

4 CASE STUDY: TRANSVAAL AND DELEGOA BAY COLLIERY, WITBANK, SOUTH AFRICA

4.1 Introduction

4.1.1 Overview

This case study concentrates on the public participation undertaken as part of a rehabilitation planning exercise for the old Transvaal and Delegoa Bay Colliery located near Witbank in South Africa. The process was undertaken by an independent professional team led by Envirogreen Consulting working closely with the Department of Minerals and Energy and the Department of Water Affairs and Forestry. A range of innovative techniques, described below, were used to involve the public in the process and raise awareness of the dangers associated with the site.

This case study is based on a review of project literature as well as interviews with a cross section of stakeholders involved in the process. It provides a description of the project and overview of its policy and legislative context, a description of the environmental assessment and public participation process and an analysis of key aspects of the public participation process. Details of the references consulted and interviews are included in the final references section of this chapter.

4.1.2 Project Description

The Transvaal and Delogoa Bay Colliery (T&DB Colliery) is located north-west of Witbank, Mpumalanga, South Africa. The mine commenced operations in 1896 and was officially closed in 1953. After the closure of the mine, many areas of the mine collapsed and subsided. This resulted in a combination of problems, including acid mine drainage and spontaneous combustion giving rise to further subsidence and air pollution. Although many of the old mine shafts were capped and sealed, the majority of these seals have failed or have been removed, accelerating spontaneous combustion of the coal.

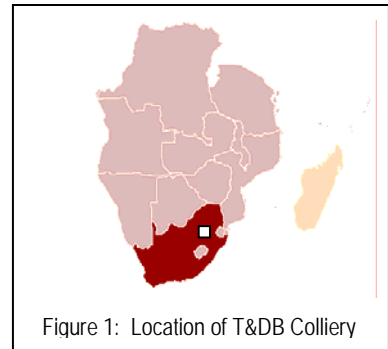


Figure 1: Location of T&DB Colliery

The condition of the site has prevented expansion of the town of Witbank to the north of the T&DB Colliery and the land is also unsuitable for agricultural purposes.

The towns of Kwa-Gukwa, Hlahlanikahle and Vosman are situated to the west of the area. These towns comprise a mixture of formal housing and informal settlements. The area is a low income area. Many people living in these areas are dependent on public transport or people walk to work. People walking to work traverse the T&DB site daily en route to Witbank and the Ferrobank Industrial area, exposing themselves to considerable health and safety risks, as footpaths pass over undermined ground and through burning areas. People scavenging for coal on discard dumps are also exposed to risks.

Various measures have been undertaken over the years in an attempt to address problems associated with the mine site. These have included stormwater bypass channels, the commissioning of a wastewater treatment works to treat acid mine drainage and efforts to extinguish the fires on site. Various investigations were also commissioned in the mid 1990s.

In 1998, the Department of Minerals and Energy (DME) and the Department of Water Affairs and Forestry (DWAF) jointly commissioned Envirogreen Consulting, a mine rehabilitation company, to investigate and design potential rehabilitation measures for the entire site.



4.1.3 Legislative Context

The study was initiated by DME and DWAF in the context of a number of Acts, including:

- The Constitution of South Africa;
- The National Environmental Management Act 107 of 1998 (NEMA);
- The National Water Act 36 of 1998; and,
- The Minerals Act 50 of 1991.

The T&DB mine is deemed to be ownerless and thus the State is obliged in terms of this legislation to ensure that the problems associated with the site are remedied. In addition, the public must be informed and provided with the opportunity to participate and make meaningful input.

The Constitution of South Africa

Section 24 of the Constitution states that everyone has the right to an environment that is not harmful to their health or well-being and that the Government is required to act reasonably in order to protect the environment by preventing pollution, while promoting conservation and sustainable development, as well as building society and the economy.

National Environmental Management Act (NEMA) 107 of 1998

Section 24 (1) of this Act requires that any activities that require authorisation or permission by law and that may significantly affect the environment, socio-economic conditions and cultural heritage, must be considered, investigated and assessed prior to implementation¹.

Section 28 relates to environmental hazards and the “responsibilities of persons to address rehabilitation of land upon which activities have had a negative impact on the environment”. In section 28 (3), it states that measures must be taken to:

- Assess, investigate and evaluate the impact on the environment;
- Contain or prevent the movement or the causant of pollutants; and,
- Remedy the effects of the pollution or degradation.

National Water Act 36 of 1998

Section 19 of the Act places an obligation on a person who owns, controls, occupies or uses land to take measures to prevent pollution of water resources.

Minerals Act 50 of 1991

In the context of the Minerals Act², mining companies are obliged to:

- Ensure the safety and health of persons; and,
- Rehabilitate the surface of the affected land.

The Act states that mining companies must develop an Environmental Management Plan Report (EMPR). The report has to set out a description of the mining activity as well as the manner in which impacts will be managed. Rehabilitation of the mine, which is an integral part of the EMPR, must be carried out throughout the mining process and after closure. Failure to comply would be considered a direct contravention of the process as set out in the Minerals Act.

Mines are also obliged to disclose information to the public, particularly if a serious public safety or environmental risk exists.

Civil Society Participation

Regulatory provisions providing a broader environment conducive to public participation include constitutional provisions. Access to information is provided for in Section 16 (1) (b) of the 1996 Constitution. The Constitution also places an obligation on the state to assist stakeholders in their quest to obtain information. The right to information was further cemented in the promulgation of the Promotion of Access to Information Act 3 of 2000 and with particular reference to mining, in section 30 of the Mineral and Petroleum Resources Development Act 28 of 2002.

¹ Government Gazette No. 19519, Section 28.

² Minerals Act No. 50 of 1991, May 1991.

Access to participation is also ensured in the Environmental Impact Assessment Regulations, the Environment Conservation Act and the National Environmental Management Act 107 of 1998.

4.2 Rehabilitation And Public Participation Process

4.2.1 Rehabilitation Investigations

The approach to investigating and designing potential rehabilitation measures comprised a three-phased approach³. The three phases were:

- Phase 1: Preliminary investigations and strategic assessment of various rehabilitation options from which technically feasible options were selected. The initial activity was undertaken between 1999 and 2001. Various short term measures that would yield immediate benefits were also identified;
- Phase 2A: Detailed investigation and design of the short term measures that could be implemented. Further investigation of the technically feasible rehabilitation options to confirm their viability was also completed. These activities were undertaken from 2001 to early 2003; and,
- Phase 2B: Implementation of short term measures, site-based test work and a focussed public awareness campaign. The short term measures that were implemented in 2003 and 2004 included:
 - Construction of storm water controls to reduce the inflow of storm water to the site;
 - Upgrading and construction of safe access pathways across the site; and,
 - Construction of trenches and berms to control access to the site and channel pedestrians to safe routes.

The next phase of the project will include the implementation of the long term Strategic Rehabilitation Plan for the T&DB site.

Public participation was undertaken throughout the project. The participation process can broadly be divided into two stages, Stage 1 covering Phase 1 and 2A and Stage 2 largely covering Phase 2B.

4.2.2 Public Participation Process

The objectives of the public participation process were to:

- Provide stakeholders with information about the project;
- Provide stakeholders with the opportunity to raise issues and concerns, as well as contributions for mutual benefit for the successful rehabilitation of the site;
- Establish channels for ongoing consultation and feedback with local communities; and,
- Raise community awareness concerning the safety and environmental health hazards associated with the site.

³ Draft Proceedings of a Public Meeting, 24 April 2003.

The following methods were used during Stage 1 and Stage 2 of the public process:

- Small group meetings;
- Public meetings;
- Key stakeholder workshops and brainstorming sessions;
- Distribution of information material throughout the project;
- Information days including presentation of a play and school activities such as wall painting; and,
- Surveys.

a) Stage 1

A two-tier approach was taken to stakeholder involvement:

- Focused stakeholder consultation comprising continuous consultation and information dissemination to communities; and,
- Broader stakeholder involvement entailing periodic feedback to the broader stakeholder base.

Over 400 stakeholders were identified and invited to participate in the process. A group of key stakeholders was also identified. Information documents were produced in English and distributed to a broad range of stakeholders. Documents were also left in public places such as libraries, clinics and council offices. Media advertisements were placed and announcements made on local community radio stations.

The following activities were undertaken:

- Pre-consultation small group meetings were held at the start of the project with representatives of various community based organisations in the language of choice of the participants. The meetings aimed to:
 - Generate information on the perceptions of the proposed process and the rehabilitation of the site;
 - Identify underlying issues and concerns; and,
 - Ensure the buy-in and commitment of all parties.
- Four public meetings were held in Witbank between 1999 and 2001. At these meetings, people were informed of the investigations underway and given the opportunity to comment on the options and the work that was planned.
- Two brainstorming sessions were held with key stakeholders in July and November 1999. Proceedings were sent to all participants as well as those who requested them. Stakeholders were given the opportunity to comment on the proceedings and the process.
- A Draft Scoping Report was produced that documented the issues and concerns about the site. Issues included concerns about the physical safety of people crossing the site due to subsidence and fires, as well as the presence of criminals on the site. A public meeting was

held in September 1999 to discuss further issues related to the Draft Scoping Report. A Final Scoping Report was produced thereafter. A letter of acknowledgement was distributed to those who commented.

- Feedback reports on the progress of the project were sent to all stakeholders and relevant documents were distributed for comment at key milestones in the project. Fact sheets were also distributed to local communities, people working on the site and those crossing the site.
- Stakeholders expressed the need for a forum of stakeholders to address issues related to awareness creation and education. Following a number of meetings regarding the nature and representivity of the forum, the Kwa-Guqa Environmental Forum (KEF) was formed in July 2001 to facilitate, promote and oversee the protection of the environment within the area. The provincial Mpumalanga Department of Agriculture, Conservation and Environment (DACE) and the national Department of Health assisted in the formation of the forum.

b) Stage 2

Once work on the short term measures had commenced on the site, DME, DWAF and the project team recognised that public participation and awareness raising needed to be increased. A detailed public awareness campaign was consequently initiated. It was an ongoing process that included the following activities:

- Further investigation of the stakeholders in the area and identification of new role players who had emerged in the area subsequent to the commencement of Stage 1 of the process.
- Formation of an informal steering committee with key stakeholder groups from the local community including non-governmental organisations and community based organisations. Regular bimonthly meetings were held with the group to discuss the various proposed public activities and also obtain feedback.
- A public meeting was held in April 2003 to provide feedback on the construction work completed, technical studies from Phase 2A, rehabilitation options for the site as well as the environmental impacts of each option. The proposed public participation program was also presented for comment.
- A T&DB township play, locally called a “drama”, was commissioned. Local communities were involved in the production of the play. It was performed as a means of raising community awareness about issues relating to health and safety. The play was also performed at a DME gala event to create awareness within DME about the work done at T&DB Colliery.
- Communication material was produced. The material compiled by the project team included information fact sheets and a T&DB Colliery newsletter. The material was produced in both the Northern Sotho and Zulu languages. The fact sheets provided graphical illustrations in the interests of communicating with illiterate people. The newsletter provided detail on the environmental issues at T&DB Colliery and work undertaken. The communication material was distributed in October 2003 during the performance of the play at local schools.

- Towards the end of 2003, an Access Control Pathway survey was conducted to determine reasons for pedestrians using unsafe routes across the site. The survey was conducted due to local people's skepticism about using the upgraded safe access pathways. Local volunteers conducted the survey and over 200 people were interviewed. It was found that further improvements to the access pathways were required and that the message regarding the pathways needed to be continually reinforced. Additional surveys were therefore planned and carried out in November 2003, as well as January and February 2004.
- A further public meeting was held in March 2004 to discuss work undertaken in 2003. Various presentations included details of public participation activities, short term construction measures, site based test work and the long term Strategic Rehabilitation Plan for the mine. The publications produced in 2003 were once again distributed prior to the public meeting.
- School theatre workshops and wall painting were conducted by the project team in March 2004 in Witbank to promote awareness and develop skills amongst children. Children were given theatre classes and thereafter joined other community members in communicating safety issues relating to the colliery, as well as information about the work undertaken by DME and DWAF.
- Due to negative media coverage concerning the site, a documentary film was commissioned on the public awareness campaign and the rehabilitation process. The documentary was linked to DME's National Phepapatso Strategy (Clean Up campaign). It is currently used as a tool to raise awareness amongst the public throughout South Africa.

Throughout Stages 1 and 2, there was continuous consultation with authorities, non-governmental organisations and CBOs to ensure an open and transparent process and build a relationship of trust between the authorities and the local communities.

4.3 Case Analysis

4.3.1 Introduction

Overall, the public participation and awareness process was characterised by openness and the involvement of grassroots community members. Innovative techniques such as the play and access survey were used to build community awareness. There was an openness on the part on the Department of Minerals and Energy to expanding the public process from Stage 1, once it became clear that broader awareness raising was required. This enabled a flexible approach on the part of the consultants, who were in a position to respond to the needs of stakeholders involved in the process and introduce new activities as required.

This case analysis largely focuses on Stage 2 of the public participation process outlined above with a brief overview of the outcomes of Stage 1 below.

4.3.2 Stage 1 of the Public Participation Process

The initial Stage 1 public participation activities were aimed at informing stakeholders of the rehabilitation project; gathering meaningful input on identifying rehabilitation options and measures;

establishing communication channels for ongoing consultation and feedback; and raising community awareness of safety and environmental hazards associated with the site.

A comprehensive communication strategy was implemented and more than 400 stakeholders were identified and provided with the opportunity to participate. This phase of the project also culminated in the formation of the Kwa-Gqua Environmental Forum (KEF) in July 2001. This body was established following an expressed need from the majority of the stakeholders involved in the process at that time for a forum to address issues related to awareness creation and education. The public participation team was flexible in responding to the needs of stakeholders in the process at this point and assisted with the formation of the forum.

Although this phase of the process was largely successful, several issues emerged which necessitated an increased and even more intensive public process in the next phase of work. These were:

- A programme run on a national television network which highlighted many dissatisfactions with the slow progress of the rehabilitation project amongst local communities;
- It emerged that the KEF was not representative of the full spectrum of community interests; and,
- There was a level of mistrust of consultants and of the DME due to the long time frames involved in identifying potential short and long term rehabilitation measures.

Stakeholders commented that they were frustrated by the slow progress of the project, and as a result did not trust the DME or the project consultants. These concerns emerged in Stage 2 of the public process, when the environmental assessment consultant and DME representative noted that a lot of time had to be spent explaining why the process of identifying and implementing rehabilitation options was slow, including explaining government tender procedures. One of the project engineers also noted that in Stage 1 of the process, public meetings were undertaken in a 'pitch up and present' mode. Technical information was presented, without sufficient care to ensure its appropriateness to stakeholders. This mode of public meeting limited the opportunities for dialogue and debate with stakeholders.

4.3.3 Approach

The DME and DWAF approached Stage 2 of the public process in an open minded manner and were committed to ensuring a successful process. The project engineer noted that this commitment was essential to the success of the project and that the DME and DWAF were willing to put time and money into the project to ensure success. A DME official also noted that it was essential to ensure community buy-in to the project. The project was adopted by DME as one of its flagship projects in a national campaign on the rehabilitation of old mines, titled the Pephafatso campaign.

An open and flexible approach was adopted to identifying possible techniques for the public participation and awareness campaign. The project consultant noted that the project team, including the DME and DWAF decided to identify and try many techniques that are often recommended as part of 'best practice' books but are often not implemented. Inputs were also sought from local stakeholders as outlined below. The techniques used are discussed in Section 4.3.5 below. The commitment of time and money to the project by DME and DWAF played an important role in ensuring that these innovative techniques could be implemented.

The approach of the project team and the DME ensured a high level of buy-in during the public process and a very good level of awareness amongst local communities. It also resulted in the identification of community benefits to be gained from the rehabilitation process.

4.3.4 Stakeholders

A broad range of affected stakeholders were involved in both Stages 1 and 2 of the public process. At the commencement of Stage 2 of the public participation process, a new public participation practitioner joined the project and undertook a social profile of the stakeholders using the existing project database and identifying additional organisations, through interactions with existing stakeholders. The purpose of the profile was to:

- Understand community dynamics and hierarchies, as well as the representivity of various organisations;
- Identify the capacity of stakeholders to participate effectively in aspects of the process; and,
- Identify organisations that had resources to assist with the process.

Based on the social profile, the practitioner identified a core group of key stakeholders who he believed could assist with the awareness programme and public process. This group included the KEF as well as other groups who were not part of the forum. A much broader stakeholder base was thus included in the process, which assisted in generating trust amongst stakeholders.

An open approach was adopted with stakeholders, whereby issues were open for discussion and debate, and regular meetings were held with the core group of identified stakeholders. These stakeholders played a key role in decisions that were taken about the direction of the public awareness campaign. They provided input during preparation for public meetings, suggesting venues and dates, and made suggestions for activities for the awareness campaign. Local community members were also involved in many of the activities that were undertaken such as the safe access routes surveys. This ensured community buy-in to the activities and a much broader sense of ownership of the process than had been the case earlier.

A local non-governmental organisation assisted with networking within the community, which the public process consultant acknowledged was a valuable means of accessing grassroots stakeholders. A stakeholder also noted that the regular twice monthly meetings of the core group provided an ideal forum in which issues and concerns could be discussed and more highly technical aspects addressed. Another stakeholder also noted, however, that there were tensions over power relations between organisations, although this did not affect the outcomes of the awareness campaigns.

4.3.5 Techniques

A broad range of techniques, including individual meetings, communication material and the play, were used during the public process and awareness campaign.

a) Communication

Communication with stakeholders was active and ongoing throughout the public process and awareness campaign. The communication material was specifically targeted at the local communities and presented in an accessible format. Fact sheets with graphics on work undertaken as well as that proposed, were more accessible than a newsletter produced for stakeholders interested in more detail. The “multi-tier” nature of communication material enabled a broad range of stakeholders to access a level of information appropriate to their interests and capacity.

The public participation consultant and the technical project team worked closely together. This assisted in ensuring that factually correct, yet accessible, information was communicated to stakeholders. A stakeholder noted the willingness of the consultants to explain information and the technical aspects of the project. One of the problems highlighted by a stakeholder was that, initially, it was difficult for people to practically envisage what would be occurring with respect to rehabilitation, but that the information provided was accessible and informative

b) Play

The play provided an innovative means of communicating with stakeholders and raising awareness. It was a local production and was very well received by local communities. The project engineer noted that it conveyed the same messages as many technical presentations given at meetings, but in a much more accessible format. One of the stakeholders noted that it was easy for people to relate to the message conveyed by the play as it was in a township theatre style. The play also resulted in the transfer of skills to a number of local community members who were involved in its production, including improved abilities to stage productions.

c) Public Meetings

Two public meetings were held to provide feedback on work that had been completed, as well as future proposed work. These meetings provided a broad forum in which stakeholders could raise issues and concerns as well as interact with the project team. Interviewees noted that issues were raised and that people understood what was going on. A local councillor noted that there was sufficient flexibility in the process for him to consult with his constituency and report back to the technical team at the meetings. He also noted that there was sufficient opportunity for other stakeholders to be involved.

d) Access Control Surveys

The access control surveys provided an effective means of interacting with regular users of the site. They provided valuable information in understanding why patterns of unsafe use of the site continued despite the upgraded paths and also provided the opportunity to educate regular users of the dangers associated with the site.



Participants in an access control survey

Many interviewees commented, however, that the surveys needed to be undertaken on a regular basis as many people forgot or 'slipped into old habits'.

4.3.6 Incorporation of Issues

The project was successful in raising awareness and incorporating the issues raised by stakeholders. Some of the issues raised by stakeholders included concerns about:

- Safe access across the site. Safe access pathways were constructed;
- The presence of graves on the site. Grave sites have been identified and recommendations made regarding relocation of graves;
- The level of crime associated with the site. The issue was raised with the Community Policing Forum, who together with the South African Police Service and the South African National Civic Organisation, indicated that they would strive to intensify crime prevention initiatives in the area;
- Potential damage to houses during blasting to be carried out on the site. A photographic survey was undertaken by local volunteers of all the potentially affected houses prior to the blasting. This provided a sense of security to affected stakeholders as a record was then available as a reference point in the event of problems caused by blasting.

In addition, re-mining of the coal discard dumps has been incorporated into the long term rehabilitation plan with the intention of providing the coal to the local communities.

4.3.7 Stakeholder Participation and Commitment

Several interviewees noted that many stakeholders started to 'lose' interest in the process when progress on site rehabilitation was perceived to be very slow. It was noted that local communities were extremely keen to see the site rehabilitated and were unhappy with the pace of the process. The investigation and rehabilitation exercise has, however, been slow and subject to government funding priorities. Although time was spent explaining the process to communities, frustration remained amongst stakeholders.

The poverty of people in the area affected the process. A local non-governmental organisation representative noted that initially there was no material support for organisations to be involved in the more intense focus group meetings. The issue was discussed with the project team and resources were made available for participants' transport and food needs. This enabled more effective participation of these stakeholder representatives in the process.

Interviewees also commented that some stakeholders were unwilling to participate in the process once they realised that they would not be 'getting anything out of it'. The local councillor noted that the attitude of many stakeholders can be problematic. He noted that it was a problem that extended to many other activities as well and there were no 'simple' solutions. Another stakeholder noted that the KEF had disbanded as people had other priorities such as finding work.

Despite these difficulties, the public process was successful in raising community awareness of the site and in ensuring that local stakeholders contributed to the rehabilitation planning.

4.4 Conclusions and Lessons Learnt

The T&DB Colliery process resulted in a high level of awareness amongst stakeholders of the dangers of the T&DB site. One of the key challenges in achieving this awareness was in educating people with entrenched habits and concerns that related to basic day to day survival. The innovative and intensive techniques used in the process assisted, in overcoming this challenge.

The overall benefits of the process and the lessons learnt from the process are outlined further below.

4.4.1 Benefits to Stakeholder Groups

Some of the benefits arising from the public process included:

- It enabled the Government to achieve its objective of raising public awareness of the dangers of the site;
- The Government gained the trust of local communities at first, as they were perceived as addressing stakeholder concerns, although this has dissipated to some extent due to delays caused by funding issues;
- Local non-governmental organisations built their capacity and knowledge to participate in similar process in the future;
- Local stakeholders improved their knowledge and understanding of the site;
- Relationships were built and strengthened between various local stakeholder groups;
- Participants in the township play, improved their skills related to organising, developing and performing plays;
- Local volunteers involved in the process gained experience in administering surveys; and,
- Stakeholders gained a deeper understanding and appreciation of environmental issues, the manner in which they impact on their lives as well as a better appreciation of their rights.

4.4.2 Lessons About Techniques Used

Lessons learnt about public process 'techniques' that contributed to the success of the process include:

- Make a conscious effort to use innovative and creative participation techniques. The access control survey and township play were innovative techniques used to effectively raise public awareness;
- Use a diverse range of events to create scope for involvement of a wide range of groups. Focussed meetings were held with a core group of stakeholders and 'public' events for a broader groups. Events at schools also provided scope for the involvement of a broader range of stakeholders;
- Use diverse communication methods to enhance awareness of the process and promote participation. For example, two types of communication material were produced during the project, graphical 'fact' sheets and a more detailed newsletter. The township play also provided another communication method;
- Present information in a form accessible for stakeholders; and,

- Provide practical support to assist stakeholders to participate, if circumstances are appropriate.

4.4.3 General Lessons

More general lessons that can be learnt from the T&DB Colliery Process that contributed to its success and ensured buy-in of communities to the process include the following pointers for action:

- Be flexible and open to changing the public participation process during its course;
- Research a social profile to identify and appreciate the nature of stakeholders;
- Involve stakeholders in the design of participation processes;
- Stakeholders may not participate in a process if they do not see any benefit to themselves;
- Slow progress in implementing a process or the recommendations of a process can lead to mistrust amongst stakeholders; and,
- NGO's can play an important role as intermediaries between local community groups and project teams.

4.5 List of Interviewees

(in alphabetical order with an indication of their capacity or position at the time of the environmental assessment)

Fakude, Thomas
Councillor for area Hlanlonikahle Ext. 1
27 July 2004

Madupe, Herbert
Public participation consultant, Golder Associates Africa
26 July 2004

Mkhwanazi, Elias
Environmental Justice Networking Forum
27 July 2004

Mokoena, Nonkhumbi
Mpumalanga DACE
27 July 2004

Ramaube, Arthurnacious
KwaGuga Environmental Forum
27 July 2004

Ramovha, Sydney
Project Manager, Department of Minerals and Energy
26 July 2004

Wimberley, Frank
Project Manager, EnviroGreen Consulting
26 July 2004

Two local Kwa-Guqa residents
27 July 2004

