ABN 97 009 377 619

Letter of Variation to

Consultative Environmental Review Mine and Waste Dumps- Fimiston August 1990

Partial Realignment of the Environmental Noise Bund and Loopline Railway Access

Prepared by: KCGM Safety and Environment Department
Date: October 2005

Distribution:	KCGM Internal
	Department of Industry and Resources
	Department of Environment
	City of Kalgoorlie-Boulder
	Office of Rail Safety
	KCGM External Stakeholders
	KCGM Website – www.superpit.com.au

Summary

Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) is seeking approval to realign the Environmental Noise Bund which includes construction of an access ramp formation for the Loopline Railway.

This project proposal is for KCGM to realign the Environmental Noise Bund to the west to ensure that protection for the community from mine noise is maintained if KCGM gains approval for a western cutback of the Fimiston Open Pit (called Golden Pike Cutback). It is important to note that the Golden Pike Cutback (and associated waste rock dumps and tailings storage) is subject to a separate formal approval process (Public Environmental Review). Should this realignment of the Environmental Noise Bund be approved this does not guarantee that the Golden Pike Cutback will also be approved. As such, contingency options have been incorporated into the design of the Environmental Noise Bund if the Golden Pike Cutback does not proceed.

The realignment of the Environmental Noise Bund has provided a unique opportunity for the Loopline Society by creating an access for the Loopline Railway to run along part of the top of the noise bund. This will provide patrons with expansive views of the City of Kalgoorlie-Boulder and the KCGM operations and access to the relocated Super Pit Lookout. This tourism combination will enhance the experience of visitors and become a tourist legacy for the City of Kalgoorlie-Boulder.

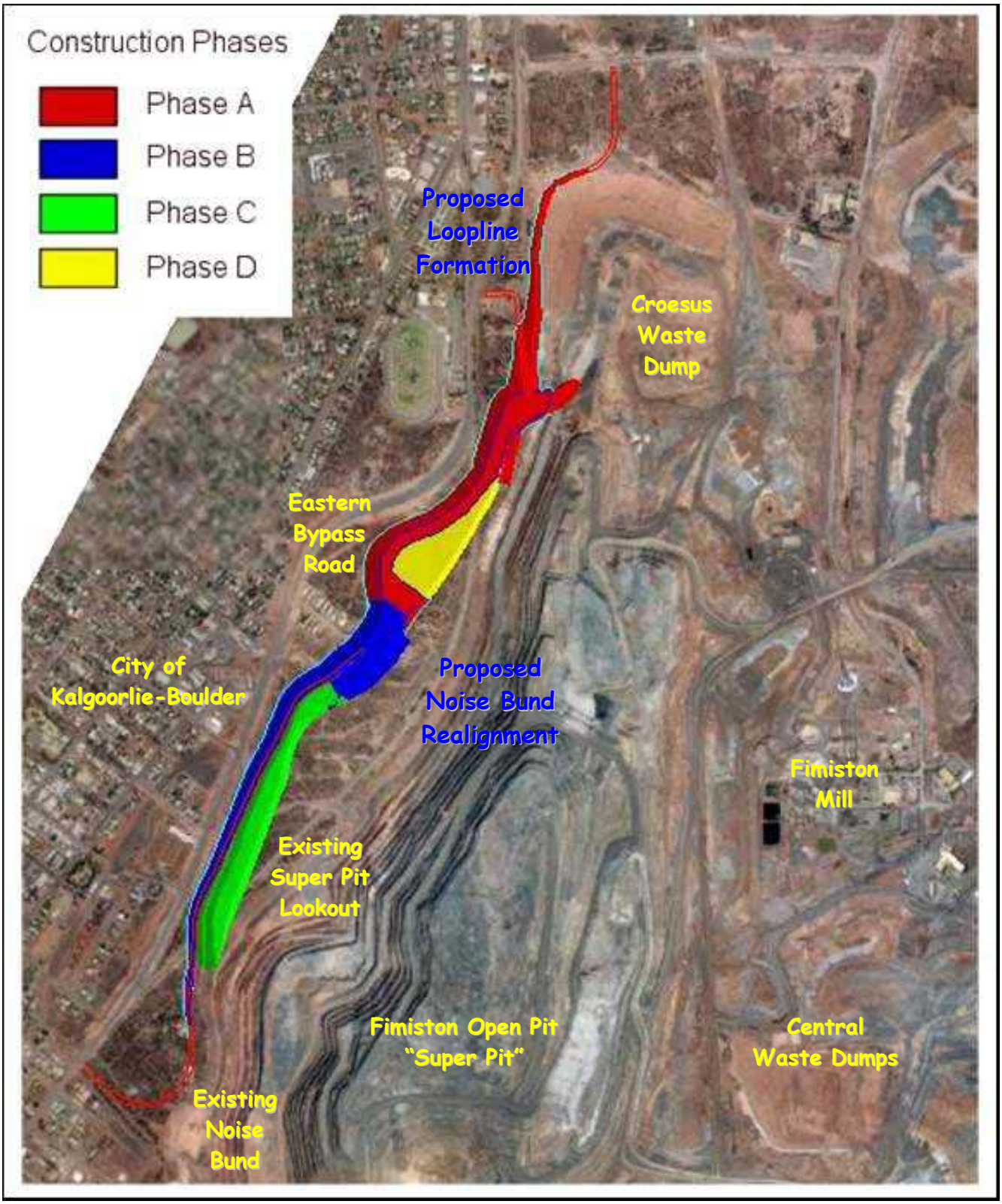
KCGM is committed to realising the re-establishment of the Loopline Railway to ensure ongoing tourism development, and the continuation of an important part of Kalgoorlie-Boulder heritage. It is also important that the realignment of the Environmental Noise Bund and the establishment of an access ramp for the Loopline Railway are completed as soon as practicable to ensure that the Loopline re-establishment is not further delayed.

KCGM is undertaking extensive consultation with key stakeholders and the wider community for the Fimiston Operations Expansion as a whole which includes this Stage 1 - Realignment of the Environmental Noise Bund and Loopline Railway Access. KCGM has also developed a comprehensive communication plan in line with DoE guidelines.

Consultation for this project included:

- Notification to key stakeholders via letter drop and advertisements.
- Making the draft version of this plan available for review and feedback in both hard copy and on the KCGM website.
- Invitations for Feedback to key stakeholders, near neighbours, the KCGM Community Reference Group and KCGM employee and contractors.

This consultation process has begun prior to project commencement and will continue throughout the life of the project to key stakeholders. The KCGM Inquiry Line is available 24 hrs, 7 days, and additional feedback regarding this project will be acted upon should the need arise during the Project.



Site Plan for the Proposed
Environmental Noise Bund Realignment and Loopline Foundation

Commitments by KCGM

In the undertaking of this project KCGM will comply with all relevant mining and environmental statutes including:

- New commitments made in this document;
- Existing mining lease conditions;
- Existing environmental Ministerial Conditions and Commitments; and
- Any new conditions imposed.

Table 1
Commitments by KCGM for the Environmental Noise Bund Realignment

Commitment	Objective	Action	Timing	Audit verification
1. KCGM will **rehabilitate** and make safe areas involved in this operation	To maintain an adequate level of safety and to improve the site's environmental quality and amenity	Rainfall will be managed by preparing rehabilitation sites so as to encourage water harvesting and infiltration	During and after completion	KCGM Annual Environment Report (AER) will document status
		Potable water will be used on all final rehabilitation faces if needed for dust suppression	During works	By inspection
2. KCGM will minimise the production of **dust**	To ensure that the amenity of residential and business areas is not unduly affected by dust from the project	Water trucks and water cannons will water areas that could form dust. Dust binding agents will also be used (if required)	Tool box meetings by KCGM site supervisor and contractors, planning and maintaining work areas and responding to changing conditions	By inspection
		During potential periods of dust formation, visual checks will be made on a regular basis by supervisors	During works	By inspection
		The site superintendent shall take corrective actions to control dust levels in response to complaints or where dust levels may have an adverse effect	During works	By inspection or KCGM Public Inquiry Line
		Employees and contractors will receive formal induction and training covering procedures for dust control	During works	KCGM training database
KCGM will monitor **dust** levels near the operation		A high-volume dust monitor will regularly monitor dust levels.	During Works	KCGM AER

Commitment	Objective	Action	Timing	Audit verification
3. KCGM will minimise **noise** production	To ensure the amenity of residential and business areas is not unduly affected by noise from the operations	KCGM will implement recommendations and suggested management techniques referred to in the Noise Assessment Report (Appendix 3 of this report and Section 4.7)	During works	By Inspection and KCGM Public Inquiry Line
		Employees and contractors will receive formal induction and training covering procedures for noise control	During works	KCGM training database
KCGM will monitor **noise** levels near the operations		Continual noise monitoring will be maintained via existing noise monitors.	During works	KCGM AER
4. KCGM will implement a **public consultation** and information program and respond to complaints, concerns or interest	To keep the public informed and to minimise inconvenience to neighbours	The KCGM "Public inquiry line" will be used to register and respond to complaints concerns and inquiries in accordance with the KCGM procedure	During works	KCGM Public Inquiry Line
		Information will be provided to interested parties and feedback sought	Prior to and during works	Copies of information provided
		Information articles will be published in local newspapers	During works	Copies of articles provided

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1 INTRODUCTION

Kalgoorlie Consolidated Gold Mines Pty Ltd (KCGM) is seeking approval to realign the Environmental Noise Bund which includes construction of an access ramp formation for the Loopline Railway (Figure 1).

KCGM views this project as a 'non-substantial' change to the existing operations in that it:

- Has no additional significant environmental impacts;
- Is not a significant change to the existing operation; and
- Is manageable under the existing Ministerial Statement 188 Conditions and Commitments which control the KCGM open pit mining operations.

Based on the details within this document, KCGM seeks approval from the Minister for Environment for this project under Section 45C of the *Environmental Protection Act 1986.* Approval for this Notice of Intent is also sought from the State Mining Engineer through the Department of Industry and Resources (DoIR) in accordance with the requirements of the *Mining Act 1978*. Additional approval from the Minister for State Development is also requested in accordance with Section 25(3)(a) of the *Mining Act 1978* as the project is located within the Kalgoorlie-Boulder townsite boundary.

1.1 Background and Objectives

This project proposal is for KCGM to realign the Environmental Noise Bund to the west to ensure that protection for the community from mine noise is maintained if KCGM gains approval for a western cutback (called Golden Pike) of the Fimiston Open Pit.

Construction of the Environmental Noise Bund will be subject to dust and noise management constraints to minimise any potential impact on the amenity of nearby industrial and residential areas. These constraints will prolong the length of the construction period which is estimated at 2 years based on the anticipated delays. The 2 year construction period means that KCGM needs to commence construction of the Environmental Noise Bund as soon as practicable to ensure it is completed prior to mining occurring in the Golden Pike Cutback.

It is important to note that the Golden Pike Cutback (and associated waste rock dumps and tailings storage facility) is subject to a separate formal approval process (Public Environmental Review). Should this realignment of the Environmental Noise Bund be approved this does not guarantee that the Golden Pike Cutback will also be approved. As such contingency options have been incorporated into the design of the Environmental Noise Bund if the Golden Pike Cutback does not proceed.

The realignment of the Environmental Noise Bund has provided a unique opportunity for the Loopline Society by creating an access for the Loopline Railway to run along part of the top of the noise bund. This will provide patrons with expansive views of the City of Kalgoorlie-Boulder and the KCGM operations and access to the relocated Super Pit Lookout. This tourism combination will enhance the experience of visitors and become a tourist legacy for the City of Kalgoorlie-Boulder.

KCGM is committed to realising the re-establishment of the Loopline Railway to ensure ongoing tourism development, and the continuation of an important part of Kalgoorlie-Boulder heritage. It is also important that the realignment of the Environmental Noise Bund and the establishment of an access ramp for the Loopline Railway are completed as soon as practicable to ensure that the Loopline re-establishment is not further delayed.

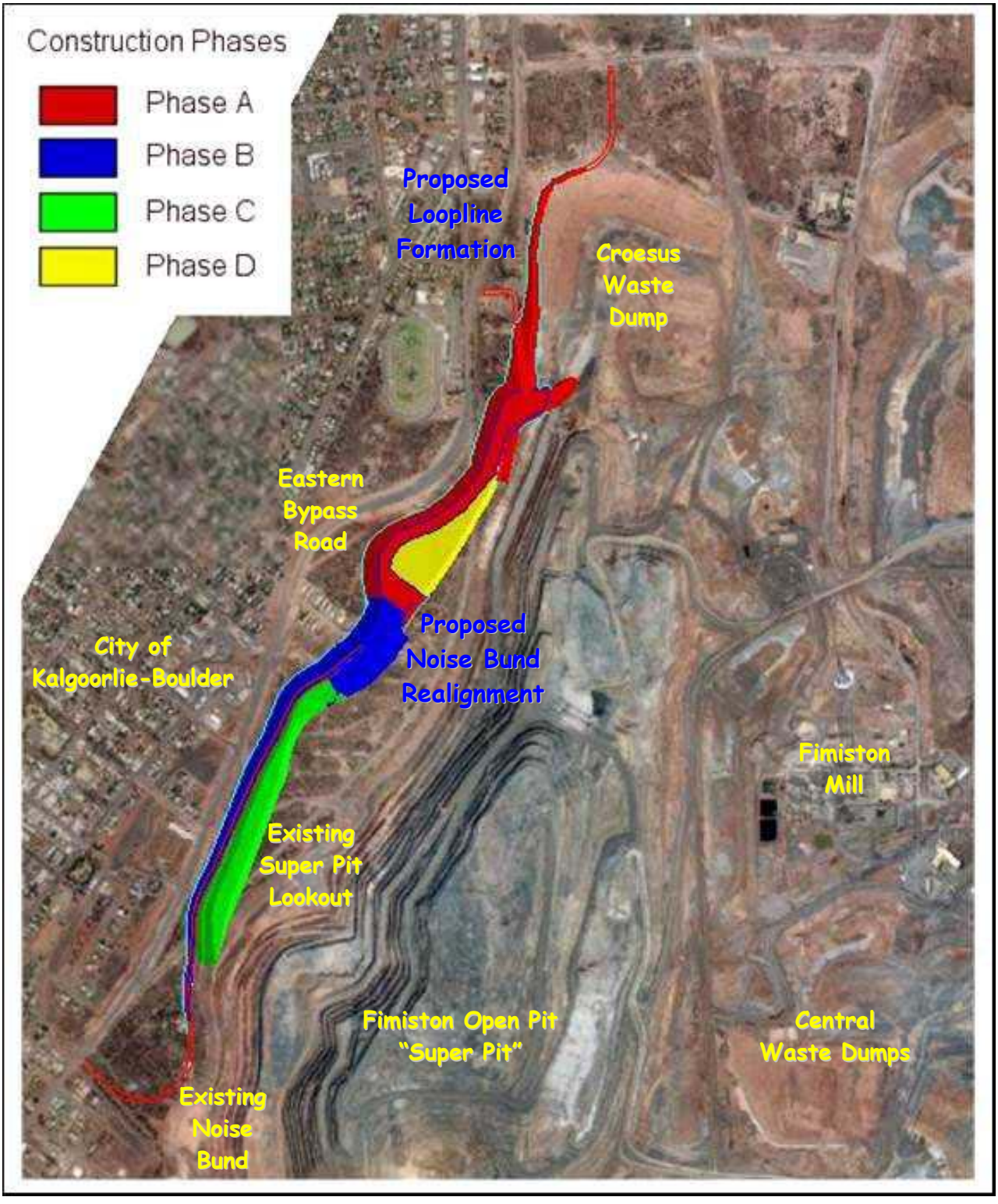

Figure 1
Site Plan for the Proposed
Environmental Noise Bund Realignment and Loopline Foundation

1.2 Location

The Fimiston Operation is located immediately east of Kalgoorlie. The Environmental Noise Bund lies to the west of the existing Fimiston Open Pit, between the pit and the City of Kalgoorlie- Boulder. This project will involve a number of KCGM's active mining leases. These are M26/316, M26/359, M26/388 and M26/405. The lease boundaries are shown in Figure 2. Sections of the Loopline are also shown on M26/54 and M26/95; these indicate the railway track path and are not part of the proposed construction.

Figure 2
Aerial Photograph and Tenement Overlay
for the Environmental Noise Bund Realignment

The project area is approximately 38 hectares, with disturbance per tenement as follows: M26/316 (16.3 ha), M26/359 (16.9 ha), M26/388 (0.2 ha) and M26/405 (4.5 ha).

The project is also located on the City of Kalgoorlie-Boulder town site boundary and additional approval from the Minister for State Development is required in accordance with Section 25(3)(a) of the *Mining Act 1978.*

1.3 Ownership

The Proponent for the project is Kalgoorlie Consolidated Gold Mines Ltd (KCGM).

- The KCGM office address is:
  Black St.
  Kalgoorlie, Western Australia 6430
- The postal address is:
  Private Mail Bag 27
  Kalgoorlie, WA, 6430
- Contact for the Project is:
  Ms Michelle Birch
  Senior Environmental Officer
  Phone: 08 90221338
  Fax: 08 90221331
  Email: mbirch@kalgold.com.au

1.4 History

The existing Environmental Noise Bund which runs along the western edge of the KCGM open pit operation helps in shielding residential areas from mine noise. This bund was originally established in 1993/4 and has proved effective in lowering noise levels from the mining operations in residential areas. This project proposal is for KCGM to realign this bund to the west to ensure that protection for the community from mine noise is maintained if KCGM gains approval for a western cutback (called Golden Pike) of the Fimiston Open Pit. The history of the Environmental Noise Bund construction is shown in Figure 3.

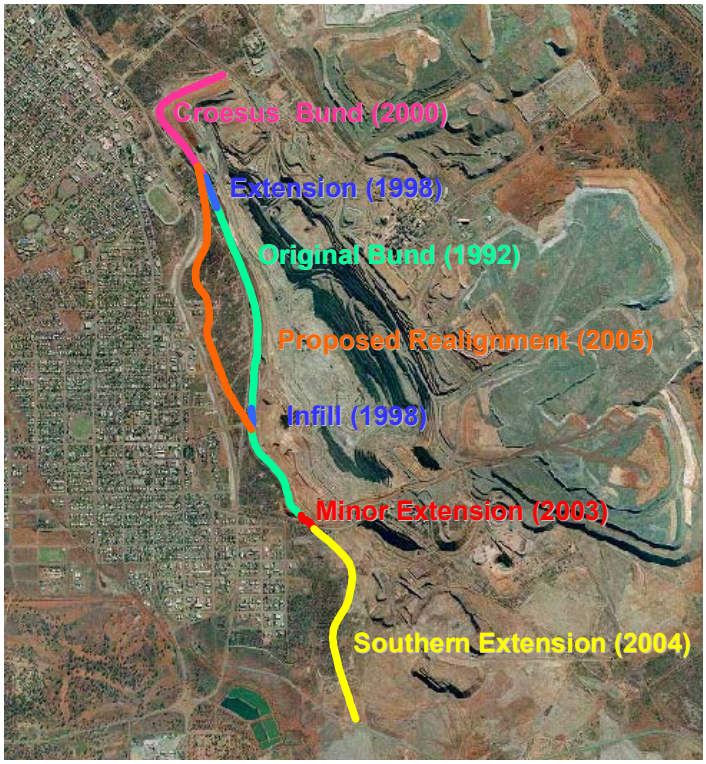

Figure 3
KCGM Noise Bund Construction History

The realignment of the Environmental Noise Bund has provided a unique opportunity for the Loopline Society by creating an access for the Loopline Railway to run along part of the top of the noise bund. This will provide patrons with expansive views of the City of Kalgoorlie-Boulder and the KCGM operations and access to the relocated Super Pit Lookout. This tourism combination will enhance the experience of visitors and become a tourist legacy for the City of Kalgoorlie-Boulder.

The Loopline Railway is an important element of mining heritage along Kalgoorlie-Boulder's Golden Mile. At its height, the Loopline serviced all the mines and their associated townsites on the Golden Mile (Figure 4). The railway was a vibrant commuter service for the mining community of Boulder. The advent of consolidated open pit mining saw this original route incorporated in the mining operations.

The Loopline Society has already been the recipient of a $1M donation from KCGM towards the relocation of the Loopline Railway. KCGM is committed to realising the re-establishment of the Loopline Railway to ensure ongoing tourism development, and the continuation of an important part of Kalgoorlie-Boulder heritage.

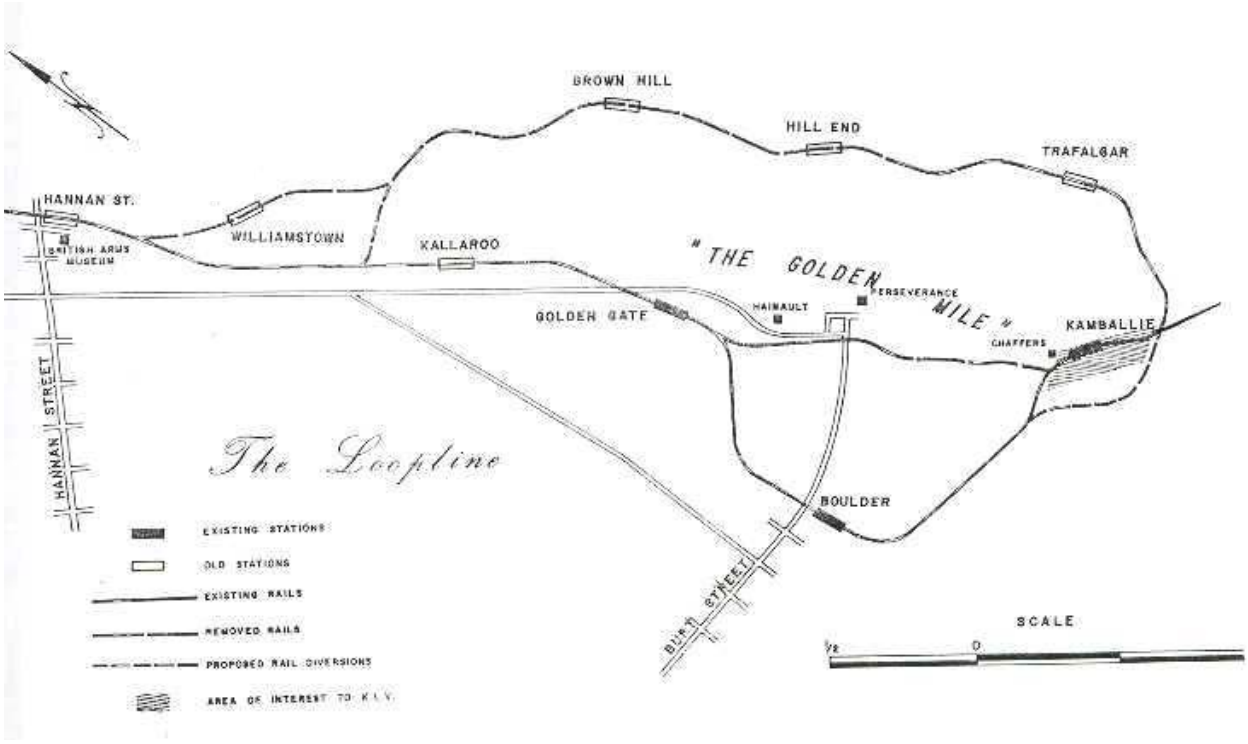

Figure 4
Historic Loopline Route

1.5 Existing Facilities

Existing KCGM infrastructure (including fencing) and the old Bypass Road (now degazetted) will be progressively removed or relocated as part of this development. Other landscape features include the Environmental Noise Bund, Fimiston Open Pit, and Croesus Waste Rock Dump.

2 EXISTING ENVIRONMENT

2.1 Regional Setting

Kalgoorlie Consolidated Gold Mines (KCGM) is located immediately east of the City of Kalgoorlie-Boulder in the Goldfields Region of Western Australia, approximately 600 kilometres east of Perth.

The area known as the "Golden Mile" has a long association with gold mining since the first discoveries during the late 1800s. Mining continues to be a key land use of the region, with mines scattered throughout. Kalgoorlie-Boulder, with an approximate population of 35,000, is the major regional centre in the area. Most people in Kalgoorlie-Boulder are either directly or indirectly dependent on the mining industry for their income.

The principle agricultural activity in the region is sheep grazing but this is located away from the city.

2.2 Geology

The Kalgoorlie succession in the vicinity of the Fimiston deposit consists of a basal ultramafic unit called the Hannans Lake Serpentinite, overlain successively by the Devons Consol Basalt, Kapai Slate, Paringa Basalt and Black Flag Beds. Mafic to ultramafic sills have then intruded the sequence. One of these sills, the Golden Mile Dolerite, is the host for most of the gold mineralisation in the Golden Mile.

The structure of the Fimiston area is dominated by the large Kalgoorlie Anticline and Kalgoorlie Syncline, the major Golden Mile Fault which strikes sub-parallel to formation boundaries, and numerous cross-cutting faults (Golden Pike etc). It was recognised that 3 major deformation events were responsible for these structures, occurring over a period of 60 million years beginning 2,670 million years ago.

The rock mass in pit region consists of Paringa Basalt (PB), Golden Mile Dolerite (GMD), shales and porphyry dykes. Except shales, each of these units has high intact rock strength, with an average Uniaxial Compressive Strength (UCS) of greater than 85MPa.

The Paringa Basalt and the Golden Mile Dolerite are considered to be the two main rock masses forming the final pit walls. The oxidation depth varies from 0 to 70m and averages 40m.

2.3 Geomorphology

The Kalgoorlie gold deposits are contained within the Coolgardie Plateau geomorphological unit. The natural land surface is about 350-400m above the Australian Height Datum (AHD), and is notably flat, dominated by plains with broad valleys draining to flat dry lakes, mostly to the east of the city. The project area is located at about 360m AHD on a flat to low undulating plain that drains, primarily, by sheet wash and by small creeks that terminate in low depressions.

2.4 Soils

Soils of the region are typically neutral red earths in the plain areas, calcareous loams and brown calcareous earths in the more hilly portions, with saline/sodic soils dominating in and around the salt lakes. In topographic lows, naturally transported fines make the soils in these areas more clayey, probably resulting in higher nutrient levels and slightly better water-holding capacity.

Soils within the project area are degraded as a result of historical mining operations and land clearing, however many areas have been revegetated as part of the KCGM progressive rehabilitation programme.

2.5 Hydrology

The relatively low rainfall and gentle slopes cause rain, when it occurs, to sheet off rather than form distinct watercourses. There are no significant drainage lines on the project site. A minor water course runs west from north of Johnson St East and joins the main Kalgoorlie-Boulder civil drainage network however, based on observations during recent heavy rainfall events, this drainage channel does not have a significant catchment area. It is anticipated that the construction of the noise bund will not impact on this channel in any way.

The Golden Mile is a south-plunging ridge of mostly ultramafic rocks forming part of the Kalgoorlie-Kambalda Greenstone Belt. The main rock units are the Golden Mile Dolerite and the Paringa Basalt. These formations have a very low primary permeability and will not store or transmit large quantities of ground water expect through major secondary structures. The hydrogeology of the greenstones is poorly understood as they do not form major aquifers and have not been studied in detail. The permeability of these rocks is likely to have a large variation.

The Greenstones along the Golden Mile are overlain by tertiary and younger sedimentary deposits to the west, south and east. Groundwater often occurs in these deposits at shallow depths. Some exchange of groundwater must occur between tertiary sedimentary deposits and the older greenstones which form the Golden Mile and other bed rock formations in the Kalgoorlie area.

The total dissolved solids concentration of the naturally occurring saline water ranges from about 20,000 to 200,000 milligrams per litre (sea water has about 35,000 to 40,000 milligrams per litre of total dissolved solids).

2.6 Climate

Climate of the Kalgoorlie area is classified as semi-desert Mediterranean (Beard 1972) and is characterised by warm winters and hot summers. Meteorological data are available from the Kalgoorlie airport.

Mean annual rainfall for the area is about 255mm, with a slight predominance of winter falls, although rain does occur on a year round basis. Winter rainfall is associated with cold fronts moving in from the Southern Ocean, while summer rainfall comes mainly from localised thunderstorm activity and cyclonic rain-bearing depressions. The latter sources are both less regular and less predictable. This is borne out by the larger number of rain days each month for winter (mean of 8 rain days for the months May to August) versus the more sporadic, but heavier, falls of summer (mean of 3.6 rain days for October to March). The mean monthly rainfall ranges from 32mm in June to 12mm in December.

The mean annual daily maximum temperature is 25.2°C, with a range from 16.7°C in July to 33.7°C in January. Mean minimum temperature ranges from 5°C in July to 18.3°C in January, with an annual mean of 11.6°C. Relative humidity ranges between 76% at 0900 hours in July to 22% at 1500 hours in December.

2.7 Flora and Fauna

The project area lies within the Coolgardie Botanical District's Coolgardie Vegetation System, in the southwest interzone, the vegetation of which has been mapped at a scale of 1:250,000 (Beard 1972). On this map Beard shows the pre-disturbance natural vegetation as sclerophyll woodland, although the area has long been cleared. Extensive timber cutting occurred, in the Kalgoorlie region, at the turn of the century for mineshaft supports and for firewood.

There are numerous exotic weed species in the area, partly due to the proximity of Kalgoorlie-Boulder and possibly introduced by early prospectors. These extensions will provide the opportunity to reintroduce native plant species by methods that minimise the recolonisation of weed species.

A specific ground search was undertaken in 1994 (Muir Environmental) for Gazetted Rare Flora and Fauna. Newbey *et al* (1985) identified the significant species *Eucalyptus brachyphylla* and *Eucalyptus kruseana* during surveys of the region however these species are characteristic of granite complexes which are not represented in the vicinity of the project area. No other species of note were identified from these investigations.

In the region, Gazetted Rare Bird species include the; Peregrine Falcon (*Falco peregrinus*), Pink (or Major Mitchell's) Cockatoo (*Cacatua leadbeadbeateri*), and the Naretha Blue Bonnet (Parrot) (*Northiella haemotogaster narethae*). Two gazetted pythons have also been considered to possibly occur in the Kalgoorlie region. These are the Woma or Ramsays Python (*Aspidites ramsayi*) and the Carpet Python (*Morelia spilota imbicata*).

The area under the control of and surrounding the KCGM operations has been degraded by historical mining, pastoral and urbanisation activities. The degradation has included disturbance and alteration of the ground surface, erosion by water and wind, revegetation programs and recreational activities. These activities have resulted in the disruption or removal of fauna habitats from KCGM operations and the City of Kalgoorlie-Boulder.

The records of the Western Australian Museum indicate that most mammals occurring in the vicinity of the project area are both common and widespread. In addition, there have not been any reports of collections or sightings of rare species in or around Kalgoorlie for many decades.

In conclusion, the limited area of the project and the highly disturbed nature of the area indicate that there is not likely to be any effect on the status of the above flora or faunal species.

2.8 Social Environment

KCGM is located within close proximity to the City of Kalgoorlie-Boulder as a result of the historical population growth that occurred around the mining operations along the Golden Mile at the time.

KCGM has a workforce of about 700 people including contractors and is an important part of the economic and social fabric of the City of Kalgoorlie-Boulder. In 2004 alone more than $255 million was contributed into the local economy through wages and Kalgoorlie-Boulder based suppliers. KCGM operations are also important to the Local, State and National economy; in 2004 more than $12 million was paid in royalties and $4.6 million in other taxes. This project forms part of the bigger Fimiston Extension proposal (requiring further approval) to extend the estimated mine life by around 5 years and therefore extending the economic and social inputs into the City of Kalgoorlie-Boulder and State of Western Australia.

The KCGM Super Pit is a major tourist attraction and the company intends to build on this with the Loopline Tourist Railway. The KCGM Super Pit Tourist Lookout is located on the western side of the Fimiston Open Pit. The lookout has become a major tourist attraction for the Goldfields with approximately 10,000 visitors per month. It provides visitors with information on KCGM and increases awareness of the KCGM operation and the mining industry as a whole. KCGM has been publicly acknowledged for its commitment to tourism, and was the grateful recipient of the Kalgoorlie-Boulder's Chamber of Commerce & Industry's Tourism Award in 2004.

European and Aboriginal heritage and other social impacts are discussed in Sections 5.1 and 5.2.

3 PROJECT DESCRIPTION

The project is made up of two key components, the realignment of the Environmental Noise Bund and construction of the Loopline foundation. Figure 1 shows the general layout of the project.

The Environmental Noise Bund will be constructed in four phases to allow for an expedited construction and commissioning of the Loopline Railway along the top of the bund. This also allows for the construction of the new Super Pit Lookout prior to the removal of the current Lookout.

The Environmental Noise Bund will be constructed from north to south. It will commence at the Croesus Environmental Noise Bund and will run south between the Fimiston Open Pit and the Eastern Bypass Road to a point just south of Burt Street. At this point it will be married in with the existing Environmental Noise Bund.

The Loopline Railway will travel along the top of the Environmental Noise Bund for approximately 1,000 metres. It will access the Environmental Noise Bund via two ramps, one of 800 metres in length to the north and one of 1,450 metres in length to the south. The difference in length is to account for the southerly fall of the natural land surface. Both the ramps and the section of the Environmental Noise Bund forming the railway foundation will be compacted to the required engineering standards to ensure the safe construction and operation of the Loopline Railway.

3.1 Construction Outline

The Environmental Noise Bund and Loopline foundation will be constructed in four phases. The initial phase will involve the construction of the northern section of the Loopline foundation and construction of a pad for the new Super Pit Lookout. The second phase continues the Loopline foundation to the south, dominated by the southern access ramp. The third phase is to fill in the southern end of the Environmental Noise Bund, bringing the realigned section up to its final height and operating width. The final phase involves the infilling of the northern section with mine waste.

It is proposed that a contract mining fleet will be used for at least the first two phases of construction. The mining fleet would consist of 90-150t trucks (Caterpillar 777, 785 or equivalent) and front end loaders or excavators. Ancillary equipment required would include water trucks, graders and dozers. KCGM has an impact roller capable of compacting up to 8 metres of rock. This machine would also be utilised in the construction of the Loopline foundation to ensure the necessary compaction is achieved.

The third phase of construction may be completed with either a contract mining fleet, with equipment owned and operated by KCGM, or a combination of the two. Should KCGM equipment be used then material would be excavated from the open pit operation by Komatsu PC8000 hydraulic shovels (35m^3 capacity) and loaded in to Caterpillar 793C trucks (225t capacity). This primary fleet will be supplemented as required by a fleet of smaller equipment comprising of Komatsu 1250 excavators (7m^3 capacity), Caterpillar 992 Front End Loaders (12m^3 capacity) and Caterpillar 777 Trucks (90 tonne capacity). Machinery deployed for this phase would also include Caterpillar D10R Dozers and Caterpillar 16H Graders. Water trucks will be used on an ongoing basis for dust control.

The fourth phase of the operation will be completed using KCGM equipment. Material will be excavated from the Open Pit operations by Komatsu PC8000 hydraulic shovels (35m^3 capacity) and loaded in to Caterpillar 793C trucks (225t capacity). Other machinery used for this phase will be similar to that used for the third phase.

3.1.1 Phase A – Northern Loopline Foundation and Superpit Lookout

Figure 5
Phase A Construction

Prior to construction, topsoil and organic material will be cleared from the site and stockpiled. This material will be used during the rehabilitation of the bund.

Waste rock will be sourced from the Croesus Waste Dump and transported across the now filled Croesus Pit along a specially constructed 35 metre wide haul road. This haul road will allow material to be taken from the Croesus Waste Dump to begin construction of the bund, commencing at the north of the existing Croesus Noise Bund. Oxide material is also available from this Croesus Waste Dump and will be used as required for rehabilitation.

The first lift of the Environmental Noise Bund comprising the Loopline foundation will be constructed to a point south of the proposed Super Pit Lookout position before the second lift commences. The first lift of the northern rail access ramp and vehicle ramp will be constructed at the same time. Compaction requirements will be achieved prior to the commencement of the second lift.

Once all lifts of the Loopline foundation and access ramps have been completed the remainder of the Super Pit Lookout pad will be constructed. As this pad is not subject to the same compaction requirements as the Loopline foundation, it can be constructed in one lift. This will not impact on the stability of the Super Pit Lookout or any other structure constructed on the pad.

Once both the ramp and the Super Pit lookout pad are in place, the Loopline Society will have the opportunity to extend their track from the Boorora Rd area onto the Environmental Noise Bund and to the Superpit Lookout. Coinciding with this rail construction, rehabilitation of the Environmental Noise Bund slopes can commence north of the Super Pit Lookout pad. The construction of the new Super Pit Lookout and access road can also commence at this point.

It should be noted that at this point there will be no view into the Fimiston Open Pit from the lookout as the existing Noise Bund is still in place.

3.1.1.1 Super Pit Lookout

The Super Pit Lookout will be constructed at a point along the Environmental Noise Bund that provides the best vantage point of the operation, whilst also allowing easy pedestrian access and vehicular access. This vehicle access will be via a separate ramp designed and constructed in conjunction with Stage A of the project. This access road will either join the Eastern Bypass Road at the existing intersection of the now closed Croesus Mill Road, opposite Cruikshanks Oval, or at the eastern end of Johnson St East. The final location will be agreed with the Main Roads Department to ensure a safe and easy access from the Eastern Bypass Road.

Access will also be maintained from the Fimiston Open Pit to the Super Pit Lookout to allow for the transport of equipment for functions such as the Gold Council Mine Open Days in order to promote community awareness and education of the mining industry. This access will be for KCGM use only and will not be open to the public.

3.1.1.2 Compaction of the Loopline Foundation

KCGM have been advised by engineering consultants Golders Associates that the Loopline foundation can be constructed in a series of compacted lifts in order to be suitable for a rail service. The maximum height of these lifts is currently being investigated by engineering and geotechnical consultants in conjunction with KCGM personnel.

Each lift will be compacted to required specifications and tested for compliance, prior to the commencement of the next lift. Both the north and south rail ramps will be constructed in the same manner. Trials will be undertaken to determine the compaction levels and lift thicknesses required.

It is envisioned that each lift will be constructed via first flat dumping the area then end dumping waste material from a progressive tip-head (Figure 6). This tip-head will be maintained by a wheel or track dozer. Compaction will be achieved by the movement of the haul trucks and dozer. Any extra compaction required will be achieved by the use of the impact roller. This method of construction will also reduce the overall dump face which will help to minimise dust emissions.

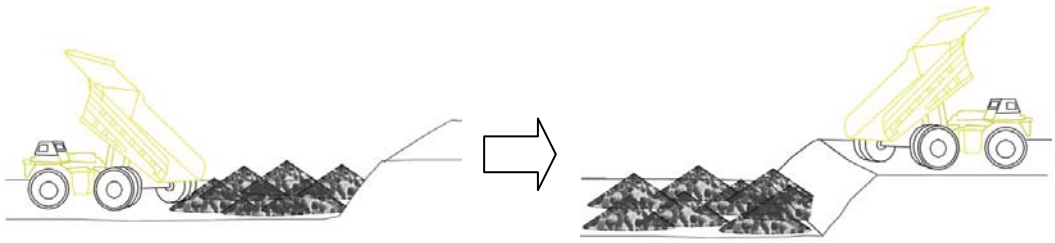

Figure 6
Schematic Example of Flat Dumping Methods

KCGM dumping procedures stipulate that any flat dumping that occurs must be designed so that emergency access is maintained for tip heads that may be built over the flat dumps. This procedure will be used during flat dumping operations.

The dumping procedure also states that all dumps will have windrows equal to no less that half the height of the tyres on the largest vehicle likely to be operating on the dump. In this case the trucks will be the largest vehicles and therefore windrows of a suitable height will be maintained around all exposed edges of the dump. These windrows will be maintained by wheel or track dozers.

The Loopline foundation will be constructed to a minimum width which allows battering along the western side while still maintaining a 10 metre running width along the top for the Loopline railway line and railway service road. Consideration has also been given for the safety and practicality of hauling along the top of this foundation. While the final size will depend on the size of the trucks chosen, it is likely that the minimum possible width before rehabilitation will be between 35 and 50 metres.

Phase C and D and any parts of Phases A and B which do not form part of the Loopline formation will be constructed in the standard dump lifts following the KCGM site dumping procedures.

3.1.2 Phase B – Southern Loopline Formation

Figure 7
Phase B Construction

Prior to construction, topsoil and organic material will be cleared from the site and stockpiled. This material will be used during rehabilitation of the Environmental Noise Bund.

Once the final lift of Phase A is complete, Phase B can commence. There is no need to wait for rehabilitation or railway construction works before the commencement of this stage.

Phase B consists of the extension of the Loopline foundation from the south of the new Super Pit Lookout to the access road of the existing Lookout. The material for the second stage will be sourced from the northern end of the existing Environmental Noise Bund, rather than from the Croesus Waste Dump. This will provide an improved view of the operation from the new Super Pit Lookout.

The material from the northern end of the existing Environmental Noise Bund will be hauled around the eastern base of Phase A along a 35 metre wide haul road. The haul road system utilised in Phase A will not be used in Phase B due to the increased haulage length and the need to free up the top of the bund for construction of the railway and facilities, and for the commencement of rehabilitation.

The Loopline foundation will then continue to the south, cutting access to the existing Super Pit Lookout and terminating at the base of the access ramp at the southern end of the operation, near Outram St. Once these earthworks have been completed the Loopline Society will be able to complete construction of the Loopline railway and rehabilitation can continue along the full length of the western face of the Environmental Noise Bund.

As with Phase A, this section will be constructed in lifts of appropriate height and these will be compacted to engineering specifications prior to the commencement of subsequent lifts.

In order to allow for complete rehabilitation at this point, should the Golden Pike cutback not proceed, the southern ramp will be designed to allow for rehabilitation of both the western and eastern faces, although progressive rehabilitation will only occur on the western face. However it will also be necessary to leave a substantial windrow along the eastern edge of this ramp, to ensure no spillage from Phase C can cross the railway.

It should be noted that although much of the existing Environmental Noise Bund will be reclaimed during this time, at no point will the existing Environmental Noise Bund be removed father south than the Loopline foundation has developed, effectively maintaining an intact Environmental Noise Bund for the length of the operation.

3.1.3 Phase C – Removal of Existing Super Pit Lookout and Completion of the Environmental Noise Bund

Figure 8
Phase C Construction

Prior to construction, topsoil and organic material will be cleared from the site and stockpiled. This material will be used during the rehabilitation of the Environmental Noise Bund.

Once Phase B has been completed Phase C can commence. The completion of the southern section of the Loopline railway and rehabilitation does not preclude the commencement of Phase C.

Phase C of the construction will consist of the complete removal of the existing Environmental Noise Bund including the existing Super Pit Lookout and the extension of the realigned Environmental Noise Bund to the south. This will provide an unobstructed view of the operation from the new Super Pit Lookout and from certain parts of the Loopline railway.

Should extra material be required for this phase, it will be sourced from either the Croesus Waste Dump, or the Fimiston Open Pit operation.

As this phase is not subject to the same compaction requirements as the railway foundation, it can be constructed in a single lift, rather than multiple lifts. The ramp system utilised in Phase B will be used for this stage.

The western edge of this phase connects with parts of the eastern edge of the Loopline foundation ramp, necessitating the requirement for the windrow along the eastern edge of the ramp.

3.1.4 Phase D – Environmental Noise Bund Infill

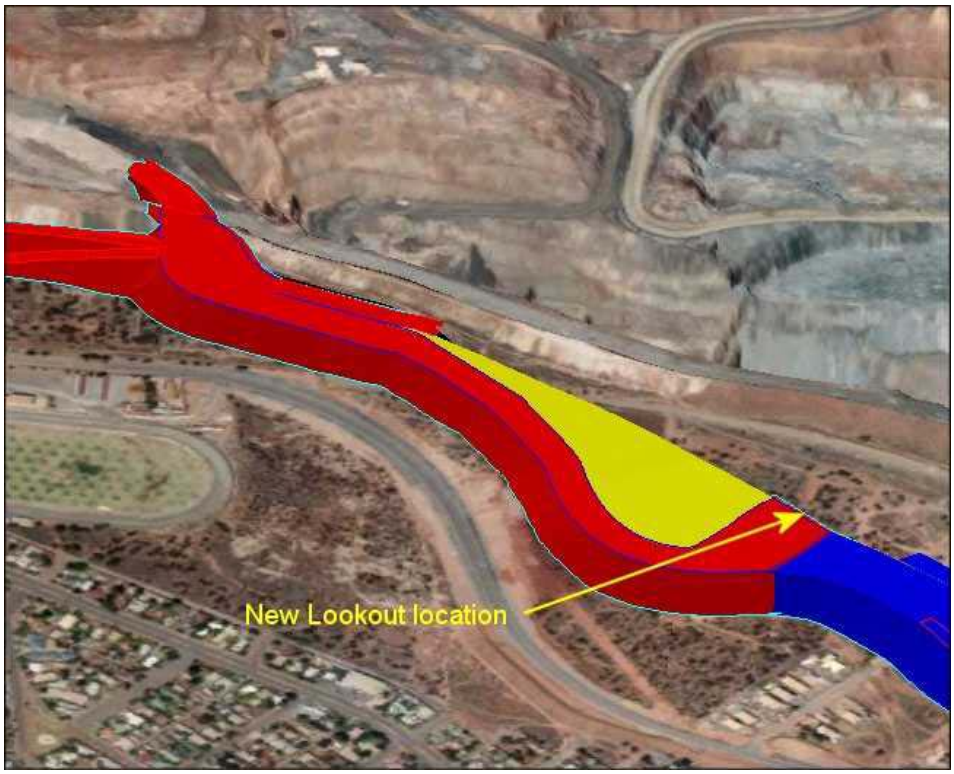

Figure 9
Phase D Construction

Phase D of construction will consist of filling in the remainder of the Environmental Noise Bund, north of the new Super Pit Lookout. This will provide a larger area for activities such as Mine Open Days.

Prior to construction, topsoil and organic material will be cleared from the site and stockpiled. This material will be used in the rehabilitation process.

This phase will be constructed using mine waste from the Fimiston Open Pit operations and will be constructed in a single lift from north to south. Due to the proximity of this phase to the new Super Pit Lookout and the timing of the construction, members of the public will be able to view the construction process. This will provide an opportunity to further educate the general public on the mining methods used at KCGM.

3.1.5 Geotechnical Considerations

Geotechnical reviews of the western wall of the Golden Pike Cutback have been undertaken to assess the stability of the design of the proposed cutback.

These reviews concluded that the cutback design conforms with KCGM experience and may be considered conservative. The fresh rock encountered in the Fimiston Open Pit is extremely stable and has shown no evidence of weathering with time. Also, no kinematic stability mechanisms (fault or shear planes etc) have been identified for the western wall.

It was also determined that the stability of the oxide in the western wall would not be compromised by the presence of the Environmental Noise Bund and that the stability of the Environmental Noise Bund would not be compromised if flooding of the Fimiston Open Pit occurs after mine closure.

3.1.6 Effects of Golden Pike Cutback Approval

Figure 10
Phase A Design if the Golden Pike Cutback is Cancelled

The Environmental Noise Bund realignment has been developed with the intention to mine the Golden Pike Cutback once approval has been obtained. However, it is flexible enough to cater for the cancellation of the Golden Pike Cutback if approval is not obtained after the end of any phase.

Should the Golden Pike Cutback be cancelled during or after Phase A but before Phase B then the southern end of the Environmental Noise Bund would be extended east and married in to the existing Environmental Noise Bund. The southern face of this extension would be rehabilitated. The Super Pit Lookout could either be moved to the realigned Environmental Noise Bund to provide a Lookout for the Loopline Railway or the existing Super Pit Lookout would remain.

The extension of the Loopline Railway to the new edge of the Super Pit Lookout pad would depend on timing as compaction issues would need to be addressed.

It should be noted that in this case no southern ramp would be constructed for the Loopline railway. Instead it would be recommended that the Loopline Railway install a rail junction at the base of the northern ramp and run a second track around the base of the existing Environmental Noise Bund. The Loopline Railway could still continue onto the Environmental Noise Bund from the north to gain access to the new Superpit Lookout.

Should the Golden Pike Cutback be cancelled during or after Phase B but before Phase C then reclamation of the existing noise bund would cease and the exposed face would be rehabilitated. The eastern face of the southern rail ramp would also be rehabilitated. The position of the new Lookout would have to be reviewed to determine if its location is adequate for the needs of the community. If, due to the location of the remaining original Environmental Noise Bund, it is not adequate then either more of the existing Environmental Noise Bund may need to be removed, or the Lookout pad may need to be extended further to the east. Alternatively the existing Super Pit Lookout would be utilised as a permanent feature.

Should the Golden Pike cutback not proceed then a further geotechnical review of the western wall will be undertaken to revise the required position of the abandonment bund.

3.2 Ore Processing

This section of the DoIR Notice of Intent Guidelines is not relevant to this project as KCGM mineral processing will remain unaffected.

3.3 Tailings Disposal Facility

This section of the DoIR Notice of Intent Guidelines is not relevant to this project as the nature of the tailings and deposition rates will not change.

3.4 Support Facilities

Existing support facilities, at KCGM, will be utilised during the course of the project.

3.5 Workforce

Both contract employees and the existing workforce will be used during the course of the project.

3.6 Transportation Corridors

Relocation of the Super Pit Lookout will require a change in the location of the access road to this facility. To limit the duration of any disruption of access to the existing Lookout, construction of the Environmental Noise Bund will commence at the northern end and progress southwards. The construction of a new Super Pit Lookout and public access road to the site will be completed during Phase A, prior to the existing access road being closed during Phase B.

The new Super Pit Lookout public access road will join the Bypass Road at the existing intersection of the now closed Croesus Mill Road, opposite Cruikshanks Oval. An alternative access option is via Johnston Street East. KCGM will work with the City of Kalgoorlie-Boulder and Main Roads WA regarding this modification to ensure all design requirements are met.

No additional transportation along other public access roads is expected for this project. Haul trucks and other mining equipment will be confined to operate on existing or new internal roadways within the mining operation.

3.7 Housing and Accommodation

KCGM employees will continue to reside in the City of Kalgoorlie-Boulder. The City has adequate provision to house any temporary or short-term employees or contractors who may be involved in this project.

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Land Clearing

Approximately 38 hectares of land will be disturbed for the relocation of the Environmental Noise Bund. Land clearing within the Project area will be undertaken on historically disturbed land that has been rehabilitated by KCGM. There is a network of access tracks throughout the area that adds to the level of disturbance. Every effort will be made to ensure land clearing is minimised with any topsoil material stockpiled for use in rehabilitation.

4.2 Water Use and Management

No local water resource will be impacted by the project. Mobile water trucks using non-potable water will be used to control dust generation. In rehabilitation areas potable water will be used. It is recognised that potable water is a scarce commodity in the Kalgoorlie goldfields and water management will continue to be an area of prime importance. Where appropriate, a dust-binding agent will be used to reduce water consumption for dust suppression.

4.3 Flora and Fauna

The vegetation in the project area has relatively low conservation significance as the area has been historically disturbed by mining activities and rehabilitated, as part of KCGM's "Greening the Golden Mile" rehabilitation program. There have been no threatened or rare flora or fauna identified from surveys conducted since 1994 and none are known to exist in the project area.

The potential for the introduction of weed species on cleared and disturbed areas will be minimised by commencing rehabilitation of the Environmental Noise Bund as soon as is practicable after construction is complete. Weed eradication by spraying will be conducted as necessary, primarily on areas of high density or where weeds are affecting the colonisation or survival of native species.

The Environmental Noise Bund will be rehabilitated as soon as is practicable once the bund is constructed (Refer to Section 4.9). The bund will be constructed to be water harvesting and shaped to reduce erosion on the batter slopes.

4.4 Waste Products

There will be no change to the generation or management of domestic and industrial waste from this project. All domestic and industrial waste will be disposed or recycled as per current waste management procedures. Mobile equipment will report back to the KCGM fuel farm or workshops for servicing and maintenance works.

The Environmental Noise Bund will primarily be constructed with waste rock material from the existing Environmental Noise Bund, or sourced from Croesus Waste Dump adjacent to the project area. The final construction phase may use waste sourced from the Fimiston Open Pit.

No potential acid generating material will be placed within the Environmental Noise Bund. Potential acid generating material is limited to less than 1% of the total waste rock still to be removed from mining the Fimiston Open Pit. All potentially acid generating material is strategically placed within the existing waste rock dumps to ensure it is confined and can be buffered against non-acid generating material.

4.4.1 Greenhouse Gas Emissions

An opportunity to minimise energy use (for hauling material) and greenhouse gas emissions during construction of the Environmental Noise Bund has been identified by accessing waste rock from the existing Environmental Noise Bund and the nearby Croesus Waste Rock Dump.

A secondary greenhouse benefit will also be achieved for the long-term waste rock dumping plans through utilisation of the Croesus Waste Rock Dump for future dumping. This will enable some trucking haul routes to be shortened thereby saving fuel and reducing greenhouse-gas emissions.

4.5 Dangerous Goods and Hazardous Substances

It is envisaged that no dangerous goods or hazardous substances will need to be transported across, stored or handled in this project area.

4.6 Dust

All contractors and staff involved with the construction of the Environmental Noise Bund will be required to undertake an induction. The induction (Appendix 1) details the measures to be undertaken by KCGM to minimise dust generation. The induction also outlines the procedure for KCGM to respond to any contact with the public inquiry line or directly from the community.

KCGM has a dust monitoring and management programme in place to ensure that the impact on residential areas is minimised (Appendix 2). Operational management is undertaken on a day-to-day basis based on forecasts from the Bureau of Meteorology and real-time measured wind conditions. During unfavourable weather conditions (if the wind will blow dust into residential areas) construction of the Environmental Noise Bund will not be undertaken.

Dust management practices will include:

- Active monitoring of current and forecast wind conditions.
- Stopping work if the wind data indicates dust may travel into residential areas.
- Water trucks and water cannons used in areas that could produce dust. Fresh water will be used on areas to be rehabilitated.
- Visual inspections will be made for dust formation on a regular basis.
- Additional dust control measures (i.e. the use of a dust binding agent) or a suspension of activity may result from inspections or public feedback.

These dust management practices have been successful in minimising any potential dust impacts on the nearby community during the construction of the southern extension of the Environmental Noise Bund which commenced in August 2004.

The management programmes described above should ensure that there are no cumulative impacts from dust from the existing operation and dust generated through this project. High volume dust samplers currently in place to monitor ambient dust levels will operate during the course of the project.

4.7 Noise

The existing environmental noise bund which runs along the western edge of the KCGM open pit operation helps in shielding residential areas from mine noise. This bund was originally established in 1993/4 and has periodically been extended and improved by KCGM. The Noise Bund has been effective in lowering noise levels from the operation, thus reducing adverse impacts on the local community.

A noise impact assessment was undertaken by Herring Storer Acoustics in June 2005 to determine potential noise impacts for the construction of the realigned Environmental Noise Bund. The report also examined the potential effectiveness of the 20m high bund for the reduction of noise from mining the Golden Pike Cutback should this project proceed. A full copy of this report is provided in Appendix 3.

4.7.1 Noise Bund Construction

The Environmental Noise Bund construction is considered as a "construction site" and therefore, in accordance with Regulation 13 of the *Environmental Protection (Noise) Regulations 1997*, the Assigned Noise Levels of Regulation 7 will not apply between 0700hrs and 1900hrs on any day which is not a Sunday or Public Holiday. Noise management under Regulation 13 also requires that the machinery used for the construction is the quietest reasonably available and that affected residences be advised if work is essential outside of the designated hours.

Demonstrated by past experience, noise generated during construction of the Noise Bund will be effectively managed, in accordance with KCGM's *Revised Noise and Vibration Monitoring and Management Programme June 2004*, a copy of which is provided in Appendix 2. Under this programme KCGM's management commitments include:

- Ensure the quietest equipment available is used on site.
- Endeavour to fit all mobile equipment with "smart alarms".
- Restrict the use of equipment for the environmental noise bund construction phase to the hours of 7am to 7pm Monday to Saturday and not on Sunday or public holidays.
- Ensure that all contractors and staff involved with this project undertake a site-specific induction to raise awareness.
- Undertake continued consultation with stakeholders to determine the success of the noise management practices.

Monitoring of noise levels will be undertaken using the existing environmental noise loggers.

4.7.2 Noise Bund Effectiveness

Modelling results of the proposed Golden Pike mining operations on existing ground levels, with a 20m high noise bund between the mining operations and the residential areas, showed that noise levels are in the range of 50 – 55 dB(A). These modelled noise levels are generally consistent with noise levels currently monitored and so no significant change in the noise environment is expected.

It is also relevant to note that the noise modelling results are for all the equipment on the inventory provided by KCGM operating simultaneously, and for wind from all directions at the same time and therefore can be considered to be the "worst case" scenario. Based on this it is expected that any variations would be less than the modelled results dependant on the wind direction and the number of items of machinery operating.

The acoustic assessment concluded that noise levels from the mining operations of the Golden Pike Cutback, should it proceed, will be reduced as the ground levels of mining operations become lower and the additional barrier of the pit itself also assists to reduce noise levels. A series of noise contour plots are provided within the full report in Appendix 3 to illustrate the change in the noise levels with the progression of mining.

The Environmental Noise Bund has been a key part of KCGM's noise management programme since it was first established in the early 1990's. The effectiveness of the original Environmental Noise Bund, especially for surface mining operations, was clearly demonstrated through modelling (Figure 11). Since its establishment there have been a number of modifications and extensions to the Environmental Noise Bund (Figure 3).

KCGM believes that the realigned Environmental Noise Bund together with the continued implementation of the *Noise and Vibration Monitoring and Management Programme* will be effective in minimising noise impacts on the local community.

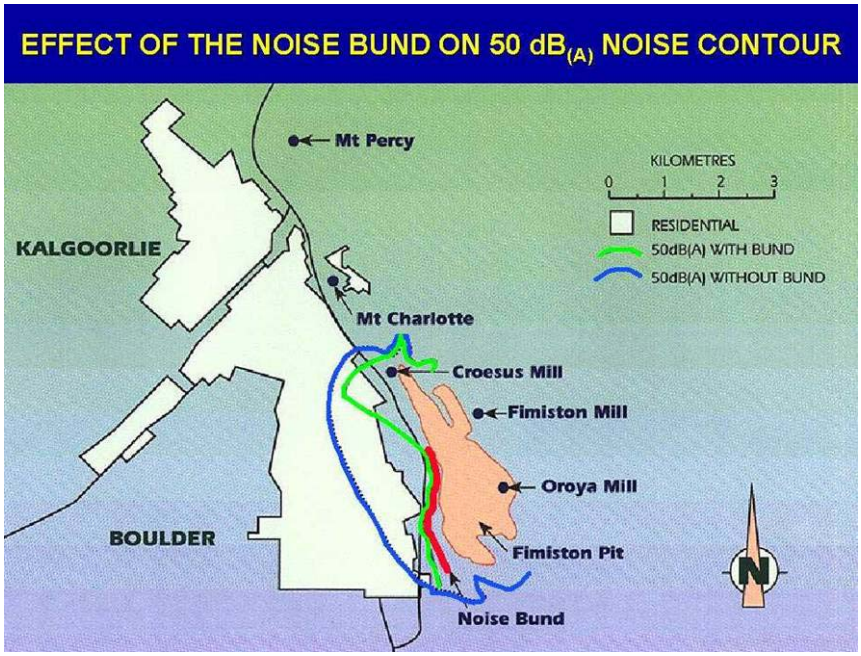

Figure 11
Original Noise Bund and the Impact on the 50dB(A) Contour

4.8 Vibration

The largest equipment to be used on the project is haul trucks and any vibration from haulage activity will be negligible. Although large in appearance and carrying capacity, wheel loadings for the haul trucks are similar to those for road trains currently using public roads, such as the Eastern Bypass Road through the South Boulder area. This is supported by the fact that in the past three years KCGM haul trucks have received permits from Main Roads WA enabling them to be driven from the KCGM site along the Eastern Bypass Road and down Hannan Street (the centre of Kalgoorlie) for the annual St Barbara's Mining Festival street parade.

The material flow from a haul truck as the tray is lifted is slow and vibration from this activity will also be negligible. The planned construction activity will occur at distances greater than 100-metres from properties not owned by KCGM in the Johnston Street East light industrial area and over unconsolidated materials (natural surface and waste rock). The distance and nature of the materials would serve to rapidly reduce any vibrations (if they were to occur).

4.9 Rehabilitation

This section provides a description of the proposed rehabilitation programme for the Environmental Noise Bund. The intended outcome is the successful establishment of native vegetation that will remain self sustaining and viable for the long-term. Figure 12 shows rehabilitation on the existing noise bund.

The Environmental Noise Bund and Loopline foundation will be constructed in four phases which have been designed to allow for progressive rehabilitation on the western slope as each phase is completed.

4.9.1 Design and Construction

Waste rock will be sourced from the Croesus Waste Dump to construct the first phase of the bund and oxide material is also available from waste dump and will be used as required for rehabilitation. The material for the second and third phases will be sourced from the northern end of the existing Environmental Noise Bund, rather than from the Croesus Waste Dump. The fourth phase will be constructed using waste rock from the Fimiston Open Pit operations.

The control of erosion and water run off on the noise bund is an important factor in rehabilitation. The design of the noise bund is to capture water rather than release and water management strategies are incorporated into the design. These design structures not only provide effective water management but harvest and hold water as run on areas which will subsequently benefit vegetation growth.

The water management strategies will include (but not be limited to):

- The slopes battered and angled to 20º.
- Ripping to a nominal depth of 1 m. Winged tynes will create deep rip lines along the contour to enhance soil mounding and permeability. Contour ripping also helps to control runoff and maintain moisture.
- Rock armouring of embankments. Deep ripping will also intermix the growth medium with rocks to provide stability for vegetative growth and minimise any erosion and run off that may occur from heavy rainfall.
- A berm will be installed where possible to “break” the slope when the bund is more than 15 m vertical in height. These will be back sloping to control run off and promote infiltration.
- Installation of bunds on flat areas and on berms (perpendicular to the contour to compartmentalise the berm) to promote water storage and infiltration (if required).

4.9.2 Topsoil Management

The management and replacement of topsoil onto rehabilitation areas is important for successful revegetation. While the integrity of topsoil is best retained through immediate respreading this is not always possible given construction and progressive rehabilitation schedules.

Topsoil will be reclaimed from the footprint area of the proposed Environmental Noise Bund and from the existing noise bund in front of advancing construction, these areas have been historically rehabilitated and the existing revegetation suggests that the material will be a suitable growth medium.

Available topsoil (or any other suitable growth media) will be reclaimed in accordance with the following practices:

- Topsoil will be removed from areas to an approximate depth of 300 millimetres (depth may vary and all suitable growth material will be removed as appropriate);
- Potable water will be utilised for dust suppression during topsoil removal to prevent potential salt contamination.
- Topsoil stockpiles will be limited to 2 meters high and located in close proximity to minimise rehandling or storage impacts on microflora.
- Removed revegetation may be mulched and placed over the stockpile to assist with stabilisation, control erosion and reduce potential dust emissions.

This material will be used as soon as practicable during rehabilitation of the Environmental Noise Bund. Oxide will be sourced from the Croesus Waste Rock Dump and used with any available topsoil stockpiled during the initial land clearing.

The battered surface will be covered with approximately 150mm of subsoil and topsoil materials (30-40% topsoil 60-70% oxide) in order to provide a growth medium for revegetation.

4.9.3 Revegetation

A native seed mix will be spread over the rehabilitation areas. The seeding rate will be 10 kg/ha and may be supplemented by application of a fertiliser. The slopes of the project area will support Eucalypt/Acacia open woodland and Acacia shrubland. The flat areas at the toe of this landform will be revegetated to Eucalypt/Chenopod open woodland, typical of the Kalgoorlie region.

The specific selection of species to be included in the seed mix will be based on the availability of local seed at the time of rehabilitation. All seed that is collected for use in rehabilitation is tested for viability by specialist contractors. Seeds are cleaned and free of debris and as appropriate may be treated by exposure to smoked water or mechanical scarification for hard coated seeds to encourage germination.

Hand seeding is presently the main method for seed broadcasting and seeding is undertaken to take advantage of seasonal weather patterns such as rainfall events to maximise growth.

Tree seedlings will also be hand planted in target areas where water ponding is likely for example, flat areas such as the base of slopes, areas of change in slope angle, contour banks and crest and toe drains. KCGM will also consider reticulation to the trees to assist with their establishment. Reticulation is only used for a short period after which watering is progressively reduced to limit the reliance on reticulated water supply.

4.9.4 Monitoring

Monitoring is used to measure the performance of the rehabilitation and enables continuous improvement of practices utilised on site.

KCGM uses Landscape Function Analysis (LFA) to monitor the progress and success of rehabilitation. This method incorporates links between vegetation structure and soil function. LFA relies upon comparisons with analogue sites which have similar shaped landforms. Analogue sites are within a 50km radius of KCGM.

Traditional botanical methods of monitoring rehabilitated areas are applied at the same time as LFA such as Point Centred Quadrats. This method reveals results such as species richness, diversity, and percentage canopy cover.

Visual inspections of landforms are carried out as part of the monitoring regime to ensure that they are maintained in original form and structure and that no rills or flaws are occurring. If identified, remedial works are carried out as soon as practicable.

Figure 12
Noise Bund Rehabilitation

4.10 Post-Mining Landuse

The partnership between KCGM and the Loopline Railway Society provides an opportunity to develop a tourism legacy that will remain long after the closure of the KCGM operation. The Super Pit Lookout and section of the Loopline Railway atop the realigned Environmental Noise Bund has the potential to become a significant tourist attraction for the City of Kalgoorlie-Boulder.

The Super Pit Tourist Lookout is already a major tourist attraction for the Goldfields with approximately 10,000 visitors per month. It provides visitors with information on KCGM and increases awareness of the KCGM operation and the mining industry as a whole. KCGM has been publicly acknowledged for its commitment to tourism, and was the grateful recipient of the Kalgoorlie-Boulder's Chamber of Commerce & Industry's Tourism Award in 2004.

The Environmental Noise Bund will also be a highly visible area that will be a visual display of mine-site rehabilitation. A Closure Strategy is currently being developed which will provide the basis for the development of detailed Closure Plans for KCGM's operations. Closure Plans including post-mining landuse will be developed in consultation with key stakeholders including regulatory authorities and community.

5 SOCIAL IMPACTS

5.1 Heritage

The Loopline Railway is an important element of mining heritage along Kalgoorlie-Boulder's Golden Mile. At its height, the Loopline serviced all the mines and their associated townsites on the Golden Mile. The railway was a vibrant commuter service for the mining community of Boulder. The advent of consolidated open pit mining saw this original route incorporated in the mining operations.

In June 2001, the significance of the Loopline was formally recognised by being entered in the Register of Heritage Places on a permanent basis under the *Heritage of Western Australia Act 1990.* The Loopline Society has already been the recipient of a $1M donation from KCGM towards its relocation. KCGM is committed to realising the re-establishment of the Loopline Railway to ensure ongoing tourism development, and the continuation of an important part of Kalgoorlie-Boulder heritage.

The realignment of the Environmental Noise Bund has provided a unique opportunity for the Loopline Society. Creating an access for the Loopline Railway to run along part of the top of the noise bund will provide patrons with expansive views of the City of Kalgoorlie-Boulder and the KCGM operations and access to the relocated Super Pit Lookout. This tourism combination will enhance the experience of visitors and become a tourist legacy for the City of Kalgoorlie-Boulder.

5.2 Aboriginal Sites

An ethnographic survey was undertaken in 1989 in conjunction with the Aboriginal Site Survey undertaken by O'Connor and Quartermaine (1989) for the original CER for the KCGM operation. Additional surveys have been conducted by O'Connor in 2000, 2001 and 2004. The survey areas covered by these studies encompass the expansion area proposed by this Project.

Aboriginal people from Coolgardie, Kalgoorlie, and Coonana, who have long term associations with the region, were consulted, and local elders who have detailed knowledge of the region's totemic geography visited the survey area.

Eight sites of ethnographic significance have been identified during surveys. Of these sites the Murantjara site is the closest to the project area and is adjacent to the toe of the Croesus Waste Rock Dump. KCGM will ensure that that this site is managed in accordance with the provisions of the *Aboriginal Heritage Act 1972.*

An archaeological survey was undertaken by O'Connor and Quartermaine in 1989 to locate and record archaeological sites within the survey area and to research historically recorded Aboriginal sites. Additional surveys have been conducted by Quartermaine in 2000 and McGann in 2001. The survey areas covered by these studies encompass the area proposed by this Project. No archaeological sites were located within the survey area; however seven isolated finds were recorded.

KCGM have recently met with officers of the Department of Indigenous Affairs (DIA) with a view to establishing a site wide management plan for the protection and respect of aboriginal ethnographic and archaeological sites within the immediate vicinity of KCGM operations. KCGM will ensure that that these sites are managed in accordance with the provisions of the *Aboriginal Heritage Act* 1972 and to the standards set by the DIA.

5.3 Community Consultation

KCGM is undertaking extensive consultation with key stakeholders and the wider community for the Fimiston Operations Expansion as a whole which includes this Stage 1 Realignment of the Environmental Noise Bund and Loopline Railway Access (Appendix 4). KCGM has also developed a comprehensive communication plan in line with DoE guidelines.

5.3.1 Consultative Framework

KCGM utilises a number of ongoing mechanisms that facilitate stakeholder consultation, and effectively capture community feedback. These are outlined in Table 2.

Table 2
Mechanisms for Stakeholder Consultation

TOOLS	DESCRIPTION
Public Inquiry Line	KCGM has a 24 hour, 7 day a week Public Inquiry Line (PIL) which is available to record stakeholders' queries and track responses.
Community Reference Group	A self-selected group of local community members and invited guests from the DoE and DoIR. Meets monthly to discuss current KCGM planning and feedback from the community.
Super Pit Website	KCGM publishes project plans and reports on the Super Pit website which also has a feedback mechanism direct to the PR Coordinator. Web, phone and personal feedback is incorporated into PIL reporting.
The Dirt (Internal Newsletter)	A bi-monthly employee/contractor newsletter which is also posted on the Super Pit website. Major issues are captured and reported both internally and externally.
News & Views	Public Quarterly publication distributed to all Kalgoorlie-Boulder households (13,000 copies)
Presentations	"What's Down the Track" graphically illustrates the current vision for KCGM's future, including the proposed final pit shell. This presentation has been also updated for targeted audience issues.
Direct Letter Drops	KCGM has a round of near neighbour routes for blast notification, which can also be utilised for direct communications. This is in addition to identified target stakeholder groups.
Super Pit Shop	The KCGM Super Pit Shop operates as a public shopfront for queries on future approvals (open 9am-5pm Monday to Friday).
Information Sessions	With the opening of a public shopfront, KCGM has the opportunity to conduct information sessions as needed on issues as, and if, they arise.
Surveys	KCGM sponsored a poll telephone survey of the local community to discover any environmental concerns with the operation. Web based surveys are utilised to get opinion from employees and key stakeholder groups on an as needs basis. Door to door or postal surveys are conducted on an as needs basis. Surveys at displays or open days may also be conducted.
Media	KCGM coordinates with the local media (radio and newspaper) as a means of consultation to the wider community on future plans.

5.3.2 Stakeholder Consultation Undertaken

In December 2004, KCGM developed and launched the "KCGM Concept Plan" which outlined the process and vision for achieving what is expected to be the final pit outline in 2017. This also outlined the requirement for this Environmental Noise Bund Realignment. Earlier in the year, KCGM undertook a comprehensive Social Impact Assessment in 2004, the results of which are available on the super pit website: www.superpit.com.au.
To date KCGM has completed the following consultation regarding project approvals:

- Presentation at the Mine Expo "What's Down the Track" Forum – Oct 04.
- Attitudinal Phone Survey on KCGM - Dec 04.
- KCGM Super Pit Shop opened – Dec 04.
- Release of the KCGM Concept Plan - Dec 04.
    - With approximately 680 downloads from the KCGM website.
- Key stakeholder interviews with SEZ near neighbours - Mar/Apr 05.
- Concept Plan mail out to project near neighbours (approx 350) – Mar 05.
    - 23 completed questionnaires received to date (12 neutral, 8 negative, 3 positive). Many responses relate to the existing operation.
- Project Definition Document Released - Apr 05.
    - With approximately 1,600 downloads from the KCGM website.
- KCGM Approvals Displays and Information
    - Australian Gold Council National Mine Open Day at KCGM - Apr 05.
    - Australian Miners and Prospectors Hall of Fame Open Day - May 05.
    - Chamber of Minerals and Energy Mine Open Day at KCGM – Oct 05.
- "News & Views" Newsletter to Kalgoorlie-Boulder households (approx 10,000)
    - Issue 1 – Fimiston TSFs Article – Dec 04.
    - Issue 2 – Approvals Article – June 05.
- The Dirt Newsletter
    - Issue 18 Approvals Update – July 05.
    - Issue 19 Noise Bund Update – Sept 05.
- Discussion at quarterly Community Reference Group meetings.
- Presentation at the Mine Expo "What's Down the Track" Forum – Oct 05.
- Consultation with the Loopline Tourist Railway Committee.

KCGM has also coordinated with the local media as a means of consultation to the wider community on the future plans. Media reporting that has been undertaken includes:

- Kalgoorlie Miner *"KCGM looks to go under Super Pit"* - 22 Oct 04
- *6KG Radio Interview "Concept Plans available at Super Pit Shop*" - 23 Dec 04
- Kalgoorlie Miner *"Super Pit Plans to 2017"* - 4 Jan 05
- *6KG Radio Interview "Concept Plans available at Super Pit Shop"* - 13 Jan 05
- Golden Mail *"KCGM Releases Concept Plan"* - 14 Jan 05
- Kalgoorlie Miner *"Kaltails an Option : KCGM"* - 6 May 05
- Kalgoorlie Miner *"Loopline Delay"* - 14 May 05
- Kalgoorlie Miner Special Mining Feature *"KCGM From Strength to Strength"* - 14 May 05
- Kalgoorlie Miner *"Loopline No Closer to Re-Opening"* – 27 Aug 05.
- Kalgoorlie Miner Advertisement *"Noise Bund and Loopline"* – 27 Sept 05.

Consultation is also being undertaken with key Government Agencies. The Project Approvals Co-ordination Unit assists with the co-ordination and facilitation of these meetings.

Specific consultation for this project included:

- A draft of this Plan was made available to key stakeholders for a 3 week review period.
  - Key stakeholders were notified via a letter drop and advertisements;
  - Copies were available for review at the DoE and Local Library;
  - Copies were made available via the KCGM Super Pit Shop and web site; and
  - KCGM employees were invited to provide feedback.

Approximately 350 near neighbours (Figure 13) were notified via letter drop which included a summary of the project (Appendix 4). Four responses were received regarding this project plan. A summary of issues raised and KCGM's responses are shown in Table 3. The stakeholder feedback and KCGM's responses was discussed with the KCGM Community Reference Group (CRG) on 27 Oct 05. Table 3 also includes the CRG comment regarding KCGM's responses.

This consultation process has begun prior to project commencement and will continue throughout the life of the project to key stakeholders. The KCGM Public Inquiry Line is available 24 hrs, 7 days, and additional feedback regarding this project will be acted upon should the need arise during the Project.

Figure 13
Key Stakeholders

Table 3
Stakeholder Feedback and KCGM Response

Stakeholder Feedback	KCGM Response	CRG Comment
Stakeholder 1		
I bring to your attention the appearance of the current noise bund (again). The revegetation has been at best 20% successful. Can KCGM re-seed it (some trees would be good) as part of the proposed programme? With the mine life at this point terminating in 12 years it would be good to see a green vegetation belt along the Bypass Road at that point in time.	Following our initial discussions with you regarding the appearance of the small noise bunds constructed as part of the Bypass Road realignment, some work has been undertaken. This has included earthworks to remove soil stock piles, removal of old concrete foundations and general clean up and rubbish removal. The bunds which are located on the Main Roads reserve are not under the direct control of KCGM. However, KCGM has had initial discussions with both Main Roads and the City of Kalgoorlie-Boulder regarding a co-operative agreement to undertake further rehabilitation work in this area. A rehabilitation plan is currently being developed and we hope to discuss this with you and other nearby stakeholders in the near future.	Supported
Stakeholder 2		
As we will still be in town when all is finished has a plan been drawn up for the noise bund area. My wife and others think that this area can be transformed to become the Kings Park of Kalgoorlie Boulder. Think of it with a purpose design with planned road access, facilities, plantings of trees and shrubs from area and signed with what part they had in the beginning of the golden mile. It could even become our War memorial area etc.	At this stage rehabilitation of the environmental noise bund will be undertaken as part of our normal works. However as part of the approval process for the Golden Pike Cutback and additional waste rock dumps and tailings storage KCGM will be developing a Mine Closure Strategy to inform stakeholders of KCGM's commitment and framework for planning for and undertaking closure activities of its operations in and around Kalgoorlie-Boulder. Community consultation will play a major role in the formulation of closure plans to determine the community's expectations with regards to the decommissioning, rehabilitation and closure of KCGM's operations. Your initial feedback will be considered as part of the development of our closure plans, and we would encourage you to become involved in the future development of the mine closure plans.	Supported

Stakeholder Feedback	KCGM Response	CRG Comment
Stakeholder 3		
We wish to object most strongly to any western cutback of the Fimiston Open Pit because of continuing damage to our home. We have corresponded previously with your company with our complaints in 1995 and 2000 (further details provided in letter). The deterioration to our home continues and we are understandably concerned and upset at the deterioration of our main asset in retirement. No responsibility is apparently accepted by your company for the destruction of property. After a lifetime spent in Boulder we have been accepting of the mining industry but now draw the line when any proposed cutback will only accelerate the deterioration of our property. We do not agree to any realignment of the noise bund or any western cutback of the Fimiston Open Pit.	KCGM's most recent records indicate that feedback was received from you regarding property damage on 11 June 99 and 24 August 00 with property inspections carried out by KCGM on 23 June 99 and 15 September 00. KCGM was unaware of your continuing concerns until your recent correspondence. We would like to meet with you to discuss your concerns regarding property damage, and there is also the opportunity for an assessment by an expert structural engineer. If you agree to an expert inspection, the findings could assist in determining a way forward.	Supported
Stakeholder 4		
GREEN BELT ZONE Presently there is a green belt zone between the Environmental Noise Bund and Boulder residences and businesses. It would appear on the Proposed Site Plan that the present green belt zone is going to be cleared and the proposed Environmental Noise Bund is going to be built very close to the fence line which borders the Eastern Bypass Road. What environmental approvals have been given for the complete clearance of the present green belt zone? Where is the new green belt zone going to be planted given that on the Proposed Site Plan there doesn't appear to be any room for one? Is there a requirement by the Department of Environment for a green belt zone as part of the approvals process? In the past, green belt zones have been planted for reasons of dust and, noise pollution suppression along with rehabilitation and beautification especially near residential areas. Are these reasons no longer valid? Is the green belt zone going to be planted on the west side of the Eastern Bypass Road? How is it going to work and where is it going to be planted? Is there going to be a green belt zone at all?	The green belt was established by KCGM as part of the "Greening the Golden Mile" progressive rehabilitation programme. Areas of this rehabilitation will be removed as part of the environmental noise bund construction but where possible clearing will be kept to a minimum. Approval for clearing sections of this rehabilitation is part of the project plan. Re-establishment of rehabilitation on the Environmental Noise Bund will form part of the green belt between the mining operation and the City of Kalgoorlie-Boulder. KCGM is currently developing a rehabilitation plan for the small noise bunds established on the western side of the Bypass Road. We aim to discuss this plan with nearby stakeholders in the near future. The small noise bunds constructed as part of the Bypass Road are located on the Main Roads reserve which is not under the direct control of KCGM. KCGM has had initial discussions with both the Main Roads and City of Kalgoorlie-Boulder regarding a co-operative agreement to undertake further rehabilitation work in this area.	Supported

Stakeholder Feedback	KCGM Response	CRG Comment
PROPOSED ENVIRONMENTAL NOISE BUND During construction of the above, large amounts of waste rock/blue rock will be exposed. The generation of reflected heat onto the Eastern Bypass Road and nearby residences and businesses could become uncomfortable. Given that during summer the sun has a long period of time during the afternoon coming in from the west how long will it take for topsoil to be placed on top of the waste rock/blue rock? When will revegetation take place? As trees struggle to grow on waste rock what alternative vegetation can be planted on the proposed Environmental Noise Bund that will make it look attractive as it is so close to Boulder? Will the revegetation process involve reticulation of same sort?	The Environmental Noise Bund realignment has been designed to allow for progressive rehabilitation as construction of each stage is completed. It is hoped that each stage can be completed in 6 months but it is difficult to place an exact time frame as construction may be delayed depending on wind conditions. Growth medium (soil) stockpiled for the project will be spread over the waste rock and the area will be seeded using a native seed mix. The specific selection of species to be included in the seed mix will be based on the availability of local seed at the time of rehabilitation. Trees will also be hand planted in target areas where water ponding is likely. KCGM will also consider reticulation of trees to assist with their establishment. Reticulation is only used for a short period after which watering is progressively reduced to reduce the reliance on reticulated water supply. This method has been successfully used at Mt Percy which can be seen from the rear of the Australian Miners and Prospectors Hall of Fame.	Supported
LOOPLINE RAILWAY ACCESS It is proposed to place the railway line on part of the top of the proposed Environmental Noise Bund. What about the privacy of nearby residences and businesses? With the train so far up in the air passengers will have unlimited views into yards and possibly homes. How will the proposed Environmental Noise Bund be constructed to enable the train to safely travel along it without any subsidence or movement of the waste rock/blue rock under the railway line given that blasting will be occurring nearby? Will it be safe?	It is not expected that the privacy of nearby residences and business will affected by the Loopline travelling along the top of the noise bund. Residential properties are located more than 250 meters from the area where the Loopline will be at the top of the noise bund and views are likely to be restricted by fencing, trees and other infrastructure. Nearby businesses consist primarily of large sheds so privacy will not change, many also have ring lock fencing which does not restrict privacy even from the roadside. The Loopline Railway access ramp will be constructed to meet engineering compaction requirements to ensure the long-term stability of the material. KCGM and the Loopline will work with the Office of Rail Safety to ensure that the construction meets necessary standards. The Loopline ramp includes room for a vehicle access track that can be used for routine inspections of the ramp following blasting as part of the Rail Safety Management Plan that will be developed by the Loopline.	Supported

Stakeholder Feedback	KCGM Response	CRG Comment
MONITORING EQUIPMENT (NOISE AND DUST) The hours of construction of the proposed Environmental Noise Bund have been listed in the Community Update as being 7.00am - 7.00pm Monday to Saturday (no Sundays or Public Holidays). How many monitoring stations will be operational at all times? Who will monitor the results and maintain the monitoring stations? Will the results be independently evaluated? Are the dust particles going to be analysed for pollutants such as heavy metals or asbestos for example? Will monitoring take place for the complete twelve hours of operation everyday?	Three dust monitors are currently used to monitor potential dust from blasting and are operated on days when blasting occurs from 9am to 6pm. KCGM intends to utilise these dust monitors for the noise bund construction project. The monitors will therefore be operated on days when blasting occurs and/or days when construction occurs from 7am to 7pm which may not be every day. KCGM is responsible for the operation; calibration and maintenance of the dust monitors and dust monitoring results are reported to the Department of Environment (DoE). KCGM is currently engaging a consultant to undertake a dust study as part of the Golden Pike Cutback approval process which will include analysis of dust samples.	Supported
PUBLIC SAFETY DURING CONSTRUCTION Due to the fact that the proposed Environmental Noise Bund is going to be constructed so closely to the Eastern Bypass Road will passing traffic and the public be safe at all times? Is there any possibility of construction material landing outside the fence line?	Construction areas in closest proximity to the Bypass Road are for Phase B of the Loopline Railway Access ramp. Construction of this access area will be undertaken in a series of compacted lifts which reduces the potential for any construction material landing outside the fence line. All appropriate safety precautions will be implemented for this project to ensure public safety.	Supported
FEEDBACK TIMEFRAME The invitation for feedback by the public was typed on the 23 September 2005. I did not receive it until 27 September 2005. The deadline for feedback is Friday 14 October 2005 which only gives me 18 days to comment. A period of at least 21 days for comment would be appreciated. The calling for feedback during school holidays is difficult for families that go away as it reduces their chance to respond within the time-frame given.	Our public consultation for this project was aimed to be 3 weeks however the public holiday on 26 September meant a delay in mail delivery. Therefore the consultation period commenced on 27 September 05 which is the date that it was advertised in the Kalgoorlie Miner. Consultation letters were posted on the 23 September 05 so that they would be received by stakeholders on the 27 September, the day the consultation period commenced. We note your concern regarding consultation during school holidays and the potential for reducing the time frame for response. KCGM is happy to discuss any difficulties stakeholders may have meeting the time frame and extend this as required. This was recently done for consultation on the Seepage and Groundwater Management Plan which was released for a period of 3 weeks and was extended to 4.5 weeks following a request via the DoE.	Supported

5.4 Social Environment

KCGM has a workforce of about 700 people including contractors and is an important part of the economic and social fabric of the City of Kalgoorlie-Boulder. In 2004 alone more than $255 million was contributed into the local economy through wages and Kalgoorlie-Boulder based suppliers. KCGM operations are also important to the Local, State and National economy; in 2004 more than $12 million was paid in royalties and $4.6 million in other taxes. This project forms part of the bigger Fimiston Extension proposal (requiring further approval) to extend the estimated mine life by around 5 years and therefore extending the economic and social inputs into the City of Kalgoorlie-Boulder and State of Western Australia.

The KCGM Super Pit is a major tourist attraction and the company intends to build on this with the Loopline Tourist Railway. The KCGM Super Pit Tourist Lookout is located on the western side of the Fimiston Open Pit and has approximately 10,000 visitors per month. It provides visitors with information on KCGM and increases awareness of the KCGM operation and the mining industry as a whole.

The realignment of the Environmental Noise Bund has provided a unique opportunity for the Loopline Society by creating an access for the Loopline Railway to run along part of the top of the noise bund. This will provide patrons with expansive views of the City of Kalgoorlie-Boulder and the KCGM operations and access to the relocated Super Pit Lookout. This tourism combination will enhance the experience of visitors and become a tourist legacy for the City of Kalgoorlie-Boulder.

5.5 Workforce Induction and Training

All employees and contractors involved with the construction of the Environmental Noise Bund will undertake a specific induction (Appendix 1). The induction will make personnel aware of the management practices designed to minimise impacts on the environment and community from the project.

6 COMMITMENTS BY KCGM

This section contains commitments KCGM makes for this project (6.1) and appraises relevant Ministerial Conditions and Commitments (6.2) from the Consultative Environmental Review-Fimiston Mine and Waste Dumps (August 1990).

In the undertaking of this project KCGM will comply with all relevant mining and environmental statutes including:

- New commitments made in this document;
- Existing mining lease conditions;
- Existing environmental Ministerial Conditions and Commitments; and
- Any new conditions imposed.

6.1 Commitments for this Project

Table 4
Commitments by KCGM for the Environmental Noise Bund Realignment

Commitment	Objective	Action	Timing	Audit verification
1. KCGM will **rehabilitate** and make safe areas involved in this operation	To maintain an adequate level of safety and to improve the site's environmental quality and amenity	Rainfall will be managed by preparing rehabilitation sites so as to encourage water harvesting and infiltration	During and after completion	KCGM Annual Environment Report (AER) will document status
		Potable water will be used on all final rehabilitation faces if needed for dust suppression	During works	By inspection
2. KCGM will minimise the production of **dust**	To ensure that the amenity of residential and business areas is not unduly affected by dust from the project	Water trucks and water cannons will water areas that could form dust. Dust binding agents will also be used (if required)	Tool box meetings by KCGM site supervisor and contractors, planning and maintaining work areas and responding to changing conditions	By inspection
		During potential periods of dust formation, visual checks will be made on a regular basis by supervisors	During works	By inspection
		The site superintendent shall take corrective actions to control dust levels in response to complaints or where dust levels may have an adverse effect	During works	By inspection or KCGM Public Inquiry Line
		Employees and contractors will receive formal induction and training covering procedures for dust control	During works	KCGM training records database
KCGM will monitor **dust** levels near the operation		A high-volume dust monitor will regularly monitor dust levels.	During Works	KCGM AER

Commitment	Objective	Action	Timing	Audit verification
3. KCGM will minimise **noise** production	To ensure the amenity of residential and business areas is not unduly affected by noise from the operations	KCGM will implement recommendations and suggested management techniques referred to in the Noise Assessment Report (Appendix 3 of this report and section 4.7)	During works	By Inspection and KCGM Public Inquiry Line
		Employees and contractors will receive formal induction and training covering procedures for noise control	During works	KCGM Training database
KCGM will monitor **noise** levels near the operations		Continual noise monitoring will be maintained via existing noise monitors.	During works	KCGM AER
4. KCGM will implement a **public consultation** and information program and respond to complaints, concerns or interest	To keep the public informed and to minimise inconvenience to neighbours	The KCGM "Public Inquiry Line" will be used to register and respond to complaints concerns and inquiries in accordance with the KCGM procedure	During works	KCGM Public Inquiry Line
		Information will be provided to interested parties and feedback sought	Prior to and during works	Copies of information provided
		Information articles will be published in local newspapers	During works	Copies of articles provided

6.2 Existing Ministerial Conditions and Commitments

Table 5 lists the Ministerial Conditions associated with the Consultative Environmental Review: Mine and Waste Dumps –Fimiston (1990) which are relevant to this Environmental Noise Bund Realignment and the associated commitments.

Table 5
Ministerial Statement 188 (Fimiston Mine and Waste Dumps)
Environmental Noise Bund Realignment

Number	Requirement	Document Reference
Ministerial Conditions		
M5	In order to ensure that there are no unacceptable detrimental effects from noise, vibration and dust from this project on the amenity of nearby residents, the proponent shall, within 6 months of the date of this statement (24 October 1991), prepare and subsequently implement a noise and vibration monitoring and management programme to the satisfaction of the Environmental Protection Authority and a dust monitoring and management programme to the satisfaction of the Environmental Protection Authority on advice from the Goldfields Dust Abatement Committee.	Noise, dust and vibration monitoring programmes implemented for the Fimiston Operations will continue. Refer to Appendix 2 in this document.
M6	Prior to the dumping of waste on the proposed north-east or south-east waste dumps within 500 metres of residences, the proponent shall prepare and implement a management plan for waste dumping to ensure that there is no unacceptable detrimental effect on the residents, to the satisfaction of the Minister for the Environment on advice from the Environmental Protection Authority.	Entire document.
M8	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. At least six months prior to decommissioning, the proponent shall prepare and subsequently implement a decommissioning and rehabilitation plan, to the satisfaction of the Department of Mines on advice from the Golden Mile Mining Development Planning Committee.	Refer to Section 3 and 4.9 in this document.

Proponent Commitments		
P1	KCGM will prepare and implement, by December 1992, an Environmental Management Programme (EMP) for all of its operations in agreement with the Environmental Protection Authority and the Department of Mines.	Entire document.
P2	KCGM undertakes to prepare annual reports of the Mining and Rehabilitation sub-programme of the broader Environmental Management Programme, as agreed with the Environmental Protection Authority and the Department of Mines.	KCGM Annual Environmental Report.
P4	KCGM will develop a surface drainage system incorporating sediment detention systems and a water quality monitoring programme. The results of the sampling will be included within the annual report and updated annually.	KCGM Annual Environmental Report.
P5	In association with the Goldfields Dust Abatement Committee and Kaltails, KCGM will install and support a Dust Monitoring Programme within the Kalgoorlie-Boulder area. The data obtained will be made available to the Environmental Protection Authority via the Goldfields Dust Abatement Committee.	Refer to Appendix 2 in this document.
P6	KCGM will undertake a programme of noise monitoring to ensure continued compliance with occupational health and public nuisance noise requirements. If considered necessary an ongoing monitoring strategy will be devised.	Refer to Appendix 2 in this document.
P7	KCGM will implement a progressive rehabilitation programme as outlined in Section 4.3 (Consultative Environmental Review Mine and Waste Dumps-Fimiston KCGM August 1990) as agreed with the Environmental Protection Authority in consultation with the Department on Mines.	KCGM Annual Environmental Report