

**IN MEMORY OF MY TWIN SISTER PHIONA NYANGOMA TUMUBWEINEE
22 MARCH 1979 – 05 APRIL 2005**



counter – point scenario's

a methodology of integrating Tswana tradition into the proposed Kruindfontein Mine

COUNTERPOINT: (*from Lat. contrapunctus, from contrapunctum 'against note'; Fr. Contrepoint; Ger. Kontra-punkt; It. contrapunto*)

A term first used in the 14th century, to describe the combination of simultaneously, different sounding musical lines according to a system of rules.² The difference in quality between the two groups particularly shown in their directions referring to important sections in its composition or to the parallelism:

² The New Grove Dictionary of Music and Musicians, 2001:551

By Philippa Nyakato Tumubweinee

Submitted in fulfillment of the part requirements, for the degree of MArch (Prof). In the faculty of, the Built Environment and Information Technology, University of Pretoria, the Republic of South Africa.

November 2006

Supervisor:

Mr. Derrick DeBryun

Study Leader:

Prof. Karel Bakker

counter point scenario's

a methodology of integrating Tswana tradition into the proposed Kruindfontein Mine

Mining is one of the major industries that support the South African economies. With a role as important as this it should be looked on with a degree of importance and acknowledgment. This is however not the case. The attitude towards the mining industry is continually worsening as the evils that dog this industry grow.

This thesis attempts to propose a design model for future reference, which it is believed will endeavour to explain and investigate the idea that a paradigm shift in the perceptions that dog the mining industry can be changed. The goal towards this shift would be the view of mining as a process and industry that is sustainable and benefits the greater community society and country.

The values learnt here would culminate in a design model that will attempt to address the negative attitudes and effects that are wrought upon the landscape and communities as a result of the mining process.

A **paradigm shift**, where the mining process, seen as a temporary land-use happens as a part of a much broader end land-use.³A design models that allows for a **scenario based solution** to the long term planning rehabilitation and eventual appropriation of a mine its functions contributions and effects in any given locality.

This thesis also acknowledges the planning methods that are being applied to date in the entire country and attempts to borrow and incorporate most aspects of this.

Modernity cannot in all essence return to a state of the primordial. What can however be achieved is a reinstatement of the traditional primordial values into modernity. an attempt at a sustainable mining practice where the conversion of a linear process is in which the Mine per say does not just commence with an empty acre of land and end as a colossal rock dump, but as a land use that can sustain the pre, the current and the post-mining alternative functions. A paradigm shift proposed in an attempt to be able to harness the energy from the economic, urban, and social boom created by a mine to empower and encourage sustainable representative communities and economies.

Therefore planning the end-land use, and implementing it through out the mining operations, will most definitely lessen the severity of the impacts associated with closure in mining.

a methodology of integrating Tswana tradition into the proposed Kruindfontein Mine

³ Radameyer, Interview, 13 March 2006

introduction

1 context

- 1.1 Site Analysis
- 1.2 Bio-physical Analysis
- 1.3 Social Analysis
- 1.4 Infrastructural Analysis
- 1.5 Economic Analysis
- 1.6 Historic Background of the Tswana people
- 1.7 Mining Analysis

2 the problem

- 2.1 Problem statement
- 2.2 Sub – problems
- 2.3 Hypothesis
- 2.4 Delimitations
- 2.5 Assumptions

3 precedent studies

- 3.1 Gas Works Park, Seattle
- 3.2 The Dogon, Mali
- 3.3 Purple Daisy, Pretoria
- 3.4 Aids Hospice, Rustenburg

4 scenarios

- 4.1 Contextual scenarios
- 4.2 Location scenarios

5 design development

- 5.1 Design philosophy
- 5.2 Conceptual site layout
- 5.3 Accommodation schedule

6 technical documentation

- 6.1 Site layout
- 6.2 Design drawings
- 6.3 Materials and structure
- 6.4 Ventilation systems

conclusion

list of sources

list of figures

images of Saulspoort

Introduction

Mining engineers, not particularly concerned with the design of aesthetics, follow a practical approach in both the architecture and landscaping of a potential mining project. Factory warehouse like facilities are designed to protect expensive equipment, protecting such from external elements like dust and rain, usually resulting in unsightly, elementary structures intruding in the landscape.⁴ Offices, change rooms, workshops, gathering spaces and so forth are designed to function, usually resulting in mundane, uninspiring spaces, contributing to the adverse visual social and physical impact of the site.

In an attempt to shift the dogmas that govern the perceptions of mining one must endeavor to explain and investigate the concept of mining accommodated in a larger, broader sense and location, in which the mine can be seen as a catalyst for the introduction of values, spaces and urban areas that are not without meaning and belonging.

A paradigm shift in the approach to mining in an industry that is otherwise perceived as exploitative and exhaustive on the natural, social and bio-physical environments. The term 'paradigm' borrowed from the Greek word 'paradegima' which is literally a model. A model from which builders could extract detailed dimensions with callipers, thereby achieving repetition for replicas.⁵ With this basis this thesis investigates a possible paradigm shift that contains mining as a temporary intervention as a key to a more sustainable and "socially" acceptable practise. A design model that stipulates guidelines that allow for sustainable mining practices incorporating the social and infrastructural impacts of the mining process. This design model should accommodate and start from a culturally sensitive point that allows for its users, the community, to understand and recognise how their activities and beliefs are represented and accommodated within the new context.

The locality within with the proposed Kruidfontein Mine falls, is located within the Moses Kothane Local Municipality (MKLM), Bonjanala District in the North West Province, north of the Pilanesberg National Park, in the vicinity of the town Saulspoor, including the farms Rooderand 46JQ; Tuschenkomst 135JP; Wilgerspruit 2JQ; Koedoesfontein 42JQ; Legkraal 45JQ and Magazynskraal 3JQ, as indicated in Fig.1.⁶

Two proposed focus areas were identified within this locality:

The first proposal falls within the boundaries of the town Saulspoor. The focus of this study is on community development. The urban

⁴ Radameyer, Interview, 13 March 2006

⁵ Fischer, A Paradigmatic Approach to Architectural History Postmodernism1989:pg4

⁶ Strategic Environmental Focus, Kruidfontein Project Impact Assessment prepared for AngloPlatinum, 2002:pg1

and economic development, and the preservation and presentation of the social dynamics within and around the town of Saulspoor are paramount in this project.

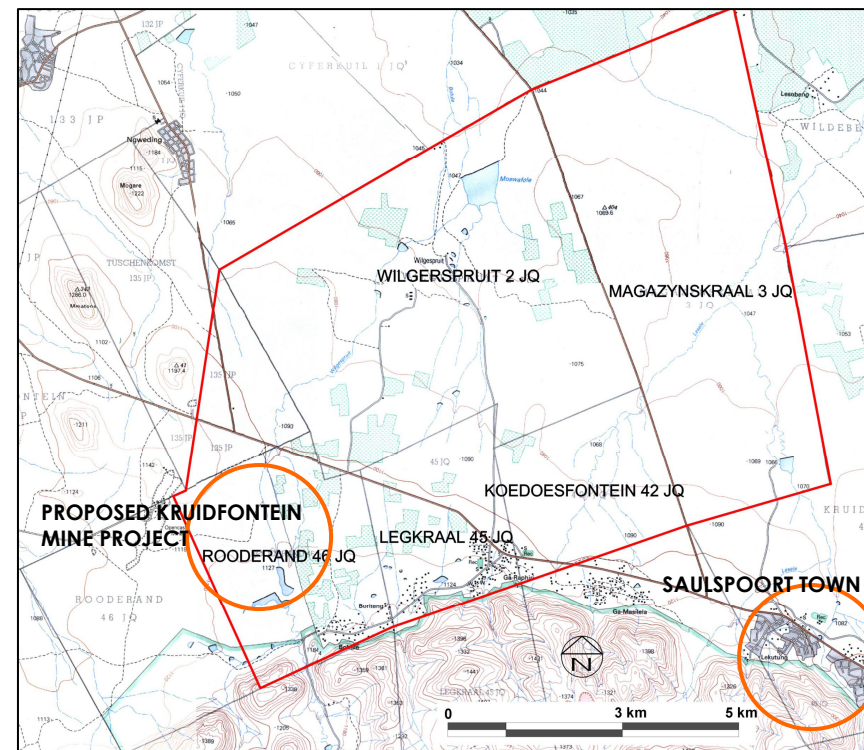


Fig 1: - Moses Kotane Local Municipality (Strategic Environmental Focus, 2002: pg A-2

The second proposal investigates innovative ways of designing the infrastructure at the future shaft-location on the farm Rooderand 46JQ. This will provide a long-term plan to connect alternative functions to the mining site, and designing for an enduring land-use.

The two proposals are however not separate from each other, as both are essential for the well being of the natural-, social-, and economical- environments, the mines' impact, and the community. Both attempt to address issues pertaining to formalized economic centres, upgrading of medical and social facilities and so forth. Allowing for a comprehensive, coherent master plan that aligns itself with the interests of the Pilanesberg National Park, Anglo Platinum Mining group, the Bakghatla ba Kgafela tribe and the inevitable secondary industry that would grow as a result of the suggestions and solutions proposed within this locality.

This dissertation attempts to addresses the social and cultural context of the Kruidfontein project, investigating the current spatial, functional and infrastructural context of the area through appropriate design and urban planning.

The dissertation also attempts to addresses the fragmentation of mining infrastructure. By proposing an adequate design guidelines and planning that allow for minimal environmental impact bearing in mind, the allowance for a post-closure land use.

In creating an active, working urban environment that embodies the present cultural usage patterns.

In not only recognising the benefits the mining industry contributes to the economy, but also looking at this industry as a catalyst, a multiplier through which significant effects on a more localised scale can be introduced and encouraged in South Africa.⁷

Overall goals:

- Focus on the proposed end-land use and the accommodation of mining as a temporary land use.
- Presentation of various options that can justify and reinforce the possible reclamation of the Kruidfontein Project.
- An approach to a more sustainable mining process that will ease the transition to the proposed end land use.
- A detailed and comprehensive process/design proposal that allows for the gradual conversion of the Kruidfontein Project into a sustainable community- sensitive intervention that adds value to the area.
- Allowing for the mine to become a part of the community, thereby making its appropriation after closure easier.
- Addressing the visual impact of mining infrastructure in the landscape, both from an aesthetic and sustainable point of view.
- Proposing a pre-designed and designated end land use of the mine site and its infrastructure that is sustainable and developmental to the communities in the areas in which the mine site is located.
- The integration of the Mine as a living growing entity into a community that also is alive with various layers of tradition culture power structures and so forth.

Methodology:

A **scenario-based** approach to problem solving will be used as part of the research and development process. Due to the nature, scale and time span of the project, the scenario-based approach allows for flexibility and appropriation of the design proposals presented.

Scenario planning is seen as anticipating various options, and enabling broad-based "participative and diverse" dialogue.⁸ Through a multi-lateral systemic process that has the ability to dissolve the issues faced by changing the conditions that support them.

⁷ South Africa 2014, 2004:pg 103

⁸ South Africa 2014, 2004:pg 13

Taking into account a process of analysis, interpretation, intervention, the implementation and finally a scenario presented as a set of flexible broad based guidelines as explained in Fig.2.

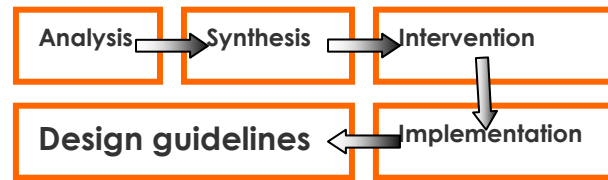


Fig 2: The descriptive survey method (Schulz 2004:102)

The Clients:

Non place-based actors:

- International
 - World Tourism Organization (WTO)
 - World Conservation Union (IUCN)
 - United Nations Environment Programme (UNEP)
 - World Wildlife Fund (WWF)
 - World Bank (WB)
 - World Trade Organization (WTO)
 - AngloPlatinum



- National
 - Department of Environmental Affairs and Tourism (DEAT)
 - South African Tourism (SATOUR)
- Regional
 - North West Parks and Tourism Board (NWPTB)
- Donors
 - Gold Fields
 - De Beers
 - Anglo American
 - SA Breweries
 - Sun City
 - SAPPI

Place-based actors:

- The local community
- Tribal Authorities
 - Bakgatla-ba Kgafela
 - `Bakubung-ba Ratheo
 - Batlha Ko-ba Baleema
- Community Development Organisation (CDO)
- Pilanesberg Park Management
- Moses Kothane Local Municipality
- Concessionaires