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APPENDICIES

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APPENDIX C: KCGM Ministerial Conditions Related to Closure
1. INTRODUCTION

Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) is the management company of the Kalgoorlie operations for Joint Venture (JV) Owners, Newmont Mining Corporation (Newmont) and Barrick Gold of Australia Limited (Barrick). KCGM is currently seeking approval from the Environmental Protection Authority (EPA) for an extension to the Fimiston Operations. This project includes the expansion of the Fimiston Open Pit, Waste Rock Dumps (WRD) and Tailings Storage Facilities (TSF).

Essentially, the proposed extension outlines KCGM’s life of mine plan for the Fimiston Operations until 2017 which is when the maximum extent of surface open pit mining from the Fimiston Open Pit will be reached. Gold production through the processing plants will continue until all stockpiles have been exhausted. KCGM continues to investigate options to extend the operation beyond this estimated mine life, enabling KCGM to remain a strong economic contributor to the City of Kalgoorlie-Boulder.

KCGM publicly presented the Fimiston Operations Extension Project outlining the vision for the final development of the Fimiston Open Pit in December 2004 with the release of KCGM’s Concept Plan - Sharing Our Vision for the Future (Appendix A). This Concept Plan was the first time KCGM had announced a closure date for the open pit operations and presented graphical images of the final Fimiston Operation in 2017. KCGM sought and received feedback from the community on the content of the Concept Plan.

This Conceptual Mine Closure Strategy formalises KCGM’s commitment and approach towards closure of all aspects of its operations. KCGM aims to progress the discussion on mine closure to identify community expectations and ideas for the remaining feature of the operation in 2017. This Strategy will remain a fluid document that is reviewed and updated every three years to ensure changes in areas such as the regulatory environment, community expectations or technical closure planning information are captured and incorporated into decision making.

This Strategy covers all operations on tenements under the control of KCGM. This document provides the basis from which to develop detailed Closure Plans for specific areas in conjunction with regulatory authorities and the community that will detail agreed commitments and targets for closure. The main operational areas are outlined below:

- Open Pits;
- Processing Plants;
- Underground Mines;
- Tailings Storage Facilities;
- Waste Rock Dumps;
- Historical Mining Activities;
- Infrastructure and Utilities; and
- Exploration.
Although the current expected mine life of the Fimiston Open Pit is to 2017, planning is underway to consider opportunities to extend the mine life. It is already public knowledge that KCGM is looking at the underground potential from the open pit, while the toll treating of ore has also been proposed to prolong mine life. The keys to KCGM’s closure planning are flexibility and the ability to develop a high level of stakeholder awareness as the operations draw closer to an actual resource depleted end date. It is intended that a more definitive timeline of environmental, social and financial studies will be created when the Fimiston Operations are within 5 years of closure.

2. OBJECTIVES

The EPA’s objective for decommissioning and closure is:

- To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.

KCGM recognises the importance of mine closure planning and is committed to the policies and standards of its JV Owners which include planning for the closure of operations. KCGM has established six closure objectives for its operations.

- **Objective 1**
  *To ensure plans are in place for the continued management of the site in accordance with agreed closure criteria.*

- **Objective 2**
  *To create safe and stable landforms conducive to revegetation.*

- **Objective 3**
  *To rehabilitate the site to a self-sustaining ecosystem such that the site blends in with the surrounding landscape as far as this is practicable.*

- **Objective 4**
  *To consult the community and interested stakeholders regarding the closure of KCGM’s operations.*

- **Objective 5**
  *To retain features of heritage value where practicable, consistent with the mining history of the Kalgoorlie area.*

- **Objective 6**
  *To monitor environmental performance during operation, decommissioning and post-closure stages of the project and to take appropriate action until the specified closure criteria have been met.*
3. OBLIGATIONS

3.1 Commitments

Demonstrated by a Statement of Commitment, KCGM supports the policies and standards of its JV Owners, Newmont and Barrick (Appendix B). Newmont and Barrick have comprehensive internal standards relating to the closure of their operations which govern activities related to closure and reclamation planning and community and external relations.

Barrick and Newmont are signatories to *Enduring Value - Australian Minerals Industry Framework for Sustainable Development* and through the JV Owners KCGM is also committed to the principles of this framework. *Enduring Value* is the centrepiece of the minerals industry’s commitment to achieving continual improvement in its environmental, social and economic performance, accountability and ensuring that it operates in manner that is attuned to community expectations.

3.2 Environmental Principles

There are no formal standards for mine closure planning in Western Australia; however there are a number of guidelines that provide a framework for closure planning requirements. These are:

- ‘Strategic Framework for Mine Closure’, 2000 prepared by the Australian and New Zealand Minerals and Energy Council (ANZMEC); and
- ‘Mine Closure Guidelines for Minerals Operation in Western Australia’, October 2000 prepared by the Chamber of Minerals and Energy of Western Australia.

KCGM recognises the importance of the above guidelines in providing a consistent framework for mine closure across Australia and has incorporated these into closure planning and decommissioning to date (i.e. Mt Charlotte Closure Plan 2001) and into the development of this Conceptual Mine Closure Strategy.

This Conceptual Mine Closure Strategy has been prepared in line with the ANZMEC framework and objectives. This strategy also outlines the structure for the subsequent development of mine closure plans, consistent with the ANZMEC framework.

3.3 Legal Requirements

All mining operations in Western Australia are subject to the State *Environmental Protection Act 1986* which overrides all other Acts including the *Mining Act 1978*, except Agreement Acts created prior to 1972. The *Environmental Protection Act 1986* is administered by the Department of Environment (DoE).
Under the *Environmental Protection Act 1986* the Minister for the Environment is entitled to place specific conditions on a project with regards to environmental management. The Minister may endorse the commitments made by the company in any public documents it presents and/or place additional conditions on a project if the Minister considers it necessary.

KCGM is currently subject to the conditions of the following Ministerial Statements:

- No. 28 - *Satellite Gold Roaster, near Kalgoorlie*. May 1988;
- No. 77 - *Gidji Roaster - Phase II Expansion, near Kalgoorlie*. September 1989; and

Ministerial Conditions in these Statements related to closure are presented in Appendix C.

The conditions generally state that a rehabilitation and decommissioning plan to the satisfaction of the EPA, be prepared no later than six months prior to closure of the operations. Through the development of this Conceptual Mine Closure Plan, KCGM recognises that closure is an integral part of an operation and must be considered at all phases of the operation.

In Western Australia the key statutes relating to mine closure and post-closure legal liabilities are the:

- *Mining Act 1978*; and

These Acts are administered by the Department of Industry Resources (DoIR).

Under the *Mining Act 1978* the DoIR has the jurisdiction to place conditions on a tenement that apply to the rehabilitation and decommissioning of the mining operations. In general, tenement conditions for closure and rehabilitation of a mine site can be summarised as follows:

- Structures must be removed or otherwise made safe in the long term;
- Revegetation is to be actively promoted on disturbed land and man-made landforms (e.g. waste rock dumps, TSFs, roads, plant sites) except where this is deemed to be impracticable; and
- Revegetated areas should be in keeping with the natural pattern of the surrounding vegetation and be maintained until it is self-supporting.
Under the *Mining Act 1978*, the DoIR has established an Unconditional Performance Bond (UPB) system applicable to all mining operations. The system ensures that sufficient funds are available if the State Government is required to undertake rehabilitation on mining tenements where the holder has failed to comply with environmental conditions place on its tenements. The bonds for KCGM’s leases are reviewed annually through the Annual Environmental Report in light of ongoing site rehabilitation undertaken.

The *Mines Safety and Inspection Regulations 1995* are specifically related to safety and ensuring that the decommissioning and closure of sites is undertaken so that all potentially unsafe equipment or products (such as detonators, explosives or blasting agents) are removed and disposed of in accordance with manufacturer’s recommendations.

The Western Australian *Contaminated Sites Act 2003* (not proclaimed as at Dec 05) and *Contaminated Sites Regulations 2004* are also likely to have implications for the closure of KCGM’s operations in the future.

4. **OPERATIONS**

4.1 **Location**

KCGM’s operations are located immediately east of the City of Kalgoorlie-Boulder in the Goldfields Region of Western Australia, approximately 600 kilometers (km) east of Perth as shown in Figure 1.

4.2 **Climate**

KCGM’s operations are located in an arid semi-desert region. The region receives a low annual average rainfall of about 250 mm while annual evaporation is about 2,500 mm.

The rainfall is irregular and unpredictable, with heavy rainfalls occurring in summer due to remnants of cyclonic activity, combined with long dry periods. The mean daily temperature is 25°C in July and 34°C in January. The winds are predominantly easterly during autumn and summer.

4.3 **Flora and Vegetation**

KCGM’s operations lie within the Coolgardie Botanical Districts Coolgardie Vegetation System, in the southwest interzone. This botanical district is predominantly eucalypt woodland becoming open towards the more calcareous soils, where a cover of saltbush-bluebush understorey is evident (Figure 2).
Figure 1: KCGM’s Operations - Location Plan
A gently undulating topography is broken up with occasional ranges of low hills. Sand plains are more prominent in the western part with some large playa lakes. Principally the soils are brown calcareous earths. Extensive timber cutting occurred in the Kalgoorlie region at the turn of the century for mineshaft supports and for firewood, therefore much of the woodland has been historically cleared.

Since 1990, large areas of historically disturbed land surrounding the Fimiston Operations have been rehabilitated as part of KCGM’s “Greening the Golden Mile” revegetation program.

4.4 Operational Areas

Since the discovery of gold in the Kalgoorlie area in 1893 and the subsequent gold rush, numerous small mines and workings were established along the rich gold reef in Kalgoorlie called the ‘Golden Mile’. In 1989, Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) was formed to manage these workings as a single operation. Today, many of these workings have been mined during the development of the Fimiston Open Pit (or the ‘Super Pit’), or rehabilitated as part of KCGM’s progressive rehabilitation strategy.

KCGM’s current operations include the components described in the following sections and shown in Figure 3. The proposed final open pit and waste rock dump landforms in 2017 are shown in Figure 4. Each of these aspects of KCGM operations will be incorporated into closure planning and the development of final closure criteria for the operation.
Figure 3: KCGM’s Operations – Site Plan
4.4.1 Underground Mines

The Mount Charlotte underground mine with a maximum depth of 1,200 m below the surface, is located at the eastern end of Hannan Street. A closure plan for the Mt Charlotte Mine was approved by regulatory authorities and made publicly available in October 2001. Although the Mt Charlotte head frame and shaft are no longer in use (but are maintained as a second form of egress), underground mining and waste backfill operations continue via the Sam Pearce Decline and Glory Hole.

The Chaffers Shaft, located at the southern end of the Fimiston Open Pit was a former mine access shaft. Access to the shaft was restricted during the southern extension of the open pit footprint. The Chaffers Head frame was donated to the Australian Prospectors and Miners Hall of Fame.

4.4.2 Open Pits

The Fimiston Open Pit operations commenced in 1990 following the amalgamation of various mining operations along the Golden Mile. Final dimensions of the pit are estimated to be 3.5 km in length, 1.5 km wide and up to 600 m deep (Figure 4).

The Fimiston Open Pit will encompass historical mining areas and identified ore bodies including: Brownhill, Stores, Golden Pike, Oroya, Trafalgar, North Kalgoorlie, Morrison and Chaffers.
There are several open pits that KCGM has decommissioned and rehabilitated during its operations. The Croesus Open Pit was backfilled with waste rock in 2001. The Sir John Open Pit at Mt Percy was partially backfilled in 1998 as part of a project to encapsulate potentially acid forming material. This project was recognised as a finalist in the Australian Minerals and Energy Environment Foundation (AMEEF) Environmental Excellence Awards and DoIR Golden Gecko Awards for Environmental Excellence in 1999. Two other open pits are located at the Mt Percy operation (Mystery and Union Club).

4.4.3 Processing Plants

KCGM has two processing plant sites. The Fimiston Mill covers about 20 hectares (ha) and is located in the main mining area adjacent to the Fimiston Open Pit (Figure 5). This plant treats approximately 13 million tones per annum of ore using flotation and conventional Carbon-in-Leach (CIL) circuits. The Gidji Roaster covers about 5 ha and is located 17km north of Kalgoorlie-Boulder. The site treats up to 375 000 tones per annum of sulphide concentrate from the Fimiston Mill.

The Mt Percy Mill was decommissioned in 1997 and the 7 ha site was rehabilitated in 2001. The Croesus Mill was decommissioned in 1997 and the 9 ha site was rehabilitated as part of the Croesus Rehabilitation Project in 2001.

Figure 5: Fimiston Mill Site
4.4.4 Waste Rock Dumps

Waste Rock Dumps at the Fimiston Operations extend to the north, east and south of the Fimiston Open Pit. These dumps are expected to cover about 1,627 ha and store approximately 908 million tonnes of waste rock (Figure 4). The heights of the Fimiston waste rock dumps are limited by the Kalgoorlie Airport Safety Height Restrictions and will have final elevations between 40 m and 120 m.

Marginal ore and sub grade ore stockpiles are dumped within the waste rock dump boundary. These stockpiles will be processed through the Fimiston Mill following the completion of open pit mining in 2017.

There is an 18 ha crusher pad located at Fimiston which is constructed of compacted waste rock to a height of about 15 m. This pad will remain until gold production is complete and it will then be rehabilitated.

There are three waste rock dumps at the Mt Percy site (Mystery, Union Club and Sir John) and a crusher pad that cover an area of approximately 17 ha. These have all been rehabilitated.

The Environmental Noise Bund located to the western side of the Fimiston Open Pit is currently undergoing approval for realignment and is expected to cover approximately 25 ha. The noise bund is also being designed and constructed to comply with DoIR guidelines for abandonment bunding for the Fimiston Open Pit.

4.4.5 Tailings Storage Facilities

Of the Tailings Storage Facilities (TSFs) located on KCGM’s leases, Fimiston I TSF (110 ha), Fimiston II TSF (350 ha) and Gidji TSF (18 ha) are currently operational and are anticipated to be in use for the remainder of mine life.

Additional tailings storage capacity at Fimiston is required to meet processing requirements of the projected 2017 mine life. Opportunities for providing additional capacity include recommissioning the Kaltails TSF with a height increase or further height increases to the Fimiston I and II TSFs.

Other closed TSFs have either been rehabilitated, encapsulated within waste rock dumps or are planned to be decommissioned within the progressive Rehabilitation Management Plan.
4.4.6 Infrastructure

The KCGM leases incorporate a variety of infrastructure that has been established to support mining operations. The main infrastructure on the KCGM site is:

- Office Buildings;
- Refuelling facilities;
- Heavy and light vehicle workshops;
- Wash down bays;
- Car parks;
- Core farm;
- Transformer yards;
- Water tanks; and
- The Tourist Lookout.

4.4.7 Existing Utilities

The presence of existing utilities and service corridors include, but may not be limited to:

- Conveyors;
- Pipelines (including borefield lines);
- Power lines;
- Bores; and
- Roads (sealed, unsealed and haul).

4.4.8 Exploration

Throughout the KCGM leases, there are disturbed areas resulting from previous mining activities as well as recent exploration (Figure 6). Disturbance includes drill holes, sumps, cleared gridlines, tracks and old shafts, most of which have been rehabilitated. Exploration sites include:

- Fimiston;
- 8-Mile Dam;
- Horans Big Dam;
- Boulder South;
- Kalgoorlie South JV;
- Boomerang JV; and
- Other Sites.

4.5 Historical Sites

There are many historical mining, processing and tailings areas that have been acquired by KCGM during the consolidation of mining on the Golden Mile. KCGM will be decommissioning and rehabilitating these areas over the duration of operation.

KCGM recognises the importance of maintaining a record of these areas and incorporating these into closure plans. These areas will be subject to the same regulatory assessment against agreed closure criteria as the current operational areas.
Figure 6: KCGM Exploration Areas (in light green)
5. STAKEHOLDER INVOLVEMENT

Since its inception in 1989, KCGM has played a major role in Kalgoorlie-Boulder, and significant focus and resources have been invested in engaging the local community. In 2003 the KCGM Community Relations Policy “Consider, Communicate & Contribute” was publicly launched by the Community Reference Group Chairperson. An employee education program was also rolled out to ensure renewed focus on community relations responsibilities within the community.

In 2004 a Social Impact Assessment (SIA) was conducted on behalf of KCGM, and issues surrounding closure were brought up as part of dialogue with stakeholders. As a result of the SIA, a public newsletter “News & Views” was created, the Concept Plan - Sharing Our Vision for the Future public document was developed and launched, and a renewed commitment to the development of tourism was made by KCGM management. The SIA has been made available online to generate more community discussion, and to date there have been more than 5,000 downloads.

A Community Needs Analysis conducted in March 2005 has assisted in revising community investment guidelines targeted at longer term community development projects, and in line with our principles to “Consider, Communicate and Contribute” to the Kalgoorlie-Boulder community. In addition, KCGM participated in a project to measure the effectiveness and impact of the company's social development projects which aimed to address longer term sustainability issues.

5.1 Consultation Framework

KCGM has an established community consultation network and utilises a range of mechanisms to facilitate consultation and capture community input on an ongoing basis. The most significant mechanisms include:

- The Community Reference Group - a self-selected group of local community members and invited guests from the DoE and DoIR. The group meets monthly to discuss current KCGM planning, operational activities and feedback from the community.
- The Public Inquiry Line (PIL) - is a 24 hour, 7 day a week system that is available for anyone to register queries and enables KCGM to track responses to issues and queries that are raised. The PIL is also used to record significant interactions with the public at the Super Pit Shop and both formal and informal meetings. The electronic database records are trended as to the nature of the queries and reported in a number of internal management meetings and to the Community Reference Group.
- Media Management - KCGM has actively engaged the media to promote discussion on closure issues, and all media mentions have been recorded and are available electronically through the Super Pit Shop.
• The KCGM Super Pit Shop - is situated in Burt St Boulder and provides an easy access for the community to review approval and planning documentation, and to discuss queries with a range of KCGM staff. The Shop also hosts a 1:2,000 scale model of the Super Pit as it would look in 2017, based on the Life of Mine plans. This model is a centrepiece that has generated public inquiries on the post closure options. Currently the answer is brought back to the focus on prolonging the mine life beyond 2017, rather than specific closure issues with reference made to more detailed consultation as the closure date nears.

• Public Speaking Opportunities - KCGM actively works to participate in a number of local forums to discuss ongoing approvals and issues of interest to the community. Of particular note is the annual "What's Down the Track" forum at the Goldfields Mining Expo which outlines the next 3 years for development for mining and related operations. The KCGM General Manager has presented KCGM plans to 2017 and opportunities to extend the mine life in the last two years. Other forums include Rotary, the Kalgoorlie-Boulder Chamber of Commerce & Industry and the Goldfields Esperance Development Commission.

5.2 Consultation Process

In December 2004, KCGM’s Concept Plan - Sharing Our Vision for the Future outlined the extent of KCGM’s plans for surface mining at the Fimiston Operations until scheduled closure in 2017. This Concept Plan was the first time KCGM had announced a closure date for the open pit operations and presented graphical images of the final Fimiston Operation in 2017. KCGM sought and received feedback from the community on the content of the Concept Plan.

Community consultation continues through the process of defining and developing the approval documentation for the Fimiston Operations Extension Project. The Project Definition Document for this Project was publicly released in April 2005. KCGM recognises the importance of the community as an integral part of this Project and closure planning.

This Conceptual Mine Closure Strategy publicly outlines KCGM’s commitment and approach to the closure of its operations and serves as a primer for discussions with regulatory authorities and the community regarding the future closure of KCGM’s operations.

Structured consultation will be undertaken during the development of closure plans to determine the community’s expectations with regards to the decommissioning, rehabilitation and closure of KCGM’s operations. The stakeholder consultation process will continue through the development of agreed closure criteria and throughout the stages of implementation and post-closure monitoring and reporting.
5.3 Identification of Stakeholders

Comprehensive stakeholder mapping exercises have been conducted by KCGM in various formats over the years in accordance with Newmont Standards. A comprehensive public stakeholder register is maintained online. KCGM is introducing a new database program in 2006 to electronically capture stakeholder maps. Stakeholders include, but are not limited to:

- JV Owners Newmont and Barrick;
- KCGM Employees and Contractors;
- KCGM Community Reference Group;
- Kalgoorlie-Boulder community and the wider regional area;
- Local community service providers;
- Local government organisations;
- Educational institutions;
- Industry associations;
- Community groups;
- State regulators (principally DoIR and DEC);
- Department of Land Information (DLI); and
- Other state and national government agencies.

Responses to this document and inquiries registered on KCGM’s Public Inquiry Line (08 9022 1100) will assist KCGM in identifying interested parties, and the key issues for the closure of its operations. This Conceptual Mine Closure Strategy has been made available on KCGM’s website: [www.superpit.com.au](http://www.superpit.com.au)

6. RISK ASSESSMENT

The development of closure plans for KCGM’s operations will incorporate a risk-based approach using technical analysis to determine the risk associated with the closure alternatives. Social impacts have, and continue to be captured, with risk management plans addressing closure risks revised as part of the community relations risk management system.

A cost-benefit analysis of various closure scenarios will assist KCGM to reduce the level of uncertainty associated with future closure planning and the alternatives selected for implementation.

The risk assessment will be based on the principles outlined in AS/NZ 4360:2004 Risk Management and AS/ISO14001.
KCGM will consider future risks for the operations during and following closure planning, these risks may include:

- Long-term stability of the pits, waste dumps and TSFs;
- Groundwater levels and water quality associated with the TSFs, pits and waste rock dumps;
- Rehabilitation success;
- Dust generation; and
- Social impact of economic withdrawal.

7. CLOSURE PLANNING

KCGM JV Owners incorporate closure planning into the operation of their business interests. Closure planning is vital to ensure that closure costs are estimated for the operation and that they are updated annually as part of the budgeting process. The JV Owner corporate closure plans and cost estimates are based on the most probable scenario for rehabilitation and closure of their properties.

Periodic internal reviews of the corporate closure plan enables the JV Owners to ensure plans and cost estimates are accurate as the operation progresses and changes. The reviews also enable:

- More extensive research and engineering to improve original closure assumptions;
- More detailed engineering designs and cost estimates for closure near the end of the mine life; and
- For adjustments to accommodate changes in society expectations and legal requirements at the time of closure.

Barrick and Newmont make provisions for several possible closure scenarios at KCGM including:

- Life of Mine Closure Planning (planning closure at the completion of mining operations); and
- Immediate Closure (a sudden closure of the operations).

This planning enables the JV Owners to be adequately prepared for the onset of closure at any time.
7.1 Financial Provisioning

Financial provisioning for closure and rehabilitation is undertaken by KCGM JV Owners and is incorporated into business planning. Closure cost estimates include all anticipated costs associated with closure identified through international accounting standards. Cost identification undertaken by KCGM extends beyond these standards to include other closure costs to ensure future cash flow requirements are not underestimated.

Cost estimates are updated at least annually or where a significant project change has occurred and there is a need to reflect this change in the life of mine closure cost estimate. For improved budgeting purposes cost estimates are categorised to ensure closure planning is standardised for all properties throughout the JV Owners operations. This enables information to be consolidated to ensure adequate cash-flow planning, internal resource allocation, long-range planning and to satisfy financial reporting obligations to shareholders and various other external parties.

Closure costs are estimated for a period of time after closure to account for post-closure monitoring and maintenance obligations.

Where obligations are not expected to continue for this extended duration, the closure plan will explain the basis for the anticipated date on which the obligations will end.

7.2 Timing of Closure

It is important to recognise that the timing of closure will depend on many factors such as:

- Economic and environmental costs;
- Gold price and the value of the Australian Dollar;
- Environmental standards and requirements; and
- Results of ongoing monitoring programmes.

It is currently proposed to complete open pit mining in 2017 with gold production ceasing once all stockpiles have been exhausted. Figure 3 shows the final Fimiston Operations in 2017, specifically the main landform features of the Fimiston Open Pit and Waste Rock Dumps.

KCGM continues to investigate options to extend the operation beyond this estimated mine life, enabling KCGM to remain a strong economic contributor to the City of Kalgoorlie-Boulder. Following are some of the areas that KCGM are investigating to potentially extend the mine life further into the future.
• There is the potential for underground mining below the Fimiston Open Pit; this Project is referred to as “Fimiston Deeps”. Mining will be dependent on the amount and grade of the ore and higher costs associated with underground mining.
• KCGM is also examining options outside current leases including the possible acquisition of new exploration tenements, or joint venture opportunities with smaller explorers.
• There is the potential for exploration development within the existing footprint of KCGM leases, opportunities which are currently being examined through an exploration drilling program.
• Toll treating or the purchase of ore for the Fimiston Mill has also been identified. The capacity of the Mill to treat refractory ore is an avenue that can be explored.
• Exploration drilling is currently in progress at Mt Charlotte to examine the potential to continue mining at this site.

7.3 Proposed Land Use

Final land uses have yet to be decided, however on completion of closure and rehabilitation the designated land uses for KCGM sites are likely to be a combination of:

• rehabilitated landforms for conservation, recreation and pastoral purposes;
• tourist attractions consistent with the mining heritage of the Kalgoorlie-Boulder Region; and
• zones with restricted access for safety reasons.

KCGM will undertake extensive community consultation to develop and define the end land use options for its operations and also undertake environmental, social and economic assessments to ensure the selected options are sustainable into the future. An overview of the conceptual options for closure of the major mining features is provided in the sections below.

7.3.1 Fimiston Open Pit

Investigations are currently being undertaken to identify and evaluate the potential for further underground development from the Fimiston Open Pit void, extending the life of the pit and therefore expected closure date to beyond 2017.

However once finally closed, the Fimiston Open Pit is expected to remain as a void, which will partially fill with water (from rainfall, surface water runoff and groundwater inflow) and have no effective land use after mining. The possibility of directing water into the pit for use as a recreational lake has been considered but further investigations into pit wall stability and water quality are required.
Monitoring and investigations of pit wall stability are routinely undertaken as part of the operation and may occur for a period after closure. Studies to date indicate that the Fimiston Open Pit rock mass is generally very stable and the fresh rock slopes are not at risk of overall failure. Initial stability test work has also been completed for the open pit filling with water; this work indicated that stability is not compromised by flooding of the pit.

KCGM is currently undertaking investigations and modeling to forecast the rate of rise of water in the pit, the expected level at which equilibrium of the natural groundwater is reached and the expected long term quality of the pit water.

The Environmental Noise Bund and Waste Rock Dumps will be utilised as abandonment bunding for the Fimiston Open Pit. Additional barricades such as fences and signs may be installed, but the long term maintenance of these barriers as a safety measure will need to be discussed with the community and Regulatory Authorities.

During operation, opportunities to partially backfill areas of the pit with waste rock are examined and adopted wherever possible. However, the option to completely backfill the Fimiston Open Pit at closure is not considered economically feasible due to the spatial extent of the Pit. Backfilling could also sterilise any underground resources that may become economic to mine in the future.

7.3.2 Waste Rock Dumps

Waste rock dumps will remain as prominent features on the Kalgoorlie landscape presenting a hilly vegetated backdrop to the City of Kalgoorlie-Boulder. The dumps may pose a potential attraction for recreational activities or as suitable areas for livestock grazing. However, unrestricted access to these areas after closure could result in degradation of revegetation and an increase in erosion. The waste rock dumps on the eastern and southern side of the operation will provide a barrier for unauthorised access (abandonment bunding) to the Fimiston Open Pit.

Water management on waste rock dumps is important for long-term stability of the landforms and erosion control. The design of the waste rock dumps is to capture water rather than release and water management strategies are incorporated into the landform. These design structures not only provide effective water management but harvest and hold water as run on areas which will subsequently benefit vegetation growth. Visual inspections of landforms are carried out as part of the monitoring regime to ensure that they are maintained and that major erosion is not occurring. If identified, remedial works are carried out as soon as practicable.
KCGM plans to rehabilitate waste rock dumps as soon as areas become available, this is known as progressive rehabilitation (Figure 7). The benefits of progressive rehabilitation include the early establishment of vegetation, which reduces dust levels and improves visual surroundings. In addition this also results in a significant reduction in the amount of rehabilitation required when mining is completed.

![Figure 7: Waste Rock Dumps Progressive Rehabilitation](image)

A variety of rehabilitation techniques have been tested at KCGM which aim to establish a diverse vegetation cover dominated by chenopod shrub species such as saltbush and bluebush with some small trees and associated grasses. KCGM will continue to undertake rehabilitation trials and monitoring throughout the life of the mine to investigate rehabilitation effectiveness.

Approximately 95% of waste rock from the Fimiston Open Pit is Golden Mile Dolerite which is known not to be potentially acid generating. A recent acid drainage risk evaluation study concluded that the risk of acid rock drainage formation in the Fimiston Waste Rock Dumps is very low to low and any acid rock drainage that occurs is manageable. Field trials are current being undertaken to validate this assessment.

### 7.3.3 Tailings Storage Facilities

Access to the tailings storage facilities (TSFs) is restricted during operation and will continue to be restricted once mining and processing ceases. Access restrictions will remain until the tailings have consolidated and dried sufficiently to support machinery and allow rehabilitation to be completed.
Rehabilitation will be undertaken to ensure that the TSFs are safe and stable and any potential erosion is minimised. Visual inspections of TSFs are carried out as part of the monitoring regime to ensure that they are maintained and that major erosion is not occurring. If identified, remedial works are carried out as soon as practicable.

Past studies indicate that dust generation from the TSF is not a significant issue during operation due to the formation of a salt crust on the surface of the TSF from the use of hypersaline processing water. Long term dust generation from the facilities will be managed by rehabilitating the surface of the TSF so that the tailings material is not exposed to environmental elements. Rehabilitation undertaken at the Mt Percy TSF in 2001 has proved successful in reducing potential dust generation from the facility.

As the TSFs dewater and consolidate the structural stability of TSFs increases. Geotechnical assessments of the TSFs are undertaken annually throughout the mining operation and are likely to continue for a period post closure to assess any changes in stability during continued groundwater abstraction. Earthworks and shaping of the facility during rehabilitation will ensure water management does not increase the risk of erosion on the embankments or the surface the facility.

Management of groundwater through the Seepage and Groundwater Management Plan aims to return and maintain the groundwater to levels agreed to be reasonably indicative of natural levels that may occur post mine closure (referred to as historical levels). Based on experience at other sites it is expected that following closure of the TSFs the dewatering bores (Eastern Borefield) can be progressively shut down over a number of years and the groundwater level remain at the target depth. Pumping of seepage is assumed to continue for at least 5 years or until specific closure criteria have been met.

Once it is confirmed that the groundwater level will remain at the target depth without active management, the Eastern Borefield will be decommissioned. It is anticipated that the groundwater will continue to naturally deepen back to a new equilibrium. Groundwater monitoring at the Mt Percy TSF after closure indicated that the groundwater table fell to below the base of monitoring bores (i.e. the bores were dry) within 2-3 years of decommissioning of the facility.

The management and disposal of any TSF recovery water after decommissioning of the Fimiston Mill needs to be considered. Options such as use by other mining operations, pumping into the Fimiston Open Pit or underground workings, dispersal via temporary evaporation ponds or treatment (if required) and discharge to Hannans Lake will need to be investigated and discussed with the community and Regulatory Authorities.
7.3.4 Infrastructure and Utilities

KCGM will discuss with the local community and other stakeholders, the fate and responsibility for retaining infrastructure or other mining features that have potential heritage value. KCGM has already been approached by the Goldfields Historical Society to provide a permanent home at the final Super Pit Lookout for their historical collection. It is hoped that through an extensive process of community consultation, and with government support, there is the opportunity to provide a sustainable, multi-function tourism legacy.

The majority of infrastructure is expected to be dismantled and removed from site. Other infrastructure, for example concrete pads, may be broken up, remain in situ and be covered by a growth medium for native vegetation. Any contaminated land identified within KCGM’s operations will be remediated either in situ, by removal and certified disposal or removal for remediation.

Where utilities are not retained on completion of mining these will be decommissioned and rehabilitated. Retention of some corridors will be necessary during site rehabilitation and monitoring phases. Security and limited access to some corridors may need to be maintained even after the completion of mine closure.

Surface works are expected to be undertaken to ensure that water does not pond during high rainfall events and that it flows to natural drainage systems. Once cleared areas will then be revegetated with native vegetation species and most likely returned to semi-natural shrubland landscape.
7.4 Closure Planning Timetable

The proposed closure planning timetable is likely to be as follows:

<table>
<thead>
<tr>
<th>Event</th>
<th>Timing</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>KCGM Social Impact Assessment</td>
<td>May 2004</td>
<td>Updated every 3 years</td>
</tr>
<tr>
<td>Community Consultation and Discussions with Regulators</td>
<td>Commenced in December 2004</td>
<td>Ongoing</td>
</tr>
<tr>
<td>KCGM Concept Plan “Our Vision for the future”</td>
<td>December 2004</td>
<td>Revised annually</td>
</tr>
<tr>
<td>Closure Studies and Investigations</td>
<td>Currently in progress</td>
<td>Ongoing during operation</td>
</tr>
<tr>
<td>Groundwater and Vegetation Monitoring</td>
<td>Currently in progress</td>
<td>Minimum 5 years after closure</td>
</tr>
<tr>
<td>Conceptual Mine Closure Strategy</td>
<td>January 2006</td>
<td>Revised every 3 years during operation</td>
</tr>
<tr>
<td>Rehabilitation Management Plan</td>
<td>July 2006</td>
<td>Revised annually</td>
</tr>
<tr>
<td>Community Consultation Strategy</td>
<td>December 2006</td>
<td>Updated every 2 years</td>
</tr>
<tr>
<td>Community Consultation Plan</td>
<td>5 years prior to closure</td>
<td>Updated every 2 years</td>
</tr>
<tr>
<td>Preliminary Site Specific Closure Plans</td>
<td>5 years prior to closure</td>
<td>Updated every 2 years</td>
</tr>
<tr>
<td>Final Site Specific Closure Plans</td>
<td>3 years prior to closure</td>
<td>Until closure signoff</td>
</tr>
<tr>
<td>Transition Plans for Local Employees, Businesses and External Relations Activities</td>
<td>3 years prior to closure</td>
<td>Revised annually until closure</td>
</tr>
<tr>
<td>Decommissioning Plan</td>
<td>12 months prior to closure</td>
<td>For the closure period</td>
</tr>
<tr>
<td>Maintenance and Monitoring Plan</td>
<td>12 months prior to closure</td>
<td>Minimum 5 years after closure</td>
</tr>
</tbody>
</table>

7.5 Closure Criteria

In order to assess at what stage closure of KCGM’s operations can be considered “complete”, it is necessary to define specific closure or completion criteria. These are a set of indicators that will be developed with and agreed to by regulatory and community stakeholders. This agreement will include the end land use objectives for the operation and the basis for measuring when these objectives have been achieved.
Conceptual closure criteria have been developed in line with KCGM's commitment to its policies, those of the JV Owners and the relevant standards and guidelines of regulatory authorities. It is intended that the conceptual closure criteria are flexible enough to adapt to changing circumstances at an operational, regulatory or community level, without comprising the agreed end objective.

KCGM recognises that scientific work, particularly in regards to rehabilitation will be required to underpin these criteria. Triennial reviews of this document provide a mechanism for the review of these criteria based on any available technical or scientific information. During progressive rehabilitation activities throughout the life of mine, KCGM will strive for continual improvement to meet or exceed these criteria. It is envisaged that closure criteria will be agreed and finalised with regulatory authorities and the community during the development of site specific closure plans for KCGM’s operations.

### Conceptual Closure Criteria for KCGM’s Operations

<table>
<thead>
<tr>
<th>Objective</th>
<th>Conceptual Closure Criteria (after five years post-closure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To create safe and stable landforms conducive to revegetation.</td>
<td>Seals on shafts and vertical openings remain intact with no evidence of settling or other movement. Subsidence hazards are fenced off.</td>
</tr>
<tr>
<td></td>
<td>Access points to the Open Pit have been sealed off to prevent unauthorised entry.</td>
</tr>
<tr>
<td></td>
<td>No subsidence or slipping of the pit walls is present that is a threat to the long-term stability of the pit abandonment bunds.</td>
</tr>
<tr>
<td></td>
<td>Natural surface drainage patterns have re-established where the post-mining landforms allow.</td>
</tr>
<tr>
<td></td>
<td>The waste rock dumps and TSFs have been contoured for water management, spread with topsoil, ripped, seeded and are geotechnically stable.</td>
</tr>
<tr>
<td></td>
<td>Plant equipment and associated infrastructure has been dismantled and removed from the site for sale and/or appropriately disposed of.</td>
</tr>
<tr>
<td></td>
<td>Surface infrastructure has been removed unless otherwise agreed with the local community and relevant Regulatory Authorities. All underground lines and cables remain buried unless these pose a future risk.</td>
</tr>
<tr>
<td></td>
<td>Pipelines and pumps have been flushed and removed from site (aboveground) or left buried (below ground).</td>
</tr>
<tr>
<td></td>
<td>Boreholes (except those retained for monitoring purposes) have been shutdown, bore casings removed and holes plugged or capped.</td>
</tr>
<tr>
<td></td>
<td>Surface exploration holes have been capped, filled or otherwise made safe.</td>
</tr>
</tbody>
</table>
## Objective

<table>
<thead>
<tr>
<th>Conceptual Closure Criteria (after five years post-closure)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2. To rehabilitate the site to a self-sustaining ecosystem such that the site blends in with the surrounding landscape as far as this is practicable.</strong></td>
</tr>
<tr>
<td>Vegetation communities have established and compare favourably with the suitable natural analogue sites through assessment like Landscape Function Analysis (LFA).</td>
</tr>
<tr>
<td>Potential criteria of success might include:</td>
</tr>
<tr>
<td>• do not require watering, further seeding or planting once established;</td>
</tr>
<tr>
<td>• have sufficient canopy cover to start the build up of leaf litter;</td>
</tr>
<tr>
<td>• comprise at least 80% of local indigenous species¹; and</td>
</tr>
<tr>
<td>• have a general absence of weeds and are not becoming unstable by a presence of exotic species.</td>
</tr>
<tr>
<td><strong>3. To consult the community and interested stakeholders regarding the closure of KCGM’s.</strong></td>
</tr>
<tr>
<td>Stakeholder consultation regarding the proposed closure and rehabilitation of KCGM’s operations has been undertaken and measures have been implemented to address their concerns. Agreed management measures implemented to address these concerns, have been completed and signed off by key stakeholders.</td>
</tr>
<tr>
<td><strong>4. To retain features of heritage value where practicable, consistent with the mining history of the Kalgoorlie area.</strong></td>
</tr>
<tr>
<td>The designated lookout(s) for the ‘Super Pit’ are structurally sound and well maintained. Any other mining infrastructure left for heritage purposes are structurally sound and well maintained.</td>
</tr>
<tr>
<td>Ongoing maintenance of these structures has been agreed with the local community and the Regulatory Authorities.</td>
</tr>
<tr>
<td><strong>5. Identify any potential long-term soil, surface water or groundwater pollution associated with the operations and formulate an action plan to address this.</strong></td>
</tr>
<tr>
<td>Contaminated sites have been remediated in compliance with relevant regulatory standards, guidelines and/or are considered to disperse naturally such that it does not result in any harmful impacts on the surrounding environs or receptors, in the opinion of the Regulators.</td>
</tr>
<tr>
<td>Future sources of contamination have been identified and assessed for risk and treated by removal of the source and disposed and/or managed through a management plan.</td>
</tr>
<tr>
<td><strong>6. To monitor environmental performance during operation, decommissioning, rehabilitation and post-closure stages of the project and to take appropriate action until the specified closure criteria have been met.</strong></td>
</tr>
<tr>
<td>Monitoring of soil, surface, groundwater, flora and fauna has continued according to the agreed schedule during the post closure period and the results have been included in the annual closure report to the Regulators.</td>
</tr>
<tr>
<td>Any areas of concern identified during the post closure period have been addressed or an action plan developed and included in the annual closure report.</td>
</tr>
</tbody>
</table>

Note: 1. 100% of species sown or planted in the rehabilitation will be local indigenous plant species.

## 8. CLOSURE PLANS

Due to the size and spatial spread of operations and the degree of historical mining activity on KCGM’s leases, KCGM will develop a series of Closure Plans for different aspects of the operation. Different timing of closure of some aspects of the operation will also influence the development of these plans.
For example, separate closure plans for the Gidji and Fimiston Operations may be more applicable than creating one closure plan for the entire operation as many of the areas may be at varied stages of closure or continued operation before the expected end of mine life of 2017. Closure Plans will be developed at least three years prior to closure, in line with the ANZMECC Strategic Framework for Mine Closure (2000).

KCGM aims to commence the development of Preliminary Site Specific Closure Plans within at least five years prior to closure, with the aim of finalising the Site Specific Closure Plans at least 3 years prior to closure. During the two year period between the development of the preliminary plan and the finalisation of the site specific plans KCGM will undertake consultation.

The Closure Plans will be communicated and discussed with stakeholders through KCGM’s community consultation process outlined in Section 5.

8.1 Supporting Documentation

In addition to mine closure plans additional plans will provide support for closure operations at various levels. These include the Rehabilitation Management Plan, Decommissioning Plan and Maintenance and Monitoring Plan.

Progressive rehabilitation is being undertaken throughout the life of the mine and includes historically disturbed areas, waste rock dumps and tailings storage facilities. A Rehabilitation Management Plan will be developed to formalise KCGM’s strategy for progressive rehabilitation. This plan will provide regulators and the community with an understanding of KCGM’s strategy for rehabilitation prior to the development of detailed closure plans.

A Decommissioning Plan will provide specifics as to the removal, demolition or salvage of infrastructure, the removal or remediation of any contaminated sites, and the procedures for sealing and securing areas of potential long term risk such as underground openings. The Decommissioning Plan will be developed towards the final stages of the operation, approximately one year prior to scheduled closure.

A Maintenance and Monitoring Plan will define the environmental indicators to enable KCGM to determine its performance against the agreed closure criteria. The plan will detail monitoring programmes and outline targets for continued evaluation of performance over specified timeframes.
Post-closure maintenance and monitoring may involve the following:

- Reconstruction of rehabilitated areas that have eroded;
- Reseeding or replanting where revegetation has been unsuccessful;
- Maintenance and repair of fences, gates, bunds and old shafts;
- Groundwater monitoring around the TSFs, pit and waste dumps;
- Monitoring of pit wall stability and any slippage; and
- Maintenance of any features remaining for heritage / tourist purposes that are the responsibility of KCGM.

KCGM also recognises the need for Transition Plans for Local Employees, Businesses and External Relations Activities, to address and manage the socio-economic impacts on the immediate community of Kalgoorlie-Boulder and KCGM employees. These plans will be developed at least three years prior to closure and revised annually until closure.

Maintenance and monitoring will be undertaken for at least five years post-closure to measure the progress of rehabilitation, landform management and any other aspects against the specified closure criteria. The need for continued maintenance and monitoring will be reassessed at this time.

9. GLOSSARY


Bluebush: A salt-tolerant group of plants generally with fleshy bluish leaves, typically of the genus *Maireana*.

DoE: Department of Environment

DoIR: Department of Industry and Resources.

DLI: Department of Land Information.

EPA: Environmental Protection Authority

LOMPR: Life of Mine Rehabilitation and Closure Plan.

PIL: Public Inquiry Line

Saltbush: A salt-tolerant group of plants typically of the genus *Atriplex*.

TSF (Tailings Storage Facility): An impoundment used to store tailings
Appendix A

*KCGM Concept Plan - Sharing Our Vision for the Future*
Sharing our vision for the future

December 2004
Contents

What is the KCGM Concept Plan?
What’s the history of KCGM?
What are KCGM’s plans?
What will the final Super Pit look like?
How will we get there?
How will this affect me?
What other issues are there?
What happens after 2017?
How can I have my say?
**What is the KCGM Concept Plan?**

The KCGM Concept Plan is, at its heart, our vision for the future. It not only outlines what we believe will be the final Super Pit outline in 2017, but illustrates how KCGM is working to extend beyond this current estimated mine life.

The KCGM Concept Plan is a consultation tool that can help us explain what we need to do in order to maximise the Golden Mile resource. More importantly, it outlines how you, our stakeholders, can help us shape the future of the Golden Mile.

The KCGM Concept Plan is a public document, which will be updated on a regular basis to reflect the shaping of our future. It will be a collaborative effort as we work to incorporate stakeholder feedback into our planning processes, and address community issues as they arise.

KCGM is an important part of the economic fabric of the City of Kalgoorlie-Boulder, in 2004 alone we contributed more than 255 million dollars into the local economy through wages and Kalgoorlie-Boulder based suppliers.

It is KCGM management's role to not only oversee the running of Australia's largest gold mine, but to look to further opportunities to ensure that our organisation continues to play a central role in our City's economy for many years to come.

The KCGM Concept Plan is only one small piece in ensuring that our stakeholders are well informed. The new KCGM Shop Front in Boulder will provide a welcome and friendly face to our organisation, and an opportunity for you to come in and discuss our plans.

It's part of keeping up with our commitment to “Consider, Communicate and Contribute”. After all we're not only proud of KCGM, we're proud to be part of the Kalgoorlie-Boulder community.

Cobb Johnstone
General Manager
What’s the history of KCGM?

In the first five years, the mines of Kalgoorlie and Boulder had yielded half a million ounces of gold and the community of the ‘new’ era of gold mining reflected the initiative and wealth of the people who produced it. The town of Boulder sprang up in friendly rivalry with Kalgoorlie, each having its own trappings of a bustling, well to do mining centre.

Gold production reached a peak in 1903 when 1,225,700 ounces (38 tonnes) were produced from ore grading an average of 41.1 grams per tonne. Production gradually declined as grade decreased with depth and increased proportions of primary, refractory ore were encountered. The decline continued until the revaluation of gold in 1932-33 led to a major revival, but production again declined through the 1960’s, and by 1975, all operations on the Golden Mile had ceased. Only the highly mechanised Mt Charlotte mine, situated at the northern end of the field, close to Hannan’s original find, remained in production.

The sustained rise in the gold price from 1979 onwards saw an increase in mining activity, and the Golden Mile underground operations progressively reopened. Small open pits were also developed in the early 1980’s, but few people at the time could have foreseen the large scale changes that were to occur before the end of the decade.

By the mid 1980’s, all mining operations in Kalgoorlie, from Mt Percy and Mt Charlotte at the northern end to Chaffers at the southern end, were effectively controlled by three companies. With a common goal of maximising the return on investments for their respective shareholders, these companies had developed a rather loose relationship concerning the sharing of facilities and exchanging technical knowledge. Through a number of entrepreneurial deals, this loose relationship was formalised on 29 March, 1989 by the creation of a new management company, Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM).

KCGM manages the operations for its two joint venture owners, Newmont Australia Limited and Barrick Gold of Australia Ltd.

KCGM is the manager of the internationally famous gold resource the Kalgoorlie-Boulder “Golden Mile” which is Australia’s largest gold mining operation. In 2003, KCGM produced the 50 millionth ounce from the Golden Mile making it only one of four gold precincts in the world that has achieved this milestone. It’s a milestone achieved after more than 100 years of mining this area rich in both minerals and history.

Gold was discovered at Kalgoorlie in 1893 by Paddy Hannan, Tom Flanagan and Dan Shea, 42 years after the first discovery of gold in Australia. Mining and prospecting was initially concentrated at the northern end of the field near Mt Charlotte. However, the real potential of the ground came to light when many others started digging south of Hannan’s Find. This area became famous world wide as The Golden Mile.

The original concept of the Golden Mile in 1897 was “from Hannan’s, Brownhill, Paringa, North Kalgurlu and Brookmans Boulder on the north to Lake View South, Boulder Main Reef and Chaffers on the South.” It was also amended to include “From the Croesus (Kallaroo) on the North to the Imperial and Hannan’s Star on the South”. Ironically this equates to a distance of about 3.8km – more than two miles. To add to this, although not technically part of the Golden Mile, Mount Charlotte has also long been affectionately entwined with Australia’s richest strip.

The majority of early prospectors moved on to be replaced by a new breed of mining men; men who brought new knowledge to the Eastern Goldfields and designed or refined the best of the world’s mining machinery to get the gold bearing ore from below the surface to the mills.

“The fortunes and falls in the gold mining industry have been a driving force in the creation of Kalgoorlie-Boulder, and at KCGM we’re proud to still be an important part of the local community. We also intend to be here for the 60 millionth ounce from the Golden Mile!”

John Shipp
General Manager (1987- 2004)
KCGM’s pouring of 50 millionth ounce from the Golden Mile July 2003
What are the future plans?

KCGM’s current approvals will only take our operations up to 2012, however in October 2004 General Manager Cobb Johnstone revealed what KCGM believes will be the final Super Pit outline in 2017.

These plans have not been approved, and we are still working on the detailed environmental and engineering aspects. However, we would encourage you to consider this Concept Plan for our future and provide us with your thoughts.

Put simply, we would like to undertake the following major projects to ensure our mine reaches its 2017 mine life potential:

- Realign the noise bund
- Expand the pit on the western wall (the ‘Golden Pike’ Cutback)
- Build more waste rock dumps
- Lift the Fimiston I and Fimiston II Tailings Storage Facilities (TSFs) by 10 metres
- Re-commission a disused TSF (Kaltails) as a third TSF facility

THE NOISE BUND

In order to begin the process, the current environmental noise bund will need to be realigned along the western perimeter of the ‘Golden Pike Cutback’ (explained below). The building of this new bund is a priority to ensure that our closest neighbours are shielded from subsequent mining activity.

The bund is built from waste rock and covers an area of approximately 25 hectares of previously disturbed land which KCGM has subsequently rehabilitated. There may also be the opportunity to offer the Loopline Railway room on the bund for their train, offering views of the City and the Super Pit.

THE GOLDEN PIKE CUTBACK

KCGM will be seeking approval for a westerly extension of the Fimiston Open Pit to allow for the continued operation of the mine. Granting of the western extension, called the “Golden Pike Cutback” will allow for both the widening and deepening of the pit to a depth of around 600 metres and will extend the life of the Fimiston Open Pit by five years (taking it to 2017).

The Golden Pike Cutback will not require any infrastructure relocation and will be entirely contained in the area west of the re-aligned Bypass Road. The surface extent of the Golden Pike Cutback is approximately 30 hectares and would be contained within the existing KCGM perimeter fence constructed after the completion of the Bypass Road re-alignment in 2003.

THE WASTE ROCK DUMPS

The Super Pit moves around 89 million tonnes of material each year, of which only approximately 14 million tonnes is treatable ore. The remaining 75 million tonnes is called ‘waste’ which we use to build up the distinctive rock dumps which are a feature of the Kalgoorlie landscape. To access ore on the ‘Golden Pike’ cutback, and to get further down in the Super Pit, more waste rock will be removed and so KCGM will need to build more waste dumps.

This waste material will be relocated into the eastern, northern and southern sides of the operation, as well as internally within the final pit. KCGM is currently seeking approval to extend the waste rock dump southwards behind the recent environmental noise bund extension, however northern waste rock dumps are also required for the rock produced from the Golden Pike cutback and a deeper Super Pit.

THE TSFs

KCGM requires additional tailings storage capacity at Fimiston to meet processing requirements for the current 2012 mine life, and the projected 2017 mine life requirements. KCGM currently operates two tailings storage facilities (TSFs) for the Fimiston operation called...
Fimiston I and Fimiston II. The TSFs store all of the tailings generated from crushing, grinding and leaching of about 14 million tonnes of ore per year to recover some 850,000 ounces of gold. Fimiston I TSF takes about 20% of the tailings with the majority going to Fimiston II.

KCGM needs to raise both its TSFs and currently has an application in to raise Fimiston I, Fimiston II will also need to be raised to ensure ongoing viability until 2012.

A third TSF facility would be required if the Golden Pike Cutback is approved, and it is proposed that an old TSF known as ‘Kaltails’ be recommissioned with a height increase. This would be an environmentally sound option as it reduces the need to clear land for a new facility, and also has some infrastructure such as access roads and decant ponds.

(If you would like any details on how we manage our TSFs please request a copy of “News & Views” which outlines this topic).
What will the final Super Pit look like in 2017?

- Waste Dumps Required
- Approved Waste Dumps
- Loopline Reserve
- Realigned Noise Bund
- KCGM Operations
- Golden Pike Cutback
- Environmental Noise Bund
- Southern Waste Dumps
- Approved Waste Dumps
How will we get there?

KCGM is working through an extensive approvals process and this document that you are reading is a part of this process. KCGM has already been in discussion with the relevant Government Departments and the Local Council to inform them of what we want to do. We will be working closely with the regulatory authorities to comply with a range of statutory processes.

However, a large part of the approvals process is consulting with you, our key stakeholders. We have already begun public consultation through presentations to the KCGM Community Reference Group and local community organisations such as Rotary (if you are part of a local community organisation who would like a presentation at one of your meetings, please contact the PR Team at the KCGM Super Pit Shop 9093 3488).

This KCGM Concept Plan is an important part of our consultation before we produce a Project Definition Document (PDD) which government use to identify the approvals required and this will also be made publicly available. We will then prepare and submit a further detailed and technical document with your feedback, to the relevant agencies (The Department of Industry & Resources and the Department of Environment) for approval, this document will also be publicly available.

We've also undertaken a range of activities to better get to know the concerns of our neighbours. In May 2004 we conducted a Social Impact Assessment which was an in-depth range of stakeholder interviews on their views of KCGM (the results of this Assessment are available on our Super Pit website www.superpit.com.au).

KCGM have developed a quarterly Newsletter “News & Views” which we will be distributing to all households in Kalgoorlie-Boulder, and the next issue in March will feature this Concept Plan (the first issue is available on our website and at the Super Pit Shop). We will be addressing current issues in “News & Views”, and encourage you to forward any questions you may have about our operations.

The KCGM “Super Pit Shop” at 2 Burt Street Boulder, where our Public Relations team is based, will also play an important part in getting your input into the approvals process. They will be available 5 days a week during normal office hours to the general public after January 10, if you have any queries drop into the Super Pit Shop (it will be officially opened in February 2005).

PROPOSED APPROVALS TIMELINE

KCGM Concept Plan and ongoing consultation
December 2004

KCGM Project Definition Document available for Public and Government Review
March 2005

KCGM Detailed Proposal available for Public and Government Review
August 2005

Government Approval Decision Required by December 2006
How will this affect me?

For most people there will be no obvious effect, it is simply business as usual at the Super Pit. The proposed expansion of the pit does not require any public infrastructure relocation, and will all be contained on the east side of the Bypass Road.

The most obvious part of the project to the people of Kalgoorlie-Boulder will be the environmental noise bund which will be constructed to shield our closest neighbours from any ongoing mining activity.

The construction of the environmental noise bund will be managed to minimise any potential impacts on nearby neighbours. This will essentially consist of limiting construction to day time only (noise control) and to favourable wind conditions (dust control). Environmental management practices have recently proven successful during the southern extension of the environmental noise bund in close proximity to both industrial and residential properties.

KCGM have been operating on the doorstep of Kalgoorlie-Boulder since 1989, and our environmental management has been commended by government and many stakeholders.

KCGM has developed and implemented detailed dust, noise and vibration monitoring and management plans for all aspects of its operations which are available on our website (www.superpit.com.au) or at the Super Pit Shop. Alternatively please feel free to call or email our Public Inquiry Line (9022 1100 or pil@kalgold.com.au) to request a hard copy to be sent to you.

As KCGM develops more detailed management plans for this project these will be made available for public comment. We encourage you to contact us and let us know if you have a particular interest so that we can advise you when these plans are available.

If you would like to discuss any aspect of potential impacts of our operations with regard to your residence, please get in contact with us at KCGM (as above), or in one of the many alternative ways we have offered at the end of this booklet.
What other issues are there?

We have identified a few issues, other than environmental, that are related to the Concept Plan. However, please let us know if you have any particular issues that you would like addressed.

What about the Loopline?
KCGM has a close relationship with the Loopline, and donated $1 million dollars towards realignment costs when part of the original track was removed to allow the Fimiston Open Pit to develop southwards (the Chaffer’s cutback).

The new Loopline Rail Reserve runs along the western boundary of the environmental noise bund. KCGM is currently investigating an opportunity to enable the Loopline to travel along a portion of the new environmental noise bund to enhance the tourism potential of the Loopline Tourist Railway. If the concept is supported by engineering studies, the Loopline Committee, and then the community, it will require the noise bund to be constructed sooner than anticipated to meet the Loopline construction schedules.

KCGM continues to work with the Loopline Society to ensure the progress of the new railway.

What about the Safety Exclusion Zone?
The Safety Exclusion Zone (SEZ) is a 400m buffer zone around the open pit operation that was established in 1991 by the Department of Minerals and Energy (now the DoIR) to protect residential properties from possible fly-rock and ensure pit wall stability.

It was acknowledged at this time, that a westward extension of the Super Pit would eventually require a realignment of the Eastern Bypass Road (which was undertaken in 2002) and an extension of the SEZ. It was recognized that the SEZ could subsequently be reviewed to account for altered pit conditions, mining experience and advances in technology.

KCGM is currently undertaking an investigation into blasting design and modelling of fly-rock to generate discussion with the DoIR and community on the dimensions and flexibility of the SEZ going forward.

What about the Tourist Lookout?
The KCGM Super Pit Lookout is Kalgoorlie-Boulder’s most visited free tourist attraction. The current lookout location will need to be moved (and the timing of this will depend on the approvals process). However management is committed to ensuring that next lookout location will also be a tourist legacy for the City of Kalgoorlie-Boulder.

Since 1992 KCGM has undertaken a programme of passive property acquisition and now owns all residential properties within 400m from the proposed Golden Pike development.
What happens after 2017?

The Concept Plan is really about getting us up to 2017, however a very important part of what KCGM management are looking at is the ways that we can extend the KCGM mine life to ensure that we remain a strong economic contributor to the City of Kalgoorlie-Boulder.

Listed below are some of the areas that KCGM management is looking at potentially prolong mine life.

- Once the Super Pit has been economically mined as an open pit operation there is still potential for what we are calling “Fimiston Deeps”. This is the potential for underground mining below the Super Pit. The assessment is at very early stages and will be dependent on the amount and grade of the ore and higher costs associated with underground mining.

- KCGM is now looking outside our current leases at the possible acquisition of new exploration tenements, or joint venture opportunities with smaller explorers.

- There is still exploration development potential within the existing footprint of KCGM leases, and we will be progressively pursuing these opportunities through our exploration team’s drilling program.

- The toll treating or purchase of ore at our Fimiston Mill is yet another way that we could look at prolonging the KCGM plant mine life. Our capacity to treat refractory ore is an unexplored avenue for future revenue.

- Mount Charlotte is still an operation with potential. Exploration drilling is currently underway to determine the best way to continue to mine this ‘old lady’ of the goldfields.

We are currently at an early stage of assessing a number of these different opportunities. KCGM would also welcome approaches from third parties interested in any of these options, or with other proposals.
How can I have my say?

If you are reading this document you already have begun to participate in the process. There are a number of avenues for you to respond, and we encourage you to participate in the way you would feel most comfortable.

THE SUPER PIT SHOP
Come in and visit our public relations team at 2 Burt Street Boulder (after January 10, 2005). You will be provided with the most up to date information, and if our PR team can’t answer your specific questions, they can certainly arrange for you to speak to the most appropriate KCGM people for your query.

The Super Pit Shop
2 Burt Street
Boulder WA 6433
Phone: 9093 3488
Fax: 9093 2488
Email: pil@kalgold.com.au

PUBLIC INQUIRY LINE & PIL EMAIL
The KCGM Public Inquiry Line is available 7 days a week, 24 hours a day. Your query will be responded to personally by a KCGM representative.
Please phone 9022 1100 or email pil@kalgold.com.au

SUPERPIT WEBSITE
The Super Pit website is a great information resource, and it is also another way to pass your comments back to KCGM. Visit us at www.superpit.com.au

BY LETTER
KCGM APPROVALS COORDINATOR
Private Mail Bag 27
Kalgoorlie WA 6433

COMMUNITY REFERENCE GROUP
You may feel more comfortable talking with one of our Community Reference Group Members, who can get in touch with KCGM on your behalf (anonymously if you prefer). Contact details of the KCGM CRG members are below (they’re expecting your call!).

Guy Brownlee 9021 3888
Ashley Johns 0419 941 068
Murray Joyce 9021 4262
Brian Kane 9080 5836
Peter Lilly 9088 6001
Amanda Lovitt 0403 284 013
James Murphy 9021 8128
Anne Petz 0407 990 019
Kylie Sharp 0418 930 434
Kevin Smallhorn 9021 2420
Kathleen Stanick-Bentley 0418 947 679
Laura Strachan 0417 942 635

WAIT FOR US!
KCGM will be letter dropping and conducting door to door consultation with our nearest neighbours. Keep an eye on the local newspaper and an ear tuned to local radio, as we’ll make sure you are kept informed of all opportunities to have your say in KCGM’s future.
Appendix B

*KCGM Statement of Commitment*
Safety, Health and Environment Policies

KCGM Statement of Commitment

KCGM is committed to a process of continual improvement to fully meet and uphold the policies and standards of the two Joint Venture Owners, Barrick Gold of Australia Limited and Newmont Australia Limited, with regard to management of workplace safety, health and environmental management. KCGM is also fully supportive of the Joint Venture owner commitments to the principles of practices of the Gold Institute and the Australian Mining Industry Code for Environmental Management.

The requirements and expectations of the two Joint Venture Owner policies and standards will prevail in the management of KCGM operations. The documents of the two Owners are formatted differently and offer various explanatory notes or cross references to other Standards and Guidelines. The Inside KCGM intranet provides access to the policies and standards of Newmont, Barrick and KCGM.

An important process of management of systems and operational performance is that of Audit. Regular auditing is carried out by the Joint Venture Owners for Safety, Health and Environment, including both internal and external Auditors to verify the auditing process and outcomes. In addition, KCGM and the Owners will commission subject specific Audits to support this program as required.

BARRICK

Barrick Safety and Occupational Health Policy Statement
Barrick Environmental Policy Statement

Cobb Johnstone
General Manager
June 2004

Newmont

Newmont Health and Safety Policy
Newmont Environment Policy
ENVIRONMENTAL POLICY STATEMENT

Barrick Gold Corporation believes that wise environmental stewardship is founded in the diligent application of proven natural resource management controls and practices for the protection, reclamation and enhancement of the environment.

As a leader within the mining industry, Barrick is in the forefront of implementing operational improvements that offer superior environmental protection. Barrick’s management practices will continue to fully integrate environmental evaluation, planning and design into its business development strategies.

Therefore, in the best interests of its business, its employees, its shareholders, and the communities in which it operates, Barrick Gold Corporation will:

- Comply with all environmental laws and regulations.
- Establish and maintain a clearly defined environmental management program to guide its operations.
- Ensure that its directors, officers, managers and employees understand and adhere to its environmental management program.
- Provide its managers and supervisors at each operation with the authority and resources necessary to carry out its environmental management program, including the administration of site-specific environmental practices.
- Conduct periodic reviews of its operations to monitor environmental performance and to guide its environmental management program.
- Require those who provide it with services and products to practice good environmental stewardship.
- Sponsor research directed at expanding scientific knowledge and achieving cost-effective solutions to environmental issues.
- Promote environmental awareness among its employees, their families, and the communities in which it operates.
- Work with governmental and civic leaders, environmental groups and other concerned parties to develop a mutual understanding of environmental issues.
- Mitigate its environmental impacts and support environmental enhancement programs of common benefit.

BARRICK

John Shipp
Regional Vice President
Australia-Africa
ENVIRONMENT POLICY

Newmont Australia Limited ("Newmont") is an international mining company, with a principal focus on gold. The company operates in Australia, New Zealand, Europe, Africa, North and South America and Asia.

Newmont believes that responsible environmental management and superior environmental performance is integral to an efficient and successful company. This will be achieved through leadership and the use of reliable systems that provide timely and accurate information, in a transparent manner, to support effective decision making.

To enable environmental objectives to be achieved, each Newmont operation will:

- **Identify** opportunities for improvement and set challenging standards that are congruent with community values and expectations.
- **Implement** and maintain an environmental management system that identifies, assesses and effectively controls environmental risks to the business and community. Such a system must be characterised by rigor, simplicity and action.
- **Integrate** environmental considerations into all aspects of the company’s activities including exploration, project development, mine expansion, acquisitions, divestments and closures.
- **Design**, operate and decommission all facilities and associated infrastructure to avoid or mitigate adverse environmental impact, minimise associated long term financial liability and enhance social benefit.
- **Select** people with appropriate qualifications and capabilities, and provide necessary training to enable employees, contractors and suppliers to recognise the potential and actual impact of their activities to ensure they are able to manage their activities in accordance with this policy.
- **Initiate** regular audit and assessment programs and embrace recommendations for improvement by prompt follow-up action.
- **Consult** the community on its concerns, aspirations and values regarding the development, operational and closure aspects of mineral projects, recognising that there are links between economic, social and cultural issues.
- **Communicate** openly about environmental risks, incidents or emergency situations, or ideas for improvement, to enable effective decision making and action.
- **Demonstrate** commitment to public reporting of environmental performance and other requirements of the Australian Minerals Industry Code for Environmental Management.
- **Comply** with all applicable legal and regulatory requirements as a minimum standard.

John A.S. Dow
Managing Director

June 2002
Appendix C

*KCGM Ministerial Conditions Related to Closure*
MINISTERIAL CONDITIONS RELATED TO MINE CLOSURE

Ministerial Statement No. 28

**Condition 6**
The proponent shall ensure that the Paringa Roaster is decommissioned within two months of the final commissioning of the Satellite Roaster.

Ministerial Statement No. 77

**Condition 8**
The proponent shall ensure that the Croesus roaster is decommissioned no later than two months after the final commissioning of Phase II of Gidji roaster.

**Condition 9**
At least six months prior to decommissioning of the Gidji site, the proponent shall prepare a decommissioning and rehabilitation plan to the satisfaction of the Environmental Protection Authority on the advice of the Minister for Mines, for the site and its environs. The implementation of this plant shall be the responsibility of the proponent and the work shall be carried out to the satisfaction of the Environmental Protection Authority on the advice of the Minister for Mines.

Ministerial Statement No. 188

**Condition 8**
The proponent shall be responsible for decommissioning and removal of the plant and installations and rehabilitating the site and its environs to the satisfaction of the Environmental Protection Authority (EPA). A decommissioning and rehabilitation plan is to be prepared at least six months prior to decommissioning of the site to the satisfaction of the Department of Mines [now DoIR] on advice from the Golden Mile Mining Development Planning Committee.