

5. SECTION B: LIFECYCLE PLANNING

5.1 Expansion

The Super Pit remains in an interesting life cycle phase as it pushes forward with its proposed expansion of the mine while continuing its consultation around mine closure, which is now expected in 2021. As previously discussed, the Super Pit lies in extremely close proximity to local residents and businesses and impacts of any expansion of the pit, noise bund, safety exclusion areas and waste dumps could have complex implications for a range of local stakeholders.

5.2 Closure Considerations

Newmont's Closure Standard NEM-CER-S.036 provides closure criteria for all its operations, which include the Super Pit. These include involvement of stakeholders; impact assessments of risks; consideration of post closure community use and cultural values and links to capacity building in all design/construction considerations, as well as a need for operations planning to be informed by social impact assessments, and include appropriate budgets, timeline and resources, based on engagement, economic diversification and internal buy-in and support. In addition, it recommends that the following plans be in place:

- Transition plan for local employees and businesses.
- Safety net schemes for most vulnerable groups in communities.
- Training for local suppliers.
- Transition plan for disposal of all physical assets.
- Transition plan for sustainability of all external relations community investment activities and programs.
- Capacity building for organisational groups.
- Transition plan for the continued protection of all sites with cultural, historical or religious significance.
- Agreed criteria for measuring success.
- Internal and external communications plans.
- Contingency plans for other exit strategies e.g. sale of operations.
- Clearly defined roles and responsibilities and monitoring programs.

This closure standard closely reflects the major findings of an assessment of five case studies conducted by Q & A in 2007. Key areas for consideration highlighted by the case studies include:

- Links to community history and heritage.
- Management and responsibility for post closure risks (including water and soil quality).
- Structural security (particularly pit walls, tailings and underground galleries, illegal mining and infrastructure vandalism).
- Infrastructure re-uses.
- Employee programs.
- Pit and site rehabilitation.
- Site security and safety.
- Monitoring of risk areas into the future.
- Legal requirements.
- Funding for post closure activities.
- New economic focuses for the region.
- Community involvement.

The Super Pit is now scheduled for mine closure at the end of 2021. Findings from the 2007 case studies demonstrated that early engagements, community involvement in decision-making and creative infrastructure solutions are crucial to closure success. When embarking on a closure journey, it is important that all stakeholders recognise that these processes require considerable time and resources, and it is never too early to start.

Closure of the mine will clearly have a significant impact on many different areas in the Kalgoorlie-Boulder region. These impacts have been explored in more detail in the 2010 SIA to ensure early identification of potential negative impacts and capitalisation of opportunities that may arise.

These potential impacts have been explored through looking at existing information (such as population numbers, employees numbers, environmental rehabilitation, for example) as well as community perceptions, using the findings of:

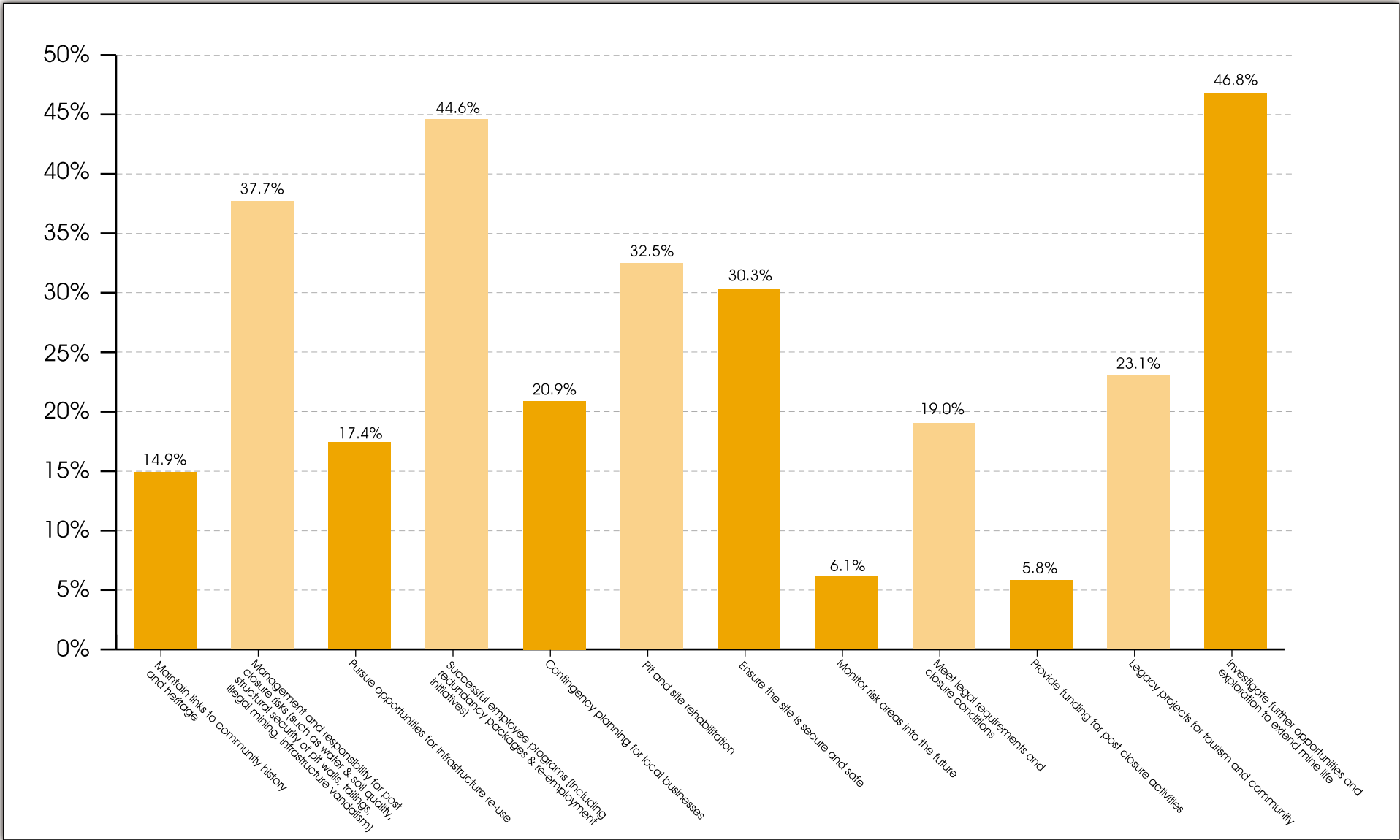
- The KCGM Closure Survey, conducted in November 2009.
- Seven focus groups, discussing closure visioning and planning.
- Local government workshops
- The SIA community survey conducted in February 2010.
- In-depth interviews conducted with community members, including government agencies, pastoralists and Indigenous representatives.

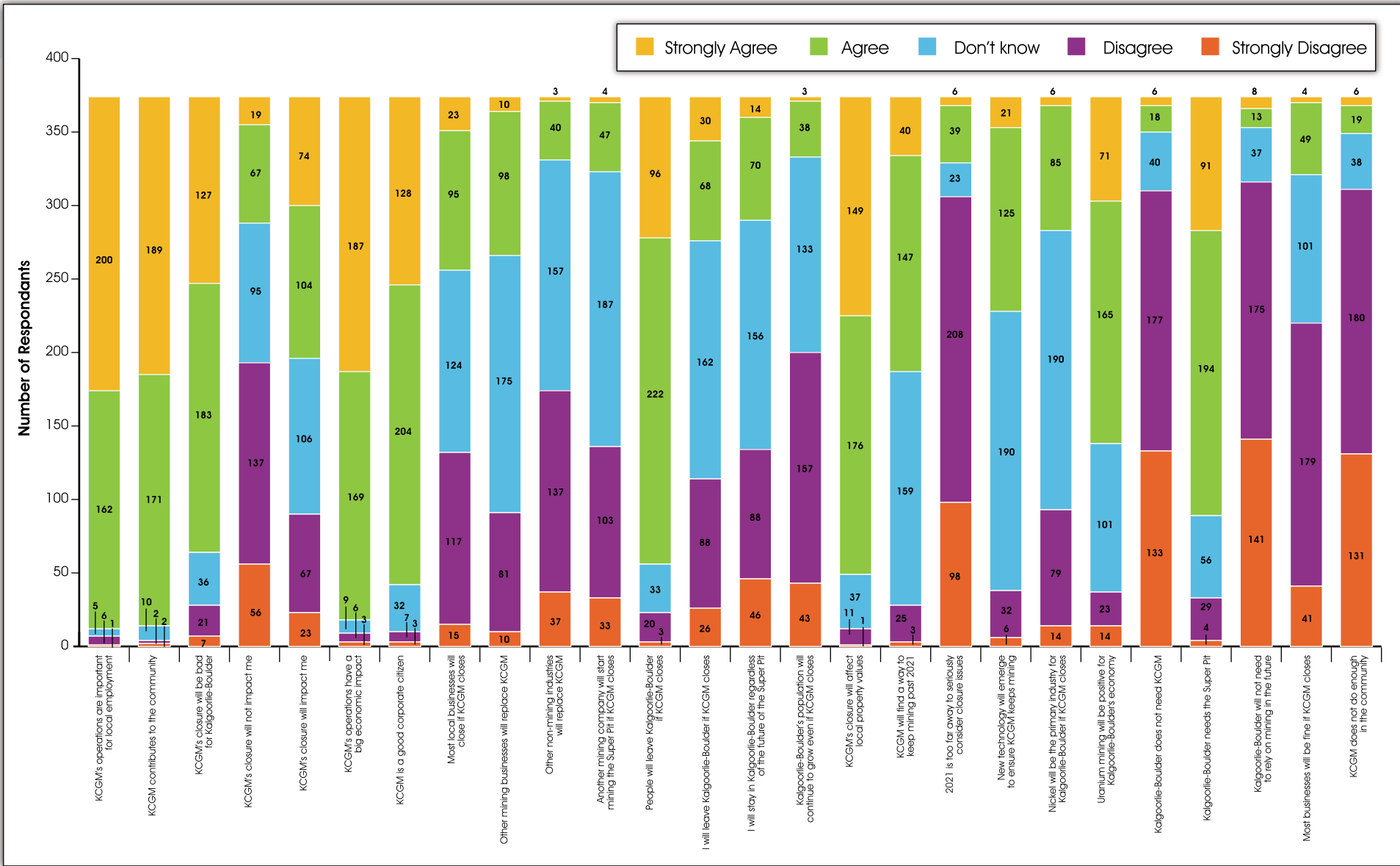
Mine closure is obviously a very significant topic in Kalgoorlie-Boulder. This is reflected in KCGM's Closure Survey, in which 26% of respondents were very concerned and a further 61% slightly concerned about the possible closure. Please note that a large proportion – 41% – of respondents were current or past KCGM employees and it is often people who have a large emotional or personal investment in a survey topic who choose to participate. These concerns were mainly focused on impacts on the local community "feel", economic impacts on the town, housing prices and the availability of employment.

The KCGM Closure Survey continued to ask respondents to select the top three issues they considered to be most important regarding mine closure. These results are illustrated in Figure 5.1 and show that investigating further opportunities and exploration to extend mine life is deemed the most important issue with regard to mine closure (47%). Showing that in an ideal world the community would like the mine to stay, rather than be faced with the implications of closure. Should mine closure be inevitable, however, then employee programs including redundancy packages and re-employment initiatives (45%), management and responsibility for post closure risks such as water and soil quality, structural security of pit walls, tailings, illegal mining, infrastructure vandalism (38%), rehabilitation (33%) and site safety (30%) are seen as priority areas.

KCGM's 2009 Closure Survey asked respondents how strongly they agreed with a number of statements, where 1 is strongly disagree, 2 is disagree, 3 is agree and 4 is strongly agree. The mean scores out of four are detailed in Figure 5.2.

These findings are discussed for each of the social impact areas below; however there are a few interesting points to note. In general, KCGM's closure is perceived as a bad thing for Kalgoorlie-Boulder, with a mean score of 3.27 out of 4 for this statement. There is some optimism that KCGM will continue mining the Super Pit beyond 2021, with a mean score of 3.04 (keeping in mind that 3 = agree and 4 = strongly agree). KCGM's closure will impact me attracted a mean score of 2.85 out of 4, however a large proportion of the survey sample were KCGM employees.





5.2.1 Sense of Place

“Take mining out of the town and it will lose its heart.” (Mine closure focus group)

The Super Pit is very closely linked to Kalgoorlie-Boulder’s identity and there is strong emotional attachment to the “hole”. This has implications for the town in moving forward as there appears to be a division amongst the local community, as to whether the pit should be kept as it is for tourism purposes and as a testament to its mining past, or whether to develop the site into a recreational facility (such as a lake or adventure sports)⁶. There is a strong argument that the pit should be further developed as a tourist attraction, as this builds on the region’s strong mining past, allows the community to keep this mining icon and develops tourism as a sustainable future industry for the region.

“Allow people access to the Pit. It is more spectacular from the bottom than the top.” (Mine closure focus group)

“It is an iconic tourist attraction and any post-closure should include tourism in its plan.” (KCGM Closure Survey 2009)

The KCGM Closure Survey asked respondents to select the top three issues they considered to be most important regarding mine closure. 15% of the community rated the maintenance of links to community history and heritage in their three most important areas. History and heritage is likely to increase in importance amongst local residents and businesses as it is deemed by many stakeholders as an integral part of a sustainable future for the region following mine closure. This highlights the importance of KCGM’s active involvement in the development and ongoing support of projects in this area. However, in providing financial support to historical and heritage type projects and organisations, KCGM should consider the potential future of these without their financial support. Therefore, projects and organisations in this area should be given careful consideration as to their possible lifespan and future sustainability.

Participants of the focus groups were keen to preserve as many historic aspects of the region as possible (although there was debate over whether the brothels should stay or go). Hannan Street, Race Round, Burt Street, the Museum, the Mining Hall of Fame, the Loopline Railway and historical buildings were all seem as assets to the community as was historical mining infrastructure.

Recommendations

- Continue to support projects that underpin the historical and heritage values of the region – particularly working with the Golden Mile Loopline Railway Society and others to bring/communicate this issue to resolution.
- Work with heritage and history groups currently sponsored by KCGM to determine how they can become more sustainable in future without financial support from the company.
- Determine feasibility of the Super Pit as a future tourism attraction, through economic modelling in conjunction with local and State tourism agencies and geotechnical assessment of the stability of the pit walls and other safety considerations (see Section 5.2.6, Economic)

⁶ These post closure options are a reflection of the aspirations expressed by mine closure focus group participants and are not necessarily post closure options currently identified in the Conceptual Closure Strategy.

- Communicate the “legacy” that KCGM will leave behind, celebrate its achievements and reward the community for its support over the years.

5.2.2 Environmental Values

When asked to define successful closure, each of the seven closure visioning workshops listed environmental values (leaving a safe, stable, non-polluting environment with appropriate revegetation) as one of the things that would constitute successful closure.

(Definition of Success) “Rehabilitation has been conducted to a high standard that meets community expectations, is safe and stable, has vegetation on it and is both ecologically and geologically relatively stable.” (2010 closure workshops)

In most cases, it was felt that this was a minimum requirement for successful closure and in itself would not constitute the basis for international recognition for successful closure.

The worst-case scenario is that KCGM put a fence around the pit, the regulators tick the boxes and KCGM simply walks away after meeting [Environmental Protection Authority] EPA obligations. (Closure visioning workshop)

Interestingly, three of the six objectives of the draft conceptual closure strategy relate to environmental values and rehabilitation, suggesting a fairly narrow focus for closure in these objectives on the environment. However, over 90% of respondents to the 2009 Closure Survey either agreed or strongly agreed that the six objectives were appropriate.

Much of the concern around environmental values is centred on safety and pollution. This included managing a saline water table and potential salinity issues as the groundwater raises post closure, managing leachate from the tailings storage facilities, remediation of contaminated sites and responsibility for ongoing monitoring and management once KCGM has left.

“Keeping Kalgoorlie safe (is the most important issue). Will the pit walls collapse? Underground workings - will they open up and endanger life? Tailings dam - will they create another dust bowl like the old Lakewood Tailings dams did? Who will manage and monitor the pit for substances? What will you do if there are unplanned substances?” (KCGM 2009 Closure Survey)

On the issue of rehabilitation and revegetation, views were mixed. One school of thought is that that the money spent on revegetation could be better spent elsewhere; so long as there are no pollution (including dust) or stability issues then don't bother spending a lot of time and effort on revegetation, particularly in areas that are not visible from town.

No point in full rehabilitation, as it is likely that mined areas will be continually re-disturbed by industry. Need to leave mined areas safe and stable but apart from that it would be better to have a regional environmental management plan with the money that would have been spent on rehabilitation of mined areas spent on regional projects like invasive/feral species control. (In-depth interview)

The alternative view is that the site should be rehabilitated to a point where it is a self-sustaining ecosystem with a high level of biodiversity (not just salt bush) and using innovative rehabilitation techniques and landform designs (such as creating environmental niches like south facing, water catching gullies within the waste rock dump which imitate similar, natural habitats). This was supported by ideas around support for an environmental research fund that focussed on pristine ground, trials and research to improve current practices and rehabilitation/revegetation techniques.

Also tied to the desire to have the site 'cleaned up' is the issue of visual amenity. Workshop participants felt that it was important that the site was "not an eyesore" both from the ground and from the air.

Recommendations

- Develop environmental closure criteria and rehabilitation plans in consultation with regulators and the local community.
- Investigate the feasibility of alternative landform designs and the creation of environmental 'niches'.
- Investigate options for an environmental research fund or trust focussed on best practice rehabilitation programs in the goldfields.
- Review conceptual closure objectives to ensure there is a balance between environmental and other objectives.

5.2.3 People

The local community is concerned about a potential decline in population and what the town will "feel" like without the KCGM community.

"The message about closure is affecting people's decisions now (property, schools, moving out of town)." (Mine closure focus groups)

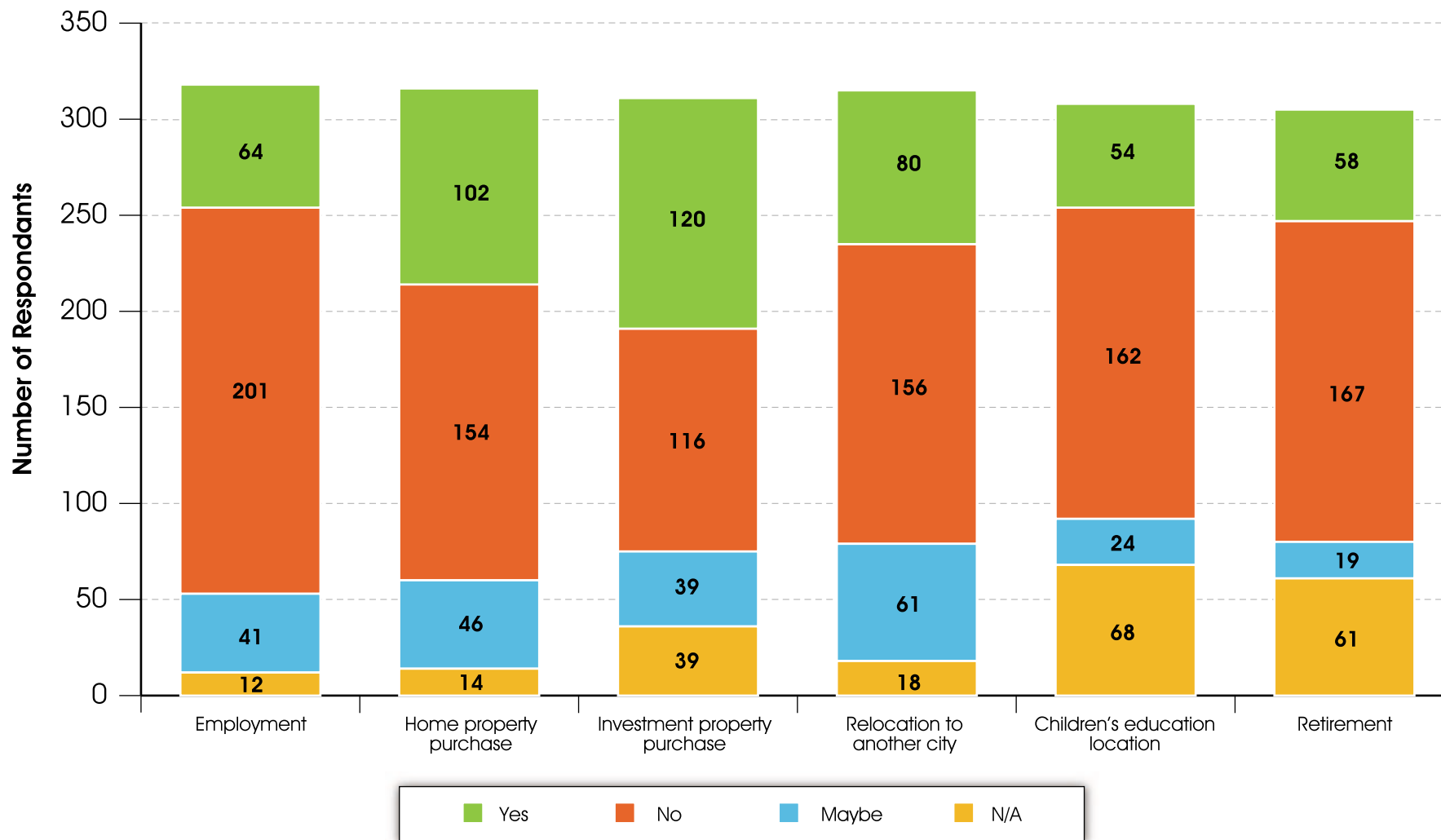
"People are what make Kal great....There's a risk of losing this and we need things in place to hold people here." (Mine closure focus groups)

People are already making decisions about their future in Kalgoorlie with the mine closure as a key consideration, as results from the KCGM Closure Survey show in Figure 5.3. As illustrated in this figure, the purchase of property, particularly for investment, is the decision currently most impacted by the mine closure.

Employment generated by KCGM is regarded as a key community benefit, with 98% either agreeing or strongly agreeing that KCGM's operations are important for local employment. The concerns about a declining population are also reflected in the 93% who agree or strongly agree that people will leave Kalgoorlie-Boulder if KCGM closes and 46% who agree or strongly agree that they will leave if KCGM closes (again keeping in mind the high representation of KCGM employees in this survey).

Successful employee programs (including redundancy packages and re-employment initiatives) was rated by 45% of the community in the KCGM 2009 Closure Survey to be in the top three important issues regarding mine closure. Please note that a high percentage of respondents – 41% - were current or previous KCGM employees. However, the findings of the qualitative research reveal that this is a common belief amongst the total community, and not just KCGM employees, as the wider community is concerned about the long-term impact on the region's population and future sustainability. Of course, many of the respondents know at least someone who works for KCGM and they are obviously thinking of their future.

Based on current data, Closure Survey results and estimated household sizes estimate, in the order of 1,950 individuals may leave Kalgoorlie-Boulder as a direct result of them or an immediate family member being made redundant from KCGM (assuming a 30% redeployment rate). This represents approximately 7% of the total population of the Kalgoorlie-Boulder local government area.



There is a possible scenario that people could leave the region due to “fear of the unknown” resulting in a lower population. People need to be reassured of reasons to stay in the region and the positives that the area has to offer. This would be alleviated to some extent if there were a gradual shutdown of operations (if this is possible), rather than an abrupt halt to operations as was experienced, for example, in Ravensthorpe.

“Accelerated attrition of people before closure date due to uncertainty of the situation is a concern regarding the Super Pit. People are focused on the negatives.”

Recommendations

- Communicate likely impacts on population of mine closure and reduced employment to manage expectations among the community, as well as how redundancies are likely to be managed over time and the rate at which employee numbers are likely to decrease.
- Explore possible options for employees regarding alternative employers in the region, re-training or redeployment.

5.2.4 Community Development and Social Needs

KCGM is well recognised as contributing generously to the local community, with 97% of respondents from the KCGM 2009 Closure Survey agreeing/strongly agreeing that KCGM is a good corporate citizen. There is some fear that there may be some worthwhile local programs that may not be able to start or continue operating without sponsorship from KCGM in future and for some that KCGM will need to demonstrate a “legacy” or ongoing commitment to the Kalgoorlie community. Particular areas of concern highlighted include loss of funding for junior sports, education programs and Indigenous employment.

Recommendations

- Consider the establishment of a “futures fund” or ongoing community trust, such as those offered by the WA Community Fund to ensure longevity of programs or organisation funding with appropriate governance structures in place.

5.2.5 Communication and Engagement

This SIA has seen a direct link in improved communication around future plans driving overall performance by KCGM locally. Given the critical nature of early communication and engagement as a measure of success for mine closure, this is a positive indicator that KCGM are on a positive path in relation to closure communication and planning.

In addition, there have been significant shifts in the two external communication attributes – communicates regularly with this community and openly engages with this community on issues of importance. Interestingly, the percentage of stakeholders from across the total community who rated regular communication as very important increased significantly from 49% in 2007 to 65% in 2010. This has resulted in a significant decrease in the somewhat important rating (from 36% to 21%). This is likely to be the result of an increased priority being placed on communication, in the context of increased awareness within the community of likely closure dates and discussions.

Interestingly the qualitative research in this study has shown that the word “closure” itself has negative connotations among the community. Some respondents feel that it may obscure some of the good things that may come from initiatives as a result of the closure. A number of the closure visioning workshops cited concerns that the negative language of “closure” would impact people’s opinions and decisions, particularly those people outside the community who may be making decisions to invest in Kalgoorlie-Boulder. Communication does not only have to focus on the negative impacts (which are inevitable) but other key themes could also be explored along the

lines of “celebrating our history together” or “the legacy we leave” or more broadly for the community, “transitioning to a new future”. There is excitement and a lot of energy in discussion about alternative uses of the pit, so this could be couched as a new era of opportunity for Kalgoorlie-Boulder with everyone invited to share in this exciting phase.

Consultation fatigue and being over consulted without seeing any action is a danger for KCGM. 2021 is not far away and some people are concerned that things are not moving quickly enough.

“Eleven years is not that long. KCGM can’t consult forever; they will need to act on some things as soon as possible.” (Mine closure focus groups)

“Consultation has been good, but consultation isn’t planning.” (In-depth interviews)

The KCGM 2009 Closure Survey identified that people realise the importance of planning for the future, with only 13% agreeing or strongly agreeing that 2021 is too far away to seriously consider closure issues.

Recommendations

- Consider framing the next steps of the closure plan around articulating a vision for closure that includes agreed strategies under each of the key focus areas, perhaps titled “our legacy plans” or something to that effect to utilise a more positive tone and encourage a sense of positive action.
- Work with the GEDC and City of Kalgoorlie-Boulder on their current initiatives to commence a blueprint for Kalgoorlie-Boulder into the future.

5.2.6 Economic

From an actual impact perspective, there is no doubt that closure of the Super Pit would have a notable impact on Kalgoorlie-Boulder, particularly in the short term. Especially considering direct total economic value added to the Australian economy is currently estimated to be in the vicinity of A\$519.6 million (Newmont, 2008), with over half of this spent locally via local suppliers, local payroll and community sponsorship or donations.

This loss would be evident through the loss of employee base, likely short-term impacts on property sales and prices and impacts on contracting and retail, accommodation and hospitality businesses within the community. That said the degree of likely economic impact will be based on the current economic climate within the community (including the stage and feasibility of other planned and existing mining activity within the region, the outcome of the Transport Hub and tourism diversification strategies and the ability to stage closure activities over a period of time.

Within the community at present, there appear to be two trains of thought regarding the economic impact of mine closure on Kalgoorlie-Boulder. One school of thought is that Kalgoorlie-Boulder is a strong community that is a lot more than just home to KCGM and the Super Pit and so will survive mine closure due to other successful industries and companies, even though there are certain to be changes as a result.

There is life after the Super Pit – KCGM have contributed to economic diversity but when they leave it will not be the end of the world. (In-depth interview)

Kalgoorlie is not a ‘one-mine’ town (Closure visioning workshop)

The second school of thought is more pessimistic, and believes that uncertainty about the future and the redundancies made as a result of closure will mean that many people leave town,

reducing Kalgoorlie-Boulder's population and having flow on effects to the services and facilities in the city.

(Closure risk or concern) Credit rating of Kalgoorlie residents – will banks lend to people if the pit is closing in 10 years and a mortgage term is 30 years? This affects primary homes and investment property. (Closure visioning workshop)

(Closure risk or concern) Actual start of redundancies will be much earlier (2014) will need to be careful and clear with this message. (Closure visioning workshop)

(Closure risk or concern) Kalgoorlie becomes a ghost town – significant loss of population and/or personal wealth. Need to maintain continuity of investment. (Closure visioning workshop)

(Closure risk or concern) Investment Risk – Eastern States/outside investors very closely tie the fate of the Super Pit to investment in and the fate of Kalgoorlie. (Closure visioning workshop)

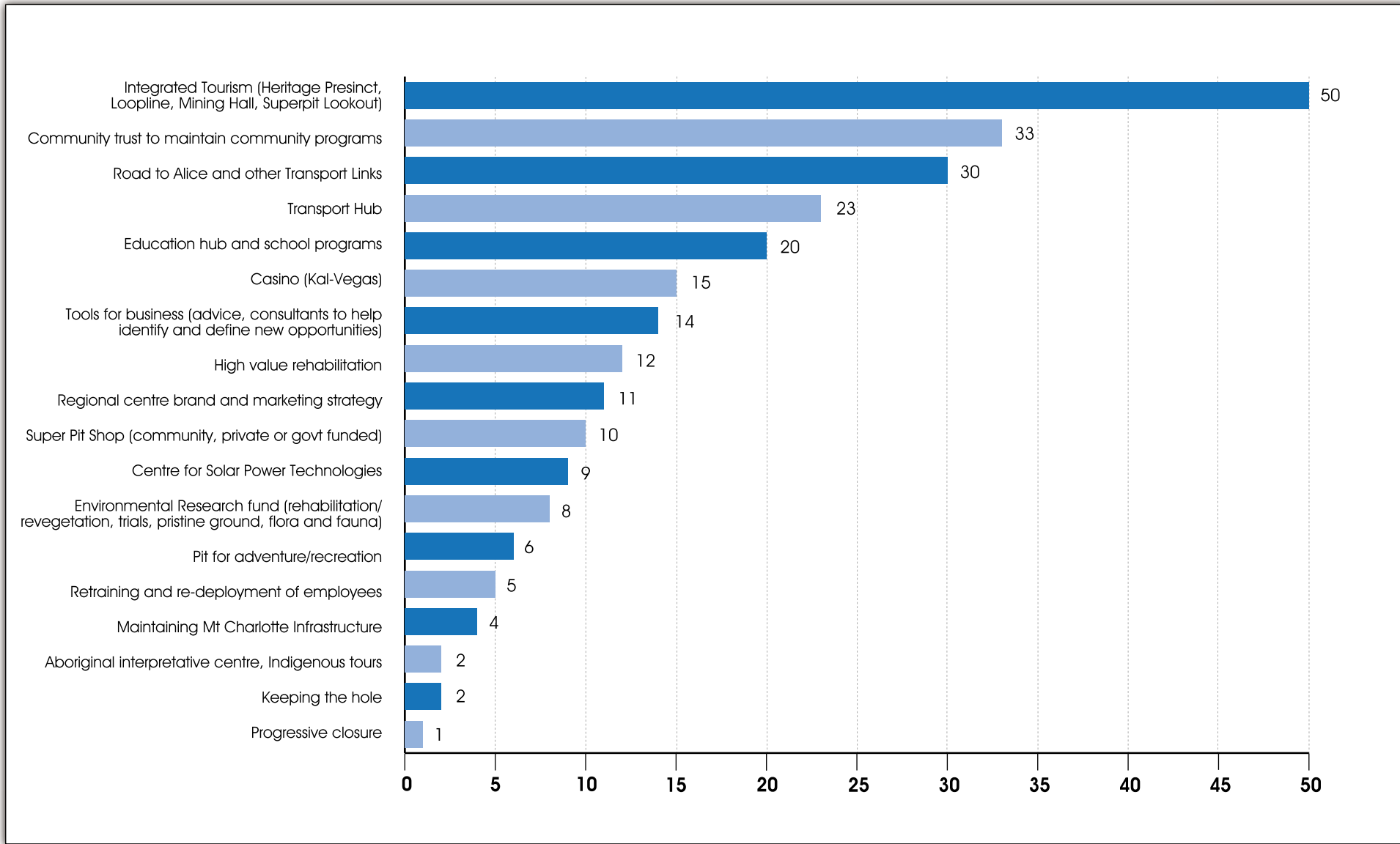
The majority, if not all, of the workshop participants felt that a transition to closure with staged redundancies and specific programs in place to assist employees and their families find alternative work or retrain in other industries and assistance for businesses to plan well in advance for 'life without KCGM'. When considering future options for KCGM's employees and contractors after the Super Pit's closure, the nature of the current skills shortage provides potential for employees to find work within new and existing mining operations within the region. These may include, but are not limited to:

- BHP Billiton Nickel West.
- Avoca Resources.
- Norton Gold Fields Paddington Mine.
- AngloGold Ashanti Tropicana Project.

The fickle nature of the gold market and the possibility of early, unplanned closure was also a concern for some participants. The spectre of Ravensthorpe is very much still on people's minds as an example of how not to close.

Most workshop participants, however, are confident that with enough warning and good planning, Kalgoorlie will make a relatively easy transition to alternative sources of income. Interestingly, when asked if the closure of KCGM would significantly affect their businesses, all contractors stated that KCGM is not their only client and while it would leave a hole, with enough planning time, they would be able to fill the hole and their business should not be unduly affected.

KCGM is seen by respondents to have an important role in facilitating this transition and assisting the community to improve economic diversity within the region – whether this is funded directly by KCGM through initiatives such as a community trust, employee re-employment and training initiatives, the "hole" and lookout are maintained and established as a ongoing drawcard or an environmental research fund to working with government agencies to ensure a transport or education hub is put in place and that tourism initiatives are integrated, appropriately analysed assessed and are holistic in their approach. Figure 5.4 summarises the "closure" initiatives that closure workshop participants would "put their money on" to ensuring the future success of the region. These are ranked in priority order with a score calculated by the level of spend dollars (1=smaller initiative, 2=medium initiative and 3=significant spending) and number of mentions. It is indicative only but demonstrates the key themes noted above.



Source: Closure Workshops 2010



Job No:
8121
File Name:
8121_01_F05.04_GL

KCGM
2010 Social Impact Assessment



Closure Programs Workshop Attendees would "Put Their Money on"

Figure No:
5.4

Recommendations

- Define KCGM funded and appropriate mechanisms and governance strategies for economic legacy initiatives (e.g. a community “futures fund”, the lookout and pit development, development of a tools for employees and local business programs to help these stakeholders define new opportunities and continue to support and work with heritage and tourism groups to realise the Loopline Railway Project and other integrated tourism initiatives).
- Work with the City, GDEC and other agencies on the realisation of future strategies such as the Transport hub through active participation in appropriate committees and planning sessions
- Consider discussion with other companies mining in the local area regarding future employment of local KCGM employees who could possibly be made redundant with mine closure.
- Work with Indigenous employees, trainees and the local communities to ensure appropriate re-employment and re-training can be sought within appropriate timeframes.

5.2.7 Land and Property

It is difficult to gauge the actual impact of mine closure on land values, as this will be highly dependent on factors such as the success of re-employment programs, how gradually mine closure is phased and the success of other industries such as tourism.

One of the main community concerns surrounding mine closure is the devaluation of property prices. There are mixed perceptions regarding the impact on land values. It is envisaged that announcements regarding mine closure may result in a knee-jerk reaction in the short-term with a fall in property prices; however there is uncertainty about the long-term effect.

(Concern or risk) Property values falling – will they hold value to closure and beyond? (Closure visioning workshop)

(Concern or risk) Property prices falling and people deciding not to buy houses now. (Closure visioning workshop)

As previously discussed in Section 5.2.6, Economic, the possible closure of KCGM has influenced people’s decision-making regarding purchasing a new home (49% yes or maybe influenced) or purchasing an investment property (58% yes or maybe) in the area. The KCGM 2009 Closure Survey shows that 96% of people expect local property values to be affected.

In addition to property values KCGM own a number of properties within the community, particularly those within the 400 m radius of the site. The future of these properties, including assessment of future hazards, maintenance and disposal, will need to be considered as part of the overall closure strategy. In addition, the future re-uses of mining infrastructure (particularly Mt Charlotte) for tourism and heritage projects will need to be defined.

In terms of near neighbours, the future of Williamstown will also need to be clarified and articulated in consultation with these residents. Neighbouring pastoralists could be impacted upon in terms of future environmental risk exposure such as unplanned tailings seepage and ongoing monitoring requirements and will need to be consulted in more detail on these issues and appropriate environmental plans developed.

Recommendations

- Initiate closure visioning discussions with Williamstown residents and neighbouring pastoralists so that these initiatives can be included in closure planning.
- If disposal of KCGM owned property is a component of the closure plan ensure this is done over an extensive period of time to reduce dramatic impacts on local supply, demand and real estate pricing
- Extend the asset management plan in the closure plan to clarify the future of highlighted mining infrastructure appropriate for preservation, a disposal, and maintenance or re-use plan for all other infrastructure and assets.

5.2.8 Safety and Emergency Services

KCGM's main focus is to create safe and stable landforms that are non-eroding. Based on KCGM's Conceptual Mine Closure Strategy, the main measures for ensuring safety post-closure are to (KCGM, 2009d):

- Ensure all potential access points to the pit are sealed off to prevent unauthorized entry.
- Ensure abandonment bunds, or other structures acting as bunds (e.g., waste dumps, noise bunds) will remain intact, resistant to erosion and dust generation providing an effective barrier to the pit.
- Ensure no significant risk of major subsidence or slipping of the pit walls.
- Ensure all potential subsidence or slippage hazards are fenced off.

One of the main desires expressed in the closure visioning workshops was the ability to use the pit for a variety of purposes, not just look at it. There were seen to be many advantages to letting people access the pit, provided it was safe, including opportunities for new businesses, training, tourism, recreational activities and as a deterrent to vandalism and the like. Detailed costing, risk assessment and liability considerations will need to be initiated in this area and the outcomes articulated early to avoid challenges in expectation management.

"I think one of the most important issues surrounding the pit closure will be making the area safe for those many years down the track. Being so close to town it is important to keep the area safe."
(KCGM 2009 Closure Survey)

Recommendations

- Seriously investigate opportunities for future access to and uses of the pit and actions required to make the pit, or part of the pit, safe for these uses. This needs to include detailed costing, risk assessment and liability considerations.