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| Independent engagement with the Costerfield community regarding the antimony mine  Report to Minister for Industry and Minister for Energy and Resources  **Department of Economic Development, Jobs, Transport and Resources** |

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**Document review and authorisation**

**Job Number: 2-D-62**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Doc. Version | Final/Draft | Date | Author | Reviewed by | Quality check | Release approved by | Issued to | Copies |
| 1.0 | Draft | 2/6/2015 | C. Flanagan-Smith  N. McGuckian | S. McGuinness | P. Mawson | N. McGuckian | S. Williams | 1 |
| 2.0 | Final | 9/6/2015 | C. Flanagan-Smith  N. McGuckian | N. McGuckian | M. McIntosh | N. McGuckian | Minister D’Ambrosio | 1 |
| 3.0 | Final | 15/09/2015 | C. Flanagan-Smith | N. McGuckian | - | N. McGuckian | Minister D’Ambrosio | 1 |

Note: (e) after number of copies indicates electronic distribution

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Executive summary

As a result of the continued hostility between stakeholders associated with mining at Costerfield, Minister D’Ambrosio, the Minister for Industry, and Minister for Energy and Resources, engaged RM Consulting Group (RMCG) to consult with the Costerfield community to seek a greater understanding of community concerns and advise on appropriate responses to those concerns.

The township of Costerfield, with a population of less than 200, is located in central Victoria. It is within the municipality of the City of Greater Bendigo, approximately 100 kilometres north of Melbourne and ten kilometres north east of Heathcote. Originally settled for farming; the area has been mined intermittently for 150 years.

Mandalay Resources is the current owner of the mine, and it operates the Augusta Mine, Cuffley Lode, and the Brunswick Processing Plant, where it processes antimony in the form of stibnite.

Two major changes at the mine triggered the current tensions at Costerfield:

* Over a year ago, a new mobile crusher was installed at the Brunswick Processing Plant, leading to complaints about increased volumes of dust production.
* A new evaporation facility was proposed and approved near Splitters Creek, leading to a range of community objections and complaints about impacts on water and property values.

We compiled a profile of the community and their concerns to illustrate the variation that exists within the Costerfield community, categorising households according to their level of concern and what they are concerned about.

As shown in Table 1-1, one quarter of households are very concerned, one third of households are moderately concerned or have some concern, and nearly 50 per cent of households are either not concerned or satisfied with how their concerns are being handled.

Table -: Summary of concerns

| Level of concern | Number of households | % |
| --- | --- | --- |
| Extreme frustration and anger leading to long term conflict | 5 | 14 |
| Significant, long term discontent with government and mine approach to community concerns | 4 | 11 |
| Moderate concern about water quality, unhappy with process, confused about reporting and communication | 5 | 14 |
| Some concern about water quality, unhappy with processes | 5 | 14 |
| Some concern about water quality, happy with processes | 2 | 6 |
| Minor concern – like to be kept informed | 2 | 6 |
| No concern | 13 | 36 |
| Total | **36** | **100** |

Having listened to all concerned community members, we have found that there is a distinction between people’s primary concerns about environmental or health impacts and people’s secondary concerns about communication, information processes and so on.

#### Primary concerns

* The effects antimony has on human and animal health, specifically:
  + - Human health
    - Animal and insect health
* Dust levels are higher and may be contaminated with antimony
* Splitters Creek evaporation facility, specifically:
  + - Dissatisfaction with the approval
    - Concern about future evaporation requirements
* Ongoing noise concerns
* Impacts on ground and surface water
* Mine water on roads
* Property values
* Conflict within the community eroding community spirit

#### Secondary concerns

* The complexity of the situation, specifically:
  + - Complexity of primary concerns
    - Complex history at Costerfield
* Community engagement and conflict resolution processes, specifically:
  + - Inadequate community engagement
    - Lack of problem solving to address concerns
    - Government bodies working without coordination
    - Mandalay Resources and predecessors have generally communicated and engaged poorly with the local community.
    - Inadequate communication of scientific information
    - Inadequate operation and structure of the Environmental Review Committee
* Lack of trust in both government and mining advice:
  + - Perceived conflict between regulation and facilitation of mining
    - Conflicting advice from outside people
    - Concern about the independence of consultants
* Lag time between reporting of health concerns and finalisation of Golder Associate’s Health Risk Assessment

#### Conclusions

Clearly, the situation at Costerfield is complex, with many causes and levels of concern across the community. However, there are three issues that we conclude are fundamental to current community concerns:

* Dust is the biggest cause of current community concerns. If this issue had been dealt with collaboratively with the community when it first arose, many of the current concerns would not exist.
* Staff of government bodies have not adequately followed up or coordinated responses to community concerns.
* Mine owners and government bodies have conducted community engagement at the most basic level, *Inform*, rather than engaging more purposefully to understand community concerns and engage them in solutions.

The implication of this is that government and Mandalay Resources have not satisfied the needs of the community when issues were relatively small – leaving a vacuum in which uncertainty and frustration have grown.

#### Recommendations

A more harmonious atmosphere in the Costerfield community can only be achieved by addressing both primary and secondary concerns: threats to environmental and human health, and the processes by which the government and Mandalay Resources communicate and work with the community. The following recommendations will address the current concerns and help prevent future issues.

| Group of recommendations | Recommendation |
| --- | --- |
| Adopt collaborative approaches | * Recommendation 1: Develop solutions in collaboration with communities |
| Resolve current secondary concerns | * Recommendation 2: Improve listening and communication processes * Recommendation 3: Offer ongoing mediation to households that have long-term and extreme concerns * Recommendation 4: Appoint a Community Advocate to solve problems * Recommendation 5: Develop regulator communication, regulatory and problem solving skills * Recommendation 6: Review the operation and structure of the Costerfield ERC * Recommendation 7: Mandalay Resources improve their standard of community response |
| Resolve current primary concerns | * Recommendation 8: Minimise the dust from the crusher * Recommendation 9: Communicate results of health assessment and dust management * Recommendation 10: Carry out an independent review of the groundwater investigations * Recommendation 11: Provide environmental flows to local creeks |
| Prevent future concerns | * Recommendation 12: Improve listening and communicating processes across government and industry * Recommendation 13: Encourage appropriate behaviour by all parties * Recommendation 14: Mandalay Resources collaboratively develop a long-term strategy for environmental management |
| State-wide recommendations | * Recommendation 15: Develop a senior Community Advocate team for mining concerns * Recommendation 16: Review the operation and structure of ERCs * Recommendation 17: Earth Resources Regulation and the EPA work more closely * Recommendation 1: Develop solutions in collaboration with communitiesRecommendation 18: Create greater separation between Earth Resources Regulation Victoria and Energy and Earth Resources |

# Introduction

This report is the result of an independent investigation conducted by RM Consulting Group (RMCG) for The Honourable Lily D’Ambrosio, Minister for Industry, and Minister for Energy and Resources. We have written this report to give the Minister a thorough understanding of the community concerns associated with mining operations at Costerfield and to recommend approaches to resolve these concerns.

The current concerns at Costerfield are not uncommon; misunderstanding and hostility between different groups is a feature common to all forms of social organisation, not least in mining communities. Though common, this situation involves a great deal of complexity and to resolve it we need to understand the needs and concerns of all stakeholder groups. Therefore, for this investigation, we examined the history and perspectives given by community members, agency representatives, mine staff and other relevant stakeholders.

This report presents a snapshot of the Costerfield community and its concerns with mining to provide context for the current day issues. We then describe the range of concerns of the community and the extent to which they are shared within the community. The concerns are presented in two sections, firstly the environmental and human health concerns are examined and this is followed by a secondary group of concerns relating to communication, information and complaints processes.

The report concludes with a series of recommendations to address existing concerns and to prevent future issues. The recommendations deal specifically with the concerns of the Costerfield community, however some recommendations will have application for other communities with adjacent mines elsewhere in Victoria.

# The Costerfield community and mining

## Community snapshot

The township of Costerfield is located in central Victoria; within the municipality of the City of Greater Bendigo, approximately 100 kilometres north of Melbourne and ten kilometres north east of Heathcote (Figure 2‑1).

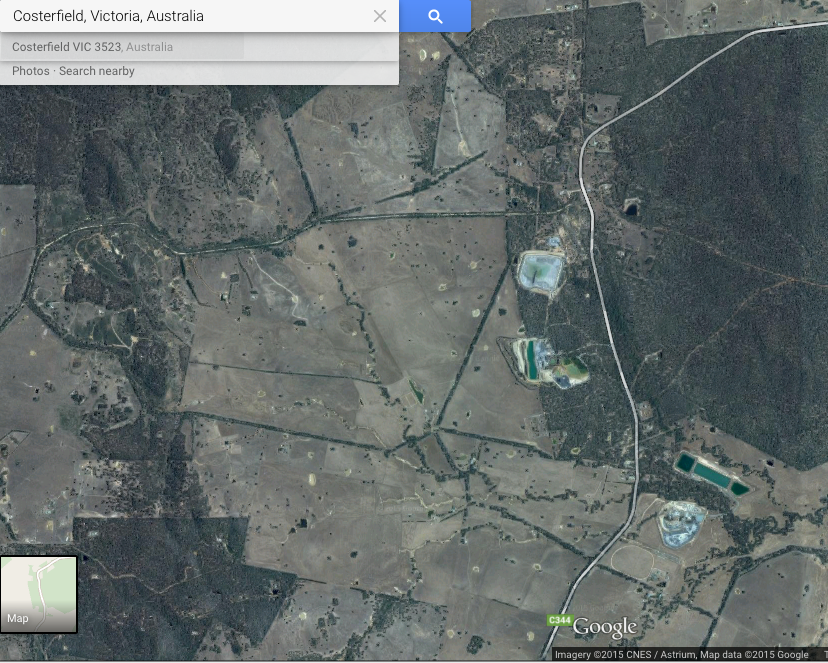


Figure ‑: Location of Costerfield township in Victoria, R: Aerial map of Costerfield (Google 2015)

The Costerfield area has a small population (less than 200) with around 40 households within three kilometres of the mine. The residents of Costerfield are reliant on Heathcote and Bendigo for access to most goods and services.

The area was originally settled for low intensity farming and the town was built when mining of stibnite and gold began in the late 1850s. Today, the predominant land uses are agriculture and mining. Mining has occurred intermittently over the last 150 years. Residential, commercial and recreational infrastructure development has been very limited. The Puckapunyal Military Area is east of the Costerfield township.

## History of mining

Open cut mining commenced in the Costerfield area in the 1860s. Open cut mining was most productive between 1860-63 and 1904-23. The area was mined intermittently until the 1970s when extensive exploration and improved technology led to the discovery of the Augusta deposit in 1975.

AGD Mining Pty Ltd (AGD) was given a permit in 1995 to construction of a processing plant to rework tailings and the oxide portion of the Brunswick deposit, which was mined by open pit method. AGD first developed the Augusta ore body as an underground operation in 2006. However, reportedly due to falling mine profitability associated with a downturn in the antimony price during the Global Financial Crisis., the mine was shut down in 2009.

Mandalay Resources purchased the mine in December 2009 and discovered the Cuffley Lode in 2011. At present, Mandalay Resources Costerfield operates the Augusta Mine and the Cuffley Lode, while processing of antimony, in the form of stibnite, and gold occurs at the Brunswick Processing Plant (Figure 2‑2).

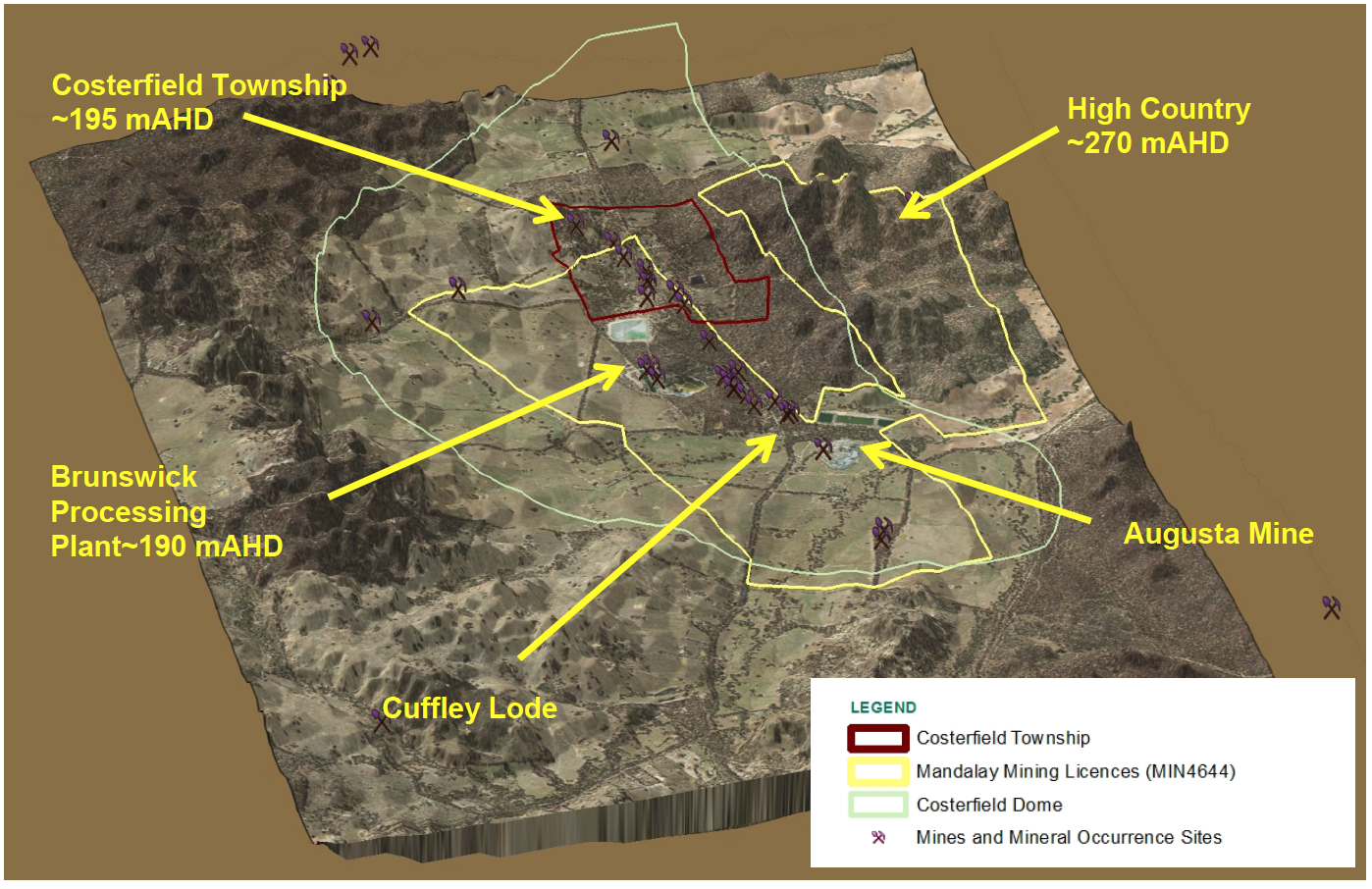
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Figure ‑: Topographical plan showing the Costerfield township, current active mine sites and the extent of Mandalay Resources’ mining licence (Golder 2015)

## Recent events leading to current concerns

Two major changes at the mine triggered the current tensions at Costerfield:

* Over a year ago, a new mobile crusher was installed at the Brunswick Processing Plant, leading to complaints about increased volumes of dust production.
* A new evaporation facility was proposed and approved near Splitters Creek, leading to a range of community objections and complaints about impacts on water and property values.

It is important to note that these changes to the mining operations did not happen within an otherwise happy community, they happened within a community with members who had a history of concern regarding the mine.

Over the course of the ensuing months, community groups most concerned about dust and the Splitters Creek facility had increasingly tense interactions with Mandalay Resources and government staff. They have also contacted the media to share their worries and allegations about the impact of antimony mining on the local people, livestock and environment.

In April 2014, the then Minister for Energy and Resources convened an Intergovernmental Steering Committee to address the problems being reported at Costerfield. The committee engaged Golder Associates (Golder) to conduct a Rapid Risk Assessment to test air, soil and water across the township. The first round of testing showed that local drinking water tanks contained water with concentrations of antimony above the Australian Drinking Water Guidelines (ADWG). As a result, Mandalay Resources offered to pay for all households’ tanks to be cleaned and refilled with Heathcote town water, which was taken up by 25 households.

In May-June 2014, the results of community members’ urine tests indicated that levels of antimony were well above health guidelines. The results of these tests are now doubtful due to confirmed laboratory errors.

Despite the doubt about the urine testing results, the then Department of Health (now Department of Health and Human Services, DHHS) advised the Costerfield community to take the following precautions:

* *Drink water that complies with the drinking water standard*
* *Reduce indoor dust*
* *Reduce soil exposures (e.g. replace soil in play areas and garden beds)*

Golder is now conducting a Comprehensive Health Risk Assessment to determine the likely health impacts, pathways of ingestion, and safe intake levels. In the meanwhile, Mandalay Resources is supplying free bottled water on request to all households within a 3km radius of the Costerfield Hall.

Community spirit in Costerfield has been damaged by the conflicts that have arisen. Anger in the community is, in some cases, being directed at other community members. In other instances, anger is being related to the media, local government and state government departments and directly to the Minister.

As a result of the continued hostility between stakeholders associated with Costerfield, Minister D’Ambrosio engaged an independent facilitator to seek a greater understanding of community concerns and advise on appropriate responses to those concerns.

# The scope, method and independence of the investigation

## The independent facilitator

Nigel McGuckian is the lead investigator on this project. Nigel McGuckian (B.Ag.Sci. (Hons), Dip. Ed, CPAg, MAIAS, MAAAC, MAICD)) is a Senior Fellow at RMCG with over 25 year’s experience working with businesses and communities. He has delivered training in governance, group skills and strategic planning. Special fields of expertise include consultation, mediation, social research, education and training and facilitating farmer discussion groups. Nigel managed major consultation processes for the Murray Darling Basin Authority on the impact of purchasing water allocation. Nigel is well regarded within the region for his knowledge of rural communities.

Nigel is supported by Claire Flanagan-Smith (B.Env.Eng (Hons)), a Senior Consultant at RMCG with over 10 year’s experience working with rural and regional organisations and communities. A qualified Environmental Engineer, Claire merges a highly developed understanding of human behaviour with a strong grasp for technical considerations. Claire has a strong knowledge of the region derived through her consulting work, which includes regional strategic planning with the Loddon Mallee Regional Development Australia committee and community consultation with local and state government.

## The independent facilitator’s scope

The scope of this work, as an independent facilitator, is to engage with the Costerfield community to seek a greater understanding of community concerns and develop appropriate responses.

#### Project objectives

The objective of the project is to assist the Victorian Government to understand and respond to community concerns regarding the management of antimony in the local environment. Specific objectives are to:

* Clarify particular concerns regarding elevated antimony levels in the community
* Clarify community members’ beliefs regarding the extent to which the Mandalay Resources mine has contributed to elevated antimony levels
* Clarify what community members believe is the role of the Victorian State Government in relation to regulation
* Clarify what the Victorian Government can and can’t do to respond to community concerns
* Establish whether community members are satisfied with the form and content of community engagement activities undertaken by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR)
* Identify appropriate or preferred means for DEDJTR to share information with community members
* Identify community preferences for the ongoing management of antimony levels at Costerfield

Note – the scope of the project was broadened to include all environmental and human health concerns.

#### Project deliverables

Project deliverables will include:

* An agreed schedule of engagement activities
* A report that will quantify community concerns and provide recommendations for ongoing management

## Method

The methodology used in our investigation has involved:

* Reading and analysis of relevant background materials including media reports, consultant reports, government guidelines and written materials including communication between stakeholders.
* Site visits to understand the physical layout of the facilities and households associated with community concerns
* Qualitative social research methods including:
  + - In-depth interviews with all stakeholders, repeated over time, and wherever possible conducted in person. Stakeholders included community members, mine management and government representatives
    - Observation of one environmental review committee (ERC) meeting.
* Analysis has been conducted using the grounded research method and stakeholder analysis tools, as described in Appendix 1.

#### A note on the consultation database

In preparation for this investigation an initial database of Costerfield community members based on the water-sampling list was provided by the state government. This database does not represent the entire community, rather households within three kilometres of the mine site. Additional community members were contacted following the community meeting or through referrals from other community members and these people were added to the consultation database.

Everyone on the consultation database was contacted, however a number of households either weren't contactable or not living at the specified address. In two cases, it was not possible to arrange a suitable time for an interview. Also some people stated they were not concerned and chose not to be interviewed.

## Independence and approach to the investigation

RMCG has been engaged by DEDJTR as an independent consultant reporting to the Minister. RMCG has never been engaged by Mandalay Resources.

At the initial meeting with the community, Nigel McGuckian committed to treat the community with respect and to be open and honest in all dealings with the community.

# Profile of concerns

We have compiled a profile of the community and their concerns to illustrate the variation that exists within the Costerfield community.

We were able to categorise households according to their level of concern and what they are concerned about. It is clear the community comprises a range of subgroups ranging from those who are very concerned through to those who have no concern.

As shown in Table 4-1, one quarter of households are very concerned, one third of households are moderately concerned or have some concern and nearly 50 per cent of households are either not concerned or satisfied with how the issue is being handled.

A full description and overview of these groups is given in Section 7.

Table -: Summary of concerns

| Level of concern | Number of households | % |
| --- | --- | --- |
| Extreme frustration and anger leading to long term conflict | 5 | 14 |
| Significant, long term discontent with government and mine approach to community concerns | 4 | 11 |
| Moderate concern about water quality, unhappy with process, confused about reporting and communication | 5 | 14 |
| Some concern about water quality, unhappy with processes | 5 | 14 |
| Some concern about water quality, happy with processes | 2 | 6 |
| Minor concern – like to be kept informed | 2 | 6 |
| No concern | 13 | 36 |
| Total | **36** | **100** |

# Primary concerns

## Understanding primary causes of concern

To resolve concerns and find solutions, it is important to firstly understand the full breadth of community concerns. Having listened to all concerned community members, we have found that there is a distinction between people’s primary concerns about environmental or health impacts and people’s secondary concerns about communication, information processes and so on.

In this section, we describe the primary concerns of people in the community, with some direct quotes to further illustrate the nature of those concerns. Secondary concerns are discussed in Section 6.

We understand Costerfield community members have raised the following primary concerns over the past two years.

## The effects antimony has on human and animal health

Some community members in Costerfield are concerned about the potential effects that antimony in the air they breathe and water they drink could have on their health, the health of their animals, and the value of their properties. Those who are concerned are either uncertain about the effects of antimony on their health or close to certain that it is damaging them.

As the comprehensive Health Risk Assessment by Golder is not yet complete, these community members are becoming more anxious at a perceived lack of precautionary dust management.

The lack of final and clearly communicated messages is causing confusion and frustration within the Costerfield community.

“You have been testing for months, when are you going to fix the problem?”

#### Human health

In mid-2014, after reporting their concerns about antimony in dust to various stakeholders, many community members had urine tests for antimony. The tests conducted in May and June 2014 showed elevated levels. This increased their concerns about dust.

Since then, the Department of Health and Human Services has discovered that those samples were contaminated by antimony in the testing containers. This contamination was reported to the community, but there is now confusion about the results and whose results are still legitimate. More recent tests collected by DHHS, have been within health guidelines, but these results are no longer trusted because of a variety of secondary reasons, as discussed in Section 7.

Despite clear advice from the department to drink bottled water, there is confusion in some households about why this is necessary, how long the recommendation stands and concern about whether it will be necessary in the long-term. Some people have minor concerns while others are extremely frustrated and annoyed by this advice and the nuisance and worry it has created in their lives.

Additionally, some people in the community think that they are hearing two contradictory messages, “there is nothing to worry about” and “drink bottled water”. Clearly, the advice to drink bottled water is a precautionary step in the absence of the final results of testing and investigation, but the community has had their confidence in the safety of their water weakened, and it will be difficult to regain.

“If there is not a problem, why the warning?”

#### Animal and insect health

There is concern amongst a small number of community members about the impact that inhaling and ingesting antimony may have on animal health. For example, some community members are concerned that their sheep are consuming antimony that has fallen on the soil they eat from. Others are concerned that their livestock may drink from antimony-contaminated dams. A beekeeper has moved his hives from a location near the evaporation facility to ensure his bees do not drink mine water.

In all of these examples, community members are, perhaps subconsciously, employing the precautionary principle by assuming that antimony will have a negative impact until they are shown evidence to the contrary.

## Dust levels are higher and may be contaminated with antimony

Community members have concerns about dust levels in the environment. The most recent concerns were raised by community members in December 2013, when they reported abnormally high dust levels in the environment. They are concerned that the mine is adding extra, antimony-laden dust into the air and compromising human health when inhaled or when it enters drinking water. This is not the first time that dust has caused concerns at Costerfield. Some government staff noted that dust played a role in the closure of the mine in 2009, prior to its purchase by Mandalay Resources.

“Dust lies at the heart of current and past health concerns in Costerfield.”  
 ~ Costerfield Antimony Issues Blog[[1]](#footnote-1)

People are concerned about whether the mine is contributing either to more dust or to more contaminated dust. There is uncertainty and confusion about the source of the dust. Again, there is a range of views regarding the source of dust in the air. Some people associate the raised dust levels directly with the mine and the crusher, while others see raised dust as a part of living in a rural town in summer.

There is also concern about the content of the dust. Golder’s Desktop Review shows that the local soils have naturally higher background levels of antimony. There is a residue of black dust on some properties in the township, where the natural soil colour is a red brown. Some community members are concerned about whether or not this dust is highly contaminated with antimony.

“Is the dust contaminated or not?”

The final Golder Health Risk Assessment should shed some light on both of these issues, but the results will need to be communicated by a party who is both trusted and seen as independent.

“We don’t know how much PM2.5 we are breathing.”

## Splitters Creek evaporation facility

As a result of expanding the mine’s underground operations, Mandalay Resources needed a new evaporation facility to deal with the excess groundwater dewatered from the site. A new evaporation facility was proposed and approved near Splitters Creek, which led to a range of community objections and complaints related to water supply, antimony contamination, aesthetics and property values.

A series of evaporative terraces ending in a storage dam has been built on a 30Ha paddock of farming land, a few hundred metres uphill from adjoining farming properties.

There is a high level of concern amongst landowners around the Splitters Creek evaporation facility about a range of impacts including noise during the construction of the facility, dust caused by construction, threat of contaminated overflow, threat of dust from the facility, loss of runoff into farm dams and decrease in property values as a result of all of the above.

The facility was approved and then unsuccessfully challenged at VCAT by the owners of an adjacent property.

Dissatisfaction with the approval

The process of approval of the Splitters Creek evaporation facility has led to major concerns. Although Mandalay Resources has followed all the necessary process and to achieve and retain approval for this process, we suggest that their community engagement, set at *Inform* on the IAP2 scale rather than *Involve* (seeAppendix 2), has contributed to a water disposal solution that is highly unpopular in the local community and has contributed to frustration.

It is also a failure of government that community members immediately surrounding the facility have not been adequately engaged in decisions about a facility of this magnitude.

By engaging more closely with the community to develop a more workable solution, a great deal of time, money and distress could have been saved.

Concern about future evaporation requirements

It is considered very likely by a number of stakeholders that Mandalay Resources will require greater capacity to dispose of mine water as it is likely to excavate deeper into its current mine sites. Community members are concerned that Mandalay will either require another evaporation facility or expand the Splitters Creek facility when this happens.

## Ongoing noise concerns

Some community members are concerned about noise from the mine and the construction of the Splitters Creek evaporation facility.

*“They are making a hell of a mess and a hell of a din [at Splitters Creek].”*

According to community members, noise from the mine has increased in the last year or so. The noise is not constant; instead there are random loud noises as rock is dumped. This type of noise is difficult to regulate because it happens sporadically. The typical response by the mine to noise complaints is to send out a noise monitor. As this occurs after the incident, it is an almost redundant process. Therefore many community members do not bother reporting their concern to the mine, meaning that it is not resolved, further adding to their list of frustration with the mine operations.

This issue is confounded by the noises that come from the nearby Puckapunyal army base, for which the community has no recourse.

Without a constant noise monitoring system, it is not possible for any regulator to adequately assess the source, frequency and magnitude of noise events, meaning that resolution of this concern is not possible at present.

## Impacts on ground and surface water

Community members are concerned about the effect of ground water pumping on the ground water levels and subsequent flows in the Wappentake Creek. Community members strongly believe there has been an environmental effect, however this view is at odds with the consultant’s reports on ground water.

Some community members believe that the increase in amount of groundwater extracted to dewater the mine’s underground operations has been approved without an adequate study of environmental effects and controls. They are concerned that the dewatering is impacting on flow into local creeks and water access for farmers.

In response to community concerns, Mandalay Resources purchased a reverse osmosis plant and received permission from the Environment Protection Authority (EPA) to treat groundwater with such a plant to reduce salinity and other substances before discharging water into creeks.

Some community members dispute the assessment of the Wappentake Creek as ephemeral and the associated EPA advice to restrict flows from the reverse osmosis plant is a concern to those who would prefer to have a regular and reliable flow of water for livestock.

Some community members are concerned about the quality of the water that is running in the creek, reporting that the water periodically runs grey. They are concerned that the grey water is contaminated with heavy metals.

## Mine water on roads

Some community members have been concerned that dust suppression efforts by the mine were being done with water from mine dewatering. As a result, the practice of spraying roads and roadsides with mine water has been abandoned, along with the use of evaporative misters, however the community is concerned about the residual impact.

## Property values

Many community members are concerned about the impact that this suite of issues is having on the value of their properties. Some community members stated that they have had the property value on their rates notice reduced. Some community members are concerned they could not sell their property if they wanted to sell.

*“If I wanted to sell…. who would buy the house? I feel trapped.”*

## Conflict within the community

The range of attitudes and levels of concerns has contributed to conflict within the community. This is a concern to some community members who feel that community spirit has been eroded by ongoing conflict.

*“We have been accused of causing people to lose their jobs.”*

*“The community has been split since 1995/96.”*

Some community members in the “not concerned” group are angry with the concerned community members, who they accuse of making a fuss about nothing.

*“I am sick of hearing about it. There’s some who won’t be satisfied.”*

*“We used to play in those mullock heaps, there’s nothing wrong with us!”*

# Secondary concerns

## Secondary concerns

The primary environmental and health concerns of some community members described in Section 5 have been amplified by:

* The complexity of the factors that may be contributing to their primary concerns
* Failures in both mine and government community engagement and concern resolution processes
* Lack of trust in both government and mining advice
* Lag time between escalation of concerns and final health results

These secondary concerns are now further described.

## Complexity

Complex concerns

The environmental and health issues at Costerfield are complex because there are many concerns, with uncertainty and debate about their causes and impacts. Most of the concerns require scientific measurement and analysis that people who are not scientifically trained find difficult to understand.

“I am bashing my head against a brick wall.”

This complexity leads to misunderstanding and frustration between stakeholder groups. It also means that different beliefs are difficult to reconcile. Reaching agreement or reconciling conflicts in which complex issues are involved, requires time, trust, patience and excellent communication skills.

Complex history

Mining operations over the last 150 years have been both an economic driver for Costerfield and a source of frustration.

No one we spoke to was anti-mining, or suggested that this mine should be shut. Even the most concerned community members spoke about their support for mining as a local employer.

But a legacy of industrial mining has left many, mostly small, unrehabilitated mine sites around the area. According to the Golder investigations, these sites appear to be contributing to the elevated antimony levels, and are a constant reminder of the results of poor mining practice, regulation and rehabilitation compared to current standards.

## Community engagement and conflict resolution processes

During our investigation, we have discovered that the community engagement and conflict resolution processes at Costerfield are inadequate to deal with the complexity of the community’s concerns. The lack of timely and clear responses to community concerns has left a vacuum that has been filled by a range of expert views, rumours, internet searches or concerned community leaders, leading to distorted or inaccurate messages.

“We have had to learn how to look after ourselves.”

“It took two months to get results.”

This has increased many community members’ frustration and in some cases they have become aggressive. Similarly, community members now do not trust information that has been provided to them by government. The level of concern for some has reached a point where they suspect corruption in government departments.

Inadequate community engagement

Considering the IAP2 Public Participation Spectrum (see Appendix 1) mine owners and government bodies have conducted community engagement at the most basic level, *Inform*, rather than engaging more purposefully to understand community concerns and engage them in solutions. Even at this *Inform* level, engagement has not been adequate, with irregular communication.

“We’re next door to the mine and we don’t hear anything!”

“We don’t get a say, they just tell us what they’ve already decided.”

Failing to understand and address the needs of the community, even when those issues are relatively small, can leave a vacuum in which uncertainty and frustration grows. We understand this to be the case at Costerfield. Community members have sought outside advice, some of which directly contradicted the advice from Mandalay Resources and government bodies, leading to a situation where many locals don’t now know who to believe.

Lack of problem solving to address concerns

We have found that the processes and attitudes of many stakeholders have been inadequate, with a distinct reluctance shown by some department staff to follow the concerns of some community members through to a resolution. Many staff in government bodies have operated within their particular role, rather than working collaboratively to resolve concerns. We have heard many stories of community concerns being referred within and across departments. In other instances, some government staff appear reluctant to release information without the authority of more senior managers, indicating a risk management approach to communicating with the community.

As a result, some community members’ concerns have been left unresolved for months on end because no authority has taken responsibility for the concern and worked to solve the problem in collaboration with the community.

The lack of an accountable body that is authorised to seek resolution to community concerns appears to be the underlying cause of this situation.

Government bodies working without coordination or due care

Government bodies, including state and local government bodies, have clear responsibilities in relation to the regulation of mining, however our investigation has revealed a community perception that each body has operated rigidly within their particular scope. A summary of the concern resolution approach of government bodies, as assessed by concerned community members, is shown in in Table 6-1. Too many community members are having their communications ignored or forwarded on by government bodies. We experienced this phenomenon in our investigations, where direct communication with government was met with silence on at least one occasion.

The problem with government bodies operating in silos is that they cause people to ignore the big picture. During our investigation, we heard many stories where community members failed to get a response to their concern, received responses that were difficult to understand or had their request passed on to another body and then another.

“Nobody would communicate with us.”

“The government departments have been hopeless.”

From this situation we can only conclude that the staff of government bodies do not feel they have either the authority or the responsibility to follow up or coordinate a response to community concerns that are outside the scope of their role. Good management in state and local government demands that people work together to ensure the concerns of local communities are resolved.

Table -: Community assessment of concern resolution approach of government bodies and the mine

| Organisation | Role | Concerned community member assessment |
| --- | --- | --- |
| City of Greater Bendigo (CoGB) | *The CoGB is responsible for all issues relating to Planning Permit Conditions.*  *A CoGB councillor is the chair of the Environmental Review Committee.* | * Although the CoGB has carried out its legislated role, some community members have become frustrated because they see CoGB as responsible for supporting them to resolve their concerns, and this has not happened. |
| Department of Health and Human Services (DHHS) | *DHHS has a role in promoting and protecting general public health in accordance with the Public Health and Wellbeing Act 2008,* | * Some staff were considered to be proactive in the early stages of the current situation, but have now taken a back seat. * Showed some problem solving initiative when considering results of urine tests. * Some community members have been concerned about unclear messages regarding human health. |
| Earth Resources Regulation (ERR) | *Responsible for regulation of mining. Required to provide consistent and transparent licensing and tenement management regime, together with monitoring and enforcement that ensure these industries comply with their obligations and meet community expectations.*  *At Costerfield, ERR is responsible for the approved Work Plan and Licence Conditions pertaining to the mining and evaporation facility sites.* | * Seen as reactive rather than proactive on matters of concern to the community. * Considered to be on the side of the miners, rather than an advocate for protection of things valued by the community. * Conflicting advice received from different staff members * Considered to provide overly formal and legalistic response to community concerns rather than targeted and human scale engagement. |
| Environment Protection Authority (EPA) | *Whilst the EPA has a regulatory role on air, water and noise pollution outside the mine, it appears that EPA defers to ERR when community concerns are raised, providing advice rather than working directly with the mine.* | * Is considered to have been too passive in relation to community concerns, preferring to provide advice to the mining regulator rather than investigating concerns. * Some in the community believe the EPA should play a stronger role and act as an independent protector of the environment. |
| Goulburn-Murray Water (GMW) | *Oversee groundwater management and provide advice to ERR regarding approvals.* | * Community members have found GMW unresponsive to their concerns, instead referring them to the ERR. |

Mandalay Resources and predecessors

Across the history of the operation of the Costerfield mine, mining enterprises have generally communicated and engaged poorly with the local community. When Mandalay Resources took over from AGD Operations in 2009, it inherited a legacy of community discontent with the mine.

Opinion is divided about the approach Mandalay Resources has taken to dealing with community concerns. Some community members will no longer deal with Mandalay Resources due to their anger and frustration, while others find them accommodating and helpful. The Environment and Community Adviser from Mandalay Resources has been well accepted and is respected by the community. She has spent time talking with and listening to community when dropping off bottled water.

“She is great, always takes the time to have a chat.”

The current community team at Mandalay Resources are generally well regarded across the Costerfield community for their approach to community concerns. This has not always been the case with some previous staff and previous owners intensely disliked by some community members.

In the past, some complaints made by community members have been debated or ignored:

“I called them about the noise and they told me that I couldn’t have heard that noise.”

While this has improved since the appointment of a new Sustainability Manager and the Environment and Community Adviser, the community need to feel sure that their complaints are registered and resolved, if not by the mine, then by a government department. Some community members believe Mandalay Resources needs to be forced into changing their approach.

“The mine won’t do anything, unless the community makes them.”

It was clear during our investigation that some people in the community, those households at the “extremely frustrated” level of concern (see Section 4), are considered by Mandalay Resources and government as too difficult to deal with, because of their history of anger, outbursts and “unreasonable” requests. This group is now being ignored by the mine and put in the “too hard basket”. Other community members are seen as being favoured by Mandalay Resources.

“The mine won’t go near some members of the community.”

“They look after the squeaky wheel.”

Inadequate communication of scientific information

The information that has been provided to communities, including water testing results, community updates and health fact sheets, has been provided in written format and in most instances Golder and department staff have sat down with households to talk them through their results. We have found that this approach has worked for those who have both good scientific literacy and trust in the representatives. But many in this community have limited ability to accept scientific messages, particularly when those messages have qualifications.

*“I don’t understand the results.”*

*“No one gives you anything in black and white.”*

For example, the health message given by the Department of Health (now Department of Health and Human Services, DHHS) essentially says, “*The data shows that it is probably safe for you to drink your water, but we recommend that you don’t give it to your children, and until the Golder Health Risk Assessment is finished, we recommend you drink bottled water.”* This message makes some community members extremely anxious, because they see chemicals as either good or bad, rather than understanding antimony as something like alcohol: safe when small amounts are consumed, harmful above agreed levels.

The lack of a trusted advisor with good science communication skills has left space for outsiders to contribute opinions that contradict and undermine the efforts of government bodies and the mine to resolve community concerns.

Inadequate operation and structure of the Environmental Review Committee

Across Victoria, many mining communities have a local Environmental Review Committee (ERC). The purpose of an ERC is to review a mine or quarry’s environmental performance. Although the ERC has no legislative authority, its members have the power to follow up on issues of non-compliance or community concern.[[2]](#footnote-2)

In this investigation we were only able to attend one meeting of the Costerfield ERC, as meetings are run quarterly. Although the meeting we saw was conducted reasonably well, we understand that this is not usually the case. Reports from community and government representatives indicate the ERC is limited in its terms of reference (see Appendix 3) and meetings are poorly chaired, full of technical information about mine activities, and sometimes community members have expressed anger and frustration Generally the ERC has been a poor forum for resolving community concerns.

“The mine see the ERC as theirs.”

The meetings are run in a room in the Mandalay Resources site offices. During the last two years, some community members in conflict with Mandalay Resources have been banned from entering the site, and are therefore excluded from attending meetings.

As a result of these issues, the ERC has been a source of concern rather than a process for resolution of primary concerns.

## Lack of trust in government and mining advice

Perceived conflict between regulation and facilitation of mining

The Earth Resources Regulation Victoria staff, located as they are within the DEDJTR structure, are considered by many of the concerned community members as being interested in promoting or representing the mining company, and therefore being too biased to regulate the mine properly.

“They’re interested in getting more mining, they don’t want to hold them back.”

Some community members think that management of the mine is driven by economic factors, with little concern about the impacts on the environment.

“The regulators have never been doing what they are supposed to do.”

We appreciate that Earth Resources Regulation are not in the Energy and Earth Resources division, instead located in the Corporate, Planning and Compliance Services division. But a community cannot be expected to appreciate this separation, leaving the government open to speculation about bias. There is also a question of whether this separation is sufficient to reduce bias, given that the divisions ultimately report via the same channels.

The City of Greater Bendigo is also seen by some community members to be more interested in supporting mining than regulating adequately. This situation means that the most concerned community members do not trust the two bodies with the greatest responsibilities for responding to community concerns.

Conflicting advice from outside people

As mentioned in previous sections, a number of people outside the Costerfield community have provided opinions and advice to concerned community members. Some of this advice is exaggerated or misinformed, which misleads the community and increases their concern. Often this advice has been at odds with advice provided by government. Government advice is delivered with a cautious and qualified tone. While this is appropriate, it cannot compete for people’s attention with the other advice.

After talking to people across the Costerfield community, we feel that this outside advice is able to take hold because the other communication avenues are either too hard to understand or not trusted. To date, no one has reconciled these contradictory opinions and advice, meaning that many community members are having difficulty in knowing whom they should trust.

Concern about the independence of consultants

The concerned community members in Costerfield do not trust advice provided by consultants, particularly consultants from large consulting firms that also provide advice to mining companies. Concerned community members consider these consulting firms to be in the pocket of mining industry and therefore biased in their advice.

“[That firm] have done heaps of work for Mandalay, I don’t believe their report.”

This perspective has not been helped by the work of outside parties who have encouraged community members to distrust the results of consultant reports. This lack of trust in consultants leads to a general lack of trust in any expert opinion provided either by or to Mandalay Resources or government bodies or the consultants they hire.

## Lag time between concerns and finalisation of health assessment

Testing of water in the Costerfield community has involved a variety of regimes, with targets and frequency determined according to the proximity of households to the mine and their level of concern. Some households are having their drinking water tested each month while others are tested every four months. Golder provides a letter outlining the results of water testing to households and often meet personally with householders to discuss the result, albeit in a limited fashion, as they are not authorised to give health advice.

The amount of time between the escalation of community concerns about antimony and the finalisation of Golder’s Health Risk Assessment has created a period of uncertainty that has escalated concerns even further. People are uncertain when full results will be released, what the monitoring results mean and as a result, they are drawing their own conclusions.

The final results of both the water testing and dust monitoring are not yet available, as there is a necessary investigation period. Although the preliminary results from dust monitoring were presented to the ERC, two of the community representatives had left the meeting before Golder made their presentation. We believe it unlikely that the messages will filter through to the rest of the community, especially given that there is a significant difference between the community perception of the problem and the results of monitoring.

“Nobody is getting results of the dust monitoring.”

Although the process of feedback seems thorough, there is still frustration because people do not fully understand the significance or meaning of results. We think this frustration is caused by the lack of a trusted advisor with the authority to give advice.

# Overview of level and range of community concerns

Our analysis of community concerns leads us to conclude:

* Community concern varies quite significantly throughout the community
* The total number of households in the community is small and a personal approach to addressing community concerns is manageable
* The number of households with significant concern is small (<10) and a targeted and dedicated personal approach is manageable
* The proportion of households with no concern or some concern, but have relative satisfaction with processes, is just under 50 per cent

Table 7-1 provides an overview of the concerns of the Costerfield community.

We stress that although only 25 per cent of households have significant or extreme concerns, the level of frustration and anger for some community members is very high.

Table -: Profile of the community’s level and type of concerns

| Level of concern | No. of households | Description | Key concerns |
| --- | --- | --- | --- |
| **Extreme frustration and anger leading to long term conflict** | 5 | These community members are entrenched in unresolved conflict with Mandalay Resources and/or government officials. They do not trust Mandalay Resources or government, and have a long history of frustrating interactions with government and various owners of the mine. This group is composed of two main subgroups, based on their primary concerns, being dust and the Splitters Creek facility. | Human and animal health impacts from water, dust  Environmental impacts to groundwater and surface water  Splitters Creek evaporation facility  Anger with the mine and government |
| **Significant, long term discontent with government and mine approach to community concerns** | 4 | These community members have significant long-term discontent with government and various owners of the mine. They are very concerned about impacts to human health and the environment. They feel that these concerns have not been dealt with adequately. | Human health impacts from water, dust  Environmental impacts to groundwater and surface water  Location and design of Splitters Creek facility |
| **Moderate concern about water quality, unhappy with process, confused about reporting and communication** | 5 | These community members are moderately concerned about water quality and are unhappy with the process that government and/or Mandalay Resources have used to communicate or work with them. They are waiting for test results, and many are confused about reporting and communication about water quality. | Drinking water quality |
| **Some concern about water quality, unhappy with processes** | 5 | These community members have some concern about water quality and the process used to manage issues. They are aware of environmental issues, particularly antimony, and want more information. They are unhappy with the approach Mandalay Resources and/or government has taken. | Drinking water quality |
| **Some concern about water quality, happy with processes** | 2 | These community members are aware of the environmental issues, particularly antimony, and have some concern about water quality. They are happy with the process to manage the issues, and now waiting for water testing results and information. | Drinking water quality |
| **Minor concern - like to be kept informed** | 2 | These community members are not concerned about environmental issues, however they would like to be kept informed. | Desire to be kept informed |
| **No concern** | 13 | These community members are not concerned about environmental issues including antimony contamination. | None |

# Conclusions

Clearly, the situation at Costerfield is complex, with many causes and levels of concern across the community. However, there are three issues that we conclude are fundamental to current community concerns:

* Dust is the biggest cause of current community concerns. If this issue had been dealt with collaboratively with the community when it first arose, many of the current concerns would not exist.
* Staff of government bodies have not adequately followed up or coordinated response to community concerns.
* Mine owners and government bodies have conducted community engagement at the most basic level, *Inform*, rather than engaging more purposefully to understand community concerns and engage them in solutions.

The implication of this is that government and Mandalay Resources have not satisfied the needs of the community when issues were relatively small – leaving a vacuum in which uncertainty and frustration have grown.

The needs of the community that should have been addressed are:

* Containment of dust to the mine site and a clear understanding that dust will be contained to the mine site in the future
* Clear messages about effects on human health of antimony
* Management of dust on roads and no contamination of the environment from trucks
* Transparency and conforming to agreed environmental controls at Splitters Creek
* Trust in the assessment of environmental effects of groundwater pumping, and environmental benefits from flows in the creek
* A responsive noise monitoring and reporting system
* Compensation for loss of land value.

# Recommendations

A more harmonious atmosphere in the Costerfield community can only be resolved by addressing both primary and secondary concerns: threats to environmental and human health, and the processes by which the government and Mandalay Resources communicate and work with the community.

We have made 18 recommendations in five categories:

* Adopt collaborative approaches
* Resolve current secondary concerns
* Resolve current primary concerns
* Prevent future concerns
* State wide recommendations

## Adopt collaborative approaches

Recommendation : Develop solutions in collaboration with communities

We recommend that Mandalay Resources and Government regulators recognise the importance of collaboratively developed solutions and how they can be powerful in building trust in government agencies and lead to better results for both the mine and the community. This should be the underpinning philosophy for the response from the Minister. It seems one of the reasons the concerns exist is due to decisions being made with inadequate or lack of appropriate consultation/communication. The government should encourage a collaborative approach that genuinely seeks to develop solutions in collaboration with the community and Mandalay Resources.

Both the recently released *Public Participation in Government Decision-making: Better practice guide* and the community engagement guidelines for mining and exploration in Victoria are based on the International Association for Public Participation’s (IAP2) *Public Participation Spectrum* which defines public participation as the involvement of those affected by a decision in the decision-making process. At Costerfield, where trust needs to be rebuilt, both government and Mandalay Resources should be aiming to engage concerned community members at IAP2 level 4: Collaborate, “engage with the public on each aspect of the decision, including the development of alternatives and a preferred solution.” (VAGO 2015.)

The varying levels of concern amongst community members should guide both Mandalay Resources and the government on how they approach engagement. It is important to recognise that the level of concern varies significantly throughout the community. A small part of the community is very concerned and requires close personal attention to understand their concerns and develop cooperative solutions. In this way, solutions can be found and implemented early before concerns escalate.

As a first step, we recommend that the Minister circulate this report to all stakeholders who contributed to the investigation.

## Resolve current secondary concerns

Resolving the secondary concerns in Costerfield should be the first priority, closely followed by resolution of the primary concerns. This will build community trust and ensure there are appropriate strategies in place to prevent future issues.

From our experience working with communities, and from our understanding of this community, people in Costerfield will begin to feel trust in the government agencies if:

* There are clear mechanisms to report and respond to concerns, giving them confidence that their concerns are being heard and acted upon (some community members said how encouraging it has been for us to come and listen to their concerns)
* Mandalay Resources are both proactive and consistently responsive to community complaints
* The community has the ability to resolve long-term conflicts/complaints
* The community understands what is happening at the mine and in the environment
* The community understands the risks to human health

Recommendation : Improve listening and communication processes

Rebuilding trust requires immediate improvements to communication and complaints resolution processes. As a principle, Mandalay Resources and all other stakeholders should:

* Seek to understand concerns and take responsibility to resolve these concerns
* Respect community members by communicating with them in person and in writing in a timely and clear way

Later in this section, we have made recommendations for the improvement of the ERC and establishment of a Community Advocate at Costerfield. One of these must:

* Establish an accurate and current database of community members that records their contact details and concerns.
* Provide an update on the investigations to date
* Report on the time line for completion of investigations
* Take time to explain the science and test results to community members with low scientific understanding
* Implement a schedule of engagement activities and inform the community how this will be carried out

Recommendation : Offer ongoing mediation to households that have long-term and extreme concerns

We recommend that the Government offer an independent mediation service between Mandalay Resources and people who have long-term and extreme concerns, in line with the principles described in Recommendation 2. This is required to diffuse the difficult conflicts and long-term concerns. Some of these people have started a negotiation process through the mining warden, however preliminary work may be required to re-establish trust in the process. The mediator will require a high level of skill and experience with rural communities.

Recommendation : Appoint a Community Advocate to solve problems

We recommend that the Government immediately appoint a senior Community Advocate to support the Costerfield community while their current concerns are being resolved. This community needs a trusted advocate who explains the results of testing and investigations, quickly responds to concerns and works across government bodies to resolve complex problems. This position may be temporary and only dedicated to Costerfield in the short term, but we recommend developing a permanent team that plays this role connected to mining communities across Victoria, as discussed in Recommendation 15.

Recommendation : Develop regulator communication, regulatory and problem solving skills

It is the job of the mine regulator to act as the interface between the community and mining industry. That so many people in the Costerfield community have experienced perfunctory responses from government staff shows that Earth Resources Regulation staff need training in community engagement and conflict resolution. That community members have received conflicting advice about regulatory processes indicates that Earth Resources Regulation need to take a quality assurance approach to training and retraining staff on the content and intent of the regulatory framework that governs their work.

We recommend that Earth Resources Regulation conduct all-staff training on the regulatory framework, community engagement and conflict management, according to the principles in Recommendation 2. Improved community engagement skills, in combination with sound regulatory understanding, will allow Earth Resources Regulation staff to regulate the Mandalay Resource’s Community Engagement Plan and take action to resolve community concerns before they reach the heights seen at Costerfield.

Recommendation : Review the operation and structure of the Costerfield ERC

The current Costerfield ERC has terms that are too narrow, and it is not run well enough to cope with the complexity and level of community concerns associated with the operation of the mine.

We recommend improving the structure and operation of the Costerfield ERC, with a potential review of the ERC model used across the state. The aim would be to improve the ERC so that it:

* Meets more frequently. Quarterly meetings do not give community members sufficient time to identify, respond to and resolve complex concerns.
* Has a chair with skill in mediating and chairing complex decision making processes
* Focuses on problem solving and actively resolving mining related community concerns
* Has a broader terms of reference to give more consideration to resolution of concerns
* Consults more widely than the committee’s community representatives
* Communicates with the community following the ERC meetings

Recommendation : Mandalay Resources improve their standard of community response

We recommend that Mandalay Resources commit to maintaining and improving their community engagement efforts, using the principles described in Recommendation 2. Mandalay staff and management must commit to:

* Discussing long term plans for future development with the community
* Developing solutions in collaboration with the local community
* Setting and adhering to clear ground rules for interaction with community members
* Explaining conformation to VCAT conditions to the neighbours of the Splitters Creek facility

## Resolve current primary concerns

The current primary concerns of community members need to be resolved quickly and clearly to restore trust. Their resolution depends somewhat on the resolution of several secondary concerns, but they need to be acted upon without being delayed by resolution of secondary concerns.

Recommendation : Minimise the dust from the crusher

We recommend that the EPA and Mandalay Resources work collaboratively with concerned community members to investigate solutions that will help minimise the dust from the crusher and resolve their concerns. Although a number of measures have been taken, the community is not convinced these measures are effective. This could be either because the community was not engaged, or the measures are not effective.

Recommendation : Communicate results of health assessment and dust management

We recommend that the Government make a concerted effort to communicate the results of the dust monitoring, water sampling and Comprehensive Health Risk Assessment. In a community with a complex history and lack of trust, good communication requires someone to take the time to personalise the response and follow up concerns. We recommend that this be carried out at least twice:

1. In June 2015 to explain the results of dust monitoring to date
2. In August 2015 when all results are available and the health assessment has been carried out

This must be done with clear explanation of results and the implications for human health. Assistance from a Community Advocate to follow up concerns must be offered as part of this communication.

Recommendation : Carry out an independent review of the groundwater investigations

We recommend that the Government engage an independent, trusted expert to review the groundwater investigations at Costerfield, including review of the ephemeral status of Wappentake Creek. This expert should engage all affected residents in the review to give consideration to community members’ historical and anecdotal records and ensure their concerns are addressed.

The results of this investigation need to be clearly explained to all concerned community members.

Recommendation : Provide environmental flows to local creeks

We recommend that Mandalay Resources continue providing environmental flows to enhance the condition of local creeks, consulting with local residents about which creeks should have highest priority.

## Prevent future concerns

If future concerns are to be resolved appropriately, it is crucial that government provides community with a clear, responsive complaints resolution process.

We recommend that someone in government, ideally a senior Community Advocate (see Recommendation 4) is charged with coordinating or advising on engagement processes, for mining communities.

Currently, mining companies have requirements for community engagement under the Mineral Resources (Sustainable Development) Act 1990 (the Act) and the Mineral Resources Development Regulations 2002. The Act states that *“...exploration and mining licensees have a duty to consult with their community across the entire life cycle of a project, from exploration, through to development, operation, closure and rehabilitation.”* (See Appendix 2 for detailed regulatory requirements.)

Recommendation : Improve listening and communicating processes across government and industry

Preventing future concerns will require improvements to communication and complaints resolution processes. To ensure community members do not become frustrated or hostile, all mining companies and government bodies should:

* Seek to understand concerns and take responsibility to resolve these concerns. Some community members said how encouraging it has been for us to come and listen to their concerns.
* Respect community members by communicating with them in person and in writing in a timely and clear way, rather than passing the buck on to another government body.

Recommendation : Encourage appropriate behaviour by all parties

We recommend the government explicitly request all parties agree to a set of reasonable ground rules. For example, treating each other with respect, responding in an honest and timely manner, seeking collaborative solutions. We believe it is appropriate these standards of behaviour apply to all stakeholders.

Recommendation : Mandalay Resources collaboratively develop a long-term strategy for environmental management

The community has raised their concern that Mandalay Resources will require another evaporation facility if the mine expands further. It is recommended the mine develop a long-term strategy and explore all options, working collaboratively with concerned community members to develop the best solutions for all parties.

## State-wide recommendations

Although it is beyond the scope of this project, it seems appropriate to make the following recommendations that apply across the State. There is an opportunity for Costerfield to be a community where new approaches are trialled with the opportunity to apply successful methods across the state.

Recommendation : Develop a senior Community Advocate team for mining concerns

As discussed in Recommendation 4, mining communities need trusted advisors who can quickly respond to their concerns and work across government bodies to resolve complex concerns. We recommend that the government develop a team of senior Community Advocates who work with mining communities across Victoria.

This team will help prevent tension and conflict in mining communities and support better regulation for better environment and human health outcomes. This role will need to be senior and independent, as a junior officer will be unlikely to have the level of skills or experience needed to deal with complex situations.

This team will need to be located in a body that is perceived as unbiased, for example the Office of the Mining Warden.

We also recommend that the people in these roles chair the ERCs.

Recommendation : Review the operation and structure of ERCs

As per Recommendation 5, we recommend reviewing the ERC model used across the state. The aim of the review would be to improve the ERC model so that it:

* Meets more frequently in areas with high community concern
* Is focused on problem solving and actively resolving mining related community concerns
* Has a chair with skill in mediating and chairing complex decision making processes
* Has broader terms of reference, to give more consideration to resolution of concerns
* Consults more widely than the committee’s community representatives
* Communicates with the community following the ERC meetings

Recommendation : Earth Resources Regulation and the EPA work more closely

Earth Resources Regulation need to work more closely with the EPA as the current separation and split of responsibility hinders efficient and effective resolution of community concerns.

We recommend that Earth Resources Regulation and the EPA commit dedicated staff to attend all ERC meetings, and conduct joint site inspections to foster better relations and cross-pollination of skills. This will go some way to assuring communities that Government takes their concerns seriously.

Recommendation : Create greater separation between Earth Resources Regulation Victoria and Energy and Earth Resources

The organisational location of both Earth Resources Regulation Victoria and the Energy and Earth Resources division within DEDJTR presents a perceived and potential risk of bias, which hampers the ability of Earth Resources Regulation to problem solve in good faith with community members.

We recommend that the Minister consider moving Earth Resources Regulation out of DEDJTR. This could involve moving it into an existing body like the EPA, which is currently the only stakeholder organisation involved in Costerfield that is considered neutral by concerned community members. Alternatively, the Government could create a new statutory body funded by a levee on mining activities.

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Appendix : Data analysis methods

#### Grounded theory research method

The *grounded theory research method* will be used in this research to produce primarily qualitative data. This method involves building up theories based on analysis of patterns in the data. Instead of starting with a hypothesis, in grounded theory the first step is to collect data. Then the key points are extracted from the data, interviews in this instance, and noted with some type of coding. The codes are grouped into similar concepts in order to make them more workable. From these concepts, theories are worked up, and presented as the findings of the study.

In the process of bringing together and interpreting individuals’ experiences, it can be possible and helpful to reduce some qualitative data into quantifications. It is crucial however, that the act of attaching a number to a theme is not taken to mean that that theme is more “real” or “important” than those that are unquantified. It is also important to recognise that, given the differences as well as similarities between the structure of semi-structured interviews, topics are not evenly discussed across all interviews. Where a topic is discussed in all interviews it is done so in the context of unique conversations. To understand a situation, particularly one to which we need to respond, it can be helpful to quantify the “size” of some of the problems confronting us by measuring the commonality of responses across a sample. The grounded theory research method allows this to be done for a number of the more clear-cut and dominant themes.

Following the completion of all interviews, the interview notes will be analysed by systematically working through them and building a progressive code of key themes. These themes will then be worked in mind maps and tables, based on the grounded theory approach, to prioritise data-driven and inductive conclusions.  In keeping with this methodology, themes will be re-tested against interview notes in an iterative process until the key findings emerged.

#### Stakeholder analysis method

In this investigation, our stakeholder analysis method has been developed through the integration of recognised approaches such as International Association for Public Participation (IAP2), and our experience working with rural and regional communities.

#### IAP2 spectrum

The level of engagement and corresponding promise to stakeholders and possible methods of engagement are outlined in the following Table.

Table A1 Description of engagement levels

**INCREASING IMPACT ON THE DECISION** 

|  | Inform | Consult | Involve | Collaborate | Empower |
| --- | --- | --- | --- | --- | --- |
| **Stakeholder engagement goals** | To provide balanced, objective, accurate and consistent information to assist stakeholders to understand the problem, alternatives, opportunities and/or solutions. | To obtain feedback from stakeholders on analysis, alternatives and/or outcomes. | Work directly with stakeholders throughout the process to ensure that stakeholder concerns and aspirations are consistently understood and considered. | Partner with stakeholders in each aspect of the decision including the development of alternatives and identification of the preferred solution. | To place final decision-making in the hands of the stakeholder. |
| **Promise to stakeholders** | We will keep you informed. | We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. | We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how stakeholder input influenced the decision. | We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible. | We will implement what you decide. |
| **Possible Methods of engagement** | * Fact sheets * Websites * Open days | * Public comment * Focus groups * Surveys * Public meetings | * Workshops * Deliberate polling | * Advisory committees * Participation in case study development * Consensus building * Participatory decision-making |  |

Appendix : Regulation requirements for community engagement

Schedule 13 of the Mineral Resources Development Regulations 2002 states that a licensee must submit:

**For mining licences not exceeding 5 hectares**

8. A community engagement plan that –

(a) identifies any community likely to be affected by mining activities authorized by the licence; and

(b) includes proposals for –

(i) providing information to the community; and

(ii) receiving and considering feedback from the community;

in relation to mining activities authorized by the licence; and

(c) includes a proposal for responding to complaints and other communications from members of the community in relation to mining activities authorised by the licence.

**For mining licences exceeding 5 hectares**

10. A community engagement plan that –

(a) identifies any community likely to be affected by mining activities authorised by the licence; and

(b) includes proposals for –

(i) identifying community attitudes and

expectations; and

(ii) providing information to the community;

and

(iii) receiving feedback from the community;

and

(iv) analysing community feedback and

considering community concerns or expectations; in relation to mining activities authorised by the licence; and

(c) includes a proposal for registering, documenting and responding to complaints and other communications from members of the community in relation to mining activities authorised by the licence

Appendix : Environment Review Committee – terms of reference

1. <http://costerfieldantimonyissues.blogspot.com.au/p/dust.html> [↑](#footnote-ref-1)
2. Energy and Earth Resources (2015) [↑](#footnote-ref-2)