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Investing in our communities





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### **Foreword**

Communities are the lifeblood of our nation and rely on regional economic and social development to continue to provide a stable environment in which families can flourish and contribute to the fabric of South African society.

Mining is part of South Africa's past and future, contributing around 5%\* to the country's GDP. Mining been identified by the Limpopo provincial government as key to the future development of this region, responsible for an estimated 25% of provincial GDP.

Coal of Africa Ltd, which has coal prospects in Limpopo, has embraced the communities of this region. This engagement with us is part of the Company's contribution to further develop the province and its people.

## Commitment to training and education

The Company is committed to training and educating the local communities – this will help our people learn new skills, educate

\* Source: Reserve Bank quarterly bulletin Q12009

landowners about their rights and assist them to get the maximum benefit from their land.

The Thovhele Toni Mphephu Ramabulana Bursary Fund launched by Coal of Africa Ltd on 9 July 2009 has already provided 30 bursaries valued at R2.5m to young men and women from Limpopo. This bursary fund will make a significant difference to students from under-represented groups in the region, particularly those who may not have otherwise considered or afforded tertiary education. It will also help encourage more students to choose science-based subjects, which will improve the region's technical skills capacity.

The Company is committed, through its skills development plan, to contributing R160 million over five years for skills development, infrastructure development and community services in the Limpopo province. Through its mining operations, Coal of Africa Ltd will offer employment in the Mooiplaats, Makhado and Musina areas, alleviating some of the severe skills shortages and providing much needed income to families in the community.

### Commitment to our rich cultural heritage

Coal of Africa Ltd has demonstrated its awareness of the rich cultural heritage

in our Limpopo province, especially at Mapungubwe, by allocating approximately R1 million for heritage resources.

Coal of Africa Ltd has committed to involving the indigenous communities and other experts in identifying and assessing the cultural value of the area. The experts will record as many of the archaeological sites as possible to be revealed by the mining activities and assess these sites in terms of archaeological importance and then undertake appropriate mitigation. They have also committed to consult the local tribal community with regard to the relocation of any graves.

#### Supportive of the project

We salute Coal of Africa Ltd for its continued engagement with the communities due to its respect for local interests, cultures and customs and we commit to working with the Company to ensure responsible and valuable co-existence in Limpopo.

They have committed to sustaining partnerships with the community to deliver health, education and social initiatives – signifying its depth of commitment to the communities in which it operates. We are fully supportive of the project.

His Majesty, Khosi Khulu Toni Mphephu Ramabulana

"The consultation process has been excellent – the Coal of Africa Ltd team has the utmost respect for us as traditional leaders and the consultation process has been 100%."

His Majesty, Khosi Khulu Toni Mphephu Ramabulana

"Coal of Africa Ltd means everything to our community — although they haven't started mining yet, they have already done a lot in the area. An example being the recently launched bursary scheme in my name. We are the poorest of the poor, our rate of unemployment is high — this will help bridge that gap."

His Majesty, Khosi Khulu Toni Mphephu Ramabulana



# Making a commitment to our communities

This is our first community investment report, demonstrating our firm commitment to the communities in which we operate. Companies and communities should co-exist to mutual benefit. Our duty of care to our neighbours is linked to our operational business objectives and is an integral part of our approach to corporate responsibility.

Sustained investment in communities makes a positive difference and delivers tangible benefits to our business. Our community programmes help us to attract new talent, engage with our stakeholders and generate prosperity. We all have a stake in the health and vitality of our communities and this report demonstrates how we are making a genuine and lasting impact.

I welcome your comments and suggestions as we continue to develop our activities in this area. We are on a journey and this first report guides you through our approach to community investment. We will bring you details of our progress, through our website, and in later reports.





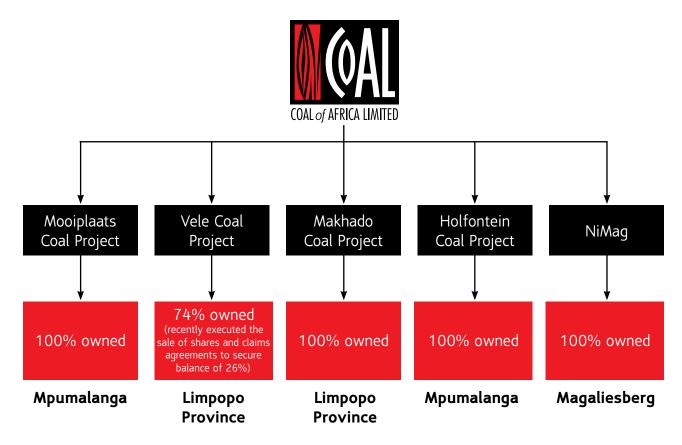






## Coal of Africa Ltd at a glance

#### **Organisational structure**





"We are very proud of the initiatives started by Coal of Africa Ltd – the mine will help empower our youth, create jobs for our communities and improve the infrastructure in the area."

C Mdaka, Executive Mayor, Makhado

Coal of Africa Ltd is an international coal mining company, primarily focused on the acquisition, exploration and development of thermal and metallurgical coal projects.



The Company's key coal projects, along with its leading metals processing company, Nimag Group (Pty) Ltd, are located in South Africa.

#### **Vele Colliery Project**

The Vele Colliery will be located approximately 48km west of Musina, adjacent to existing intensive agriculture on the Limpopo River bordering Zimbabwe. This coal project is planned to commence production in 2009. Coal of Africa Ltd owns 74% of the project and has recently executed the sale of shares and claims agreements to secure the balance of 26%. At full capacity, the opencast and underground mine will produce 5Mt per annum of semi-soft and hard coking coal.

#### **Makhado Colliery Project**

Makhado Mine is situated in the coal fields of Soutpansberg in the Limpopo Province.

This proposed opencast mine is wholly owned. Production of hard coking coal is planned for 5Mt per annum.

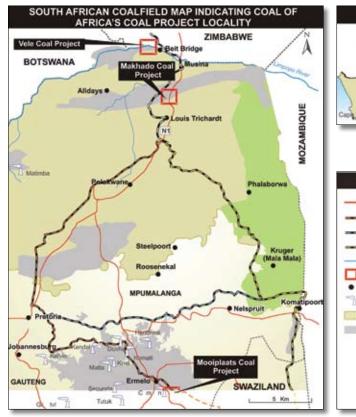
#### **Mooiplaats Colliery Project**

Coal of Africa Ltd's Mooiplaats Colliery is an underground thermal coal mining operation situated in the Ermelo coal fields of Mpumalanga, 1.7km from the Camden Power Station. The colliery started mining in November 2008. This underground operation is wholly owned and produces around 3Mt per annum of bituminous coal. Part of the bituminous product is targeted for exports via Richards Bay Dry Bulk Terminal and the balance will be supplied to Camden Power Station.

#### **Holfontein**

The Holfontein project is situated in the Secunda coal production area.









# Coal of Africa Ltd's commitment to environmental responsibility

As a leading mining company we take our environmental responsibilities seriously. We believe that superior environmental performance results in increased efficiency, lower risk and higher overall performance of our operations, and is critical in maintaining our licence to operate.



Coal of Africa Ltd is committed to spending R500 million over thirty years to ensure the highest levels of environmental and social performance.

The Company believes that by applying responsible management of all aspects of mining, it is possible for the mines, ecotourism and the communities to co-exist for the benefit of all parties and in response to the development needs of the region. Consequently, the Company has committed to plan, design, operate and close operations in a manner that enhances sustainable development and uses new, modern methods that are more environmentally sensitive than in the past.

The aim is to leave a surface which approximates the pre-mining aspect, slope and drainage density of the area. As the open pit is moved forward, rehabilitation will occur on the mined out areas. The Company will strive to limit the environmental impacts of operations through efficient use of natural resources and to reduce input materials such as water, electricity and waste.

The environmental processes, including the Environmental Impact Assessment (EIA) and Environmental Management Programmes (EMP) for Vele Colliery have been managed by highly qualified environmental/social practitioners and experts in their related fields.

The assessment process included a scoping phase, detailed impact assessments by independent specialists and extensive stakeholder consultation, all in accordance with the requirements of the South African Department of Minerals and Energy. In addition to complying with national regulations, Coal of Africa Ltd will always observe international best practice, in all its activities.

The resultant 2,000 page EMP document includes numerous independent expert reports covering impact assessments and mitigation measures on the following areas: soil and land use, biodiversity, surface water, ground water, air quality, noise, heritage and paleontology, visual impacts, effects of blasting and socio and macro economic issues.



Various rehabilitation measures will be taken to return the land to its original state after the project. The Company understands the uniqueness of the area and is committed to manage the mine in an environmentally sensitive way and in accordance with the vision of the proposed Transfrontier Conservancy Area (TFCA) project.

## Committed to environmental management

The Company is also committed to spending sufficient amounts to ensure minimal adverse impacts on the environment. Once the mine is operational, in excess of R18 million per annum will be committed to environmental management. Rehabilitation and revegetation, offset biodiversity programmes, dust suppression, rescue and relocation of protected fauna and flora, environmental monitoring and auditing will all form part of the ongoing programme. A further R160 million has been allocated over the first five years for skills development, infrastructure development and community services.





## **Environmental policy**

Coal of Africa Ltd is committed to:

- Sustainable business models for all stakeholders shareholders, employees, communities and the environment
- Compliance with all applicable environmental legislation
- Environmental best practice
- Adherence to first world standards
- Restoring and rehabilitating affected areas
- Establishing appropriate and effective mitigation measures
- Progressive and innovative programmes to minimise environmental impacts

## **Addressing communities' concerns**

In seeking to minimise any impact and deliver sustained benefits to the communities in which Coal of Africa Ltd operates, the Company is faced with a number of challenges. The key is to ensure engagement with and responses to local communities, enabling the operations to incorporate community feedback and expectations into decision making and business planning processes.

As part of Coal of Africa Ltd's application for new order mineral rights, the Company has engaged extensively with stakeholders to establish specific issues. Such engagement has been in a variety of forms, including individual and group meetings, consultative hearings, an open day and written correspondence.

The key issues identified include:

#### **Tourism**

A large number of individuals and groups benefit from the tourism potential of the Mapungubwe National Park and believe that ecotourism is more economically sustainable for the region than mining. They are concerned that the mine would be detrimental to the future plans for a Transfrontier Conservancy Area and that it could endanger the status of the World Heritage Site.

#### **Environmental**

Other concerns relate to the misperceptions of seepage, visual impacts, air quality, impact on flora and fauna. Opponents of the project are concerned that if one mine is allowed to operate other companies will apply for licences and the area will become industrialised. The potential for an independent power producer to build in the area is cause for further concern.

#### **Socio Economic**

Residents in Musina are concerned that the mine will attract migrant labour, with its concomitant problems such as crime, prostitution and overcrowding to the area.

"Given the prevalence of HIV/AIDS and related social issues currently faced by the communities of Musina, through comprehensive social and labour plans, Coal of Africa Ltd will provide extensive training and education programs to the communities of Limpopo."

Professor Ralushai, Anthropologist

"As a community we are thankful for the mine – this means jobs, bursaries and a better life for us all."

Lovemore Tshivhula, a member of the Tshivhula tribe



#### **Key issues and concerns**

#### **ISSUES/CONCERNS**

#### **RESPONSE**

The project will be detrimental to the environment which will become like Witbank with visual, lighting, air, noise, smell pollution.

Removal of huge green footprint.

Ecotourism will provide far better longer term sustainable contribution to the GDP of the area, than short term development.

Cumulative impacts: Mulilo Power Station, other coal mining activities will turn this into an industrial area. Joint EIA's requested for power station and coal mining as well as for transport.

Coal mining today is very different to what it was even five years ago. The methodologies used today take into account the environmental impact and Coal of Africa Ltd is committed to a host of mitigation measures (see Reducing the impact on the environment pg19) to ensure that the mine does not negatively impact on the surrounding area.

Coal of Africa Ltd has also changed the original mining plan to include underground mining to reduce the visible and surface impacts, and will mine roughly 40% of the coal volume from underground.

Rehabilitation will be done concurrent to mining and the open pit will not be larger than 50 hectares at any one time.

Coal of Africa Ltd believes that it is possible for the various ecotourism projects, the communities and the mine to co-exist in a way that benefits all. Coal of Africa Ltd is unaware of any valid studies that show that tourism can contribute anything like the positive impact of its projects. Coal of Africa Ltd's current land holding is in excess of 7,000 hectare and it is committed to improving both fauna and flora values on its owned properties.

The Company will come to an agreement with adjacent landowners to create animal corridors and has allocated land for increased gaming activity.

A number of prospecting rights for coal and other minerals have been granted in the area. Coal of Africa Ltd is unsure at this stage whether any or all of these rights will progress into mining developments and it is therefore not possible for the Company to comment on the activities of other commercial entities.

Similarly there is a potential for the establishment of a power station close to the Vele Colliery but the Colliery is not dependent on such a development.

The impact assessment associated with such a power station is the responsibility of Mulilo. Coal of Africa Ltd will continue to supply information to Mulilo relevant to this process, and any future developments that will take cumulative impacts into consideration.



Coal of Africa Ltd has not considered the world heritage status of Mapungubwe.

Coal of Africa Ltd takes its environmental responsibility very seriously. The Company understands the uniqueness of the area and intends managing the mine in an environmentally sensitive way and in accordance with the vision of the proposed Transfrontier Conservancy Area (TFCA) project.

At engagements with representatives from the TFCA, SANParks and DEAT it was confirmed that the Vele Colliery lies outside the Mapungubwe National Park (which houses the WHS), the TFCA and its associated buffer zones. This was confirmed by comparisons with published maps on these organisations' websites.

We believe that a Phase 2 expanded plan for the TFCA has been proposed, but Coal of Africa Ltd has not been formally consulted in this regard.

Nevertheless, the Company believes that it is possible for the various ecotourism projects, the communities and the mine to co-exist in a way that benefits all.

Coal of Africa Ltd wishes to draw attention to the fact that the criteria chosen for the nomination of Mapungubwe as a World Heritage Site (in the Unesco document), were based on four cultural heritage aspects.

In fact, it states that consideration was given at one time to exclude 'natural' areas; they were included for practical and administrative reasons.\*

Based on these criteria, Coal of Africa Ltd believes that no activities at the proposed mine should cause Mapungubwe to be removed from the World Heritage list.

Impact on plans for/threat to future TFCA area.

Coal of Africa Ltd takes its environmental responsibility very seriously. The Company intends managing the mine in accordance with the vision of the proposed Transfrontier Conservancy Area (TFCA) project.

A number of biodiversity offset programmes have already been identified which will be investigated further, once mining commences, in conjunction with the relevant stakeholders. This would have a positive impact on the conservation initiatives in the area.

Huge impact of increased transport on roads around and in Musina.

Coal of Africa Ltd is committed to providing assistance with the maintenance of R572 road. The plan is for transport to bypass the town and not go through it. The necessary upgrades of existing roads and construction of new roads have been considered in consultation with the Musina Local Municipality in order to minimise the impact on the Musina community.

Coal of Africa Ltd is studying the possibility of a future railway line or a conveyer system to transport its product.

Increased prostitution / crime.

The plan is to use local labour as much as possible, preventing an influx of new labourers. These employees will be accommodated in Musina with their families in a normalised and sustainable social environment. Coal of Africa Ltd's commitment to local sourcing of labour is evidenced by the selection criteria of its bursary scheme.

Programmes will include HIV/AIDS awareness training, voluntary counselling and testing.

Coal of Africa Ltd is mining Mapungubwe.

The western most extremity of the mining footprint is roughly 7kms away from the eastern most border of Mapungubwe. The mine is roughly situated 27.5km away from the Mapungubwe main entrance and the Mapungubwe Hill cultural site.

<sup>\*</sup> Source: http://whc.unesco.org

The mine and associated infrastructure will have a huge visual impact on the mine.

Extensive work has been done to determine the potential visual impact of the proposed coal mine on the Mapungubwe World Heritage Site. Limited visibility is expected within the Mapungubwe National Park. Visibility from Mapungubwe Hill is obstructed by high ground east of the hill. Cross sections of the area confirm this.

The mine will cause acid mine drainage that will not only impact on the Limpopo River, but also on downstream Ramsar site within the Kruger National Park.

The specialist work and analyses have shown that the potential for acid mine drainage is negligible as a result of the natural lithology of the area providing sufficient buffer capacity to counteract acid mine drainage from forming.

The main impacts are associated with the opencast mining, having a huge impact on biodiversity, land use and land capability. The mine should consider only underground mining.

The mining layout has been adapted to include underground mining over more than 50% of the area, thereby reducing the impact on existing land use significantly. This has resulted in only 8% of existing agriculture to be effected by the mining layout.

Rehabilitation will be done concurrent to mining and the open pit will not be larger than 50 hectares at any one time. Ultimately, Coal of Africa Ltd intends to acquire several thousands of hectares surrounding its mining activities and use this opportunity to improve the status of both flora and fauna.

Apart from the fact that a large portion of the mineral resource would be lost should only underground methods be employed, underground mining would result in surface discard and slurry facilities.

The mine would impact on the surface flow in the Limpopo River.

Specialist studies have shown that the mine would have less of an impact on the flow in the Limpopo River than existing agricultural activities. The main reason is the constant re-use and recycling initiatives that have been considered during the planning phase of the proposed mine, dramatically reducing the fresh water required.

Specific questions around protection of raptors and specialist report on birds.

Specialists and ecologists in the fields of small mammals, reptiles and other flora and fauna, as well as game farm management, met with contractors and Coal of Africa Ltd for a two day workshop to review the list of protected species and to develop an implementation action plan for the rescue requirements of each. The plan includes the manner in which rescue must be done (eg. seed collection, physical relocation), the destination of each species to be relocated, permit requirements and roles and responsibilities.

The mine will destroy the riparian forest and through that the habitat for a number of large avifauna species.

No opencast mining will take place within the 1:100 year flood line of the Limpopo River, which delineates also the riparian forest footprint. In fact, the specialist studies show that a very large portion of the riparian forest has been impacted / destroyed completely by agriculture. The current riparian forest along this portion of the river is in a bad state as a result of the agricultural activities and water abstraction. As part of the biodiversity offset programme, the rehabilitation of riparian areas will be investigated and implemented where feasible.

Coal of Africa Ltd has not approached all the Interested and affected Parties (IAP's).

Documentation is available which shows that all IAP's have either attended meetings or have been contacted regarding their queries.

# Major contributor to the South African economy

The proposed mine will contribute towards the economic development and wealth of Musina and surrounding communities in a number of ways including:

- Wages to be paid to employees and contractors (indirect benefit up to 28,000)
- Job creation at the mines during construction and operational phases
- Indirect job creation in Musina and the surrounding communities

- Royalties and taxes paid to government and municipality
- Financial support for community development through Coal of Africa Ltd's corporate social investment initiatives.

Coal of Africa Ltd's Vele Colliery will be a significant contributor to South Africa's GDP R2,1bn will be spent during construction and R9.7bn during the operational phase. The Company will invest close to R3 billion in the project, which in turn, based on external macro economic studies and the mine's maximum production potential of 5 Mt per annum of coking coal, could create in the region of 28 000 direct and indirect employment opportunities and according to socio-economic surveys conducted of Musina, each person supports on average six dependants. Letters of intent have already been signed with prospective customers for offtake agreements.

### Increase value of exports as a contribution to GDP

Given the significant potential for job creation, the future mine would be a major contributor to the growth of the South African economy and would also support the South African Department of Trade and Industry's drive to increase value of exports as a contribution to GDP.

At a proposed production rate of 10 Mt per annum Coal of Africa Ltd's operations could improve South Africa's balance of payments by R20 million per annum through import replacement and export earnings.

In addition to providing employment opportunities, Coal of Africa Ltd is committed to spending R85 million over a five-year period for Local Economic Development i.e. infrastructure projects, social investment, health and welfare projects and environmental projects.

The Company will contribute R70 million over an eight year period towards human resources development programmes i.e. skills development, career progression plan, mentorship plan and internship and bursary plans and local community CSI projects.



"The greatest challenge to the province of Limpopo is to eradicate poverty and develop its people by creating quality jobs.

Musina has historically benefitted from mining - creating new levels of economic development and employment. This dates back to 1906 during the times of the Musina Copper Mine. The unemployment rate in the area is one of the highest nationally and having Coal of Africa Ltd operating in the area would contribute towards the economic development and wealth of Musina and surrounding communities."

Professor Ralushai, Anthropologist

# Committed to maintaining cultural heritage of the area

Coal of Africa Ltd is aware of the rich cultural heritage which is centred mainly on the Citadel in Mapungubwe. The proposed mine will not be located within the Mapungubwe National Park, the Transfrontier Conservancy area or their associated buffer zones.

If archaeological sites are revealed by mining the Company will record and preserve the items, the Company will consult the local tribal community and apply for a permit under section 36 of the National Heritage Resources Act. Authorisation, in terms of the Human Tissues Act and regulation of the provincial department of health with regard to the relocation of graves, will be obtained, where necessary.

## Around R1 million will be spent on heritage resources

An archaeologist and palaeontologist will be employed on a retainer basis to monitor any new excavations for archaeological and/or palaeontological artifacts.

### Involving the indigenous communities

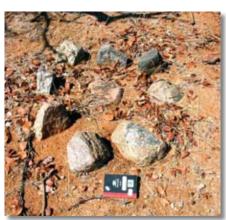
In terms of cultural heritage management, Coal of Africa Ltd has committed to involving the indigenous communities and other experts in identifying and assessing the cultural value of the area. Commitment has been given to recording as many of the archaeological sites as possible to be revealed by the mining, and assessing these sites in terms of archaeological importance and to undertake appropriate mitigation. The Company will also consult the local tribal community with regard to the relocation of any graves.

"We are proud of our rich heritage – Coal of Africa Ltd has already assured us that it will partner with us in terms of promoting our rich culture and heritage."

His Majesty, Khosi Khulu Toni Mphephu Ramabulana



Early Stone Age



Grainbin stand K2 sites

"There are a lot of benefits to this project – the rate of unemployment in the Limpopo province is extremely high –this mine means bringing food to the table. We are very excited and grateful to Coal of Africa Ltd."

Khosi Magadani, Chairperson of Tribal Council



Transitional K2 pottery



Mapungubwe pottery

## **Corporate social responsibility**

Given the low skills level in the area, through its skills development plan, Coal of Africa Ltd will provide training to the community through learnerships, vocational skills training and an Adult Basic Education Training programme.

The Company is committed to contributing R70 million over an eight year period towards human resources development programmes i.e. skills development (R25m), career progression plan (R5m), mentorship plan (R10m) and internship & bursary plans (R30m). The Company will also be implementing HIV/AIDS prevention, testing and treatment programmes for employees and contractors.

#### Addressing skills shortage in Limpopo province

Coal of Africa Ltd recently launched the Thovhele Toni Mphephu Ramabulana Bursary Fund in the Limpopo province.

This bursary scheme has been established to encourage more students to study courses at tertiary institutions, equipping them to consider a career in mining. The Company has, to date, invested R2.5 million in the scheme.

At the end of 2008, thirty students were awarded full bursaries from the fund in the fields of engineering, geology and science. Of the thirty students, fourteen are females and eighteen are males.

This bursary fund will make a significant difference to students from under represented groups in the region, particularly those who may not have otherwise considered or afforded tertiary education.

It will also help encourage more students to choose science-based subjects, which will improve the region's skills capacity.

The following criteria are used to select students:

- The candidate's field of study has to be mining related
- They should hail from the Vhembe district
- Candidates need to perform well in Mathematics, Science and English
- Applicants must have proof of admission at a preferred institution.

The increased commitment to training will address the skills shortage in the mining industry in the Limpopo Province and should provide a benefit to the communities in which Coal of Africa Ltd operates. The current shortage of skills in the economy is exacerbated by a shortage of qualified people in the scientific, engineering, geology and technological fields. Coal of Africa Ltd's core business relies heavily on the availability of skilled people in these sectors. This investment not only ensures that the Company has a pool of skilled resources for its own operations, but also contributes towards addressing the skills shortage in the country in general.

A skilled population will contribute to the economic success of the nation as a whole.



Beneficiaries of 2008 bursaries

"As the district council, we are very supportive of this project. Coal of Africa Ltd will be instrumental in creating jobs in this area. Local people should voice their support for the development of the mine – Mining is an important sector in Limpopo. This project will be important for towns like Musina and Makhado – helping them develop and grow."

Mr A Muvhumbe, Acting Mayor Makhado Municipality





#### **Beneficiaries of 2008 bursaries:**

- · Aluwani Matodzi
- · Dakalo Mathepe
- Elelwani Nethavhani
- · Elelwani Ranngu
- Foster Tshiluvhu
- · Hulisani Mudau
- · Kharendiwe Makongoza
- · Londani Mphaphuli
- Mashudu Monyai
- · Milingoni Rambuda
- Mpho Mango
- Mpho Mmbara
- Mulalo Mashamba
- Mulalo Radzilani
- Nangani Mugodo
- Ndamulelo Murodovha
- Ntakuseni Ndou
- Ntsundeni Tshilongo
- · Nyandano Matamela
- Nyawasedza Benedicta Makhuva
- Phathutshedzo Mudau
- Phathutshedzo Mukwevho
- · Prince Mukaswe
- Rofhiwa Rambiyana
- Strike Mudimeli
- Thembuluwo Muhanelwa
- Todani Sidimela
- Tshedza Netshivhungululu
- Vusani Tshivhandekano
- Wanga Tshihwela

#### **Universities:**

- Freestate University
- Nelson Mandela Metropolitan University
- Tshwane University of Technology
- University of Cape Town
- · University of Johannesburg
- University of Pretoria
- · University of Witwatersrand
- Vembe FÉT

#### **Courses:**

- Chemical Engineering
- Civil Engineering
- Construction Management
- Electronic Engineering
- Environmental Health
- Geology
- Industrial Engineering
- · Mechanical Engineering
- Metallurgical Engineering
- Mining Engineering



"The MQA gets very excited when a company takes human resource development as an important area of their strategy. The bursary scheme introduced by Coal of Africa Ltd in the Limpopo Province will make a huge impact in terms of skills development. Coal of Africa Ltd is addressing the skills shortages in the area and this bursary will help to alleviate poverty and create opportunities for young people in the area."

Mr Livhu Nengovhela, CEO MQA

"This bursary is not just about mining — it's about investing in the communities. This bursary will address the skills shortage in the area and will be a huge opportunity for the people with no funding to study further. 30 students have benefitted already — this really is just the beginning."

Mathumo Mapaya, TTMRBF Executive Trustee

## Co-existence examples around the world

Mining on World Heritage Sites has received much attention, with UNESCO engaging with mining, heritage and environmental organisations to discuss the impacts on the status of World Heritage Sites, and the challenges of coexistence. Following a workshop in September 2000, the following key principles underpinning the relationship between mining and World Heritage interests, were agreed:

- Protection of World Heritage integrity: all parties should be committed to the maintenance of World Heritage values and the integrity of the sites concerned, as defined under the World Heritage Operational Guidelines.
- Maximising benefits and minimising adverse impacts: mining activities should be designed to maximise economic, social and environmental benefits and reduce to the minimum, negative consequences or side effects within or beyond national boundaries; and also be committed to the equitable sharing of benefits. Activities associated with the establishment and management of World Heritage Sites should also aim to maximise social and ecological benefits and to minimise adverse ecological and social impacts.
- \*\*Respect for different value systems: it is important that commercial interests respect the value systems, conservation and World Heritage interests, and vice versa; and that both parties should respect cross-cultural values (such as those of indigenous peoples and other traditional communities).

- the sectors should be based on transparency, trust, timeliness and honesty, and should include early warning proposals for new nominations as well as for mining operations.
- Inclusiveness: all relevant local, national and international stakeholders should be consulted and involved from the earliest possible stage in plans for mining operations and in any plans to nominate World Heritage sites; partnerships should be built at various levels to help secure on-going involvement.
- Whole of life consideration: all aspects of mining operations, from preliminary exploration to closure and aftercare, should be covered by these principles.

Robust, adequately resourced

- institutions and processes:
  there should be clear processes and responsibilities in respect of areas of possible conflict. This requires appropriate regulations, security of tenure, effective World Heritage management capacity, enforcement, conflict resolution procedures, and the timely sharing of information. Where needed, systems should be established to build capacity within all stakeholder groups (industry, institutions, NGOs
- Best practice: all relevant activities should be characterised by the use and sharing of the best practice in respect of: science and technology, adaptive management, transboundary cooperation, assessment of societal benefits, stakeholder consultation, comprehensive risk assessment, and thorough emergency preparedness – all reflecting local environmental and circumstances.
- **Independent review:** all activities involving the parties should be open to independent review and reporting on performance without fear or favour.
- Acknowledgement of uniqueness: notwithstanding the above, every World Heritage site and every mining operation is different, and specific arrangements must be sensitive to this.



Mooiplaats Colliery shaft portal



## Examples of co-existence

#### Kakadu National Park\*

Kakadu National Park in Northern Australia was accorded its status as a World Heritage Site in 1981. Uranium deposits are situated within close proximity to it, with Ranger Mine owned by ERA, part of the Rio Tinto group, currently operating in the park.

Despite attempts by opponents to have the mine closed, UNESCO has not placed the site on its danger list as the mining activity does not pose a threat to the environment or traditional sites.

\* Source: UNESCO World Heritage www.energyres.com.au

Ranger Mine started mining on Pit No:1 in 1980 and completed mining of the resource in December 1994. The Northern Territory Government gave approval to mine Pit No:3 in May 1996, with mining commencing in 1997. In July 2009, approval was given for further exploration.

During the 1970's the mine faced a significant amount of resistance until an agreement was reached between the Australian Government and the Northern Land council (representing the traditional aboriginal land owners).

ERA has spent a significant amount on the mine's environmental systems.

- The Company completed construction of a laterite plant in 4Q 2008 at a cost of AUS\$44 million. This plant will treat stockpiled ore which cannot be processed through the existing mill circuit.
- In 4Q 2008 a radiometric sorting plant was commissioned at a cost of AUS\$196 million.
- More than AUS\$16.5 million was spent to more than double its pond water treatment capacity.
- AUS\$11.5 million was committed to upgrading the lime softening circuit to enable water treatment.
- The storage capacity of the tailings facilities was increased at a cost of round AUS\$29 million.

 As of 2009 the Company's tailings are to be pumped to the tailings storage facility, which allows for Pit 1 to be closed and rehabilitated, at an estimated cost of AUS\$17 million.

Ranger Mine, through ERA, is the dominant contributor to the Alligator Rivers Regional Economy. In addition, the Company has provided most of the infrastructure for the town of Jibaru, the main service centre for the Kakadu National Park. Ranger Mine's power plant also supplies power to Jabiru.

#### Richards Bay Minerals\* (RBM)

Richards Bay Minerals, a mineral sands producer, on the north coast of South Africa, jointly owned by Rio Tinto and BHP Billiton, is situated in a wetlands area, and has proved that co-existence is possible through responsible mining.

Since beginning mining in 1976, the Company has implemented an environmental rehabilitation programme to restore the mined dunes to their natural state in accordance with the guidelines of the Department of Water Affairs and Forestry. This ensures that, as far as possible, the plant and animal life, function and species composition in the mined areas will be similar to that in unmined areas. Before mining, around 60% of the lease area had exotic plantations, 20% coastal dune forests and the remaining 20% was covered by disturbed grasslands. The Company ensures that it does not mine along the coast to allow those dunes to serve as reservoirs for seed colonisation of mined areas.

Given that scientific studies have shown that the natural systems are able to cope with natural disturbances such as fire, trampling, floods and drought, it follows that it is possible for recovery after man made disturbances. In this instance, it is usually the intensity, scale and frequency of the disturbance that determines whether or not the site will be able to withstand the damage. Additionally, ecologists recognise the fact that nature will not continue without being disturbed in one way or another. As such, the focus has been on what mechanisms and processes are responsible for system recovery. which gives them the chance to develop conservation management policies to encourage the normalisation of the system if disturbed.

\* Source: www.rbm.co.za



#### **Rehabilitation Programme**

In the case of Richards Bay Minerals, the mining of sand dunes removes all forms of life and disrupts natural ecological processes. Accordingly, the Company's rehabilitation programme mimics the natural development of dunes as closely as possible, whilst also monitoring the progress and "correcting" their rehabilitation actions. The rehabilitation process aims to have one third of the land area being indigenous coastal dune forest, with the remaining two thirds revegetated with Beefwood to be used for the development of a charcoal industry.

Twelve to fourteen years after the initiation of dune rehabilitation, plant species such as the Natal mahogany, coastal red milkwood and white ironwood grow in the shade of the dune thorns. Within years 18 to 21 the sweet thorn species begin to die off, which leaves gaps where indigenous forest species grow. This is supported by seed dispersion through the monkeys and birds that move between unmined and rehabilitating areas. The rehabilitation of the dunes is supported by the development of animal communities, which colonise the rehabilitating dunes, as is natural.

Thus far, Richards Bay Minerals' rehabilitation programme has resulted in the development of habitats which closely resemble the site prior to mining activity. The sites are being used by the Company as an outdoor laboratory, which enables scientists to make the necessary corrections to the programme. Thus far, research findings lend credibility to the programme.

#### **RBM embraces Cultural Heritage**

Richards Bay Minerals is being mined in an area that had inhabitants dating back to some 3500 years ago. Richards Bay Minerals has formed a unique partnership with a team of archaeologists and local residents. What is being pieced together is a cultural history of the hunter-gatherers and first farmers of the region.

Richards Bay Minerals has established the Mananga Heritage Centre. Here user-friendly exhibits and fascinating artefacts, uncovered on the dunes, are displayed in three traditional thatched rondavels complete with authentic clay walls, and floors of polished anthill clay and cattle dung. This unique centre was the culmination of

work undertaken over several years by archaeologists and anthropologists of the Natal Museum and Amafa aKwaZulu-Natali.

Without the aid of the mining operations, any attempts to locate sites proved to be almost impossible. The mining operation requires the removal of vegetation and top soil, and means that archaeologists can literally walk onto exposed sites. Mining has provided the opportunity to uncover sites, which will otherwise be lost forever, as over time the biotically active dunes would render organic remains, such as bones and metal to dust.

The aims of the project are:

 To record as many sites as possible to be revealed by the dune mining

- To assess these sites in terms of archaeological importance and undertake appropriate mitigation
- To record and excavate material that may be used for archaeological and palaeo-environmental information
- To build a cultural history of the area.

## Kruger National Park: Palabora Mining Company\*

Kruger National Park is the largest game reserve in South Africa. It is now part of the Great Limpopo Transfrontier Park, a peace park that links Kruger National Park with the Gonarezhou National Park in Zimbabwe, and the Limpopo National Park in Mozambique. The park is part of the Kruger

\* Source: www.palabora.co.za whe.unesco.org







to Canyons Biosphere, an area designated by the United Nations Education and Scientific Organisation (UNESCO) as an International man-made Biosphere Reserve. UNESCO has not declared the Kruger National Park as a World Heritage Site.

Palabora Mining Company operates a highly successful underground block-cave mine, producing 30,000 tons per day of copper ore on the border of South Africa's largest eco-tourism attraction, the Kruger National Park. The impact of the Company's operation on the surrounding environment is therefore closely scrutinised by government, environmental groups, the South African National Parks Board and the local community.

Palabora uses current best practices in production scheduling and reconciliation, rehabilitation and maintenance of the footprint, roadway construction, oversize and hang-up treatment, loader efficiencies and dust suppression systems. The mine works 24 hours per day, 365 days per year.

#### **Environmental Programmes**

Environmentally, Palabora has extensive ongoing programmes in place to minimise the effects of sulphur dioxide emissions, greenhouse gases, dust and water pollution, as well as an on-site wild life management programme. Sulphur dioxide emission levels, as a result of copper smelting, have been reduced to an average 11 parts per

billion, in 2005, from 21 parts per billion in 2000. Since 1999, fresh water intake for operations has been reduced from 50 million litres to 21 million litres per day in 2005. The target for 2005 was 18 million litres per day. The Company has ISO 14001 environmental certification, and maintains a plan for eventual closure of operations, including management of social and environmental impacts, estimates of closure costs and financial provision, and consultation with local communities. The Company has been heavily involved with the activities of the Kruger to Canyons Biosphere and other conservation partners in the Lowveld.

In addition, Palabora Mining Company has made a register of all the artefacts found on

its premises in recent years, and has a long term target of creating a museum celebrating past mining endeavours. The Company plans to tie in with the Kruger National Park, which has its own tribute to the late Iron Age in the form of Masorini, 11km from Phalaborwa.

Palabora's aim is to prepare for closure in order to leave behind a safe and environmentally acceptable site and an economically self-sustaining community.

The financial provision in the rehabilitation fund as at 31 December 2008 was R314 million (current market value). A contribution of R6,52 million was made to the rehabilitation fund at the end of 2008 following approval from the DME.







# Reducing the impact on the environment: The Vele Colliery Project

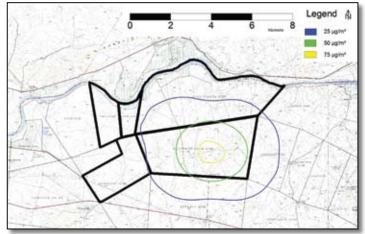
**Coal of Africa Ltd is** committed to various measures to reduce any impact the proposed mine may have on the environment. The **Company has looked** at all aspects in terms of: soil and land use, biodiversity, surface water, ground water, air quality, noise, heritage and palaeontology. visual impacts, effects of blasting and socio and macro economic issues.

#### **Air quality**

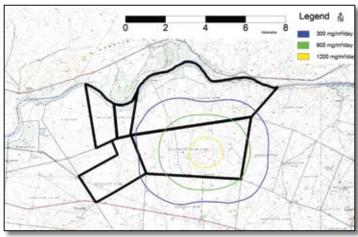
#### **Possible impact**

- Acceptable inhalable particle levels not exceeded over adjacent areas
- Dust fallout levels exceed targets set for residential areas, but not for industrial areas
- With effective stemming control, atmospheric dust is mostly contained to within about 200m of blasting

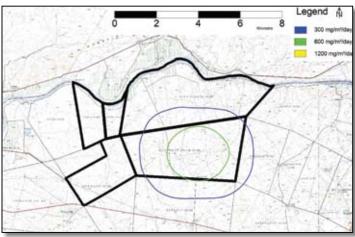
- Regular watering (haul and in-pit roads) and application of chemical dust suppressants (main haul road)
- Access road will be tarred
- Vegetation of permanent stockpiles and berms
- Use of a water spray system at transitional stockpiles
- Sprays at all transfer points
- Assess cladding of ROM and product stockpiles
- Vehicle speed on unpaved roads limited to 40km/hr
- Develop air blast control measures to limit dust from blasting
- Mitigation to reduce vehicle exhaust gas emissions
- Implementation of ambient air quality monitoring programme
- Regular monitoring of methane



Highest predicted daily average PM10 ground level concentrations without mitigation



Monthly dust deposition levels predicted at Vele site without mitigation

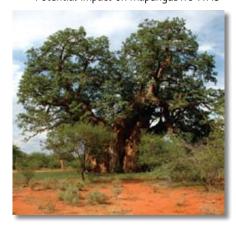


Monthly dust deposition levels predicted at Vele site with mitigation

#### **Biodiversity**

#### **Possible Impact**

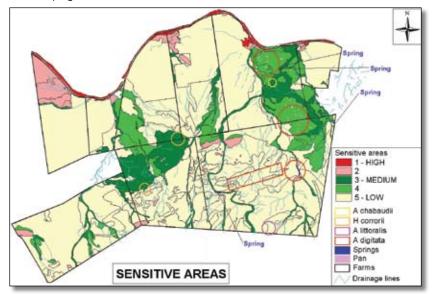
- 33 red data listed and legally protected species occur in area
- 116 baobabs counted, of which > 70% fall within development area
- Impact/modification of natural habitat
- Reduction in indigenous biodiversity resources/products
- Change in land use, mainly natural areas
- Alteration/disruption of normal movement routes or corridors
- Modification of hydrological processes and functioning of river systems
- Cumulative impact and increased pressure on sensitive riparian wetlands
- Degradation/destruction of springs and
   Degradation/destruction of springs and sp
- Change of aquatic biota and food webs
- Disturbances of wildlife on adjacent areas
- Potential poaching/theft of animals or plants
- Potential impact on conservation initiatives such as Limpopo-Shashe TFC A
- Potential impact on Mapungubwe WHS

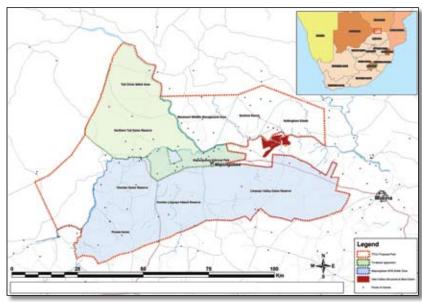




- Species rescue, relocation and reintroduction plan
- Harvesting of seeds from herbaceous and woody vegetation for rehabilitation
- Establish indigenous nursery (BEE project)
- Fencing of open cast and infrastructure areas
- Management agreement with adjacent landowners to create animal corridors
- Comprehensive environmental monitoring programme
- Environmental educational and awareness programmes

- Biodiversity offset programmes, eq:
  - restoration of degraded riparian wetlands
  - funding support for the Limpopo Valley Herb Project
- co-funding/improvement of conservation contribution of land and/ or land use activities within TFCA
- establishment of herbarium (Mapungubwe)
- support of other conservation initiatives, eg Ground Hornbill Research and Conservation Project





Vele Colliery - proposed TFCA park locality map

#### **Heritage**

#### **Possible impact**

- Early Stone Age and Middle Stone Age material noted at various places – obscured Stone Age deposits exist in the development area
- Sites recorded: potential for degradation
  - One late Stone Age hilltop, but no rock art
  - One early Iron Age (AD 500 750)
  - 10 K2/Mapungubwe
  - 1 Khami period (AD 1400 1820)
- Due to natural topography archaeological population density is much lower than in the west in Mapunqubwe core area
- Saline springs present probably used for salt making in the past; potential for degradation
- Commercial farming has destroyed archaeological sites on floodplain
- Potential impact on Mapungubwe WHS



Khami pottery



Early Iron Age pottery

#### **Committed measures**

- Iron Age sites are fairly common and similar sites are protected elsewhere. Their scientific significance is important to explain population densities and distribution patterns during Iron Age. Extensive recording is recommended to add new knowledge and value to research done in the Mapungubwe core
- No significant concentrations of exposed Stone Age material have been found.
   When topsoil is being stripped prior to mining, a systematic assessment of Stone Age material exposed should be conducted
- Heritage educational and awareness programme
- Comprehensive heritage monitoring programme during operational phase

#### **Noise**

#### **Possible impact**

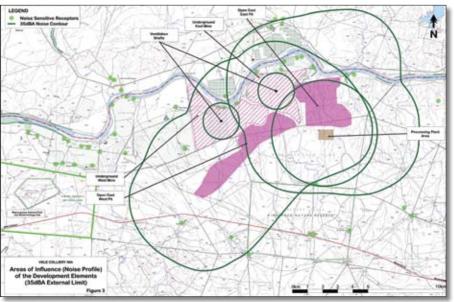
- Core area is rural and very quiet
- Noise sensitive receptors include game farms, and game and nature reserves
- · Wind will affect transmission of noise
- Thick vegetation will result in reduction of noise over distance

The overall noise impact of the operational phase of the project is shown in the figure below. The 35dBA ambient noise contour

demarcates the outer limit of influence according to SANS 10103 (standard for rural areas).

Noises from the colliery will be heard at times well beyond the indicated positions of the respective 35dBA contours, namely under certain meteorological conditions (eg wind, early morning air density, inversion layer) and from single short-term events (eg blasting).

- Use of low noise fans at ventilation shafts – tender requirement
- Tree screening around plant area to reduce noise levels
- Noise suppression devices on heavyduty vehicles – contract requirement
- Cladding of generator sets/low noise generator sets will be used
- Use of rubber vulcanised conveyor belts
   less noisy/vibration
- Noise attenuation berms around opencast pits (also serve as stormwater/highwall drains)
- High noise activities, such as blasting, at regular times, restricted to 08h00 to 16h00
- All plant, equipment and vehicles to be kept in good repair
- Introduction of best practice in relation to industry noise reduction



Noise profile

## Socio and macro economic

#### Social variables/impact

- Quality of living environment
  - strain on infrastructure
  - impact on housing availability
  - change processes and impacts related to daily movement patterns
  - influx of job seekers and possible increase in crime, infrastructure and operational safety, and health impacts
- Family and community impacts
  - demographic changes composition of population
  - conversion of land use
  - relocation of land owner individuals, families and labourers
- Institutional, legal, political and equity impacts
  - capacity building
  - gender relations
  - impact equity
- Sense of place

#### **Committed measures**

- Provision of infrastructure and housing on site for construction workforce
- Assistance with maintenance of R572 road into Musina
- Implement projects identified and included in Social and Labour Plan
- Facilitation of housing development for external workforce
- A transparent recruitment drive aimed at locals, including existing SMMEs and notably HDSAs
- Skills programmes to equip workforce (mining-related and portable)
- Investigate and finalise alternative transport methods
- HIV/AIDS and health related awareness programmes
- Bursary opportunities to build skill capabilities in the region
- Design and implement economic development programmes

- Minimise surface areas through planning of infrastructure lay-out and mine method alternatives
- Communication and consultation with adjacent land owners to address impacts and grievances
- Participation in projects adding value to conservation and tourism
- Adopting principles of good corporate citizenship focused on conservation of natural resources such as water, biodiversity, etc
- Consult with regional stakeholders on mine closure plan and rehabilitation programme
- Facilitate access to jobs and new housing for local farm labourers
- Establish a consultative forum with concerned groups to raise concerns; find possible committed measures for perceived impacts and monitor implementation and effectiveness

#### **Economic variables/impacts**

- Positive impact on Gross Domestic Product of district, province and country
  - every rand invested in Vele Colliery produces a greater contribution to overall GDP than average rand invested in RSA economy
- Employment within district, province and country
  - slightly fewer jobs (3.1), per rand million invested, as compared to national average (4.5) due to capital intensive nature of mine
- Impact on agricultural activities and game farming
  - reduction in agriculture and game farming GDP – employment will be less than contribution to be made by Vele Colliery
- Impact on tourism activities
  - reduction in tourism GDP and employment less than contribution to be made by Vele Colliery
- Replacement cost of environmental functions



#### Soil and land use

#### **Possible impact**

- Opencast mining disturbance of the various facets of the existing soils, land capability and land use
- Underground mining limited/no disturbance

#### **Revised mining plan**

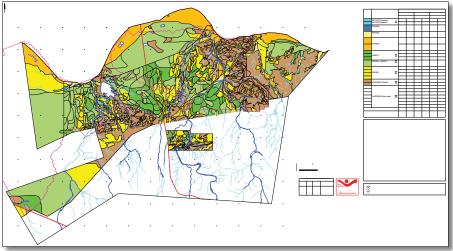
- Combination of opencast and underground mining
- Significant reduction of impact on existing agricultural land
- Only 8% of total surface area impacts agriculture (161 ha)
- Co-existence of mining and agriculture

#### **Committed measures**

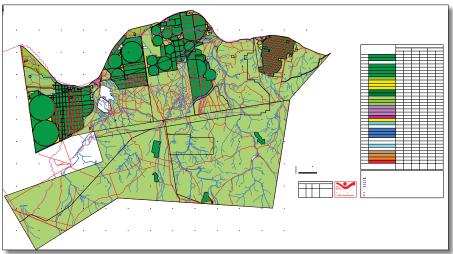
- Detailed rehabilitation plans to be developed with final free-draining profile
- Stripping of all available topsoil for use in rehabilitation
- Post-mining land use to reflect initial land use capability as far as practically possible
- Rehabilitated areas to be revegetated as soon after topsoiling as possible
- Indigenous grassland species preferred for revegetation
- Vegetation (predominantly Mopani trees) will be removed prior to topsoil stripping, chipped and composted for rehabilitation
- Irrigation will be required to re-establish vegetation before rainy season
- Soil analysis to provide corrective fertilisation regimes to facilitate vigorous plant growth
- Erosion control measures to be implemented where necessary

#### **Total surface impact**

	Hectares
Opencast mining	1835
Plant infrastructure	62
Underground infrastructure	16
Other	60
TOTAL	1973



Pre-mining land capability



Present land use

### **VELE COLLIERY PROJECT – VIEWSHED PLANS**

#### **Visual impact**

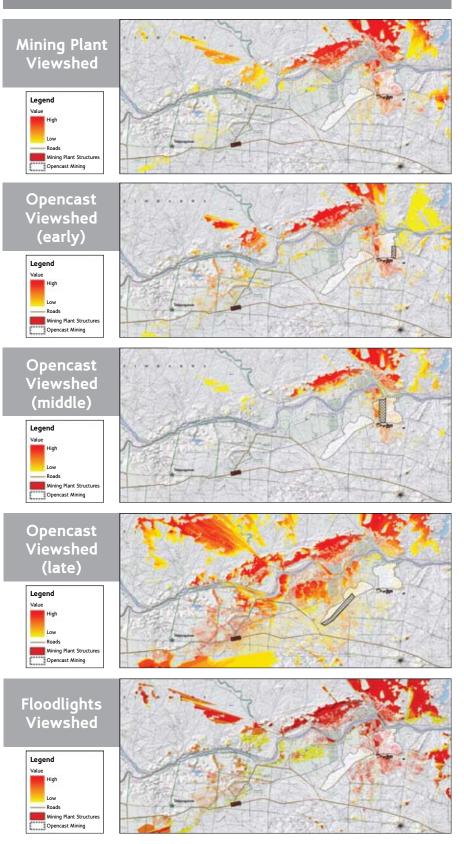
#### Viewshed analysis

Individual viewshed analysis has been undertaken for:

- At processing plant area
- At three stages in mining schedule
- High mast lighting

The mining plant and eastern pit area are less visible than the western pit. The 30m high lighting masts have more exposure than any other component. Exposure at night is a concern, especially if lighting sources are directed horizontally towards viewers.

- Plant infrastructure kept to max height 20m
- Introduce landscaping measures e.g. vegetating berms
- Avoid unnecessary removal of vegetation during construction
- Avoid use of highly reflective material in construction
- Metal surfaces painted in natural soft colours that blend into environment
- Use shielded or directional luminaries that focus beam downward
- Introduce tree screening around plant area to reduce visibility
- Rehabilitation concurrent to mining to minimise open, unrehabilitated areas
- Introduce dust suppression to reduce visual impact



#### Water

#### Possible impact - yield

- Abstraction from Limpopo River will be similar to or less than current
- Opencast mining will intersect streams flowing northwards
- Pollution of surface water could occur in plant area
- İmpact on surface water runoff estimated at 0.002% of Limpopo River mean annual flow
- Mining will not affect alluvial Weipe and Onverwacht aquifers
- Mining could result in inflows into mine workings due to:
  - leakage from overlying secondary aquifers
  - seepage from the Limpopo River via faults
  - interception of natural groundwater flow through coal

#### Possible impact - water quality

- Rock overburden and coal discard will be deposited in open pits during mining
- Seepage through residue material will remain in pits and be pumped out during mining
- Leachate volume by rainfall through waste rock expected to rise to 1800 m3/d, with total leachate of 2700 m³/d due to groundwater inflows
- Pumping of leachate from pits expected to peak at 2200 m<sup>3</sup>/d, and will decline, once mining of east pit is terminated and pit starts to refill
- Sulphate concentrations of leachate when mixed with groundwater inflows will be reduced to 1200 mg/l
- Background groundwater has a median sulphate concentration of 570 mg/l, with peaks of over 5000 mg/l
- Acid-base accounting (ABA) shows sufficient carbonate material exists to neutralise acid

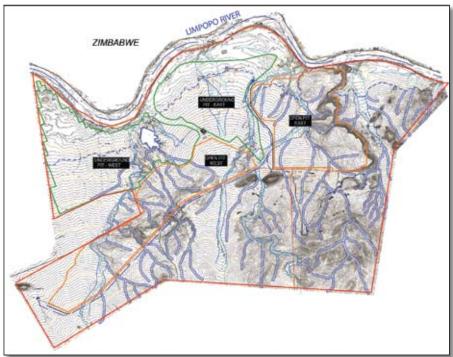
#### **Water balance**

Water balance graph shows potential maximum shortfall over lifespan of mine totals 3 400 m³/day

- Residue material will be deposited in open pit
- Rehabilitation will be concurrent with mining, minimising potential to oxidise sulphate bearing rocks and controlling migration of high sulphate leachate
- Potential acid generating horizons will be placed at bottom of pit, submerged below water table, preventing oxidation
- Stockpiling and exposed residue material will be minimised by direct placement of overburden and topsoil
- Grass cover will be re-established, as soon as possible after topsoiling to minimise infiltration of water through residue material
- Clean storm water is diverted around open pits and plant area
- All contaminated runoff generated will be contained in lined dirty water dams and used as process water, for dust control in pits and along haul roads







Stormwater management

## Frequently asked questions

#### Won't the Vele Colliery be detrimental to the aesthetics of the area with visual, lighting, air, noise and smell pollution?

Sustainable development is an integral part of our business. Coal mining today is very different to what it was even five years ago. We use the latest technologies and practices for sustainable and modern mining methods, offering efficiencies, improved productivity and regulatory compliance.

The methods used today take into account the environmental impact of the mine. We are committed to a host of mitigation measures to ensure that the mine does not negatively impact on the surrounding area. An amount in excess of R18 million is committed per annum to minimise the environmental impacts. This will include:

- rehabilitation and revegetation
- offset biodiversity programmes
- dust suppression
- rescue and relocation operations for protected fauna & flora species
- staff to oversee the indigenous nursery and the rehabilitation, and specialists to assist with rescue operation / revegetation programme
- environmental monitoring and auditing

There have been a number of reports about the mine being located in the Mapungubwe National Park (which houses the World Heritage Site of Mapungubwe Hill) and the Transfrontier Conservancy Area (TFCA)?

Despite recent media reports to the contrary, the proposed Vele Colliery is not located within the Mapungubwe National Park (which houses the World Heritage Site of Mapungubwe Hill), nor in the Transfrontier Conservancy Area (TFCA) project nor in their associated buffer zones.

This has been confirmed by representatives from the TFCA, SANParks and the Department of Environment and Tourism and has been checked against published maps on these organisations' websites.

The Vele Colliery will be located approximately 48km west of Musina, adjacent to existing intensive agriculture on the Limpopo River bordering Zimbabwe.

The Vele Colliery is the first step down a road that will lead to the destruction of the area; won't the Mulilo Power station and other coal mining activities turn this into an industrial area?

A number of prospecting rights for coal and other minerals have been granted in the area.

It is unsure at this stage whether any or all of these rights will progress into mining developments and it is therefore not possible for Coal of Africa Ltd to comment on the activities of other commercial entities.

While there is potential for the establishment of a power station close to the Vele Colliery, Coal of Africa Ltd is not dependent on such a development.

## What about the world heritage status of Mapungubwe – will the proposed Vele Colliery threaten this status?

Coal of Africa Ltd takes its environmental responsibility very seriously. The Company understands the uniqueness of the area and intends managing the mine in an environmentally sensitive way. The Company has also initiated a number of programs that will balance out the effects of the Vele Colliery.

Mapungubwe National Park was declared a world heritage site by UNESCO because it fulfilled four 'heritage criteria'. In fact, it was considered at one time that the 'natural' areas be excluded and they were included for practical and administrative reasons only.

Based on these criteria, Coal of Africa Ltd believes that no activities at the proposed mine should cause Mapungubwe to be removed from the world heritage list.





#### Surely ecotourism will provide a far better, longer term, sustainable contribution to the GDP of the area, than short term development?

Coal of Africa Ltd believes that it is possible for the various ecotourism projects, the communities and the mine to co-exist in a way that benefits all.

Coal of Africa Ltd has agreed with adjacent landowners to create animal corridors and have allocated land for increased gaming activity.

## What about the damage that will be done to the environment including the Limpopo River?

Rehabilitation will be done concurrent to mining and the open pit will not be larger than 50 hectares at any one time. Coal of Africa Ltd has also changed the original mining plan to include underground mining to reduce the visible and surface impacts, and will mine roughly 40% of the coal volume from underground.

Specialist studies have shown that the mine would have less of an impact on the flow in the Limpopo River than existing agricultural activities.

Coal of Africa Ltd has committed to recycling initiatives that will dramatically reduce the fresh water required by the project and specialist work and analyses has shown that acid mine drainage will be negligible to the Limpopo River and further down the river to the Kruqer National Park.

## Having a coal mine in the area will surely have a negative impact on the road system?

Coal of Africa Ltd has committed to assisting with the maintenance of the R572 road, although it is planned that coal transport trucks will bypass the town of Musina instead of going through the town.

The necessary upgrades of existing roads and construction of new roads have been considered in consultation with the Musina Local Municipality in order to minimise the impact on the Musina community.

Coal of Africa Ltd is looking at the feasibility of a rail link to transport its product.



#### With a new coal mine in the area surely people will flood to Musina increasing the crime rate and prostitution?

Coal of Africa Ltd will use local labour as much as possible, preventing an influx of new labourers. All employees will be accommodated in Musina with their families in a normalised and sustainable social environment. Programmes will include HIV/AIDS awareness training, voluntary counselling and testing.

#### I have heard that the coal mine will endanger a number of bird species including raptors, is this true?

A two-day workshop was held recently to develop a rescue, relocation and reintroduction plan for any birds which may be affected by the proposed Vele Colliery. A number of specialists were invited to attend to participate in developing a detailed implementation action plan for all the identified protected species.

## Why doesn't the mine consider only underground mining?

The mining layout has been adapted to include underground mining over more than 50% of the area, thereby reducing the impact on existing land use significantly. This has resulted in only 8% of existing agriculture being affected by the mining layout.

Rehabilitation will be done concurrent to mining and the open pit will not be larger than 50 hectares at any one time. Apart from the fact that a large portion of the mineral resource would be lost should only underground methods be employed, underground mining would result in surface discard and slurry facilities, which would have a greater impact on the environment than an opencast mine.

## Will the mine destroy the riparian forest and through that the habitat for a number of large avifauna species?

No opencast mining will take place within the 1:100 year flood line of the Limpopo River, which delineates the riparian forest footprint.

The current riparian forest along this portion of the river is in a bad state as a result

of the agricultural activities and water abstraction. As part of the biodiversity offset programme, the rehabilitation of riparian areas will be investigated and implemented where feasible.

#### How is Coal of Africa Ltd demonstrating its commitment to the protection of the Mapungubwe World Heritage Site?

Coal of Africa Ltd's mining plan has been set up in such a way that it is environmentally "friendly". Including underground mining will reduce the visible and surface impacts, and will mine roughly 40% of the coal from underground.

The viewshed analyses show that the impact on the heritage site and national park will be low. This is mainly as a result of careful placement of the plant area, as well as restricting the height of the plant infrastructure to 20m.

The mine is being designed to have limited visibility to surrounding tourism areas. One of the farms that have been purchased by the Company has an active lodge on it, and we intend for it to continue operating during our mining activities.

Coal of Africa Ltd has purchased land at its Makhado project which has substantial game on it, and plans to relocate this game to the Vele project area to supplement current herds in the area. Local conservation initiatives will also be supported.

The Company has committed to spend R500m over 30 years to ensure the highest levels of economic and social responsibility.

A detailed environmental monitoring programme will be implemented, including air quality (dust outfall), noise, methane, surface and groundwater monitoring and a detailed rehabilitation plan will be developed for the mining area, with the intention of restoring the mining area back to natural areas suitable for conservation and/or hunting purposes in the long-term.

# UNESCO requires that as a mining company operating close to a World Heritage Site, you should maximise the benefits of the site and minimise adverse impacts. How are you doing this?

Coal of Africa Ltd will be a major contributor to South Africa's GDP – R2,1bn during construction and R9.7bn during operational phase. The initial capital investment in the mine will be R3bn. Letters of intent have been signed with prospective customers for offtake agreements. It is anticipated that sales of coking coal could replace coal currently imported from Australia - benefitting South Africa's balance of payments.

The contribution to employment means that both directly and indirectly, 13,958 people will be advantaged during construction and 39,822 will be advantaged when the mine is operating.

In addition to providing employment opportunities, Coal of Africa Ltd is committed to spending R85 million over a five-year period for Local Economic Development i.e. infrastructure projects, social investment, health and welfare projects and environmental projects.

The Company will contribute R70 million over an eight year period towards Human Resources Development Programmes i.e. skills development, career progression plan, mentorship plan and internship and bursary plans and local community CSI projects.

#### Mapungubwe is a Cultural World Heritage Site. How is Vele dealing with the area's cultural heritage?

Coal of Africa Ltd is aware of the rich cultural heritage which is centred mainly on the Citadel in Mapungubwe. The mine will be situated at least 7km outside the Mapungubwe park and 27.5 km away from the Citadel. However, if archaeological sites are revealed by mining the Company will

record and preserve the items. The Company will consult the local tribal community and will apply for a permit under section 36 of the National Heritage Resources Act, or by authorisation in terms of the Human Tissues Act and regulation of the provincial department of health with regard to the relocation of graves.

Around R1 million will be spent on heritage resources. An archaeologist and palaeontologist will be employed on a retainer basis to monitor any new excavations for archaeological and/or palaeontological artifacts.

