fairtalk

An Exxaro publication for KZN Sands stakeholders

exxaro
POWERING POSSIBILITY

issue 2
february
2012

Chris van As, principal electrical engineer for the Fairbreeze project, at the Fairbreeze substation. The distribution transformer in the substation steps down the 88kV supply coming into the Fairbreeze substation to the 11kV supply that is needed for Mtunzini.

Power to Mtunzini's people

Mtunzini's electricity supply tends to be a hit-and-miss affair. Interruptions are a fact of life, and sometimes the town can be without power for a whole day. The good news is that this is about to change, thanks to a new 88kV power line and Fairbreeze substation.

WHEN EXXARO started working on the Fairbreeze project, it was clear that the 11kV rural power line supplying Mtunzini from the south would not be sufficient for the mine. A new Eskom substation would be needed.

Eskom's original solution was to build a feed line from the existing 275kV high voltage distribution line that runs between Richards Bay and Stanger, to the proposed new Fairbreeze substation.

Continued on page 2

Praise for Exxaro's sustainability programmes

During December 2011, Exxaro received recognition for its efforts to be a responsible and sustainable mining company:

- The JSE again named Exxaro a "best performer" in its Social Responsibility Index (SRI). This honour is awarded to only 22 listed companies in South Africa, including low-impact non-mining enterprises. The 2011 assessment covered the usual social and governance indicators, a higher climate change threshold and a newly introduced environmental performance threshold.
- Exxaro received a score of 94% in the Carbon Disclosure Leadership Index (CDLI) and improved its ranking from joint fourth in 2010 to third in 2011. Only Goldfields and Nedbank are higher ranked. The CDLI rates companies in terms of the transparency and quality of disclosure of their greenhouse gas (GHG) emissions and is part of the annual Carbon Disclosure Project (CDP). The CDP ranks companies on two levels: the CDLI and the Carbon Performance Leadership Index (CPLI). The latter reviews emissions reduction targets and the progress companies make towards meeting their targets.

Power to Mtunzini's people

Continued from page 1

The landowners who would have been impacted, however, resisted and Eskom had to revisit its options.

Exxaro contributed R12,7 million to improve Mtunzini's electricity supply

The supply route that was eventually approved, involved the construction of a new 88kV line branching off from the Hudley substation, to supply and feed into the Fairbreeze substation. The 5,4km line still traversed a number of farms and Exxaro agreed to carry the servitude costs involved. Exxaro also made the land for the Fairbreeze substation and the line running from it into Mtunzini, available to Eskom at no cost.

When Fairbreeze was put on hold due to the 2008/09 recession, Eskom was not convinced that it should go ahead with the new line and substation. However, Exxaro's commitment to carry the costs it had agreed to persuaded the utility to proceed.

The 88kV line was completed in June 2010 and in August 2011 the substation was fitted with a distribution transformer dedicated to Mtunzini. All that remains is the construction of the new supply lines from the substation into town and to the Mtunzini estate. Once completed, Mtunzini will enjoy the benefits of stable, reliable power.

The 2011 Fairbreeze project configuration moved the primary wet plant further away from Mtunzini. This means that a new substation will have to be built for the mine. As a result, Fairbreeze will not impact negatively on Mtunzini's power supply. In fact, quite the opposite has happened as a direct consequence of the mine.

asked & ANSWERED

How much of Mtunzini's drinking water will be diverted to supply the Fairbreeze mine?

Not a single drop. Fairbreeze will use raw river water supplied by Mhlathuze Water from the Mhlathuze River via a bulk water supply pipeline. In effect, Fairbreeze will use the water currently allocated for Hillendale as part of the industrial water allocation for the area. The mine will recycle as much water as possible to minimise its bulk water use.

fairtalk is published by Exxaro's KZN Sands operation to keep stakeholders informed about the Fairbreeze project. If you have questions or comments on the newsletter or the project, share your thoughts by contacting Natalie Keegan:

Tel: 035 902 7840
Email: Natalie.Keegan@exxaro.com
Fax: 086 630 2775

www.exxaro.com

Op soek na 'n vertaling?

As jy enige van die artikels in hierdie uitgawe in Afrikaans wil lees, laat weet gerus vir Natalie Keegan:
035 902 7840 / Natalie.Keegan@exxaro.com.

Ngabe uyafuna yini ukuba kutolikwe? ngesiZULU?

Uma udinga eminye yemibhalo edidiyelwe ngesiZulu ungaxhumana no Natalie Keegan:
035 902 7840 / Natalie.Keegan@exxaro.com.

More than just another mine

The Fairbreeze mine approval is about more than Exxaro adding another mine to its portfolio. The livelihoods of thousands of people are at stake.

"THERE SEEMS TO BE a perception that only Exxaro's profits will suffer should Fairbreeze not go ahead," says Neels Oosterhuis, general manager of KZN Sands. "The truth is that without Fairbreeze, the whole of KZN Sands will close down as we will not have the ilmenite to keep the furnaces going at the Central Processing Complex in Empangeni."

Neels concedes that transporting ilmenite from Exxaro's Namakwa Sands operations is a much talked-about option, but points out that it is only viable in the short-term due to the transport costs involved. "We will import ilmenite from Namakwa Sands as a stop-gap measure if Fairbreeze goes ahead. The reason is that we cannot afford to switch the furnaces off while waiting for Fairbreeze to start producing. Once the furnaces have cooled down, it will be too expensive to restart them." This also explains why Exxaro cannot afford to delay Fairbreeze any longer – the period between Hillendale's closure and the start of production at Fairbreeze has to be as short as possible to limit imports from Namakwa Sands.

Time is running out

Should Fairbreeze not be approved, the closure of KZN Sands will start in January 2013, leaving more than 1 000 people jobless. "Hillendale currently employs 400 people whose skills cannot be used at other mines in the area, such as RBM. Without Fairbreeze, it will be almost impossible for them to find jobs."

The lost job opportunities will remove an annual wage bill of more than R300 million from Zululand. The Empangeni/Richards Bay area will furthermore lose around R530 million worth of goods and services that KZN Sands procures from local businesses every year.

"We are not being alarmist," says Neels. "These are simply the realities of our business."

Neels Oosterhuis, general manager of KZN Sands

Jobs that will be lost without Fairbreeze:

±746
permanent employees

±300
permanent contractors

±1000
indirect jobs

Global demand for mineral sands, and the products manufactured from them, is skyrocketing while supply has remained static. Trevor Arran, executive general manager: sands and base metals at Exxaro, discusses the opportunities and risks for South Africa.

The world is hungry for mineral sands

IN DECEMBER 2011, *Mining Weekly* reported on the increased demand for mineral sands that the industry has experienced over the past two years. Trevor confirms this situation and elaborates on the reasons for it:

- Over the last 15 years there has been little investment in mineral sands due to flat demand and low prices. In the last five years, however, China has emerged as a massive consumer of titanium dioxide products and zircon. The "eastern dragon" has driven demand while supply has remained static.
- High-grade titanium dioxide feedstocks are limited. The reserves that are available demand massive investment, not only to build the actual mines but also to establish the associated infrastructure such as water, electricity, roads and ports. Furthermore, these reserves are often in areas that face tremendous socio-political challenges. As a result, the new investments will take 5-10 years to come to fruition.

Against this backdrop, there can be no doubt that the Fairbreeze reserve will be mined, if not by Exxaro then by someone else, to meet the growing global demand.

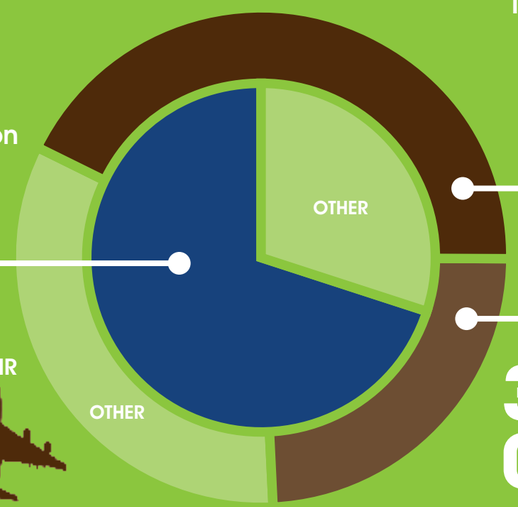
From slag to pigment

Beneficiation is the holy grail of mining in South Africa and a major focus area for the Department of Mineral Resources. If the mining industry wants to be party to government's drive to create a vibrant economy, it has to look at the entire value chain – mining, processing and beneficiation – to sustain and create significant jobs.

Economic development decisions taken now will have a huge impact on the next generation, especially in KwaZulu-Natal, where the employment rate is lower than the national average. The recent Exxaro/Tronox transaction will give Exxaro access to technology and expertise that could make it potentially more viable to beneficiate ore here than exporting it. The economic development and job creation potential is vast and global demand for Exxaro's products is creating the ideal investment environment for such ventures, if proven economically viable. This is a national growth opportunity that cannot be missed.

Did you know?

South Africa and Australia account for close to **70%** of global zircon production



Of the 1,4 million tonnes of zircon produced in 2010

China consumed **43%**

Europe used **24%**

Boeing and Airbus want titanium metal for their next-generation airplanes. The CSIR is currently at the forefront of refining the technology, presenting the ultimate downstream beneficiation opportunity for South Africa.

360 000 tonnes = the zircon shortage by 2016 at current demand and production rates

The many uses of mineral sands

Mineral sands is a term used to describe deposits of heavy minerals. The Richards Bay deposits are some of the largest in the world and consist mainly of ilmenite, rutile and leucoxene. These naturally occurring minerals are mined to produce titanium feedstock, zircon and other products.

RUTILE

Coating of welding rods
Titanium metal
TiO_2 pigment

Titanium metal is exceptionally strong and light. It is used to build airplanes and make sports gear like golf clubs. In the medical field it is used in artificial joints and heart pacemakers.

ZIRCON

Ceramics, Tiles
Sanitary ware
TV screens
Computers
Refractories

Other industrial and domestic products

ILMENITE

Ilmenite is smelted in electric arc furnaces to produce titanium slag and low manganese pig iron (LMPI).

LMPI is used in the vehicle manufacture industry for engine blocks and parts.

The titanium slag is a feedstock for the production of pigment that is used, amongst others, in paint, plastic, cosmetics, suntan lotion and Tippex®.

Dust detectives

How do you measure dust in the air around us? Simple – just catch it and weigh it!

Know your dust buckets

Single-stand units are 1,5m to 2m high and are designed with a lockable rim so that the buckets cannot be removed. **Bi-directional** units have two sampling positions, a wind vane and bucket cover connected to a mechanical pulley system that is controlled by an instrumentation panel. This mechanism controls the bucket cover according to the wind direction. In one position the bucket collects dust blowing away from the site and in the other dust blowing onto the site.

AMBIENT DUST MONITORING first started on 20 September 2005 at the Fairbreeze C site. Dinesh Moodley, environment and radiation protection monitor at KZN Sands, explains that based on the predominant wind directions, eight sample locations were identified to establish a baseline of ambient dust fallout. "The locations vary from the extremities of the mine property to the town and residential areas," he says.

"We have also included sensitive areas, such as the Siyaya River and the wetlands."

In May 2008, Mtunzini residents asked Exxaro to increase the monitoring of the ambient dust fallout in the town. "We erected a dust bucket stand at the medical centre and started sampling on 29 May 2008," says Dinesh.

The inclusion of Fairbreeze A, B and D saw the addition of eight more sampling locations as of 28 April 2011. Exxaro currently monitors 17 single-stand and two bi-directional dust bucket stands across the Fairbreeze site.

Dinesh Moodley at work in the laboratory and (right) checking a single-stand dust bucket.

How it's done

The process of measuring ambient dust (or dust in the air around us) starts with five-litre polyurethane plastic buckets mounted on stands and filled with distilled water and pool algaecide. The latter prevents the growth of algae in the water.

The water/algaecide mix is left out in the field to capture the ambient dust. Once a month the sample is retrieved and filtered to determine how much dust (or particulate matter) had settled at the bottom of the bucket. This filtration and gravimetric analysis is conducted in the Exxaro laboratory at the Central Processing Complex in Empangeni. The results are captured in a database to identify trends and generate reports.

Somshoko secures the future

Somshoko Trading, a company in the Macambini tribal area, has been awarded the Fairbreeze security contract – one of the first to be concluded in preparation of the mine's construction and operational phases.

"THIS CONTRACT is my first chance. From here I will expand and create more jobs by working for other companies and government departments as well." The man with the business vision is Nkosi Mathaba, nkosi of the Macambini Tribal Authority. He founded Somshoko Trading to supply security services to Fairbreeze Mine.

Delia Jordaan, contract specialist at KZN Sands, estimates the value of the contract at between R1,8 and R2,4 million per year, depending on the number of guards to be appointed. "That will only be decided once construction gets underway. We expect the requirement to be between 20 and 32 guards for the five-year contract."

During January this year, the 35 Somshoko employees and Nkosi Mathaba completed their security guard training under the watchful eye of Professor Johan Ras from Facasa Security. All 36 men and women were trained on level E and D. Ten will receive further training on level C and B and four on level A.

To ensure a sustainable business that meets its stringent supplier requirements,

Annalien Fouché, KZN Sands' sustainable development manager, congratulates Nkosi Mathaba on winning the Fairbreeze security contract. Nkosi Mathaba named his company Somshoko Trading in honour of his grandfather.

Exxaro assisted Somshoko with its PSIRA registration and will pay for entry medicals and KBC Health and Safety Induction. "We will also supply the guards with their first uniforms and equipment such as torches and batons. To build business management capacity, we will sponsor three months' worth of accounting assistance, and supervision of the company's administration for a year," says Delia.

Thanks to Exxaro's total investment of about R400 000, Somshoko will have a firm footing in the security industry, regardless of Fairbreeze's future.

tf

de-bunking THE MYTHS

FALSE The Fairbreeze Basic Assessemnt Report (BAR) is a shortcut document that does not consider all the impacts of the mine on the environment.

TRUE The Fairbreeze BAR is neither a shortcut nor an inferior assessment process.

A BAR is a scoping and environmental impact assessment process collapsed into one and contains all the information necessary for the competent authority to make a decision on the application.

Over the past 10 years, Exxaro has received numerous authorisations based on the extensive specialist studies that have been done on the proposed Fairbreeze mining area.

Consequently, the majority of the impacts associated with the project have already been identified. Undertaking a full S&EIR process would have duplicated this work. Undertaking a BAR instead means that Exxaro could focus its effort on assessing the issues and including the cumulative impacts identified in the studies.

In addition to the past studies, the 2011 BAR includes 11 new specialist studies.

The assessment requirements for the BAR and full EIA processes are very similar.

Sweet progress at Hillendale

DURING JANUARY, 90 tonnes of seed cane was planted on Hillendale's rehabilitated dunes. "The planting of our first commercial-scale sugarcane crop is a major rehabilitation milestone for us," says Eben Scholtz, manager: technical services at KZN Sands. "And fortunately the rain arrived just when we needed it."

Rehabilitation at Hillendale is a three-stage process. By 15 January 2012, the following progress had been made with each of the stages:

Backfilling

Area mined	248,0ha
Area backfilled	172,3ha
Area backfill in progress	40,6ha
Mined area with infrastructure	13,9ha
Active mining area	35,2ha

Mix placement

Mix placement is at different stages on the backfilled dunes. The material is placed up to 1,5m deep and to date 140ha have been covered to varying depths with capping material.

Intermediate crop planting

Some 60ha of intermediate vegetation has been planted. The vegetation will be worked into the soil once it is ready. Called green manuring, the process provides organic material and nitrogen to the soil, and helps to stabilise and create good soil structure. The process is repeated until the soil is ready for the planting of certified seed cane.

Fairbreeze project update

IN OCTOBER 2011 the Department of Agriculture, Environmental Affairs and Rural Development (DAEARD) informed Exxaro that the **Fairbreeze Basic Assessment Report (BAR)** did not meet all DEARD's requirements for the document to be accepted. DEARD asked for clarification and further information. This entailed:

- Two additional specialist studies, namely traffic and agriculture.
- Peer reviews of the air quality and rehabilitation reports.
- An updated offset plan.
- Answers to a list of questions.
- Minor editing corrections.

The amended BAR will be sent out for public comment early this year and a comment period will be provided. All registered interested and affected parties (I&APs) will be informed of the review period. Copies of the documents will be available on the ACER website and at the Mtunzini and Gingindlovu libraries.

The Department of Water Affairs (DWA) has granted an amendment to the 2007 **Fairbreeze water use licence**. A notice of appeal has been lodged against this approval. The DWA has to respond and the appeal will be adjudicated by the independent Water Tribunal.