

DE BEERS IN SOUTH AFRICA

The contribution of Venetia Mine to the communities of Musina and Blouberg







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ABBREVIATIONS & DEFINITIONS

Acronym Meaning

B-BBEE Broad-Based Black Economic Empowerment

BEE Black Economic Empowerment
CAGR Compound Annual Growth Rate

CONTOPS Inconvenience top-ups (an allowance accrued

by employees for the inconvenience of out of

the ordinary working shifts)

CPI Consumer Price Index

CSI Corporate Social Investment
CSO Central Selling Organisation
CSR Corporate Social Responsibility

DBCM De Beers Consolidated Mines Limited

DBE Department of Basic Education

ED Enterprise Development

EPWP Expanded Public Works Programme
FET Further Education and Training

HDSA Historically Disadvantaged South African

IDP Integrated Development Plan

LAC Local Area Committee

LED Local Economic Development

LGDS Limpopo Growth and Development Strategy

LM Local Municipality/Municipalities

LoM Life of Mine

NPO Non-Profit Organisation

NUM National Union of Mineworkers

OpCo Operations Committee

RDP Reconstruction and Development Programme

SANParks South African National Parks

SEIA Socio-Economic Impact Assessment

SLP Social and Labour Plan

SMME Small, Medium and Micro Enterprises

SME Small and Medium Enterprises

VLNR Venetia Limpopo Nature Reserve

VMFund Venetia Mine Fund

VUP Venetia Underground Project

SUMMARY OF CONTRIBUTION TO MUSINA AND BLOUBERG

HISTORY OF THE VENETIA MINE



De Beers has been working in Limpopo since 1969. 1992

Venetia mine opened in 1992.

The mine produces 4 million carats of diamonds a year, which accounts for 75% of De Beers' diamond production in South Africa.



946

1969

The life of Venetia Mine has been extended until 2046 with a further investment of US\$ 2billion, the largest ever mining investment in South Africa.

EMPLOYMENT



In 2015, there were **3795 workers** (De Beers' employees plus contractors) at the mine, of which **2606** (**68%**) were local residents.

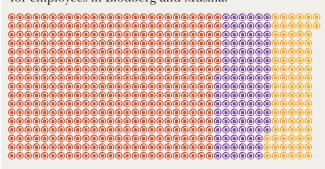
Of De Beers' employees at the mine, 86% were local residents.



HOUSING

De Beers has built 522 homes in Musina town. It rents another 109 properties.

De Beers has facilitated home ownership schemes for employees in Blouberg and Musina.



432
De Beers-owned houses built

109
De Beers-rented accommodation

90 Homes built for VUP

INCOME GENERATION

From 1992 to 2015 it is estimated that Venetia Mine paid wages into the local economy of between **R3,4 billion** and **R6 billion**. Over the last decade, the average wages of local resident **increased by 11% a year**. (Average inflation was 6%)

In 2015, the average wage and benefits package for a B-Band local resident was R238,782 a year.

This is **THREE** times the annual average household income in Musina, and **SIX** times the average household income in Blouberg.



















R238 782

Annual average total income for B-Band employee

INFRASTRUCTURE

De Beers has invested in local infrastructure including construction and maintenance of 17 primary and secondary schools, sports facilities, electrification plants and distribution networks; water infrastructure, and roads including the R521 that stretched between Alldays and Musina.



De Beers has connected **five villages** and **337 households in Blouberg**, and **600 households in Musina** to the national grid.

SCHOOL SCHOOL 2

HEALTH AND EDUCATION

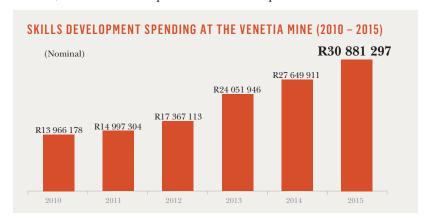
From 2006 to 2015 De Beers invested R144 million in education, health and community initiatives in Blouberg and Musina.

Education projects have assisted approximately 3000 learners and funded 27 extra teachers.



SKILLS DEVELOPMENT

In 2015, **R31 million** was spent on skills development at the mine.



More than 4,000 beneficiaries received training in 2015

80% of these training beneficiaries were local residents.



LOCAL ECONOMIC PROCUREMENT

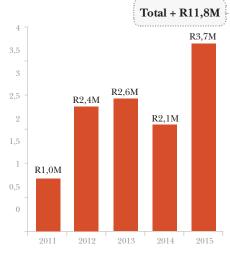
85% of mine procurement in 2015 was from BEE entities, compared to 19% in 2004.

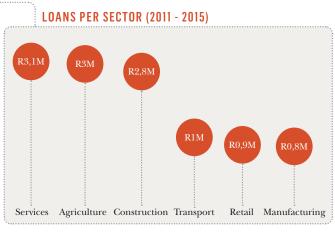
In 2015, the mine procured **R137 million** (3.39% of total procurement) locally.

Between 2011 and 2015, the De Beers Zimele hub supported 47 small businesses in Musina and Blouberg with a total investment of R11,8 million in debt financing.

These companies supported 648 jobs in Limpopo.

VENETIA MINE ZIMELE FUND LOAN VALUE





47 small businesses = 648 jobs

LOCAL TAXES

From 2007 to 2015 the mine paid **R88 million** in municipal taxes.



1. WHAT THIS REPORT IS ABOUT

The De Beers Group of Companies was established in South Africa in 1888 during the Kimberley diamond rush.

Today De Beers is the world's largest diamond producer by value. De Beers has mining operations in South Africa, Canada, Botswana and Namibia. De Beers is active in the exploration, mining, sorting, valuing, selling, and marketing of diamonds.

The Venetia Mine (the mine) is situated in the Limpopo province in South Africa, about 88kms from the town of Musina, it is in the administrative area of Musina Local Municipality (Musina). The mine also draws workers from the nearby Blouberg Local Municipality (Blouberg). Musina and Blouberg are regarded as the mines' local communities.

De Beers wanted to understand the contribution Venetia Mine has made in Musina and Blouberg over the life of the mine, and asked economic consultants, Genesis Analytics, to research the following question:

"What socio-economic contribution did Venetia Mine make to the municipal areas of Musina and Blouberg from 1992 to 2015."

The research included a review of data provided by De Beers, historical information from the De Beers' archives, and 32 research interviews with De Beers' staff members.

2. USING THE RIGHT TERMS

The following terms are differentiated in the report:

WORKERS

This means all workers at Venetia Mine, whether they are employees of De Beers or contractors.

NON-RESIDENTS

This means employees of De Beers who do not reside on a long-term basis in Musina or Blouberg. Non-residents live further afield and commute to the mine – non-residents do not contribute as much to the local areas as residents. An example would be a mine supervisor who lives in Polokwane and drives to Venetia Mine every day.

EMPLOYEES

This means all workers at Venetia Mine who are employed by De Beers.

RESIDENTS ...

This means employees of De Beers who are resident on a permanent, long-term basis in either Musina or Blouberg. While residents may have secondary abodes further afield they reside in the local areas on a permanent basis, and thus contribute significantly to the local area. An example would be a mine engineer who originally hails from the Eastern Cape but now resides in Musina.

employees of De Beers who are resident in Musina or Blouberg and who are originally from the areas. These employees give their primary residence in Musina or Blouberg. An example is a mine worker from Alldays who was born in the area, and who has her primary residence in

Musina.

Most of the reporting in this document takes place at the level of residents.





3. DATA NOTE

Historical research is always dependent on the availability and quality of historical information.

Sometimes information is captured in a way that does not help the research. The impact the mine has had on local employees (those born and bred in Musina or Blouberg) is of great interest; yet most information is available only at the level of *residents* rather than locals. Residents make an important contribution as their permanent home is in Musina or Blouberg and they are active members of the local economies.

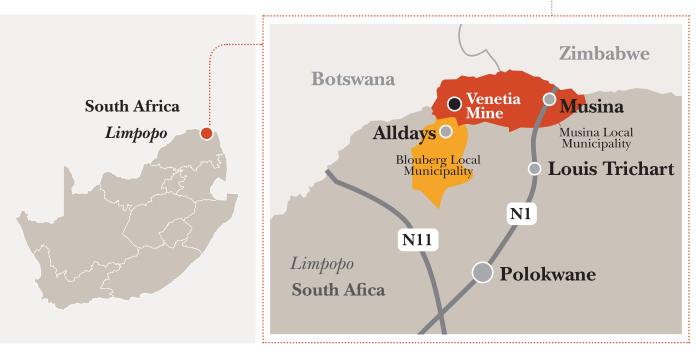
Secondly, some historical information was not available for the period prior to 2004. De Beers switched to a new finance and payroll system in 2004 and legacy data was not available. As such, much of the research deals with contribution from 2005 to 2015, going back to 1992 where it is possible.

4. ABOUT VENETIA MINE

The Venetia Mine is situated in the Limpopo province in South Africa. The mine, which covers an area of 2,680 hectares, is about 80km west of the town of Musina, which is 10km south of the Zimbabwean border.

The mines is 36km east of the small town of Alldays which is in the Blouberg Local Municipality. Most of the workers on the mine come from Musina and Blouberg.

FIGURE 1 | LOCATION OF THE VENETIA MINE



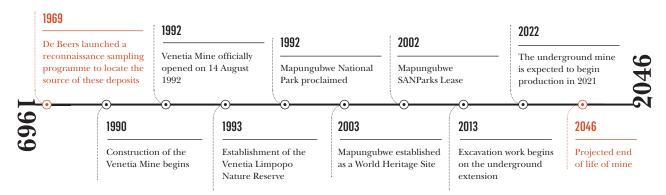
Diamond-bearing gravels were discovered close to the Limpopo River and 35km north east of the present mine as early as 1903. In 1969, De Beers launched a reconnaissance sampling programme to locate the source of these deposits. Viable kimberlite pipes were discovered in 1980 and construction of the mine began in 1990.

Venetia was officially opened on 14 August 1992 and reached full production in 1993.

Presently, Venetia is South Africa's largest diamond mine with an annual output of 4.3 million tons of ore – which yields 4 million carats of diamonds a year.

The mine accounts for 75% of De Beers' diamond production in South Africa.

FIGURE 2 | TIMELINE OF THE VENETIA MINE



Venetia is an open-pit mine. The ore body is mined by drilling, blasting, loading and hauling waste rock and kimberlite with conventional truck-and-shovel methods. Crushed ore is conveyed to a treatment plant, where the kimberlite is further crushed, washed and screened into different size fractions.

After drying, hand-sorting recovers the diamond stones, which are sent to the offices in Kimberley for classification based on combinations of size, shape, colour and quality.

The mine operates on a continual basis, 24 hours a day, seven days a week, 365 days a year. Employees work shifts for four days, followed by four days off.

Venetia draws water from the Limpopo River which is pumped 35km to reservoirs at the mine. Water is also held in a storage dam that supplements usage during the dry season. The mine uses approximately 6.1 million cubic meters of water a year, and a third of process water is recycled.

Venetia is located in an environmentally sensitive area and De Beers has spent about R17 million over the life of mine on environmental engineering projects. It established the 36,000 hectare Venetia Limpopo Nature Reserve adjacent to the mine and moved a large number of animals from the mining area to the reserve.

Open-pit mining will continue until 2021 and will be replaced by underground mining to reach deeper pipes.

Excavation work on the underground extension of the mine began in 2013, an investment of US\$ 2 billion - the largest ever mining investment in South Africa.

The first production from the underground project is scheduled for 2021, climbing to full production in 2025.

This underground project will extend the mine's life to 2046 and is expected to produce 96 million carats of diamonds over its extended 21 year life span.

5. WHAT IS CONTRIBUTION?

The purpose of this report is to describe the socio-economic contribution made by the Venetia Mine to the municipal areas of Musina and Blouberg.

WHAT DOES CONTRIBUTION MEAN?

The contribution of a company to surrounding communities can be described in any number of ways. Each way will use a different unit of measurement. For example, contribution to employment is measured in number of jobs created; contribution to income generation can be quantified in a rand value.

Conceptually, the parts of economic contribution are expressed in this equation:

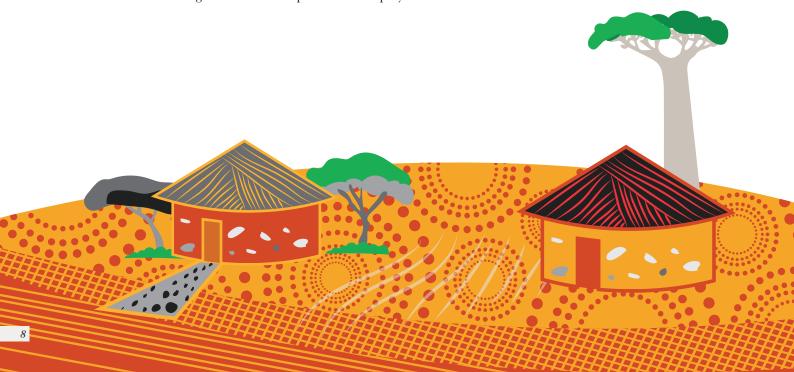
 $Total\ contribution = Measured\ contribution\ x\ (1 - Developmental\ context)$

where:

- Measured contribution is data collected from De Beers, and
- Developmental context is the level of socio-economic development in the area

In other words, contribution is relative to the environment in which the contribution is made. The contribution of a mine in Australia to job creation, a developed country where unemployment is low would be relatively low compared to an area like Musina and Blouberg where unemployment is endemic and there are few alternate jobs. Likewise, the communities surrounding a diamond mine in Canada, will enjoy relatively high levels of education. Social investment initiatives in education will have lower impact there than in an area without schools or teachers.

For this reason the report starts with an introduction to the developmental context in Musina and Blouberg. The context helps to either amplify or diminish total contribution.



6. ABOUT MUSINA AND BLOUBERG

6.1. WHEN THE MINE STARTED

According to the first feasibility study done of Venetia in the late 1980s, the area surrounding the present day mine was known as 'Region G'¹ and comprised of, "the Northern Transvaal from Warmbad in the south, Phalaborwa in the east, Thabazimbi in the west and Messina in the north."

The feasibility study records that in 1985 the total population of Region G was 2.75 million people with an estimated population growth rate of 4.3% recorded annually from 1970 to 1985. The region comprised 12% of South Africa's population. The rate of urbanisation in the area at the time was 8%. Only 36% of the labour market was employed or seeking employment in 1985.

Educational standards were extremely low. Only 17% of the population in the region had attained a Standard 6 (today's Grade 8 equivalent); the other 83% had less education than a Standard 6. The people in the area were young with about 60% of the population younger than 20.

The feasibility study indicates that the northern Bochum area in the then self-governing state of Lebowa² was of particular importance to Venetia as it represented the largest potential source of semiskilled and unskilled labour in the area. The area had a population of 100 000 in 1990.

Infrastructure in the area was minimal: there were no hard roads, no central water points in most villages, no waterborne sewerage disposal, and limited electrification. There were 36 schools, with just seven high schools offering matric certification. Most villages had a clinic, a liquor store, and a general dealer.

Alldays was the closest small town to the mine situated 36km away. Few people lived in the town (population was estimated to be less than 100). Alldays had one shop, two petrol filling stations, a small hotel, a small hospital and a primary school.

Due its proximity to the mine, De Beers had initially earmarked Alldays for housing the mine's employees. However, the Alldays authorities at the time were unwilling to accept the racially integrated community proposed by De Beers, as the company refused to segregate staff. The authorities in Musina town took a more enlightened view and agreed that a racially-mixed community could be established in Musina notwithstanding the Group Areas Act of the time, which forbade mixed race communities. Although Musina town was more than twice the distance as Alldays it was decided that the mine staff would be housed in Musina.

In 1990 Musina had a recorded population of only 12 000. The largest employer was the Messina Copper Mine which was moving towards closure at the end of the 1980s just as construction started on Venetia in 1990. This provided a new employer for the miners in the area.

¹ This predates the establishment of present day administrative areas but it is likely that parts of both Blouberg and Musina would have been in this area.

² This area now falls within the Blouberg Municipality.

6.2. MUSINA AND BLOUBERG TODAY

The large administrative area of Musina, which spans 757 829 ha, is in the northern part of the Limpopo Province and is bordered by Botswana and Zimbabwe. It is one of four local municipalities within the Vhembe District Municipality.

The town of Musina³ developed from 1905 around the copper mining industry. 'Musina', is Tshivenda for 'spoiler', because copper was considered a poor substitute for iron.

The local administrative area of Blouberg spans an area of 505 400 ha and also in the Limpopo province. It was established in 2000 after the union of the Bochum-My-Darling, Alldays-Buysdorp, and parts of Moletjie-Matlala Transitional Local Councils. Its jurisdiction was further expanded in 2006 after the formal incorporation of the Tolwe, Vivo, Maastroom, Swaartwater and Baltimore areas which were previously in the Makhado and Lephalale LMs.

DEMOGRAPHICS

According to the Community Survey by StatsSA, in 2015 Musina had a population of 94 462, which accounted for about 2% of the population of Limpopo. The population has nearly tripled since 1996 when it stood at just 33,061. According to local reports, the population has grown rapidly because of the growing trading and migrancy links with Zimbabwe in the north.

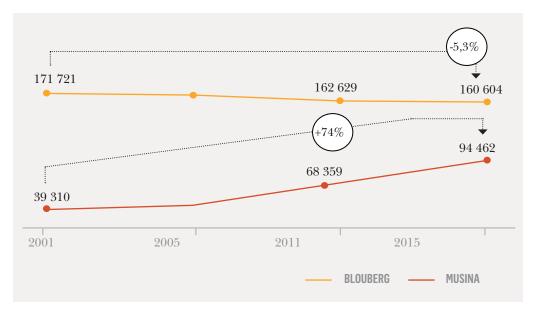
Labour migration to the miner and the municipality's proximity to Botswana and Zimbabwe has created a multi-ethnic municipality. Major languages spoken in the area are Tshivenda, Xitsonga, Sepedi, Afrikaans and English.

The town of Musina is home to half of the municipal population with half located in rural areas and smaller villages. Blouberg is smaller in size than Musina but has a bigger population. In 2015 the population was recorded as 160 604, which accounts for 3% of the population of Limpopo. The municipality is mostly inhabited by the Bahananwa and Batlokwa people, with a smaller number of Vha-Venda, Afrikaans and English-speaking people.

Official statistics suggest that the population of Blouberg has fallen – from 171,721 in 2001 (Census) to 160 604 in 2015.

Blouberg has a declining population, while the population in Musina continues to grow.

FIGURE 3 | POPULATION GROWING IN MUSINA, FALLING IN BLOUBERG



Sources: StatsSA | Genesis Analytics analysis, 2016 | National Census, 2011

³ Previously spelled Messina.

The size of the youth population in Musina is above the national average and almost half the total population of the municipality. Blouberg is largely made up of people older than 34 or under 15.

Musina's population is relatively young with 46.8% of the residents in 2015 aged 15 to 34, which is noticeably higher than the national average.

There are fewer young people (15 to 34) in Blouberg, compared to both the national average and Musina. This may be attributable to fewer economic opportunities and smaller towns in Blouberg than in Musina and economic migration in search of employment.

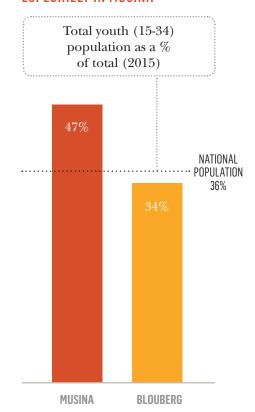
EDUCATION, EMPLOYMENT AND INCOME

Although improving, formal educational levels remain low in both municipalities.

In Musina in 2011 (latest figures available) 11% of the population older than 20 had no schooling, 22% had completed matric, and only 7% had a higher education qualification.

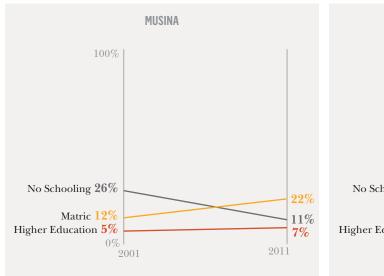
The levels of education in the Blouberg are better than Musina for the population over 20. As with Musina, the number of people with no schooling has decreased. In 2011, 13% of the Blouberg population had obtained tertiary level of education, an improvement from 2001.

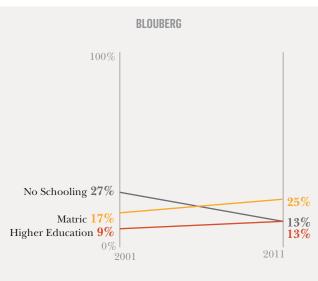
FIGURE 4 | YOUNG POPULATIONS, ESPECIALLY IN MUSINA



Sources: StatsSA | Genesis Analytics analysis, 2016 | Socio-economic Assessment Report 2013 | National Census, 2011

FIGURE 5 | IMPROVING BUT LOW LEVELS OF EDUCATION



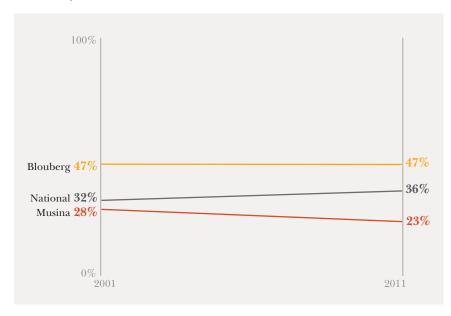


Sources: StatsSA | Genesis Analytics analysis, 2016 | Socio-economic Assessment Report 2013 | National Census, 2011 *Education does not add up to 100%, as other categories not reported on.

Although youth unemployment levels in Musina have improved it remains the biggest economic challenge. With a 23% unemployment rate amongst youths (aged 15 to 34).

There is exceptionally high youth unemployment in Blouberg, which is higher than the average in Musina and the national average. Fully 47% of those aged 15 to 34 are unemployed.

FIGURE 6 | HIGH LEVELS OF YOUTH UNEMPLOYMENT



In Blouberg 47% of those aged 15 to 34 are unemployed.

Sources: StatsSA | National Census, 2011

Although real household incomes have improved since 2001 income levels in Musina are low compared to the national household comparators. Average household income in Musina was R2 878 in 2011. Low income levels and high rates of unemployment can be partially attributed to the poor skills levels within Musina.

The population of Blouberg is exceptionally poor with a average household income in 2011 of just R1 610 (real income) per month – this is lower than the Musina average, as well as the provincial and national averages.

In Blouberg, real household incomes increased slightly between 2001 and 2011 with the main sources of income being migrant remittances, pensions and social grants. 762 of 41 192 households are headed by children.

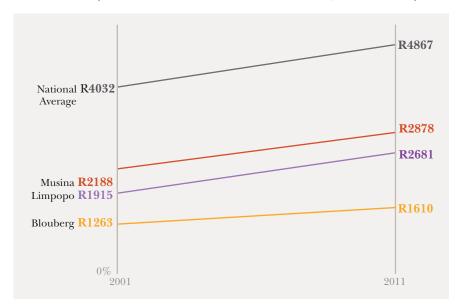
Blouberg - more so than Musina - has an infrastructure backlog in water, road, sanitation, education facilities and healthcare infrastructure.

762 of the 41 192 households in Blouberg LM are headed by children.

Real income refers to the income of an individual after taking into consideration the effects of inflation on their ability to buy goods and services. Average household income in Musina was R2 878 in 2011.



FIGURE 7 | HOUSEHOLDS IN MUSINA AND BLOUBERG HAVE IMPROVING BUT LOW INCOMES (MONTHLY AVERAGE HOUSEHOLD INCOME; REAL INCOME)



The average household incomes in Musina and Blouberg are much lower than the national average.

Sources: StatsSA | Socio-economic Assessment Report 2013 | National Census, 2011

HOUSING

Less than 1% of Musina is urban. The only significant urban area is Musina town.

In the 2011 National Census it was recorded that there were 20 042 households in Musina. 75% of these were formal houses,⁴ an improvement from 2001 when only 55% were formal houses. Informal dwellings are either shanty towns near Musina town or basic farm dwellings.

The tenure status within the Musina indicates that 43% of households are in rental accommodation and 28% are in fully-paid-for houses.

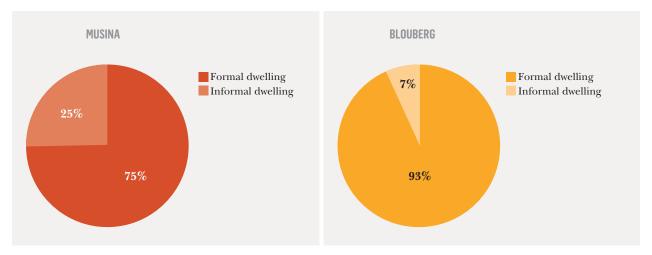
According to the 2011 National Census, Blouberg has 41,192 households with 93% of these classified as formal households. This has increased from 72, 5% in 2001. Tenure data indicates that 59% of formal houses are both fully paid and owned or currently being paid off by their residents.

ouse or brick/concrete structure. Informal dwellings are

⁴ Formal houses are characterized as a house or brick/concrete structure. Informal dwellings are a makeshift and temporary structure, not approved by a local authorities and made with found materials like corrugated iron and plastic.

FIGURE 8 | A NEED FOR MORE FORMAL HOUSING IN MUSINA (2011: OF 20 042 HOUSEHOLDS IN THE LM)

FIGURE 9 | MORE FORMAL HOUSING IN BLOUBERG THAN IN MUSINA (2011, OF 41 192 HOUSEHOLDS IN THE LM)



Sources: StatsSA | National Census, 2011 Note: Informal dwelling: Makeshift structure not approved by a local authority and not intended as a permanent dwelling. Typically built with found materials (corrugated iron, cardboard, plastic, etc.). Formal housing refers to a house or brick/concrete block structure.

ECONOMIC PROFILES

Agriculture is the main economic activity in Musina, accounting for 35% of GDP, with mining accounting for 30%.

In Musina agricultural employs 54% of the population many on a casual and seasonal basis.

While mining is a valuable activity accounting for 30% of output, it is not an especially large employer, accounting for just 4% of employment. The highest concentration of mining activities are in the western parts where Venetia Mine is located, and in areas surrounding Musina town.

An important heritage site is located in Musina, the Mapungubwe National Park. The park's principal feature is Mapungubwe, a great hilltop citadel that served as the capital of an advanced 13th century African kingdom and it is also a world heritage site. Botanical highlights include fine specimens of baobab trees and impala lilies, which are protected species.

FIGURE 10 | MUSINA'S ECONOMY IS DOMINATED BY AGRICULTURE AND MINING (2011)



Sources: StatsSA | Socio-economic Assessment Report 2013 | National Census, 2011

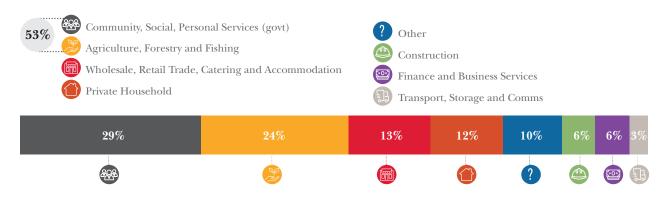
In Blouberg, agriculture and government services are the main economic activities. The biggest economic activity is government services which suggests a smaller private sector and high dependency on social welfare within the Blouberg.

Mining prospects are being developed in Harriswhich (platinum), Steamboat Farms (coal, gold and other minerals) and Indermark and Eussorinca (sand mining). Platinum prospects exist in the Dalmyn, Windhoek-Papegaai and Silvermyn areas.

Tourism has been identified as a key future economic driver in Blouberg. There are various plans to develop and grow the sector. Tourist attractions in the area include the Blouberg Nature Reserves, San rock art paintings in the Makgabeng Mountains, the Malebogo/Boer battlefields, as well as game farms.



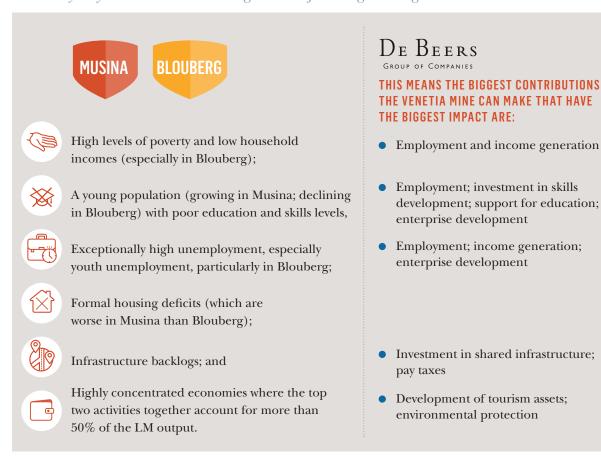
FIGURE 11 | BLOUBERG'S ECONOMY DOMINATED BY AGRICULTURE AND GOVERNMENT (2011)



Sources: StatsSA | Socio-economic Assessment Report 2013 | National Census, 2011

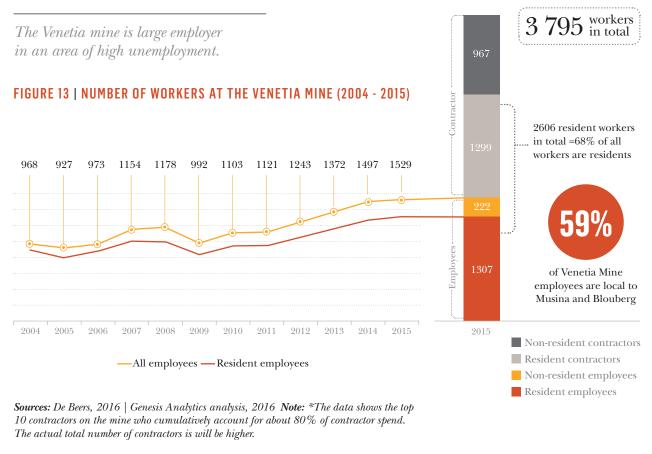
6.3 SUMMARY

A picture emerges of two areas where life is improving but still difficult in many ways. Musina and Blouberg have the following challenges:





7. EMPLOYMENT



THE DATA SHOWS THAT:

- Venetia Mine is a large employer in areas of high unemployment. A total of 3795 workers were active at the mine in 2015.
- Of 3 795 workers at the mine, 2 606 are resident in Musina and Blouberg. That is to say 68.6% of people working on the mine reside locally.
- There are more contractors (2266) than De Beers' employees (1529). Many contractors are employed on the construction of the Venetia Underground Project.
- De Beers' employee numbers at the mine have grown in every year except in 2009 when the mine put a freeze on hiring following the global financial crisis. Between 2004 and 2015, an annual average of 1171 people were employed.
- Of De Beers employees, most (86% in 2015) are residents of either Musina or Blouberg. In other words De Beers has typically hired residents before non-residents, or has created opportunities for employees to become resident in either Musina or Blouberg.
- Data for locals (as opposed to resident) are incomplete but it is estimated that about 58% of De Beers' employees are locals.

The Venetia Mine is a large employer in areas of high unemployment.

There were 3795 workers in 2015.

68.6% of people working on the mine are local residents.

Of De Beers' employees at the mine, 86% in 2015 were residents.

De Beers has typically hired area residents before non-residents.



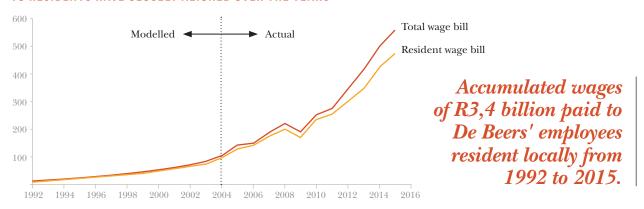
8. INCOME GENERATION

8.1. AGGREGATE WAGES

The next measurement of contribution is the income that has been paid into the local economy as wages over the life of the mine.

Wage data are available only from 2004, therefore a regression model was used to determine the contribution before 2004. The assumptions used were conservative.

FIGURE 14 | THE TOTAL WAGE BILL AND TOTAL WAGES PAID TO RESIDENTS HAVE CLOSELY ALIGNED OVER THE YEARS

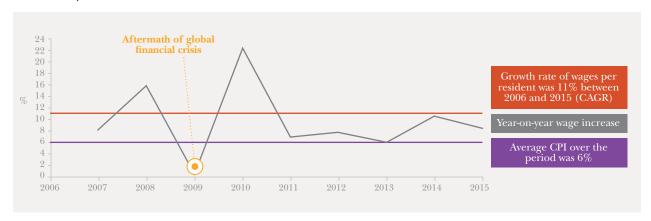


Sources: De Beers, 2016 | Genesis Analytics analysis, 2016
Assumptions: Linear relationship between time and number of employees | Constant 9% wage growth between 1992 and 2003.

A conservative estimate is that from 1992 to 2015 Venetia Mine paid about R3,4 billion in accumulated⁵ wages to employees who were resident in Musina and Blouberg. As residents spend a large portion of wages in the local economy, this amount is a fair proxy for income generation from wages in the local economies. Note this does not include the wages paid to contracting staff over the period, nor does it include the benefits paid to employees in addition to wages. If these were added it is likely that the accumulated wage bill would be more than R6bn from 1992 - 2015.

8.2. WAGE INCREASES FOR RESIDENTS

FIGURE 15 | AVERAGE GROWTH OF WAGES PER RESIDENT HAS BEEN ABOVE CPI



Sources: De Beers, 2016 | Genesis Analytics analysis

⁵ Aggregated nominal wages in each year.

The data also show that from 2006 to 2015 the wage per resident increased by 11% a year. This is almost double the average inflation rate over the same period (6%). Residents have enjoyed positive increases year on year in comparison to changes in the cost of living.

Residents have enjoyed positive increases year on year in comparison to inflation.

8.3. BENEFITS

FIGURE 16 | TOTAL WAGES AND BENEFITS (2004 - 2015, NOMINAL RANDS)



Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

Between 2004 and 2015, the mine paid an aggregated total of R4,1 billion in wages and benefits to De Beers' employees. Most of this was paid to residents. For instance, in 2015, the total amount paid to residents in wages and benefits amounted to R574 million, or 86% of total wages and benefits. An aggregated total of R3,6 billion was paid to residents in wages and benefits between 2004 and 2015.

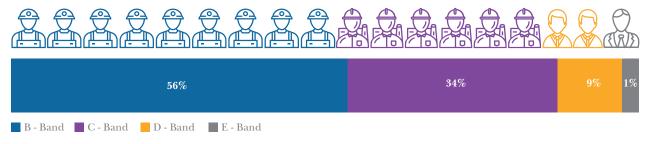
Between 2008 and 2009, the aggregate wage and benefits bill fell with retrenchments after the global financial crisis.

Between 2004 and 2015, the mine paid an aggregated total of R4,1 billion in wages and benefits to De Beers' employees.

8.4. AVERAGE PACKAGES IN CONTEXT

The majority of resident employees at the Venetia Mine fall into the B-Band income group.

FIGURE 17 | THE MAJORITY OF RESIDENT EMPLOYEES AT THE VENETIA MINE FALL INTO THE B-BAND INCOME GROUP

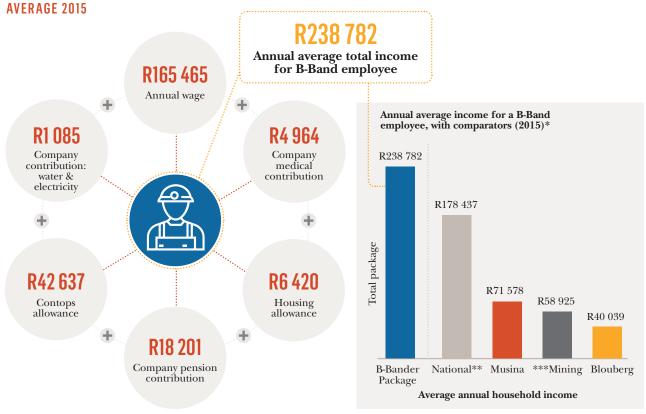


Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

Typically, a 'B-Bander' will hold a matric qualification and performs operational duties at the mine.

Most resident employees are B-Banders.





Sources: De Beers, 2016 | Genesis Analytics analysis, 2016 | Quarterly Employment statistics, March 2016 Note: * Musina and Blouberg average income inflated to 2015 prices | **Includes bonuses and overtime | ***Mining is an industry category which refers to the average income earned by workers of all mining activities in South Africa.

In 2015, the average wage and benefits package for a B-Band employee was R238,782. Benefits include a housing allowance, bonus, medical contribution, contops⁶, and company contributions towards water and electricity.

A B-Band employee earns in comparison more than 3 times the average annual household income in Musina and almost six times than the average annual household income in Blouberg. Venetia Mine B-Banders earned more than three times of the average South African mine workers.

A B-Band employee
earns more than
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average annual
household income
in Musina and
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household income
in Blouberg.

⁶ Contops refers to Inconvenience Top-ups given to mine operation workers for working during 'inconvenience' times during the day – also known as overtime.

9. **HOUSING**

De Beers has invested heavily in the construction and development of staff housing in Musina.

To date, the mine has built 522 homes in Musina. This includes 90 homes for contractors working on the construction of the VUP. In addition, the mine rents 109 housing units in Musina for staff.

The mine has also established facilitated home ownership schemes in Blouberg and Musina. These assist employees to buy their own homes or to upgrade properties. The first scheme was introduced in 1987 and assisted with a subsidy and security collateral for deposits, as well as a housing allowance in accordance with wage levels. The revised scheme caters primarily to employees who do not have homes and earn R25 000 or less, thus falling into the gap between RDP housing and bank-financed homes. To date 819 employees have been eligible for the scheme, and 39 have taken it up.

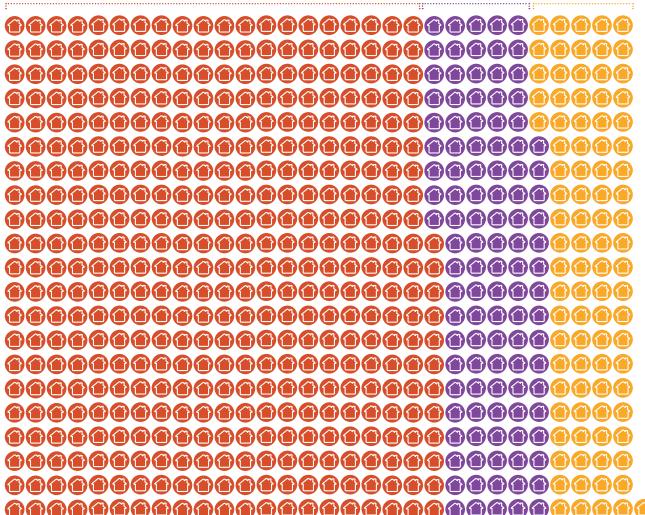
To date,
De Beers has
built 522 homes
in Musina and
rents another
109.

FIGURE 19 | DE BEERS HOUSES MORE THAN 630 FAMILIES IN MUSINA

432
De Beers-owned houses built

109
De Beers-rented accommodation

90 Homes built for VUP



Source: De Beers, 2016







ГҮРЕ	NAME	MUSINA	BLOUBERG	NAME OF VILLAGE/TOWN
chool	Makushu Primary School	x		Nancefield Township
chool	Renaissance High School			Nancefield Township
chool	Malale Primary School			Malale Village
chool	Lwaphungo Secondary School	x		Tshiungani Village
chool	St Martins De Porres Primary School	x		Nancefiled Township
chool	Eric Louw High School	x		Musina Town
chool	Messina Primary	x		Musina Town
chool	Shanduka Academy	x		Musina Town
chool	Musina High School			Nancefiled Township
Road Works	Musina Roads Intersections			Musina Town
Housing	432 De Beers owned houses 90 VUP Built houses 109 De Beers rented houses			Musina Town
ym		x		Musina Town
Electricity	Replacement of Electrical Poles	x		Nancefiled Township
Road	The R521 that goes from Musina to Alldays, with Venetia Mine in-between	x	х	Musina Town and Alldays
chool	Ratanang Special School		x	Senwabarnwana Town
chool	Ratanang Crèche		x	Alldays Town
chool	Grootpan Crèche		x	Grootpan Village
chool	Mashie Primary School		x	Ezoringa Village (Next to Eldorado)
chool	Mmantshako Secondary School		x	Ezoringa Village (Next to Eldorado)
chool	Matshabe Primary School		x	Juniorsloop Village
School	Alldays Combined School		X	Alldays Town
chool	Phala Secondary School		x	Senwabarnwana Town
CCD Centre	Siaz Crèche		x	Siaz Villages
lectricity	Electrification Project Silvermyn		x	Silvermyn Village
lectricity	Electrification Project Aurora		x	Aurora Village
Vater Systems	Alldays Water Project		x	Alldays Town
Other	Taaibosch Community Bakery		x	Taaiboschgroet Village

11. INVESTMENT IN EDUCATION, HEALTH, SPORTS AND ARTS

The corporate social investment (CSI) initiatives of the Venetia Mine are split between Musina and Blouberg.

The mines' CSI strategy is linked and aligned to the Integrated Development Plans (IDPs) of the municipalities as well as the Social and Labour Plan.

THERE ARE FOUR SOURCES OF CSI FUNDING FOR INITIATIVES IN BLOUBERG OR MUSINA:

THE DE BEERS FUND:

Funding is for applications of R50,000 or more, which are adjudicated and decided upon during the quarterly Board of Trustees meeting in Johannesburg. The focus is on sizable community development projects like infrastructure.

VENETIA MINE LOCAL AREA COMMITTEE:

This committee receives requests for funding of projects of less than R50,000. The focus is on smaller community projects.

VENETIA MINE SOCIAL AND LABOUR PLAN (SLP):

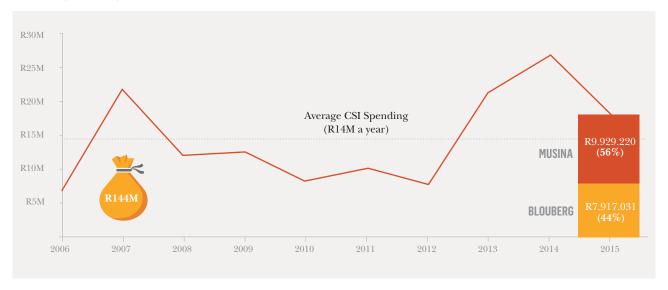
These projects are adopted from Musina and Blouberg is Integrated Development Plans and included in the Venetia Mine SLP commitments, focusing on community, local economic, and infrastructure development projects.

VENETIA MINE FUND:

This supports projects that do not qualify for funding from either the LAC or DBFund but which are of strategic significance to the mine. The Venetia Mine OpCo team manages the Venetia Mine Fund.



FIGURE 21 | SINCE 2006 DE BEERS HAS SPENT A CUMULATIVE R144M ON EDUCATION, HEALTH, SPORTS, ARTS AND COMMUNITY PROJECTS IN MUSINA AND BLOUBERG



Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

In the years for which information is available - 2006 to 2015 - De Beers invested R144 million on CSI initiatives in Blouberg and Musina. In ten years the mine funded or donated to 200 projects⁷ in education, health and welfare, sports, arts, culture and infrastructure development (especially building schools, roads, and drilling boreholes).

The mine has invested an average R14 million a year in CSI. In 2015, Musina received slightly more than Blouberg with 56% of total CSI spending.

The mine has contributed an average of R14 million a year in CSI.

FIGURE 22 | CSI DISTRIBUTION OF SPENDING HAS ALMOST TRIPLED SINCE 2006



Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

⁷ Some projects have been funded more than once.

Education accounts for about 85% of CSI spending. This includes Early Childhood Development programmes, post-school bursaries and learnerships, the construction of primary and secondary schools, and educator subvention programmes.

A programme with the provincial department of education has provided infrastructural support to 11 schools in the Musina and Blouberg LMs areas, including construction of classrooms, ablution facilities, administration blocks, and water provision. This partnership has also successfully built boarding facilities for children with special needs at Ratanang Special School in Senwabarwana, which is home to more than 300 children.

The mine introduced a teacher subvention programme in three schools, namely Musina High School, Messina Primary School and Eric Louw High School, providing funding for additional Mathematics and Science teachers. The programme has supported 27 teachers, with full salary subvention, and 50 students with fee subsidies. R6 million has been spent and the programme is scheduled to end in December 2017 with De Beers encouraging the Department of Basic Education to absorb the supported teachers permanently.

The investment in education has impacted the schooling of more than 3 000 learners in Musina and Blouberg LMs.

HEALTH AND WELFARE

Health programmes have focused on HIV/AIDS awareness, prevention and treatment initiatives. Programmes such as Soul City Venetia, which supports home-based care and primary health care training and Field Band Foundation, an HIV lifestyle programme that uses music to promote positive and healthy lifestyles, are two programmes that have received funding. On the mine site, De Beers provides medical care facility that is free of charge to all employees.

SPORTS, ARTS, CULTURE AND HERITAGE

The mine provides kit, equipment and trophies for soccer tournaments. The mine was also instrumental in ensuring that the community of Blouberg partook in the festivities of the 2010 World Cup hosted in South Africa, by sponsoring the public viewing area in the community. The mine supports the Field Band Project both in Musina and Blouberg LMs with uniforms and equipment.

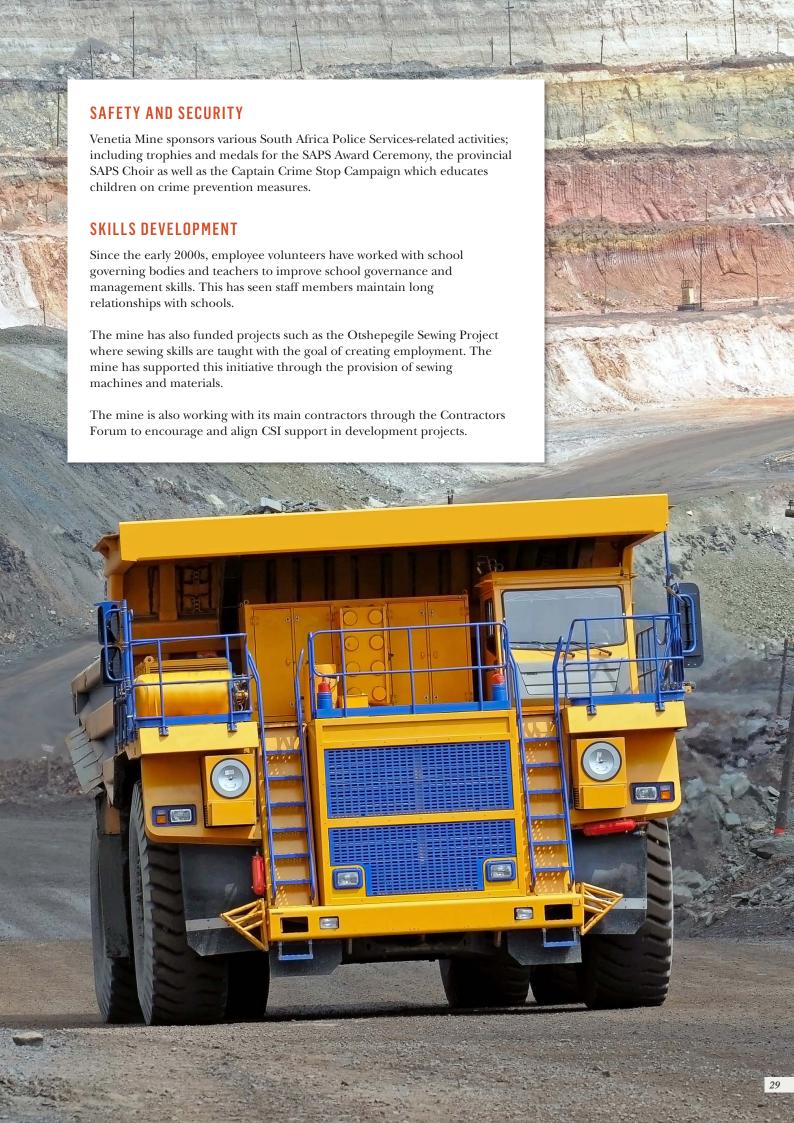
OTHER PROJECTS

ELECTRIFICATION

The mine has assisted with bulk electrification in Blouberg and Musina. In 2009, the mine completed a project that connected five villages and 337 households in Blouberg to the national grid. This project created 100 jobs during the construction phase.

In Musina LM an electrical reticulation network was installed in the township of Nancefield (Extensions 9 and 10) which resulted in a further 600 households being connected to the grid. Education accounts for 85% of CSI spending.

This investment in education has impacted the schooling of more than 3 000 learners in Musina and Blouberg.



12. TRAINING AND SKILLS DEVELOPMENT

Venetia Mine offers training to all employees and has also extended training to non-employee members of the community. More than 4,000 beneficiaries received training in 2015.

Training ranges from basic operational training for B-Banders to more in-depth training and leadership development training for C-Banders, to more senior management training for D-Banders.

TABLE 2: TYPES OF TRAINING PER EMPLOYMENT BAND

EMPLOYMENT BAN	D TRAINING TYPE	EXAMPLES
B-BAND	 Occupational Health and Safety First Level Safety Risk Management 	 Safety Risk Management A1 Fire Extinguisher Training Overhead Crane Operation Working at Heights
C-BAND	 Skills Programmes Occupational Health and Safety Second Level Safety Risk Management Leadership Development 	 Safety Risk Management A2 Supervisory Learnership Programme Introduction to Asset Management
D-BAND	• Leadership Development	 Safety Risk Management A3 Root Cause Analysis Training Mine Health and Safety Act Training

Source: De Beers, 2016

Spending on training has increased annually from 2010 (first available records). 10% of spending is on standard safety training and 10% on standard machine operating, 60% is investment in skills that are transferable outside the mine, for instance, artisanal skills. These skills are not only relevant on the mine; they can be taken into other occupations and career paths. The other 20% of spending was on management development.

60% of training is transferable outside the mine.

FIGURE 23 | SKILLS DEVELOPMENT SPENDING AT THE VENETIA MINE (2010 - 2015)



Most of the training at the mine is for residents of Musina and Blouberg. In 2015, 80% of training beneficiaries were residents of Musina and Blouberg. A rough ratio suggests that 58% (607) of total trainees were locals. 15% of the training beneficiaries were women.

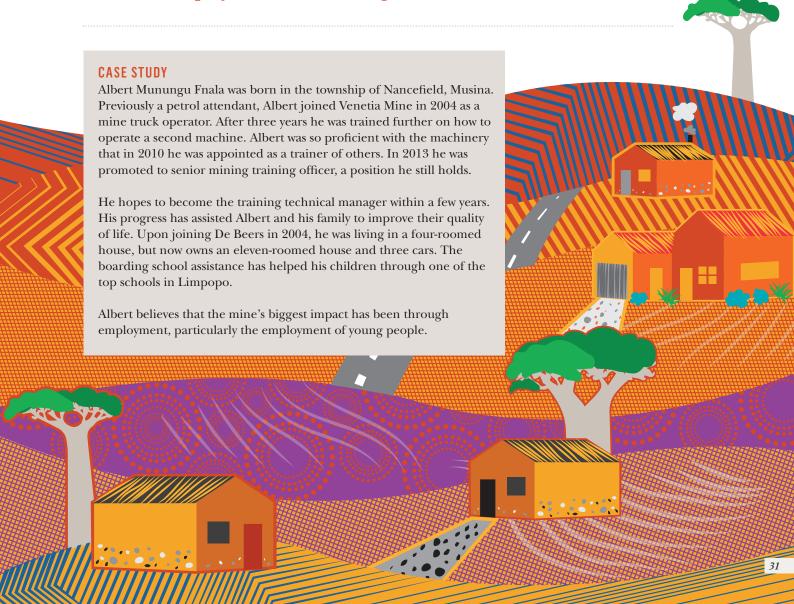
80% of all training beneficiaries were residents.

FIGURE 24 | RESIDENT EMPLOYEES HAVE BEEN THE GREATEST BENEFICIARIES OF TRAINING SPENDING



Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

Dedicated training programmes have allowed talented employees to climb through the ranks.



13. FISCAL CONTRIBUTION

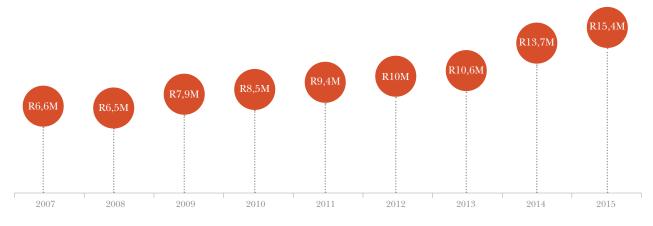
The mine makes payments of rates and taxes, and water and electricity to Musina.8

The mine has paid R88 million in municipal contributions since 2007.

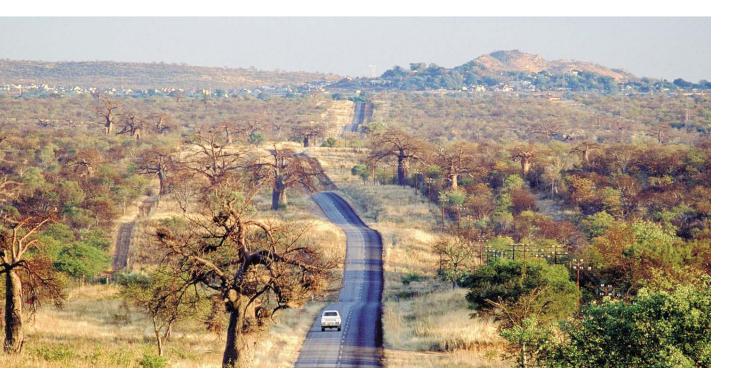
Municipal payments support the service delivery mandate of the local municipality.

The mine has paid R88 million in municipal contributions since 2007. R15.4 million was paid in 2015.

FIGURE 25 | THE VENETIA MINE CONTRIBUTES TO MUSINA FISCUS (NOMINAL RANDS: 2007 - 2015)



Sources: De Beers, 2015

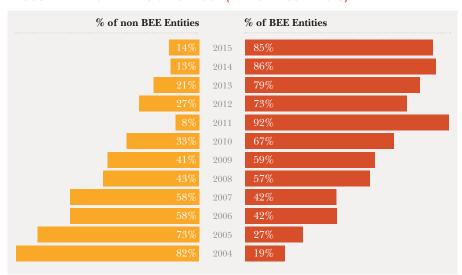


⁸ These payments in respect of are from mine-owned properties in Musina. No payments are made from the mine operations for water and electricity, as water is pumped directly from the Limpopo River and electricity comes directly from Eskom.

14. LOCAL PROCUREMENT

In accordance with transformation of the mining industry, the mine has oriented procurement towards black-owned business. In 2004, only 19% of mine procurement came from BEE entities; by 2015 this had increased to 85%.

FIGURE 26 | THERE HAS BEEN AN INCREASE IN BEE PROCUREMENT SPENDING SINCE 2004 (PERIOD: 2004 - 2015)

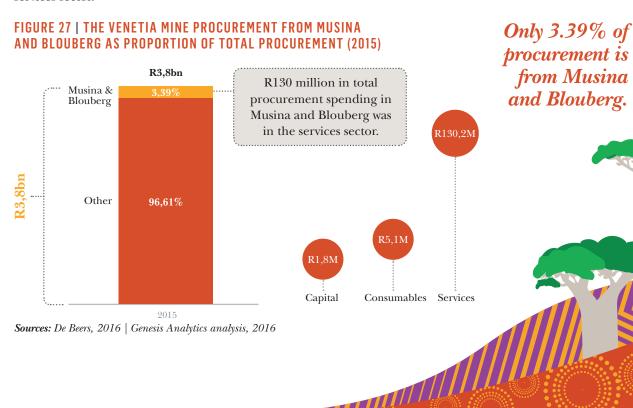


In 2004, only 19% of mine procurement came from BEE entities; by 2015 this had increased to 85%.

Sources: De Beers, 2016 | Genesis Analytics analysis, 2016 Note: BEE Entities – Entities with HDSA Ownership of greater than 25 % +1 vote. This includes HDSA Empowered entities (25 % +1 vote) and HDSA Owned entities (50 % +1 vote), as confirmed by Mr Pieter Killian.

Total procurement spending for Venetia Mine operations in 2015 was R3.8 billion of this only 3,39% or R137 million came from companies operating in Musina, with a tiny portion coming from Blouberg LM. This reflects that the larger commercial centre is the Musina LM. The opportunities for local procurement based on existing businesses are for kitchen consumables; stationery; pool maintenance; lubricants and fuel; courier services; employee transport; facilities management; electrical; and tyres and batteries.

Of the R137 million spend in procurement in the two local areas, over R130 millions of that was spent in the services sector.



15. LOCAL ENTERPRISE DEVELOPMENT

Local enterprise development is driven by De Beers Zimele, a community enterprise development program established in 2006 jointly by De Beers and Anglo Zimele.⁹

Anglo Zimele is Anglo American's enterprise development initiative, established in 1989 to provide loan and equity financing to black entrepreneurs and businesses.

The word "Zimele" is derived from Zulu and Xhosa and means "to be independent" or "to stand on one's own feet".

The objectives of De Beers Zimele are to nurture commercially viable businesses to bring about black economic empowerment through the creation of sustainable small and medium sized enterprises. The programme provides access to capital, business advisory and planning services, links to established supply chains and markets (the mine and other industries), and mentorship. The De Beers Zimele hub at Venetia was established in 2011.

Loans from R1, 000 to R1 million are given at a standard low interest rate (6%) to all businesses. Between 2011 and 2015, the Venetia hub supported 47 small businesses in Musina and Blouberg with a total investment of R11, 8 million in debt financing. Together, these companies accounted for 648 jobs in Limpopo.

"Zimele" is derived from Zulu and Xhosa and means "to be independent" or "to stand on one's own feet".

FIGURE 28 | ZIMELE FUND HAS INVESTED IN LOCAL SMES

Zimele Fund Venetia Mine loan value (R millions, 2011 - 2015); Loans per sector (R thousands, 2011 - 2015) Zimele has provided loans to the value Total + R11,8M of R11, 8 million and through these, 4 helped support the creation of 648 jobs R3,7M in Limpopo since 2011. 3,5 R2.6M R3,1M R3M 95 R2,4M R2.8N R2,1M 2 1,5 R₁M R1,0M R0,9M 0,5 0 2012 2013 2014 2015 Agriculture Construction Transport Retail Manufacturing

Total loans (low interest %)Total Loans per annum

Sources: De Beers, 2016 | Genesis Analytics analysis, 2016

⁹ Prior to Zimele, De Beers had an initiative called Matlafalang.

Most of the Zimele loans were to SMEs in agriculture, construction, and services. Examples of recipients are Mushosa Trading CC, a transport business, and Capricorn Poultry Power – a chicken retailer.

CASE STUDY

MUKONDI MAFUNE, BUSINESS OWNER

Mukondi has lived most of her life in Musina. She is the main distributor of Sasko bread in Musina – distributing 70 000 loaves a month to 135 spaza shops, Nando's, Checkers, Spar, Shoprite, BlackSteer, and other franchise stores. She has had a distribution contract with Sasko since 2013.

She found herself short of funding to expand her business. Mukondi approached De Beers Zimele and was given a loan of R536 000 which she used to buy trucks. Her monthly repayment was R9 000, but given her determination to repay Zimele quicker, she asked to increase repayment to R15 000. She repaid the loan in three years.

Mukondi employs seven people and has trained a staff member to manage the business' finances.

Following the success of Mukondi's first business, she was given the opportunity to run the Diamond Club, a guest house facility owned by De Beers. She manages the kitchen, house-keeping and laundry.

Mukondi has used revenue from her two successful businesses to invest in her children's education. Her next goal is to bring the Holiday Inn franchise to Musina.



16. CONSERVATION

The mine is located in an environmentally sensitive area. ¹⁰ De Beers has spent about R17 million on initial environmental protection projects.

16.1. VENETIA LIMPOPO NATURE RESERVE

Following the discovery of kimberlite pipes on the farm Venetia in 1980, De Beers purchased the farm and adjoining farm Krone. These farms, along with most of the other farms in the area were gazetted for agriculture some 130 years ago and had been overgrazed. The chief geologist, Alex van Zyl, implemented a conservation policy to game-fence the two properties and to exclude all domestic stock from the area.

In 1989 it was proposed that the Venetia Limpopo Nature Reserve be extended to the Limpopo River. Additional farms were purchased. To date, some 19 farms totaling an area of 32,000ha have been purchased and turned into a Reserve. The fauna and flora from the mining area were moved to the Reserve, including large baobab trees.

The Reserve has a habitat of Mopane woodland and a rich biodiversity. It is home to 246 species of animals, 17 of which are either endangered or protected.

In addition to the benefits of conservation, the Reserve accommodates a small number of eco-tourists, hosting a total of 2,693 bed nights in 2015.

The Reserve is a space for ecology research facilitation. The Limpopo Leopard project, a collaboration with the Limpopo Province scientists and the hunting industry is pioneering a science-based regulatory system aimed at improving the sustainability of leopard.

16.2. MAPUNGUBWE NATIONAL PARK

The Mapungubwe National Park is located at the confluence of the Shashe and Limpopo rivers and comprises 20 properties some of which are owned by De Beers. The company has leased 4000ha of land to SANParks.

The park comprises semi-arid landscape with varied geology, including rock types that are 200 million years old. The region is linked to one of the oldest known geological feature in the world, a small exposure of what is believed to be the original crust material of the earth. The most primitive rocks of South Africa were laid down on this original crust. The Mapungubwe Cultural Landscape World Heritage Site and the Mapungubwe National Heritage Site are in the park.

¹⁰ The buffer zone shielding the mine as well as the Mapungubwe site is legally protected through the National Heritage Resources Act, the National Environmental Management Act and the World Heritage Convention Act.





17. REPORT NOTES

The contribution of Venetia Mine is measured at a local level. This does not take into account the national contribution like nationally paid taxes, foreign earnings or impact on the rest of the economy.

The measurement framework is socio-economic and does not include an assessment of the mine's environmental impact.

Except where external sources are referenced, the information required to prepare this report was provided to Genesis Analytics by De Beers, then analysed independently by Genesis Analytics.

Consultations were not held with members of the Musina and Blouberg communities, except with officials from Musina and Blouberg municipalities.

Genesis Analytics confirms this is an independent assessment of the economic contribution of the Venetia Mine on Musina and Blouberg based on the information so provided.

The report does not take into account the extent to which some or all of the noted contributions might have happened in the absence of the mine. In other words, no attempt has been made to assess the counterfactual or substitution effect that might have applied in the absence of the mine.

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