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A Critical Review of Sustainable Economic Development in the Mining Industry: A Case Study of Lebowa Platinum Mine in South Africa

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Synopsis

This project investigates the economic element of sustainable development within the mining industry with specific focus on Lebowa Platinum Mine in South Africa. Leveraging an analytical framework developed by the International Council on Mining and Metals, the research aims to collect and analyse data to determine whether the mine is contributing to economic sustainable development. The findings are intended to provide a deeper understanding of the factors that influence positive outcomes and which may in turn impact Anglo American corporate objectives.

As an exploratory case study, the research sought to gather qualitative and quantitative evidence on a variety of factors that indicate economic development. Primary data gathering was in the form of structured interviews and open forums with internal stakeholders as well as local business owners, community development groups, traditional leaders, local and central government representatives and non-governmental organizations. The goal was to establish how these various stakeholders had been economically impacted through mine procurement, employment, social and infrastructure provision and contribution to the national economy.

The results reveal that the mine provides jobs for between 18227 and 24073 people. A sample of 12 local suppliers revealed rising business and increased employment as a result of mine procurement and improved inclusion of previously disadvantaged suppliers. At least R10.6million has been invested in social projects and the mine contributed R83million in taxes in 2005.

The project demonstrates the importance of social license, community engagement and the creation of economic linkages in achieving positive economic outcomes. The Sustainability Balanced Scorecard is proposed as a tool to link the mines sustainability objectives with commercial performance.

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List of Abbreviations

Abbreviation	Description
AA	Anglo American Corporation
ABET	Adult Basic Education and Training
AP	Anglo Platinum Ltd
BSC	Balanced Scorecard
CSR	Corporate Social Responsibility
DME	Department of Minerals and Energy (South Africa)
GDP	Gross Domestic Product
GGP	Gross Geographic Product
HDI	Human Development Index
HDSA	Historically Disadvantaged South African
ICMM	International Council on Mining and Metals
IDP	Integrated Development Plan
LPM	Lebowa Platinum Mine
MMSD	Mining, Minerals and Sustainable Development
SD	Sustainable Development
SEAT	Socio-Economic Assessment Toolkit
SED	Socio-Economic Development
SBSC	Sustainability Balanced Scorecard
SMME	Small Medium and Micro Enterprises
WBCSD	World Business Council on Sustainable Development
UNCTAD	United Nations Council on Trade and Development
YTD	Year to Date
3BL	Triple Bottom Line

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Chapter 1: Introduction

1.1. Background

Within the business community the issue of sustainable development has emerged as a significant theme. In a recent survey[1] of senior executives and institutional investors by the Economist, 85% of respondents noted that sustainable development[2] was "central" or "important" to investment decisions. The management advisory firms KPMG (International CSR Survey) and PriceWaterhouseCoopers (Global CEO Survey) noted similar findings.

The increasing role of sustainable development (SD) is impacting the relationship between firms and its various stakeholders: investors, customers, suppliers, employees, communities and governments. More is expected from organisations and accordingly companies that have poor performance in sustainable development are facing growing pressure from a multitude of sources.

Traditionally the responsibility of management was to act to maximise shareholder or firm value. Does acting to benefit the welfare of other stakeholders then conflict with this notion? One view is that sustainable development can lead to the maximization of firm value through acting to improve the welfare of interest groups that are able to affect firm value (Fisman et al 2006:p1).

The frameworks used to achieve such success are less well understood and more importantly highly contextual. Most management writers acknowledge the preliminary nature of research into such tools and frameworks particularly within certain industries. The mining and resource sector is one such industry. Mining particularly, faces immense pressure to proactively deliver to the three dimensions of sustainable development: social, environmental and economic. To succeed in this endeavour a clear understanding of the drivers and dynamics involved in sustainable development is required. This report explicitly acknowledges the significance of social and environmental factors; however it is the economic element which is examined.

[1] Economist (2005) Corporate Social Responsibility Survey: The Good Company. January 2005
[2] The terms sustainable development and corporate social responsibility are used interchangeably throughout the text.

In efforts to facilitate the maximisation of economic sustainability through its operations the mining company Anglo-American (AA) currently pursues a number of corporate initiatives. AA is also a signatory to various international initiatives on sustainable development. One such initiative is the International Council on Mining and Metals' (ICMM) Resource Endowment Programme. This programme was created to assist resource companies to better understand regional, national and local impacts of mining. The Resource Endowment Toolkit acts as an analytical framework that is able to provide solid foundations for SD strategy, implementation and management best practice.

While already a robust methodology in its own right, the Resource Endowment Toolkit like other such tools within the industry is still in its formative stages. Practical application of the framework may be able to influence the future effectiveness of its use, while at the same time facilitating the analysis and understanding of sustainable economic development in the field. It is for this reason that the research was commissioned.

This report takes the form of a case study, and examines the economic development performance of Lebowa Platinum Mine in South Africa using the Resource Endowment Toolkit as the analytical framework. Results of the study are used to formulate recommendations and may be used to assess the effectiveness of the model for implementation on other mining operations around the world.

1.2. Research Objectives

Using the analytical framework of the ICMM model the project aims to analyze the economic contribution of the Lebowa Platinum Mine within the framework of sustainable development. This will be achieved through the collection and analysis of primary and secondary data associated with the following areas of impact: Procurement, Employment, Social and Infrastructure Provision and Fiscal Contribution.

Using Lebowa Platinum Mine as a case study the project will:

- Seek to understand how effective mine procurement has been in stimulating local economic development through analysis of a sample of twelve local suppliers.
- Explore human capital development through examining employment data, skills development, training, health and social investment.
- Measure the economic value added to the local and national revenues through royalties, taxes and infrastructure provision.

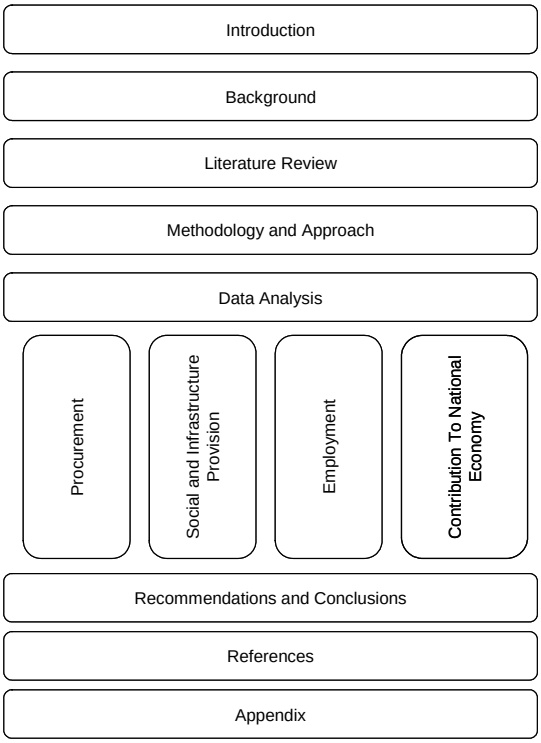
1.3. Report Structure

The report is organized into six sections. Chapter 1 provides a brief introduction. Chapter 2 examines the contextual framework of the report, exposes some of the key issues and introduces the theoretical framework that is explored later in the text. Chapter 3 explores the literature surrounding sustainable development in the mining industry and some of the frameworks related to management best practice. Chapter 4 outlines the methodology that was adopted and provides a brief overview of how data was collected.

Chapter 5 examines the evidence whether Lebowa provides sustainable economic development to the local community. This is conducted through the analysis of four primary levels of economic impact: procurement, social and infrastructure provision, employment and contribution to the national economy. Chapter 6 provides recommendations and conclusions and exposes potential areas for future research.

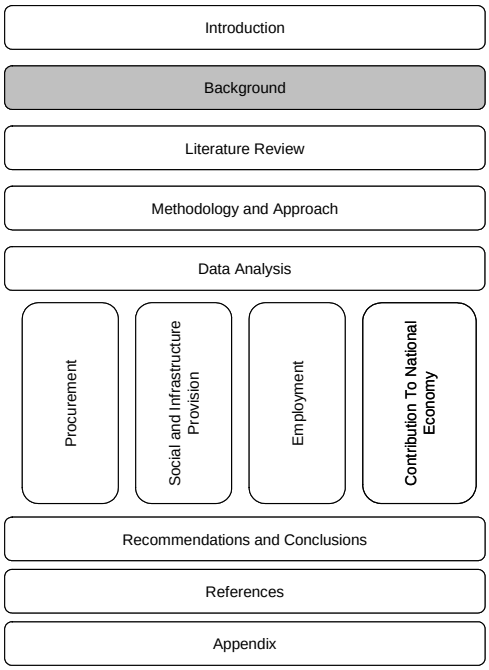
The table below represents the report framework and will act as guidance through the text.

Figure 1.1.



Chapter 2: Background

2.1. Corporate Sustainable Development



The terms Corporate Social Responsibility, Sustainability, Sustainable Development and Corporate Responsibility all broadly refer to the same concept which covers environmental, social and economic performance in varying levels of detail (KPMG: 2005). The World Business Council for Sustainable Development (2004) cited by KPMG (2005:p10) defines Sustainable Development as "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life".

This concept has increasingly demanded priority on corporate agendas and is rapidly becoming a requirement to do business. According to the University of Amsterdam and KPMG (2005:p7) the number of large international companies producing separate corporate responsibility reports has tripled since 1993. KPMG (2005:p9) state that over 52% of the worlds top 250 companies on the global Fortune 500 produce separate in-depth corporate responsibility reports along with their annual financial statements. The reason given for this rise was both economic and ethical. Economic drivers included the proliferation (KPMG 2005:p4) of such factors such as building a good brand, positioning as employer of choice, reinforcing market position, building strong relationships with financial markets and increasing shareholder value.

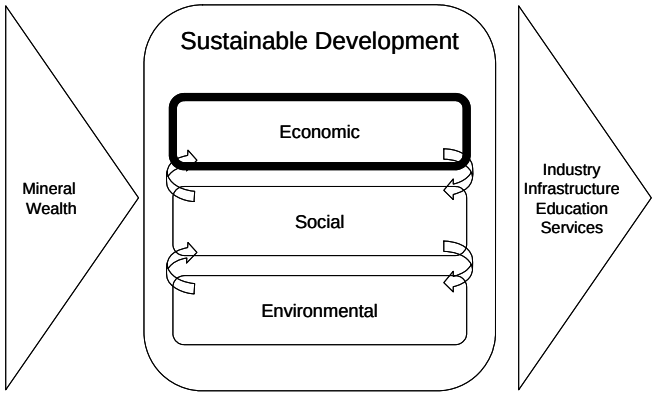
Mining and resource companies rank particularly highly in terms of measurement and reporting of corporate responsibility which may in part reflect the high level of scrutiny they receive and high level of impact they have on the communities within which they operate (Jimena 2006: p8). Within this context international public and private sector

bodies[3] are increasingly engaging with business and governments to influence not only reporting but also policy formulation and implementation. For effective engagement organizations require common understanding on the concept, however Van Zyl (2005:p4) maintains that this is not that easy as there are currently about 60 different definitions of the term sustainable development in circulation. The mostly widely used is the definition offered by the Brundtland Commission delivered on behalf of the World Commission on Economic Development: "to meet the needs of the present generation without compromising the ability of future generations to meet theirs" (Brundtland 1987: p43). Sustainable development including the practice of corporate responsibility is widely regarded as consisting of three separate elements: Economic, Social and Environmental. While this paper focuses on the economic component of sustainability the three concepts are closely interdependent. Bansal (2004 p198) maintains that if any one of the three principles are not supported, economic development will not be sustainable

Mineral resources are non-renewable and mines have lifecycles only as long as they remain economically viable (Auty 1998). Hence within the mining sector much of the activity surrounding sustainable development is characterised around "action today that influences outcomes in the future" (Phillips et al: 2004:p13) - when mining activity has concluded. Sustainable development theory follows: as a natural resource is exploited so wealth is created within an economy. Sustainability requires recognition that wealth in the form of resources, systems, knowledge and skills improves the lives of people in numerous ways (Whisler 2003: p757). Economic development if managed in a sustainable manner will offset the effects of the depletion of the natural resource through development of industry, infrastructure, education and services as is illustrated in the diagram below.

[3] Some examples include: International Council on Metals and Mining, United Nations Council on Trade and Development, World Bank, International Finance Corporation, International Development Research Centre

Figure: 2.1



Source: Adapted: (Brundtland: 1987)

It is this approach to economic development that this report seeks to explore at a local level pertaining to Lebowa Platinum Mine.

2.2. Mining in South Africa

The impact of mining on the economic development of South Africa has been vast. The concentration of minerals in South Africa was the primary factor for the opening up of the country and its rapid economic development (Chamber of Mines 2004:p4, Economist Intelligence Unit 2006:p3). Despite mining contributing a relatively small proportion of the world's economy, within the mining sector South Africa is one of the worlds leading mineral producers along with Russia, Canada, Australia, Brazil and the USA. South Africa is very wealthy in terms of mineral deposits and accounts for a large number of the world's reserves and production of the following commodities.

Figure: 2.2: South Africa's ranking in world mineral reserves, 2004

Mineral	Reserves Rank (World)	% of Total
Platinum Group Metals	1	87.8
Manganese Ore	1	80.0
Chrome Ore	1	72.4
Gold	1	40.1
Vermiculite	2	40.0
Alumino-silicates	1	37.4
Vanadium	2	27.0
Uranium	4	9.6
Nickel	5	8.4
Coal	6	6.0
Iron Ore	9	0.9

Source: Department of Minerals and Energy 2005

In 2006 South Africa's Department of Minerals and Energy estimated there were a total of 118 separate mining or quarrying operations. These operations generate demand for domestic goods and services, earn foreign exchange, employ labour, attract foreign direct investment, impact local communities through healthcare investment, education and training and contribution to local municipalities while generating revenue for the state through direct and indirect taxation (Chamber of Mines 2005:p4).

The employment generated by mining in South Africa is significant. Direct employment for example in 2004 was approximately 420,000 (SA STATS 2006: p2). The number of people who depend on mining either directly or indirectly through support industries including dependants is far greater and is estimated at approximately 4 million (Economist Intelligence Unit 2006: p49).

In recent years modernisation and restructuring of the South African mining sector driven by industry reforms has seen much consolidation and job losses. Despite this mining still represents up to 33% of total national exports and contributes up to 8% of GDP (Department of Mineral and Energy: 2006). The South African Chamber of Mines (2005:p3) claim the full impact of mining in South African represents closer to 16% of GDP.

Restructuring of the mining industry since 1994 has been driven by the reintegration of South Africa into the global economy following years of isolation under Apartheid. Such factors included relaxing of exchange controls and the lifting of sanctions (Worrall 2005:p14). Policy changes have also impacted the industry under the new democratic government (Economist Intelligence Unit 2006:p3) and have consisted primarily of two factors:

- The transfer of ownership of mineral rights from private companies to the state in 2002 through the Mineral and Petroleum Resources Development Act.
- The adoption of Black Economic Empowerment initiatives.

Mining companies during the recent past have faced in addition to the reintegration into the world economy, significant socio-political turmoil but will remain vitally important in their contribution to the South African economy.

2.3. Anglo Platinum and Lebowa Mine

The Anglo Platinum Group is a subsidiary owned 78% by Anglo American Plc. Anglo Platinum Group comprises of the holding company Anglo Platinum Ltd and the wholly owned subsidiaries: Rustenburg Platinum Mine, Potgietersrust Platinum Limited and Lebowa Platinum Mines Limited (LPM). Its operations include six mines, two smelters, a base metal refinery and precious metals refinery situated in the Limpopo and North West Provinces of South Africa.

The company was the world's largest supplier of platinum in 2005 contributing 38%[4] of total world production and by the end of 2006 plans to complete a multi-year expansion enabling it to deliver 3.5 million ounces. Anglo Platinum also has interests or is currently prospecting in Canada, China, Zimbabwe, Brazil and Russia.

Anglo Platinum mines, refines and markets platinum and other platinum group metals (PGM: palladium, iridium, ruthenium, osmium, gold and base metals such as nickel, copper and cobalt). The refined PGM product is sold through medium term contracts to a limited number of distributors and manufacturers such as Johnson Matthey Plc, Engelhard Corporation, Umicore SA, Toyota Motor Corporation, Tanaka Kikinzuko Kogyo and Degussa Metals Catalysts Cerdec (dmc2). Platinum group metals are primarily used for emissions control in auto catalyst production. Platinum is also used in jewellery production, high technology industry, electrical, chemical and petroleum refining (Cawthorn 1999:p2).

Lebowa Platinum Mine (LPM) is located approximately 300km north east of Pretoria within the Limpopo province on the eastern fringes of the Bushveld igneous complex. It has direct access to the Merensky and UG2 reefs which in addition to PGM also contains gold, nickel and copper. (Ackhurst: 2006). The mine has been operational since 1967 and was acquired by Anglo Platinum in 1995. Mining authorisation covers an area of 10,185 hectares which is spread over five farms: Middelpunt, Umkoanesstad, Brakfontein, Diamant and Zeekoegat (LPM 2006:p2). LPM's production has varied widely over its lifespan due to varying yields and availability of water (Ireton: 2006). In 2004 LPM milled 1.7million tons of rock and produced 117,000 ounces of

[4] http://www.angloplatinum.com/

platinum group metals (Ackhurst: 2006). The mine is currently expanding production through two major projects, the replacement of the primary vertical shaft and the expansion of a hillside shaft. The mine has an expected additional 80 years of operation utilising its current method of breast extraction (Ackhurst: 2006). LPM was suggested as a good opportunity to analyse sustainable development through the economic impact[5] that the mine had on its community due to the following reasons (Bullock: 2006):

- The location of the mine in an area of high poverty with relatively low levels of economic development.
- High rate of community unemployment and low skill levels.
- LPM is economically isolated from major centres and outside "well" developed infrastructure.
- Mine management has recently changed and increased focus has been given to community engagement and sustainable development.

2.4. The ICMM Resource Endowment Toolkit

This research report was guided by the theoretical framework of the Resource Endowment Project of the International Council on Mining and Metals (ICMM). The ICMM is a CEO led organization dedicated to sustainable development and comprises the world's largest mining companies as well as commodity bodies (ICMM: 2006). The goal of the ICMM is to understand how large scale mining in "low and middle income countries can enhance the socio-economic development of host countries" ($ICMM_a$: p3). The work is being conducted in partnership with the World Bank Group and United Nations Council on Trade and Development (UNCTAD).

The Resource Endowment Project by way of an "assessment toolkit" prescribes a wide variety of research questions used to develop a detailed understanding of the socio-economic impacts of mining. The framework approaches mining operations first from a national perspective, examining governance and macroeconomic management as well as the impact that mining has on these structures. Such variables as national economic

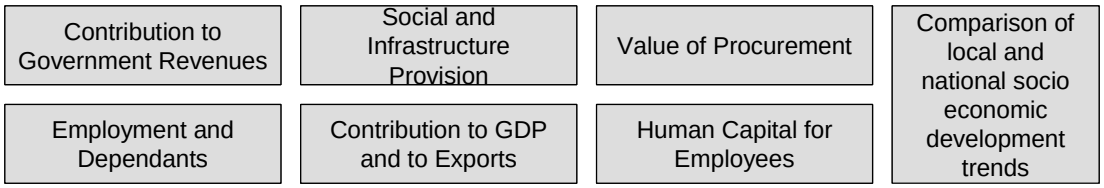
[5] Defined "as any increase or decrease on the productive potential of the economy" (Phillips et al 2004:p4)

growth, inflation as well as monetary and fiscal frameworks are examined. The context of the country and its history is examined with an assessment of the proximate causes of outcomes ($ICMM_a$ 2006:p1).

The toolkit critically investigates local level or project drivers of economic development in addition to the contextual and macro environment. Project level assessment examines the following broad areas:

Figure: 2.3

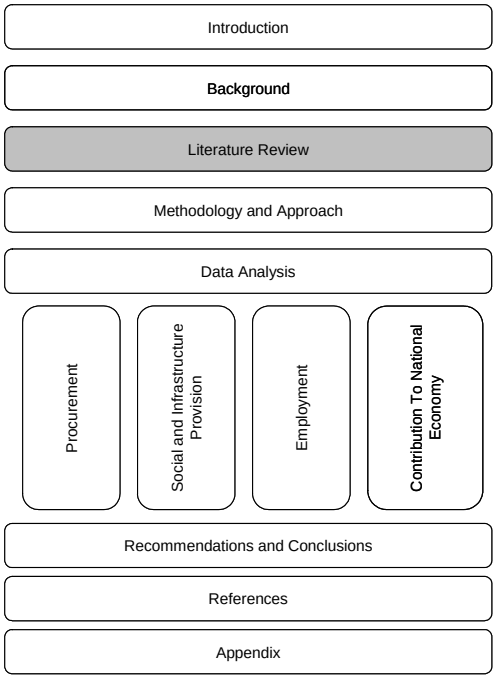
Local Level Impact Assessment



Source: Adapted from Resource Endowment Project (ICMM: 2006)

Proximate causes have been examined through a number of case examples conducted on mines in Chile, Tanzania, Ghana and Peru. The results and commentary provide an insight into the practical implementation of economic sustainable development policy. Results are not designed to provide absolute conclusions but rather provide an "understanding of the social and economic interactions and outcomes" ($ICMM_a$: 2006:p1). These consist of policy frameworks, operational practices and partnership agreements. It is acknowledged that, while still within its formative stages, the Resource Endowment Project provides a transparent, robust framework which can be leveraged to understand the impact of individual mining operations on a national and localized level.

Chapter 3: Literature Review



The following sections outline relevant material from academic and industry literature on sustainable economic development within the mining industry, gathered from the MBA curriculum and from independent research. These findings underpin the critical analysis of the primary and secondary data and informed the development of the report's recommendations and commentary.

3.1. Sustainable Development

In 1992 the Royal Society and the United States National Academy of Sciences issued the following statement:

> *"World population is growing at the unprecedented rate of almost 100 million people every year, and human activities are producing major changes in the global environment. If current predictions of population growth prove accurate and patterns of human activity on the planet remain unchanged science and technology may not be able to prevent either irreversible degradation of the environment or continued poverty for much of the world."*
>
> (Atiyah, M & Press, F: 1992)

Climate change, deforestation, droughts, famine, large scale conflict, energy insecurity, increased taxes and pollution have all been associated with unsustainable development. So has the world begun to pay attention to sustainable development? In a press release issued in October 2006 former US Vice-President Al Gore noted "what changed after Katrina was that we realize we have entered a period of consequences". This remark encapsulates global opinion of the notion of sustainable development and while much attention is primarily focused on the environmental element, equally relevant are social and economic sustainability.

Sustainable development is not a new concept. Granville (2002:p12) noted that the concept of sustainable development emerged during the late 1800's and the pollution caused by industrial activity. Fitzgerald et al (1995), claim the concept of sustainable development results from a deepening global consensus on the requirement for development to be sustainable over the long term and not to reap the benefits today, at the expense of future generations. In response to this notion, world leaders have increasingly aligned political agendas with sustainability orientated programmes. In the public sector through intervention, governments are implementing regulatory frameworks which make sustainable development financially viable (Picket-Baker 2004:p2). Public sector bodies accounted for most of the activity around sustainable development in the mid to late nineties but the focus has swung now to business to play a larger role (Dyllick and Hockerts 2002:p131). Butt (2003:p3) argues the alliance goes further than a public private partnership and for sustainability concepts to deliver results the definition needs to be extended to include "society" as a whole.

Representative of business's increasing role in sustainable development is the trend toward corporate performance reporting using such frameworks as the triple bottom line ("3BL"). In agreement with Bruntlands' (1987:p43) definition of the three pillars of sustainable development 3BL reports against economic, social and environmental parameters. Corporate social responsibility (CSR) is how business accounts for its economic, social and environmental impacts and may encompass several frameworks other than 3BL. According to Charter et al (2002:p15) CSR can range from mere compliance with regulation to holistic, integrated and strategic approaches to sustainable development. According to Hamann (2003:p238) practicing corporate social responsibility actually represents "enlightened self interest". Michael Porter as cited in Charter et al (2002:p19) refers to the "win-win" concept where improved sustainability actually leads to improved marketplace performance.

Despite this notion Parker et al (2004:p9) claim very few mining businesses have taken account of the overall impact of their operations and furthermore lack models to assess the impact they have. Parker et al (2004:p8) outlines economic impact as a particular challenge for business and focuses on the impact of several industries, including mining due to their potential for contribution to sustainability.

3.2. Sustainable Development in the Mining Industry

Numerous essential elements of survival in modern society rely on minerals extracted through mining (Parker et al 2004:p9). Hilson & Murch (2000:p4) however maintain that few industries within the world economy have such a profound impact on sustainable development as mining and the extractives industry in general.

While exploitation of finite mineral resources is inherently unsustainable (Eggert 2001:p4), the economic wealth generated through mining has the capability to have deep environmental and social impacts. The unsustainably of exploiting finite mineral deposits is actually misleading claims Eggert (2001:p4) who offers three reasons for this:

- Through technological innovation mining companies are able to discover or mine reserves that would otherwise be technically or financially unfeasible.
- While mining itself is unsustainable, recycling sustains much of the benefit generated by mining.
- Most importantly - the wealth generated by mining if invested correctly can provide indefinite benefits through education, healthcare and infrastructure.

Eggert (2001:p5) concludes that sustainable mining can lead to the generation of a renewable source of human well being. “Sustainable mining” delivers economic wellbeing in a socially just way that does not diminish environmental quality (Eggert 2001:p5)

Implementation of sustainable development in mining may appear a vague and complicated notion when considering context and the multi stakeholder environment. However according to Bansal (2005:p198) mining firms are able to operationalise corporate sustainable development in ensuring success through: Environment: Reducing the size of their “ecological footprint”; Social: Proactively assessing, managing and engaging with all stakeholders (not just financial shareholders) including the natural environment and always acting in societies’ best interests and Economic: Creating and capturing value. Captured value is then transferred to shareholders through dividends, consumers through its products and to employees through wages and salaries.

Many proponents of sustainable development argue that implementation within the mining industry is highly contextual and highly localised (Parker et al 2004:p25, Van Zyl 2005:p4). Due to these factors Van Zyl (2005:p4) claims that implementation must be based on a set of compatibility concepts. Central to Van Zyl (2005), Parker et al (2004) and Auty (1998:p487) is localization and in particular community level focus through effective social engagement.

3.3. The Importance of Developing Social Engagement

Parker et al (2004) undertook research across four industry sectors into the linkages and drivers behind business and economic development within the framework of the three pillars of sustainable development. Cross-sectoral analysis assisted in developing business strategy and management process to inform corporations and shape successful development. The research relies heavily on case examples and is focused on the mining sector. Parker et al (2004: p20) reinforces the significance of economic development at the community level building on the work by Auty (1998) which highlights the importance of social capability within mineral driven sustainable development. Parker et al (2004:p16) provides three primary contextual factors for the focus on the community level:

- Mining investment is "front-loaded" and if social and political circumstances deteriorate, there is no option to relocate the operation elsewhere.
- Mining has an important impact on local communities who have little influence on markets or shareholders but who can significantly disrupt operations through their actions.
- The remote nature of an increasing number of mines, far from the central government are necessitating increasingly a social license to operate within affected rural communities.

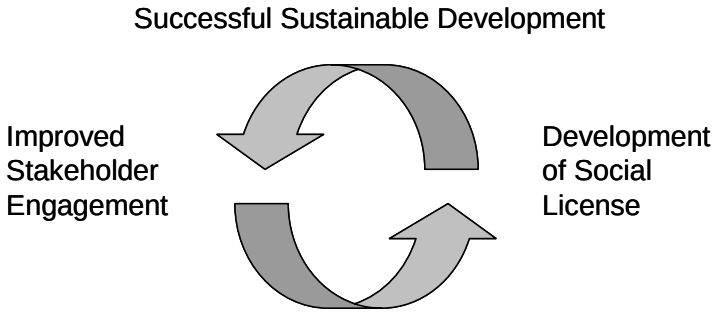
In addition to Parker et al (2004), Auty's work (1998: p487) also established a bias in favour of a "social license to operate" which firms require particularly for mining operations. To develop a social license to operate Auty suggests an independent "social audit" so as to mediate between a mine and a local community. This audit helps develop social license by tracing revenue flows, compliance with environmental

standards, the benefit of community compensation payments and helps through transparency to develop greater trust. Hamann (2003:p239) argues the notion of social engagement by business underpins the ultimate success of economic development. This evolves to a stage where civil society regards business as a vital partner for sustainable development (Bansal: 2005).

Auty (1998:p487) further argues that an effective "social audit" will through the transparency it generates serve to reduce the capability of actors to engage in rent-seeking behaviour. Rent seeking defined by Krueger (1974:p291) as the "*process by which an individual, organization, or firm seeks to gain through manipulation of the economic environment, rather than through trade and the production of added wealth".* This *does* not lead to sustainable development argues Auty (1998:p488) as it encourages heightened dependence by the community on the depleting mineral asset and causes a misallocation of resources by the company. Social audit argues Auty (1998:p499) reduces rent-seeking behavior by creating *"transparency and consensus on the deployment of mineral rents".* Rent-seeking behavior and the limits of corporate social responsibility are topics frequently debated by corporate leaders (Vogel 2005:p17). The business benefit for "getting it right" far outweighs doing nothing or "getting it wrong" and Vogel (2005:p18) argues successful social engagement within the context of sustainable development is the new "competitive reality" firms face.

Parker et al (2004:p25) and Togolo et al (2001) cited by Richards (2002:p4) use the theme of improved stakeholder engagement from all stages of mine development (planning to operation and beyond closure) as necessary to develop social license and stress this as a mutually re-enforcing process that is critical for companies to achieve in order that they contribute to successful sustainable development. Figure 3.1 below illustrates the virtuous cycle of social license and stakeholder engagement.

Figure: 3.1:



Source: Adapted: Parker et al (2004:p25)

The work of Fox (2001:p33) emphasizes that improving stakeholder engagement means communities should be directly invited to consultation to voice concerns and these should be treated with respect and acted upon. While Richards (2002:p5) concurs with multi-stakeholder engagement, his work stresses the importance of identifying "legitimate stakeholders" who represent the communities and not outside interests. Effective social engagement with legitimate stakeholders' representative of communities underpins economic development as it actively "develops society that existed before or builds up around a mine as it evolves" (Richards 2002:p5). Auty (1993) argues engagement with communities may require internalizing of the welfare function which serves to develop the "social capital" of local communities so they in turn can better represent their interests.

Parker et al (2004:p17) emphasize that sustainable economic development initiated through effective social engagement is hugely determined by context. Successful sustainable development practice cannot simply be transported from one operation to the next. It is the context that forms the engagement and that will determine what steps are required for success. Acknowledging the importance of context is the requirement to develop and maintain partnerships particular to each setting.

3.4. The Relevance of Partnership and Linkages

Direct economic impacts of mining on local communities are represented by factors such as direct employment, procurement/supply chain activity, infrastructure contribution and social development. Eggert (2001: p22) notes that a major factor that greatly increases economic development is the indirect impact through connections to

other parts of the local economy. These connections include both backward linkages or purchase of inputs and forward linkages representing downstream mineral processing activity. The net impact of forward and backward linkages are referred to as the multiplier effect. Eggert (2001: p22) defines a multiplier as "*the total effect of an economic activity (direct, indirect and induced) divided by the initial direct effect*"

The larger the multiplier the larger the economic impact but Eggert (2001:p23) notes that the size of the multiplier is highly dependant on situational factors and warns that social and economic costs and benefits need to be considered. Multipliers are influenced by the proportion of money invested that is spent within a region. Money spent within a region for example stimulates economic activity and money spent outside a region does not. While Parker et al (2004) focus on the social drivers behind creation of linkages, Eggert (2001:p23) stresses structural factors as more important. Such examples include:

- The size of the region.
- The region's industry structure.
- The location of a region.

The optimal multiplier for a mine is highly dependant on the structural factors and is determined by context. McMahon and Remy (2001:p35) argue that structural factors often mean both mines and communities fail to account for the full economic impact of mining development. For example how is the economic impact of environmental damage accounted for?

Parker et al (2004: p8) suggest government are critical stakeholders to generate a successful impact through acting to mitigate difficulties in pricing of intangibles. Partnership by mining companies with all relevant stakeholders to develop social capital Auty (1998:p489) claims is crucial. McMahon and Remy (2001:p34) claim the evidence suggests that success at the community level is more likely when there is direct engagement with government. Engagement with government however should not preclude detailed baseline studies of communities before mining which Auty (2003:p670) outlines is central to developing social capital.

Otto (2004:p23) argues that economic linkages can be maximised by government engagement through regulation, for example employment. Regulation surrounding the employment of local workers helps develop linkages and increases the impact of the multiplier. Government engagement applies similarly to other areas such as procurement, fiscal contribution and social and infrastructure investment. Parker et al (2004:p9) point out that while engaging with government is often overlooked it is important to note that central, local and regional government do not always share the same development goals or priorities as local communities. To maximise economic impact business, government and civil society need to collaborate to better understand their different priorities and in so doing create increased value. Sir Mark Moody-Stuart (2006*)* chairman of Anglo American notes that it is *"vital trust is built between companies, NGOs and the public at large*".

3.5. Regional Development and Mining

A broad perspective of mining over time suggests a drastic evolution of the industry and its impact on local communities. Eggert (2001:p33) outlines 2 models which help provide a basic conceptual understanding of mining and its impact driven by industrial development, technological innovation, economic growth and world trade.

3.5.1. The Strong Linkage Model

In the latter half of the eighteenth century and beginning of the nineteenth century mines were primarily located close to industrial and population centres. Minerals extracted were processed locally and used in production or consumed. Eggert (2001:p34) claims this led to strong economic linkages as the mines relied heavily on local and regional inputs and the markets that they provided. Mining technology consisted of more basic techniques and didn't rely on specialist skills sought from further a field. Relatively high transportation costs discouraged long distance transportation of low value products (Eggert 2001:p34). Consequently mining primarily through structural factors played important roles in local economic development. Radetzki (1982) cited by Eggert (2001:p34) notes that Chicago and Birmingham in the late eighteenth and early nineteenth centuries illustrated strong linkages in the iron and

steel and coal industries. Radetzki (1982) noted that the linkages worked in both directions:

- Coal and steel production was attracted to regions where deposits of these commodities were located
- Conversely development of coal and steel mining was stimulated by proximity to industry and markets for final consumption.

3.5.2. The Weak Linkage Model

Technological innovation and world economic growth meant that by the 1960's the strong economic linkage between mines, ore deposits and communities had changed (Ayres et al: 1998, Eggert 2001). Lower transport costs especially bulk ocean transport meant mines could increasingly be located further away from mineral processing facilities and final consumers. Mining techniques had also improved drastically to leverage new technology and increased scale of operations but in response to this mines needed to source highly skilled specialised labour which could not always be found in local communities (Eggert 2001: p35). Mechanisation also reduced the demand for unskilled labour.

Kapelus (2001:p5) maintains that the trend to leverage improved technology and the larger scale of operations necessitated vastly increased capital investment and thus led to the rise of multinational mining companies. Unlike the strong linkage model where companies relied on local communities for inputs and as markets, multinational mining companies repatriated much of their profits for distribution to shareholders (Strongman 1998) and royalty payments were paid largely to national governments. Eggert (2001:p34) points out that mines increasingly were regarded by the communities near which they were located as "economic enclaves" – isolated from non-mining sectors of the local economy Ayres et al (1998:p5).

Kapelus (2001:6) and Eggert (2001:p35) claim the lack of local economic linkages of modern mines pose serious sustainability concerns particularly when mines face closure. Concerns relate not only to economic linkages but also to social, cultural and environmental costs (McMahon and Remy: 2001:p5). Eggert (2001:p35) argues that many critics point out that local communities bear a disproportionate share or the costs

of mining, for which they are not compensated furthermore they do not participate in decision making regarding the mine. The evolution of mining from strong to weak linkage models poses serious concerns for communities and regional development and improves the necessity to understand sustainable development.

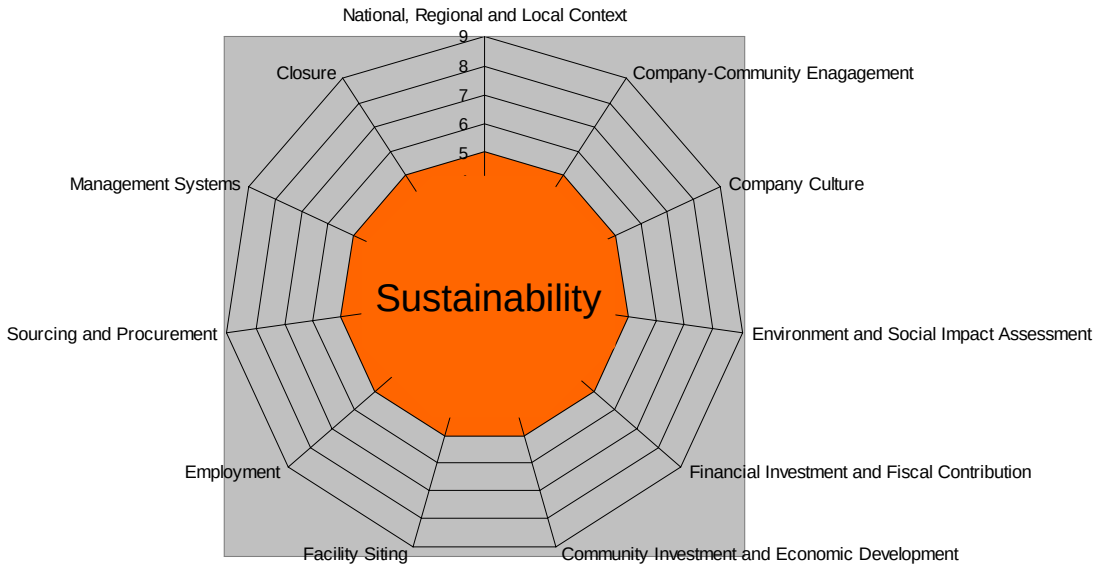
3.6. Sustainable Development Frameworks and Management Models

3.6.1. Sustainable Development Assessment Tool

Parker et al (2004:p5) and Hamann (2003:p244) both outline the formative stage development of management practice and theory surrounding sustainable economic development and call for greater guidance and models to assist business in identifying and accounting for its impacts. The adoption of one particular framework for economic sustainable development should not undermine any other but rather look to improve transparency and help firms better understand the drivers within either contexts. Parker et al (2004) argues in favour of the “Sustainable Assessment Tool” a model which focuses on developing social license and community engagement as a pre-requirements for achieving sustainable economic development. The framework used is highly localised and allows managers to measure sustainability on a continuum based on eleven categories of analysis. These include national, regional and local context, company-community engagement, company culture, environment and social impact assessment, financial investment and fiscal contributions, community investment and economic development, facility siting, employment, sourcing and procurement, management systems and closure.

Each one of the above variables is then scored resulting in a “sustainability footprint” which is capable of expressing a mines sustainable development performance (Parker et al 2004: p45). The idea is to score highly in each domain resulting in a large sustainability footprint. For illustrative purposes Figure 3.2 below displays uniform scores in each domain (5 out of a possible 9):

Figure: 3.2: The Sustainable Development Assessment Tool

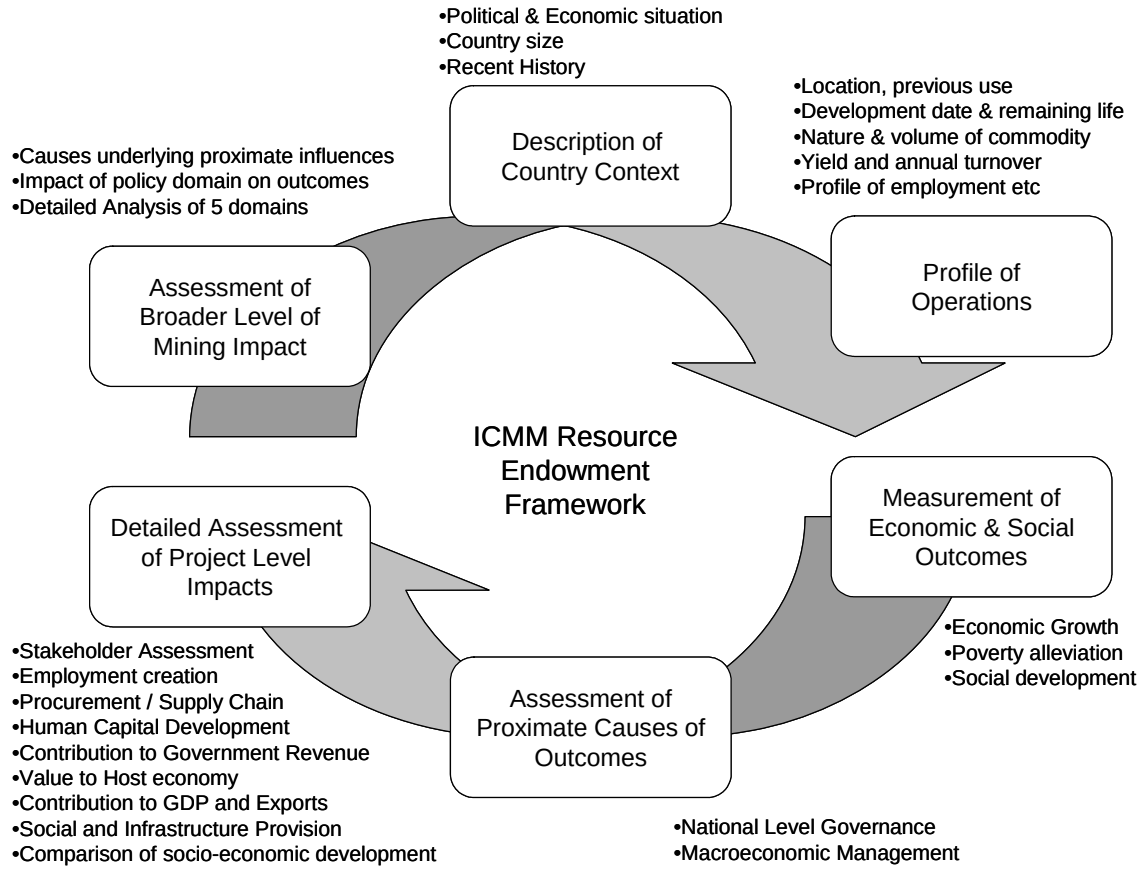


Despite outlining a wide variety of analysis areas Parker et al (2004) have a bias toward project level and the social element of socio-economic development. The impact of structural, national and regional influences and financial performance is under played as is the legacy associated with an existing operation.

3.6.2. Resource Endowment Toolkit

The ICMM (2006: p1) framework focuses on documenting drivers of "development effectiveness" through a detailed understanding of national policy conditions, operational practices and partnership requirements that lead to sustainable outcomes. Unlike Parker et al (2004) The Resource Endowment Toolkit integrates to a greater degree non-project level impacts such as macroeconomic environment, policy conditions and the impact mining in turn has on these. The ICMM framework through assessment of causes and outcomes of a wide variety of actors associated with a mining operation provides a potentially deeper understanding of project level impacts through maintaining scope to expand outside the theoretical framework – dependant on context. Saunders et al (2003) argues this is vital particularly when evaluating social qualitative data. The figure below outlines the ICMM framework including details particularly on project level assessment which is the focus of this paper.

Figure: 3.3: The ICMM Resource Endowment Framework



Source: Adapted ICMM 2006

As can be noted, the Resource Endowment Toolkit also includes assessment of the broader impact of mining, country profile, proximate causes of outcomes and the measurement of social and economic outcomes. Case study implementations in four countries ($ICMM_b$ 2006: p3) have already delivered findings on sustainable development but contextual factors and the huge differences that exist between the operations make findings difficult to contrast ($ICMM_b$ 2006). Causal relationships between inputs and positive outcomes are however beginning to emerge.

The ICMM framework while including a wide variety of factors does not include to the same extent the social and local depth of Parker et al (2004) which Auty (1998:p489) argues is critical. Furthermore while being a robust and transparent methodology for corporate social responsibility reporting does not provide within its capability any tools for management decision making and strategy execution. Focus on practical case

studies to build deeper understanding of positive and negative outcomes allows the framework to develop increased credibility and it itself relies on partnerships (ICMM, World Bank, United Nations Council on Trade and Development). The objective of the ICMM framework is to improve the incidence of positive outcomes from sustainable development, see below.

Figure: 3.4: Positive Outcomes from Mining

Source: ICMM 2006:p4

Dorian Emmett, Anglo American Head of Sustainable Development (Anglo American 2006:p15) outlines the ICMM Resource Endowment Toolkit as one of the key drivers behind sustainable development in Anglo Americans' business. Importantly the framework integrates with Anglo's existing internal Socio Economic Assessment Toolkit.

3.6.3. Socio Economic Assessment Toolkit

Anglo American announced in 2005 that their focus had been on changing the way they do "*business through making sustainable development an intuitive and conscious part of every decision – whether it is made by a mine manager, a corporate finance officer or someone working with communities or biodiversity"* (Anglo American$_a$ 2005:p1)

Anglo's stated objective is to *"seek to make a contribution to the economic, social and educational well-being of the communities associated with our operations"* (Anglo American$_a$ 2005:p1). Central to this is the understanding of how operations impacted local communities prior, during and post production through to mine closure. This in part is underpinned by Anglo American's internal Socio Economic Assessment Toolkit (SEAT).

The SEAT allows an operation to better understand the dynamics of its impacts and, having measured them, to manage them in accordance with sustainable development objectives. It is also provides assistance in developing a social dimension to long-term mine closure planning. The World Business Council for Sustainable Development (WBCSD 2006:p2) note that the SEAT allows Anglo to improve development

opportunities that flow from its operations. Anglo American (2006:p38) claim the tool has enabled it to improve social performance and capacity building particularly at its mature operations. Key principles of the SEAT include (WBCSD 2006:p3):

- Identification of key social and economic impacts that require management.
- Assessment of existing initiatives and providing guidance should improvements be necessary.
- Provide guidance in developing a Community Engagement Plan.
- Provide an analytical framework that allows operations to understand their overall sustainability performance.
- Ensuring that best practice is captured and shared within the company.
- Provide a planning tool to manage the mines social and economic impact including social investment and mine closure.

In accordance with Parker et al (2004) the SEAT framework focuses heavily on community engagement and management of social investment as key factors in improving economic development. In addition to Richards (2002:p5) the framework also highlights the importance of identifying the "legitimate stakeholders" and the potential negative influence of outside interests. SEAT provides a holistic analytical and managerial framework to sustainable development integrating social, economic and environmental elements relevant to specific operations. (See Appendix 13 for a brief outline of the SEAT framework). The framework aims to leverage partnerships vital to sustainability success (Auty 2003:p489) and is open to continuous improvement (WBCSD 2006:p4) signifying a proactive and transparent approach. Part of the implementation of SEAT involves annual reporting thus socio-economic development initiatives by Anglo become transparent and may serve to improve trust by local communities and contribute to improved "social licence" (Auty 1998, Hamann (2003:p239). To this end in 2005 Anglo American was awarded the ACCA award for Sustainable Reporting.

While the framework serves to provide a sound managerial platform for measurement and decision making it does not easily integrate corporate wide financial principles such as shareholder value maximisation. SEAT does refer to the long term benefits generated for shareholders through effective sustainable development, but the tool is

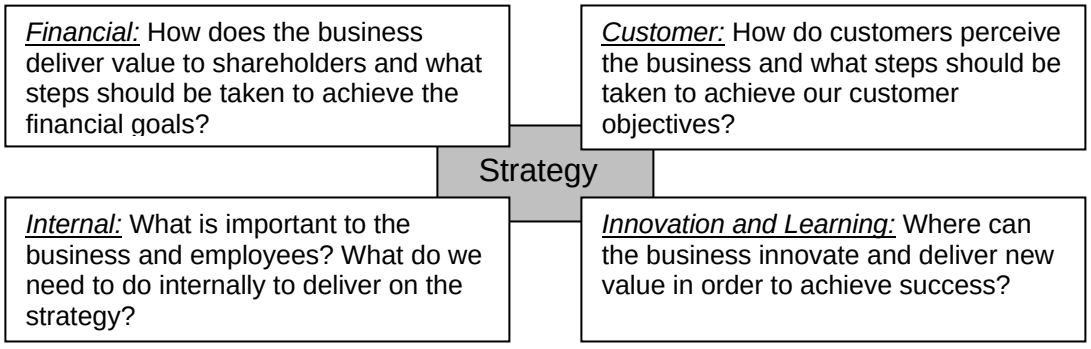
absent of capabilities that allow management to integrate these with local socio-economic objectives. Kaplan and Norton (1996:p147) note that the "objective of any measurement system should be to motivate all managers and employees to implement successfully the business … strategy"

3.6.4. The Balanced Scorecard and Sustainable Balanced Scorecard

The Balanced Scorecard framework, developed by Kaplan and Norton (1992:p71) was designed to address imbalances of traditional management performance reporting and control that had previously consisted of financial reporting only. The Balanced Scorecard was designed as a strategic management tool that like the ICMM approach (2006:p1) looked at both input or internal processes and outcomes. Kaplan and Norton (1993:p135) argued that traditional management performance measurement lacked the ability to include other important dimensions that had great impact on business and that were relevant to balance the financial perspective. Kaplan and Norton's (1993) framework approached reporting using a "top down" method driven by corporate strategy while SEAT based its methodology on a "bottom-up" approach as it was focused on the operation level.

The balanced scorecard proposes the management of business around four dimensions but maintain that through appropriate implementation of the model, firms are able to keep business strategy at the centre of their focus (Kaplan & Norton 1993:p137). The following dimensions are proposed:

Figure 3.5: The Balanced Scorecard



The balanced scorecard allows strategy implementation to be a virtuous cycle of implementation, measurement and adaptation. Importantly it is not only owned by top management but central to workers at all levels (Kaplan and Norton 1993: p139).

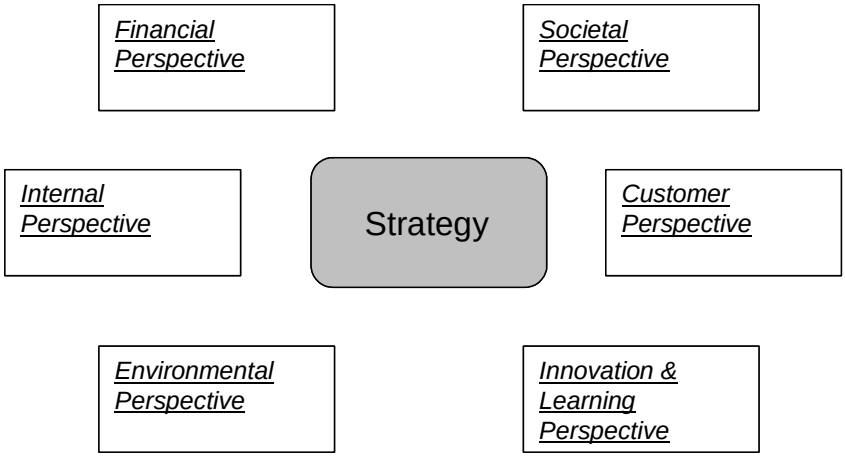
Measurement takes place along a continuum with regards to: objectives, targets and initiatives within each perspective (Financial, Customer, Internal & Innovation and Learning) which allows localisation of strategy taking account of context which Parker et al (2004:p9) argues is vital. Worrall (2005: p29) argues that a deep understanding of cause and effect relationships can be developed by this approach. Through doing so management is capable of effective decision making more closely aligned with firm strategy, through effective interpretation of lag and lead indicators within each of the four perspectives.

Critically firms are able to link different dimensions together in the fulfilment of corporate strategy such as shareholder value maximisation. Neither the Resource Endowment Toolkit, Socio-Economic Assessment Toolkit nor the Sustainable Development Tool offers such a capability. The balanced scorecard approach enables firms to better understand the impact of improved employee relations on financial performance or customer satisfaction. Worrall (2005:p29) points out the balanced scorecard provides a link so that firms can better understand how “soft” or intangible goals translate into hard tangible results. This becomes particularly relevant in assessment and management of intangibles such as social impact which Auty (1998: p487) argues is critical for successful economic impact.

The balanced scorecard approach provides a stronger bias than Parker et al (2004) toward financial measurement and is able to better integrate with the macro environment. (Worrall 2005:p30) argues that this delivers greater flexibility, the ability to reference past performance in planning scenarios and flexibility in delivering to a corporate strategy. Despite this a common critique of the balanced scorecard is that while it recognises the four dimensions, it does not reflect adequately environmental or societal elements and thus is not applicable to sustainable development. Social engagement and linkages (Parker et al 2004:p25, Auty 1998:p488, Richards 2002:p4) are vital for economic sustainable development yet the balanced scorecard does not directly include these.

Crawford and Scarletta (2005:p12) argue that including environmental and societal elements within the traditional framework presented by Kaplan and Norton (1993) allow the creation of a "*sustainability balanced scorecard*". Corporations thus are able to balance financial goals with corporate social and environmental responsibility while having the capability to measure management effectiveness across a broad range of perspectives. Causal relationships between sustainable development and financial outcomes for the company are particularly important (Worrall 2005:p36). The Sustainable Balanced Scorecard methodology allows better understanding of these dimensions from the individual project level and corporate level.

Figure 3.6: The "Sustainable Balanced Scorecard"



Source: Adapted from Crawford and Scarletta (2005):

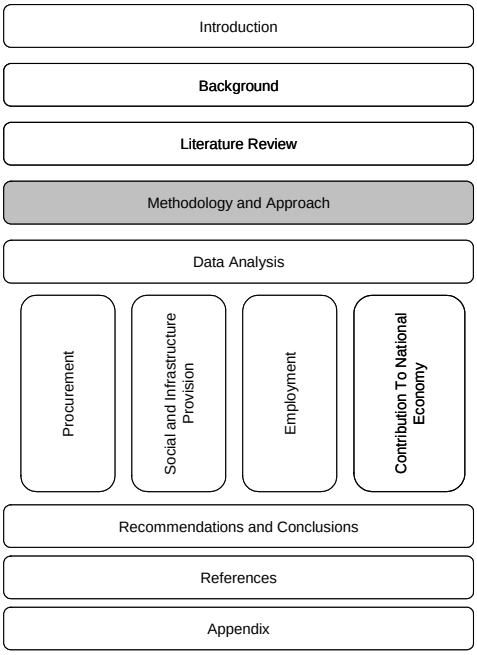
Communication of the success of methodologies that deliver understanding into the relationships between sustainable development and financial outcomes need to be improved (Parker et al 2004: p45). Willard (2002: p141) argues it is the communication of the business case to executives and management that is the problem. Willard (2002: p142) argues the "causal chain link" between sustainability and improved business results is already well understood by frameworks such as the sustainability balanced scorecard.

3.7 Summary

The literature review has enabled an overview of a number of important concepts relating to the research. An overview of the concept of sustainable development and in particular within the mining industry formed a strong theoretical background. Social engagement, partnerships and linkages and their prominence in developing positive outcomes for sustainable development were discussed in specific reference to the mining industry. Regional development and the weak vs. strong linkage model provided a longitudinal view of mining and the impact on economic development. Finally the theoretical management framework's offered by the Sustainable Development Assessment Tool, the Resource Endowment Toolkit, the Socio-Economic Assessment Toolkit and the Balanced Scorecard and Sustainable Balanced Scorecard were discussed. The Sustainable Balanced Scorecard in particular provided compelling motivation for use in the context of economic sustainable development as it was able to provide management with the capability to link the societal and environmental aspects of mining with the requirement to be commercially viable as an operation.

Chapter 4: Research Methodology

4.1. Methodology



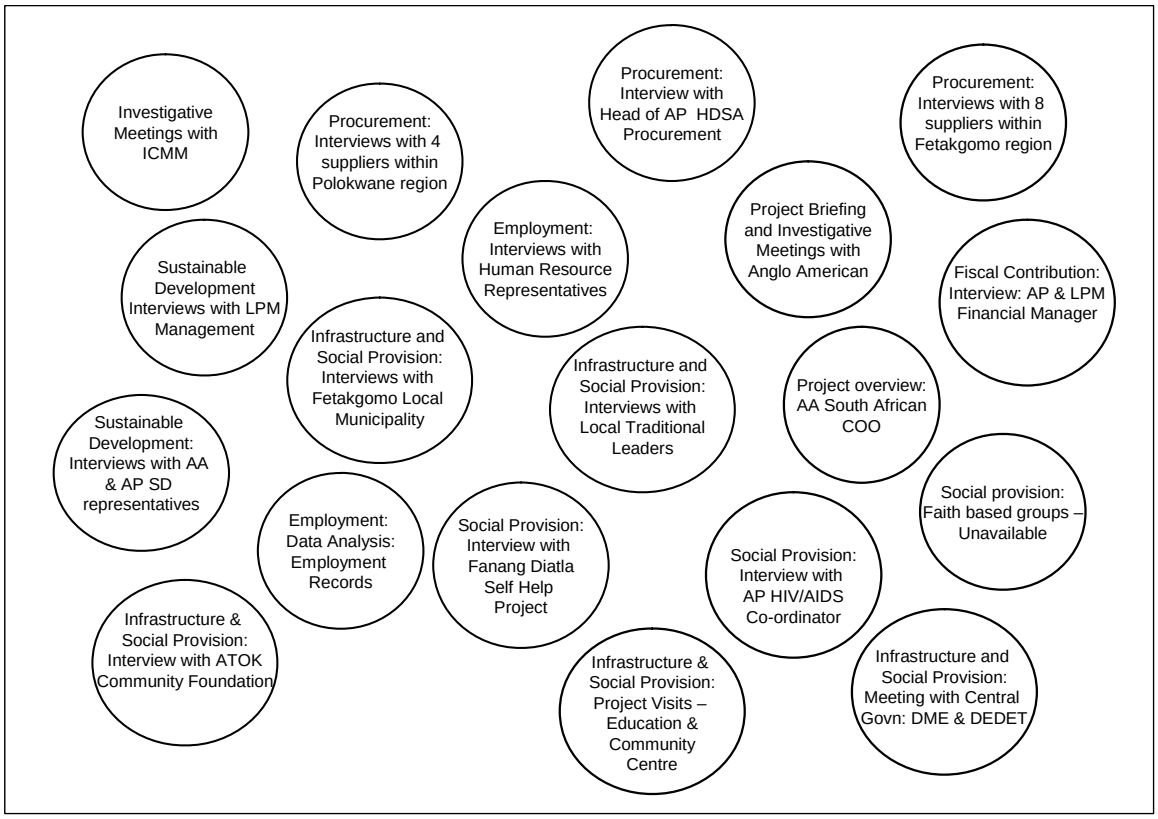
The research uses an inductive approach, relying heavily on case study example within the primary data. Due to the scope of the project an inductive approach was felt most appropriate as it better suited the discussion of theory following the collection of primary and secondary data (Saunders et al 2003:p87). The ICMM Resource Endowment Toolkit provided a sufficiently restrictive theoretical proposition within which to conduct the collection of data, something Saunders et al (2003:p234) argue is vital for robust inductive research methodologies.

The case study method is appropriate for the detailed examination of economic impact at Lebowa as “the case study is a research strategy which focuses on the dynamics present within single settings” (Eisenhart 1989:p532). The purpose of the research is to understand the actions and outcomes that have occurred at Lebowa. Yin (2003:p12) maintains that the central tendency of all case studies is that they aim to examine decisions especially “why they were taken, how they were implemented and with what result”.

In accordance with Eisenhart (1989), the research question was developed prior to undertaking any data collection on the case study. This together with the theoretical framework contained within the Resource Endowment Toolkit allowed a focused and systematic collection of primary and secondary data. Despite the use of this framework, Saunders et al (2003:p389) argues that particularly in a social setting and when collecting qualitative data using a theoretical framework, care must be taken not to “introduce premature closure on the issues to be investigated” - particularly if interviews depart from a theoretical construct (Saunders et al 2003:p389).

As an investigative study the research focused on a body of qualitative and quantitative data arranged around four areas of economic impact. Particular care was taken regarding departure from ICMM theoretical constructs within social settings. The scope of the research was limited to project level impacts by available time. Full application of the ICMM theoretical framework was not possible. Instead the project used an adaptation of the framework which included a mine specific analysis of procurement, social and infrastructure investment, employment and contribution to the national economy. See figure 4.1 for an overview of the primary data.

Figure 4.1: Primary Data Sources



4.2. Data Gathering Process

4.2.1. Procurement: Collection of primary data was by way of 12 structured interviews with mine suppliers, largely pre-selected by LPM's resident procurement manager. A broad cross section was requested prior to interview. Standardised interviews were administered primarily to the business owner or owner's representative. The sample included 8 local businesses and 4 businesses located in Polokwane (80km

from mine). Prior knowledge by the resident procurement manager (pre-contact via telephone) about the research, allowed “convenience sampling” an approach which Saunders et al (2003:p119) argues can provide better quality data when using a case study approach. The procurement interviews consisted of three sections. Section 1 focused on the company’s background, industry and makeup, Section 2 focused on the companies current performance including turnover and employment levels and Section 3 focused on future investment and economic outlook as well as any problems the business was experiencing. (See Appendix 10: for a sample questionnaire).

While the sample was not representative of the mine supply chain, skewed 75% in favour of locally owned SMME’s which only represent 14% of current total procurement (Ditchfield 2006) - the sample did provide a deeper understanding of local level impacts and linkages, vital to economic impact (Auty 1998: p500). Several of the local business owners had also directly benefited from LPM business development training (Phasha 2006) and this provided an opportunity to explore not only procurement but also the results of social development and indirect employment. Following initial interviews, the LPM resident procurement manager assisted with follow-up and clarification of several data issues. Secondary research of journals (Journal of Mining Development, Journal of Development Economics and Management Review Journal etc), research reports (Auty 1998, Parker et al 2004, Richards 2002 etc) and industry material (MMSD, WBCSD, ICMM, SACOM) facilitated improved understanding and context surrounding economic impacts.

Mine procurement data from 2004 – 2006 YTD was also provided by Anglo Platinum which formed the basis of several analytics. Procurement data proved difficult to manipulate and in the end was of limited use due to the relative short duration and large volume of irrelevant detail. The objective was to build a body of evidence surrounding the impact of LPM’s procurement activities and assess whether this was contributing to local economic development.

Figure 4.2: The 12 businesses interviewed.

Name	Company/Title	Location	Date
Elliot Phasha	AP Resident Buyer	Lebowa	03/08/2006
Gary Ditchfield	AP Procurement Manager	Johannesburg	31/07/2006
Jackie Makonko	Shawame Construction & Waste Removal	Lebowa	07/08/2008
James Maimela	Moopong Project Developers CC	Lebowa	03/08/2006
Johan Van Tonder	Martello Civil Contractors	Lebowa	03/08/2006
John Steynberg	J & D Fasteners CC	Polokwane	07/08/2006
Lesiba Chuene	Mogodi Brickyard	Fetakgomo	04/08/2006
Phillemon Lekubu	Bakone Garment Making & Repairs	Lebowa	03/08/2006
Rashid Vally	Solly's Electrical Wholesalers	Polokwane	07/08/2006
Robert Sekonya	Babelegi Business Enterprises CC	Lebowa	03/08/2006
Salminah Shikwane	MmaNoto Toyota	Fetakgomo	04/08/2008
Sam Matjie	Mmatjie Homes & Sammy Stores	Fetakgomo	04/08/2008
Steve Phasha	Difetakgomo Mining & Services	Lebowa	03/08/2006
Tewie Wessels	Limpopo Toyota	Polokwane	07/08/2006

4.2.2. Social and Infrastructure Provision: Data collection followed a strategy aimed at measuring the social capital as well as material contributions of the mine. As referred to in the literature review, social engagement is critical for developing positive economic impact (Parker et al 2004). Social capital was analysed using qualitative data collected from mine management, off-site Anglo Platinum employees, traditional community leadership, local government and local non-governmental organisations including health and welfare groups. LPM's Socio-Economic Development Officer facilitated interviews and acted as translator where required.

Primary data collection consisted of semi-structured interviews, open forums and informal discussions regarding topical issues affecting the community, past projects that LPM had been involved in and prospective future initiatives. Examples included mine supported HIV/AIDS initiatives, educational assistance for communities including school building, water provision projects and capacity building and business development

training (Maphutha 2006, Sekonya 2006 and Lesuli 2006). Care was taken to avoid premature closure on issues departing the ICMM framework.

Figure 4.3: Primary data sources used for assessment of social and infrastructure investment

Name	Company/Title	Location	Date
Agnes Qusabe	Fanang Diatla Self Help Project	Lebowa	08/08/2006
Andrew Letlapa	AP SED Officer	Lebowa	02-10/08/2006
D.A Selepe	Traditional Leader: Selepe Community	Lebowa	08/08/2006
Jackie Lesuli	Economic Development & Planning Manager Fetakgomo Municipality	Fetakgomo	07/08/2006
Lina Maphutha	AP HIV/AIDS Co-ordinator	Lebowa	02/08/2006
M.M Phasha	Traditional Leader: Barok-ba-Mkwana Community	Lebowa	08/08/2006
P.Makelepeng	Councillor: Monotwane Community	Lebowa	08/08/2006
Robert Sekonya	Chairman ATOK Community Foundation	Lebowa	08/08/2006

Secondary data consisted of information on past projects and initiatives (Letlapa 2006) as well as material collected from industry bodies (MMSD, WBCSD) and management journals (Journal of Development Economics). Following the site visit several data was corroborated with the assistance of the LPM mine manager and company records via email and telephone calls.

4.2.3. Employment: Economic impact through employment consists of direct employment by the mine, indirect employment and induced employment. Direct employment information was acquired through the human resource department's databases which provided in-depth primary data of employee's (Mahango 2006). Indirect employment data was collected as part of the procurement sampling process; interviews were also conducted with three local traditional community leaders and non-governmental organizations representing communities from which the workforce was drawn. Induced employment data was obtained in part from work done in fulfilment of

LPM's 2006 SEAT (Socio-Economic Assessment Toolkit) report and ICMM guidelines (ICMM 2006:p35).

LPM human resource data provided detailed information on a range of social and development aspects in addition to workforce demographics. It should be noted that due to unforeseen circumstances and the loss of a significant member of staff, valued guidance and assistance with employment data became difficult following primary data collection. The overall economic impact through employment followed as closely as possible the methodological framework of the ICMM (2006:p34-37) to estimate the total number of people employed by mining operations. See figure below.

Figure 4.4: Primary data sources used for employment analysis.

Name	Company/Title	Location	Date of Interview
Billy Mahango	LPM Human Resources Manager	Lebowa	02/08/2006
Henry Zondi	AP Head of Operational Human Resources	Johannesburg	01/08/2006
Local Business (see procurement above)	Business Owners & Managers	Lebowa, Fetakgomo & Polokwane	See Procurement above
Local Community Leaders: (see social & infrastructure provision above)	Traditional Community Leaders: Representing local workers	Lebowa	08/08/2006
Willy Van Waveren	AP Employee Benefits Officer	Lebowa	21/08/2006 via email & telephone

4.2.4. Contribution to National Economy: Data collection was of company financial accounts submitted as part of annual reporting. "Non-aggregated" LPM data from 2000-2005 was made available for analysis. Such duration provides only a limited view of the operations' contribution to the host economy but falls within ICMM requirements of 5 years (ICMM 2006:p40). Due to the already long life of the mine (nearly 40 years) longitudinal brevity may underestimate the conclusions regarding LPM's overall fiscal contribution. Accessibility of detailed data on back dated fiscal

payments over a range of 10 years was understandably difficult for the finance department (Broodryk 2006).

The ICMM methodology includes a comprehensive list of fiscal payments including dividends, royalties and taxes and other charges. Due to the project level focus contribution to the national economy by downstream activities while recognised as significant, did not form part of the study. Such examples include contribution to GDP, foreign exchange earnings and fiscal contributions made by downstream activities. The ICMM methodology was followed for project level contributions and was completed for the most recent tax year: 2005. (See Appendix 6: Fiscal Contributions for a full breakdown of inputs and Figure 4.5 below for data sources).

Figure 4.5: Primary data sources used to assess contribution to national revenue.

Name	Title	Where	Date
Dolf Broodryk	Manager Corporate Accounting	Johannesburg	31/07/2006
Jacques Steenkamp	Financial Manager Lebowa Platinum Mine	Polokwane	11/08/2006
Ian Emsley	Advisor Carbon Management and Sustainable Development	London	10/10/2006 via email

4.3. Access and Confidentiality:

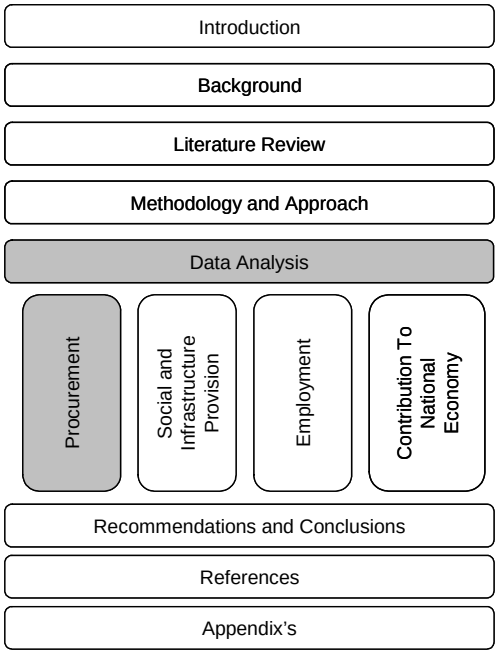
All interviews were done on a voluntary basis. During all interviews the objectives of the research were clearly explained (through the use of a translator if required) and interviewees were given an opportunity to review the ICMM guidelines. Access to the findings and sponsors of the research (Anglo-American Plc and Imperial College London) were made clear prior to interview and the interviewee was given an opportunity to ask any questions. An effort was made to explain the research was independent of LPM. Where appropriate interviewee's were asked if conversations could be recorded for accuracy. An assurance was made not to disclose sensitive financial and business information to competitors and as such it was confirmed the report was purely for consumption by Anglo American employees and would not be publicly available. During community discussions, while an effort was made to allow attendees to speak freely, a translator was necessary who was an LPM employee. It is not anticipated this influenced findings as the subject matter was familiar from prior

interactions. Saunders et al (2003:p131) explain that deception and consent are central features required in ethical qualitative data collection and it was felt these were best addressed through the appropriate use of the LPM representative during interviews.

Chapter 5: Data Analysis

5. 1. Procurement

5.1.1. The Impact of Procurement



The mine supply chain represents a significant impact of the mine on the local economy through its effects on the promotion of new industries, the boosting of local production and indirectly on the wider non-mine community through local monetary injection and the multiplier effect (ICMM 2006:p15; Otto 2004:p14). Examples of industry sectors that can benefit from mining operations include: construction, manufacturing, food supply, hotels and restaurants, and banking and insurance (ICMM: 2006:p15).

The economic impact of the multiplier is largely dependant on the number of economic linkages a mine has (Otto: 2004:p21). Upstream linkages refer to activities such as exploration, consumables and labour and downstream linkages refer to processing and production of mine output. The findings below focus primarily on upstream linkages as they impact to a greater degree local procurement. Downstream activities take place largely outside of the local region however it is noted that the concentrator unit (part of the downstream processing of ore) is located onsite and contributes to greater economic value added as referred to in the literature review as part of the weak vs. strong linkage model and regional development.

Central in determining the impact of procurement on local communities is the definition of “local”. It is often difficult to reach consensus particularly when a mine is located in a relatively remote region. At LPM geographic distance from the mine is used by mine management however ICMM (2006:p13) define as “local” the area where workers have

their homes and families. This is also contentious due to migrant workers (with second homes/families) and workers who commute long distances on a daily basis. For consistency, the local region will be defined as 50km radius of operations which excludes Polokwane but includes the location of the majority of workers' primary homes and families.

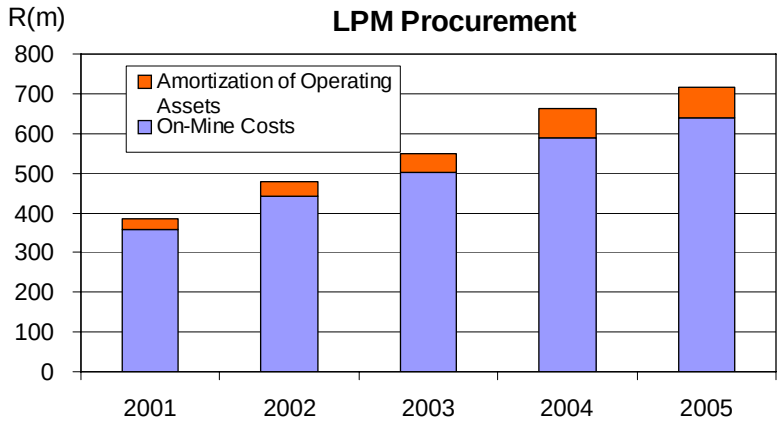
To contextualise procurement it is worth noting that LPM experienced a sustained period of under-investment due to the comparative lower platinum yield and water supply issues at the mine in the past (Ireton:2006). The operation consequently did not reach the production levels nor have a supply chain that was at the same level of development as other Anglo Platinum operations within South Africa. Recent capital investment projects at LPM look to reverse the under investment trend and spending has shown a marked increase since 2004 inline with Anglo Platinum objectives to increase company wide production to 3.5million ounces (Johnson Matthey 2002:p26). Within the local municipal region mining constitutes roughly 28% of gross geographic product (IDP 2006:p53) and it the largest private sector element of the local economy. The total local municipal budget for 2005/2006 is approximately R29.6million (CBDC3 2005:p8) When taking into account the increased level of spending since 2004 and the impact of the multiplier through linkages, procurement has the potential to advance local economic development significantly.

5.1.2. Overview of the LPM Supply Chain

LPM's supply chain is diverse in terms of geographical location of the suppliers, types of goods and services provided and the size of the companies. In 2005 LPM accounted for approximately R717Million spending (on-mine costs plus amortisation of operating assets) an increase of R168Million or nearly 31% rise since 2003 (Anglo Platinum Income Statement 2003-2005). Of the total procurement spend over 99% are South African registered companies[6]. The large proportion of total procurement spend on capital products (reflected below in part by increase in amortisation costs) reflects capital expenditure initiatives since 2004 to expand mine capacity.

[6] http://www.angloplatinum.com/

Figure 5.1: Procurement



Extrapolating year to date figures for procurement of goods and services, total procurement for 2006 of R606,461,665 is broken down as follows:

- Capital: R227,086,281 (37% of spend)
- Services: R252,073,134 (42% of spend)
- Consumables: R127,302,251 (21% of spend)

5.1.3. Local Procurement

A sample of local suppliers was used to evaluate mine procurement policy, dependence on the mine, and enterprise development and employment within the local area. While it is recognised that the data was impacted by convenience sampling it is worth noting that Saunders et al (2003) argue that within the context of non-probability sampling such measures can deliver greater depth of understanding.

The majority of sample businesses were SMME's engaged in construction and building related activity (see table below and Appendix 11: for the sample of suppliers) and local to the mine. The sector within which the majority of sample business fell was services and consumables. For the sample total annual spend for 2006 is estimated at R19.2Million up from R16.8Million in 2005 representing a 14.3% increase. Procurement by LPM indirectly supported 133 jobs in 2006 within the sample suppliers[7]. Employment within local suppliers was also up on 2005 figures and 75% outlined plans to hire more

[7] Calculated based on ICMM methodology: proportion of turnover from mine multiplied by total number of full time employees (ICMM 2006:p36)

labour in 2007. Diversified businesses (with a small proportion of their turnover from the mine) tended to have larger turnover and employed more people. Local businesses were mostly small in terms of turnover and employment

Figure 5.2: Local Supplier Sample: (For full details see Appendix 11)

Item	Approximate Value of Procurement (per annum)	Company Name	Location	Previously Disadvantaged Supplier?
Mine clothing repairs	R166 232	Bakone Garment Making & Repairs	Lebowa Mine (Local)	Yes
Construction Services	R780 000	Difetakgomo Mining & Services	Sefateng Village (Local)	Yes
Industrial Supplies	R28 000	J & D Fasteners CC	Polokwane	No
Vehicle & Parts Supplier	R1 500 000	MmaNoto Toyota	Lebowakgomo (Local)	Yes
Building Supplies	R125 000	Mmatjie Homes & Sammy Stores	Lebowakgomo (Local)	Yes
Building, Training	R720 000	Babelegi Business Enterprises CC	Lebowa Mine (Local)	Yes
Transport Contracting	R12 900 000	Martello Civil Contractors	Polokwane	No
Building Supplies	R83 000	Mogodi Brickyard	Lebowakgomo (Local)	Yes
Waste Removal & Construction	R1 455 000	Shawame Construction & Waste Removal	Maroke Village (Local)	Yes
Electrical Supplies	R120 000	Solly's Electrical Wholesalers	Polokwane	Yes
Building Supplies	R46 000	Mogodi Brickyard	Bogalatladi Village (Local)	Yes
Parts, Vehicles & Service Supplies	R2 000 000	Limpopo Toyota	Polokwane	No

LPM outsources a number of activities and actively works to establish local contractors and suppliers through the provision of business training, mine resources and preferential procurement policy (Phasha 2006 & Ditchfield 2006 also see policy section below). As referred to in the literature review, McMahon,G & Remy,F: (2001:p15) claim outsourcing is “critical for both the size and sustainability of the mining operations economic impact”. Examples of companies that LPM has actively worked to establish

include Difetakgomo Mining and Services (business development training, favourable contract terms and equipment provided), Bakone Garment Making (business development training provided) and Shawame Construction (business development training provided). Non-local (Polokwane) based suppliers stated business from the mine had decreased in the past 2 years (J&D Fasteners, Solly's Electrical & Limpopo Toyota). Non-previously disadvantaged suppliers expressed concerns for being able to win future mine tenders (J&D Fasteners & Martello Civil Contractors). Early indicators suggest a bias favouring local previously disadvantaged suppliers however the evidence collected could not conclusively confirm this.

42% of the sample companies had only been in existence since 2002, and did not posses skilled workers – defined as workers with technical skills or qualifications within a certain field. LPM procurement noted this was a hindrance in expansion of procurement spend with local suppliers (Ditchfield 2006). In response evidence notes that 50% of the sample interviewed cited LPM business development or tender preparation training as a key factor enabling them to compete for contracts. All local suppliers interviewed outlined plans for expansion through either hiring more labour or investing in capacity in 2007.

5.1.4. Capital Expenditure Projects

LPM has experienced major capital investment in the past three years with the sinking of new access shafts and capacity expansion at Brakfontein Merensky (R95.7million replacement project) and Middlepunt Hill (R43.7million extension project). The main shaft at Lebowa currently requires miners to travel up to 4km underground on foot, before reaching places of work, impacting production efficiency significantly (Van Vuuren 2006).

To date approximately R349Million[8] has been spent on the expansion representing an increase of 47% in property, plant and equipment investment. Vendors providing services have largely consisted of Johannesburg based specialist project management, contracting and construction suppliers. Examples include Skelton and Plummer Projects with total spend of over R25Million, Highveld PFS with R8.6Million and SAN

[8] Anglo Platinum LPM Annual Accounts: 2003, 2004, 2005- Income Statement, Annexure A, Note 11

Contracting Services (Source AP HDSA Procurement 2004-2006). In addition to providing skilled labour these contractors also source unskilled contract labour from local communities. San Contracting Services saw procurement spend from Anglo Platinum group rise from R46Million in 2003 to R124Million in 2004, although individual contract spend at Lebowa is unclear.

The proportion of labour drawn from local communities by contracting firms is unclear but limited evidence suggests that the majority of spend has been with non-local companies consistent with the sourcing of specialist skills and the Weak-Linkage Model as referred to in the literature review. With a basic overview of how the supply chain impacts local economic development, a sample overview of local suppliers and some detail on major capital investment the following section outlines initiatives to increase economic linkages through development of local and previously disadvantaged suppliers.

5.1.5. Supply Chain Development:

Legislation passed in the South African Mining Charter of 2004 called for previously disadvantaged South African participation in mining to represent 15% by 2009 and 26% by 2014 (DME 2004:p2). In order to qualify for renewal of mineral rights all mines within South Africa are required to achieve compliance with these targets. Specific elements related to human resource development, employment equity, migrant labour, ownership, procurement etc. To achieve targets within procurement, vendors were required to be segmented into 3 categories against which supply chain development and reform is reported. In accordance Anglo Platinum's segmentation is as follows:

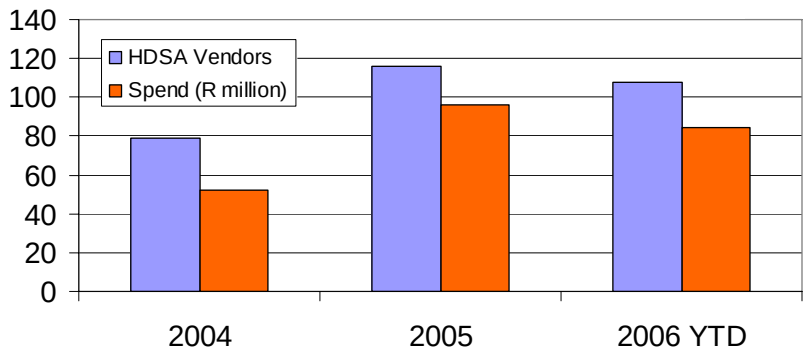
Figure 5.3: Supplier Segmentation

Procurement Segment	Abbr.	Definition
HDSA - Owned Suppliers	HO	> 50% HDSA ownership
HDSA - Empowered Suppliers	HE	> 25% HDSA ownership
HDSA - Influenced Suppliers	HI	> 5% HDSA ownership

All procurement is tracked according to whether the vendor falls within HO, HE or HI categories (Ditchfield 2006). Within the ICMM theoretical framework this policy refers to promotion of previously disadvantaged groups through procurement (ICMM 2006).

Currently total HDSA procurement (HO & HE vendors only) at LPM accounts for 23.8% of total spend for 2006 with the consumables segment of HDSA spend at 43.9%, representing levels ahead of government targets. The figure below represents January 2004 – August 2006 procurement with previously disadvantaged suppliers. Extrapolating current procurement for 2006, spending for the year is projected to reach R126Million. From 2004-2005 the number of HDSA vendors increased by 46% and spending increased by 84% (Ditchfield 2006). HDSA procurement prior to 2004 is not available as reporting by HDSA status was not required.

Figure 5.4: HDSA Procurement: Jan 2004 – Aug 2006



Government has not taken a direct role in the promotion of local supply chain development besides implementing favourable HDSA legislation. Otto (2004:p10) and Parker et al (2004:p7) argue to enhance economic impact and leverage current initiatives engagement and collaboration with government as a third party needs to be a priority. Current government spending in the region is focused on social services (IDP 2006: p23). Despite this, LPM has proactively begun to engage government as a stakeholder and through its own policies targeted local businesses. An example of this engagement is through local government where LPM pay the salaries of 3 full time employees for the purpose of business development training for local residents under the guidance of Fetakgomo Municipality (Lesuli 2006). Potential exists to deepen collaboration in this regard which will deliver to the government agenda of social upliftment and the LPM SD agenda of supply chain development and Mining Charter compliance targets

A trial procurement policy was recently implemented at LPM together with one other AP mine. The policy is designed to stimulate the development of local and previously disadvantaged (HDSA) suppliers and to speed up the rate of change within procurement through capacity building (Ditchfield 2006). Suitable suppliers will be granted "preferred vendor status". The trial procurement policy is to ensure future compliance with the Mining Charter that by 2007, 20% and by 2012, 30% of discretionary procurement will be with HDSA suppliers (Anglo Platinum 2006: p3). If the policy proves successful AP has the intention to expand the framework across the group. Central to the policy are the following initiatives (Ditchfield 2006) – See also Appendix 14:

- Preferential treatment of local vendors.
- Preferential treatment of HDSA vendors (AP keeps a database of HDSA accredited vendors which currently numbers 1039: July 2006).
- Assistance for local companies on how to prepare and submit tenders.
- Encouragement through labour brokers for the sourcing of local contract labour.

Inclusion for community interests in procurement favours smaller contract sizes which typically require more management time and challenge operational efficiency (Parker et al 2004:p23). During supplier interviews a number of local small businesses expressed that they had been excluded previously from the supply chain and not afforded the opportunity to compete on mine tenders.[9] The trial procurement policy in place at LPM addresses this issue by aiming to increase "single source" contracts through the resident buyer (Ditchfield 2006, Phasha 2006). According to Anglo Platinum's trial procurement framework (Anglo Platinum 2006:p3); to allow local HDSA suppliers preferential access to contracts, the local procurement manager or resident buyer is empowered to award smaller sized contracts based on a weighting system.

The trial of this policy has been successful in stimulating local economic HDSA participation, through the increased awarding of contracts to local SMME's and the growing number of HDSA registered vendors. From 2004 until 2006 HDSA registered vendors at LPM have increased from 95 to 134 (Company records August 2006).

[9] Several local business owners felt mine contracts were previously reserved exclusively for businesses with relationships with mine management, typically White Owned Businesses from outside of the local area and they were granted contracts unfairly.

During interviews with local businesses the trial procurement policy was perceived as having a positive impact on local economic development (Appendix 11: Local Supplier Data). Since 2004 there has been a 52% increase in HDSA procurement along with a 23% decline in non-HDSA empowered or owned companies.[10]

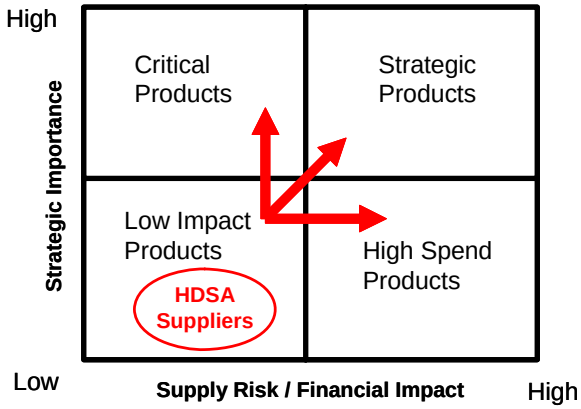
Anglo Platinum noted the following challenges to enhanced local economic benefit through procurement and supply chain development (Ditchfield 2006, Phasha 2006):

- Lack of capacity within local businesses. In this context defined as lack of access to capital as well as lack of specialist skills (Ditchfield 2006).
- Lack of tendering ability by local small businesses (Phasha 2006).
- Fronting by suppliers - when suppliers give a false impression of being HDSA companies by "window dressing" their companies with HDSA's, who have no real management or ownership interest (Anglo Platinum Sustainable Development Annual Report 2005:p40).
- Definition and confirmation of local vendor status for suppliers (Ditchfield 2006).
- Difficulty in creating synergy between previously advantaged and disadvantaged suppliers' potentially threatening service delivery (Ditchfield 2006 & Phasha 2006).

In interviews with mine procurement personnel lack of skills among local HDSA vendors were identified as a major issue. Few firms practiced high value or highly skilled work. The majority of local HDSA suppliers provide low value goods/services utilizing relatively unskilled labour (Ditchfield: 2006). Anglo Platinum's stated intention is to facilitate the migration toward more "value-added" quadrants, away from "low impact products". See figure 5.5 below.

[10] Source: HDSA Procurement data for LPM 2004-2006 – Anglo Platinum

Figure 5.5: AP Procurement Quadrants



Business development training is being offered by AP in order to assist communities local to their operations and previously disadvantaged suppliers to achieve the standards required to tender for Strategic, Critical and High Spend contracts and to encourage entrepreneurship. The initiative is being driven by central AP procurement teams and uptake at LPM has been positive - 33% of sample businesses cited the positive impact of the business development training on their ability to tender and win LPM contracts. The corporate procurement team has developed a “business model” outlining the methodology behind their efforts. See Appendix 15.

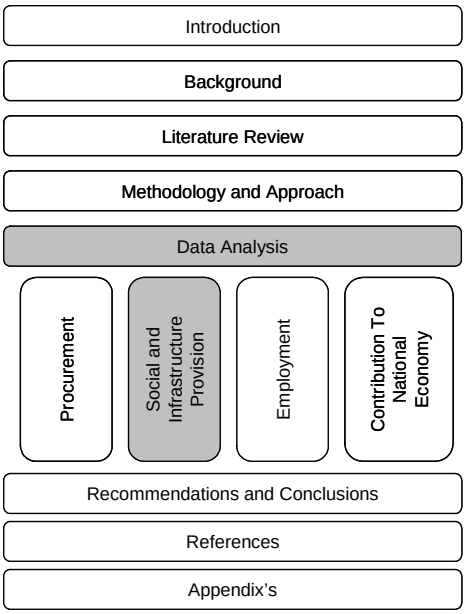
5.1.6. Summary

LPM has managed a degree of success in supply chain development through increases in local economic linkages (rise in HDSA accredited & local vendors) and greater HDSA spend. Evidence from the sample of suppliers suggests LPM is having a positive impact albeit on a clearly predefined sample. The addition of proactive measures such as business development training for eligible potential suppliers signifies a commitment to compliance with the Mining Charter and a commitment to increase economic impact. Evidence in the form of greater participation of previously disadvantaged suppliers within the high value segments of the procurement quadrant will take time to emerge. Structural problems associated with the weak linkage model of mining development such as non-availability of local skilled suppliers still exist and will take time to resolve. While early evidence for economic impact is positive it is not conclusive and a longer duration and larger sample of suppliers is suggested. The following section examines the economic contribution LPM has made toward social and infrastructure provision.

5.2. Social Development and Infrastructure Provision

5.2.1. Overview

The impacts of a mining operation on a local economy go beyond employment, supply chain development or the contribution to fiscal flows (ICMM 2006:p19). Mining has a long term and localised impact on the community in which it is located (Auty 1998). A case is made in the literature review where economic development through social investment enables mines to develop greater social license to operate and improves its performance within the community (Parker et al: 2004:p6). The evidence below provides a sample of these efforts and the associated outcomes.



LPM is located within the Fetakgomo municipality which has a 100% rural population of approximately 106,427 people (IDP 2006:p15). The Municipality relies exclusively on central government grants for funding. Development initiatives are managed according to an integrated spatial development plan (IDP) which is drafted with local and national input and outlines the public sectors' approach to social and economic development. The table below outlines selected local social and developmental statistics (IDP 2006):

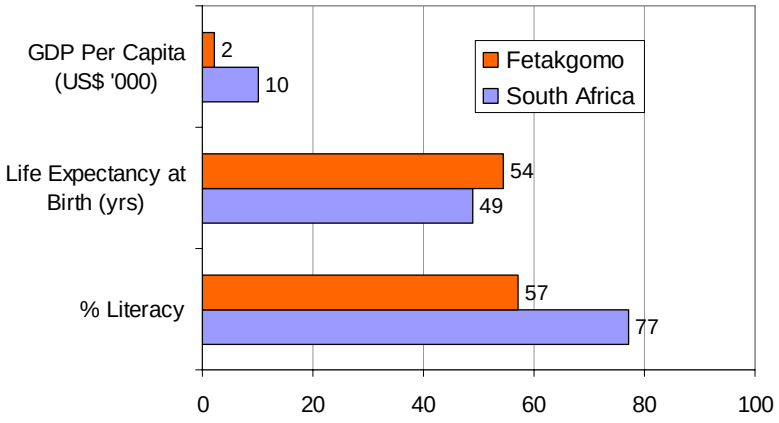
Figure 5.6: Fetakgomo Development Indicators

Fetakgomo Municipal Region	
Population	106,427
Population between ages of 5 and 19yrs old	44%
Annual income per household	R8127*
Employment of economically active population	89.5%
Access to drinking water	66%
Access to sanitation	61%
Access to electricity	20%
Telecommunications (fixed line)	32%
Mining contribution to local GDP	28%

Source: Fetakgomo IDP 2006, United Nations 2006

The annual household income of R8,127 (US$1,100 in Sept 2006) represents a large proportion of the population living in poverty and 73% of the population are not economically active (SASTATS 2002). While income is markedly less than national levels, health and education differences represented by life expectancy and literacy are less marked. See Figure 5.7 below outlining the ratio between Local and National Level Indicators:

Figure 5.7: Fetakgomo vs. South Africa Development indicators



Source: SAHR 2003/2004, UN HDI 2006, SASTATS 2002

Infrastructure and social services provision are a major focus of governmental development objectives in stimulating economic growth and account for 34% of local gross geographic product (IDP 2006:p16). Mining activities which include neighbouring

Kubz and Phashaskraal Pelawan Platinum mines, contributes 28.8% to local gross geographic product - the largest private sector contribution (IDP 2006:p53).

5.2.2. Projects

While Lebowa's impact on social and infrastructure development can be reasonably assessed it is noted that significant goodwill created through a well run programme is difficult to accurately measure (Parker et al 2004). LPM has management structures and resources dedicated to social development. Its engagement with the community is guided by mine management and corporate policy (Manyanga 2006, Letlapa 2006). LPM has a substantial portfolio of social and infrastructure projects within the local area of the mine which it has either directly funded or provided resources. See Appendix 2: Community Social Investment (Letlapa 2006)

Significant resource has been dedicated to contributions toward education and community infrastructure. Over 14 local schools have been built in a 50/50 partnership with the Department of Education and teacher salaries in several cases have been subsidised to improve the level of schooling. In addition to direct education investment , six university scholarships have been set aside for local school leavers for admission to mining related fields of study (Manyanga 2006). Infrastructure investment has been provided in the form of water supply (provision and maintenance of boreholes) for eight villages and electrification projects for four villages as well as the maintenance of access roads (See Appendix 2 for further detail).

In terms of health investment, the mine funds the training of 11 local nurses at Carltonville Nursing Academy in Gauteng. Temporary health facilities serving the public in the form of a clinic have also been directly funded (Manyanga 2006). LPM funds several HIV/AIDS initiatives aimed to assist employees and the local population (Maphutha 2006):

- A home based care scheme operates for employees or ex-employee's (and their direct families) too ill to return to work as a result of HIV/AIDS or other illness.
- A VCT scheme encourages voluntary testing and counselling so employees can become aware of their HIV/AIDS status (See Appendix 14).

- Community and employee representatives are funded by LPM to directly engage with the local population through the peer awareness initiative (See Appendix 9).
- Various awareness campaigns aimed at informing and educating the community to the dangers of HIV/AIDS including brochures, condom dispensers and billboards.

The mine directly supports either financially or through the provision of mine resources: infrastructure provision, education facilities and training, health, local enterprise development and community and cultural development (See Appendix 2: Social Investment).

Parker et al 2004, McMahon and Remy 2001 and Otto 2004 as referred to in the literature argue that social and infrastructure development where considered successful based on prior evidence normally displayed deep collaboration and engagement with multiple stakeholders. LPM have contributed to the delivery of social and infrastructure facilities and services through partnerships with Eskom (State Electricity Supplier), the Department of Education, Department of Health, Local Municipality and local development committees and NGO's. While LPM displays commitment to community level sustainable development generally[11], the implementation of management measures and processes associated with the corporate SEAT framework remain at an early stage. To date no final SEAT report has been published for LPM.

5.2.3. Land Use

LPM occupies portions of five farms, four of which are state owned and one which is held in trust for the Bapedi Tribe. All land is occupied and falls under the jurisdiction of Traditional Authorities (Johnson 2006). Four of the five farms fall under the Baroka-ba-Nkwana Traditional Authority and one farm falls under the joint jurisdiction of the resident Selepe Traditional Authority and the neighbouring Monatwane Traditional Authority. During negotiation of land leases between LPM and traditional leaders it was agreed R2,000,000 would be paid each to the Baroka-ba-Nkwana and Selepe's and R1,000,000 would be paid to Monatwane community all to be allocated to social

[11] Level of commitment gauged by Sustainable Development investment as proportion of turnover, number of staff employed in Sustainable Development activities and alignment with Anglo American Practices.

upliftment projects (Johnson 2006). Prior to this compensation for land use is unclear. Annual land rental payable under current agreement (Sept 2005 till Sept 2006):

- Nkwana Community is R280,677.22
- Selepe Community R27,693.29
- Monatwane Community R27,693.29

In interviews with local traditional leadership (Ghoshi's) several issues regarding land use emerged. Due to a land ownership dispute between rival factions, beneficiaries of land rent and compensation payments have not received payment. Payments relate to R2,000,000 (for Baroka-ba-Nkwana & Selepe communities) and R1,000,000 (Monatwane community) for loss of use of farmland. LPM has abided by its obligations and paid all monies into representative attorney's escrow accounts. Legal procedure has dictated that until the ownership issues are resolved, no compensation will be available to the affected communities (Johnson 2006). The process to resolve this issue has frustrated local residents to the degree where action against the mine has been threatened (interview with Local Traditional Leadership August 2006). In addition to compensation for land use, environmental concerns were raised by affected communities due to dust pollution as a result of the recently enlarged slimes dam.

5.2.4. Community Engagement

Current LPM management have adopted different methods used previously in engagement with local communities. The current mine manager initiated individual meetings with local community leaders in order to improve access to mine management, facilitate greater transparency and help engender relations (Manyanga 2006). In addition selected local community leaders were invited to visit mine facilities to witness first hand the underground operations. LPM mine management hired a dedicated Communication Officer who produces a monthly newsletter aimed at creating greater awareness of the mine in the community (Manyanga 2006). This was in response to poor perceptions of the mine within the community especially amongst young people (Manyanga 2006). Engagement with traditional leadership in the past was through the Socio-Economic Development officer and now is directly through the Mine Manager.

Conflicting priorities from different local communities have in the past undermined community relations (Mahango: 2006). Current mine management have encouraged the development of greater consensus and prioritisation of social needs through chairing working sessions, providing mine facilities and food and transport to traditional leaders (Mahango 2006, Letlapa 2006). The result has been a prioritised list of projects with an increased level of stakeholder consensus (See Appendix 12). While these events in themselves do not stand as evidence of improved community relations, community leadership representatives who attended interviews and forums agreed access to mine management had improved and they felt they were being heard. (See Appendix 1 for list of community representatives).

5.2.5. Resettlement and Compensation

LPM has a resettlement policy based on the guidelines of the World Bank, the South African Chamber of Mines and the Safeguard Policies of the International Finance Corporation. At present two projects at LPM have required the relocation of local settlements: the expansion of the slimes dam and the Brakfontein shaft project. The slimes dam required the relocation of 20 families, any family living adjacent to the newly constructed slimes dame qualified (Pather 2006). A total of R846,063 was spent on relocation to Mecklenberg township, some 20km away – on average R42,303 per family. Once resettlement was complete, no further compensation payments were made nor were any further resettlement demands received (Pather: 2006).

For the second project; the replacement of the Brakfontein shaft, resettlement and compensation were approached differently - based on the experience of the slimes dam. Currently relocation is required by LPM for all dwellings within 500m of the shaft portals totalling 32 homes. Relocation however is being considered for homes within a 1,000m radius which would include up to 118 households (Pather 2006). Compensation and details of the relocation are thus still to be decided.

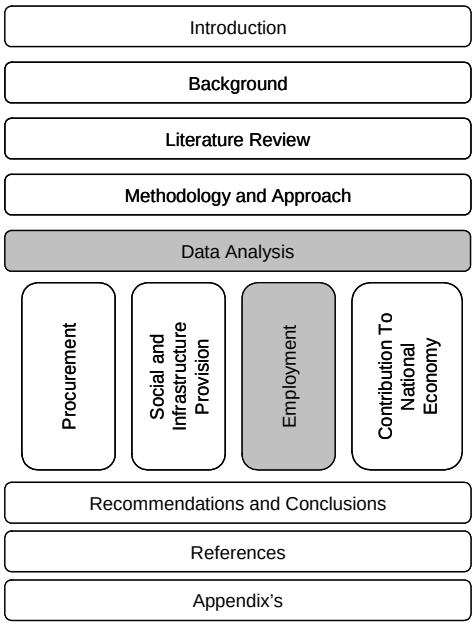
5.2.6. Summary

LPM's contribution in social and infrastructure investment is vast when considering net funds invested as well as resources assigned to community engagement and sustainable development. Community engagement as referred to in the literature review (Auty 1998 & Richards 2002) and especially in the case of LPM is pivotal in achieving success in economic development. The high levels of poverty and low development suggests low social capital by the community. By engaging in dialogue with key stakeholders mine management has initiated deeper consensus in decision making. Internalisation of parts of the welfare function (through its health and social investment initiatives) as referred to by Auty (1998:p487) should deliver improved trust. Key to generating social license and transparency will be in working with government as a stakeholder to resolve the question of land ownership and compensation payments. The following section examines the effect of employment.

5.3. Employment

5.3.1. Overview

One of the most visible economic impacts of mining is the employment that is generated at a local and regional level. Employment is created directly by LPM's operations as well as during construction phases, indirectly through the demand it generates for goods and services as well as the effect on employment through the multiplier and the demands created by employees (ICMM 2006:p15). Despite the highly mechanised nature of modern industrialised mining LPM still employs a substantial number of people.



Employment generated by the mine includes of the following elements: Direct employment which consists of staff on the payroll or offsite management and support staff located within South Africa. Indirect employment: Contractor employees working on the operation in fulfilment of contracts or any staff working at LPM's suppliers or suppliers of contractors. This also includes employment generated through social provision and investment activities and jobs created through business development training, schools and clinics. The final element is induced employment which is generated by the spending of direct and indirect employees on local goods and services such as transport, leisure and public services. See Appendix 4 (Employment Impacts). It is important to note that while employment is predominantly at the mine, there is also substantial direct and indirect off site employment (ICMM 2006:p36).

Collection of employment data enabled a tabular representation of employment at LPM in accordance with the ICMM framework. A summary of the employment data of LPM is presented below (ICMM 2006:p34):

Figure 5.8: LPM Employment

Permanent Employee's[12]	2,138
On site Contractors	2,680
Total Direct Employment	4,817
Estimated Indirect Employment – (excluding on site contractors)[13]	2,060
Estimated Induced Employment[14]	11,349 – 17,195
Dependants (average of 5 per employee)[15]	24,085
Domestic / Expatriate workers (no data available for contractors)	99.2% / 0.8%
Local workers[16]	81%
Male/Female	n/a
Total employment & dependants	50,553

Source: LPM Company Records July 2006, in field interviews

LPM direct employment (contract and permanent) consists of approximately 92% unskilled labour, 3.2% skilled (artisans and engineers) and 4.8% management including offsite support personnel. (Van Waveren: 2006). (See Appendix 5 for a breakdown of labour figures). Of the total workforce 99.2% of permanent employee's are South African citizens reflecting a very low number of expatriate staff. Labour from Mozambique, Zimbabwe, Angola, Lesotho, Botswana, Malawi and Swaziland are employed[17] – primarily as contractors for which data is unavailable. In interviews with LPM staff, mention was made of a higher proportion of foreign contract or migrant workers. On site male to female ratios were unavailable however interviews conducted

[12] Figure includes 2061 onsite employees plus 77 headquarters based personnel. To estimate Johannesburg employment total Anglo Platinum staff across Gauteng, Limpopo and North West Province consist of 43416 of which 691 are headquarter staff thus giving a field to headquarters ratio of 62:1. The 4741 on site employees thus supports 77 off site management employees thus bring the total employees plus contractors to 4817.

[13] Estimated 2006 total on-mine costs (R606 461 666) less total labour costs (estimated at R300 198 524) removes element of spending already resulting in direct employment of 4817 jobs. Remaining procurement spend assuming same proportion of labour costs vs. total on mine costs is R306 263 141. Sample turnover (R19.8m)/(R306 263 141) = 6.5% (133 jobs) thus total indirect employment equals 2060.

[14] Induced employment estimated at 165%-250% of direct plus indirect employment (McMahon & Remy,F: 2001)

[15] Source: Anglo Platinum (2006) LPM Human Resources Database

[16] 81.3% of permanent employees gave a local address as a primary residence. It is recognized however that semi-permanent migrant workers with second homes elsewhere as well as contractors for whom data is not available and who include foreign workers could impact findings.

[17] Source: LPM employment database

of indirect employment show female participation within the labour force at 27% (Source: Supplier Interviews August 2006. See Appendix 11: Local Supplier Data). LPM contract labour is managed through 24 suppliers but a policy shift toward local labour brokers recognised by the Traditional Community Leadership is underway. This is recognised as having provided significant benefits for local employment and has been a channel to demonstrate mine engagement with local communities (Mahango: 2006, Local Traditional Leaders: 2006). Mine management have in alignment with AP corporate policy initiated a process whereby contractors will increasingly be replaced by permanent employees (Manyanga: 2006). In preparation for this, higher labour turnover is encouraged through the issuing of more short term contracts for temporary unskilled workers. High turnover, management claim has enabled the selection of workers with the highest productivity and aptitude and who are targeted for conversion to permanent employees. This approach is designed to provide a supply of labour able to immerse quickly within the workforce. (Mahango: 2006). On average the wages at LPM are higher than industry standards. Wages paid by the mine averaged R83,156 since 2000 above national mining salaries of R82,964 (SASTATS P0277:p15).

5.3.2. Local Employment Challenges

Despite the relatively high proportion of local workers at 81% and the fact that mining provides the highest private sector component of gross geographic product (IDP 2006:p53), municipal data suggests levels of unemployment below provincial and national levels particularly for the ward within which LPM is located which has 24.18% unemployment (IDP 2006:p23). This is a potentially concerning statistic but could in part be explained by a number of factors:

- The most recent unemployment data is from the 2001 Census. LPM has expanded significantly since then which may have impacted unemployment figures.
- Net outward migration of economically active persons from Limpopo Province - not affected by mining. SASTATS (P0302: 2006:p5)
- Lack of available local skills and low education levels (IDP 2006:p17).
- Recent major industrial action at LPM at the beginning of 2005 leading to the temporary closure of the operation and labour redundancies (Mahango 2006).

- High levels of migrant labour. Despite workers giving a local address, their primary residence and family could be outside the local area.
- High prevalence of HIV/AIDS. Anglo Platinum figures suggest a workforce infection rate of 28% (Maphutha: 2006). See Appendix 14 for mine sponsored treatment.
- Supply chain initiatives to source from and develop local suppliers will not be reflected in the statistics yet. It is anticipated that this policy (still at a trial stage) will increase the impact on indirect employment within the local area.
- High labour turnover – although in line with the mines' stated labour policy, this may be having an impact on employment levels. See net labour turnover below.

Figure 5.9: Labour Turnover at LPM: 1995 till 2005

Source: LPM Company Records July 2006

5.3.3. Human Capital Development

Development of skills is a focus area of human resource development. Lack of available skills and poor retention of highly skilled workers threatens to constrain growth at LPM (Anglo Platinum Strategy Review 2006:p48). Labour from outside of the local area is resented and limits local economic impact (Letlapa: 2006). University level mining and engineering qualifications have been in short supply in recent years (Manyanga 2006) which is consistent with the notion of weak-linkage development models as referred to in the literature review. LPM is addressing these issues in a number of ways through human capital development within AP and amongst the community.

LPM has launched a scholarship programme whereby local school children are specifically targeted through the offer of six dedicated University scholarships per year (Manyanga: 2006). LPM will fund school leavers with the aim of improving local skilled labour supply. To date, no local school children have obtained entry level grades to university and no scholarships have been awarded. In an effort to address this, management are planning publicity events within the community to break the perception of mining as a low skilled profession amongst school children. Skills development is a priority for compliance with the Mining Charter. Within the labour force there are a number of corporate wide initiatives such as the ABET (Adult Basic Education and Training) programme which aims to enable all eligible employees to have a basic literacy level. Various peer education and mentorship initiatives are underway within the mine particularly in regard to development of previously disadvantaged employees (HDSA's) in line with corporate objectives.

In addition to skills development the retention of highly skilled workers is posing a problem. Reasons given on exit interviews are lack of amenities and remote nature of the mine with limited housing opportunities (Mahango: 2006). LPM human resources point out that the difficulty in retention impacts promotion of appropriately skilled workers. An attempt to improve retention of skilled labour is currently underway. One approach has been to provide transport for approximately 120 employee's daily from Polokwane (80km away). In 2001 a practical training school was opened at LPM and employees were offered the opportunity to obtain rock blasting certificates. Courses are delivered in a practical environment and the certification is recognized outside of LPM providing graduates with a marketable skill. 22 Students annually graduate from this facility and 3 full time employees are responsible for conducting training.

5.3.4. Summary

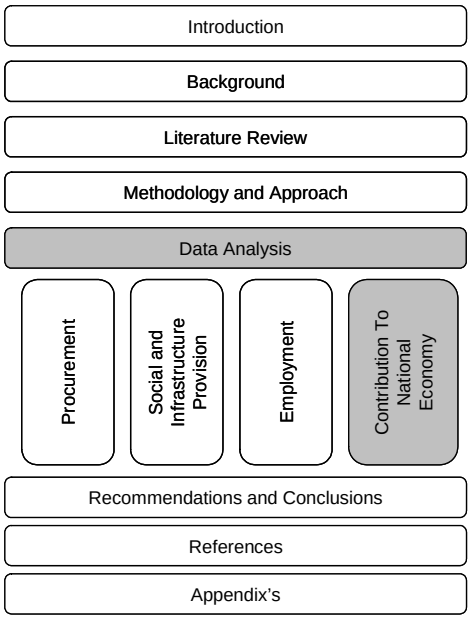
Employment offers LPM many challenges in trying to attract and retain skilled personnel as well as developing a pipeline of future labour supply. The employment policy aimed at increasing the proportion of permanent and local workers with a greater relationship with local labour brokers will take time to produce results. The impact of indirect employment cannot be under estimated – the sample of local suppliers referred to in procurement includes 133 employees who derive their jobs indirectly from the mine. Total employment (direct, indirect & induced) is estimated at between 18227 and 24073

full time equivalent jobs. This is significant within the low income community where the mine is located. Deeper analysis regarding total employment impacts and drivers is required. Implementation of AA's SEAT framework may improve understanding of employment in the local community. The following section presents evidence gathered of the contribution to national revenue.

5.4 Value Contributed to Host Economy

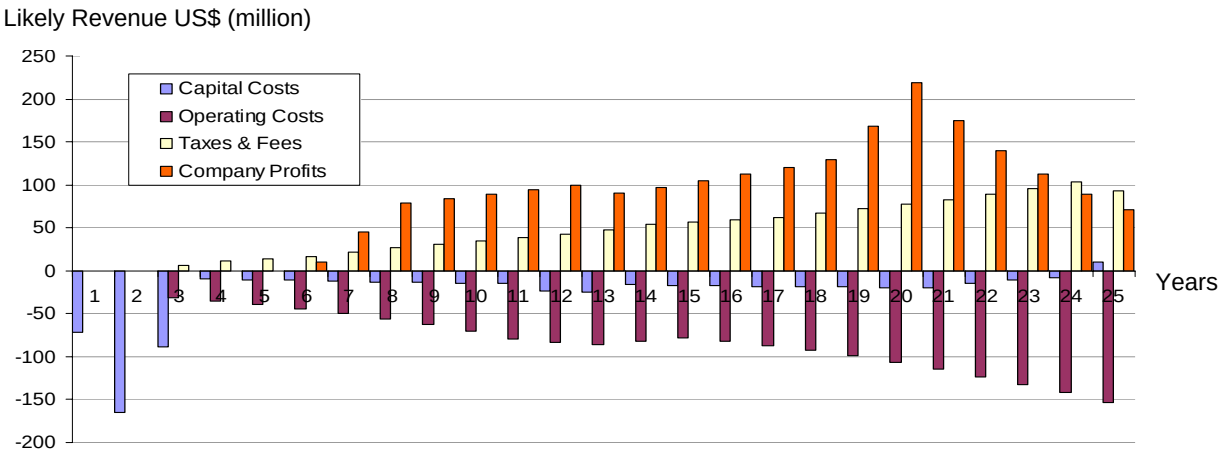
5.4.1. Significance to host economy at Macro level

Mining has traditionally been a significant element of South Africa's economy: currently accounting for approximately 6.8% of gross domestic product. Its proportion of GDP has gradually declined due to a number of factors including the diversification of the economy. A SA Chamber of Mines (Mohr-Swart 2005: p6) study estimates mining still accounts, when considering upstream and downstream linkages and induced economic activity for approximately 16% of GDP and 27% of total employment.



Within the above national context LPM has an important role to fulfil. On a local level mining contributes 28% of gross geographic product or approximately R39.4million (IDP 2006:p23), the highest single private sector contribution. During the life of a mine the revenue contributed to government changes significantly between lifetime stages (Emsley: 2006). LPM has been in operation since 1968 and is expected to still have another 80 years of life suggesting it is 1/3 of life. The following table outlines typical mine cash benefit flows throughout the life of a mine. (Adapted Otto: 2005:p40)

Figure 5.10: Mine Lifecycle Revenue Flows



In the early stages of mine development high capital and operating costs result in very little profit (Otto 2004:p15). Tax incentives normally diminish over time resulting in increased tax payments linked to increased profits as production increases. This is not linear, however, and the graph above is purely a representation. Changing investment cycles and commodity prices determine mine production capacity which is not always fully utilised. For example in the past due to comparatively low yields and water supply problems LPM suffered from under investment (Ireton 2006). A typical lifecycle view of revenue contribution by LPM needs to take account of these different stages of development. Recent capital investment at Brakfontein for example suggests an early lifecycle stage while the current main shaft suggests end of life stage.

5.4.2. Fiscal Revenue Contribution

Fiscal contribution in South Africa is to the national government. Local and regional government rely on central allocation of funds. This “trickle down” effect while generally regarded as effective is currently under review within a wider national policy agenda. Local government and communities are demanding more direct government revenue from mining operations. This is consistent with the case as developed in the literature review for increasing social license to operate by mines in communities far from central government.

A framework of revenue collection and allocation and ability to assess explicit individual elements encourages transparency, reduces corruption and allows the host

governments to generate international credibility. In 2002 at the World Summit for Sustainable Development in Johannesburg, the Extractive Industries Transparency Initiative (EITI)[18] was announced to assist companies with the publication and verification of government revenues. This provides an international standardised framework and a strong basis to segment payments. The EITI framework was supplemented by the ICMM to create a mining industry specific framework of government revenues which can be used on an individual mine basis. ($ICMM_a$ 2006: p39). It is this framework which has informed data collection and analysis at Lebowa. The table below is based on available data collected from LPM for 2005.

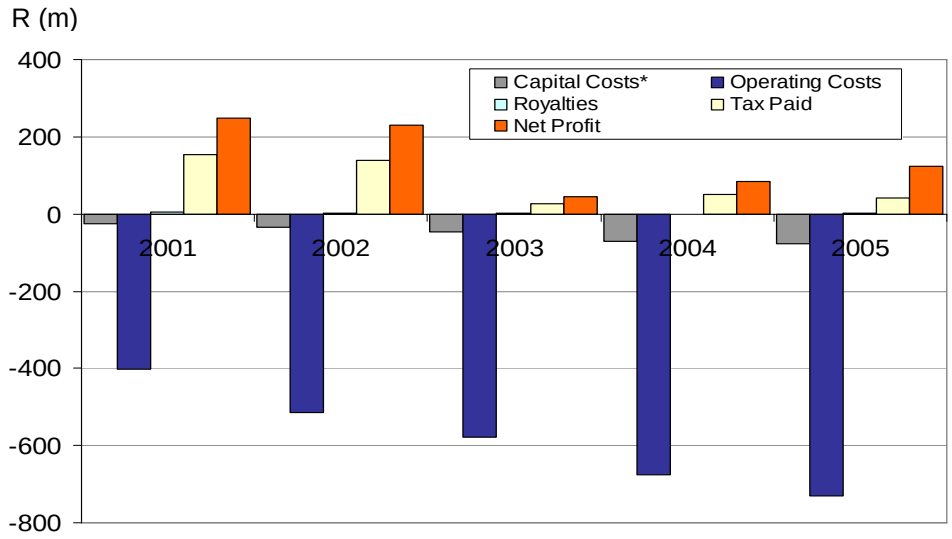
Figure 5.11: Contribution to National Revenue

EITI Payments (excludes taxes levied on consumption e.g. VAT/Sales Tax)					
1. Company tax on profits[19]	R42,400,016	2. Royalties[20]	R3,135,619	3. License fees	n/a
4. Entry fee's	n/a	5. Rental fee's[21]	R336,063	6. Production bonus taxes	n/a
Non-EITI Payments (excludes payments to public body in return for a service)					
7. Income tax paid by workers[22]	R35 600 000	8. Social Security Payments	Incl. in 7	9. Import/Export Duties[23]	n/a
10. Property Taxes[1]	n/a	11. Vehicle Excise & Fuel Duty	n/a	12. Natural Resource Charges (e.g. water use)	n/a
13. Corporate Registration fees	n/a	14. Stamp Duties	n/a	15. Hidden charges[24]	
16. Other payments[25]:	R1,562,561				

[18] http://www.eitransparency.org/section/abouteiti
[19] LPM Income Statement 2005 note 9
[20] LPM Income Statement 2005 note 5
[21] Payable to landowners, currently withheld in escrow accounts due to land dispute.
[22] LPM Value Added Statement 2005
[23] If not covered under EITI charges above.
[24] Mandatory use of state owned monopolies
[25] Most recent data from 2003 (Emsley 2006). Includes but not limited to District council levies/Regional Services Levies. Property taxes, rates and property levies, Mining licences and permits, Compulsory "payments in kind", for example construction of infrastructure/schools/medical facilities in lieu of taxes

Total contribution based on the above framework and available data for 2005 was approximately R83,034,259. The level of fiscal contribution over a longer period of time is required to assess where within the mine lifecycle LPM currently is. Based on a 5 year view, tax payments have reduced due to lower profits caused by rising operating costs, but conversely royalty payments have increased. This is consistent with mature mines at end of life. The recent capital investment at LPM offsets the notion of end of life and suggests instead a more recent operation although capital expenditure is not yet fully reflected in the financial statement due to the lag. See table below for 2000-2005 tax and royalty payments by LPM relative to revenue

Figure 5.12: LPM Fiscal Contribution

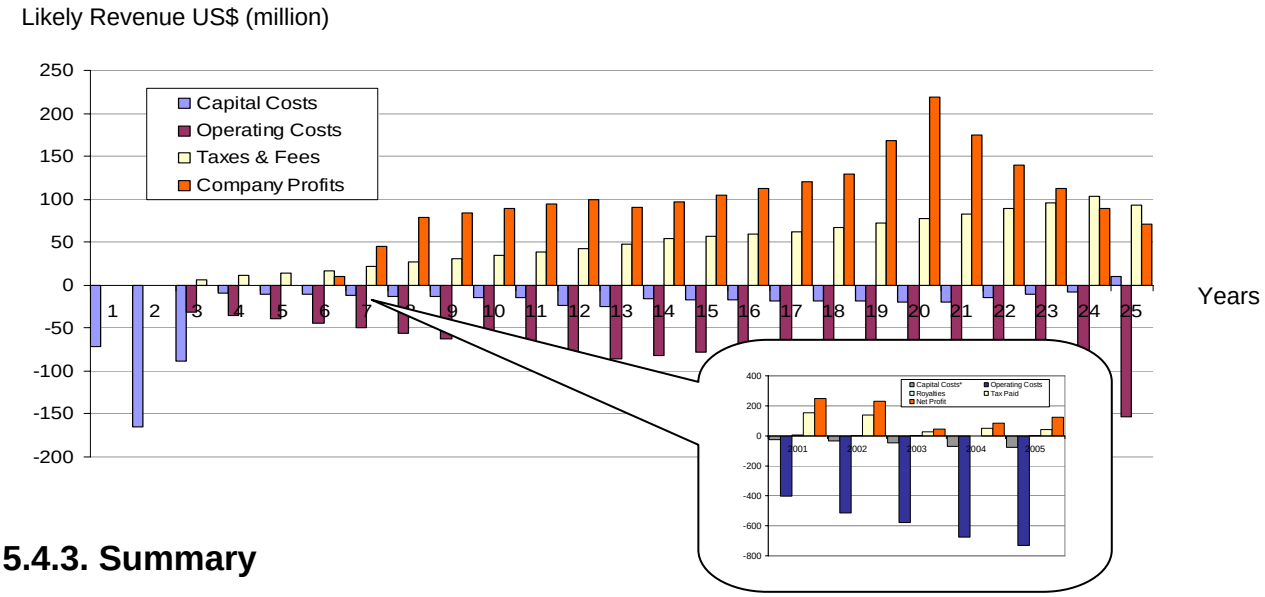


Source: LPM Financial Statements: 2001 -2005

The level of royalty payments and taxes paid over a longer time period would inform to a better degree where in the lifecycle the mine currently lies and what type of contribution to national revenue the mine can expect to make.

(or in addition to taxes),Compulsory "payments in kind" to Government departments/state mining companies in lieu of taxes (or in addition to taxes), Resource rent taxes, Dividend payments on free carried interest, Payments for free carried interest

Figure 5.13: Current Fiscal Contribution vs Lifecycle Revenue

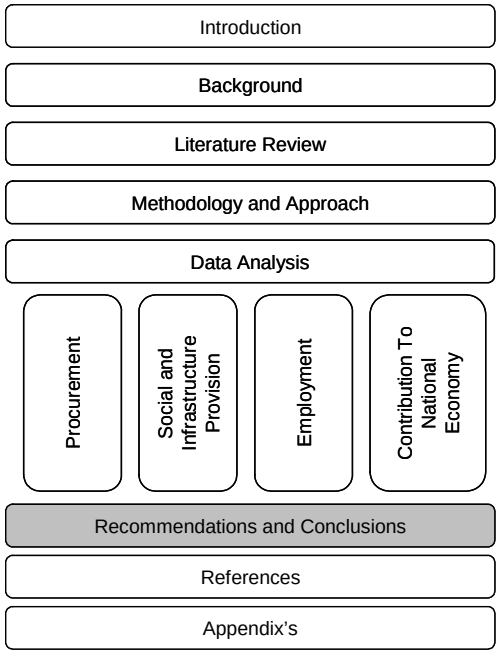


5.4.3. Summary

Contribution to national revenue using the ICMM methodology is relatively difficult to assess due to difficulties in acquisition of data especially for non-EITI payments. LPM has been in operation for 38 years and has been through several investment cycles each leading to varying levels of revenue contribution. A deeper understanding can only be obtained through a longitudinal analysis. In addition collection and analysis of secondary data supporting the EITI requirements would also improve assessment of contribution. This however was deemed out of scope for this project.

Chapter 6: Recommendations and Conclusions

6.1. Recommendations



Defining limits to corporate social responsibility will be an important factor at Lebowa. The challenge within the multi-stakeholder environment is to maintain commercial objectives within the framework of sustainable development. Despite prioritisation and agreement on social investment projects many stakeholders still regard the operation as having endless resources. Assessing and managing causal relationships between internal performance and societal demands using the sustainable balanced scorecard could help develop a more structured approach.

The issue of land ownership and community compensation needs to be resolved in the interests of developing social license and positive outcomes. Prior periods of poor social license have meant communities are suspicious of mine efforts to resolve the dispute. Potential exists to engage in rent-seeking behaviour if the situation is not adequately resolved. Transparency and engagement with the landowners has already been pursued but deeper engagement of government as a third party (Parker et al 2004) may be a principle factor in resolving the dispute.

Internally the adoption of the sustainable balanced scorecard approach as referred to in the literature review, could assist management strengthen the link between sustainable development and commercial objectives as performance indicators. The South African Mining Charter already demands a range of socio-economic criteria which must be met to enable conversion of mineral rights. The case as developed in chapter three regarding the balanced scorecard underlines the importance to developing linkages between the causal effects behind different outcomes (Worrall:

2005). This will enable economic sustainable development and commercial performance through appropriate allocation of resources across the operation. Human capital development (internal perspective) through training could potentially be further improved by integrating the scholarship development programme (additional weekend maths and science classes) with the mining school/training centre. This will improve scalability and deliver productivity improvements for LPM and also allow greater participation by regular illiterate miners while not impacting work schedules e.g. Saturday classes. This approach also has scope to utilise existing trainers who could benefit from training to deliver more types of skills, not only mining related courses.

Subsidised transport may provide relief in the short term but LPM needs to evaluate more structured retention incentives for highly skilled workers. This could include structured remuneration packages, bonus payments, improved lifestyle facilities and rotation based schemes with other AP mines. Such incentives structured appropriately, deliver to the societal perspective and internal perspective of the sustainable balanced scorecard and corporate financial perspective through improved production.

Improved awareness of mining operations within the local community is required. Steps by current management to take traditional leadership onsite and expose operations generated positive feedback from communities and may improve transparency of the operation[26] and impact perceptions among school goers (societal perspective). Government engagement (National and Local) has been proactive on the part of mine management and despite being in a formative stage has yielded generally positive outcomes. According to recent research (Parker et al 2004, McMahon and Remy 2001 & Otto 2002) these relationships drastically amplify the effectiveness of corporate efforts. Engagement with all levels of government must be encouraged and formalized where appropriate rather than on an adhoc basis. Consistent with the balanced scorecard this will enable the establishment of cause and effect indicators and strategic feedback (Kaplan and Norton 1999: p270) allowing continuous improvement.

Efforts to stimulate local supply chain may benefit from improved engagement by LPM with previously advantaged suppliers. As the case was built in the literature governments increasingly intervene to make sustainable development financially viable

[26] Interview with Traditional Leadership of Phasha, Selepe and Monatwane Communities 08 August 2006

through policy intervention (Picket-Baker 2004:p2). Such policy stances by LPM could be investigated for procurement where partnerships are rewarded and the loss of valuable skills avoided.

6.2. Review of Research Question

Evidence considered above suggests contributions to economic development in all four areas particularly procurement and social and infrastructure provision. Importantly LPM is beginning to build social license through community engagement and this over time will be increasingly relevant in developing economic impact and creating sustainable development. The evidence considered only provides a brief overview of the economic impacts and on several portions of the research, as highlighted the data is inconclusive.

6.3. Economic Impact and Sustainability

A case is made in the literature review for community engagement, social license and linkages as drivers of economic sustainable development. Available data suggested evidence of this existed but this remains inconclusive. Particular mention needs to be made of the social license being created during the community engagement and project prioritisation process followed by mine management for social investment. This represents a step change from prior sustainable development efforts.

The literature review on linkages and partnerships and available primary evidence collected to assess the impact of procurement suggests much progress is being made in this area. Sampling error (use of convenience sample) constrains the evidence slightly in regard to local procurement but the extent to which linkages are being developed represent partnership with local municipality, businesses and government on an increasing scale. Mine procurement policy although only at a trial stage at Lebowa suggests a focused approach to improving the economic impact of procurement for local communities.

Employment by LPM delivers significant economic impact despite high turnover and issues in attracting skilled labour. Community engagement, the shift to local labour brokers and university scholarships for local children may increase the impact of

employment on the local community over time. Human capital development at LPM can offer significant benefits within the community of Fetakgomo.

6.4. Implications for Corporate Strategy

Anglo American's sustainable development strategy described by Chairman Mark Moody-Stewart is focused around "changing the way we do business through making sustainable development an intuitive and conscious part of every business decision". Management process and behaviour across the organisation needs to include economic, social and environmental considerations, which (Worrall 2005:p59) argues requires a focused and proactive approach. Anglo American's sustainable development strategy is controlled by a central unit which is responsible for strategy formulation, implementation and monitoring. Reporting against sustainable development objectives takes place regularly and reports are publicly available. Anglo American is a signatory on a variety of codes of conduct but acknowledges that sustainable development is an ongoing process and encourages continuous improvement.

Lebowa Platinum Mine while comprising a very small element of Anglo American's global operations offers a number of important outcomes in regards to Anglo's SD strategy implementation in South Africa. Preliminary evidence collected on procurement, employment, social and infrastructure provision and fiscal contribution points to improving economic impact. The approach through which this has been achieved suggests success in adoption of a holistic SD approach. Important within the context of Lebowa is the role played by community engagement and social license where stakeholders have increasingly had opportunities to participate in decision making. This approach runs in contrast to recent media surrounding alleged community marginalization by AP at other operations (Spoor 2006). Negative outcomes have the potential to disrupt operations and isolate stakeholders.

Delivering sustainable economic development through improved stakeholder engagement will in addition be important in achieving compliance with the South African Mining Charter to enable conversion to new order mineral rights. Corporate strategy will be designed to achieve compliance and thus sustainable development's role will become increasingly significant as a competitive advantage.

6.5. Limitations and Future Research

To fully reflect the contribution of Lebowa mine to sustainable economic development requires dedicated research with the collection of high quality primary data over a predetermined time frame. In practice this was difficult to achieve within the available time and scope of the project despite Anglo Platinum's strong support. Issues were revealed in the data collection and analysis stages of the project despite the robust sampling methodology of the ICMM framework and being granted access to most stakeholders. On several occasions sufficient data was not available. Fiscal contribution for example is very difficult to meaningfully assess over a period of only 5 years when the mine has been operational for nearly 40 years. In addition access to faith based leadership was not possible and improved sampling of labour representatives could have produced different insights.

Theoretical models described in the literature provide robust frameworks for analysis and broad scope. The analysis and development of causal relationships is complex, among multi-stakeholders and requires vast amounts of data. The sample size used for local suppliers could be improved to better represent the supply chain, but this data is also important for employment, social investment and fiscal contribution and it is interrelated. Sampling cannot focus on separate areas but needs to take a holistic approach.

Key to drawing conclusions is contextual knowledge and this was difficult to acquire in a short period of time. Aspects of qualitative data gathering were challenging since the context of the mine needed to be well understood before attempting to document social and community data. This is difficult to address through prior secondary research alone. Importantly too is that the remote nature of the operation made data collection and follow-up challenging at times. Future research would benefit from better understanding of causal inter-relationships, making a wider collection of primary data and improving sampling sizes. A focus on developing contextual knowledge should be made prior to analysis and this would invariably involve extended field research.

6.6. Conclusion

The case is built early in the document for the possibility of adopting the Sustainability Balanced Scorecard (SBSC) as a framework of choice in the management of sustainable development at LPM. SD frameworks such as the ICMM's Resource Endowment Toolkit provide robust assessment methodology but critically are not intended for the inclusion of variables designed to maintain commercial viability. The SBSC will deliver improved management clarity regarding cause and effect relationships surrounding SD while assisting internal company commercial prerogatives. The SBSC allows a clearer understanding of the development of social license to operate which would represent lower input costs and increased profits while uplifting the local community. The six perspectives of the SBSC are inter-related and all require management. Achievement of the strategy for local economic development involves many actors working in synergy and traditional SD frameworks need to include commercial elements to ensure the process itself is both holistic and sustainable.

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Appendices

Appendix 1: List of Interviews (Excluding Local Suppliers)

Anglo Platinum – Johannesburg Head Office		
Name	Title/Description	Date
Stephen Bullock	Head of Sustainable Development	01/08/2006
Gary Ditchfield	Head of Corporate HDSA Procurement	31/07/2006
Dolf Broodryk	Manager Corporate Accounting	31/07/2006
Henry Zondi	Head of Operational Human Resources	01/08/2006
Francious Uys	Head of Safety and Sustainable Development	31/07/2006
Yagalan Pather	Projects Manager (email)	07/09/2006
Jimmy Johnson	Corporate Legal Counsel (email)	20/11/2006
Anglo Platinum – Lebowa Mine Management		
Felix Manyanga	Mine Manager	02/08/2006
Harry Van Vuuren	Production Manager	05/08/2006
Billy Mahango	Human Resource Manager	02/08/2006
Jacques Steenkamp	Financial Manager	11/08/2006
Elliot Phasha	Local Resident Buyer – Procurement	03/08/2006
Andrew Letlapa	Sustainable Development Manager	18/08/2006
Clive Ackhurst	Economic Resource Manager	02/08/2006
Lina Maphutha	HIV/AIDS Co-ordinator	02/08/2006
Willie Van Waveren	Employee Benefits Officer – via telephone/email	21/08/2006
Anglo American Plc – London and Johannesburg		
Ian Emsley	Advisor: Carbon Management and Sustainable Development	Various
Godfrey Gomwe	Chief Operating Officer – South Africa	19/08/2006
Karin Ireton	Head of Sustainable Development: Markets & Economics	19/08/2006
External Interviews		
Kathryn McPhail	Principal: ICMM	27/07/2006
Jackie Lesuli	Fetakgomo Municipality Economic Development & Planning Manager	07/08/2006
D.A Selepe S.M Gasele M.William P. Makelepeng M.M Phasha M.S Phasha M. Sekonda	Traditional Leader of Selepe Community Selepe Community Messenger Councillor Selepe Community Councillor – Monatwane Community Traditional Leader of Barok-ba-Nkwana Community Spokesperson Barok-ba-Nkwana Community Spokesperson Barok-ba-Nkwana Community	08/08/2006
ATOK Community Foundation	Robert Sekonya – NGO Chairman Hlaware Kgasago-NGO deputy chairman Lazarus Masete NGO councillor	08/08/2006
Fanang Diatla Self Help Project (Faith based NGO)	Agnes Qusabe -Leader Tily Mahlatji Elsi Thobejane	08/08/2006
Department of Minerals and Energy	Mrs Agnes TBC – Senior Manager Mining Cluster	10/08/2006
Department of Economic Development, Environment & Tourism	Ms ML Maja – Senior Manager: Targeted Industries Ms MC Mosena – Manager: Targeted Industries	10/08/2006 10/08/2006

Appendix 2: Community Social Investment

Community Social Provision	Description of Activity at LPM	Approximate Cost or Cost per Annum	Other Contributions (e.g.: staff or in kind support)
Physical Infrastructure			
Transport	Mine access roads open for general public thoroughfare to residential areas.	Not available	
Utility Services (water, electricity, telecoms)	Facilitation of electrification of Sefateng, Monametse, Bogalatladi and Mohlahlaneng Villages	Not available	Staff support for engagement of local community with Eskom and Local RDP Committee
	Testing, drilling and provision of borehole water supply for Ga-Selepe, Monatwane, Sefateng Bogalatladi, Rostock Shubushubung, Maruping & Mooilik Villages	R115 967.36	Ongoing maintenance of facilities by LPM
	Community water supply project for Sefateng Village	R238 385.07	Ongoing maintenance of facilities by LPM
	Post Office facilities paid for by mine. Open to the public. Extension of telephone lines to local area due to mine.	Not available.	
Education			
School facilities built, maintained or part funded (normally in a 50/50 partnership with Department of Education)	1. Bogalatladi Primary	R800,000	Co-ordination and management by LPM staff.
	2. Frank Mashile Secondary	R600,000	
	3. Mafene Primary	R40,000	
	4. Mafise Primary	R500,000	
	5. Mahudu Primary	R30,000	
	6. Malengine Secondary	R800,000	
	7. Monametse Primary	R450,000	
	8. Monare Secondary	R27,600	
	9. Motsepe Primary	R1,100,000	
	10. Ntwampe Secondary	R96,463	
	11. Nyaku Secondary	R800,000	
	12. Potlake Secondary	R1,500,000	
	13. Selepe Primary	R67,825	
	14. Serokolo Secondary	R2,000,000	
Education, training, scholarships/bursaries and awareness training of people not employed on the operations	6 University scholarships exclusively available to local students	Not available	
	Direct engagement with local high schools by	Not available	Staff visits

Appendix 2: Community Social Investment (Page 2)

Community Social Provision	Description of Activity at LPM	Approximate Cost or Cost per Annum	Other Contributions (e.g.: staff or in kind support)
	management to promote awareness		
	Site inspection visits offered to local traditional leadership to improve awareness	Not available	
	Practical mining training at on site facility. 22 miners per year trained and certified.	Not available	3 full time LPM staff employed at facility
Contribution to teacher salaries	n/a		
Health			
Hospitals built & maintained	Temporary provision of facility for local clinic.	Not available	
	Mine health facility including 2 doctors, 5 nurses, visiting dentist, radiologist	Not available	
Testing, Immunization and Education Programmes	11 Local women sponsored to train as nurses in Carltonville Hospital, Gauteng	Not available	
	20 local women trained to administer “home-based care” programme of Anglo Platinum in commitment of corporate HIV/AIDS policy. Orphans and vulnerable children also cared for. (Work in collaboration with ABSA and Mandela Children’s Fund)	R783,200pa	
	34 Peer educators to educate workforce and community on HIV/AIDS and other health issues.	R132,600pa	Staff commitment
	Anti Retroviral Treatment programme extended to miners and immediate families	R192,000pa	
	VCT testing - Oraquik	R41,757	
	VCT testing - Eliza	R55,920	
	4 Annual sponsored Health events: Sexually transmitted diseases, TB, Aids and candlelight memorial.	R100,000	Plus additional staff commitment
	On site and community HIV/AIDS awareness campaign	Not available	

Appendix 2: Community Social Investment (Page 3)

Community Social Provision	Description of Activity at LPM	Approximate Cost or Cost per Annum	Other Contributions (e.g.: staff or in kind support)
Medical Supplies	n/a	Not available	
Local Enterprise Development			
Helping to expand customers businesses through training or investment	Not applicable for local impact	N/A	
Purchasing from disadvantaged communities	Price premium paid to previously disadvantaged suppliers.	Not available	
Helping to expand suppliers businesses through training or investment	Business Capacity building in partnership with US AID – workshops & training held for 20 Black owned companies	Not available	
	Business Development Training for Emerging Entrepreneurs – contracted out to Limpopo Business Support Services: 43 companies trained	Not available	
	Establishment of local business support centres within Fetakgomo Municipality	Not available	3 full time staff located on municipal premises funded by LPM
	Facilitation of establishment of 5 women owned co-operatives. Management training provided.	Not available	
Community Development			
Donations	Fencing of grave yard at Mashabela Village	R103,243	
Sponsorship of arts, crafts or sporting events	Platinum Race (annual)	R30,000	
Capacity building through training, mentoring and work experiences etc	See Local Enterprise Development above		
Sharing company facilities, sports facilities, classrooms, emergency equipment			
Multiple resource use, sharing resources such as grazing, waste wood collection, trails, harvesting unused natural resources etc			
Facilitating community	Traditional leadership		

Appendix 2: Community Social Investment (Page 4)

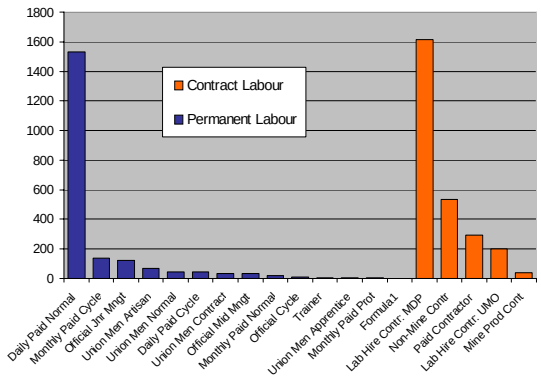
Community Social Provision	Description of Activity at LPM	Approximate Cost or Cost per Annum	Other Contributions (e.g.: staff or in kind support)
access to decision makers	agreed access to decision makers had improved		

Appendix: 3: Labour Profile July 2006

Personnel N	Work Cor	Local	Emp Level	Nationality	Entry Date	Leaving date	Total basic pay	Number of Children
64000760	SAN Cont	#N/A	Lab Hire Contr: UMO	South African	2005/02/15	2005/04/21	0.00	3
64000773	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15		0.00	4
64000774	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15	2006/01/06	0.00	3
64000783	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15	2005/08/02	0.00	3
64000785	SAN Cont	#N/A	Lab Hire Contr: UMO	South African	2005/02/15	2005/02/15	0.00	5
64000796	SAN Cont	#N/A	Lab Hire Contr: UMO	South African	2005/02/15	2005/02/15	0.00	5
64000801	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15		0.00	3
64000803	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15		0.00	4
64000806	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15		0.00	4
64000807	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15	2006/03/24	0.00	3
64000811	SAN Cont	#N/A	Lab Hire Contr: UMO	South African	2005/11/22	9999/12/31	0.00	3
64000827	SAN Cont	#N/A	Lab Hire Contr: UMO	South African	2005/02/15		0.00	3
64000830	SAN Cont	#N/A	Lab Hire Contr: MDP	South African	2005/02/15		0.00	3

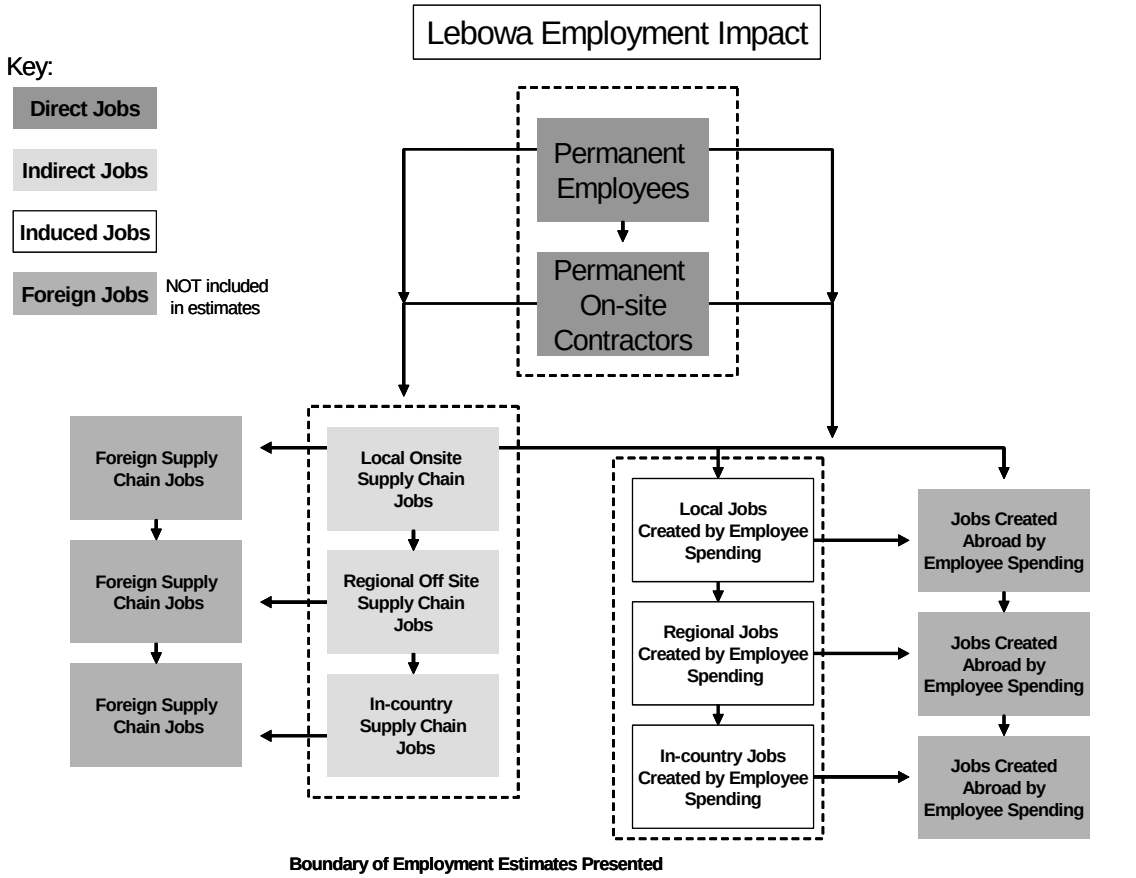
Data Sample Only

Permanent Labour	Daily Paid Normal	1528
	Monthly Paid Cycle	137
	Monthly Paid Normal	22
	Monthly Paid Prot	3
	Daily Paid Cycle	45
Permanent Labour Total		1735
Artisan	Union Men Artisan	70
	Union Men Normal	45
	Union Men Contract	34
	Union Men Apprentice	3
Artisan Total		152
Management	Official Mid Mngt	34
	Official Jnr Mngt	123
Management Total		157
Other	Formula1	
	Official Cycle	10
	Trainer	7
Other Total		17
Contractor	Non-Mine Contr	534
	Paid Contractor	294
	Lab Hire Contr: MDP	1612
	Lab Hire Contr: UMO	202
	Mine Prod Cont	38
Contractor Total		2680



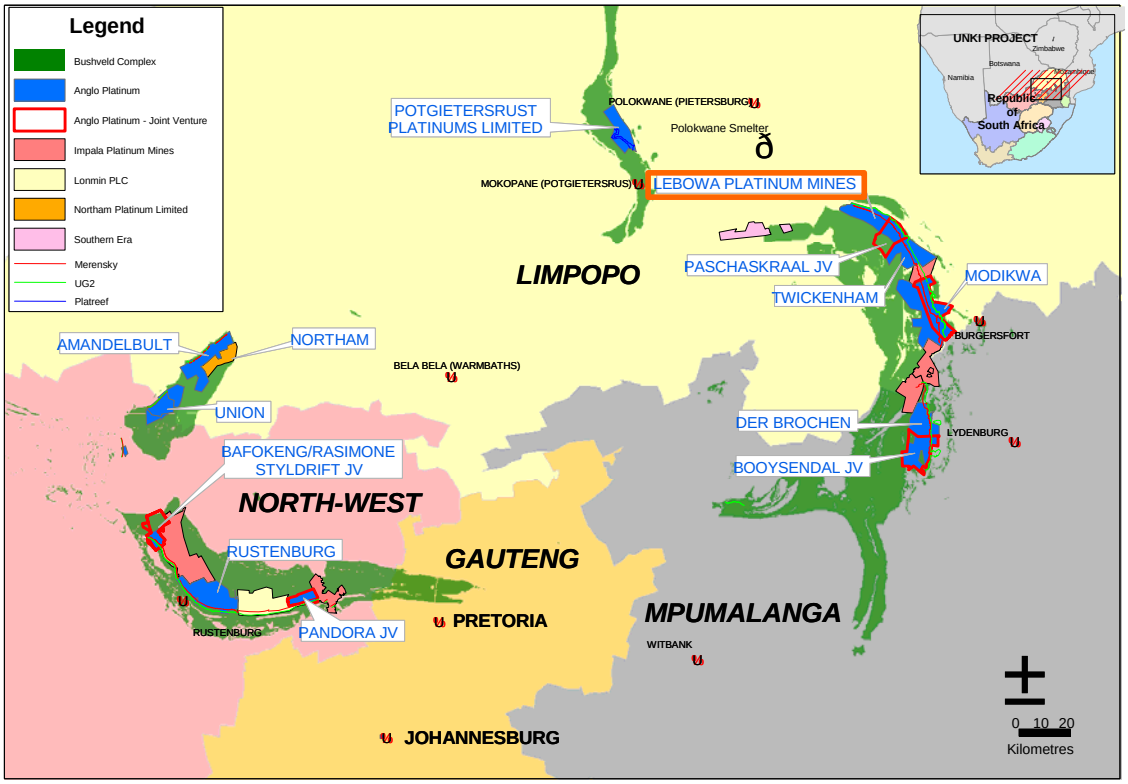
Pers.No.	Initials	Last name	Street and House	2nd address line	City	Postal code	Address Record Type	Local ?
50003674	MJ	Khumalo	Polokwane	P.O Box 69	Polokwane	749	Residential address	
50025112	JJ	Welding	5 wilde bees str	potgietersrus	potgietersrus	600	Residential address	
50026968	SB	Selepe	sekhutlong secti	GA SELEPE	PIETERSBURG		Residential address	
50033808	JC	Malope	P.O. BOX 1391		SEKHUKHUNE	1124	Residential address	Local
50037706	JP	Masete	Ga Masete Box 1		Sekhukhune	1129	Residential address	Local
50069721	PW	Sekgobela	PO BOX 621	BURGERSFOR	BURGERSFORT	1150	Residential address	Local
50088955	ML	Rawana	Bele Store, PO U	Tsolo	Umtata		Residential address	
50203223	BM	Leshilo	Mphalilele	N/A	Polokwane	700	Residential address	
50433644	WM	Mampuru	Ga-Mahlokoane	Dreiekop	Burgersfort	1129	Residential address	Local
50437720	CCA	Malepe	Shakung	DRIEKOP	Driekop	1129	Residential address	Local
50527320	TS	Molatudi	Ga-Moraka Man		Sekhukhune	749	Residential address	Local
50660276	TW	Somagagu	Misimount	Misimount	Umtata	5100	Residential address	
50768042	TL	Mjila	private bag x1	natal	natal durban	4660	Residential address	
50783017	LN	Mokgotho	P.O. BOX 114	PENGE	GAMOKGOTHO	1160	Residential address	
64000746	TG	Raganya	Ga Sekororo	P.O Box 52 Tricl	Tzaneeen	890	Residential address	
64000747	D	Makgopa	Burgersfort	Ribacross	Driekop	1129	Residential address	Local
64000748	HT	Choma	P.O Box 4051		Steelpoort	1133	Residential address	
64000749	L	Mokgotho	Burgersfort	P.O Box 1598	Burgrsfort	1150	Residential address	Local
64000755	F	Phasha	Burgersfort	N/A	Burgersfort	866	Residential address	Local
64000756	J C	Mohlala	Burgersfort	Malokela Village	Dreikop	1129	Residential address	Local
64000757	H	Malatji	Burgersfort	Mosotsi Village	Driekop	1129	Residential address	Local
64000759	M	Khotle	2654 Monare str	P.O Box 2656	Klerksdorp	2619	Residential address	
64000762	C	Maake	Mafefe Village		Mafefe	749	Residential address	
64000764	C	Lebepe	Kgapane	Modjadji	Modjadji	838	Residential address	
64000765	N	Maile	Ga Madiseng	Driekop	Driekop	1129	Residential address	Local
64000766	AC	Mohlala	MAGABANENG	SEUWE	DRIEKOP	1129	Residential address	Local
64000768	MP	Nobela	Stand no 8	Cross road 8	Cross road 8	2285	Residential address	
64000773	SA	Mkansi	Tsumere	tsumere	Giyane	826	Residential address	
64000774	SS	Mokgotho	Burgersfort	Ga Mokgotho	Driekop	1129	Residential address	Local
64000777	ABC	Crause	PUPIN ST	VANDERBIJLPA	VANDERBIJLPARK	1900	Residential address	
64000783	WH	Matlou	Burgersfort	Ga Selepe Villag	Driekop	1129	Residential address	Local
64000784	JE	Kgwete	Ga-Kgwete	74 Ga-Kgwete	Driekop	1129	Residential address	Local
64000785	F J	Phaladi	Mashemong	Ga-Manotoane	Burgersfort	1150	Residential address	Local
64000792	P	Thobejane	MOSHIRA	Driekop	DRIEKOP	1129	Residential address	Local
64000793	T J	Serwale	Wismar	Habeng	Burgersfort	1129	Residential address	Local
64000795	BJH	Nkwane	Phalaborwa loca		Phalaborwa	1391	Residential address	
64000797	RJ	Semanku	R	R	RUSTENBURG		Residential address	
64000800	WA	Mabotha	STAND NO 3	MASHUNG	GA-NKWANA	700	Residential address	Local
64000801	JG	Rapulana	Mathabatha villa		Mathabatha	733	Residential address	
64000802	GW	Hlongoe	Fetakgomo villag		Fetakgomo	747	Residential address	Local
64000811	SP	Kwenaite	LEBOWAKGOM	LEBOWAKGOM	CHUENESPOORT	745	Residential address	
64000818	JM	Moyane	PO MADUSE	MAGUSE	MAGUSE	1002	Residential address	
64000819	P S	Makgopa	Ga-Makgopa ne		Makgopa	1129	Residential address	
64000820	A D	Mojapelo	1685 Zone 3		Polokwane	742	Residential address	

Appendix 4: Employment Impact

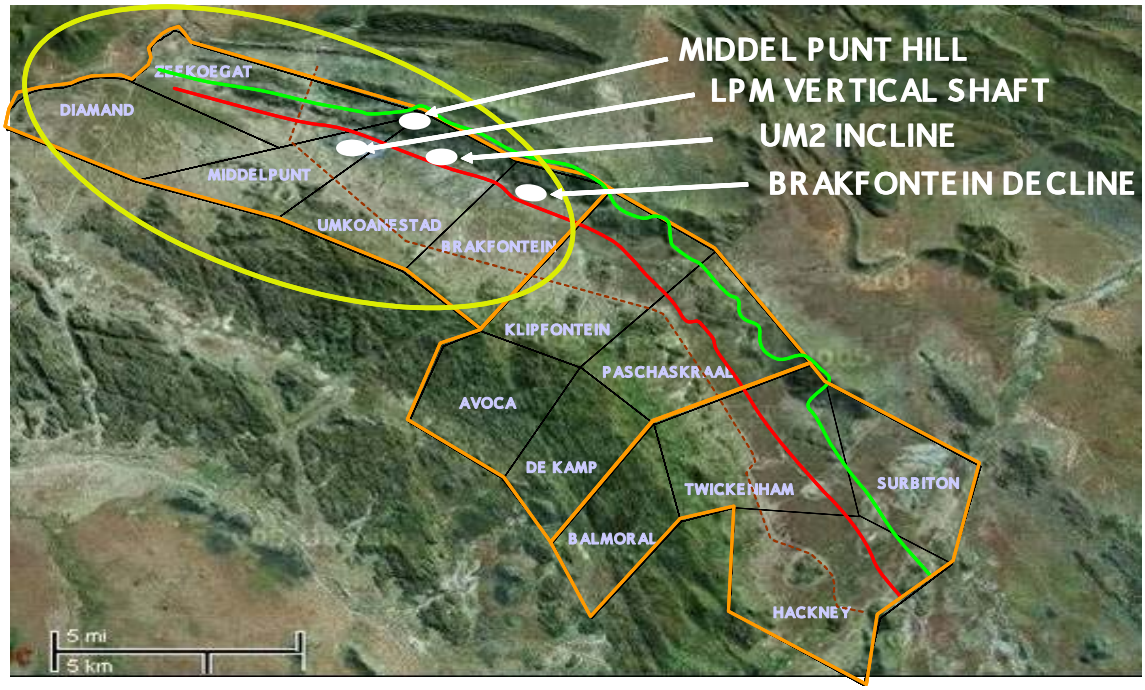


Source: ICMM Resource Endowment Toolkit

Appendix 5: Mine Location



Source: Anglo Platinum 2005



Appendix 6: ICMM Fiscal Contributions Check-list

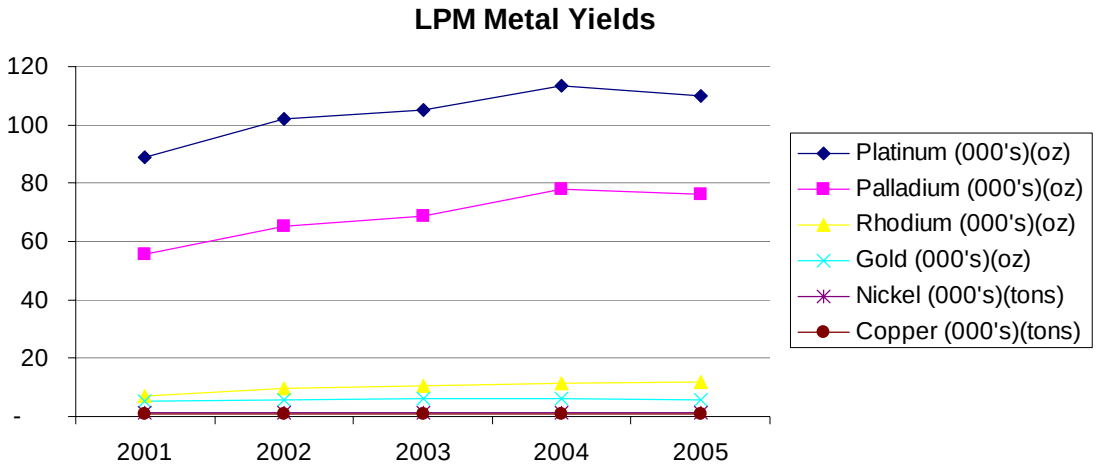
Payments Covered by EITI (excludes tax levied on consumption e.g. VAT)					
Benefit streams from International & National state-owned company		Total Value	National	Region	Local
1	Profit taxes				
3	Royalties (cash and in kind)				
4	License fees, concession fees, entry fees & other considerations for licenses/concession				
5	Signing and production bonuses				
6	Dividends				
7	Other payments to host governments				
Non-EITI Payments (excludes payment to public authorities in return for a service)					
Benefit and Payment streams specific to ICMM Resource Endowment Project		Total Value	National	Region	Local
1	Income taxes paid by workers				
2	Social security contributions to public agencies				
3	Import/export duties (if not covered under 7 above)				
4	Property taxes (if not covered under 7 above)				
5	Vehicle excise & fuel duties (if not covered under 7 above)				
6	Natural resource charge uses such as water extraction or emissions (if not covered under 7 above)				
7	Hidden payments such as mandatory use of state owned monopolies				
8	Stamp duty / corporate registration (if not covered under 7 above)				
9	Other payments				

Source: Adapted from ICMM: 2006: p38

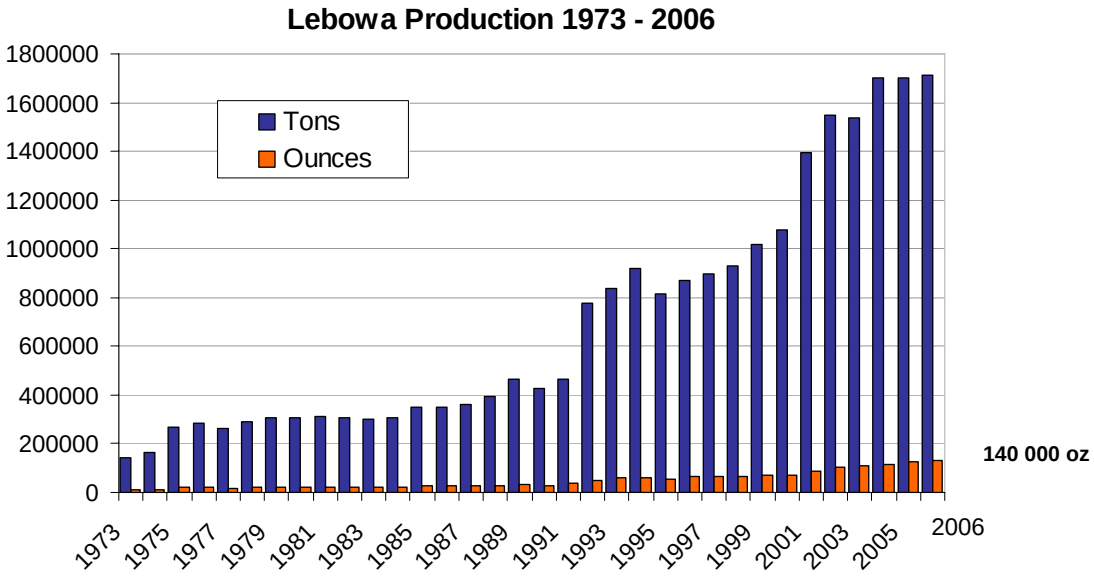
Appendix 7: Site Visit Itinerary – July/August 2006

Date and Time	Function & Contact	Issues for discussion
30/07/2006	Arrive JIA	
31/07/2006 07h30 – 08h30	Breakfast meeting Stephen Bullock	Anglo Platinum company overview
31/07/2006 08h45 – 10h30	Procurement manager – Gary Ditchfield Corporate	Data collection on procurement and mine supply chain
31/07/2006 10h30 – 12h45	Mine Value Add: Dolf Broodryk, Manager Finance and Procurement AngloPlatinum	Taxes and Royalties paid – Value Added framework
31/07/06 14h00 – 18h00	Data consolidation	
1/08/2006 08h30 – 11h30	Central HR Manager – Henry Zondi	Aggregated and localized if possible, HR data (Human Capital)
1/8/2006 12h30 – 18h30	Data consolidation	
2/8/2006 7:45 till 08h30	Mine Manager Meet Felix Manyanga	Background on research and overview of project objectives
2/8/2006 8:30 till 9:30	Economic Resource Manager - Clive	General overview of the mine lease area & economic development strategy & YTD actuals
2/8/2006 10h00 till 13h00	HR Manager Billy Mahnago Human Capital Development	Employment data, wages, Staff turnover, Information from exit interviews, Skills Development Programme
2/8/2006 14h00 – 15h30	HIV/AIDS Co-coordinator Lina Maphutha	Health awareness HIV/AIDS information Clinics
3/8/2006	Procurement Elliot Phasha Andrew Letlapa	Local Procurement and visit to approximately 5 local suppliers. Arranged in conjunction with Gary Ditchfield. (incl HDSA suppliers)
4/8/2006	SED Andrew Letlapa to arrange	General discussion about community issues – Traditional Leaders, Faith based groups, Labour Union leader
5/8/2006	To review Procurement Datapack - GD	AL to confirm if additional procurement interviews possible
6/8/2006	Sunday	
7/8/2006	SED – Visit to Fetakgomo Municipality & LRD Authority - AL	General discussion with the LED Manager and consultants.
8/8/2006	SED Communities and NGO's Andrew Letlapa to arrange as per agreement	General discussion with the Atok Community Foundation about development/community needs perceptions etc.
9/8/2006	Data consolidation:	
10/08/2006 08h00-14h00	Procurement Elliot Phasha Andrew Letlapa	Local Procurement and Supply Chain.
14h00 – 18h00	Data consolidation	
11/08/2006 9h00 – 10h00	JHB – Godfrey Gomwe: COO Anglo American South Africa	Open Forum
11/08/2006 10h30 – 11h30	JHB – Karen Ireton SD Group	Group SED Initiatives – feedback
11h30 – 18h00	Data consolidation	

Appendix 8: Mine Production Statistics



Source: Anglo Platinum (2005) LPM Annual Report



Source: Ackhurst: 2006

Appendix 9: Social Initiative – HIV/AIDS Awareness

ANGLO PLATINUM

PEER EDUCATORS REPORT FORM

AREA: _____

NAME OF PEER EDUCATOR: _____

WEEK ENDING: _____

ACTIVITY	DATE &TIME	VENUE	NO ATTENDING	GENDER		Condoms distribution		No of pamphlets distribution
				F	M	General	Condom stations	

What were the most common problems/difficulties encountered during this period?

_____

_____

_____

What do you think can be done to cover these operational problems?

_____

_____

_____

Peer educator' signature

Appendix 10: Supply Chain Analysis: Sample Questionnaire

Introduction

Objective: Provide brief summary of the background of the project. Explain that there are no correct or incorrect answers and try to ensure interviewee is comfortable

- Outline purpose of ICMM Resource Endowment Project
- Outline major objectives of the research and who is funding it
- Explain confidentiality options
- Explain typical expected output

Background

Objective: To build an understanding of the history of the business, when it started and approximate scale of operations

- What is the name of your business?
- When did you first start trading?
- How many people do you employ? (now and prior years)
- What is your current annual gross turnover? (and subsequent 5 prior years)

Context

Objective: To develop an understanding of the relationship between Lebowa Platinum mine and the business and of the business expected prospects.

- What industry sector do you sit within?
- What product or service do you provide?
- What is the physical location of your business and what is the postal address?
- What is your BEE status
- Do you employ woman (and what percentage)
- Do you have plans to expand operations (through investment or hiring) within the next calendar year

Conclusion

Objective: Open forum for additional discussion. Interviewee can provide additional data or feedback can be probed for greater detail.

- In what way if any did the mine assist you in your business?
- Is there anything in addition you would like to mention?

	Supplier Questions:	Business Data											
1	Business Name	Bakone Garment Making & Repairs	Difetakgomo Mining & Services	Mmatjie Homes & Sammy Stores	MmaNoto Toyota	Babelegi Business Enterprises CC	Martello Civil Contractors	Moopong Project Developers CC	Shawame Construction & Waste Removal	Solly's Electrical Wholesalers	J & D Fasteners CC	Limpopo Toyota	Mogodi Brickyard
2	Representative	Phillemon Lekubu	Steve Phasha	Sam Matjie	Salminah Shikwane	Robert Sekonya	Johan Van Tonder	James Maimela	Jackie Makonko	Rashid Vally	John Steynberg	Tewie Wessels	Lesiba Chuene
3	Industry	Textile	Construction	Construction	Transport	Construction, Training	Transport	Construction	Waste removal & building	Electrical supplies	Industrial supplies	Motor vehicles	Construction
4	Product Service	Overall repairs, sewing and design services	Crushed stone, sand and bricks	Building materials & construction of clinics, hospitals & houses	Vehicle sales, service & parts	Houses, small civils, training & mentoring for skills development	Ore transport & civil contractors	Civil & building work	Maintenance & construction	Electrical wiring, switchgear, circuitry etc	Nuts & bolts, various other products	Passenger, light commercial, commercial & used vehicles	Cement blocks, sand, air bricks, sand, window sills
5	Start date	Sep-04	May-02	Feb-92	Jul-87	Jul-02	Jun-90	Jun-94	Mar-03	Sep-82	Sep-84	Sep-68	Sep-80
6	Number of perm staff	4	15	40	24	4	78	1	1	10	16	170	19
7	Number of temp staff	0	8	150	0	14	12	3	2	0	0	0	0
8	Number of staff at start	4	9	20	18	1	36	1	1	n/a	2	n/a	n/a
9	Skills (perm)			45%	75%	50%	54%	25%	67%	20%	31%	35%	0%
10	Types of skills	Tailor, garment makers	Drivers, machine operators, block makers	Plumbers, bricklayers, electricians, carpentry	Trained technicians, professional managers, business development	Building science certificates, carpenters, bricklayers	Diesel mechanics, boiler makers, engineering diploma, heavy machinery	Machine operator, extensive experience with M&R & LTA	Plumber, book keeping, brick layers	Commerce degree, switchgear proficient	Storeman, accounting / book keeping, stock pullers	Technical artisans, financial, sales & marketing, general management	Basic, drivers
11	Proportion of turnover from AP	96%	65,60,45,50,80	5%	9%	60%	86, 98, 99	0	97%	1%	0.20%	0.50%	55%
12	Other sources of income:	Private jobs, retail	Private home building, govn. Projects	Govn. Projects, Private houses, other commercial, retail leasing	Govn. Contracts (Eskom, Dept health), De Beers	Govn. Projects, private work	Machinery repairs, Lonmin contracts, pipe manufacturing	private jobs, govn. Contracts adhoc	Govn. Contracts	wholesale and retail to public and private	hardware stores, retail, indirect supplier to	new & used vehicles sales, services, parts, wholesale & retail	private work, retail
13	Expected turnover 2006	166232	1,200,000	2500000	16000000	1200000	15000000	50000	1500000	12000000	14000000	400000000	83636
14	2005 Turnover	156603	950000	3000000	12000000	271000	13000000	50000	n/a	10500000	11000000	350000000	57143
15	2004 Turnover	n/a	750000	3000000	25000000	341000	11000000	50000	n/a	9000000	10000000	273000000	n/a
16	2003 Turnover	n/a	600000	3200000	20000000	68000	9000000	50000	n/a	n/a	9500000	220000000	n/a
17	2002 Turnover	n/a	400000	2900000	16000000	0	7500000	50000	n/a	n/a	8000000	187000000	n/a
18	Business Type	Micro	Small	Medium	Small	Small	Medium	Micro	Micro	Micro	Small	Large	Micro
19	Address	Atok Mine Hostel	Sefateng Village, Gankwana, Sekhukhune	# 9 Business Area Lebowakgomo	176 Unit E, Lebowakgomo, 0737	ATOK Mine, Gankwana Village	8 Aquarius Street, Polokwane, 0699	Ramapelane Village, District Sekhukhune, House 88/9	Maroke Village, Driekop, Po Box 2199, Burgersfort, 1150	78 Bok Street, Polokwane, 0700	64 Dahl Street, Polokwane, 0700	Nelson Mandela & N1, Polokwane, 0699	Corner R37 & Bogalatladi, Lebowakgomo
20	Local	yes	yes	yes	yes	yes	regional	yes	yes	regional	regional	regional	yes
21	HDSA Status	100% BO	100% BO (20% community)	100% BO	100% BO	100% BO	100% WO	100% BO	100% BO	100% BO	100% WO	20% BO	100% BO
22	Plans to expand	yes	yes	yes	yes	yes	no	no	yes	yes	no	yes	yes
23	Details of expansion (hiring of additional staff of captital investment or other)	3 more FTE in 2007	Increase brick making capability through more labour	Expanding into retail - letting shopping complex	5FTE and capital investment: addition of truck section, used car	increase training operations & certifications	AP BEE procurement threatens business	Not till get more constant work	Require more work before hiring and training	Hire sales staff & buy delivery vehicles	Organic growth only	Organic growth. Has new facilities & staff	Mechanical brickmaker, transport, more labour
24	What proportion of your workforce are women?	0%	70%	30%	33%	20%	5%	25%	0	20%	38%	15%	68%

Appendix 12: Social Investment Projects

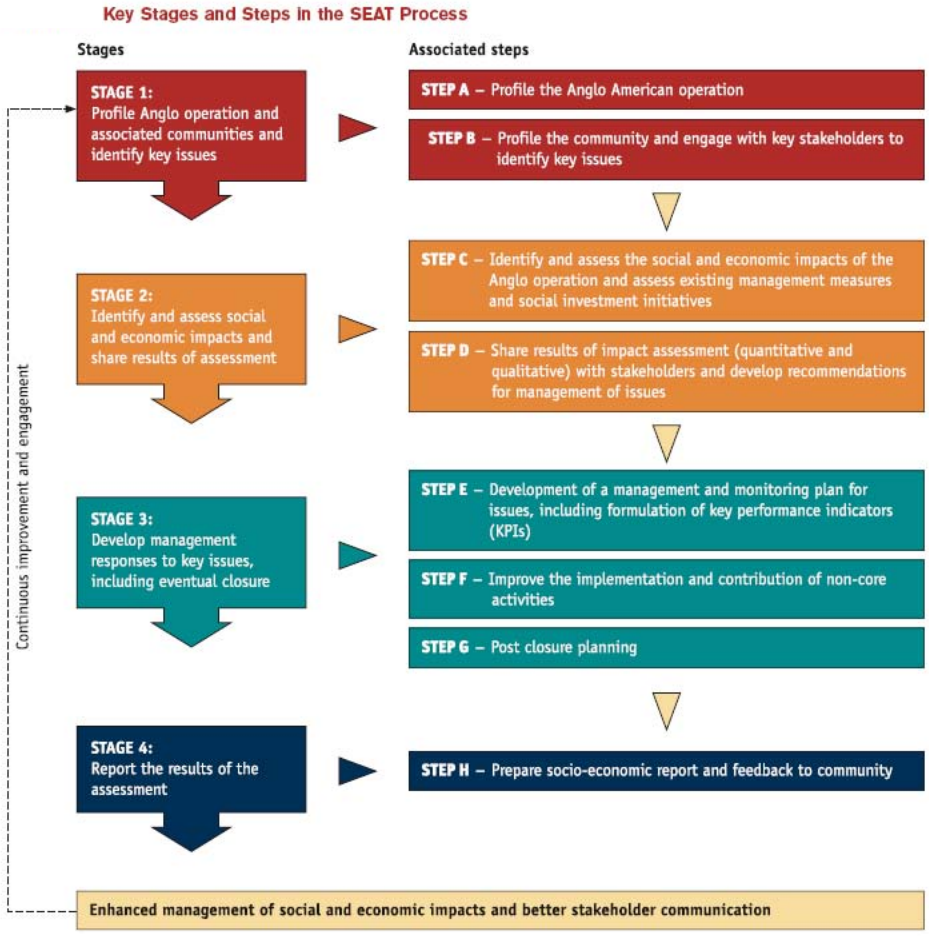
Copy of Prioritized Social Investment Requirements from Stakeholder Engagement Meeting held on 07 July 2006 at LPM. Source: Manyanga (2006)

1. Skills development focusing on IT training
2. Development of schooling infrastructure in partnership with Department of Education
3. Construction of a hospital (ATOK NOTAL Point)
4. Sports Facilities(Atok) and Recreation facilities
5. Reconstruction of Rapholo Bridge
6. Construction of a library
7. Water provision and reticulation at Selepe Village
8. Renovations and provide office furniture for local Tribal Authority Offices
9. Mining related skills development
10. Easy access to LPM management be accorded to committee
11. Community resource mobilization agency
12. Office of unemployment committee
13. Early training for unemployed people, Brakfontein prior to being commissioned
14. All permanent posts to be forwarded to the unemployment committee
15. Conversion of long service employees (1 year) into permanent workers
16. To secure joint ventures with existing mine contractors
17. Social investment to work together with trust and establish/envisaged company
18. Company to participate in mining with direct investment
19. Establishment of a community trust
20. Trust to establish a holding company
21. Contractors and Unemployment committee to meet regularly
22. Formation of a structure – Bolwena Community Forum

Appendix 13: Socio- Economic Assessment Toolbox

Source: Anglo American:

http://www.angloamerican.co.uk/static/uploads/SEAT%20Overview%20Low.pdf



Appendix 14: VCT Initiatives at LPM (2006 YTD)

HIV/AIDS VCT Programme: LPM 2006

(till end June 2006)

	EMPLOYEES				CONTRACTORS			
	VCT	TEST	POSITIVE	NEGATIVE	VCT	TEST	POSITIVE	NEGATIVE
January	187	73	14	59	258	94	15	79
February	191	103	11	92	247	122	21	101
March	166	104	9	95	221	110	18	92
April	90	52	4	48	341	149	19	130
May	157	110	11	99	488	224	37	187
June	241	133	8	125	318	147	22	125
TOTAL	1576	751	57	518	1555	846	132	714

The Table above represents testing carried out at LPM in 2006 as part of the HIV/AIDS Voluntary Counseling and Testing Programme.

Appendix 15: Trial Procurement Policy

Important criteria are the location of the supplier's business and its HDSA accreditation (HO, HE or HI). The tender process operates using a "gate" system and to be successful, a vendor must pass through "Gate 3" (Bornman 2006:p6):

- Gate 1 - safety, health and environmental compliance
- Gate 2 - technical compliance
- Gate 3 – number of points awarded.

Final selection and progression through "Gate 3" is based on a combination of factors including geographic proximity to operation, HDSA status and Price. See table below:

<u>Proximity to Mine:</u> • 50km • 80km • Provincial	 35 25 15
<u>HDSA status:</u> • HO • HE • HI	 35 20 5
<u>Price of tender:</u> • 1st • 2nd • 3rd • 4th	 30 25 20 15
Best possible score	100

A cut off limit of R50 000 to this weighting system is used allowing for a 10% price premium after which a sliding scale applies to price premium's (Bornman 2006:p6). Large contracts allow little or no price premium – allowing management in theory to maintain commercial efficiency.

Appendix 16: Business Development Model

Source: Anglo Platinum 2004