

Scope for a Latrobe Valley Mine Closure Strategy

CLEAN COAL VICTORIA

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Scope for a Latrobe Valley Mine Closure Strategy**Scope for a Latrobe Valley Mine Closure Strategy**

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Executive summary

Victoria has approximately 430 billion tonnes of brown coal reserves of which 65 billion tonnes are located in the Latrobe Valley. Currently there are three operating mines in the Latrobe Valley, providing coal for power generation, with varying expectations amongst stakeholders for rehabilitation and closure over the next 30+ years.

A Latrobe Valley Mine Closure Strategy is an important component of Victoria's planning for future coal development. A Latrobe Valley Mine Closure Strategy will address sequential land use for existing mines as well as potential future mines. The strategy needs to demonstrate how closure risks will be managed, that stakeholders will be meaningfully engaged through the closure planning process, and post mining activity will contribute to regional economy, jobs, environmental sustainability and regional liveability.

Sinclair Knight Merz was commissioned by the Department of Primary Industries (DPI) to facilitate a workshop aimed at scoping a Latrobe Valley Mine Closure Strategy. Key representatives from DPI attended the workshop. Workshop participants agreed that a Latrobe Valley Mine Closure Strategy needed to be developed by June 2013 (see Figure 1).

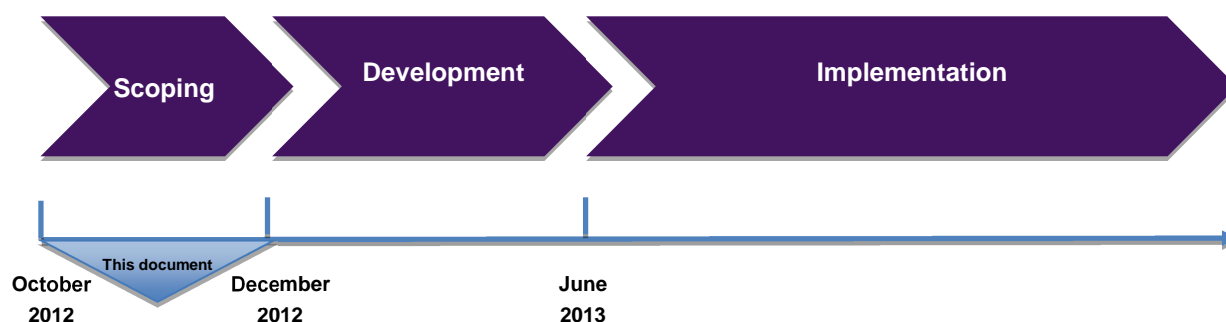


Figure 1 Latrobe Valley Mine Closure Development Timeline

It is critical that mine operators, State and Local Government, local industry and communities begin planning for future land use that can guide individual mine rehabilitation plans towards:

1. Supporting regional employment
2. Diversified and stronger regional economy
3. Improved liveability of neighbouring towns
4. Protected and enhanced (where possible) environmental assets
5. Not constraining/excluding future resource exploration and development
6. Complementing long-term regional infrastructure plans.

The Latrobe Valley Mine Closure Strategy will provide strategic planning guidance regarding:

- Aligning mine closure outcomes with long-term regional and State economic growth priorities
- Identifying mine closure pathways that address the voids and overburden across the Latrobe Valley, i.e. assessing and managing cumulative impacts

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- Promoting the transition of land between mine closure and land rehabilitation and creating investment certainty by establishing realistic mine closure criteria
- Guidance for individual rehabilitation plans to assist companies in developing mine design and closure plans that provide the necessary levels of technical certainty.
- Identifying appropriate infrastructure issues created by mine closure and what responses are needed
- Encouraging collaborative partnerships and co-design of mine closure solutions between stakeholders whilst also articulating the future value of land and resources to the broader public

The development and implementation of Latrobe Valley Mine Closure Strategy will be led by Clean Coal Victoria working in close collaboration with the DPI Mining Inspectorate.

1. Introduction

Currently there are three operating mines in the Latrobe Valley with varying expectations amongst stakeholders for rehabilitation and closure over the next 30+ years. These operating mines are Yallourn, Loy Yang and Hazelwood. There are various scenarios for future coal development within the Latrobe Valley, subject to Victorian's government's Clean Coal Roadmap and coal allocations.

Two of the three existing mines have an approved mine rehabilitation plan and the third is presently reviewing its rehabilitation plan. However there is no overall Latrobe Valley Mine Closure Strategy to connect these plans or to inform potential future coal allocations. An overall Latrobe Valley Mine Closure Strategy is needed to guide rehabilitation efforts. The development, implementation and periodical review of a Latrobe Valley Mine Closure Strategy would provide the mechanism for key stakeholders to develop and agree a broad vision for the type of future land uses that would best meet state, regional and local economic, social and environmental needs. Therefore DPI must adopt a collaborative approach to developing a Latrobe Valley Mine closure strategy.

1.1. Purpose of the Latrobe Valley Mine Close Strategy

The purpose of the Latrobe Valley Mine Closure Strategy is to provide a clear vision, strategic outcomes and actions to guide mine rehabilitation plans and potential future coal allocations. The strategy needs to demonstrate that closure risks have been managed, stakeholders have been engaged and that mine rehabilitation activities are enabling (not constraining) future regional economic growth, job creation, environmental sustainability and community liveability.

1.2. Latrobe Valley Mine Closure Strategy Custodian

Clean Coal Victoria is the custodian of the Latrobe Valley Mine Closure Strategy. Clean Coal Victoria and the Department of Primary Industries Mine Inspectorate will be jointly responsible for the implementation of Latrobe Valley Mine Closure Strategy.

2. Situational Analysis

2.1 Mine sites in the Latrobe Valley

Victoria has approximately 430¹ billion tonnes of premier brown coal reserves of which 65 billion tonnes are located in the Latrobe Valley. Today, there are three operating mine sites in the Latrobe Valley; Yallourn, Loy Yang and Hazelwood.

Key operating data for each of the three existing mines is presented below¹.

Table 1 Latrobe Valley Mines Operating Data

	Yallourn	Loy Yang	Hazelwood
Area		800 hectares	
Overburden		5-24m	
Annual Coal Extraction	18Mt/annum	30Mt/annum	16Mt/annum

2.2 Factors influencing mine closure timeframes

The development of a Latrobe Valley Mine Closure Strategy provides the opportunity for regulators, policy makers and operators to create a consistent vision and “common ground” for planning mine site rehabilitation and sequential land use.

The timeframes for mine closure is influenced by three key factors at the State, regional and local context:

1. The level of planning, investment and development in alternative energy sources for Victoria
2. The level of planning, investment and development in Gippsland and the Latrobe Valley
3. The level of technical certainty associated with optimal mine closure solutions

A Latrobe Valley Mine Closure Strategy will not control the first two factors but it is important that the strategy is responsive to investment activity. The strategy must inform stakeholders that the extent to timeframes can be predicted for mine closure is highly dependent on variables outside the direct control of the strategy.

2.3 Relevant regulation

The Mineral Resources (Sustainable Development) Act 1990² is the legislative framework that governs the use of mineral resources in Victoria. Brown coal allocation in the Latrobe Valley has traditionally been exempt from the normal mining and exploration licensing approval process with coal licences for each of Hazelwood, Yallourn and Loy Yang allocated through a tender process. These licenses are subject to a bond requirement that each of the mine operations develop mine closure plans. The Act does not contain any legal requirement for the development of a Latrobe Valley Mine Closure Strategy.

¹ Data provided by Department of Primary Industries

² Victorian Consolidated Acts, as at February 2012. Mineral Resources (Sustainable Development) Act 1990, accessed at http://www.austlii.edu.au/au/legis/vic/consol_act/mrda1990432/

The 1990 Minerals Resources Act stipulates that a closure contract should provide for a ‘safe and stable’ land form for the longer term. Currently, this means that the closure plan for each site is developed by each licence holder to allow for a desired land use to be maintained (stable) and does not adversely impact public safety.

A key issue presented with the “safe and stable” requirement is that it doesn’t motivate all stakeholders to proactively identify and pursue the most economic, environmental and socially valuable future land use.

It is now recognised that the impacts of current and potential future mining (ground stability, water resources, and the environment) should be addressed cumulatively for the long-term benefit of the region. In turn this strategic planning will inform the individual operational mine closure plan.

Current considerations of mine closure in the Latrobe Valley are focussed on an immediate response and do not necessarily promote long-term options, given the age of the existing mines and the technical complexity involved in filling the voids. This underscores the importance of a Latrobe Valley Mine Closure Strategy in providing the Government with a mechanism to work with stakeholders to explore more flexible closure requirements to overcome the barriers and challenges to efficient, effective and economically mine closure.

2.4 Relevant strategies and policies

The Government has made clean coal a strong policy priority within the context of maintaining sustainable economic growth, increasing urban density and changing energy and infrastructure requirements. This policy setting has particular relevance to current activity in the Gippsland region considering the Latrobe Valley Basin currently contains about 80%³ of the 430 billion tonnes of Victorian brown coal. Therefore, there are a number of initiatives, plans and strategies that the Latrobe Valley Mine Closure Strategy must align with.

2.4.1 Gippsland Regional Growth Plan

The Gippsland Regional Growth Plan⁴, also known as the Gippsland Integrated Land Use Plan (GILUP), is one of eight regional growth plans being prepared across Victoria. It will provide a broad direction for regional land use and development as well as detailed planning frameworks for key regional centres.

The GILUP, which is being prepared in a partnership between local government, state agencies and other relevant authorities, will:

- Identify important economic, environmental, social and cultural resources to be preserved, maintained or developed
- Provide direction for accommodating growth and change including industrial, employment, commercial, agricultural and other rural activities
- Show broadly which areas of land can accommodate growth and which are to be maintained, including consideration of the infrastructure needed to support growth or change

³ Department of Primary Industries, 2010. Brown coal – Victoria, Australia: A principal brown coal province, accessed at <http://www.dpi.vic.gov.au/earth-resources/coal/fact-sheet-brown-coal-victoria>

⁴ Department of Planning and Community Development, 2012. Gippsland Regional Growth Plan, accessed at <http://www.dpcd.vic.gov.au/planning/plansandpolicies/ruralandregionalplanning/regionalgrowthplans/gippsland>

2.4.2 Brown Coal Roadmap

The Brown Coal Roadmap is the Victorian Government's long term plan to encourage investment in low emission technologies designed to process the State's brown coal resources into higher value products. It provides a framework for future technology pathways that have the potential to deliver competitive, low emission power and coal products that support Victoria's transition to a clean energy future.

2.4.3 Latrobe Valley Industry and Employment Roadmap

The Latrobe Valley Industry and Employment Roadmap⁵ sets the Victorian Government's long-term strategic framework for guiding future investment and collaboration with the region's local governments, businesses and communities. It is the Victorian Government's response to locally developed advice for addressing the challenges facing the region's economy. The Roadmap includes early actions and intervention to create employment and stimulate new investment, ahead of restructuring the power generation sector and the full impacts of a national price on carbon.

2.4.4 Energy Technology Innovation Strategy

The Energy Technology Innovation Strategy (ETIS)⁶ is the Victorian Government's strategy to drive advances in low emission technologies, and to secure Victoria's energy future. The Strategy aims to accelerate a variety of pre-commercial energy technologies through research, development and demonstration processes to progress to 'ready-for-market'. The focus is on those technologies best able to deliver cleaner, cost-competitive energy supplies for the state.

2.4.5 CarbonNet

The CarbonNet Project⁷ is the Victorian Government's initiative to investigate the potential for carbon capture and storage (CCS) in the Gippsland region. CCS, in its early stages of research and development, is being investigated as part of a suite of solutions with the potential to mitigate greenhouse gas emissions and help address climate change.

2.4.6 Coal Allocation Framework

The Victorian Government periodically carries out allocations⁸ of coal in the Latrobe Valley to parties it believes are best placed to develop the resource for the benefit of Victorians. Victoria's brown coal in the Latrobe Valley has been exempted from the normal application process for exploration and mining licences, and is allocated by the state through market tender processes.

2.4.7 Securing supply for timber and forestry industry

VicForests⁹ has recently sought expressions of interest for up to 830,000 tonnes of native timber residue mostly generated in the East Gippsland region. The more productive utilisation of this new long-term residue supply

⁵ Regional Development Victoria, 2012. The Latrobe Valley Industry and Employment Map, accessed at http://www.rdv.vic.gov.au/__data/assets/pdf_file/0009/111060/Latrobe-Valley-industry-and-employment-roadmap-WEB_v2.pdf

⁶ The Department of Primary Industries, 2012. Energy Technology Innovation Strategy, accessed at <http://www.dpi.vic.gov.au/energy/innovation-and-research/etis>

⁷ The Department of Primary Industries, 2012. The CarbonNet Project, accessed at <http://www.dpi.vic.gov.au/energy/sustainable-energy/carbon-capture-and-storage/the-carbonnet-project>

⁸ The Department of Primary Industries, 2012. Coal Allocation, accessed at <http://www.dpi.vic.gov.au/earth-resources/coal/coal-allocation>

⁹ VicForests 2012, accessed at <http://www.vicforests.com.au/index.htm>

could underpin significant value in timber related industries in Gippsland, by stimulating direct investment in new commercial infrastructure, more productive use of existing investments and the requisite increase in processing, logistics and supply chain contracts.

2.4.8 Gippsland Region Sustainable Water Strategy

The¹⁰ Gippsland Region Sustainable Water Strategy (SWS) is one of four regional strategies being implemented by the Victorian Government to secure water resources for the next 50 years. The Strategy identifies potential challenges for water management and opportunities to secure water resources for the next 50 years. This strategy covers agricultural and urban centres including Warragul, Traralgon, Wonthaggi, Sale and Bairnsdale as well as Latrobe, Thomson, Macalister, Avon, Mitchell, Tambo, Snowy and East Gippsland catchments.

2.4.9 Secure Allocations, Future Entitlements (SAFE) Project

DSE's SAFE project, funded by the National Water Commission, has recommended a revised framework for management of Victoria's groundwater resources, updated guidance on making groundwater resource share decisions and a program of transition to the revised framework

¹⁰ Department of Sustainability and the Environment 2012. Gippsland Sustainable Water Strategy, accessed at <http://www.water.vic.gov.au/initiatives/sws/gippsland>

3. Stakeholder Needs Analysis

3.1 Types of stakeholders

The following table identifies the key stakeholder groups and specific Latrobe Valley representatives that are affected by planning for mine closure.

There are several key stakeholders that have an interest in the closure of any existing or possible future mines in the Latrobe Valley. The level of interest of these stakeholders will vary based on the timing of mine closure, how this impacts them and how the process is managed. The table below outlines these stakeholders:

Table 2: Critical Players Influencing Latrobe Valley Mine Closure

Stakeholder Group	Stakeholders
Existing Mine Operators and Generators	<ul style="list-style-type: none"> Energy Australia International Power Australia (IPR-GDF SUEZ) AGL Loy Yang
Land Owners and Managers	<ul style="list-style-type: none"> Private land holders State of Victoria Future land holders
Industry Associations	<ul style="list-style-type: none"> Committee for Morwell Minerals Council Victorian Farmers Federation Local Chambers of Commerce
Unions	<ul style="list-style-type: none"> CFMEU ETU Gippsland Trade and Labour Council (GLTC)
Financiers/Investors	<ul style="list-style-type: none"> Existing financiers Rehabilitation financiers Future investors Possible future coal resource developers
General Industry	<ul style="list-style-type: none"> Agriculture Forestry/Timber Waste Management Defence Food Processing Tourism Quarries
State Regulators	<ul style="list-style-type: none"> Water Authorities / Corporations Catchment Management Authorities Environmental Protection Authority Department of Sustainability and the Environment Department of Primary Industries

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Stakeholder Group	Stakeholders
Local Government	<ul style="list-style-type: none"> Latrobe City Council
Commonwealth Government	<ul style="list-style-type: none"> Department of Sustainability, Environment, Water, Population and Communities Department of Climate Change and Energy Efficiency Department of Treasury and Finance Department of Resources, Energy and Tourism
Political Economy	<ul style="list-style-type: none"> Victorian Premier and Cabinet Victorian Members of Parliament Mayor and Latrobe City Council Members
Community	<ul style="list-style-type: none"> Residents Tourists Indigenous communities
Media	<ul style="list-style-type: none"> Local Media (Independent) Local Media (Not Independent) State and National Media
Non-Government Organisations	<ul style="list-style-type: none"> Coal Watch Environment Victoria Shut the Gate Friends of the Earth

3.2 Needs analysis

Stakeholders have different expectations around mine closure outcomes based on how mine closure is likely to impact their current position or role within the Latrobe Valley. The table below presents a preliminary identification of key stakeholder needs, as developed by DPI staff during a scoping workshop for this strategy. These needs relate to mine closure outcomes and their level of likely engagement in Latrobe Valley Latrobe Mine Closure Strategy development process.

Table 3: Stakeholder's Expected Outcome and Likely Involvement in Mine Closure

Stakeholder Group	Expected Outcomes	Likely Involvement/Interest
Mine Operators and Generators	<ul style="list-style-type: none"> Safe and stable Lowest cost (no liability) Certainty Reputation No impact (public safety, environment and infrastructure) 	<ul style="list-style-type: none"> "Lead" thinking around technical aspects of closure Participation in strategy development and implementation Confidence in outcome

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Stakeholder Group	Expected Outcomes	Likely Involvement/Interest
Current and Future Land Owners and Managers	<ul style="list-style-type: none"> • Not disadvantaged • Balance of economic opportunity and maximisation of value of land • Rehabilitation plans dont necessarily identify best end land use – just identify current land use • Certainty 	<ul style="list-style-type: none"> • Engaged continually throughout process • Transfer of liability that does not involve government
Industry Associations	<ul style="list-style-type: none"> • Safe and stable • Lowest cost (no liability) – return on investment • Certainty • Reputation • Leverage opportunities 	<ul style="list-style-type: none"> • Will collaborate in the development and implementation of the strategy
Unions	<ul style="list-style-type: none"> • Safe and stable • Current and future industry viability • Skills transfer 	<ul style="list-style-type: none"> • Interest is in specific rehabilitation options and how current labour will be involved in this
Financiers/Investors	<ul style="list-style-type: none"> • Safe and stable • Lowest cost (no liability) – return on investment • Certainty • Reputation • No impact (public safety, environment and infrastructure) 	<ul style="list-style-type: none"> • Work with future land users • Government to take lead on addressing land use transition (*broker role played by CCV)
General Industry	<ul style="list-style-type: none"> • Commercial Opportunities • Certainty • Land Value 	<ul style="list-style-type: none"> • Wish to be engaged to shape future land use options
State Regulators	<ul style="list-style-type: none"> • All future over burden to be placed back in voids • Better regional resource use • “Safe and stable” • On-going management of residual issues 	<ul style="list-style-type: none"> • Motivating and facilitating role – transitioning land use
Local Government	<ul style="list-style-type: none"> • Revenue – additional rates • Certainty around future options • Meet community expectations 	<ul style="list-style-type: none"> • Set the agenda – high moral ground • Collaborators in planning and implementation

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Stakeholder Group	Expected Outcomes	Likely Involvement/Interest
Commonwealth Government	<ul style="list-style-type: none"> • Safe and stable • Appropriate transition of land • Carbon load/reduction • Economic, social and environmental priorities/objectives • No impact (public safety, environment and infrastructure) 	<ul style="list-style-type: none"> • Key influencing role and must be consulted • Potential future funder
Political Economy	<ul style="list-style-type: none"> • No blame/No surprises • Publicly acceptable strategy • Appropriate transition of land • Economic, social and environmental priorities/objectives • No impact (public safety, environment and infrastructure) 	<ul style="list-style-type: none"> • Engaged and informed and fronting public/media
Community	<ul style="list-style-type: none"> • Minimal impact • Assurance – protect property value • “No worse than what I have” • Transition and certainty • Provide employment 	<ul style="list-style-type: none"> • Close collaboration through ERC • Very engaged – “front of mind” • Requires process to be transparent and provide leverage opportunities (i.e. economic, social etc) for local community)
Media	<ul style="list-style-type: none"> • New story (good or bad) • Seek opinions/views 	<ul style="list-style-type: none"> • Must ensure media participation is managed by DPI media strategists
Non-Government Organisations	<ul style="list-style-type: none"> • Reducing carbon emissions • Environmental and social impact • No impact (public safety, environment and infrastructure) 	<ul style="list-style-type: none"> • Engaged and aware of “radical issues” – managed through appropriate communication

4. Challenges and Issues

When closing a mine a company seeks certainty that it can meet all of its obligations and is able to demonstrate compliance with specific criteria that enables a company to relinquish relevant tenure and walk away without ongoing liability having received return of any bond payments made. To achieve such certainty mines operating within Victoria must demonstrate compliance with the conditions negotiated with Government as part of project development approvals. Government however seeks certainty that it does not 'inherit' any ongoing legacies that require future expenditure of public funds to address unforeseen safety or environmental issues. While performance bonds are paid by mining companies at the time of project development these bonds are generally considered insufficient to cover the full costs of closure and rehabilitation. In Victoria over 3000 mines have now been gazetted as abandoned and require some level of ongoing management by Government.

The ability of mine operators and Government to achieve respective certainties is constrained by significant technical issues and challenges relating to the establishment and achievement of appropriate closure completion criteria. While these issues and challenges are numerous and may vary between mining operations some of the more common and significant issues and challenges within the Latrobe Valley include post closure landform stability, water and environmental management, community capacity and financial liability.

4.1 Post-closure landforms

Coal mines within the Latrobe Valley are characterised by high coal to overburden ratios, high groundwater levels and low density of coal seams. Insufficient overburden to backfill final voids means post-closure landforms therefore having significantly lower relief than the surrounding landscape. Furthermore pressure from high groundwater levels and the low coal density contribute to potential mine floor and batter instability risks within final landforms.

During operations management measures adopted to address stability issues include depressurisation of underlying aquifers, dewatering of coal joints via horizontal drains and management of surface drainage. Preferential placement of available overburden on mine batters is also utilised to create safe and stable slopes during operations. Significant risks however may persist in regard to the long term stability of post closure landforms once operational measures for controlling groundwater levels have ceased and groundwater levels commence recovery to pre-mining levels. Limited availability of topsoil can also exacerbate the challenge in creation of stable final landforms making the establishment of suitable vegetation difficult.

4.2 Water and environmental management

Successful long term post-closure management of Latrobe Valley mines will require robust mine water management planning to determine a sustainable water balance post closure. Principally, this includes strategies to manage high groundwater levels, protection of groundwater quality, managing surface water runoff and acceptable drainage into adjacent waterways. A key challenge in this regard is the development of strategies which are sustainable in the long term and require only minimal post-closure management. Similarly, post-closure management of dust generation and coal fire hazards will require strategies which do not require significant ongoing interventions.

Some environmental impacts associated with closed mine sites may only become apparent many years after closure has been completed. Such impacts may result from gradual or catastrophic failure of engineered structures, such as ash or overburden dumps, or from long term geochemical changes such as the loss of acid neutralisation capacity within overburden materials. While the application of current best practice knowledge and technologies is generally accepted by mining companies and Government alike within completion criteria, there is still the potential for unforeseen environmental impacts to occur in the future. There is a challenge

therefore for closure objectives to encompass strategies that are able to account for contingencies in the event of such impacts, or ideally to eliminate the hazard altogether. This may require consideration of solutions that extend beyond the boundaries of current mining tenure or which consider long term management of impacts as part of sequential land use opportunities.

4.3 Community capacity

Local and regional communities gain benefit from mining operations through direct employment or provision of goods and services, as well as indirectly through community development activities and Government funded infrastructure development. Closure objectives for mines operating in the Latrobe Valley currently aim to achieve a safe, stable and compatible post closure landscape which may not create optimal conditions capacity for local and regional communities to sustain themselves. The mining company may not necessarily be responsible for the long term sustainability of a host community, greater consideration of sequential land use objectives beyond safe, stable and compatible may provide potential for sustaining community capacity. It is possible that such objectives may be achieved at similar, or even less cost.

4.4 Financial liability

In seeking closure certainty, mining companies also seek to minimise their costs in order to maximise the return to their shareholders. Similarly Government seeks to minimise the potential cost to taxpayers and the general community in both the short and long term. The onus of assessing the cost of closure currently lies with mining companies and includes only those costs to be expended by the company to achieve the requirements of the agreed closure plan. Generally the determination of potential costs associated with residual risks such as landform instability, chronic environmental impacts and sustainable community capacity are not taken into consideration. There is therefore a significant challenge to establish a more vigorous economic model around closure that can account for the minimisation of costs to the mining company while minimising the potential economic burden to the Government resulting from residual risks as well as meeting broader societal outcomes.

5. Vision and Outcomes

5.1 Vision

The proposed vision for the Latrobe Valley Mine Closure Strategy is:

Maximise the future economic and social benefits of rehabilitated mine sites for the Latrobe Valley's emerging industry, mine operators, investors and the community while respecting and protecting important environmental, cultural and heritage values of the area..

5.2 Mine closure strategy outcomes

To realise the vision, it is critical that the Latrobe Valley Mine Closure Strategy seeks to have a direct and tangible contribution towards achieving:

1. Growth and/or stabilisation of regional employment
2. A diversified and stronger regional economy
3. Improved liveability of neighbouring towns and communities
4. Protected and/or enhanced (where possible) environmental assets
5. Future resource exploration and potential development
6. Complementing long-term regional infrastructure plans.

5.3 Mine closure strategy goals

To achieve these outcomes the Latrobe Valley Mine Closure Strategy needs to achieve stakeholder acceptance and legitimacy. This requires a shift in current thinking from minimising impact to identifying and pursuing future productive land use. Hence the key goals of the strategy should be to:

1. Align mine closure outcomes with long-term regional and State economic growth priorities
2. Encourage collaborative partnerships and co-design of mine closure solutions between stakeholders
3. Identify mine closure pathways that address the voids and overburden across the Latrobe Valley i.e. assess and manage cumulative impacts
4. Promote transition of land between mine closure and land rehabilitation
5. Create investment certainty by establishing realistic mine closure criteria
6. Articulate the future value of land and resources to the broader public
7. Provide strategic guidance for rehabilitation plans to assist in correctly identifying the mine design and closure plans that provide the necessary levels of technical certainty.
8. Identify appropriate infrastructure issues created by mine closure and what responses are needed

5.4 Performance measurements

Performance measures are to be established during the next phase of development of this strategy.

The table below will outline performance measures that are to be used to evaluate the effectiveness and efficiency of the Mine Closure Strategy.

Table 4: Performance Measurement

Goal	Key Performance Measure
1. Align mine closure outcomes with long-term regional and State economic growth priorities	
2. Encourage collaborative partnerships and co-design of mine closure solutions between stakeholders	
3. Identify mine closure pathways that address the voids and overburden across the Valley (i.e. assess and manage cumulative impacts	
4. Promote transition of land between mine closure and land rehabilitation	
9. Create investment certainty by establishing realistic mine closure criteria	
5. Articulate the future value of land and resources to the broader public	
6. Provide strategic guidance for rehabilitation plans to assist in correctly identifying the mine design and closure plans that provide the necessary levels of technical certainty.	
7. Identify appropriate infrastructure issues created by mine closure and what responses are needed	

6. Mine Closure Strategy Principles

The following principles¹¹ provide the guidance to realise the Latrobe Valley Mine Closure Strategy vision, outcomes and goals. By following these principles during the Latrobe Valley Mine Closure Strategy development and implementation, decisions/choices made will be objective and participatory (involve key stakeholders).

1. **Best use of resources:** Maximise the economic and social benefits of regulated land use for all Australians and future generations through encouraging the multiple use of regulated land, whilst respecting and protecting environmental, cultural and heritage values.
2. **Co-existence:** Acknowledge and respect the rights of all land users and the potential of all regulated land uses, whilst ensuring that regulated land is not restricted to a sole use without considering the implications or consequences for other potential land uses, and the broader benefits to all Australians.
3. **Coordinated preparation informed by effective planning:** Coordinate planning (involving government and industry) to recognise the community's expectations and capacity to adapt to land use change. Effective regional scale planning establishes clear spatial parameters for multiple and sequential land use over time, providing community and investor certainty whilst retaining flexibility to adapt to change.
4. **Tailored participation of communities and landholders in land use change decision making:** Participation of communities and landholders should be tailored, targeted and timely. Genuine participation involves communities having the capacity to shape how land use change occurs. Directly affected landholders should be meaningfully consulted in a timely way on multiple land use options and potential for co-existence to promote a greater understanding of mutual benefits and to resolve concerns.
5. **Engagement and education are paramount to informed debate:** Open and constructive debate and analysis of different multiple land use options should be informed by facts. Stakeholders should be authentic in their willingness to listen and appreciate the views, concerns and needs of other land use stakeholders.
6. **Decision-making:** Evidence-based land use decision-making informed by risk-based approaches that makes transparent the consequences of different land uses. Accountabilities regarding decision making should be clear and enduring.
7. **Efficient processes:** Work towards streamlined, transparent and consistent legislated approvals processes in which land access for multiple uses is handled in accordance with risk. Ensure that processes define multiple and sequential land use of cross cutting issues (water, heritage and cultural values) based on best available evidence and sustainable development principles.
8. **Accessible to relevant information:** Relevant information about land and resource capability and values, current and proposed multiple and sequential land use, and land management performance is accessible to all stakeholders.

¹¹ The principles have been adopted from the National Minerals and Petroleum Sector Multiple Land Use Framework, developed by the National Land Access Working Group (part of Standing Council on Energy and Resources). Principles were developed in close collaboration with other regulated land users.

7. Latrobe Valley Mine Closure Actions

A Latrobe Valley Mine Closure Strategy capable of realising the vision, goals and outcomes must feature a set of systematic actions that provide the necessary co-ordination/leadership, planning, partnerships, engagement, education, assessments/consultation/approvals, monitoring/reporting, applied learning and sharing/collaboration,

The table below outlines the high-level actions (to be scoped in greater detail) for each of these components¹².

Table 5: Mine Closure Strategy Components and High-Level Actions

Strategy Component	Actions
<p>Coordination and Leadership Initiate strong leadership and articulation of responsibilities between government, industry and the community to produce outcomes that are informed and accepted</p>	<ol style="list-style-type: none"> 1. Encourage cross-government participation, including involvement by: <ul style="list-style-type: none"> • Department of Business and Innovation • Department of Planning, Community and Development • Department of Sustainability and the Environment • Other Regulators 2. Create a Mine Closure steering committee comprising <ul style="list-style-type: none"> • State regulators • Industry leadership and participation and action • Local community and civic leadership
<p>Strategic Planning Align mine closure vision and objectives with broader government priorities and objectives and establish the appropriate planning systems and procedures that proactively seek to identify the impacts and coordinate the development of solutions that produce optimal outcomes for the region</p>	<ol style="list-style-type: none"> 3. Confirm the Latrobe Valley mine closure vision, outcomes and goals are aligned with intra-regional and State planning priorities 4. Seek support and input from local council 5. Conduct land use analysis to better understand potential future land uses for rehabilitated mine sites and test/challenge stakeholder assumptions around these needs
<p>Partnerships Establish partnerships between industry and affected stakeholders who play an important role in achieving mutually beneficial mine closure outcomes</p>	<ol style="list-style-type: none"> 6. Establish strategic partnerships, with advice from: <ul style="list-style-type: none"> • Environmental Review Committee (ERC) Chairs • Geotechnical and Hydrogeological Engineering Research Group (GHERG) Chair • Representatives of Community • Economic advisors

¹² The nine components are based on the National Minerals and Petroleum Multiple Land Use Framework components. Components have been developed to help guide stakeholders engaged with resource development to plan and implement strategies to achieve multiple and sequential land use outcomes.

Scope for a Latrobe Valley Mine Closure Strategy



Strategy Component	Actions
<p>Engagement</p> <p>Enable key stakeholders with a material interest or who are affected by mine closure to clearly understand the rationale for mine closure and provide a pathway to resolving policy, planning and investment conflicts</p>	<p>7. Develop an engagement plan to better articulate the vision, outcomes and goals of mine closure within the Latrobe Valley amongst key stakeholders. Engagement should effectively communicate:</p> <ul style="list-style-type: none"> • Why mines have to be safe and stable • Why solutions must not sterilise land for future options • How land can be transitioned so future benefits can be captured • How the aesthetic amenity of the area can be maintained
<p>Education</p> <p>Produce key messages and information to help the general public and media better understand and appreciate the complexity of mine closure and the what Government is doing to protect the public interest</p>	<p>8. Create and implement an education plan to release information to the broader community about what future land uses would represent most value. For issue to local communities, investors, State Government (economic planners), future land users, Commonwealth Government, unions, media, current land owners, NGOs</p>
<p>Assessments, Consultations and Approvals</p> <p>Undertake strategic regional level cumulative impact assessments that incorporate social, environmental and economic impacts, enabling risk-based decisions and approvals</p>	<p>9. Support and inform policy and regulatory reform regarding management of residual issues and post closure financial liabilities</p>
<p>Monitoring and Reporting</p> <p>Implement transparent and accessible monitoring and reporting procedures to improve the understanding of how the Government ensures compliance with conditions/regulations set to protect the public interest</p>	<p>10. Expand transparency around reporting to include:</p> <ul style="list-style-type: none"> • Opportunities for future land use • Closure and transition outcomes • Sustainability reporting <p>11. Ensure suitable baseline data available for closure assessments</p> <p>12. Review monitoring capacity to meet assessment of regional strategy</p>

Scope for a Latrobe Valley Mine Closure Strategy



Strategy Component	Actions
<p>Applied Learning</p> <p>Use information collated from consultations, assessments and approvals to better co-ordinate future investment and understand the cumulative impacts of mine closure solutions across economic, environmental and social dimensions</p>	<p>13. Establish a feedback loop between assessment and planning that allows:</p> <ul style="list-style-type: none"> • Long-term land use management to better understand risk/value trade off across sectors and resource types • Continuous learning about “how to close the void” – long-term investment approach <p>14. Conduct a benchmarking exercise to understand what other regions are doing around mine closure</p> <p>15. Conduct or facilitate on-going research into optimal technical solutions for post closure landforms and the management of water impacts during and post closure</p>
<p>Sharing and Collaboration</p> <p>Support appropriate sharing of data and information, and assurance of its quality, accuracy and correct application.</p>	<p>16. Create an access channel for interest groups such as NGOs, recognising they are an important asset in the future education and community “buy in” of mine closure planning and implementation</p>

8. Latrobe Valley Mine Closure Strategy Development Plan

8.1 Tasks and milestones

The table below outlines the key tasks that need to be completed for the development of the Latrobe Valley Mine Closure Strategy.

Table 6: Key Latrobe Valley Mine Closure Strategy Development Tasks

Final Mine Closure Strategy Completion Tasks
1. Develop a stakeholder plan that clearly outlines of the stakeholders identified: <ol style="list-style-type: none"> a. Who needs to be collaborated with b. Who needs to be engaged c. Who needs to be consulted d. Who needs to be informed
2. Develop full list of relevant state, regional and local government plans for the Latrobe Valley and identify which aspects of these plans are directly impacted by land uses which replace closed mines
3. Outline policy, legislation and planning initiatives which the DPI Mine Inspectorate is responsible for in terms of mine operators developing mine rehabilitation plans, agreeing liability, assessing mine rehabilitation plans to ensure they are aligned with mine closure strategy, and monitoring of mine rehabilitation plans
4. Conduct stakeholder collaboration, consultation, engagement and informing activities as required to identify and agree actions to resolving mine closure issues and challenges (geotechnical, environmental, social and economic challenges and issues associated with mine closure)
5. Establish and outline the performance measures to be used to evaluate the effectiveness and efficiency of the Mine Closure Strategy and develop a monitoring, evaluation and reporting regime to assess the performance and impact of the Strategy
6. Provide a detailed rationale for expected individual mine rehabilitation/closure outcomes and how they can support Latrobe Valley Mine Closure Strategy outcomes
7. Develop a sub-section in the Mine Closure Strategy dedicated to each of the nine strategy components. For each component, current and planned strategic actions should be described and linked back to the vision, outcomes and goals and how they will address specific challenges and issues standing in the way of stakeholder needs being addressed
8. Develop a detailed implementation plan that presents tasks, dates, roles and responsibilities for each component and each associated actions

8.2 Strategy Development and Implementation Timelines

The table below outlines the dates for finalising the mine closure strategy and commencing implementation.

Scope for a Latrobe Valley Mine Closure Strategy



Table 7: Key Milestones

Activity	Due Date
Complete Mine Closure Strategy	June 2013
Start to implement Mine Closure Strategy Initiatives	June 2015

8.3 Roles and responsibilities

The table below outlines key roles and responsibilities for finalising and implementing the mine closure strategy

Table 8: Key roles and responsibilities

Roles	Responsibilities
Latrobe Valley Mine Closure Steering committee	<ul style="list-style-type: none"> Lead the development of mine closure strategy
Clean Coal Victoria	<ul style="list-style-type: none"> Facilitate and manage stakeholder input in the development of the strategy Lead involvement in engagement and education – strong community engagement
Department of Primary Industries	<ul style="list-style-type: none"> Final approval for the strategy Coordinate with other government agencies Assesses mine rehabilitation work plan/documentation Raise awareness about regulation – provide understanding of what regulation means to different stakeholders and define what is non-negotiable

8.4 Resourcing Requirements

A Latrobe Valley Mine Closure Strategy resourcing plan will need to be developed that addresses resourcing requirements for the:

- Overall management of the strategy including ensuring development and implementation occurs on time, meets expected outcomes within allocated budget
- The development, implementation, monitoring, evaluation and reporting regarding each component's actions