



# Appendix M

Social study

# Social Impact Assessment

## Report

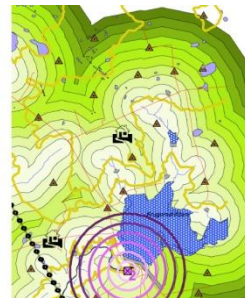
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Exxaro Leeuwplan Coal

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## 1 INTRODUCTION

Exxaro Leeuwpán Coal needs to undertake the consolidation of the current Environmental Management Plans (EMPs) and EMP Addendums within the surface areas and mining authorisation areas of Leeuwpán Coal into one consolidated Environmental Impact Assessment (EIA) and EMP document according to the Mineral and Petroleum Resource Development Act (MPRDA), 2002 (Act No. 28 of 2002). Further to this process, Leeuwpán Coal requires the authorisation of various listed activities under the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), and possibly the National Water Act (NWA), 1998 (Act No. 36 of 1998).

## 2 PROJECT BACKGROUND AND LOCATION

Exxaro Leeuwpán Coal is situated approximately 8km east of the town of Delmas. The area falls within the Victor Khanye Local Municipality (LM), which is part of the Nkangala District Municipality (DM). Exxaro Leeuwpán Coal covers an area of approximately 2 600 ha within the Mpumalanga Province of South Africa.

Exxaro Leeuwpán Coal started in 1994 with open cast mining on the farm Witklip. Mining in the Witklip blocks ceased during 2005. The remaining reserves being mined are Blocks OWM, OG, OH, OJ and the planned new expansions OL and OI. All the seams of the remaining reserves are mined by means of opencast mining using the drilling, blasting, loading and hauling with truck and shovel, excavator and fleets methodologies. Leeuwpán is planning to start the new block OL and OI during 2013.

Originally the block OI expansion was planned and encapsulated in the EMPR as underground operations. The EMPR for the area was then also approved as such. Subsequently, through further exploration and mine simulation the decision was taken to convert the block to opencast mining method. The approved EMPR as stands needs to be reviewed to convert it to an EMPR for open cast mining.

Figure 2-1      Locality map - Exxaro Leeuwpán

### 3    SCOPE OF WORK

The project will be undertaken in phases as per the prescribed environmental authorization application processes in terms of the NEMA and the MPRDA. The results of the investigation will be used to assess the potential impacts of the proposed mining operation and as supporting documentation to the applications for environmental authorization in terms of NEMA and MPRDA.

Specialist input into the scoping phase which is required in the form of a baseline environmental description with respect to the social and economic environment of the project area is included here. The scoping phase input includes:

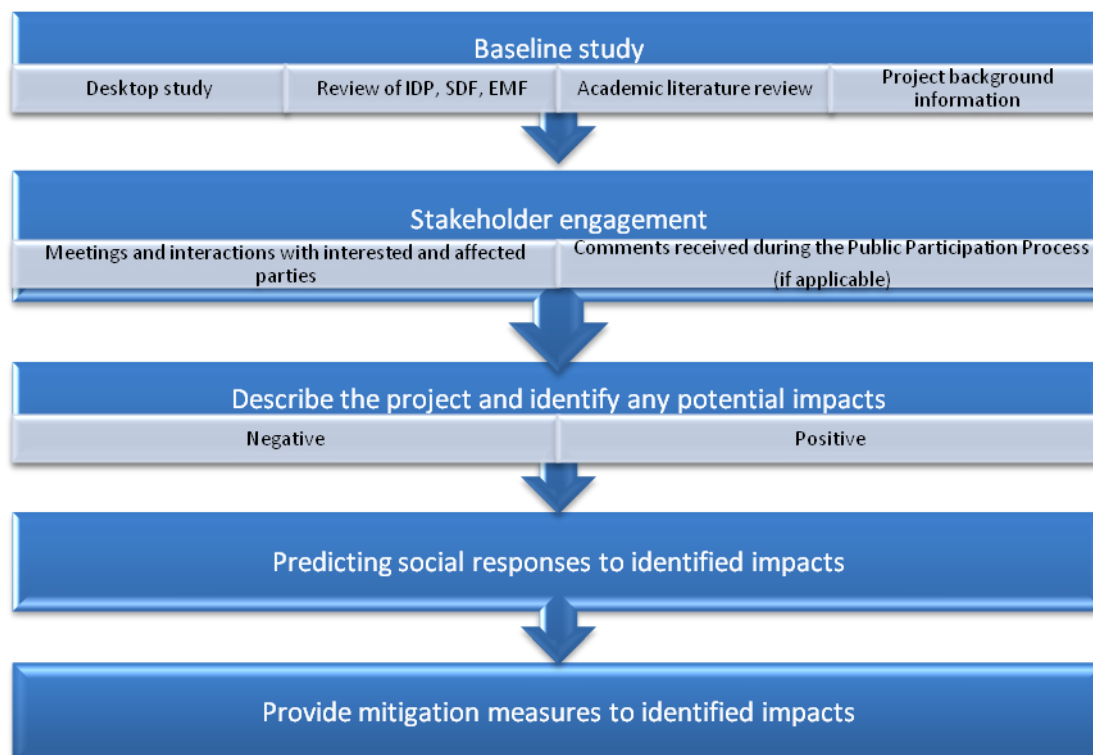
- A short baseline description;
- Potential impacts based on available data;
- Plan of study for the EIA/EMP report; and
- List of References of literature sources used to compile the baseline description.

## 4 METHODOLOGY

### 4.1 Approach and methodology

When conducting a SIA, it is crucial to follow a holistic approach that covers a range of essential issues.

The methodology that is suggested for this study is indicated in the process diagram and discussed below.

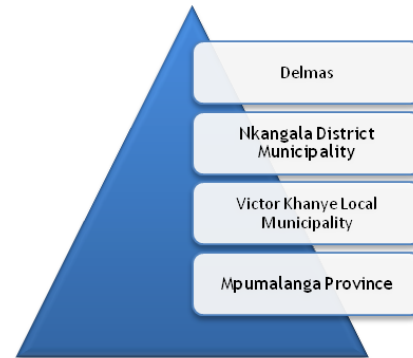


The social baseline study made use of existing data, (i.e. published reports, including Integrated Development Plans (IDP), statistical data and information obtained from SIA literature as a starting point (Refer to Section 8 for a list of references). Further methods of information gathering, i.e. interviews with key stakeholders and comments received during the public participation process will be used during the Impact Assessment Phase to supplement this data.

## 5 BASELINE DESCRIPTION OF THE SOCIAL ENVIRONMENT

### 5.1 Introduction and approach

When conceptualising a proposal to expand a coal mine, the anticipated social and environmental impacts are generally broad and not limited to one specific area or town. The proposed project falls within the Mpumalanga Province, Victor Khanye LM, which is part of the Nkangala DM.



In order to assess the potential impact of the proposed project, it is important to consider the particular Province, DM, LM as well as the nearby towns in a holistic way.

The baseline study will therefore include a brief overview of the socio-economic factors in the Mpumalanga Province and the Victor Khanye LM with a thorough investigation into Delmas.

### 5.2 Regional context

Mpumalanga literally means "the place where the sun rises". Mpumalanga lies in eastern South Africa, north of KwaZulu-Natal and bordering Swaziland and Mozambique. It constitutes 6.5% of South Africa's land area. In the north it borders on Limpopo, to the west Gauteng, to the southwest the Free State and to the south KwaZulu-Natal. The capital is Nelspruit (recently renamed to Mbombela) (<http://en.wikipedia.org>).

Mpumalanga Province is divided into three municipal districts, which are further subdivided into 17 local municipalities:

#### District Municipalities

- Gert Sibande DM;
- **Nkangala DM**; and
- Ehlanzeni DM.



The Nkangala DM consists of the following LMs:

#### Local Municipalities

- Emalahleni LM;
- Thembisile Hani LM;
- Dr JS Moroka LM;
- Steve Tshwete LM;
- **Victor Khanye LM;**
- Emakhazeni LM; and
- Mdala Nature Reserve.

Victor Khanye LM (formerly Delmas Local Municipality) is located in the Western Highveld of the Nkangala DM. The Ekurhuleni MM, in the Gauteng Province, borders the municipality to the west. It is bordered to the north by the Kungwini LM, to the south by the Govan Mbeki and Lesedi LMs (<http://www.delmasmunic.co.za/>).

The Victor Khanye LM's boasts a growing economy, with the trade sector, agriculture and mining forming the cornerstones of the economy. Mining activities within the LM are currently concentrated on coal and silica. Agriculture is, however, the main source of employment in the area and is growing constantly.

The Victor Khanye LM consist the following main places, which are listed below:

#### Victor Khanye LM

- **Delmas;**
- Botleng;
- Eloff; and
- Sundra.

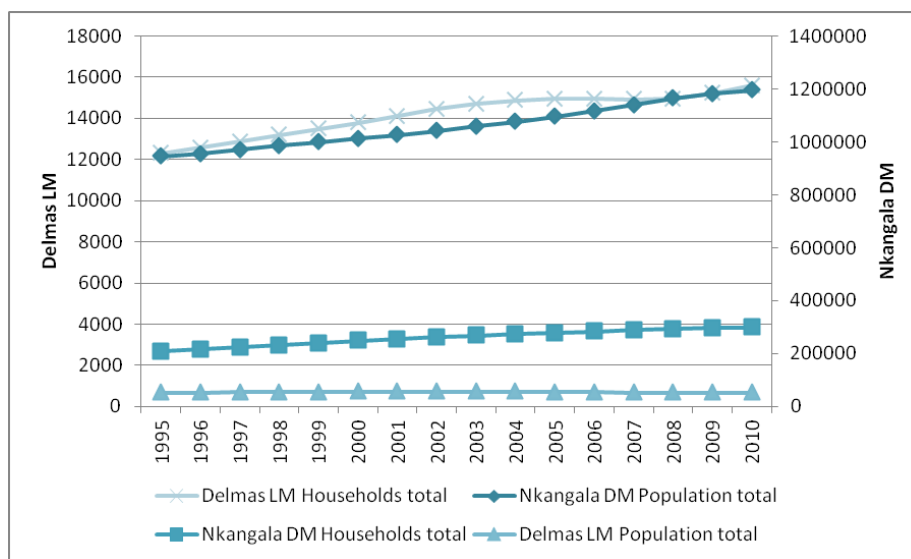
Delmas was laid out in 1907 on the farm Witklip. The farm was owned by a Frenchman Frank Campbell Dumat, who decided to call the town "de le mas" (of the small farm) after his grandfather's farm in France. The town is located some 19 km north-east of Springs and 73 km south-east of Pretoria (<http://en.wikipedia.org>).

### 5.3 Local context

#### 5.3.1 Demographic profile

##### Population and household profile

According to Figure 5-1, the population size (persons) for the Victor Khanye LM increased only slightly between the 1995 to 2010 time period, growing by 0.23% since 1995. Households have however increased at the same rate as that of the Nkangala DM over the specified time period, growing by 21.16% and 20.91% respectively.



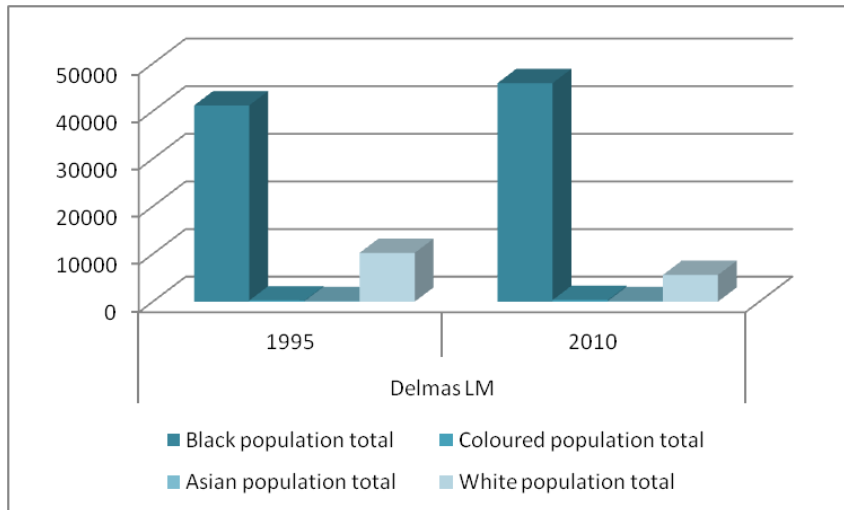
Source: Quantec Research (Pty) Ltd

Figure 5-1 Population and household size (1995 - 2010)

##### Population group

Figure 5-2 indicates that the Victor Khanye LM population in 2010 were composed of mostly Black African persons (69.88%) followed by 8.53% White persons.

The number of Black African person has increased by 10.17% since 1995, whereas the number of White persons has decreased by 82.73% since 1995. The Nkangala DM population in 2010 consisted of mostly (93.78%) Black African persons. The number of White persons living within the DM has decreased by 44.46% since 1995 with the Black and Asian populations growing strongly.

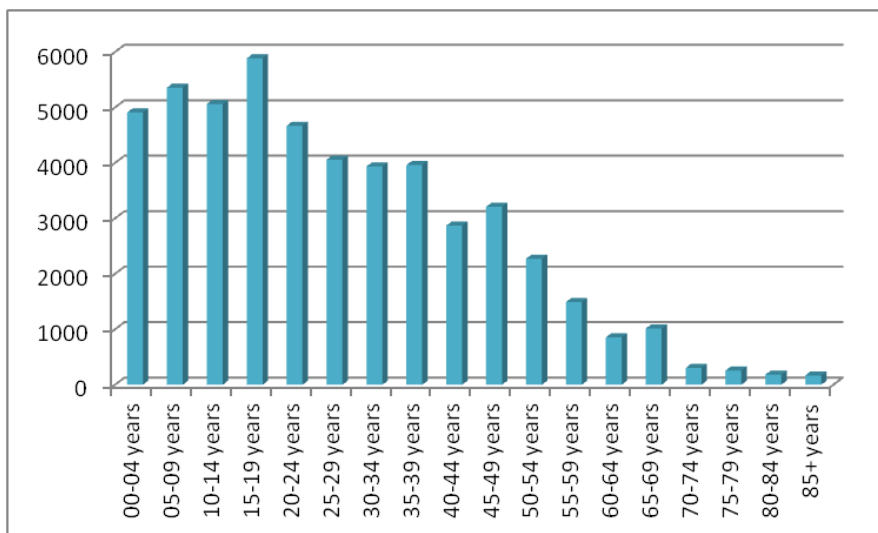


Source: Quantec Research (Pty) Ltd

Figure 5-2 Population group (1995 - 2010)

Age

It is important to assess the age distribution of persons in order to determine both the current and future needs of an area. Age is an important indicator as it relates to education, skills and dependency. A young population may require an improved educational system, whereas an older society may need an accented focus on healthcare. The Victor Khanye LM population has a large adolescent population with 26.07% of the population being younger than 15 years of age (Figure 5-3), indicating that they do not form part of the Economically Active Population (EAP) of the area.



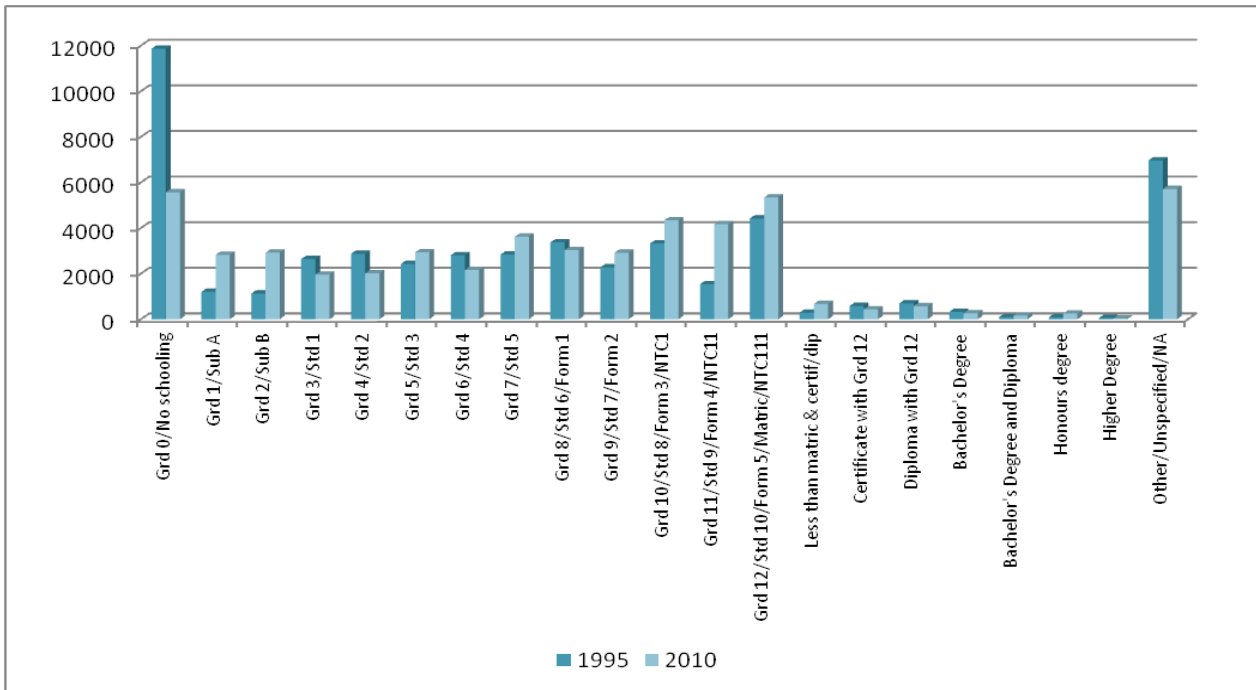
Source: Quantec Research (Pty) Ltd

Figure 5-3 Age (2007)

Approximately two thirds (65.80%) of the Victor Khanye LM population falls among the EAP (16 to 64 year) age band. These persons normally have more work experience and usually fall within the higher skilled and higher salary bracket. One can clearly note that the population starts decreasing from the age of 19 years, leaving fewer economically active individuals. The elderly population (65 years and older) is very small (3.82%), which means that less burden is placed on the EAP to support persons that are no longer economically active.

**Education**

During 1995, the largest percentage (17.58%) of the Victor Khanye LM population has not obtained a Grade 0 or any other schooling, however, by 2010 this number had improved by 113.21%. The number of persons that have achieved a Grade 12 level of education improved by 17.33% in the same period.



Source: Quantec Research (Pty) Ltd

Figure 5-4 Education level (total 1995 - 2010)

5.3.2 Economic profile

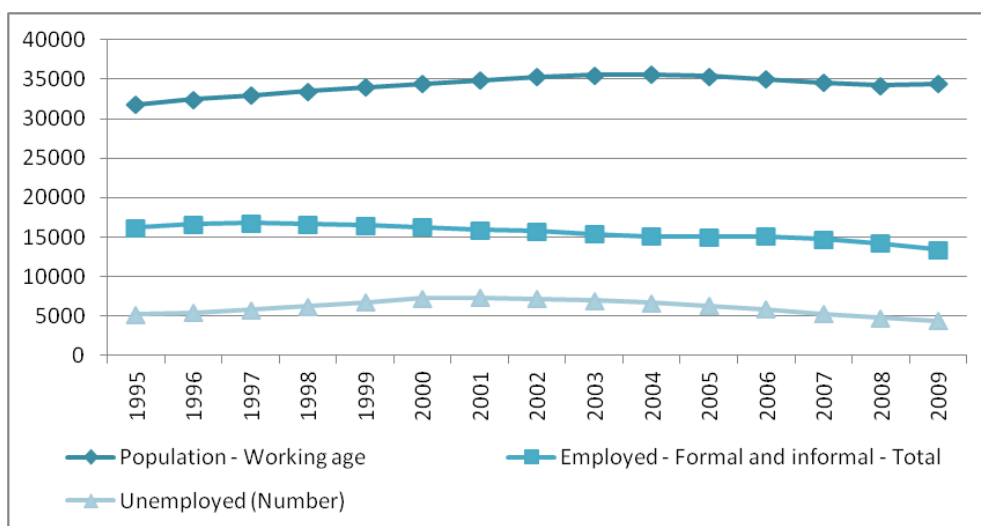
This section provides a delineation of the study area and a brief economic status quo pertaining to employment and labour profile.

Employment and labour profile

The employment status of the population has a variety of important implications. Economically active and employed persons can contribute to the overall welfare of a specific community by paying their taxes, looking after the youth and aged and by stimulating the economy. However, should a community have a large number of economically inactive and / or unemployed persons, the burden on the EAP of that community are amplified.

Source: Quantec Research (Pty) Ltd

Figure 5-5 illustrates that even though the working age population for the Victor Khanye LM has increased by 7.58% between 1995 and 2009, the number of employed persons has decreased by 20.53% in the same period. The unemployment rate has fortunately decreased by 17.04% since 1995, however, the labour force participation rate has decreased by 29.48%.

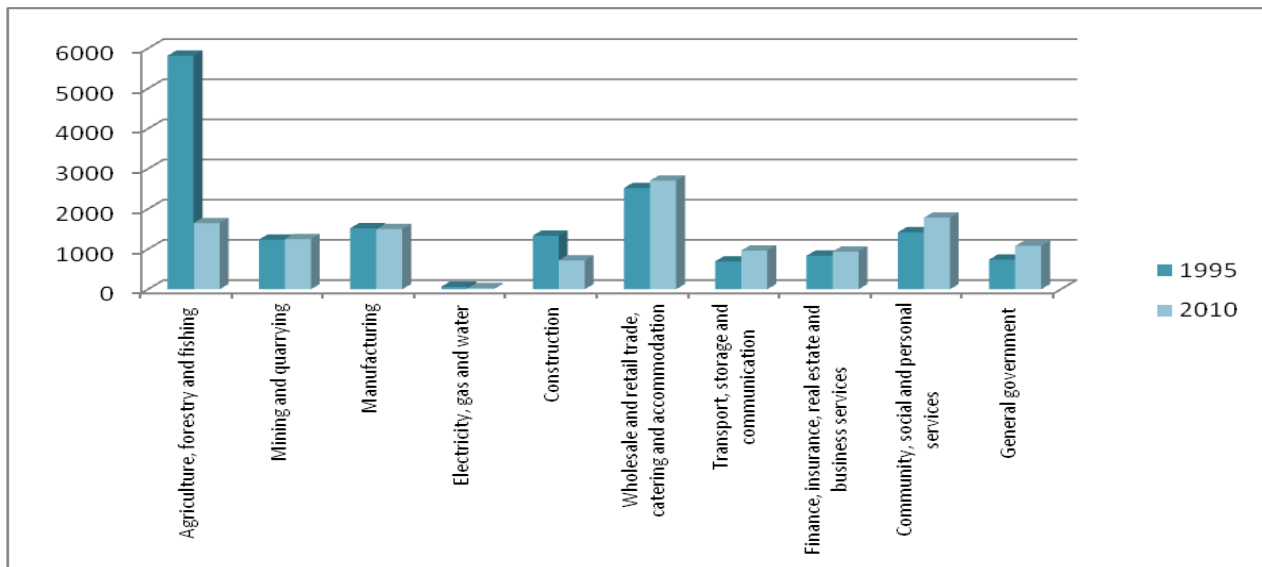


Source: Quantec Research (Pty) Ltd

Figure 5-5 Economic status (1995 - 2009)

Source: Quantec Research (Pty) Ltd

Figure 5-6 indicates that the wholesale and retail industry is currently creating the most employment opportunities within the Victor Khanye LM (21.45%). The agriculture, forestry and fishing industry has shown a significant decrease since 1995, marking a change of 252.97% for Victor Khanye LM (Error! Reference source not found.).



Source: Quantec Research (Pty) Ltd  
Figure 5-6 Industry (2010)

### 5.3.3 Services and infrastructure profile

Social service delivery centres on the provision of health, education and community development facilities and services. The concept of service delivery also comprises various elements such as affordability, quality, efficiency and access.

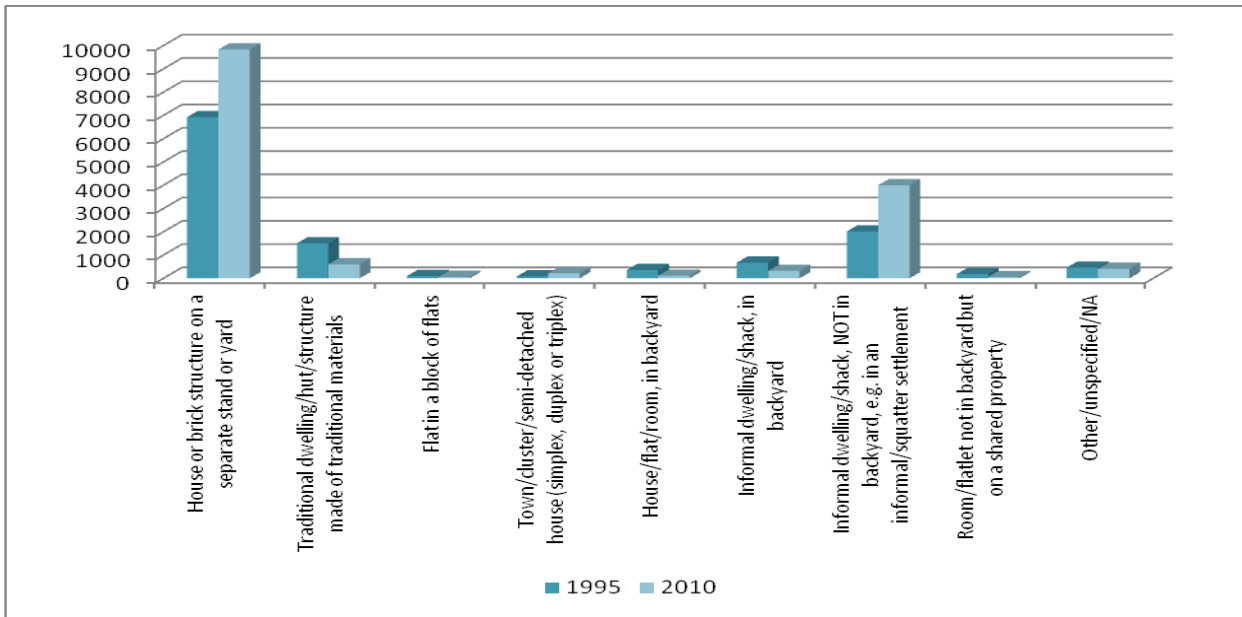
This indicator therefore examines the level of service provision in the study area. Services assessed include sanitation, water, housing and electrification. There are three priority services (water, sanitation and electricity) for the promotion of health, convenience and quality of life.

#### Housing

According to Figure 5-7, the Victor Khanye LM has been steadily formalising informal settlements within its municipal area. Persons residing within formal houses<sup>1</sup> have increased by 28.54% between 1995 and 2010. There has been a decrease of 61.97% in informal housing<sup>2</sup> within the Victor Khanye LM. Significant decreases in the number of 1) traditional dwelling/hut/structure made of traditional materials (150.42%), 2) house/flat/room, in backyard (223.42%) and 3) room/flatlet not in backyard but on a shared property (229.09%) has been noted within the Victor Khanye LM.

<sup>1</sup> Formal housing includes: 1) House or brick structure on a separate stand or yard, 2) Flat in a block of flats and 3) Town/cluster/semi-detached house (simplex, duplex or triplex).

<sup>2</sup> Informal housing includes: 1) Informal dwelling/shack, in backyard and 2) Informal dwelling/shack, NOT in backyard, e.g. in an informal/squatter settlement

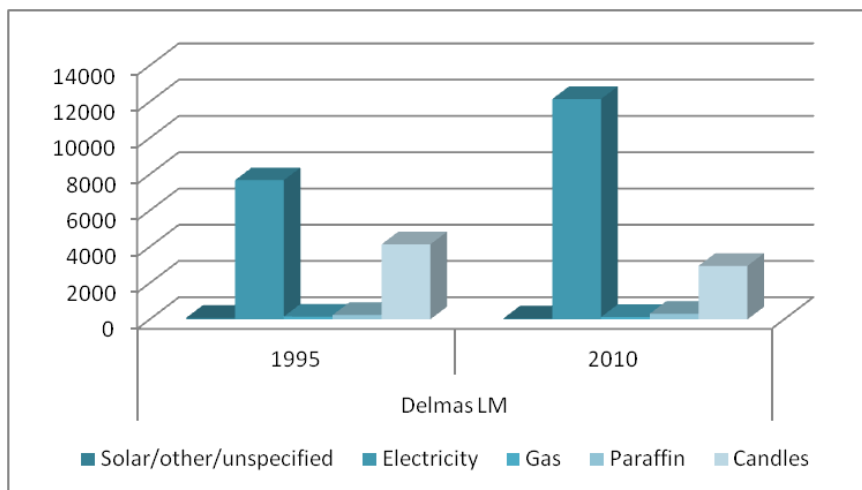


Source: Quantec Research (Pty) Ltd

Figure 5-7 Type of dwelling (1995 / 2010)

Energy use

Figure 5-8 indicates that the use of electricity for lighting has increased by 36.80% between 1995 and 2010 within the Victor Khanye LM. With the increase in electrification, all other sources for light generation have decreased, except for paraffin which has increased by 23.49%.

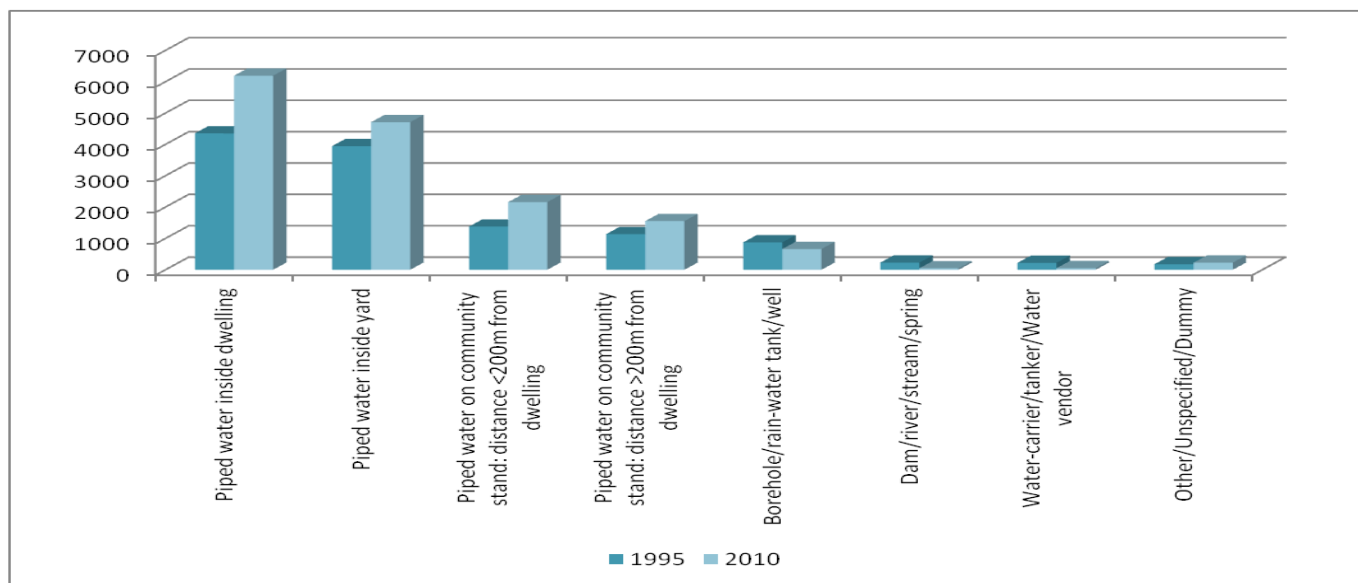


Source: Quantec Research (Pty) Ltd

Figure 5-8 Type of energy (1995 / 2010)

Water

Figure 5-9 illustrates that Victor Khanye LM has incrementally increased the level of water supply to households with a 46.02% improvement in piped water inside a dwelling or yard. The use of a water-carrier/tanker/water vendor within the Victor Khanye LM has decreased by 329.41% since 1995. The number of persons relying on a nearby dam/river/stream/spring for water has been reduced by 363.27% in the same period.



Source: Quantec Research (Pty) Ltd

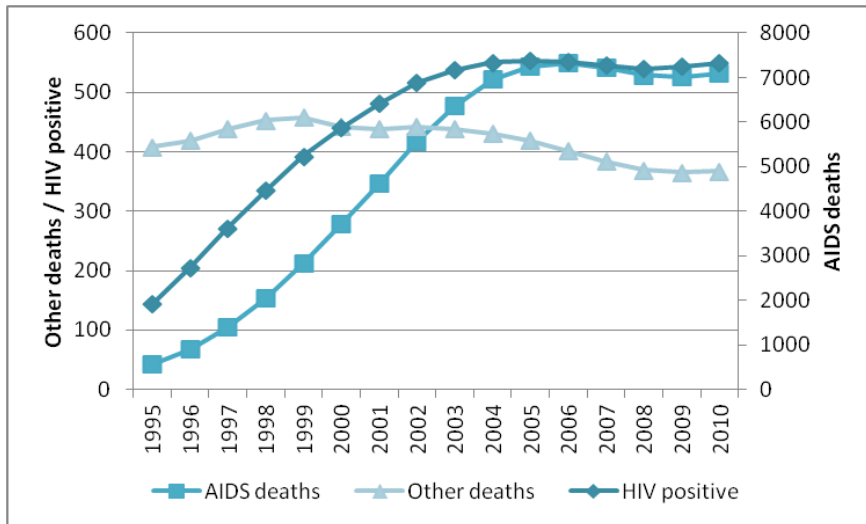
Figure 5-9 Type of water source (1995 / 2010)

Healthcare

HIV/AIDS in South Africa has increased rapidly over the past decade. The social and economic consequences of the disease are far reaching and affect every facet of life in South Africa. Despite South Africa creating a progressive and far-sighted policy and legislative environment for dealing with HIV/AIDS, the prevalence of HIV/AIDS continues to increase. This indicates that policies and laws have not been adequately implemented and have not impacted significantly on the ground.

According to Figure 5-10, the number of HIV positive persons living within the Victor Khanye LM in 2010 has increased by 73.72% since 1995. The number of HIV related deaths has increased dramatically by 92.11%, with the number of other deaths actually decreasing slightly with 11.17%. This indicates that HIV/AIDS has had a real impact on the Victor Khanye LM since 1995, even though this trend has slowed slightly from 2004.





Source: Quantec Research (Pty) Ltd

Figure 5-10 HIV/AIDS status (1995 - 2010)

## 6 PRELIMINARY IMPACT SPECIFICATION

Based on desktop research of the area as well as a site assessment of the surrounding area, a list of anticipated social change processes that the proposed project is likely to create is provided below:

<p><b>Demographic processes</b></p> <ul style="list-style-type: none"> <li>• Presence of temporary workers;</li> <li>• Resettlement; and</li> <li>• Displacement / dispossession.</li> </ul>	<p><b>Economic processes</b></p> <ul style="list-style-type: none"> <li>• No impacts are expected.</li> </ul>	<p><b>Geographic processes</b></p> <ul style="list-style-type: none"> <li>• Conversion and diversification of land use; and</li> <li>• Physical splintering.</li> </ul>
<p><b>Institutional and legal processes</b></p> <ul style="list-style-type: none"> <li>• No impacts are expected.</li> </ul>	<p><b>Emancipatory and empowerment processes</b></p> <ul style="list-style-type: none"> <li>• Capacity building.</li> </ul>	<p><b>Socio-cultural processes</b></p> <ul style="list-style-type: none"> <li>• No impacts are expected.</li> </ul>

It is important to clarify that the actual impacts experienced at a given project site will depend on a variety of factors, that range between the baseline conditions, the public participation process, engagement and capacity building that has taken place, the type of mining methods and minerals mined, the role of politics, most notably in local municipalities

and the other processes of social change either already under way (e.g. due to mining activities), or which may develop during the life of the mine.

## 7 PLAN OF STUDY FOR THE IMPACT ASSESSMENT PHASE

Specialist input into the Environmental Impact Assessment and Environmental Management Plan Phase will include the following:

- Reporting, which includes an assessment of the following:
  - Baseline conditions of the project area;
  - Potential impacts associated with the proposed project;
  - Assessment of the significance of the potential impacts. The impact assessment may require revision after the stakeholder feedback meeting to address concerns raised by Interested and Affect Parties (I&APs);
  - Recommended mitigation and management measures; and
  - Environmental Management/Action plan with associated timeframes where necessary.
- All aspects will take into cognizance the construction, operational, and decommissioning and closure phases.
- The report will follow the general structure as indicated below:
  - Introduction;
  - Methodology;
  - Baseline description;
  - Impact Assessment;
  - Management Plan; and
  - Conclusion.

The following categories will be used to assess the predicted impacts:

### Social Impact Categories

- 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;
- Gender relations;
- Sense of place.

The impacts will be examined and discussed according to the following four categories as indicated below:

#### Project Phase

- Originating prior to the construction phase;
- Expected to set in during the construction phase;
- Expected during the operational phase; and
- Expected during the decommissioning phase.

## 8 REFERENCES

Quantec Research (Pty) Ltd

<http://www.delmasmunic.co.za/>

[http://en.wikipedia.org/wiki/Mpumalanga\\_Province](http://en.wikipedia.org/wiki/Mpumalanga_Province)

[http://en.wikipedia.org/wiki/Nkangala\\_District\\_Municipality](http://en.wikipedia.org/wiki/Nkangala_District_Municipality)

[http://en.wikipedia.org/wiki/Delmas\\_Local\\_Municipality](http://en.wikipedia.org/wiki/Delmas_Local_Municipality)