



***KALGOORLIE – BOULDER***

***COMMUNITY ATTITUDES SURVEY***

***DECEMBER 2004***

***PREPARED FOR: KCGM***

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**Appendix A – Questionnaire**

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## **1.0 SUMMARY**

The executive overview is designed to provide a quick snap shot of the key issues to emerge from the survey. The executive summary runs through the survey results, giving summary results only. The full results may be found in the sections which follow.

### **1.1 MAIN LOCAL ENVIRONMENTAL ISSUES**

To tap into the residential mind set of the environmental issues that are effecting the target population, we had an unprompted opening question to simply establish what they regarded as being the main local environmental issues that impact on the way of life for them and their family. This showed that the key issues were:

- 17% dust,
- 14% “mine dust”,
- 14% smells,
- 10% “mine smells”,
- 4% mine noise at night,
- 2% mine noise in the day,
- 2% blasting, and
- 1% noise (general).

30% were unable to nominate any environmental issues that impact on their way of life, though 38% mentioned other issues which are still being processed.

At this stage, it appears that dust and mine dust (an accumulated score of 31%) followed by general smells and mine smells (24%) are the key environmental issues that impact on their way of life.

## 1.2 UNPROMPTED ORGANISATIONS THAT ARE IMPORTANT TO THE FUTURE PROSPERITY OF KALGOORLIE BOULDER

31% nominated KCGM as an organisation which is important to the future prosperity of Kalgoorlie Boulder. However, 63% mentioned a wide range of other mining companies, and the other issues mentioned were:

- 10% tourism,
- 5% environmental groups / rehab organisations,
- 4% volunteer groups (Rotary and Apex etc),
- 4% retailers,
- 4% the Health Department,
- 4% the local council,
- 3% transport / railway,
- 3% recreation and leisure industry / sporting,
- 3% support industries for the mines industry, and
- 3% the Chamber of Commerce.

## 1.3 ATTITUDES TOWARDS KCGM

Respondents were asked to agree or disagree with a series of statements about KCGM, and we found:

- 93% agree that KCGM is “important to the economic future of Kalgoorlie”.
- 78% agree that KCGM takes care to ensure “the environmental impact of its operations are minimised” (7% disagree).
- 76% agree that KCGM is “a good employer” (5% disagree, and 14% were unable to comment).
- 71% agree that KCGM has “improved communication with the community in recent times” (11% disagree and 12% were unable to comment).
- 68% agree that it is “a well managed organisation” (7% disagree and 18% were unable to comment).
- 67% agree that it is “open in its dealings with the community” (15% disagree and 9% were unable to comment).
- 63% agree that it “has a good environmental record” (13% disagree and 14% were unable to comment).
- 49% agree that it “deals fairly with the Aboriginal community” (7% disagree, 7% neither agree nor disagree and 37% were unable to comment).

## 1.4 UNPROMPTED “CURRENT ISSUES” INVOLVING KCGM

In an attempt to establish the extent to which the Tailings Dam issue was upper most in peoples minds, we asked respondents to nominate any “current issues they can think of that involve KCGM”. In response, we found:

- 6% referred specifically to the Fimiston Tailings issue,
- 4% referred to raising the Tailings Dam height,
- 7% referred to the environmental impact of the Tailings Dam, and
- 4% referred to the groundwater impact of the Tailings Dam.

Whilst there was some minor multiple response in this question, the responses can be effectively accumulated to arrive at 21% making mention of the Fimiston Tailings Dam and its impacts. 44% were unable to nominate any issue involving KCGM, and 48% made reference to some other issue unrelated to the Fimiston Tailings Dam.

## 1.5 THE MANAGEMENT OF THE TAILINGS DAM

Respondents were asked to indicate from what they “know or may have heard”, how well KCGM has managed the Tailings Dam over recent years. In response, we found:

- 52% believe that it has been managed at least quite well,
- 18% believe it has been managed neither poorly nor well,
- 10% believe that it has been managed poorly, and the residual were unable to comment.

Only 30% of respondents were able to nominate where the Fimiston Tailings Dam is located. 54% said they simply didn’t know and 16% nominated some site other than about 1.5km east of Kalgoorlie.

Moreover, 81% of respondents don’t know what KCGM wants to do with that site. Only 4% indicated that they were aware that KCGM wanted to raise the height from 30 to 40 metres, though 10% indicated that they wanted to raise the height of the dam but didn’t know by how much. Overall, about 8 out of 10 respondents have no idea of what KCGM wants to do with the site.

## 1.6 CAN KCGM MANAGE THE RAISED TAILINGS DAM

Respondents were told that KCGM wants to raise the dam height by about a third to enable it to continue efficient operations at the Super Pit. They were then asked to indicate if they believed that KCGM would be able to manage the raised Tailings Dam in a way that “ensures the environment will not be unacceptably impacted”.

In response to this question, we found:

- 69% agree that KCGM will be able to manage the raised dam in a way that ensures the environment will “not be unacceptably impacted”,
- 11% disagree with the proposition,
- 9% neither agree nor disagree and the residual was unable to answer the question.

## 1.7 READING THE KCGM NEWSLETTER

Only 6% of respondents reported that they had both seen and read the KCGM newsletter in the Golden Mail. A further 6% report that they had seen it and scanned a part of it, and 6% had seen it but not read any of it. Overall, 81% reported that they had not seen the KCGM newsletter in the Golden Mail, and only 12% reported that they had read at least part of it. It would appear that the newsletter contained within the Golden Mail is not a very successful means of communicating with the community.

However, in spite of their lack of exposure to the newsletter, 66% reported that they would be interested in having news from KCGM produced in this way. Given the response to the previous question (the very low exposure to and readership of the material within the Golden Mail newspaper) I would interpret the “interest” question as being an interest in getting material from KCGM, rather than having it specifically enclosed within the Golden Mail.

When asked how they would like to be kept up-to-date about issues of development about the KCGM operations, we found:

- 59% want to get the information in newspaper reports,
- 29% wanted information from KCGM newsletters,
- 18% wanted local radio,
- 16% local television, and
- 4% referred to the general word of mouth, 4% also referred to email / website communications, and 1 in 4 nominated some other form of communication.

## 1.8 THE NOISE FROM THE SUPER PIT OR MT CHARLOTTE

Respondents were asked to indicate if they noticed any noise from either the Super Pit or Mt Charlotte. We found:

- 33% noticed noise from the Super Pit at night,
- 21% noticed noise from the Super Pit during the day,
- 5% referred to Mt Charlotte noise during the day,
- 4% referred to Mt Charlotte noise at night,
- 4% referred to a day source of noise (not sure of the source),
- 6% referred to a night source of noise (not sure of the source).

Overall, 44% were unable to nominate any noises that they had noticed from either the Super Pit or Mt Charlotte. (These figures add beyond 100% due to some multiple response).

### 1.8.1 IS THE NOISE ANY NUISANCE?

Amongst those who had noticed noise from the Super Pit, only 4% regarded it as being a “major issue”. 96% of those who had noticed noise from the Super Pit during the day regarded it as either being a minor issue, or “not any nuisance at all”.

Amongst those who had noticed noise from the Super Pit at night, only 5% regarded it as being a major issue. 30% regarded it as a minor issue and 55% “not any nuisance at all”.

Amongst those noticing noise from Mt Charlotte at night, none of the respondents regarded it as being a major issue. 32% regarded it as being a minor issue, and 58% “not any nuisance at all”.

Amongst those who had noticed noise from Mt Charlotte during the day, only 2 respondents (8%) regarded it as being a major or a life style effecting intrusion. The remaining 92% regarded it as either a minor issue (40%) or as not any nuisance at all (52%).

## 1.9 AWARENESS OF STEPS KCGM HAS TAKEN TO REDUCE NOISE FROM ITS OPERATIONS

When asked if they were aware of what steps KCGM had taken to reduce the noise from its operations, we found:

- 50% referred to the “noise bund” that had been constructed,
- 3% indicated that they believed that KCGM had installed noise monitors,
- 2% referred to “weather related shut downs”,
- 2% referred to rubber in truck trays, and
- 19% referred to other issues.

Overall, 42% of those who had been aware of noise from either of the two operations (Mt Charlotte or the Super Pit) reported that they weren’t aware of any steps that KCGM had taken to reduce noise from its operations.

### 1.9.1 DOES THE NOISE HAVE ANY EFFECT ON RESPONDENTS?

Amongst the 245 respondents (49%) who noticed noise from either Mt Charlotte or the Super Pit, we found 90% reporting that they may notice the noise, but it is “not really an issue at all”. In fact, we found:

- 76% believe that its “not any nuisance at all”,
- 14% believe “its there but not really an issue” (these figures add to 90% for whom the noise is not an issue),
- 6% regard the noise as a minor issue, and
- 2% regard it as a major issue.

It should be recalled that these proportions are based on the 49% of people who had noticed noise. The proportions of the total Kalgoorlie / Boulder adult population noticing and being effected by noise are:

- 51% don’t notice any noise at all,
- 38% notice noise but regard it as “not any nuisance at all”,
- 7% notice the noise but “believe it is not really an issue at all”,
- 3% notice it and believe it is a minor issue, and
- 1% notice it and regard it as a “major issue”.

### **1.9.2 HAS THE NOISE IMPACT BEEN REDUCED IN RECENT YEARS**

The respondents were asked if they had noticed if the noise impact had been reduced by any of the steps KCGM had taken in recent years, 38% of those who had noticed noise reported that they believe that the noise impact has been improved. 5% of those who noticed noise believe that it had become worse and about a third (34%) of those noticing noise assess it as being no improvement at all as a consequence of steps taken in recent years. (Again these figures are based on the approximate 49% of respondents who had noticed the noise).

## **1.10 DUST**

It is apparent that dust is more of an issue for respondents than noise. When asked if dust has any effect on their “day to day activities”, we found:

- 37% said it had “no effect at all”,
- 21% notice it but regard it as being “not really an issue at all”,
- 29% regard it as being a minor issue, and
- 13% regard it as being a major issue.

Overall, about 57% believe that dust is not an issue for them at all, and about 42% regard it as being at least a minor issue for them.

### **1.10.1 UNDERSTANDING OF WHAT KCGM DOES TO MANAGE DUST**

Respondents who noticed the dust issue were asked to indicate if they were aware of what KCGM does to manage the dust from their operations. This is based on 318 of the 502 respondents.

- 38% of “dust noticers” referred to KCGM using water carts,
- 21% referred to the rehabilitation of bare ground,
- 6% referred to monitoring of dust “on-site”,
- 22% made other suggestions, and
- 27% couldn’t think of any things that KCGM does to manage the dust from their operations.

### **1.10.2 THE EFFECTIVENESS OF DUST MANAGEMENT MEASURES**

When asked to indicate how effective the measures have been in managing the dust from KCGM operations, we found:

- 15% believe that the measures have been very effective,
- 42% “quite effective”, (resulting in a “57% net effective” result),
- 15% believe that the measures have not been very effective, and
- 4% “not at all effective”.

In essence then, 57% believe that the measures have been effective in managing dust, 20% believe they have not been effective and the residual were unsure.

## **1.11 ENVIRONMENTAL REHABILITATION**

When asked to indicate if they believe that KCGM’s rehabilitation efforts to the areas they had worked were good or poor, we found:

- 24% believe that their efforts have been very good,
- 48% rated them as “quite good”,
- 13% “neither good nor poor”,
- 6% “quite poor”, and
- 1% “very poor”.

In aggregate, 72% rate the efforts to rehabilitate the areas they’ve worked as being good, 7% rated them as poor with 13% undecided and 8% unable to comment.

### **1.11.1 AIR QUALITY**

8 out of 10 (79%) regard the air quality around Kalgoorlie as being acceptable for a regional centre like Kalgoorlie Boulder. Effectively 1 in 5 (19%) rate the air quality as being unacceptable with the residual of 3% uncertain.

Amongst the 93 respondents who regard the air quality as being unacceptable, the basis for that assessment was:

- 47% dust,
- 45% general health,
- 37% smells / odours,
- 8% visual pollution,
- 14% referred to other issues (these figures add beyond 100% due to multiple response).

65% of respondents believe that KCGM do enough to manage the effects of its operations on air quality. 8% believe they do not do enough and the residual (26%) were unable to comment. This means that effectively the ratio of “they do enough” to “they don’t do enough” is in the order of 90% in the favour of KCGM “doing enough” and effectively 10% expressed opinions of the opposing view.

## 1.12 BLASTING OPERATIONS

When asked to indicate the extent to which blasting operations are noticeable in their daily routines, we found:

- 42% report that they hardly notice blasts,
- 41% report that they are aware of the blasts but “not really bothered”,
- 14% rate the blasts as a minor irritation, and
- 4% regard the blasting as a great irritation.

In essence, 83% regard the blasting as being hardly worth a mention, 17% regard it as being at least a “minor irritation”, with only 4% (from within that 17% group) regarding it as being a great irritation.

Those who had noticed the blasts and found them to be some form of an irritation (either a minor irritation or a great irritation) were asked to indicate if they noticed the noise or the vibrations more. In response, we found:

- 62% had noticed the vibrations,
- 11% noise, and
- 21% referred to both noise and vibrations.

When asked how concerned they were by the vibrations, we found:

- 1 in 4 (25%) were greatly concerned,
- 35% were “slightly concerned”, and
- 40% were not really concerned.

To put the above in perspective, the proportion “greatly concerned” represents just 6% of the total survey population. That is, 6% of the survey population had both noticed the vibrations and regarded them as being of great concern.

On the issue of whether the vibrations directly associated with the blasting or the periodic seismic vibrations were of more concern to them, we found:

- 42% were more concerned with the direct vibrations,
- 29% were more concerned with the seismic activity, and
- 24% were not aware of the difference.

### **1.13 OVERALL RELATIONSHIP BETWEEN KCGM AND THE PEOPLE OF KALGOORLIE BOULDER**

When asked how well they believed that KCGM has managed its responsibilities of operating the mine with due regard to the concerns of people in and around Kalgoorlie Boulder, we found:

- 22% believe they have done this very well,
- 59% “quite well” (these accumulate to a “net well done” result of 81%),
- 10% regard them as neither well done or poorly done,
- 4% “quite poor”, and
- 2% “very poor”.

In essence therefore, about 8 out of 10 adults living in Kalgoorlie Boulder rate the work that KCGM has done in managing its responsibilities of operation the mine with due regard with concerns of the people of the region as being “well done”. 10% believe it is neither good nor poor and 6% regard it as being “poorly done”. (There was a minor residual of about 3% to 4% who were unable to express an opinion).

## **2.0 SURVEY PURPOSE AND SURVEY METHOD**

The survey was conducted to provide a statistically sound basis for assessing the community awareness of and concern about the Fimiston 1 Tailings Dam, and the plans to raise the dam wall from 30 to 40 metres. The survey sought to establish the confidence that the community had in the ability of KCGM to manage its operations and the Fimiston 1 Tailings Dam specifically.

As a supplementary exercise, the project also sought to establish broader community attitudes towards KCGM and its operations in and around Kalgoorlie - Boulder. This second component repeated many of the questions posed in a community attitudes survey that Patterson Market Research conducted for KCGM in 1999. Where relevant, comparisons have been made in the results from the two surveys.

### **2.1 SURVEY METHOD**

The survey was conducted by means of a random dial telephone interview program of the people of Kalgoorlie – Boulder. Sampling was drawn from the electronic white pages, so people who have silent numbers, or people with no telephone connection were not able to take part in the survey.

Interviewing was conducted over the period of December 9 to the 18th 2004. In view of the time frame leading up to Xmas, all survey participants were put into a prize draw for \$500, and this prize was drawn and awarded before Xmas 2004. The winner was informed by phone and his details published on PMR's web site [www.marketresearch.com.au](http://www.marketresearch.com.au).

Target households were randomly generated, and up to three call-backs were made to unanswered numbers on an attempt to make contact with households. Once contact was made with the randomly selected households, a random selection of the target respondent for the household was made. If that person was unavailable when contact was made, up to a further three call-backs were made to appointment in an effort to interview the target respondent. This sampling procedure has been developed by PMR over the last 18 years of opinion polling work conducted for the West Australian Newspaper, and published monthly as WestPoll.

A survey of N=500 interviews has a theoretical sample error of +/- 4.4%.

### 3.0 DETAILED FINDINGS – COMPARISONS WITH 1999 SURVEY

#### 3.1 UNPROMPTED ENVIRONMENTAL ISSUES

The first question in the survey sought to establish what “top of mind” environmental issues were concerning the people of Kalgoorlie Boulder. As Table T3.1 below indicates, almost a third (30%) could think of nothing that was of concern to them in the environmental arena. Note that the table compares the results to this question from the 1999 survey, which reflected almost exactly the same “nothing” response at 28%.

Dust, predominantly from mines, is the major environmental issue in Kalgoorlie, with 32% referring to either “general dust” or “mine dust” specifically, and this is effectively the same as we found in the 1999 survey, in which “dust” rated a 29% mention.

There may be a slight fall in the “smell” issue, in that 24% referred to smells in the current survey compared to 29% five years ago.

Table T3.1 Main Environmental Issues (Unprompted)	Total Sample	
	1999 N=507 %	2004 N=502 %
Nothing	28	30
General dust	19	17
Mine dust	10	15
<b>Net Dust Reference</b>	<b>29</b>	<b>32</b>
General smells	11	14
Mine smells	18	10
<b>Net Smells Reference</b>	<b>29</b>	<b>24</b>
Waste management	-	5
Water restrictions	6	4
Mine noise at night	2	4
Mine noise during day	1	2
Other noise	1	2
<b>Net Noise</b>	<b>4</b>	<b>8</b>

The “mine noise” issue appears to be a relatively minor concern to residents with only 8% making any reference in the current survey to noise of any description. 4% referred to mine noise at night, and 2% during the day, with 2% referring to other noise sources.

To test the extent to which people who live in suburbs adjacent to the KCGM operations have a different view of the environmental issues that affect them, the survey analysis have isolated this group from the total sample, and this is reported in Table T3.1.1 below. Again, the table compares the 1999 and the 2004 data. The data suggests that there may be a slight increase in the proportion of “neighbours” that report no environmental issue that concerns them, with 24% reporting “nothing” in 1999 compared to 28% in the current survey.

There was some minor variation between references to “general dust” and references specifically to “mine dust”, though in aggregate, there appears to be no material difference between the two surveys with effectively 3 out of 10 making reference to dust as an environmental concern. This proportion is effectively the same as for the total sample, suggesting that “mine dust” is not an issue that is felt particularly by people living very close to the KCGM operations. This suggests that either the dust issue is more widespread than simply for people living adjacent to the KCGM operations, or that the issue is linked to that particular mine, but that it effects everybody across the whole township broadly equally.

Table T3.1.1 Main Environmental Issues (Unprompted)	Neighbours	
	1999 N=222 %	2004 N=247 %
Nothing	24	28
General dust	19	15
Mine dust	11	16
<b>Net Dust Reference</b>	<b>30</b>	<b>31</b>
General smells	12	14
Mine smells	20	13
<b>Net Smells Reference</b>	<b>32</b>	<b>27</b>
Waste management	-	5
Water restrictions	7	4
Mine noise at night	4	6
Mine noise during day	2	4
Other noise	0	2
<b>Net Noise</b>	<b>6</b>	<b>12</b>

An examination of the above reveals that there is probably a slight fall in the reference to “smells” amongst neighbours (along with the small fall shown for the total sample), but it appears that neighbours have a slightly elevated level of concern over this matter compared to the total sample. It is interesting that even amongst neighbours, only 12% made any reference to mine noise or other noise sources. However, this appears to be significantly greater than the 6% reported in the survey of five years ago, suggesting that, whilst this is a relatively minor issue, the level of concern over noise (predominantly mine noise) has effectively doubled over the last five years from 6% to 12% amongst neighbours.

### 3.2 UNPROMPTED ISSUES ASSOCIATED WITH KCGM

Respondents were asked to indicate “what current issues can you think of that involve KCGM?” The specific reference was;

“What current issues can you think of either from the media, or from talk around town that involve KCGM?”

The response to this question showed that the “Tailings issue” is in the unprompted mindset of residents of Kalgoorlie Boulder more so than any other issue in connection with KCGM. As Table T3.2 below indicates, 22% of respondents made some reference to the Tailings issue compared to 5% referring to dust issues, 4% some form of noise issue and 2% other pollution or environmental issues. 29% made reference to other issues (not related to the above) and 44% could think of no issues at all.

Table T3.2 Current Issues Associated with KCGM (Unprompted)	Total	Neighbours
	N=502 %	N=247 %
Any Tailings reference	22	20
Dust issues	5	6
Noise issues	4	4
Other general pollution / env issues	2	3
Other	29	28
None	44	44

Note from the above that there appears to be effectively no difference between the “neighbours” subset and the remainder of the sample over the current issues that people associate with KCGM. The above summary aggregates all of the references to the Tailings Dam or spills from the Tailings Dam. The detailed specific references to various aspects of the Tailings Dam issue were:

- 7% made reference to the environmental impact of the Tailings Dam,
- 6% simply mentioned that the “Fimiston Tailings issue”,
- 4% referred to the groundwater impact of the Tailings Dam,
- 4% referred to raising the Tailings Dam height, and
- 1% referred to leaking from the Tailings Dam / spills.

For full details see Tables 6 and 7 in the accompanying data analysis tables.

### 3.3 KCGM’S MANAGEMENT OF THE TAILINGS DAM ISSUES

Respondents were asked to indicate “from what you know or may have heard, how well would you say that KCGM has managed the Tailings Dam over recent years?”

In response, we found a net of 52% believed they had done well in managing the Tailings Dam and 10% believe that they had done a poor job. The residual were either unsure or believed that they had been managed “neither well nor poorly”.

**Table T3.3 Assessment of Tailings Dam Management**

	<b>Total</b>	<b>Neighbours</b>
	<b>N=502</b>	<b>N=247</b>
	<b>%</b>	<b>%</b>
Very well	10	10
Quite well	42	42
Neither one nor the other	18	18
Quite poorly	8	6
Very poorly	2	2
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Net Well Done</b>	<b>52</b>	<b>52</b>
<b>Net Poorly Done</b>	<b>10</b>	<b>8</b>
Don’t know	20	21

Note that whilst only slightly over half (52%) reported that they believed that KCGM had done well in the management of the environmental aspects of the Tailings Dam, only 8% of neighbours and 10% of the sample overall believed that they had done poorly in this regard. Whilst 1 in 5 were unable to express a view, a similar proportion (18%) regarded their performance as being neither well managed or poorly managed on this issue.

It is appropriate for us to examine the reasons for respondent attitudes on these measures, and these attitudes are assessed in the following subsections.

#### 3.3.1 REASONS FOR POSITIVE ASSESSMENTS

As noted above, overall, 52% of respondents assessed KCGM’s management of its Tailings Dams as “well done”. The reasons for these positive assessments, amongst the 262 respondents who reported a positive attitude were:

- 24% they’re environmentally conscious / have a good team / no spills / well managed,
- 19% haven’t heard anything bad about them,
- 13% its in line with industry standards,
- 11% they rehabilitate / plant trees,

- 11% I have observed work there / been involved,
- 11% doing the best job / it's a big project to manage,
- 10% they've improved in recent years / they had problems inherited from previous owners,
- 7% its looking well managed / good,
- 3% media reports say they are doing a good job,
- 3% they're open with the community, and
- 3% they help the community.

It appears that the reasons for these positive assessments of KCGM's management of the Tailings Dam related in the main to an observation of the company's environmental responsibility and its openness with the community.

### **3.3.2 REASONS FOR NEUTRAL ASSESSMENTS**

Amongst the 18% (89 respondents) who rated KCGM's performance as neither "well managed" nor "poorly managed" on this issue, we found the reasons for these assessments to be:

- 46% don't know anything / not bothered about it,
- 15% referred to leakages and spills / chemicals leaking into the surrounding earth,
- 10% the company is too big / doesn't consult community,
- 8% acknowledge that the project is big and difficult to manage,
- 6% referred to word of mouth / media reports,
- 4% referred to environmental damage / problems (with no more specific reference to any issue),
- 4% mentioned that they had mixed opinions about KCGM, though
- 2% said they hadn't heard anything bad about KCGM and the same proportion reported "no complaints" and they had "improved in recent years.

### **3.3.3 REASONS FOR NEGATIVE ASSESSMENTS**

Amongst the 10% of respondents (51) who believed that KCGM had managed the Tailings Dams poorly, we found the reasons to be:

- 37% referred to leakages / spills / chemicals leaking into the surrounding earth,
- 18% the company is too big / doesn't consult the community,
- 16% referred to hearsay / media reports,
- 16% referred to environmental damage (no further information),
- 12% referred to trees / loss of vegetation,
- 10% "eyesore",
- 10% "groundwater contaminated",
- 8% native wildlife loss, and
- 4% rising salinity levels.

It should be recalled that the above figures are based on the 51 people who had a "poor" assessment of KCGM's management of the Tailings Dams and is subject to a sample error factor of +/- about 14%.

## **3.4 SPECIFIC UNDERSTANDING OF THE TAILINGS DAM ISSUE**

54% of respondents indicated that they didn't know where the Tailings Dam is located. 3 out of 10 (30%) were able to nominate the location as being about 1.5kms east of Kalgoorlie and the residual offered some other indication of the location of the Fimiston One Tailings Dam.

It may be important to recognise that 81% of respondents reported that they have no idea what KCGM wishes to do at that site. Only 4% of respondents overall were aware that KCGM wants to raise the dam height from 30 to 40 metres, and a further 10% indicated that there was a proposal to raise the dam height but they did not indicate any understanding of the extent to which the dam wall would be raised.

### 3.5 ASSESSMENT OF KCGM’S ABILITY TO MANAGE THE RAISED DAM

Respondents were told that KCGM wants to raise the dam by about a third (10 metres) to enable it to continue efficient operations at the Super Pit. Respondents were then asked to indicate from what they know or “may have heard about the Tailings Dam” whether they agreed or disagreed that KCGM would be able to manage the raised Tailings Dam in a way that “ensures the environment would not be unacceptably impacted”.

In response, we found 69% agreeing that KCGM would be able to manage the dam with its increased wall height acceptably, 9% indicated that they neither agreed nor disagreed with the statement and 12% were unable to answer the question. Just 11% of respondents overall believed that KCGM would not be able to manage the Tailings Dam with the raised wall height to an acceptable standard.

Table T3.3 Assessment of KCGM Ability to Manage Raised Dam Acceptably	Total	Gender		Age Group	
		Male	Female	18-39	40+
	N=502 %	N=250 %	N=252 %	N=248 %	N=254 %
Strong agree they can manage it acceptably	15	19	11	10	20
Agree	54	56	52	58	50
Neither one nor the other	9	6	11	10	7
Disagree	8	9	6	9	6
Strong disagree they can manage it acceptably	3	3	4	2	5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Net Agree Can Manage</b>	<b>69</b>	<b>75</b>	<b>63</b>	<b>67</b>	<b>70</b>
<b>Net Disagree Can Manage</b>	<b>11</b>	<b>12</b>	<b>10</b>	<b>11</b>	<b>11</b>
Don't know	12	7	16	12	11

Note from the above, that overall, almost seven out of ten (69%) believe that they could manage the raised dam height acceptably and only 11% disagree with the proposition. Males were more likely than females to agree that they could manage the project acceptably, though even amongst females, over 6 out of 10 (63%) agreed that the company can manage the raised dam wall acceptably. (The main difference between males and females on this measure is the proportion of respondents who reported that they “don’t know” / were unable to answer the question).

There was no material difference between people aged 18 to 39 and those aged 40+ years on this question, with respectively 67% and 70% believing that KCGM would be able to manage the raised Tailings Dam acceptably.

### **3.5.1 REASONS FOR SUPPORTING KCGM**

Respondents who agreed that KCGM would be able to manage the raised dam height did so on the basis that:

- 28% simply referred to KCGM's past and present record,
- 16% "they're very experienced / professional",
- 14% they have the resources and technology to manage it",
- 8% they have to meet environmental laws,
- 7% they are environmentally aware,
- 7% simply believe they'd have the ability to do it,
- 6% they'd be under public scrutiny / government and media scrutiny,
- 3% referred to the need to keep the community informed,
- 3% referred to the need to revegetate / plant trees,
- 3% believe that they had "learnt from past mistakes", and
- 2% believe that it was "better to go higher than build another dam".

For full details see Table 15 in Appendix B.

### **3.5.2 REASONS FOR DOUBTING**

Respondents who doubted KCGM's ability to manage the Tailings Dam to an acceptable level were asked to indicate their reasoning. Their comments were:

- 17% there's an increased risk / bigger potential problems / hazardous,
- 15% "I don't know much about it" (therefore neither supported nor opposed the proposition),
- 14% "had a past history of failures" / lack of control / poor management,
- 12% risk of leakage from the dam,
- 9% the environmental impact / damage,
- 4% the effect on groundwater,
- 3% loss of trees / vegetation,

- 3% an eyesore,
- 2% the effect of chemicals on the community’s health,
- 2% referred to structural engineering problems,
- 2% referred to the possibility of accidents or natural disasters overcoming regulations and preventative measures, and
- 2% were concerned about potential cost cutting (causing failure in the system).

For full details see Table 16 in Appendix B.

### 3.6 COMMUNICATION OVER THE TAILINGS DAM ISSUE

81% of respondents reported that they had not seen the KCGM communication about the Tailings Dam in the Golden Mail Newspaper. Respondents were given a brief description of the newsletter that was inserted into the Golden Mail, and nonetheless, we found 81% had not even seen that. As Table T3.6 below indicates, this lack of exposure was consistent across both males and females, but people aged 40 years and over appeared slightly more likely to have seen it than did their younger counterparts. This is probably a reflection of readership of the local newspaper. It would be higher amongst older than younger people.

**Table T3.6 Effectiveness of Golden Mail Newsletter Insert**

	Total	Gender		Age Group	
		Male	Female	18-39	40+
	N=502 %	N=250 %	N=252 %	N=248 %	N=254 %
Saw it and read it	6	7	4	4	7
Saw it and scanned part of it	6	7	6	5	7
Saw it, not read any of it	6	4	8	4	7
Did not see it	81	81	80	85	76
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Net Read At Least Part</b>	<b>12</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>
Other	0	0	-	0	-
Don't know	1	0	2	1	2

Note from the above, that only 12% of respondents overall report that they have read at least part of the newsletter. This only increased to 15% even amongst people aged 40 years and over (and down to 10% amongst 18 to 39 year olds), suggesting that this communication medium is not very effective.

#### 3.6.1 INTEREST IN NEWSLETTERS FROM KCGM

Respondents were asked to indicate how interesting it would be for them to have news from KCGM “produced in this way” (as a newsletter / lift-out within the newspaper).

Surprisingly, 66% report that it would be at least “quite interesting” for them to receive information in this way, and only 31% indicated that they had little or no interest in it. This result suggests that community interest in feedback and information from KCGM is high, but their readership of the Golden Mail insert suggests that the delivery mechanism may not have been appropriate.

Those who expressed an interest reported that the reason was that it was important to be well informed about what’s happening in the community / and at the mine (8 out of 10).

When asked to indicate how they would like to be kept up-to-date about issues or developments about the KCGM operations, we found newspaper reports enjoying approximately double the level of support for KCGM newsletters. The preferences were:

- 59% newspaper reports,
- 29% KCGM newsletters,
- 18% local radio,
- 16% local television,
- 4% general word of mouth, and
- 4% email / website.

For full details see Table 21 in Appendix B.

The indications are that community interest in information from KCGM is high, but their preference for the delivery mechanism is in the context of a newspaper report rather than a KCGM newsletter inserted into the newspaper. PMR’s experience with readership surveys of regional daily newspapers over the last twenty years has shown that readers hardly discriminate between paid advertising and news items. PMR would recommend that KCGM consider paid full page advertising in the newspaper as a means of communicating rather than a lift-out insert.

### **3.7 FURTHER COMMENTS ABOUT KCGM OPERATIONS**

Respondents were told that the survey was being conducted for KCGM, and were invited to make any other comments they’d like to make or issues about their operations in town that they would like to bring to KCGM’s attention. In response, almost two thirds (64%) could offer no further comments, though 8% simply said “they are doing a good job”. Other suggestions and comments were:

- 5% there should be more consultation with the community / keep residents informed,
- 4% they should be more involved in the community,

- 3% take more care / interest in employees and their families (reference to long work hours),
- 3% referred to blast damage to housing,
- 3% they should employ more locals / don't bring in people from outside,
- 2% "minimise the dust", and
- 2% more tours / railway loop needs restoration / Super Pit tours are interesting.

### 3.8 THE RELATIONSHIP BETWEEN KCGM AND THE COMMUNITY

There is strong recognition that KCGM is a vital component of the Kalgoorlie Boulder community. When asked to nominate organisations that were significant to the future of Kalgoorlie Boulder, 31% nominated KCGM (though 63% nominated one or another mining company). Table T3.8.1 below summarises the responses to this question, and compares the figures from the current survey with those from the 1999 survey.

Table T3.8.1 Mentions of Organisations Important to Future of Kalgoorlie Boulder (Unprompted)	Total Sample	
	1999 N=507 %	2004 N=502 %
All other mining companies	73	63
KCGM	26	31
Tourism	6	10
Environmental groups	0	5
Volunteer groups	0	4
Retailers	3	4
Health Department	3	4
Council	0	4
Railway / Transport	0	3
Chamber of Commerce	3	3
State Government Bodies	14	2

It appears that KCGM has emerged in a slightly more dominant role from the last five years than it held even in 1999. In that year, 26% nominated KCGM as an important organisation for the future of Kalgoorlie Boulder, and this has grown to 31% in the current survey. This is probably a reflection of the increased interest in the gold sector over the last 6 to 12 months. Note that all mentions of other companies has fallen away from 73% to 63%, and that tourism has increased marginally from 6% to 10%. Environmental groups hardly rated a mention (certainly below a level of 2%) in the previous survey and they now rate a 5% mention. It is interesting that reference to State Government bodies has fallen away significantly from 14% to 2%, and this could again be a function of the increased prosperity of the region compared to five years ago.

### 3.8.1 ATTITUDES TOWARDS KCGM

Respondents were asked to either agree or disagree about a series of statements about KCGM. Table T3.8.2 below summarises the proportions of respondents that agree, disagree, neither agree nor disagree or are undecided about each of the statements with respect to KCGM.

It would appear from the table that residents of Kalgoorlie Boulder are very strongly of the view that KCGM is important to the Kalgoorlie Boulder region. 93% agree with this statement and only 3% disagree. Interestingly, nearly 8 out of 10 (78%) agree that KCGM ensures that the environmental impact of its operations are minimised. Only 7% disagree with this proposition, with the residual either undecided, or neither agreeing nor disagreeing with the statement. Interestingly, 3 out of 4 respondents (76%) regard KCGM as a “good employer”.

7 out of 10 (71%) agree that the KCGM has “improved in communications with the community” in recent years. A similar proportion (68%) regard it as a well managed organisation (only 7% disagree with 18% undecided). Again, a similar proportion (67%) agree that KCGM is open in its dealings with the community, and whilst 15% disagree with the proposition, 9% were undecided, and effectively 1 in 10 (11%) neither agreed nor disagreed with the statement (presumably through having insufficient evidence one way or another to be able to come to a determination).

6 out of 10 believe that KCGM has a good environmental record (63%) and half believe that they deal fairly with the Aboriginal community. Care should be taken in interpreting this last figure however as almost 4 out of 10 (37%) were unable to comment through lack of awareness / understanding of the issue) It is clear however that amongst those who were able to express an opinion, the weight of opinion is very much in favour of the notion that KCGM does in fact deal fairly with the Aboriginal community.

<b>Table T3.8.2 Attitudes Towards KCGM</b>	<b>Agree</b>	<b>Disagree</b>	<b>Neither</b>	<b>Don't know</b>	<b>Total</b>
Important to Kalgoorlie / Boulder	93	3	1	3	<b>100</b>
Ensures environmental impact minimised	78	7	7	8	<b>100</b>
A good employer	76	5	5	14	<b>100</b>
Improved communication with community	71	11	6	12	<b>100</b>
A well managed organisation	68	7	7	18	<b>100</b>
Is open in dealings with community	67	15	11	9	<b>100</b>
Has a good environmental record	63	13	10	14	<b>100</b>
Deals fairly with Aboriginal community	49	7	7	37	<b>100</b>

### 3.8.2 NOISE FROM SUPER PIT OR MOUNT CHARLOTTE

In a repeat of the question asked in the survey of five years ago, respondents were asked if they “notice any noise from either the Super Pit or Mt Charlotte operations during the day or night?” Table T3.8.3 below summarises the response to that question, comparing the current survey data with that from five years ago.

Table T3.8.3 Noise Noted from Mt Charlotte or Super Pit	Total Sample		Change
	1999 N=507 %	2004 N=502 %	
Mt Charlotte day	14	5	-9
Mt Charlotte night	15	4	-11
Super Pit day	11	21	+10
Super Pit night	20	33	+13
Not sure source day	-	4	
Not sure source night	-	6	
Nothing noticed	60	44	
<b>Total</b>	<b>120</b>	<b>116</b>	

\* Figures add beyond 100% due to multiple response.

It would appear from the above that five years ago, 60% reported that they had not noticed any noise in particular, resulting in 40% reporting that they had noticed noise at that point. In the current year, 44% reported not noticing any noise from either of these operations, and whilst the observation of noise from Mt Charlotte has diminished in both day and night operations, there has been a significant increase in the proportion of people noticing noise from the Super Pit during the day and at night. In the survey of five years ago, just 11% noted noise from the Super Pit during the day, and this proportion has grown to 21% in the current survey. Similarly, only 20% noticed noise from the Super Pit at night in the 1999 survey, and this proportion has grown to 33% in the current survey.

Of course the key issue is the extent to which noise is noted or causes an inconvenience to respondents.

### 3.8.3 SEVERITY OF NOISE ISSUES

Table T3.8.4 below compares the reported severity of noise issues from Mt Charlotte during the day in the 1999 and 2004 surveys. Note that it shows that in 1999, 95% hadn't noticed any noise at all, and this proportion has grown marginally to 97% in the current survey. In 1999, 4.5% reported that noise was a “minor issue”, and this proportion has fallen to 2% in the current survey. Moreover, the “major issue” proportion was 0.5% in 1999 and no respondents reported that it was a “real intrusion”. This proportion has grown marginally to 1% overall (0.5% as a “major” and 0.5% as a “real intrusion” response in the current survey).

<b>Table T3.8.4 Severity of Mt Charlotte Noise Issues (Day)</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Not noticed / not any nuisance at all	95	97
A minor issue	4.5	2
A major issue	0.5	0.5
A real intrusion	0	0.5
<b>Total</b>	<b>100</b>	<b>100</b>

The upshot of the above is that the proportion of the population for whom the noises from the day activities of the Mt Charlotte operation are either undetectable or at a level that do not constitute any nuisance at all have increased from 95% to 97%. Moreover, whilst effectively 1% in the current survey regard the noise as being a major issue or a “real intrusion”, this represents just five respondents from the survey of 502.

Table T3.8.4.1 below examines the severity of the impact of noise from Mt Charlotte during the night. Note that the proportion not noticing it at all or regarding it as not being a nuisance at all has grown from 93% to 98%. The “minor issue” proportion has fallen from 5 to 2% and the “major issue” proportion has fallen away from 2% to 0%.

<b>Table T3.8.4.1 Severity of Mt Charlotte Noise Issues (Night)</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Not noticed / not any nuisance at all	93	98
A minor issue	5	2
A major issue	2	0
A real intrusion	0	0
<b>Total</b>	<b>100</b>	<b>100</b>

### 3.8.4 NOISE FROM THE SUPER PIT

Table T3.8.5 below examines the severity of the noise from the Super Pit. Table T3.8.5 refers to the “day” noise from the Super Pit and shows that the proportion that had not noticed any noise at all has fallen from 95% to 92% but the movement has been into the 7% reporting that it is “a minor issue”. Only 1% regard it as being a major issue or a real intrusion, which is the same proportion reported in the 1999 survey. In essence, the noise from the Super Pit has noticed slightly more in the current survey than it was in that of five years ago, but it is regarded as being a “minor issue” for all but 1% of the population.

<b>Table T3.8.5 Severity of Super Pit Noise Issues (Day)</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Not noticed / not any nuisance at all	95	92
A minor issue	4	7
A major issue	1	0.3
A real intrusion	0	0.7
<b>Total</b>	<b>100</b>	<b>100</b>

Table T3.8.5.1 below examines the severity of the Super Pit noise at night. In the 1999 survey, 92% reported that it wasn’t noticed or was not of any nuisance, and this proportion has fallen away from 92% to 85.4% in the current survey. However, the impact has been very minor. Note that in the current survey, 13% regard the noise that they noticed at night as being “a minor issue”; less than 1% regarded it as a major issue and just 1% regard it as being a real intrusion. It appears that the 1999 survey showed 3% of respondents regarding it as being a “major issue” or a “real intrusion” compared to 1.6% in the current survey.

<b>Table T3.8.5.1 Severity of Super Pit Noise Issues (Night)</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Not noticed / not any nuisance at all	92	85.4
A minor issue	5	13
A major issue	3	0.6
A real intrusion	0	1
<b>Total</b>	<b>100</b>	<b>100</b>

It would appear therefore that whilst the proportion noticing any form of noise from the Super Pit, either day or night has increased since the 1999 survey, the severity of the noise that is noticed appears to have actually diminished marginally.

### 3.8.5 AWARENESS OF NOISE MANAGEMENT PROCEDURES

In both the '99 and the '04 surveys, respondents were asked if they could nominate the range of steps that KCGM takes to manage the noise intrusion into the surrounding community. As table 3.8.6 below indicates, people are better informed over these steps in 2004 than they were in 1999.

Table T3.8.6 Steps KCGM takes to manage noise	Total Sample	
	1999 %	2004 %
No idea	53	42
Built Noise Bund	34	50
Modified Equipment	7	2
Planted Trees	7	-
Operational changes	6	2
Buffer Zone	4	-
Noise Monitors	-	3
Other comments		19

Overall, 42% of those who had been aware of noise from either of the two operations (Mt Charlotte or the Super Pit) reported that they weren't aware of any steps that KCGM had taken to reduce noise from its operations. This should be seen in the context of the 53% giving the same response in the 1999 survey. People are now better informed about the noise management steps that the company has taken.

Note in particular that 50% refer to the noise bund in the current survey, compared to 34% five years ago. The focus of the steps taken is clearly on the most visible aspect – the noise bund, and there is not much reference for example to the rubber truck trays etc.

### 3.8.6 DUST ISSUES

When asked if the dust from the area affected their day to day lives, we found it to be more of an issue than noise. Moreover, the level of concern over dust seems to have increased marginally since 1999.

Table T3.8.7 Severity of Dust inconvenience	Total Sample	
	1999 %	2004 %
Not noticed / not any nuisance at all	49	37
Noticed but not an issue at all	16	21
<b>NET NO ISSUE</b>	<b>65</b>	<b>58</b>
A minor issue	21	29
A major issue	14	13
<b>Total</b>	<b>100</b>	<b>100</b>

Note that in the current survey, about 58% believe that dust is not an issue for them at all, and about 42% regard it as being at least a minor issue for them. In 1999, 65% rated it as not being an issue, and 35% rated it as at least a minor issue. The issue is more clearly on the agenda for residents in the current survey, but that concern is at a low level of angst. The issue is one of major concern to about one in eight respondents, and this figure has not changed (14% to 13%) since our '99 survey.

**3.8.6.1 Understanding of what KCGM does to Manage Dust**

Respondents who noticed the dust issue were asked to indicate if they were aware of what KCGM does to manage the dust from their operations. This is based on 318 of the 502 respondents, and table 3.8.7.1 below compares that comprehension of the steps KCGM takes with the same question from the 1999 survey.

<b>Table T3.8.7.1 Steps KCGM takes to manage Dust</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
No idea	29	27
Use Water Carts	46	38
Rehabilitation of bare ground	32	21
Monitor dust on site	4	6
Modify plant & equipment	4	-
Plant Trees	5	-
Other comments		22

It would appear that awareness of the specific steps that KCGM takes has fallen somewhat since the last survey. The proportion with “no idea” has hardly changed at all; it is just that the range of steps that is able to be brought to mind has reduced over the last five years.

**3.8.6.2 THE EFFECTIVENESS OF DUST MANAGEMENT MEASURES**

When asked to indicate how effective the measures have been in managing the dust from KCGM operations, we found:

- 15% believe that the measures have been very effective,
- 42% “quite effective”, (resulting in a “57% net effective” result),
- 15% believe that the measures have not been very effective, and
- 4% “not at all effective”.

In essence then, 57% believe that the measures have been effective in managing dust, 19% believe they have not been effective and the residual were unsure. Table T3.8.7.2 below compares this result with the survey from 1999. Note that the community perception of KCGM’s efforts in this regard see to have fallen significantly.

Table T3.8.7.2 Effectiveness of KCGM Dust control measures	Total Sample	
	1999 %	2004 %
Very Effective	26	15
Quite Effective	41	42
<b>NET EFFECTIVE</b>	<b>67</b>	<b>57</b>
Not very effective	8	15
Not at all effective	3	4
Don't Know	12	14
<b>Total</b>	<b>100</b>	<b>100</b>

The fall from 67% “effective” in 1999, to 57% in the current survey is a statistically significant movement.

### 3.9 ENVIRONMENTAL REHABILITATION

When asked to indicate if they believe that KCGM’s rehabilitation efforts to the areas they had worked were good or poor, we found:

- 24% believe that their efforts have been very good,
- 48% rated them as “quite good”,
- 13% “neither good nor poor”,
- 6% “quite poor”, and
- 1% “very poor”.

In aggregate, 72% rate the efforts to rehabilitate the areas they’ve worked as being good, 7% rated them as poor with 13% undecided and 8% unable to comment. Table T3.9.1 below compares these figures with the results from the same question five years ago.

Table T3.9.1.2 Assessment of KCGM efforts to rehabilitate land	Total Sample	
	1999 %	2004 %
Very Good	34	24
Quite Good	38	48
<b>NET GOOD</b>	<b>72</b>	<b>72</b>
Neither Good Nor Poor	10	13
Quite Poor	3	6
Very Poor	1	1
Don’t Know	13	8
<b>Total</b>	<b>100</b>	<b>100</b>

It seems that there has been a SLIGHT hardening of attitudes towards KCGM, in that the proportion rating the efforts as “poor” has increased from 4% overall to 7%. It should be pointed out that this is a small movement, and probably within statistical error. And while the “Net Good” proportion of 72% has not changed, note that the strength of the “Very Good” assessment has fallen by 10 points to be taken up in the “Quite Good” category. We interpret this as a slight hardening of community attitudes toward KCGM on this issue.

### 3.10 AIR QUALITY

In the current survey, 8 out of 10 (79%) regard the air quality around Kalgoorlie as being “acceptable” for a regional centre like Kalgoorlie Boulder. Effectively 1 in 5 (19%) rate the air quality as being unacceptable with the residual of 3% uncertain.

Amongst the 93 respondents who regard the air quality as being unacceptable, the basis for that assessment was:

- 47% dust,
- 45% general health,
- 37% smells / odours,
- 8% visual pollution,
- 14% referred to other issues (these figures add beyond 100% due to multiple response).

Table T3.10.1 below compares the air quality assessments from the current and previous surveys.

Table T3.10.1. Assessment of Acceptability of air quality	Total Sample	
	1999 %	2004 %
Net acceptable	79	79
Not acceptable	21	19
Don't Know	0	2
<b>Total</b>	<b>100</b>	<b>100</b>

It is a coincidence that the 79% proportion that rates the air quality as being acceptable has remained unchanged from the 1999 survey. The community assessment is the same in the two survey periods.

When the approximate one in 5 respondents (21% in '99, and 19% in '04) were asked to describe the aspects of air pollution that gave rise to the “unacceptable” assessments, they provided the following comments:

<b>Table T3.10.2. Aspects of Unacceptable Air Quality</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Smells	45	37
Health	46	46
Dust	47	47
Visual	4	9
Other (all other comments)	na	11

The above figures are of the sub set of people who believed that the air quality was unacceptable – broadly one fifth of respondents in each survey.

Note that most of the figures are unchanged from five years ago. The same proportions refer to Dust (47%), and “health issues” (46%). But note also the significant fall in the proportion referring to smells. This has fallen from 45% to 37%, which is statistically significant at the 70% level of confidence. That is, we can be 70% confident that the difference is real. This confidence level is dictated by the sample size, but given the exact replication of the other figures in the above, we believe that a larger sample size would show the same result. In short we have more confidence in the result than the sample size limits suggest.

In the current survey we found that 65% of respondents believe that KCGM do enough to manage the effects of its operations on air quality. 8% believe they do not do enough and the residual (27%) were unable to comment. This means that amongst those with an opinion, effectively the ratio of “they do enough” to “they don’t do enough” is in the order of 90% in the favour of KCGM “doing enough” and effectively 10% expressed opinions of the opposing view.

These figures are very similar to the responses to the same question in the '99 survey, as table below indicates.

<b>Table T3.10.3. Assessment of Whether KCGM does enough to manage air quality</b>	<b>Total Sample</b>	
	<b>1999 %</b>	<b>2004 %</b>
Yes they do enough	61	65
No they do not do enough	10	8
Don't Know	29	27
Total	100	100

### 3.11 BLASTING OPERATIONS

When asked to indicate the extent to which blasting operations are noticeable in their daily routines, we found:

- 42% report that they hardly notice blasts,
- 41% report that they are aware of the blasts but “not really bothered”,
- 14% rate the blasts as a minor irritation, and
- 4% regard the blasting as a great irritation.

In essence, 83% regard the blasting as being hardly worth a mention, 17% regard it as being at least a “minor irritation”, with only 4% (from within that 17% group) regarding it as being a great irritation. Table 3.11.1 below compares the results to this question in the '99 and '04 surveys.

Table T3.11.1. Blasting operations noticeable in your daily routines?	Total Sample	
	1999 %	2004 %
Hardly Notice	29	42
Aware, but not bothered	41	41
A Minor Irritation	20	14
A great Concern	10	4
Total	100	100
<b>NET NOT BOTHERED</b>	<b>70</b>	<b>83</b>

Note from the above that the proportion not bothered by the blasts has increased from 70% to 83%. Using the samples of 500 respondents in each survey, this is a statistically significant fall in this proportion. It appears that blasting is less noted in the current period than it was five years ago. It is interesting that the difference is in the proportion that “hardly notices” the blasts at all.

It would appear that either the blasting operations are less regular now, they are better managed to minimise the impact on the community, or the community has become so accustomed to the blasting that it hardly notices the activity.

### 3.11.1 TYPE OF AWARENESS OF BLASTING

Those who had noticed the blasts and found them to be some form of an irritation (either a minor irritation or a great irritation) were asked to indicate if they noticed the noise or the vibrations more. In response, we found:

- 62% had noticed the vibrations,
- 11% noise, and
- 21% referred to both noise and vibrations.

These figures line up quite closely with the figures from the '99 survey, as table 3.11.2 below reveals.

Table T3.11.2. Effect of Blasting most noticed?	Total Sample	
	1999 %	2004 %
Noticed Vibrations	69	62
Noted Noise	11	11
Referred to both noise & vibrations	12	21
Don't Know	8	6
Total	100	100

The table shows high consistency from one survey to the next. The major issue (amongst the approximate 18% of people for whom blasting was some form of concern) is the vibrations, with a net of 83% in the current survey making mention of the vibrations (80% in the '99 survey).

### **3.11.2 LEVEL OF CONCERN OVER VIBRATIONS**

Those expressing concern over the blasting were asked to indicate the level of their concern. The results from the 2004 survey were:

- 1 in 4 (25%) were greatly concerned,
- 35% were “slightly concerned”, and
- 40% were not really concerned.

To put the above in perspective, the proportion “greatly concerned” represents just 6% of the total survey population. That is, 6% of the survey population had both noticed the vibrations and regarded them as being of great concern.

On the issue of whether the vibrations directly associated with the blasting or the periodic seismic vibrations were of more concern to them, we found:

- 42% were more concerned with the direct vibrations,
- 29% were more concerned with the seismic activity, and
- 24% were not aware of the difference.

## ***APPENDIX A - QUESTIONNAIRE***

***APPENDIX B – DATA ANALYSIS TABLES***