

HAZELWOOD MINE FIRE INQUIRY
SUBMISSIONS OF ENVIRONMENT VICTORIA

A: Introduction

1. These submissions address the findings and recommendations that Environment Victoria (**EV**) submits that the Board should make in relation to the following subjects –
 - (a) the regulator (DEDJTR) (part B below)
 - (b) rehabilitation plans (part C);
 - (c) public notice of significant changes to work plan variations and other regulatory matters (part D);
 - (d) engagement with the community (part E);
 - (e) end of life plans – the importance of water (part F);
 - (f) proposed Latrobe Valley Rehabilitation Body (part G);
 - (g) progressive rehabilitation (part H);
 - (h) rehabilitation bonds (part I).
2. EV submits that the following overarching propositions ought inform the Board's consideration of the recommendations it should make.
3. First, the rehabilitation of the Latrobe Valley coal mines is an inter-generational issue of very great importance to Victorians. The period of time over which rehabilitation will occur is long, but the window within which to ensure the policy settings are correct and robust is small. The Hazelwood mine, for example, will close in 11 years from now or, if its licence is extended, in 18 years. Even for the longer licence terms, the amount of research and work required to develop rehabilitation solutions that are technically, environmentally and socially appropriate is significant. The opportunity presented by this Inquiry is singular.

4. Second, the first consideration warrants the board making strong and indeed bold recommendations notwithstanding that some of the key issues raised in the inquiry are complex, highly technical and nuanced and will take significant time to resolve.
5. Third, because of the significant adverse legacy a mining operation will leave on the community if rehabilitation is not managed very carefully, it is appropriate to approach this issue through a conceptual paradigm which accepts that a legal licence to extract minerals carries with it a social licence which permits the activity but which expects in return that the community will not be left to bear the burden or risk of rehabilitation and that the community will actively participate in major decisions meaning those that have significant community and environmental impacts. This ought to be so whether or not the land on which the mining operation is conducted is publicly or privately owned.
6. Fourth, on the question of community engagement it is not submitted that the community should *control* any aspect of the process to the exclusion of the interests of the mine operators. It is submitted, however, that what has been missing and what must be injected is a means of ensuring equality between stakeholders. Obviously not all have the same kind of contribution to make or fulfil equal functions but engagement on critical issues at critical junctures must real be and not consist of a one way dispensing of information from the mines to the community. A key to advancing real engagement is the establishment of an independent rehabilitation body.
7. Fifth, strong regulation is essential and it has been lacking. There are some encouraging indications of change but good intentions and broad commitments need to be strongly supported by measures that will inject independence, rigour and transparency in mine regulation.
8. Finally, there was extensive discussion in the evidence about “risk” in different contexts. The evidence suggests that the following are important considerations.
 - (a) Risk management processes are now mandatory which is to be applauded. It is, however, instructive to recall the observation of Professor Cliff¹ given in the first iteration of the Inquiry, about the difference between process documents and

¹ T2087:6 (12 June 2014)

actual risk mitigation, that, “... *controls are actions, barriers that prevent or mitigate the event. So they’re not things like a piece of paper or a plan; they are a fire fighting system, they are automatic controls, they are evacuation, they are self-contained self-rescuers, so they are things you can identify as being able to control something.*” This observation is particularly important for the regulator, who is embarking on a path of risk management and process based regulation. It is imperative that the robustness of real controls be interrogated and by more than mere desk-top reviews. Further, risk-management processes are necessary but their existence is not a substitute for robust independent scrutiny of rehabilitation work and the development of rehabilitation plans.

- (b) Risk should be looked at holistically. Setting the standard of what is an acceptable risk entails the making of value judgments.
- (c) “Risk” questions should be addressed iteratively often, and in the context of transparency and collaboration.

B: The Regulator

- 9. Rehabilitation of the Latrobe Valley mines is a complex, inter-generational issue that requires strong regulation and effective leadership.
- 10. The evidence revealed both significant regulatory failures and encouraging signs of change. Both should be considered. Past failures underscore the need for future changes to be embedded in transparent and robust structures. Those changes include the need for the appointment of an independent mine-rehabilitation body (which is addressed in Part G).
- 11. The board should find that the regulation of mine rehabilitation has been inadequate in important respects. Specifically –
 - (a) On the critical issue of rehabilitation plans (which is addressed in Part C²)–
 - (i) DEDJTR³ has failed to set meaningful performance criteria for rehabilitation and has left that task to the mine operators when it is properly a matter for the regulator;

² See Part C below for reference to the evidence supporting the propositions advanced here

- (ii) The regulator has approved successive rehabilitation plans that do not specify how the mines' end of life plans are to be achieved. Omissions include the central question of access to water and water quality;
 - (iii) DEDJTR's most recent approval (of the Loy Yang Work Plan Variation of 2015) imposed a set of convoluted, opaque conditions that, while seeking to address important aspects of rehabilitation, did so by shifting responsibility to the mine operator to develop a risk analysis, rather than, as it ought to have done, requiring those matters to be squarely addressed in the rehabilitation plan;
 - (iv) DEDJTR has failed to engage on the issue of water access when specifically invited to do so by the operator of the Yallourn mine;⁴
 - (v) Neither DEDJTR nor DELWP have undertaken the consultation recommended by action 6.8 of the Gippsland Region Sustainable Water Strategy;
- (b) DEDJTR has failed to act on clear and independent advice provided to it by the Technical Review Board that the rehabilitation plans are inadequate and based on presumptions and that considerable work is required in relation to stability issues.⁵
- (c) For the reasons advanced in Part I,
- (i) The *Mineral Resources (Sustainable Development) Act 1990* (Vic) (**the Act**) largely adequately provides for the assessment and requirement for the provision of rehabilitation bonds. However the statutory powers available to the regulator have not been effectively used;
 - (ii) The regulator lacks the technical expertise to effectively enforce the statutory regime;

³ For convenience, reference to DEDJTR includes reference to its predecessor

⁴ Statement of Mether (exhibit 14), attachment 9.55; T119-120 (Wilson); T325 (Mether)

⁵ Statement of Wilson (exhibit 5A), annexures 6 and 7;

- (iii) The current Bond Policy has simply not been enforced. That failure is a regulatory failure which is not sourced in the nature of the policy or the statutory regime itself.
 - (iv) The regulation of rehabilitation bonds has been characterised by delay, inertia and a lack of rigour.
12. Proposed recommendation (and further findings) relevant to the regulator are set out in Parts C and I.
13. The evidence revealed some commendable improvements. Specifically –
- (a) The government has initiated a reform process to develop a new approach to mining regulation to strengthen the performance of Earth Resources Regulation.⁶ Exactly what that process achieves remains to be seen but it must be noted that the department has, through the evidence of Mr Wilson, openly acknowledged a number of regulatory shortcomings which of itself is a positive indication of a willingness to embrace necessary change;
 - (b) ERR's 2015-2016 Action Plan commits ERR (among other things) to –
 - (i) The establishment of a Community Advocate to support informed community participation in earth resources regulatory decisions;
 - (ii) The establishment of an external technical expert panel;
 - (iii) Improved mechanisms for stakeholder consultation and engagement;
 - (iv) The establishment of public reporting mechanisms.
14. If those commitments are to result in real change, progress on their implementation must be publicly reported. The Board should make a recommendation to that effect.

C: Rehabilitation Plans

15. The obligation on each of the mine licensees to undertake rehabilitation resides solely the approved work plans and their incorporated rehabilitation plans. The evidence supports the following findings, which the Board should make:

⁶ Statement of Wilson (Exhibit 51), [6]-[9]

- (a) the current approved rehabilitation plans are inadequate in that they lack detail and do not contain sufficient milestones, objectives and criteria for rehabilitation;
- (b) the regulator has not to date assumed responsibility for setting appropriate performance criteria. Criteria should be set by the regulator;
- (c) A significant body of work needs to be completed to be able to sufficiently develop the plans.

16. There was unanimous agreement amongst the experts that:

- (a) the approved rehabilitation plans:
 - (i) are largely conceptual;⁷
 - (ii) do not deal adequately with the complex stability issues that impact on both progressive and final rehabilitation;⁸ and
 - (iii) fall well short of what could reasonably be considered as adequate for achieving long term safe and stable batters from a ground control perspective;⁹ and
- (b) there is a significant body of work that needs to be completed, reviewed and synthesised before there is adequate knowledge of the requirements for safely rehabilitating the mines and hence for developing the conceptual plans into successful operational and closure plans.¹⁰

17. Dr McCullough's evidence was that 17 studies need to be undertaken between now and mine closure,¹¹ addressing conceptual mine closure plans, final landform vision, and the setting of closure objectives and developing closure criteria. The work required includes, among other things, water balance studies, investigations into geotechnical stability and wave action and erosion, long-term pit lake water quality prediction,

⁷ Joint Expert Report Q7(a)

⁸ Joint Expert Report Q7(b)

⁹ Joint Expert Report Q7(c)

¹⁰ Joint Expert Report Q8(a)(as amended)

¹¹ T:453 (McCullough)

socio-economic analysis of end uses and assessing potential impacts of end of life models on the hydrology and water quality of the Morwell River.¹²

18. Professor Galvin's evidence was that four years ago the Technical Review Board gave formal advice to DEDJTR that the TRB considered the detail of the work plans to be insufficient.¹³ The advice does not appear to have been acted on.
19. A significant shortcoming in the work plans is the absence of detailed performance criteria. That failure is largely the responsibility of the regulator. The TRB, when asked to review the most recently proposed variation to the Loy Yang work plan identified as a fundamental problem that a detailed set of performance criteria are "yet to be set by government", noting that the performance criteria contained the draft plan, which were in identified respects plainly deficient, appeared to have been set by the proponent rather than by an independent assessing body.¹⁴ Mr Wilson, for DEDJTR, accepted that TRB's criticism was valid¹⁵ and agreed that it was good regulatory practice to set detailed performance criteria.¹⁶
20. Ms Unger's evidence was that it is important for government to define standards and end point criteria for safety and stability as well as other environmental and end land use aspects of rehabilitation to clarify expectations for completion of rehabilitation.¹⁷ Ms Unger said that it is critical to have a government led set of mine closure planning principles because otherwise the expectations are very unclear – governments need to set the standard and provide the frameworks.¹⁸ As Ms Unger explained, without clear completion criteria there is no step-wise process to get to an end point and no way of signing off on that end point. Without clear closure principles and objectives mine operators do not have sufficient certainty about what they must achieve and the regulator cannot determine that the steps that must be taken to meet long term objectives are in fact being undertaken.¹⁹

¹² Exhibit 22B, pg s15-17

¹³ T:418 (Galvin)

¹⁴ DEDJTR.1020.001.0560

¹⁵ T:167 (Wilson)

¹⁶ T:168 (Wilson)

¹⁷ T:618 (Unger)

¹⁸ T:609-610 (Unger)

¹⁹ T:613 (Unger)

21. The experts agreed that stakeholders should be consulted to develop a closure plan and agree success criteria.²⁰ (Stakeholder engagement is addressed in Sections E and G below).
22. Clear objectives and criteria must be put into place as soon as possible and well before closure, because the content of the objectives and criteria may influence closure strategy and may influence the type of works occurring on site prior to closure. For example, Southern Rural Water (**SRW**) considered that water quality criteria may influence closure strategy.²¹ Dr McCullough's evidence was that mine lake water quality post-closure will most critically of all parameters determine the beneficial uses of the pit.²² Mr Rieniets agreed that Loy Yang could start working on the water quality objectives now.²³
23. The mine managers all said that they would be happy to have milestones.²⁴ Mr Faithful said he was happy for DEDJTR to set performance criteria provided it was done in a practical sense and a measured fashion and "not dictated to them", but working with them.²⁵ However Mr Faithful and Mr Rieniets thought the milestones were already in place.²⁶ These views illustrate the broader position of the mines that the current work plans and rehabilitation plans are generally adequate. In that respect the views of the mine operators and the experts diverged. That disparity underscores illustrates the importance of having the regulator set criteria for the rehabilitation process.
24. It is unrealistic on the state of the evidence for to the Board to make recommendations about the particular content of rehabilitation plans but the Board can make recommendations which set in train a process to improve those plans.
25. In light of the evidence the Board should recommend that:
 - (a) *Rehabilitation plans for each of the mines should be reviewed and developed detailed operational and closure plans with , including the insertion of milestones,*

²⁰ Joint Expert Report Q1(j)

²¹ T:177 (Wilson) and SRW letter dated 24 August 2015

²² McCullough Report, Exhibit 22B, GDFS.0001.003.0017

²³ T:303 (Rieniets)

²⁴ T:283-284 (Mether, Faithful and Rieniets)

²⁵ T:284 (Faithful)

²⁶ T:283-284 (Rieniets)

objectives and criteria that are measurable, enforceable and transparent. This should be commenced now and developed iteratively until the finalisation of the end of mine life concept plans discussed in Section G;

- (b) The studies identified in evidence by Dr McCullough and any studies identified by the TRB or GHERG as being required for rehabilitation planning should be undertaken as soon as possible. This work should be commissioned or coordinated by the body described in Section G ; and*
- (c) Clear objectives and criteria should be developed by DEDJTR with input from stakeholders as soon as possible.*

The Loy Yang Work Plan Variation 2015 (LYWVPV)

- 26. These submissions focus on the recently approved LYWVPV because the approval occurred shortly before the December 2015 Inquiry hearing and is the only example of the regulator's current approach to requirements for rehabilitation plans. However these observations are relevant also for the approval of any future work plan variation applications for any of the Latrobe Valley mines.
- 27. The content of the work plan which was the subject of the LYWVPV application was the subject of pointed criticism from the TRB. Professor Galvin's evidence was that aspects to the plan sent to him for approval should never have gotten through a regional office as part of the approval process let alone being sent to the TRB.²⁷ The TRB's letter to DEDJTR of 12 October 2015²⁸ concluded that:
 - (a) the application was highly conceptual and based heavily on descriptions of proposed activities and statements of intent;
 - (b) the underpinning technical information was scant and furthermore that the reader was required to distil for themselves the little technical information that there was from the appendices;
 - (c) the proponent had decided that rehabilitation will be deemed successful if rehabilitated batters can be grazed successfully for two consecutive years which was "too silly to waste time explaining why";

²⁷ T:418 (Galvin)

²⁸ Wilson statement 20 November 2015, DEDJTR.1020.001.0560

- (d) a range of aspects critical to successful rehabilitation were not assessed or even discussed (for example drainage systems for rehabilitated slopes); and
 - (e) there was no discussion of the implications associated with restricted access to water;
 - (f) many of the deficiencies in the LYWPV application would take considerable time and research to address – years, not months.
28. The proposed work plan the subject of the LYWPV application was also identified by DEDJTR as having various shortcomings.²⁹
29. One important shortcoming is that the plan lacks precision about what rehabilitation works will be done when, and how, and what objectives and criteria are to be implemented. So much is clear by contrasting figures 18 and 19 of the LYWPV which indicate that over a timeframe of 7 years, the pit will be transformed into a lake but the associated content provides little indication of how this will occur or how water access and stability issues will be managed.
30. DEDJTR elected to approve the LYWPV despite its substantial inadequacies, but to make it subject to a number of conditions without which the plan would be defective and which DEDJTR considered essential.³⁰
31. The conditions address important factors that ought to be the subject of the rehabilitation plan, including access to water resources, the development of detailed rehabilitation objectives and fire risk. However a fundamental problem with the approach embodied in the conditions is that by addressing those matters in that way the regulator has inappropriately shifted the tasks of developing detailed rehabilitation objectives and criteria, and assessing water resources, to the mine operator.³¹
32. The conditions contain a requirement for development of mine rehabilitation risk reviews at defined stages.³² It is a positive development that the conditions require the operator to specifically assess the risk of achieving rehabilitation in accordance with the plan. However the risk assessment process itself is not an adequate substitute for

²⁹ Rienets Supplementary Statement 3 December 2015, AGL.0001.004.0004

³⁰ T:179 (Wilson)

³¹ Conditions 6.6 and 7.1

³² Conditions 6.4 and 6.5

a requirement that the plan identify the critical challenges of rehabilitation and what will be done to manage the challenges.

33. Professor Galvin said that he had a lot of trouble understanding what the conditions meant, that they were convoluted and lacked clarity.³³
34. Professor Galvin provided an example of recent conditions issued for a mine in New South Wales.³⁴ Two features of the conditions in particular are worthy of emulation – namely those concerning independent auditing and public reporting. The NSW conditions impose:
 - (a) a requirement that the rehabilitation management plan include a program to monitor, independently audit and report on the effectiveness of measures, progress against detailed performance criteria and completion criteria (condition 73);
 - (b) a requirement that the Final Void and Mine Closure Plan be subject to independent review and verification by suitable independent persons whose appointment has been approved by the Director-General (condition 74); and
 - (c) Regular reporting and independent auditing in conditions 9 and 10 in Schedule 5, and condition 12 provides for certain relevant information to be publicly accessible on the internet.
35. Whilst the LYWPV conditions include some reporting requirements, the conditions do not go as far as those the example from NSW. The NSW features of independent audits and public reporting should be considered for inclusion in Victorian approvals. This could be co-ordinated by the Body recommended to be set up in Section G.
36. Hazelwood advised that it soon intends to apply for a work plan variation. It is important that the process and result for Hazelwood does not mirror that of Loy Yang.
37. The Board should find that:
 - (a) the LYWPV and its associated conditions contain the shortcomings identified by the TRB; and

³³ T:428-429 (Galvin)

³⁴ Exhibit 26

- (b) the LYWPV and its associated conditions are not a suitable precedent for other applications.

38. *The Board should recommend that:*

- (a) *The LYWPV and associated conditions be reviewed by DEDJTR and amended to reflect the outcome of the review. The TRB should provide technical input into the review;*
- (b) *In assessing future work plan variation applications, DEDJTR should require work plans and rehabilitation plans to be acceptable on their face, rather than seeking to fix a proposal that DEDJTR considers has shortcomings, by way of conditions; and*
- (c) *Future work plan variations should include a requirement for independent audits and public reporting.*

LYWPV change in potential for public access in end use

- 39. The submission in this section relate in particular to TOR 9(h), which requires consideration of whether, and to what extent, rehabilitation options impact upon the future beneficial use of land areas impacted by the mines.
- 40. One of the matters that was included in the recent LYWPV was an apparent approval of a change from a rehabilitated land form that would enable uses which provide for public access to a rehabilitated land form that would exclude provision for public access.
- 41. EV submits that the option of a rehabilitated mine land form which retains the potential for a use including public access should not be 'taken off the table' by way of amendments of work plans and rehabilitation plans, without significant stakeholder consultation.
- 42. To change the potential end uses from ones which include potential public access, to those which do not, is a significant change. Further, it is a change which may affect the rehabilitation criteria which are required to be worked towards and achieved. In particular:

- (a) Professor Galvin agreed that there are particular standards or criteria for remediation that will need to be implemented in order to provide for public recreational use compared with purely private end use;³⁵
 - (b) Mr Rieniets accepted that there may be things that might have to happen now to allow greater public access at the end of life for example higher degree of stability on batters or ensuring a different water quality;³⁶ and
 - (c) Dr McCullough said that in respect of water quality there are different guidelines for swimming and recreation as compared with primary production and ecosystem values.³⁷
43. If the potential for public access is not clearly on the table at this point in rehabilitation planning, there is a risk that the potential for public access will be lost, or at the very least, compromised. Dr McCullough's evidence was that mine lake water quality post closure will most critically of all parameters determine the beneficial uses of the pit.³⁸ It may be that to ultimately achieve the criteria in the guidelines providing for swimming and recreation, particular investigations need to occur in order ensure that certain contaminating material is not placed at the base of the pits, or that ash ponds or exposed coal is capped or treated before filling of the pits commences, in order to achieve the requisite standard required for public access. If these investigations and steps do not occur now, options may be lost as time progresses. If the land is safe and fit for public access, it is much more likely to also be fit for agricultural uses, however the converse is not necessarily true insofar as agricultural uses may withstand a lesser quality of water and a higher degree of stability risk for survival.
44. None of the experts gave evidence that based on current knowledge, public access for the rehabilitated mines could not be achieved.
45. Mr Wilson agreed with EV that it would be important to consult with the community and engage with the community on the topic of public access in the end use concept.³⁹ Mr Wilson also agreed that the expectation would certainly be there that the

³⁵ T:453 (Galvin)

³⁶ T:310 (Rieniets)

³⁷ T:454 (McCullough)

³⁸ Report of McCullough, Exhibit 22B, GDFS.0001.003.0017

³⁹ T:183 (Wilson)

community would regard it as important that final land use concepts be prepared to enable as far as was technically possible and reasonably possible public access and use of the land.⁴⁰

46. Mr McGowan agreed that end use change would fit into an active engagement rather than just advertising category.⁴¹
47. However it is evident that DEDJTR approved the LYWPV without any community consultation on this issue.
48. Professor Sullivan agreed with Counsel Assisting that the change was the sort of thing upon which there ought be consultation.⁴² He also agreed with EV that the basis of the change and the reasons should be explained to the Latrobe Valley community.⁴³
49. Mr Rieniets' evidence on this issue was equivocal. He agreed that there needed to be some consultation in relation to the change and said Loy Yang was not saying they were not going to do that - they were not saying they wouldn't discuss it in the future.⁴⁴ However he accepted there had not been wide and open publication of the proposed change before it happened, that there was no explicit notification to the broader community and accepted there may have been no discussions with the ERC on this topic.⁴⁵ Mr Rieniets did say that Loy Yang would commit to explaining to the community the contents of the work plan and seeking information.⁴⁶ He could not give an answer on whether Loy Yang would reconsider, saying it was 30 years away and they would make that assessment based on the community feedback.⁴⁷
50. EV submits that s39A of the MRSD Act, the principle of which is also embodied in Loy Yang's own policy, was not met in the LYWPV process in respect of this issue. Loy Yang has a duty to consult with the community by giving members of the community a reasonable opportunity to express their views about activities authorised by the licence that may affect the community. The proposed end use is such an activity.

⁴⁰ T:181 (Wilson)

⁴¹ T:792 (McGowan)

⁴² T:400 (Sullivan)

⁴³ T:455 (Sullivan)

⁴⁴ T:307 (Rieniets)

⁴⁵ T:307-309 (Rieniets)

⁴⁶ T:309 (Rieniets)

⁴⁷ T:310 (Rieniets)

51. Loy Yang referred in closing submission to s 79(a)(iv) of the MRSD Act, which provides that a rehabilitation plan must take into account the desirability of returning agricultural land to a state that is as close as is reasonably possible to its state before the licence and submitted that its rehabilitation plan accordingly addresses what is contemplated by the Act (beneficial use, which need not be public use).
52. An approach to end use focusing on that provision belies the history of the Loy Yang mine, insofar as the issue of potential public end use is concerned. Private ownership of the land and its pre-licence use are but two considerations that arise within a much broader context.
53. As is the case with the Hazelwood and Yallourn mines, the rehabilitation plan has from the outset included provision for public access to the land following rehabilitation of the mine. For example, the 1997 Loy Yang Rehabilitation Plan contained approval for a lake for “community recreational purposes”.⁴⁸ Those long-standing plans have been publicly accessible and endorsed by government as forming the basis of operations on the respective mining tenements. It would therefore be legitimate for the community to have an understanding and an expectation that end uses will public access. That expectation was reflected for example in the 2009 GHD report for DPI titled “Mine Rehabilitation Options and Scenarios for the Latrobe Valley” stated that the final land form should provide the community with opportunities and be a lasting legacy to the community.
54. The experts agreed that it should be an objective that the condition of the mine post closure maximises public safety.⁴⁹
55. It must also be recalled that when Loy Yang purchased the land upon which its mine is situated, it should be taken to have known that the existing rehabilitation plans contemplated rehabilitation of the land after mining be to such a standard that community recreational use might be supported.
56. Recognition of these expectations and understandings is an important aspect the “social licence” which AGL acknowledged in its closing submissions is an aspect of the right to engage in a mining operation.

⁴⁸ Rieniets statement 30 October 2015, [94]

⁴⁹ Joint Expert Report Q1(c)

57. There are unarguably challenges to be overcome in the rehabilitation of the Latrobe Valley mines, in particular in relation to stability and water, in order to provide for public access. EV submits that all stakeholders – including the mines, the state parties, the community and relevant peak bodies – need to continue to work together to strive for an outcome which truly can be of net community benefit,⁵⁰ which will be best embodied if end uses permit community use and at least endeavour to do so in the process of ongoing investigation about the requirements for remediation. In this connection the evidence of Dr Von Bismarck in relation to the community benefits that have been achieved with rehabilitated mines in Germany was compelling.
58. Evidently, the rehabilitation process is an iterative one, in which there is an exchange of information about stakeholder views on potential uses, and scientific information about what is possible (see further Section E below). But at this stage in the process, the potential for public access should remain squarely on the table as an option.
59. EV agrees that if Yallourn is able to achieve a fully flooded lake with public access there will be benefits for community recreation and possibly also for flood mitigation and for fire-fighting.
60. The Latrobe Valley community has for decades had a close relationship with the mines, which provide both significant benefit of employment (and the burdens of air pollution and geotechnical risks). When the mines close, the Latrobe Valley community will need to re-orient, economically. The Jacobs report identified that providing landforms that create long term economic development opportunities rather than significant constraints is an important challenge.⁵¹ Professor Mackay gave evidence that when the mines close the question will be whether additional economic advantage can be leveraged from the legacy that is created by the mines.⁵² Mr Langmore's evidence was that most people would like to see some more beneficial use so the areas are productive, valuable, perceived to be beneficial to the community and that could be for a range of economic purposes, and that he was inclined to think that use for a wide range of recreational purposes is likely to figure pretty strongly in that sort of area,

⁵⁰ As noted by Counsel for Loy Yang at T:1224

⁵¹ Jacobs Report 16 November 2015, Exhibit 24A, EXP.0011.001.0043

⁵² T: 411 (Mackay)

both passive and recreational areas.⁵³ Ms Rhodes-Ward gave evidence that the Latrobe City Council's community consultation revealed that the community view was that the Hazelwood mine should be transformed into a community asset – suggesting to her that the community are seeking to be engaged in that area for the long-term future. Further, that rehabilitation should be considered from a range of aspects including community resilience and social cohesion.⁵⁴

61. It will not be of assistance to that social rehabilitation challenge – to progressive rehabilitation for people⁵⁵ – to simply 'install signage and fencing to advise no right of entry to private freehold land including the open cut lake'⁵⁶ at the mines and to divert a significant amount of water to that land, which can no longer be accessed by the public. It is sound policy and only right and fair that the mine operators and the regulator work to enable the mines to reinvest in the community post mining.
62. In the case of Loy Yang, community participation should be undertaken now in relation to the already approved LYWPV change, noting that DEDJTR have the power to reverse the variation. Community participation is also critical in the future in relation to any work plan variations which raise the same issue.⁵⁷
63. The Hazelwood Work Plan Variation is clearly in draft (and was provided under the strong caveat that it is such) but it is noted that it refers to the rehabilitated land remaining in private ownership and removes reference to the potential for community recreation uses.
64. More broadly, the issue of the ownership of the land post closure is an issue that needs to be considered by DEDJTR insofar as it will have implications for the implementation of the rehabilitation for the mines, in particular for ongoing maintenance and monitoring. It became apparent in the hearing that DEDJTR is not clear about who will own or manage the land containing the mines post closure.⁵⁸ If the land is to revert to the State after a certain time period, it is unclear whether that will occur through bequest, acquisition, sale, or some other quid pro quo arrangement

⁵³ T: 69-70 (Langmore)

⁵⁴ T:70-71 (Rhodes-Ward)

⁵⁵ T:612 (Unger)

⁵⁶ Rieniets supplementary statement 3 December 2015, AGL.0001.004.0098

⁵⁷ Section D below provides details of how notice might be dealt with.

⁵⁸ T:843 (Wilson)

whereby the State might take on rehabilitation liability in exchange for title. It is necessary for DEDJTR to give consideration to these matters

65. The issue of public end-use may be legitimately linked to the issue of access to water. Where vast quantities of water are required for a particular end-use and where access to sufficient water will impact other water users, requiring diversion from the catchment, access is demonstrably more justifiable where public benefit will result, than where the worked out-mine is to be no more than private agricultural dam to which no public access is permitted, with a single beneficial user.
66. The Board should find that:
 - (a) There was inadequate community consultation on the change of end use to exclude potential public access, for the rehabilitated Loy Yang mine;
 - (b) There should be community consultation in relation to the potential for public access for the rehabilitated Loy Yang mine, and the content of the LYWPV should be reviewed by DEDJTR in this respect;
 - (c) There has been a historical understanding, supported in the work plan and rehabilitation plan documents, that the rehabilitated mines will provide some form of public access;
 - (d) There will be different, and likely stricter, objectives and criteria to work towards to retain the potential for public access, particularly in relation to water quality and stability;
 - (e) It is desirable that the work plans and rehabilitation plans work towards achieving a rehabilitated land form which includes the potential for an end use involving public access, so that the option of public access is not lost;
 - (f) When future work plan variation applications are assessed community consultation should occur if the possibility of public access for rehabilitated mines is sought to be removed; and
 - (g) Stakeholder discussions should occur in relation to the future management and ownership of the rehabilitated mine land, co-ordinated by the new body discussed in Section G below.

67. *The Board should recommend that:*

- (a) Community consultation and engagement should occur as part of the coordination process described in Section G in relation to whether the rehabilitated mines should retain the potential for uses which include public access;*
- (b) In particular, a review should occur in relation to the exclusion of the potential for public access in the recently approved LYWPV;*
- (c) In the future, any work plan variations which involve a potential exclusion of public access for rehabilitated mine land should be the subject of community consultation, coordinated through the body described in Section G;*
- (d) Work plans and rehabilitation plans should not at this stage exclude the option of a rehabilitated land form which includes the potential for an end use involving public access; and*
- (e) Stakeholder discussions should occur in relation to the future management and ownership of the mine land.*

D: Notice of significant changes to WPV

68. It is desirable that public notice of work plans and work plan variations be provided, together with an opportunity for input and an independent review mechanism.

69. Mr Wilson said that “all else equal” or in the absence of some particular reason not to do so, it is good regulatory practice to allow whoever the relevant stakeholders are to at least have a look at what is being proposed and depending upon what it is possibly some form of involvement or input.⁵⁹ Mr Wilson also said that there was a desire of the regulator to shift the default to make proposed variations available to the public – and also for a substantial set of variations that you might not only make them available but you might want to go out and trigger some consultation.⁶⁰

70. If a mine project requires a planning permit under the *Planning and Environment Act 1987* (Vic.) (**PE Act**) or, if the Minister calls for an Environment Effects Statement under

⁵⁹ T:790 (Wilson)

⁶⁰ T:791-792 (Wilson)

the *Environment Effects Act 1978* (Vic.) (**EE Act**) there is usually a public process of notice, input and review under those Acts.⁶¹

71. However if a planning permit is not required – as is the case for the Latrobe Valley mines – then unless the Minister calls for an Environment Effects Statement, a work plan application or variation is not subject to any public notice, input or review, because neither the PE Act or the EE Act is triggered.
72. It is open to the Board to recommend that the MRSD Act be amended such that for work plan applications and/or work plan variation applications which are not otherwise subject to public notice, and which contain changes which may have a significant effect on the community, that a certain process be followed – to be set out in the Act.
73. That process would not cut across any other legislative regime or duplicate the work of existing provisions; rather it will simply fill existing gaps. The process should include:
 - (a) The right to public notice of the application. This would enable the community to become aware that a change is sought to be made, and to inform themselves of the details of the change;
 - (b) An ability to make a submission to DEDJTR about the application. This would enable the community to allow their views to be heard about a proposed change;
 - (c) In making its decision DEDJTR must take into account any submission received;
 - (d) If the decision is unfavourable to any party that party can seek to have the matter referred to an independent panel for hearing and the preparation of an assessment report. This enables an independent third party with expertise (including in planning, land use and community development) to reassess the application afresh. This achieves the objective of transparency; and
 - (e) The assessment report is referred to the Minister to make the final decision.
74. This process is akin to an Environment Effects Statement or a Planning Scheme Amendment, which each typically have the components of public notice, the ability to

⁶¹ See ss 52, 57 and 82 PE Act and s 9 EE Act.

put in a submission, referral to an independent body for assessment, and a report to the Minister.⁶²

75. Referral authorities (statutory authorities with technical expertise in a particular area such as water, fire, or pollution) can provide valuable technical input into the work plan variation process.
76. Currently, if no planning permit is required, then there is no statutory basis for referral of a work plan variation. If a planning permit is required for a work plan variation then the referral authority has a veto right and a right to compel conditions. It is submitted that the same process should apply in respect of referral authorities for all work plan variations. The desirability of such a process is illustrated by the evidence that other than in respect of the LYWPV, none of the other work plan variations for the mines appear to have been referred to water authorities. This has meant that the water authorities have not had a formal opportunity to consider and provide input into whether the rehabilitation options planned are appropriate or viable. If there were a statutory basis for referral that would not occur. This is a matter that cannot simply be resolved by co-ordination. If there is a disagreement between the referral authorities and DEDJTR, it is desirable that the process for resolving a disagreement is provided for in the regulatory regime.

Other regulatory matters

77. Section 78(1) provides that the holder of a mining licence must rehabilitate land in accordance with the approved rehabilitation plan. Section 78(1) should have an associated offence provision. It is also desirable that section 78(1) also contain a mechanism to enable enforcement of a rehabilitation plan.
78. Currently, the options for sanctions in order to ensure a licence holder complies with a work plan or rehabilitation plan are to provide an informal warning, or to cancel the licence. Neither of these options appear to provide a workable solution in the event of a breach: the former does not enable DEDJTR to compel compliance and the latter may be disproportionate to a breach.

⁶² See Part 3 of the PE Act and the EE Act.

79. EV submits that if the LYWPV conditions are maintained, there should be a mechanism to ensure that the type of “milestone” conditions which have been applied to the LYWPV can be transparently reported upon. A website should be set up which records all of the conditions and tracks compliance with the conditions by attaching relevant endorsed reports. As stated above, this approach is now being taken in NSW, and improves transparency.
80. The recent Resources Legislation Amendment Act 2015 provides legislative support to the submission that milestones should be publicly reported upon. The recent amendment provides that the Minister may require, as a condition of the licence, that the licensee submit to the minister a report on work undertaken under the licence and publish that report. This relates to work actually undertaken, separately from proposed work variations.⁶³ But the rationale of providing for public reporting is the same.
81. *The Board should recommend:*
- (a) *public notice and involvement be provided in relation to applications for work plans and work plan variations which are not otherwise subject to any public process;*
 - (b) *a statutory basis be provided for government referrals in relation to applications for work plans and work plan variations which are not otherwise subject to any public process;*
 - (c) *an offence provision, and an enforcement provision, be inserted into the MRSD Act, to be associated with s 78(1);*
 - (d) *DEDJTR arrange for transparent reporting of licence conditions and any reports submitted and endorsed under licence conditions.*

E: Engagement with the Community

82. The submissions in this section relate in particular to TOR 9(i), in relation to whether the rehabilitation options will be sustainable, practicable and effective.

⁶³ T:864 (Wilson)

83. There has been almost no engagement with the community on rehabilitation plans and end of mine life plans. The community therefore has a limited understanding about what is proposed, and what the issues that may arise from rehabilitation are.⁶⁴ The current rehabilitation plans have been prepared and approved with little regard to the concerns, aspirations or expectations of the community. Perhaps the starkest example in the evidence of the disconnect between community aspirations for rehabilitation and the actual rehabilitation plans can be seen when Mr Langmore stated that having the mine land available for public use was “absolutely critical”, probably at that stage unaware that the recently approved Loy Yang mine work plan variation amended the rehabilitation plan to exclude public access to the site, without any public consultation.⁶⁵
84. However, the final rehabilitation outcomes and land uses of the mines will have significant implications on the society, economy and environment of the people of the Latrobe Valley. Significantly, the ultimate outcome in terms of final rehabilitation landforms may impact water users downstream of the mines. Further, the rehabilitation outcomes and end of mine life land uses will determine whether or not the former mine sites will make a positive contribution to the community and economy of the Latrobe Valley.⁶⁶
85. It is reasonable that the community be given the opportunity to be educated about, and then have their concerns and aspirations considered when rehabilitation plans are developed.⁶⁷
86. The expert evidence was unanimous in accepting that effective stakeholder engagement is a key element of successful rehabilitation.⁶⁸ That is so for several reasons. First, effective and meaningful community engagement is essential to the community understanding the risks and possibilities that exist for rehabilitation, so that they are accepting a rehabilitation outcome. As explained by Dr Haberfield, what the mines should be aiming to achieve in terms of safety and stability of the final landform is informed by what is acceptable to the community, so stakeholder

⁶⁴ Rhodes-Ward statement, [4]

⁶⁵ T: 66 (Langmore)

⁶⁶ T:411 (Mackay)

⁶⁷ Rhodes-Ward statement, [4]

⁶⁸ Joint Expert Report, Q1j; T:612 (Unger)

engagement before end of mine life is essential to set success criteria.⁶⁹ Second, if a community don't accept an outcome, they can become a 'sticking point' in achieving final rehabilitation,⁷⁰ and in some instances sectors of the community may seek to thwart that outcome.⁷¹ Third, involving the community and understanding the communities' expectations and needs is necessary for mine rehabilitation to bring about an outcome for end of mine life that makes a positive contribution to the community.⁷² Attempting to do this without community input is likely to lead to a disconnect between expectations and outcomes, causing disappointment.

87. Educating the community about the what the rehabilitation options are, what is technically feasible and what the risks and opportunities are is the necessary first step to effective community engagement. Ms Unger gave evidence that community education should occur after the science and engineering knowledge around what is technical feasible in terms of rehabilitation is on a 'solid footing'.⁷³ Once that has been achieved, communicating the technical knowledge to the community will enable the community to understand what is possible and why some solutions may be the most viable or present the best outcomes.⁷⁴ The resulting input will be likely to be less impractical and better reflect the inherent creativity within community.⁷⁵ The process is, however an iterative one (see below).
88. Effectively engaging with the community requires obtaining an understanding of the community that is the target of the engagement, and then tailoring solutions directed to that specific community.⁷⁶ Solutions should be innovative and creative.⁷⁷ An example given by Ms Unger of a successful community engagement strategy in the context of mine rehabilitation was creating a fete-like atmosphere for a planning session.⁷⁸ As Ms Rhodes-Ward stated, merely stating a time and a place and expecting people to show up may not be the most effective way of reaching out to members of

⁶⁹ T525-526 (Haberfield)

⁷⁰ T:611 (Unger)

⁷¹ Exhibit 28C, EXP.0005.001.0064

⁷² T: 411 (Mackay); Exhibit 28C, EXP.0005.001.0027

⁷³ T:634 (Unger)

⁷⁴ T: 633-634 (Unger)

⁷⁵ T: 634 (Unger)

⁷⁶ T: 63-64 (Rhodes-Ward)

⁷⁷ T: 611; Exhibit 28C, EXP.0005.001.0027

⁷⁸ T:632 (Unger)

the community.⁷⁹ Ms Unger's evidence was that involving people with appropriate skills and expertise in community engagement strategies is necessary.⁸⁰

89. Having the trust of the community is a prerequisite to community engagement being successful. As Mr Lapsley explained, trust is gained in these situations by developing an understanding of the community being engaged, and then having ongoing discussions.⁸¹
90. Finally, as Mr Langmore said, community members are more likely to be involved in processes if they consider that they have real power in the process and as though their views will be actively considered.⁸²
91. Environmental Review Committees currently utilised by the mines are one means of engaging with the community, and can, to a limited extent, allow for information to be filtered out into the community. By themselves, they do not constitute adequate or sufficient community engagement.⁸³ Environmental Review Committees rely on a few key people to disseminate information throughout the community.⁸⁴ Most of the time, they are not generally accessible to interested community members. In addition, they do not represent the type of tailored, innovative and creative community engagement described by Ms Unger, that has been shown to be effective.
92. Community engagement also needs to be maintained after the mine rehabilitation plans have been reviewed and amended, throughout the lives of the mines. This is to allow for the community to have a venue in which to raise further issues with the mines, as they arise. Further, the expert evidence was to the effect that rehabilitation plans would continue to change as understandings of the technical issues evolve and improve.⁸⁵ Meaningful and informed public participation should continue as and when changes are proposed to work plans or rehabilitation plans. As discussed in sections C and D, above, the public should be notified of, and invited to participate in, any further amendments to the mines' work plans or rehabilitation plans.

⁷⁹ T:63 (Rhodes-Ward)

⁸⁰ T:633 (Unger)

⁸¹ T: 78 (Lapsley)

⁸² T: 65 (Langmore)

⁸³ T:65 (Langmore)

⁸⁴ T: 63 (Rhodes-Ward)

⁸⁵ T:402 (McCullough)

93. As Carolyn Cameron of Jacobs said,

“collaborative planning and research is needed to understand and communicate the implications of ensuring final landforms post an acceptable risk to community safety. The achievement of safe final landforms may have implications for the final landform’s capacity to contribute to other economic, community and environmental outcomes. A collaborative mine rehabilitation planning involving mine operators, Victorian government regulators, emergency services and other agencies focused on economic and community outcomes will be critical. All entities will need to be clear on what constitutes an acceptable community safety risk and what are appropriate short, medium and long term risk controls.”⁸⁶

94. The Board should find that community engagement to date has been far from adequate: engagement efforts have been limited and the community have not been provided with sufficient information or opportunity to have a say about matters that will have a very real impact on their community, economy and environment. Processes and regulatory mechanisms need to be put in place to facilitate meaningful and effective community engagement on rehabilitation and end of mine life land use. Sections C, D and G of these submissions contain specific recommendations as to what these processes and regulatory mechanisms should be.

F: End of Life Plans – Importance of Water

95. The Jacobs report identified a range of options for rehabilitation, however no firm conclusions can presently be drawn as to the “best” rehabilitation options for each mine. This is because a number of key issues remain uncertain and critical among them are the issues of access to water and water quality.

Access to Water

96. One of the central issues that became apparent in the hearing is that while the mine operators (specifically Hazelwood and Loy Yang) have assumed they will have access to certain quantities of water to fill the pits, evidenced most starkly by the optimistic content of their rehabilitation plans the water authorities have not given any real

⁸⁶ Report of Jacobs Group at 3.1.5 (exhibit 27)

consideration to whether those quantities of water will be made available to the mines.

97. It also became apparent that Action 6.8 in the Gippsland Region Sustainable Water Strategy (**SWS**) has not been progressed. As a result discussions between key stakeholders of DEWLP, other water authorities, the mines, and any downstream users, about the viability of accessing the large volumes of water that would be required to fill the pits, have not occurred.
98. Dr Davis' evidence was that water diversion gives rise to the need to consider social, amenity, landscape values, environmental impacts and that the Latrobe River system is fully allocated⁸⁷ and that impacts on offsite users and the environment should be considered.⁸⁸ Dr Davis agreed that downstream users should be consulted.⁸⁹
99. In assessing the LYWPV SRW sought that the long-term availability of water from the surrounding catchment which would otherwise flow to the Latrobe River with potential consequential impact on the regional water resources be considered by the regulator. It observed that this needed to be addressed well in advance of closure.⁹⁰
100. Dr McCullough gave evidence that it cannot yet be determined at this point in time whether or not flow-through will be a good idea, and that there can be a number of dangers for both the lake and also for the river and for users of both of those entities.⁹¹
101. Dr McCullough also gave evidence that he was unsure of the future water quality of the pit lake.⁹²
102. In relation to climate change, Mr Rodda stated that it is one of SRW's top risks – and that as climate change impacts further, SRW expects that there will be reduced water resources.⁹³

⁸⁷ T:220 (Davis)

⁸⁸ T:221 (Davis)

⁸⁹ T:221 (Davis)

⁹⁰ T:224 (Rodda)

⁹¹ T:452 (McCullough)

⁹² T:510-511 (McCullough)

⁹³ T:236 (Rodda)

103. Mr Methel acknowledged that there is a certain amount of expectation that climate change will bring more severe events – and that this may result in less water overall.⁹⁴
104. The joint panel experts agreed that there is a need for co-ordination in relation to managing valuable and scarce water resources and planning for potential climate change impacts.⁹⁵ Dr Davis agreed that collaboration between agencies needs to occur.⁹⁶ DEWLP, the other water authorities, the mines, the regulator and EV agree that discussions in relation to water can, and should happen. The Board should recommend that the discussions in fact occur.
105. EV submits that when the issue of access to water is properly considered by the water authorities or DEWLP, that the following matters should be taken into account in considering whether certain water should be allocated or diverted from other sources:
- (a) What are the catchment impacts and how can these be avoided – for both other users and the environment?
 - (b) What are the evaporation effects going to be and how should these be managed?
 - (c) How will climate change affect the filling and also any modelling?
 - (d) What are the potential cumulative impacts if each mine decides to seek to fill at the same time?
106. An accurate estimate of how long it will in fact take to fill each pit is also required in order to plan for rehabilitation and associated monitoring. The reports produced by the mine operators present differing scenarios with significantly different time estimates. The accuracy of those assessments should be verified by the water authorities. The time required for monitoring is likely to be significant in any event: Professors Mackay and Sullivan estimated decades.⁹⁷
107. Further, the content of the relevant reports should be accurately captured within the body of the Rehabilitation Plans themselves. Presently, the Loy Yang GHD report indicates that 25-35 years for filling to stability is the most likely scenario but the work

⁹⁴ T:316 (Mether)

⁹⁵ Joint Expert Report, Q8(g)(ii) and (iii)

⁹⁶ T:203 (Davis)

⁹⁷ T:456-457 (Mackay and Sullivan)

plan itself adopts the more optimistic estimate of 10 years. Mr Rieniets agreed that the work plan does not reflect GHDs assessment about what is most likely.

108. Currently, the uncertainty in relation to access to water has serious ramifications for the Board's ability to make recommendations for one particular rehabilitation outcome over another, particularly concerning Hazelwood and Loy Yang (which have deeper pits than Yallourn and do not have the same potential access to river diversions).
109. It cannot be assumed that the water will be available. As a result it would be prudent for ongoing work on end of life concepts to continue to engage with alternative options including filling the pits with overburden or other soil, if water is not available and that consideration also be given to the costs of purchasing on the open market.
110. Mr Rieniets, for Loy Yang, did not rule out the option of putting overburden into the pit if Loy Yang's preferred water allocation was not available (conceded in response to EV asking Mr Rieniets about GHD's suggestion to explore this in its water balance report for the LYWPV).⁹⁸
111. The questions for Yallourn concern whether rivers should be diverted, or to what degree, and how protection of water quality will be ensured.
112. The uncertainty in relation to access to water means that the Board should find that as consultations need to occur forthwith between DEWLP, DEDJTR, the water authorities, and relevant downstream users and environment groups. The discussions should focus upon determining what water is likely to be available to fill the pits.
113. The relevance of the EPBC Act and the involvement of the Commonwealth should also be considered.
114. There is potential for Commonwealth Government involvement in addressing and assessing the impacts on waterways of filling the mine voids with water, under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.
115. It is a breach of the EPBC Act to undertake an action that is part of a large coal mining development that will have a significant impact on water resources, unless that action

⁹⁸ T:302 (Mether)

has been approved by the Federal Minister for the Environment.⁹⁹ The EPBC Act would likely apply to the proposal to fill the Hazelwood, Yallourn and Loy Yang mine voids with water, because the action is part of a large mining development and the evidence before the Inquiry suggests that these actions will have a significant impact on ground and surface water resources.

116. Similarly, taking an action that will have a significant impact on a wetland of international significance is also a breach of the EPBC Act unless the Federal Minister for the Environment has approved that action.¹⁰⁰ The Gippsland Lakes are an internationally significant wetland, and are downstream of the mines. In the event that filling the mine voids with water effects the water quality or quantity flowing into the Lakes, such that there is a significant impact on the wetlands themselves, the EPBC Act will apply so as to require the assessment of the impacts of the pit filling on the Gippsland Lakes.
117. These provisions mean that the proposal to fill the mine voids with water will likely need to be referred to the Federal Minister for the Environment, for determination as to whether assessment is required, prior to the commencement of the filling the voids.
118. The Federal Minister for the Environment can elect to assess and determine whether to approve each action individually, if the Minister has determined that an assessment and approval is required.¹⁰¹ Alternatively, the EPBC Act provides for 'Strategic impact assessments', which enable assessment of a broader set of actions.¹⁰² Strategic impact assessments assess a "policy, plan or program." The Minister can decide to approve actions undertaken in accordance with the policy, plan or program, so that such actions do not require further, individual approval.¹⁰³ This mechanism could be used to assess the impacts of all three mines filling the mine voids with water, as part of one assessment.

⁹⁹ EPBC Act, s24D and s24E

¹⁰⁰ EPBC Act, s 16 and 17B

¹⁰¹ EPBC Act, Parts 8 and 9

¹⁰² EPBC Act, Part 10

¹⁰³ EPBC Act, s146B

119. EV submits that the mines and regulator ought give consideration to the potential impact of the EPBC Act upon the options for rehabilitation of the mines, noting that the EPBC Act creates a further set of issues that need investigation and that approval of the proposal to fill the voids with water under the EPBC Act cannot be assumed.

120. *The Board should recommend that:*

- (a) Action 6.8 of the Gippsland Region Sustainable Water Strategy be fully implemented, with annual public reporting that focuses specifically on the progress being made on this action;*
- (b) As an extension to the implementation of Action 6.8, DELWP and regional water authorities should carry out an assessment of the possible scenarios for filling mine pits with water;*
- (c) These scenarios should include different rates for filling the pits and using different sources of water and an assessment of the costs of acquiring water on the open market;*
- (d) The assessment should include the impacts on water quantity and water quality as it affects (1) the environment, including the ultimate outflow at the Gippsland Lakes, (2) downstream consumptive users, and (3) the catchment generally;*
- (e) The effects of climate change on water availability should also be assessed in this context, including possible changes in water demand within the catchment as water availability changes in other parts of the state;*
- (f) The potential cumulative effects of each mine seeking to access water at the same time should be considered;*
- (g) Part of this process should involve consultation with affected parties and other relevant stakeholders (eg. farming associations, conservation groups);*
- (h) The outcomes of this assessment should be included in the annual reporting on progress towards the completion of Action 6.8 of the Gippsland Region Sustainable Water Strategy;*
- (i) The work of GHD be independently verified by DELWP and the water authorities;*

- (j) *The outcomes of the assessments be accurately incorporated into the work plans and rehabilitation plans; and*
- (k) *Consideration be given by DEDJTR, DEWLP and the mines as to the EPBC Act and the role for the Commonwealth in rehabilitation.*

Water quality

121. It is evident that water quality needs to be protected, both inside and outside of future pits. Contamination of the pit water body in the mines may affect connected groundwater and/or surface water, and subsequently, the catchment, for both other users and the environment.
122. Consideration needs to be given in the short term to how water quality will be protected, to ensure that if early action is required, it can be taken.
123. SRW raised groundwater quality issues in their assessment of the LYWPV.¹⁰⁴
124. *The Board should recommend that steps are undertaken to protect water quality in the rehabilitation process, by undertaking research, setting water quality criteria and ensuring the criteria are observed. The setting of the criteria should involve stakeholder consultation.*

G: Latrobe Valley Mine Rehabilitation Body

Need for a new body

125. There are significant uncertainties and several complex and difficult issues in relation to rehabilitation of the mines that are in need of resolution. These issues include water access and water quality impacts, access to overburden, stability and safety and community expectations in relation to final uses of land affected by mining. It is likely that government agencies, the community, the mines and other relevant stakeholders will have diverse views on both what the process for resolution of these issues should be, as well as the ultimate outcomes. Ms Cameron said in her report that in situations such as that presented by rehabilitation of the Latrobe Valley mines, proactive coordination is needed.¹⁰⁵ Likewise, Professor Mackay gave evidence that significant planning decisions need to be made to manage interactions between the environment,

¹⁰⁴ T:224 (Rodda)

¹⁰⁵ Jacobs report, 26 October 2015, EXP.0009.001.0016

populations and the mines, and that stakeholders must come together to address these issues.¹⁰⁶

126. These issues are not new.¹⁰⁷ Further, Professor Sullivan gave evidence that the longer these issues remain unaddressed, without efforts to understand risks and coordinate solutions, the likelihood of adverse outcomes increases.¹⁰⁸ Despite being very aware of these issues for some time, the regulator does not have a specific plan or proactive program to work towards resolving these issues.¹⁰⁹
127. In the 2011/12 Annual Report from the Technical Review Board, and in communications with the TRB since, the TRB has recommended the regulator undertake a series of actions to deal with rehabilitation issues, including undertaking research, encouraging collaboration and information sharing, assessing risks in relation to rehabilitation and improving risk management. In his statement, Professor Galvin stated that “there is still some way to go” in terms of the regulator following through on TRB recommendations, that significant research and a need for better collaboration remains outstanding and that the regulator responses to mine instability and rehabilitation issues have been largely reactive to specific incidents, not proactive.¹¹⁰
128. Furthermore, evidence was given that there are limitations on the regulator being able to undertake the coordination role, and that such a role would likely diminish or dilute their regulatory function.¹¹¹ Ms Cameron pointed out that regulators have specific functions under legislation and keeping the coordination function at ‘arm’s length’ from the regulatory function both preserves the neutrality of the regulatory function and is likely to lead to a better outcome from the coordination process.¹¹² The potential for conflict or tension between roles, as well as DEDJTR’s past performance on these issues discussed in the paragraph above, are reasons why a new body, separate from DEDJTR, should be created to undertake coordination.

¹⁰⁶ T: 411-412 (Mackay)

¹⁰⁷ T:122 (Wilson)

¹⁰⁸ T:416 (Sullivan);

¹⁰⁹ T: 145-146 (Burton); T: 796 (Wilson)

¹¹⁰ Galvin statement, [10]-[14], [28]- [29]

¹¹¹ T: 592 (Cameron)

¹¹² T: 592 (Cameron); Jacobs report, 26 October 2015, EXP.0009.001.0042

129. Ms Cameron compared three models of coordination, being self-governing, lead agency and established authority. She found that the ‘established authority’ model of coordination had the strongest clarity of purpose because its roles and responsibilities are explicitly defined by statute.¹¹³ In addition, established authorities were found to be most capable in delivery of their objectives.¹¹⁴ Further, the established authority has the benefit of being independent of government, and can be established with an independent leadership group.¹¹⁵ Ms Cameron did, however, note that legislation may not be necessary for a process to assess and review the long term vision for the mines and assess the different issues with the different landforms.¹¹⁶
130. A new, purpose built body, set up under legislation, with appropriate and adapted functions and powers would be the most effective vehicle for undertaking the coordination of the review of end of mine life concept plans and rehabilitation plans. As Ms Cameron stated, a benefit of an independent, statutorily created body is that they have powers that are appropriate to the problem they are trying to solve.¹¹⁷ Further, a new body would benefit from being independent, and not having competing or conflicting roles to do with the regulation of mines.¹¹⁸ Although the planning work could be undertaken without legislation, legislation would be useful in defining the role and powers of the body, building in independence, transparency and accountability into how the body operates, and giving the body powers such as the ability to enter into contracts to commission research and compel the provision of information in some circumstances.

Role of the Body

131. An overarching review of the end of mine life concept plans of all three mines should occur.¹¹⁹ These plans need to be developed with a coordinated approach involving all stakeholders, including meaningful community participation as described in Section E, above.¹²⁰

¹¹³ Jacobs report, 26 October 2015, EXP.0009.001.0049

¹¹⁴ Jacobs report, 26 October 2015, EXP.0009.001.0049

¹¹⁵ Jacobs report, 26 October 2015, EXP.0009.001.0054

¹¹⁶ Jacobs report, 26 October 2015, EXP.0009.001.0049

¹¹⁷ T:588-589 (Cameron)

¹¹⁸ Jacobs report, 26 October 2015, EXP.0009.001.0025

¹¹⁹ Jacobs Report, 16 November 2015, EXP.0011.001.0087

¹²⁰ Joint Expert Report, [Q8g]

132. Research on the matters that may affect the feasibility of mine plans, identified by the experts as being necessary, such as on access to water and stability, also needs to be undertaken.¹²¹ This research needs to be shared amongst the mines, agencies and community and fed into the review of the end of mine life concept plans.¹²²
133. Because the actions of one mine can affect the possible rehabilitation outcomes of another, the review needs to be done in an integrated fashion, with challenges and problems considered holistically, rather than on a mine-by-mine basis.¹²³
134. The body should undertake the role of integrated review of the end of mine life concept plans, including facilitating community engagement and commissioning research, as described above.
135. Further, given the likelihood that end of mine life plans may need to be change due to changes to mine plans, differing community expectation and/or developments in science and engineering practice as to what is best practice and what is technically possible, there is a need to coordinate developments and changes in end of mine life plans, until the end of mine life. In addition, the community needs to continue to be informed of and engaged in any changes. Accordingly there will be a continuing role for the body after the review and development of the end of mine life concept plans.
136. The role of the new body should not duplicate that of the Regulator. The roles of approving work plans and rehabilitation plans, and monitoring compliance and undertaking enforcement in relation to these plans should remain with the regulator.¹²⁴

Structure and characteristics of the Body

137. The body should be overseen by an independent board with relevant expertise. The appointment of the Chair warrants careful consideration, and, consistent with the evidence on the importance of leadership given by Ms Cameron, the head of the new body should be someone both capable of making difficult decisions in a contested

¹²¹ See for example, Galvin statement, [11]-[12] and T:455 (McCullough)

¹²² Joint Expert Report, [Q8a]; Jacobs Report, 16 November 2015, EXP.0011.001.0086

¹²³ Joint Expert Report, [Q8e]-[Q8f]

¹²⁴ Jacobs report, 26 October 2015, EXP.0009.001.0041

environment, as well as obtaining the trust of stakeholders.¹²⁵ Committees on matters in need of discussion should contain representatives of government, industry and the community and report to the board. It is likely the body will require the support of a secretariat.

138. In order for the body to be able to perform its functions effectively, it will require expertise. EV submits that the board of the body should include members with expertise in community and stakeholder engagement, research design and commissioning, and project management. Expertise in the technical aspects of mine rehabilitation will also be needed to inform the board's deliberations and decisions. This could either be obtained through having members on the board with this expertise, or putting in place an arrangement so that the board can access the technical expertise of the Technical Review Board and/or the Geotechnical and Hydrogeological Engineering Research Group.
139. In order to successfully be able to coordinate, and encourage collaboration between various stakeholders, who will often be at odds, legislation establishing the body should define the body's guiding values. These values should include independence, transparency and accessibility and equal treatment of participants. Having a considered approach and creating a culture with a commitment to delivering high quality results will also be essential in obtaining trust and credibility and therefore having an effective relationship with stakeholders.¹²⁶ These matters will require careful consideration at the time of establishment, and also when selecting leaders, particularly the Chair of the Board.
140. Finally, evidence suggested that having the body being based locally, in the Latrobe Valley, would assist in developing and maintaining the productive relationships with the various stakeholders.¹²⁷

141. *EV submits the Board should make the following recommendations:*

- (a) *An independent coordinating body be established, by statute, with powers and functions specific to its role and purpose.*

¹²⁵ T: 595-596 (Cameron)

¹²⁶ Jacobs report, 26 October 2015, EXP.0009.001.0051

¹²⁷ T: 47-48 (Langmore); T: 601 (Cameron)

- (b) *The body should have the following roles:*
- (i) *Commission research needed to inform end of mine life plans;*
 - (ii) *Educate stakeholders, especially the community, on the risks and opportunities and technical possibilities and limitations in relation to end of mine land-uses;*
 - (iii) *Coordinate stakeholders (including community) and government agencies to provide information and input into end of mine life concept plans and develop end of mine life concept plans for all three mines;*
 - (iv) *Review and facilitate ongoing community and stakeholder engagement in relation to rehabilitation of the mines throughout the life of the mines.*
- (c) *The end of mine life concept plan developed by the coordinating body is to be used as a basis for preparation of detailed rehabilitation plans, in accordance with the recommendations in Section C of these submissions.*
- (d) *The body should be governed by an independent board, informed by committees comprising representatives of stakeholders . When establishing the body, special regard should be had to:*
- (i) *ensuring the board has expertise that will enable it to fulfil its role;*
 - (ii) *Establishing values of independence, transparency and accessibility and equal treatment of participants and a culture of high performance, within the body*
- (e) *The body should be based in the Latrobe Valley*
- (f) *The body to be set up should co-ordinate the carrying out of the other recommendations made by the Board.*

Coal Resources Victoria

142. Coal Resources Victoria is not the appropriate body to undertake the body of work that we submit should be undertaken by the Latrobe Valley Mine Rehabilitation Board.
143. Clean Coal Victoria, renamed Coal Resources Victoria in 2014, was formed to undertake strategic planning for the development of coal on behalf of the Government

and to develop expertise to ensure the development of Victoria's brown coal resource.¹²⁸ When established, the body described itself as being "dedicated to maximising the value of Victoria's brown coal resources".¹²⁹ Some of its responsibilities have included:

- (a) Facilitating coal development projects;¹³⁰ and
- (b) Undertaking research to assist with reducing costs of coal mining.¹³¹

Coal Resources Victoria also undertook or commissioned some studies in relation to rehabilitation options for the Latrobe Valley mines, but did not have a lead role in the review of rehabilitation plans.

144. The purposes for which Coal Resources Victoria was established are incompatible with the task of conducting or coordinating an independent review of end of mine life plans. As Mr Wilson acknowledged, it would be challenging for a body established for the purpose of developing the coal resource to play an 'arm's length' role, in respect of rehabilitation.¹³² Further, as discussed above, trust is essential to effective involvement of the community in decisions and processes.¹³³ The purpose, and actions undertaken to fulfil this purpose, of Coal Resources Victoria, have potential to create at least a perception of there being conflict of interest, and may pose challenges for gaining the trust of the community.

145. For these reasons, we submit the Board should find that Coal Resources Victoria is not the appropriate body to undertake the coordination role.

H: Progressive rehabilitation

146. The submissions in this section relate in particular to TOR 9(a) and 9(d), namely, whether and to what extent a rehabilitation option would decrease the risk of fire, and whether and to what extent progressive rehabilitation is carried out.

¹²⁸ Wilson statement, 30 November 2015, [16].

¹²⁹ Wilson statement, 30 November 2015, DEDJTR.1025.001.0043

¹³⁰ Wilson statement, 30 November 2015, [11]

¹³¹ Wilson statement, 30 November 2015, [19.2]

¹³² T:797 (Wilson)

¹³³ T: 601 (Cameron)

147. Professor Galvin gave evidence that there is scope for the mines to increase the rate of progressive rehabilitation.¹³⁴ The TRB's letter of 12 October 2015 referred to the delay in undertaking progressive rehabilitation being attributed to the presence of infrastructure on the Loy Yang northern batters and noted that this does not appear to have been independently tested to date from the technical and risk management perspectives.
148. Mr Methel agreed in general terms there could be more progressive rehabilitation subject to constraints. Mr Rieniets said where mine infrastructure and mining areas allow, of course there can be more". Mr Faithful said there can always be more.¹³⁵
149. The evidence before the Board is insufficient to support findings about how much and what additional progressive rehabilitation can be achieved. This is a matter that should be addressed in the context of the work plans.
150. *The Board should recommend that DEDJTR undertake a review of the potential for an increased amount of progressive rehabilitation to be undertaken in each mine; and if a greater amount of progressive rehabilitation can feasibly be undertaken, DEDJTR should direct that it occur.*
151. There is a related issue in respect of exposed coal batters. In the hearing it became apparent that there is a difference between the stable water level (that is, the level at which pit heave is avoided) and the final water level (which will be higher than the stable water level). It appears that the intention is that the coal batters which are lower than the final proposed water level (to be contrasted from the stable water level) will remain exposed post closure, until the time that the water level rises to cover them. It appears the mines do not intend to cover the batters at all if they are lower than the final proposed water level. The period of time for which these "lower" coal batters could remain exposed will be greater than the period of time which the pit will take to fill the stable water level. It is unknown how long precisely that period will be, but it could be decades or centuries. To fill the pits to the stable water level could take:
- (a) at Hazelwood – 200 years;¹³⁶

¹³⁴ Galvin statement, [24]

¹³⁵ T:290 (Rieniets, Faithful and Methel)

(b) at Loy Yang – 85 years;¹³⁷ and

(c) at Yallourn – 81 years,¹³⁸

(acknowledging the actual period of time may be less, however these time frames are drawn from the mine’s own material as possibilities.)

152. EV submits that the Board should find that it is unacceptable for the lower coal batters to be exposed for such long time periods, by reason of fire risk.
153. This is especially the case when for the relevant time periods the mines will no longer be operating, with the prospect that fire prevention and response systems may not be maintained in the same manner as they are currently maintained.
154. *The Board should recommend that further research is undertaken to find a way in which the affected coal batters can be treated to adequately reduce fire risk for the period of time between post closure and the water level reaching its final level.*
155. It is noted that the LYWPV condition 6.10 provides that the Licensee must ensure that all exposed coal is covered by non-combustible inert material within 15 years of the date of ceasing mining. EV supports that condition as a minimum, and submits that *the Board should also recommend that this condition be applied to the Licences for Hazelwood and Yallourn.*

I: Rehabilitation Bonds

151. Terms of reference 10(a) and (b) require that the Board consider whether the rehabilitation liability assessments reported by the mine operators in 2015 are “adequate” and whether the current rehabilitation bond system is or is likely to be “effective” for each of the Latrobe Valley Coal mines. Questions of adequacy and effectiveness require consideration of the purpose or purposes of the bond system.

¹³⁶ Faithful statement, [180]

¹³⁷ GHD report which is Appendix 4 to LYWPV – see Rieniets supplementary statement 3 December 2015, AGL.0001.004.0605

¹³⁸ Mether statement, [198]

152. However it is necessary to start by identifying the elements of the current bond system. For present purposes the 'system' should be understood to encompass the approach by the regulator (DEDJTR) to the exercise of its statutory powers and the enforcement of its written policies. This is because there is a divergence between the powers available to the regulator and its formal policy objectives on the one hand, and the actions of the regulator, on the other.

Current bond system

153. Rehabilitation liability and the provision of rehabilitation bonds are governed by part 7 of the Act. It is unnecessary to set out the provisions in full here and it suffices to observe that -

- (a) the cornerstone of the statutory regime is a positive requirement that the licence holder rehabilitate the land in accordance with approved rehabilitation plans (s.78);
- (b) rehabilitation must occur in the course of doing the work permitted by the licence and as far as practicable must be completed before the expiry of the licence or as soon as expeditiously as possible thereafter, in which case the former licensee must continue the appointment of a manager to the site (s.81);
- (c) a licensee must enter into a rehabilitation bond for an amount determined by the Minister on the condition that the licensee rehabilitates the land to the satisfaction of the Minister and the Minister may at any time (after consultation with the licensee) require a further rehabilitation bond for an amount determined by the minister if the Minister is of the opinion that the amount of the existing bond is insufficient (s.80);
- (d) under s.79A the Minister may require a licensee to assess its "rehabilitation liability" for the purposes of determining or reviewing the amount of the bond required, which assessment must be undertaken in the "manner and form" required by the Minister and must reflect work plan requirements for rehabilitation. The Minister may require the licensee to engage an auditor to certify that the assessment has been prepared as required (by the work plan and stipulated "manner and form") and that it is "accurate";

(e) If the licensee fails to carry out rehabilitation to the satisfaction of the Minister the Minister may take steps to rehabilitate the land and recover the costs of rehabilitation that exceed the amount of the bond, as a debt (s.83).

154. The Act does not expressly define “sufficiency” in the context of the rehabilitation bond and nor does it specify the considerations that the Minister must take into account when determining the amount of the bond. However, the positive obligation to remediate, the power to require the licensee to assess its “rehabilitation liability” (s.79) and the entitlement to recover the shortfall between the bond amount and the costs of any rehabilitation work carried out on behalf of the Minister make clear that the statutory intention is that the licensee (and not the State) should be responsible for the entirety of the costs of rehabilitation. These costs need to be calculated on the basis that it will be a third party, not the mines themselves, carrying out the works, as the bonds will be used to cover the costs of rehabilitation in the event of default by a licensee.¹³⁹ Mr Wilson agreed that the “purpose for which we have bonds” is “**to provide the state with sufficient money to rehabilitate if the mine owner walked away**”¹⁴⁰ – a view which is consistent with the evident statutory purpose. (The question of the purpose of the bond is considered further below).

155. The mechanism under s.79A has obvious utility because, provided the audit requirement in ss.3 is invoked, it envisages a rehabilitation liability assessment which is undertaken by the mine operators themselves (thereby proceeding on the basis of their working knowledge of the mines and their complex conditions) but which is independently scrutinised by an environmental auditor appointed under the *Environment Protection Act*. It is an obvious point that prudent regulation requires that where liability is, in the first instance, self-assessed, the assessment must be rigorously audited. The point is underscored by the evidence concerning the limitations of current liability assessments made under s.19 of the Act (below).

156. That mechanism been used only once and not in the context of the Latrobe Valley coal mines.¹⁴¹ That is because the department could not specify the manner and form of

¹³⁹ T1009-1010 (Chadwick)

¹⁴⁰ T813-814

¹⁴¹ T806 (Wilson)

the required assessment satisfactorily.¹⁴² The lack of relevant or sufficient expertise in the department is a significant shortcoming that should be rectified as soon as practicable.

157. EV agrees with counsel assisting that the statutory regime does not perfectly fit the circumstances of the Latrobe Valley mines which will require remediation over very long periods of time post mine closure.¹⁴³ However on the critical issues of the obligation to remediate, the power of the Minister to require a sufficient rehabilitation bond and the provision of a mechanism by which to assess rehabilitation liability, Part 7 of the Act should, if actively enforced by a regulator with access to sufficient expertise, function as an effective regime for the purposes of ensuring that sufficient financial security for the state is in place. For completeness we note that if in fact the bond obtained by the Minister is inadequate the entitlement under s.83 of the Act to recover a shortfall between the bond and the actual rehabilitation costs may in fact provide no real protection because the entitlement to recover a debt is valuable only to the extent that there are assets available against which to recover. The solution to that problem is to require adequate security. The second is that to the extent that additional or different forms of security are necessary or desirable (see below) they may require legislative support.
158. DEDJTR has since 2010 had a clear statement of the policy intended to govern the administration of rehabilitation bonds (“Establishment and Management of Rehabilitation Bonds for the Mining and Extractive Industries) (**the 2010 Bond Policy**).¹⁴⁴ The published policy document is described as “guidelines” because it is intended to describe the department’s policies for the assistance of mine operators and others.¹⁴⁵ Relevantly the 2010 Bond Policy provides that –
- (a) the amount of the bond is intended to address *in full* the rehabilitation liability based on the approved work plan (at 2.1);

¹⁴² T809 (Pendrigh)

¹⁴³ T655

¹⁴⁴ DEDJTR.1021.001.0001 (annexure 29 to the Statement of Wilson – exhibit 5A).

¹⁴⁵ DEDJTR.1021.001.0003

- (b) bonds are to be periodically reviewed by the department to ensure that they remain at appropriate levels during the life of the operation, including when a work plan variation is submitted (at 2.1 and 5);
- (c) The Minister may require a bond to be reviewed at any time during the life of an operation where the Minister is of the view that amount of the bond is insufficient (at 5).

159. The department has neither enforced the 2010 Policy nor, in the period before the policy was expressed in the 2010 document, managed or enforced rehabilitation bonds in the manner described in the policy. Specifically -

- (a) Each of the mine operators was required, at the time of privatisation, to provide a bond of \$15m, which was in each case described as a bond provided on an “interim basis”.¹⁴⁶ The interim assessments were left in place, apart from a reduction in the Yallourn bond to \$11.4m in 2004. No reviews have occurred on the submission of work-plan variations, including the significant variation to the Hazelwood work plan in 2009.
- (b) No review was triggered by failure of the mine operators, prior to 2015, to provide rehabilitation liability assessments, as they were required to do under the MR(SD) regulations (the schedule 19 assessment).¹⁴⁷
- (c) The amount of the bonds for each mine fall significantly short of even the mines operators’ own present assessments of their rehabilitation liability (see below).

160. The history of the administration of the bond regime reveals a lack of rigour, inertia and delay. In particular -

- (a) The calculation of the initial “interim” figures appears to have been based on scant evidence and back of the envelope style calculations displaying rudimentary workings by the mine operators, who appear not to have been asked to further develop the calculations.¹⁴⁸

¹⁴⁶ Exhibit 35 (statement of Kylie White, annexure 4); exhibit 5A (statement of Wilson, [109]-[114]).

¹⁴⁷ exhibit 5A (statement of Wilson, [117]).

¹⁴⁸ Further statement of Kylie White, 6 June 2014, exhibits KAW47-49. The available evidence concerns the calculation of the bond for the Hazelwood mine.

- (b) In December 1995 the department recommended that in respect of Hazelwood the initial \$15m bond be maintained, notwithstanding that it was a departure from the usual practice of estimating the *worst case liability* during mine life. That recommendation (which was evidently accepted) was made on the assumption that the mine would be very unlikely to close before the scheduled end of life because of the importance of the mine as part of the state's power supply infrastructure, and because "it could is therefore be argued that provided progressive rehabilitation is kept up, the potential liability to the state is only the cost at closure".¹⁴⁹ That approach was flawed because it assumed that adequate concrete and measurable milestones for progressive rehabilitation could and would be imposed, it failed to grapple with the possibility that there could be a very large gulf between rehabilitation completed at the point of mine closure and the works required to completely rehabilitate the mine, and it failed to allow for the factors that could affect early closure.
- (c) Over a decade later, in 2006, the department developed a bond calculator. In 2008 an analysis by GHD found that the calculator was a sound way of estimating rehabilitation liability with the exception that it exaggerated the allowance made for project management costs. The calculator was used by the Department to review bonds for Hazelwood in 2009 and 2011 and for Yallourn in 2010.¹⁵⁰ Despite the reviews having occurred, there was no change to any of the bonds for either Yallourn or Hazelwood.
- (d) The reason given by the Department for the fact that the bond levels have not changed since 2006 was that "in 2010 the government commenced a review of [the] rehabilitation bond policy."¹⁵¹ The proffered reason is plainly untenable. It was not suggested in evidence that the department was unable to assess the rehabilitation liability either before 2006 or after 2006 when it had developed a tool specifically to calculate rehabilitation liability and had had the tool assessed. The review in 2010 was one of the number of reviews of the bond system that

¹⁴⁹ DSBI.0007.002.0015 (further statement of Kylie White, 6 June 2014, exhibit KAW49).

¹⁵⁰ Exhibit 5A (statement of Wilson), [123]-[124]

¹⁵¹ Exhibit 5A (statement of Wilson), [125].

had been conducted since 2000.¹⁵² There is no evidence on which it could be concluded (and nor is it anywhere contended) that reviews were occurring because any aspect of the operation of the bond system was incapable of being enforced or was untenable as a matter of principle. To the contrary, the development of the liability calculator in 2006 and the articulation of the 2010 policy (which appears to have been consistent with the policy prevailing since 1995) indicates that the policy was readily enforceable. The occurrence of a series of reviews, none of which resulted in concrete recommendations and action, is not a proper basis on which a lack of enforcement of an existing policy can be justified.

161. EV agrees with the description of the 2010 Bond Policy by counsel assisting as “simple and sensible”.¹⁵³ Nothing in the history of the administration of the bond regime supports the failure by the regulator to administer the bond system in the manner described by that policy or suggests that a different approach to requiring rehabilitation bonds has been warranted.
162. For the purposes of the current bond review project being undertaken by the Department, a risk assessment was performed which rated the likelihood of the mine operators refusing to enter into increased bonds, as a risk which had a 50% chance of occurring.¹⁵⁴ The risk assessment was considered by Mr McGowan, the Regulator, before the project plan was approved.¹⁵⁵ The project plan recorded as the mitigation measures for this risk, maintaining regular communications with the mines, briefing the Minister and seeking involvement on strategy to increase bonds. It did not advert to the Minister’s power under section 80 of the Act to require a licensee to enter into a further bond as determined by the Minister. Mr McGowan agreed in evidence that the risk of the mines refusing to provide the required bonds is mitigated by the power conferred by the Act.¹⁵⁶ The project plan risk assessment is revealing on the question of the regulator’s attitude towards its dealings with the mines on the question of

¹⁵² Exhibit 5A (statement of Wilson), [173]

¹⁵³ Submissions of Counsel Assisting, [216]

¹⁵⁴ Exhibit 5A (statement of Wilson), annexure 36 (DEDJTR.1020.001.0941)

¹⁵⁵ T868 (McGowan)

¹⁵⁶ T858-859 (McGowan)

rehabilitation bonds. The plan reveals a degree of reluctance by the regulator to simply assess the appropriate level of liability and require it to be paid.

163. In this connection it is encouraging to observe that the regulator has in fact determined to apply the current policy to each of the Latrobe Valley mines in recalculating the rehabilitation bond and requiring them to enter into further bonds if the Minister's delegate is of the opinion that the current bonds are insufficient.¹⁵⁷

Reported Liability Assessments

164. In 2015 each of the mine operators submitted estimates of their current rehabilitation liability, as they were required to do under the Act. By reference to the mine operators' own assessments and the current bond policy (which requires the bonds to address the full rehabilitation liability on the basis of the approved workplan) the existing bonds are manifestly inadequate. The Hazelwood bond falls short of its own liability assessment by \$58.4M. The Yallourn Bond falls short by an amount in the range of \$33M and \$76M and Loy Yang, by \$38.7M.
165. The reported liability assessments are subject to numerous uncertainties and assumptions and are not a sound basis on which to draw conclusions on the level of the bond that should be required in each case. In the case of Hazelwood the costing makes assumptions about the availability of the bulk water entitlement which, if unfounded would result in the need to cost alternative sources of water.¹⁵⁸ The calculation of contingencies in the Hazelwood costing was opaque.¹⁵⁹ The Yallourn assessment was expressly said to be subject to a range of uncertainties specifically concerning stability issues which will require further studies.¹⁶⁰ AGL's assessment was based on modelling which was presented in draft.¹⁶¹ Finally, the liability assessments assess the costs of rehabilitation on the basis that the mines themselves will undertake the work. In the case of default on rehabilitation requirements by the mines, triggering

¹⁵⁷ Annexure 5A, exhibit 31 (DEDJTR.1020.001.0923); T857 (McGowan)

¹⁵⁸ T969 (Faithful).

¹⁵⁹ T693; 697 (Faithful).

¹⁶⁰ Exhibit 14 (statement of Mether), annexure 9.104

¹⁶¹ Exhibit 12A (statement of Rieniets), annexure Q

use of the bonds, it will be the government, not the mines, that will do the rehabilitation.¹⁶²

Conclusions - effectiveness of the current bond system

166. For the reasons indicated above, Part 7 of the Act largely adequately provides for the assessment and requirement for the provision of rehabilitation bonds. However the statutory powers available to the regulator have not been effectively used. A lack of access to technical expertise remains an impediment to the effective use of the s.79A mechanism.
167. The 2010 Bond Policy, if enforced, would be effective to ensure that the state was not exposed to the risk of having to pay the costs of rehabilitation of the Latrobe Valley mines. The existing policy has simply not been enforced. Insofar as the current “system” must be taken to include the manner in which it is enforced, the system has not been effective. That failure is a regulatory failure which is not sourced in the nature of the policy or the statutory regime itself.
168. There remain questions about whether the current system should be supplemented or changed by the explicit adoption of risk measurement relating to the risks that the mine licensees will not meet all of their obligations to remediate, and whether the current mechanism by which security should be provided (the *bond* itself) should be different or should be supplemented by alternative mechanisms. These questions are addressed below.

Risk

169. As noted above, the purpose of the existing bond policy is to provide the state with sufficient money to rehabilitate in circumstances in which the mine owner walked away. A policy which requires “100% financial assurance” (that the mine operator provide a bond equal to 100% of the assessed rehabilitation liability as reviewed periodically) unarguably meets that objective.
170. The 2002 DNRE discussion paper, “Review of DNRE’s policy on the determination and application of rehabilitation bonds for mining and extractive industries”¹⁶³ concluded

¹⁶² T1009-1010 (Chadwick)

¹⁶³ Exhibit 5A (statement of Wilson), un-numbered annexure, DEDJTR.1004.001.001

that “the overall objective [of requiring rehabilitation bonds] is to rehabilitate the land to an acceptable post mining or extraction level at *nil or negligible cost* to government and the community. In order for this to occur, the department’s regulatory framework for the setting and review of rehabilitation bonds must ensure that rehabilitation bonds cover the total rehabilitation liability.”¹⁶⁴

171. It is instructive that each of the Northern Territory, New South Wales, South Australia and Tasmania require the provision of 100% financial assurance (the provision of security for 100% of the calculated rehabilitation liability).¹⁶⁵ In New South Wales partial release of security deposits may occur when successful rehabilitation has been demonstrated for part of the site.¹⁶⁶ In Queensland 100% financial assurance is required with provision for a performance-based discount of up to 30% of the financial assurance based on meeting financial, compliance and rehabilitation criteria. In 2013 the Queensland Audit Office found that financial assurance held was often insufficient to cover the estimated costs of rehabilitation and where that was so, the responsible departments were reluctant to take action, there was little evidence of progressive rehabilitation occurring in Queensland and as a result, successful environmental rehabilitation was not occurring and the state remained exposed to unnecessary and unacceptable financial risks.¹⁶⁷
172. Mr Wilson explained that the current policy setting (leaving aside questions of enforcement) is that the bond should be calculated on the “worst case” liability during mine life. This is because from the State’s perspectives the relevant question is, “what is the state’s exposure in the case of any particular mine?”, and in relation to the “worst case”, the question is “what are you going to do with that particular part of the risk, even though it might have a very low probability? How do you manage it or are you just in a sense wearing it?”¹⁶⁸ Making a different kind of assessment (one which does not countenance the “worst case”) would require the objectives of the bond to be re-defined.¹⁶⁹

¹⁶⁴ At page 4 of the report

¹⁶⁵ Report of Accent Environmental (exhibit 44)

¹⁶⁶ Exhibit 44 at 3.3.1

¹⁶⁷ Exhibit 44 at 3.4.2

¹⁶⁸ T814,185, 186 (Wilson)

¹⁶⁹ T827 (Wilson)

173. It is contended by the mine operators that the state's policy objectives can be satisfied by the provision of less than 100% security on the basis that the amount of the security provided reflect not only the likely rehabilitation costs but the prospects that the mines will not themselves meet those costs. It is said in substance that because the current policy setting requires security for 100% of rehabilitation liability it has costs to industry and is not economically efficient.¹⁷⁰
174. At the level of principle, it must be accepted that where the purpose of the bond is to ensure that at the end of the day rehabilitation occurs at the cost of the mine operators and not at the cost of the state, one way of so ensuring is to require the provision of 100% financial assurance, but (at least in theory) another is to quantify the risk that the licensees will not meet the full cost of rehabilitation where that cost is not fully secured by a bond or similar instrument and incorporate that assessment into the calculation of the quantum of the bond. It must also be accepted that "economic efficiency" is one criterion that should be considered (and which, it must be assumed, is routinely considered) when making policy.
175. Those general propositions are relatively uncontroversial but they do not, however, lead inevitably to the conclusion that the current policy setting should be changed, or that the so-called "risk-management model" described in the evidence of Dr Gillespie and Mr Rieniets in fact represents a viable policy framework. There are several considerations that caution against a policy change of this kind. They are as follows.
176. First, the starting point for considering the role of "risk management" principles is that no basis has been demonstrated for a fundamental change in policy *objective*, meaning that the objective of the bond policy should continue to be that the mines are rehabilitated at nil or negligible cost to the state. EV does not understand that any party is contending that the level of risk accepted by the state in respect of rehabilitation costs, should materially change.
177. EV submits that as a corollary, consideration of the policy setting should proceed on the basis that there should be no move from the current setting (100% financial assurance) unless it can be positively and reliably demonstrated that change will not

¹⁷⁰ Statement of Gillespie (exhibit 45), [12]-[17]

materially increase the risks to the state. *The Board should recommend that policy analysis by the department occur within that framework.*

178. Second, economic efficiency is but one value that may guide policy making. As Dr Gillespie said, “while economics can provide information on how impacts are distributed, it provides no guidance on whether one distribution of wealth is superior to an alternative distribution of welfare. This is generally left to decision makers.”¹⁷¹
179. The significance of distributive values which favour quarantining the state and the community from risk and which accept that industry will wear the costs of providing security can be readily understood in the context of the Latrobe Valley mines which give rise to such significant and long-term rehabilitation issues and will require the expenditure of costs long after the mines have ceased operating and delivering profit to the licensees.
180. The role of economic efficiency considerations¹⁷² was emphasised in the KPMG Report¹⁷³ which was frequently cited in the Inquiry’s hearings. KPMG stated that the current system is not financially efficient as bank guarantees are costly and limit operators’ borrowing capacity. The working group whose contributions formed the basis of the KPMG report agreed that financial assurance should be economically efficient and should be based on “risk management principles”.¹⁷³ The “guiding principles” reflecting this view were not, however, formulated with the benefit of exposure to the evidence that this Inquiry has had. The report was the outcome of a literature review by KPMG and consultation with a working group comprising representatives from DPI, government and industry. No other stakeholders (including the community or other NGOs or peak bodies) participated.¹⁷⁴ That said, it must be recalled that the report expressly recognised that alongside economic efficiency, there were other important considerations, including that the financial assurance model should not create a moral hazard (which can happen if the security could provide an alternative to a company

¹⁷¹ Statement of Gillespie, exhibit 45, [23]

¹⁷² Annexure (un-numbered) to exhibit 5A (statement of Wilson), DEDJTR.1007.001.0228 (**KPMG report**)

¹⁷³ KPMG report at DEDJTR.1007.001.0232, .0234

¹⁷⁴ KPMG report at DEDJTR.1007.001.0231

meeting its legal obligations to rehabilitate a site), should not involve cross-subsidies and should not create an administrative burden for government.¹⁷⁵

181. Third, a movement away from the 100% financial assurance requirement would necessarily entail embracing an increased level of risk that the state is exposed to liability for rehabilitation costs. Mr Gillespie, for AGL Loy Yang, said that a bond that is calculated by reference to “risk management principles” would be more economically efficient but there is a trade-off for the government in that should the risks of rehabilitation default actually eventuate the government would not have sufficient money in bonds to cover the cost of rehabilitation.¹⁷⁶
182. The magnitude of that movement must be assessed, in considering any risk-based model. The question is whether it can be positively and reliably demonstrated that it would not in fact amount to a materially increased the risk to the state.
183. Fourth, the evidence in fact suggests that a model of the kind proposed by the mines is likely to result in more than a nominal increase in risk to the state and entails inherent uncertainty. Specifically -
- (a) The Gillespie model presents a rudimentary “efficiency calculation” which (by way of “illustration”) calculates the value of risk by multiplying consequence (incurring rehabilitation liability) and the likelihood of occurrence of the risk. The purpose of the model is to illustrate the resulting dollar amount of the exposure when the rehabilitation costs are reduced by reference to the likelihood of their occurrence. However the model does not allow for a discrete value or weighting to be given to high consequence and low probability risks. In fact, Dr Gillespie considered that that was not the purpose of the bond.¹⁷⁷ It is submitted that in fact, an important purpose of the bond policy must be to allow the state to deal with such risks. Even if it could be objectively and satisfactorily determined that the risk of a particular mine not meeting all of its rehabilitation objectives was extremely low, the consequences to the state would nevertheless be severe should the risk materialise, because of the magnitude of the rehabilitation costs.

¹⁷⁵ KPMG report at DEDJTR.1007.001.0233

¹⁷⁶ Statement of Gillespie, exhibit 45, [17] (see also [69]-[70]).

¹⁷⁷ Exhibit 45 at [11].

Mr Wilson adverted to this issue in evidence (see above). Orthodox risk management theory provides for sensitivity to both consequence and risk, such that events that have a low risk of materialising but which carry significant consequences may nevertheless receive a significant risk weighting.¹⁷⁸ The Gillespie model assumes the state will take on the burden of high consequence, low probability risks. It is not in the orthodox sense a “risk management” model. Dr Gillespie is not himself a risk management specialist.¹⁷⁹

- (b) The Gillespie model illustrates a risk x consequences calculation that is inapposite for the assessment of risks that are related. Dr Gillespie conceded that the risks addressed in his model (namely those concerning the ultimately failure by the mine operators to meet the full costs of rehabilitation) may well be related, in the real world,¹⁸⁰ and that if that is so, a different probability calculation is required. Dr Gillespie’s calculation “illustrates” a calculation that results in a *lower* risk value than would be the case if the appropriate calculation were used.¹⁸¹ Dr Gillespie demonstrably had no relevant expertise in making the kind of probability assessments that he sought to illustrate.¹⁸²
- (c) A model which requires the levying of a bond which represents only a fraction of the estimated liability costs (which Dr Gillespie’s model does) is at risk of creating a moral hazard – an incentive for the mine operator to decide to walk away from the obligation for the price of the bond.¹⁸³ Any “risk-based” model must genuinely engage with moral hazard. EV submits that it is difficult to envisage that any system that falls significantly short of requiring 100% financial assurance will not carry with it a real moral hazard risk. In this connection submissions appealing to reputational risk as a foundation for security should not carry significant weight because they require an assumption based on ephemeral considerations – a subjective assessment that the mines will not chose to walk away.

¹⁷⁸ See for example the AGL Risk Management and Assessment Framework of August 2011 at part 7 (Figure 7), “consequence and likelihood risk evaluation matrix”- un-numbered attachment to the LYWPV

¹⁷⁹ T1058

¹⁸⁰ T1054-1056

¹⁸¹ T1056-1057

¹⁸² T1056-1057

¹⁸³ T1059-1060 (Cramer)

- (d) The Gillespie model did not take into account transaction costs and opportunity costs to the state. Any model invoking economic efficiency principles ought to do so.¹⁸⁴

184. A model of the kind illustrated by Dr Gillespie rests principally on the contention that the risk of the mine operators failing to meet their full rehabilitation liability is low and can be assessed as such. Dr Gillespie indicated that the numbers included in his model were purely illustrative and said that they were “artificial”.¹⁸⁵ For clarity, it should be observed that the numbers chosen to illustrate the model – which create the impression of a very low risk of default – have no foundation in any fact established by Dr Gillespie’s evidence. Further, insofar as support was sought for the model in Mr Rieniets evidence, that evidence, does provide a basis for the acceptance of any of the inputs to the calculation. Mr Rieinets asserted that work had been done to generate the inputs but was unable to explain or justify the inputs.¹⁸⁶ Neither the Gillespie model nor the Reiniets evidence proffered in support of it can found any conclusion about the actual magnitude of the risk that any of the Latrobe Valley mines will default on their obligations to meet full rehabilitation costs.

185. On this issue Mr Wilson agreed that -

- (a) The use of risk frameworks in the context of bonds is difficult because it is difficult to calculate the risk with a degree of certainty.¹⁸⁷
- (b) if risk-based bonds were in place the exposure of the state to liability for operations with overseas based parent companies would be of interest to Treasury.¹⁸⁸
- (c) Where parent company guarantees are to be considered for security there would need to be transparency as to parent company assets. The department would

¹⁸⁴ T1049-1059

¹⁸⁵ T1057-1058

¹⁸⁶ T755-760 (Rieniets)

¹⁸⁷ T816

¹⁸⁸ T816-17

need access to expertise in insolvency and assessing financial stability¹⁸⁹ and would need to regularly reassess those risks.¹⁹⁰

- (d) It is conceivable that transaction costs would increase if risk assessment model for assessing bond liability was adopted.¹⁹¹ EV submits that is obvious that transaction costs would increase.
- (e) Climate change policy could affect risk of early closure and this would be relevant is a risk assessment of bond default, in particular:
 - (i) Commonwealth Renewable Energy Targets;¹⁹²
 - (ii) Victorian Renewable Energy Targets;¹⁹³
 - (iii) Other Commonwealth policies to reduce carbon pollution;¹⁹⁴
 - (iv) Programs such as the Commonwealth program “Contracts for Closure” in which Hazelwood participated and which, had the program continued, would have resulted in mines closing by 2020.¹⁹⁵

186. Mr Cramer’s evidence was that such policies are relevant considerations in assessing default risk.¹⁹⁶

187. While the Board is not in a position to make findings about the degree of risk posed by external events of the kind discussed in the evidence, the evidence is sufficient to support a finding that the risk of such events introduces opacity, complexity and uncertainty into the risk assessment process.

188. EV submits that any changes to the model contemplating risk-based considerations must take account of:

- (a) the risks of early closure effected by external events;

¹⁸⁹ T859-860

¹⁹⁰ T861

¹⁹¹ T860

¹⁹² T861

¹⁹³ T862

¹⁹⁴ T862

¹⁹⁵ T862-3

¹⁹⁶ T1053 (Gillespie)

- (b) the risks that company assets or parent company assets may well not be available in the jurisdiction during the lengthy periods required for rehabilitation;
 - (c) the real risk of moral hazard associated with any policy permitting security which is significantly lower than the amount of rehabilitation liability;
 - (d) the strong likelihood of increased transaction costs and administrative burden on the state, should such a model be adopted.
189. EV agrees that in assessing the risk of default it is not appropriate to adopt a “one size fits all” approach and that the respective financial positions of the mines differ in significant respects. They also differ in their potential vulnerability to change in climate and energy policies, and in the transparency of their financial positions, Hazelwood being the least transparent and highest emitting plant.¹⁹⁷
190. The Board should not accept the view that it is premature to make any findings or recommendations about the bond policy. EV submits that on the evidence the Board can and should find that no serious case for policy change has been made out. The Board should recommend that in its current policy review the department should consider the risks discussed above.
191. In the alternative, EV submits that a model explicitly allowing for the risk of default by the mine operators should have the following features:
- (a) An allowance for risk could be accommodated by requiring 100% financial assurance but allowing up to say 10% to 25% of the assurance to be provided by means other than a cash deposit or bank guarantee, such as a parent company guarantee or LYCA type mechanism, if certain conditions are met;
 - (b) Conditions for a parent company guarantee should include: the guarantee being transparent and enforceable, the parent company itself demonstrating sufficient assets (including as compared to debt exposure) to cover any liability, and being based in Australia;
 - (c) EV is not opposed to mechanism similar to the LY CA being used by other mines but notes that the rate at which funds are paid into trust in the case of

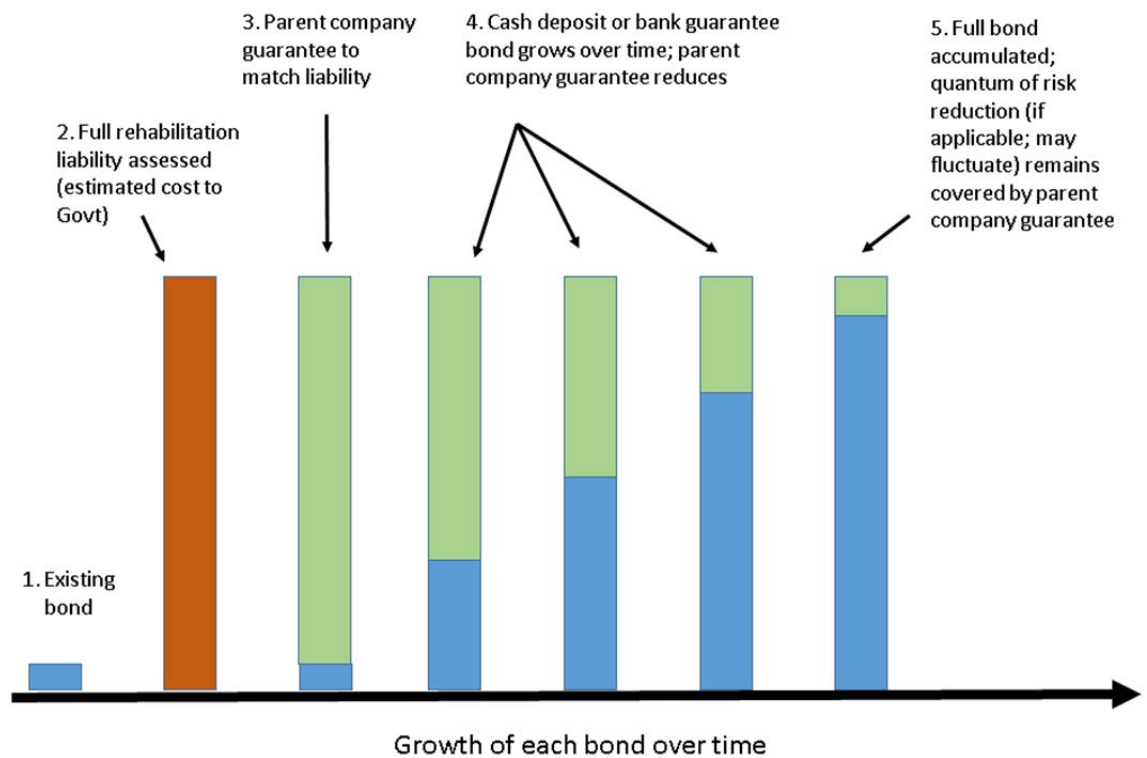
¹⁹⁷ T761-762 (Rieniets and Methers)

Hazelwood and Yallourn would need to be faster than the LY CA as there is a real risk these mines will close in the next few years and so the payments into the trust would need to happen before closure occurs. Any amount that has been secured in a trust that provides for rehabilitation costs similar to a LYCA could be off-set against the amount provide by way of a bank guarantee or cash deposit;

- (d) A cash deposit is preferred to a bank guarantee because it would allow government to use the interest for GHERG research, funding the coordinating body or some other rehabilitation purpose.

192. As to the requirement for interim measures for increasing the bonds over time, until the full bond amount is in the form of a bank guarantee or cash deposit the policy could allow a greater percentage of the bond be provided as a parent company guarantee during the interim period. Relevant factors that would influence the timing of the bond required to reach the 100% level would be license expiry date and possible/likely impacts of climate change policy, noting that these factors will influence the date of mine closure and therefore the time at which the state may need to undertake rehabilitation.

193. This approach may be illustrated graphically:



194. Any discount for progressive rehabilitation should be subject to a cap (for example, 10%) and would only apply if the progressive rehabilitation demonstrably reduced final rehabilitation liability. Where progressive rehabilitation has not been done as required in accordance with the workplan, any adjustment to the bond amount already taken into account for progressive rehabilitation should be re-adjusted.
195. Otherwise, on the question of alternative mechanisms, EV submits that the use of post-closure trust accounts is a sensible and indeed necessary mechanism in circumstances in which rehabilitation and monitoring will be required long after the licensees have ceased operating the mines.¹⁹⁸
196. EV does not agree with counsel assisting that a single trust account should be used for all three mines (whether now or post-closure). Such a mechanism would introduce

¹⁹⁸ T1063-1064 (Cramer)

cross subsidies, the perils of which are starkly illustrated by the difficulties encountered in operation of the Western Australian bond model.¹⁹⁹

Recommendations – Bond Policy

197. *The Board should find and recommend that:*

- (a) The amount of the current rehabilitation bonds and the amounts in the liability assessments reported by the mine operators in 2015 are not of a sufficient amount to protect the state from bearing the costs of mine rehabilitation, in the event of default by the mines;*
- (b) Section 79A of the MR(SD) Act provides a suitable mechanism for determining rehabilitation liability assessments, subject to (b) and (c);*
- (c) The regulator and the department do not currently have but must have access to sufficient expertise to enable the specification of the manner and form of rehabilitation liability assessments;*
- (d) It is essential that liability assessments required under s.79A be audited as envisaged under s.79A(3).*
- (e) The Act largely adequately provides for the assessment and requirement for the provision of rehabilitation bonds. However the statutory powers available to the regulator have not been effectively used.*
- (f) The 2010 Bond Policy, if enforced, would be effective to ensure that the state was not exposed to the risk of having to pay the costs of rehabilitation of the Latrobe Valley mines. The existing policy has simply not been enforced. Insofar as the current “system” must be taken to include the manner in which it is enforced, the system has not been effective. That failure is a regulatory failure which is not sourced in the nature of the policy or the statutory regime itself.*
- (g) The current policy should be enforced forthwith. The bonds for each mine should be increased to 100% of the estimated rehabilitation costs as soon as practicable after that assessment has been completed. In the case of Loy Yang the bond amount may be set off against the amount of funds secured by the LYCA.*

¹⁹⁹ Report of Accent Environmental (exhibit 44) at 3.7

- (h) Consideration of the policy setting by the department should proceed on the basis that there should be no move from the current setting (100% financial assurance) unless it can be positively and reliably demonstrated that change will not materially increase the risks to the state.*
- (i) No serious case for policy change has been made out on the evidence before the inquiry.*
- (j) In its current review the department should give specific consideration to the factors relevant to assessing risks of default:
 - (i) the risks of early closure effected by external events;*
 - (ii) the risks that company assets or parent company assets may well not be available in the jurisdiction during the lengthy periods required for rehabilitation;*
 - (iii) the real risk of moral hazard associated with any policy permitting security which is significantly lower than the amount of rehabilitation liability;*
 - (iv) the strong likelihood of increased transaction costs and administrative burden on the state, should such a model be adopted.**
- (k) The need to account for external event of kind identified in (j) introduces opacity, complexity and uncertainty into the risk assessment process.*

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