development will impact on job creation in terms of, amongst other aspects: 2.16.1. the number of temporary versus permanent jobs that will be created, 2.16.2. whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area), 2.16.3. the distance from where labourers will have to travel, 2.16.4. the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits), and 2.16.5. the opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).	See Section 5.2.2.3.
2.17. What measures were taken to ensure: 2.17.1. that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and 2.17.2. that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?	No specific intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment took place as a result of this specific project. No conflicts of interests have arisen as a result of this project.
2.18. What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest and that the environment will be protected as the people's common heritage?	Refer to the Naledzi EIA report
2.19. Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	The mitigation measures are seen as realistic and the implementation of the SIMP (See Table 13) will ensure that the social impacts will be managed.
2.20. What measures were taken to ensure that he	The applicant is responsible for implementing the

costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?	Environmental Management Programme.
2.21. Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?	All the specialists identified sensitive areas after the specialist studies were completed. This assisted with selecting the best practicable environmental option.
2.22. Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	See Section 5.2.1 of the report

9 Conclusions and recommendations

The proposed Transnet Lephalale Railway Yard will be constructed in a rural area, away from communities. It is not expected that the project will cause an influx of people into the area. It will create a significant number of jobs in an area where it is needed. In the broader economic context of South Africa, the project will have a positive impact and also have the potential to unlock other industrial development. On a site level, the project will impact negatively on the directly affected landowners and some of their livelihood activities. Given this situation, the following recommendations are made:

- Transnet must appoint a community relations manager that is trusted by the community and have the necessary skills and education before construction commences;
- Transnet must develop a community-friendly external grievance mechanism in conjunction with communities;
- Transnet must develop a community relations strategy to plan for and guide its involvement with the community. The strategy should include feedback mechanisms about aspects of concern to the community;
- Transnet must share the skills that will be required with the Lephalale Development Forum as soon as possible to allow the LDF to prepare for the construction and operation phase;
- Transnet should establish a labour desk and put measures in place to ensure the most effective local employment strategy;
- Transnet must ensure social requirements as specified in the mitigation measures are included in their contracts with sub-contractors;
- Transnet must ensure traffic impacts are minimised in accordance with the recommendations made in the traffic impact assessment;

- Transnet must engage with farmers directly about aspects that may affect their livelihoods and compensate them in a fair manner if any assets are lost or compromised.

It is recommended that the list of recommendations should be included in the environmental authorisation. Given the positive impact on national level, it is recommended that this project is given environmental permission to proceed.

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