URBIS

Research into Policy and Legislation Governing the Reuse of Mining Lands and Coal- and Gas-fired Power Stations in Australia

Summary Report

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Australian Government

Net Zero Economy Authority

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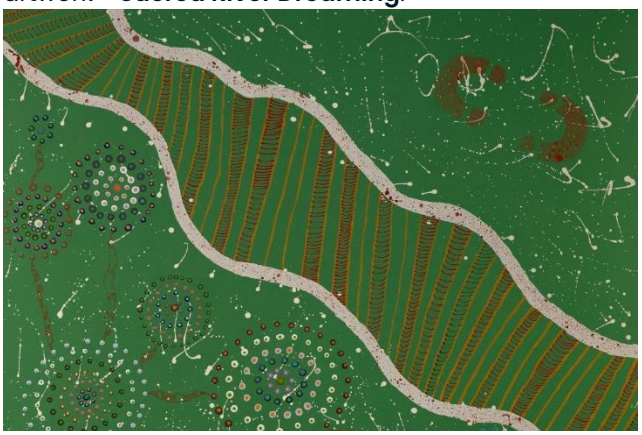
Acknowledgment of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.
We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.
We pay our respects to First Nations Elders, past and present.

Urbis is committed to incorporating our respect for First Nations cultures, peoples and storytelling in our work across the Country. We are proud to have partnered with Darug Nation artist, **Hayley Pigram**, and to profile her artwork - **Sacred River Dreaming**.



The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

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1 Introduction

Australia's transition to a net zero economy will necessitate the decommissioning and retirement of mining lands, fossil fuel based infrastructure sites, and coal- and gas-fired power stations. While these closures present complex challenges for regional communities, environmental management, and future workforce and skills requirements, this transition creates opportunities for economic diversification, innovation, and long-term sustainable job creation in the new net zero economy.

This research report provides a structured representation of the existing policy, legislative, and regulatory settings that govern the rehabilitation and reuse of mining lands and coal- and gas-fired power stations within Australia. The research and analysis has been undertaken across six jurisdictions – Commonwealth, Western Australia, South Australia, Victoria, New South Wales, and Queensland – with a focus on identifying the barriers, hindrances, and opportunities that influence beneficial and productive reuse of these sites.

The research draws on three key components:

- **Legislative and policy review** – mapping of the relevant frameworks and examining their interactions, overlaps, and limitations.
- **Stakeholder consultation** – incorporating insights from 30+ interviews with government agencies, industry leaders, energy generators, First Nations organisations, research institutions, unions, and investor groups.
- **Case studies** – provided in a companion report, case studies analysis offering jurisdictional, thematic, and sectoral perspectives, across funding, government levers, missed opportunities and global and local examples.

Through this multi-phase approach, this report seeks to contribute to an improved understanding of how policy and regulatory settings at both state and Commonwealth levels can enable, or constrain, the rehabilitation and reuse of mining and power stations sites. These findings will inform the Net Zero Economy Authority's consideration of strategies and policy to maximise beneficial reuse to enable support for a just and sustainable net zero energy and economic transition.

Throughout the project, three key themes were consistently revisited across the legislative review, stakeholder consultation and case study development. These key themes included:

- **Regulatory, legislative and policy hindrances** of productive reuse of these sites.
- **Challenges and opportunities** in the planning and implementation of productive reuse of these sites.
- **Types of potential reuse options** of the former mining lands and power stations.

Across six jurisdictions, over thirty stakeholders, and six key case studies, this report provides key research and insights to support the future planning and reuse of mining lands and coal- and gas-fired power stations.

This summary report is a short form version of the ***Research into Policy and Legislation Governing the Reuse of Mining Lands and Coal- and Gas-Fired Power Stations in Australia*: *Final Report*** with a companion report ***Research into Policy and Legislation Governing the Reuse of Mining Lands and Coal- and Gas-Fired Power Stations in Australia*: *Case Studies***. These reports, undertaken for the Net Zero Economy Authority, seek to understand and examine how policy, legislation and regulation at both Commonwealth and state levels interact, enable, and hinder the rehabilitation and reuse of former mining lands and coal- and gas-fired power stations.

2 Key recommendations

Focus areas for further investigation or policy intervention

This section provides government with a structured overview of critical areas that merit further investigation or potential policy intervention. The analysis is grounded in research evidence, stakeholder insights, and the jurisdictional reviews, highlighting both opportunities and constraints associated with the productive reuse of former mining and power generation sites.

The intention is to inform strategic decision-making, support risk management, and identify priorities that could support government in identifying specific, sequencing and planning of future directions towards further progress in this focus area.

By presenting these future direction focus areas (or red flags of the current state), government is equipped to target resources effectively, align cross-jurisdictional efforts, and enable outcomes that balance economic, environmental, and community objectives.

Future Directions Roadmap for further investigation or intervention

Short Term

Improving alignment between strategic objectives, policy & regulatory frameworks

Misalignment between state and federal policy frameworks creates uncertainty for investors and can limit private sector engagement in post-mining redevelopment.

Actions

Investigate mechanisms for harmonising planning, rehabilitation, and post-mining land use policies across jurisdictions. Focus on enabling long-term private sector investment in low-emission industries, particularly in regions transitioning from coal- and gas-fired infrastructure.

Review the applicability of Queensland's 2019 legislative reforms, which introduced a Progressive Rehabilitation and Closure Plan (PRCP) framework, to other jurisdictions. These reforms aim to shift the focus from mere rehabilitation to the sustainable repurposing of mining sites, fostering economic diversification and community resilience.

Reframing policy from *rehabilitation* to *productive reuse*

Current regulatory frameworks are heavily focused on rehabilitation and environmental compliance, often at the expense of enabling productive reuse. This emphasis can limit flexibility, deter investment, and delay the economic and social benefits of site repurposing. These regulatory frameworks prioritise rehabilitation and remediation, with the primary objective of achieving land that is 'safe and stable' for future uses.

Stakeholders noted that while remediation can technically enable almost any productive use, the challenge often lies in the level of investment required to achieve remediation standards that make certain uses viable and the time-lag it takes to implement. In some cases, prohibitive remediation costs limit opportunities.

Actions

Reframe policy objectives to prioritise repurposing and reuse, while maintaining environmental safeguards. This may include introducing reuse focused planning mechanisms, outcome-based rehabilitation standards, and incentives for innovative land use, supporting a more integrated approach to environmental, economic, and community outcomes.

Short Term

Strengthening of incentives rewarding first-movers in repurpose investing and committed owners

Current obligations under mining licences prioritise compliance and rehabilitation, often without incentivising productive or beneficial land use, limiting investment in alternative economic activities.

Actions

Assess the feasibility and impact of developing targeted incentives such as tax breaks, fast-tracked approvals, or co-investment mechanisms to encourage private sector repurposing of former mining and power station sites. Explore models used by Greenspot and Harworth in the UK for specialised repurpose investment.

Mitigating the impact of transition time-lag between the decommissioning and future reuse operational stages

While the decommissioning of mining lands and coal- and gas-fired power stations can occur within a defined timeframe, the processes required to enable productive reuse (remediation, planning approvals, infrastructure investment, market development, construction, etc.) extends over many years. This creates a gap in which workforces and communities face reduced employment opportunities and economic contraction, well before new industries or land uses are established.

Action

Addressing this lag is essential to support community resilience, sustain local services, and ensure that regional economies remain viable throughout the transition.

Establish targeted interim measures, including workforce transition programs and transitional support, and place-based investment in community services and infrastructure. These measures would provide a stabilising function, ensuring communities remain viable and workforces are retained until longer-term economic diversification and redevelopment projects are realised.

Medium Term

Introducing greater flexibility into land use planning frameworks

Current rehabilitation and reuse frameworks in Australia are characterised by rigidity and complexity, often resulting in protracted timelines and uncertainty for investors and communities. Strict rehabilitation requirements, while critical for environmental protection, are typically prescriptive and leave limited scope for alternative or adaptive end land uses.

Action

Assessing recent revisions to land use frameworks such as the introduction of SP4 Enterprise zones in NSW, and aim towards more adaptive and responsive pathways for the productive reuse of former mining and power station sites. This could include mechanisms such as transitional zoning, streamlined approvals for innovative land uses, and performance-based planning controls that prioritise outcomes (e.g., economic diversification, community benefit, or environmental resilience) rather than rigid land-use classifications. Such flexibility would reduce barriers to investment, and allow sites to evolve in line with market demand.

Assess the current residual risk & liability management hindering reuse

Small to medium operators may struggle to meet rehabilitation obligations, creating potential liability risks for government and investors.

Action

Review bond calculation methods, explore legislative amendments to reduce risk, and consider progressive rehabilitation or insurance-based mechanisms to ensure accountability and minimise exposure to legacy liabilities.

Further investigate the benefits of progressive rehabilitation in enabling productive reuse

Current rehabilitation approaches for mining and power generation sites in Australia are often static and prescriptive, limiting flexibility in site management and delaying opportunities for productive reuse.

By integrating rehabilitation and remediation with ongoing mining operations, residual risks are reduced, and land can be transitioned more effectively over time. This approach also demonstrates a shift towards more proactive mine management.

Action

Further investigate the benefits of progressive rehabilitation, which involves the staged or incremental restoration of sites during the operational life of the asset. Assessment should include comparative case studies within Australia and internationally, financial modelling of cost and timing benefits, and alignment with adaptive land use planning and regulatory frameworks.

Medium term

Advance workforce development and community preparedness

Delays between site closure and commencement of new economic activities risk workforce dislocation and regional economic stress.

Action

Map workforce capabilities, develop training pathways aligned with emerging low-carbon and circular economy industries, and engage communities early to foster social acceptance. Tailor programs to local skill sets and potential new industries.

Integrate workforce planning into early-stage redevelopment strategies; align training and reskilling programs with projected industry start-up timelines.

Promote strategic and place-specific value of mining and power station lands

Not all mining or power station lands are equally suited to productive reuse, and technical constraints such as remediation costs, landform, topsoil availability, and water access can limit viable options.

Action

Develop site-specific strategies that assess infrastructure, natural assets, and community values to identify feasible post-mining uses. Consider progressive rehabilitation approaches to reduce residual risks and enable staged transition to productive uses.

Prioritise sites with existing supporting infrastructure or a strategic location for early demonstration projects, gradually expanding to more challenging sites as solutions and funding models mature.

Long term

Target investment and listen to the investors' concerns

Investors highlighted that misalignment between state and federal policies is creating risks by sending inconsistent signals to the market. The investor cohort also expressed the need to provide more clarity on the vehicles available for investment and noted that the Authority could play a role in helping articulate this.

Action

Identify high-potential sites and implement incentives, co-investment, or risk-sharing mechanisms to attract specialised developers and early-stage projects.

Unlock the economic diversification potential of decommissioned mining and power generation sites by aligning redevelopment opportunities with local strengths, infrastructure, and market demand, while supporting workforce retention and community resilience.

Development of replicable frameworks for productive reuse

Limited knowledge transfer and inconsistent approaches can delay the adoption of productive reuse practices nationally.

Action

Capture lessons from domestic and international examples (e.g., Greenspot, Harworth, Appalachia Valley) and develop replicable frameworks for adaptive reuse, low-carbon energy hubs, industrial precincts, and residential precincts.

Pilot innovative projects in high-visibility sites, evaluate outcomes, and then disseminate frameworks for broader application across jurisdictions.

Establishment of a productive and beneficial reuse Ministerial Council or advisory body

There is a range of initiatives and policies across various levels of government and advisory bodies focused on promoting the beneficial reuse of mining lands and power stations.

Action

Comprising representatives from each state and territory jurisdiction, a Ministerial Council would provide a structured forum to develop a cohesive national strategy on the productive reuse of former mining lands and power station sites. Such a body could align regulatory approaches, share best practice, and identify priority sites for redevelopment, while ensuring consistency in investment signals and community transition planning across Australia.

Establish a National Roadmap for Productive Reuse

Action

Develop a structured roadmap that sequences reforms, research priorities, and investment pathways. Include milestones for policy alignment, community engagement, workforce development, incentive implementation, and demonstration projects. This will provide a clear plan to coordinate across governments, industry, and communities to achieve productive and beneficial post-mining outcomes.

3 Key findings of regulatory, legislative and policy hindrances

The identification of barriers across regulatory, legislative, and policy domains is critical to understanding the factors that influence the successful transformation of former mining lands and coal- and gas-fired power stations. These findings provide a consolidated evidence base to inform future planning, policy reform, and investment support, ensuring that redevelopment opportunities can be realised in a manner that supports long-term economic, environmental, and social outcomes.

The table below summarises the outcomes of the legislative and regulatory review, stakeholder insights, and case study evaluations, identifying the key regulatory, legislative, and policy hindrances and impediments to the productive reuse of former mining lands and coal- and gas-fired power stations.

1)	Fragmented regulatory environment hinders effective rehabilitation and land reuse efforts by creating gaps in accountability and complicating long-term oversight.
2)	Stakeholders describe the regulatory environment as difficult to navigate, with responsibilities split across multiple government levels and agencies, leading to slow decision-making and creating uncertainty.
3)	Reactive and uncoordinated planning is common due to the lack of a clear, overarching post-mining land use framework.
4)	Effective quantification and management of residual risk are essential to facilitate smoother transitions and ensure safe and productive land reuse. Residual risk remains a key barrier to post-mining land use, with governments' reluctance to assume liability complicating land transfer and final relinquishment.
5)	Industry concerns about indefinite liability and cost uncertainty, coupled with governments' need for rigorous assurance of long-term land safety and stability, are a key barrier.
6)	Complex and inflexible tenure arrangements hinder the transition of mining lands and power stations to productive reuse. Modernising tenure systems may support flexibility and innovation in post-mining economies.
7)	The lack of a clear pathway from mining tenure to rehabilitation or redevelopment tenures creates uncertainty and slows progress. Introducing transitional or rehabilitation-specific tenure categories may enable strategic land release.
8)	Lengthy and unclear approval processes for rehabilitation and reuse create uncertainty and discourage investment with slow timelines, unclear criteria, and risk-averse regulators delaying proposals.
9)	The evolving landscape of rehabilitation legislation is creating a challenging environment for operators, marked by inconsistent expectations and decision paralysis. Jurisdictions such as Victoria are transitioning, aiming to establish clearer responsibilities and encourage investment in higher-value reuses. However, this period of regulatory reform has introduced uncertainty, prompting some operators to delay significant rehabilitation decisions. This has resulted in extended 'care and maintenance' phases, underscoring the urgent need for a consistent and clear regulatory framework.
10)	Better alignment between state and federal legislation is essential for effective land repurposing strategies. Currently, the disconnect between local, state, and federal policy objectives creates significant challenges. Local councils may support specific land uses that state regulations do not align with, and decarbonisation and regional development ambitions are often missing from

rehabilitation regulations. This misalignment hampers coordinated decision-making and long-term planning for communities.

11) Existing legislation and regulations prioritise rehabilitation, with regulatory frameworks tending to support outcomes that prioritise environmental protection and risk management over pursuit of a highest and best use of the land and productive and beneficial reuse.

12) New South Wales, Queensland, Victoria and Western Australia have all entered into bilateral agreements with the Commonwealth, enabling these states to utilise their own assessment processes to undertake EPBC assessment of a project, reducing duplication of processes. There is an opportunity for other states to pursue similar bilateral agreements.

13) At the Commonwealth level there is no legislative mandate to consider during the approval of a mining or power station proposal a productive or beneficial use of the site once operations cease.

4 Key findings of challenges and opportunities

Understanding the breadth of challenges and opportunities associated with the transition of former mining lands and coal- and gas-fired power stations is essential to shaping effective policy, and supporting owners, operators and investment responses. These considerations span planning and rezoning processes, economic and workforce dynamics, skills availability, investment confidence, technological maturity of reuse types, and the timing of redevelopment initiatives. Collectively, they highlight the complexity of navigating both structural barriers and enabling conditions that will determine the viability and success of the future reuse of these sites.

The table below brings together insights from the legislative and regulatory review, stakeholder perspectives, and case study evaluations to provide a consolidated overview of these interconnected factors.

1) Site specific, regional, and jurisdictional considerations present challenges and constraints to developing replicable approaches or frameworks for reuse opportunities across jurisdictions and physical sites.

2) The time-lag between the decommissioning and future reuse operational stages causes a significant challenge. While decommissioning of mining lands and coal- and gas-fired power stations can occur within a defined timeframe, the processes required to enable productive reuse (remediation, planning approvals, infrastructure investment, market development, construction, etc.) extends over many years. This creates a gap in which workforces and communities face reduced employment opportunities and economic contraction, well before new industries or land uses are established.

3) Addressing this lag is essential to support community resilience, sustain local services, and ensure that regional economies remain viable throughout the transition.

4) Regulatory complexities and lengthy approval processes present significant challenges, with overlapping roles across agencies, evolving legislative frameworks, and inconsistent standards between jurisdictions causing delays and increasing investor hesitation.

5) Differing levels and agencies of government often have overlapping but distinct priorities – distinct priorities such as ensuring rehabilitation obligations, environmental standards, financial assurance, regional economic transition, land use and local (re)zoning, community outcomes, and beneficial and productive reuse of existing land and infrastructure.

6) To attract investment and drive economic growth in these regions, a unified and consistent regulatory approach, effective risk management strategies, and streamlined approval processes are essential.

7) Environmental risks and remediation present substantial challenges, particularly with high remediation costs and the complexity of contaminants.

8) Community and workforce planning and sequencing is essential. A skills mismatch and the risk of labour displacement are significant concerns, as many workers possess highly specialised skills with limited relocation options.

9) Realistic workforce planning and robust community support are crucial, including recognising prior skills and creating tailored transition pathways aligned with actual job opportunities.

10) Genuine and early engagement with communities and Traditional Owners is vital for achieving social licence and value, and to build trust with First Nations communities. Collaborative planning and ongoing consultation can foster acceptance and support.

11) A lack of early notice and proper sequencing in transitions can lead to the erosion of local supply chains and lower levels of workforce retention.

12) Mining lands and coal- and gas-fired power station closures present significant opportunities for long-term economic net zero economy potential and innovation. Large land areas with existing infrastructure offer strategic reuse options, particularly when planning aligns with community and government policy.

13) Due to the nascent stage and long-term development horizons in this sector, there are limited national and/or global examples of the successful and productive reuse of former mining lands, or coal- and gas-fired power stations.

5 Potential beneficial and productive reuse typologies

Exploring the potential types of beneficial and productive reuses for former mining lands and coal- and gas-fired power stations is central to enabling the transition to a net zero economy. Opportunities extend across renewable energy generation, advanced manufacturing, agriculture and grazing, nature conservation, tourism and recreation, and community infrastructure, each presenting unique economic, environmental, and social benefits. Realising this potential requires significant planning, consideration of planning and rezoning frameworks, investment readiness, workforce and skills development, technological maturity, and alignment with broader regional and national priorities.

The table below consolidates the key findings from the legislative and regulatory review, stakeholder insights, and case study evaluations to illustrate the range of reuse types and the conditions that will support their success.

1) Energy hubs and renewable energy projects on decommissioned sites leverage existing energy and built infrastructure and proximity to energy demand centres.

2) Clean energy infrastructure, such as solar, wind, pumped hydro, and energy-from-waste, are potential end uses for post-mining land, aligning with decarbonisation goals and leveraging existing transmission infrastructure and large-scale utility connections.

3) Innovative and renewable energy industrial precincts (REIPs) and uses, including manufacturing, and green steel production offer significant benefits but face economic, physical, and regulatory challenges.
4) There is strong stakeholder interest in transforming these sites into industrial or circular economy precincts, such as resource recovery centres, manufacturing hubs, and data centres. These developments represent opportunities to boost local economies as communities transition away from mining.
5) Agriculture and nature conservation are frequently implemented on decommissioned sites, providing some economic and significant environmental benefits. Grazing and nature conservation can offer sustainable land reuse opportunities.
6) Recreational lakes, tourism ventures, and wildlife parks can create valuable community assets and drive regional development.
7) Recreational and tourism-related activities, such as camping grounds, lake developments, and conservation parks, are viewed positively when rehabilitation delivers environmental and amenity outcomes.

6 Regulatory Frameworks and Productive Reuse of Mining Lands

At a policy level, the regulatory frameworks governing mining lands across Australia have been principally established to ensure environmental protection, safeguard public safety, and manage operational risks, rather than to actively facilitate or encourage the most productive and beneficial post-closure land uses. This focus has created a range of policy and regulatory gaps that can limit the scope and pace of redevelopment and reuse of these sites.

The table below consolidates the key findings from the legislative and regulatory review, stakeholder insights, and case study evaluations.

1) **Strong Focus on Remediation and Rehabilitation, Not Productive or Beneficial Reuse**
Most frameworks require progressive rehabilitation to achieve landforms that are *safe, stable, and sustainable*. This emphasis on minimising residual risk often comes at the expense of encouraging innovative or higher-value reuse opportunities. Rehabilitation standards are generally set early in a project's life, often decades before closure, limiting flexibility to adapt to evolving community needs, market dynamics, or strategic policy priorities.
2) **Early Determination of Post-Closure Land Uses**
In many jurisdictions, proposed post-closure land uses must be identified at project approval stage. This 'early lock-in' can be misaligned with long-term land use opportunities that emerge closer to closure, such as renewable energy projects, industrial transformation precincts, or ecological and recreational uses. Proponents are often incentivised to adopt lower-cost, lower-value land uses to meet minimum exit obligations rather than pursue ambitious redevelopment opportunities.
3) **Complex and Fragmented Approvals Processes**
Beneficial reuse proposals frequently require changes to rehabilitation plans, approvals, or planning schemes. These processes are often complex, multi-layered, and time-consuming, involving multiple agencies and levels of government. Overlapping jurisdictional roles, inconsistent requirements, and lengthy approval timeframes reduce investor certainty, undermine confidence, and hinder adaptive planning for reuse.
4) **Financial Disincentives**
Rehabilitation bonds and financial assurance mechanisms are typically calculated based on the cost

of approved rehabilitation plans. Proposals that involve higher-end land uses (e.g. enabling industrial or mixed-use redevelopment) usually require more complex and costly landforms, attracting higher bonds and creating a financial disincentive to pursue beneficial outcomes.

5) **Limited Incentives for Proponents at Closure Stage**
Mining and power station operators are generally motivated to meet minimum standards to secure approval relinquishment, rather than to deliver long-term, higher-value outcomes. In many cases, beneficial reuse initiatives fall to subsequent landowners or developers after closure, at which point opportunities may already be constrained by legacy landforms and prior rehabilitation choices.

6) Emerging Reforms and Opportunities
Several jurisdictions are in the process of reforming their frameworks to introduce greater flexibility, risk-based approaches, and streamlined assessment pathways. Early indications suggest that reforms aimed at simplifying processes, reducing duplication, and allowing for iterative planning may better enable adaptive and innovative reuse. The extent of their impact will depend on how they are implemented and whether they balance certainty for proponents with flexibility for future land use opportunities.

Summary
The current regulatory frameworks across Australia do not explicitly mandate or strongly incentivise the productive or beneficial reuse of mining and power station sites post-closure. Instead, they prioritise environmental protection and risk minimisation. While this remains important, given the need to manage legacy risks, there is a clear opportunity for a more adaptive, flexible, and integrated regulatory approach to help ensure that Australia's significant portfolio of former mining and energy assets can transition into productive, innovative, and sustainable uses that deliver long-term economic, environmental, and community benefits.

7 Regulatory Frameworks and Productive Reuse of Coal- and Gas-fired Power Stations

Australia's regulatory frameworks for the closure and redevelopment of coal- and gas-fired power station sites are fragmented and complex, and do not consistently prioritise productive or beneficial post-closure outcomes. While obligations relating to environmental protection and rehabilitation, contamination management, and decommission obligations, are generally well established, the frameworks typically lack mechanisms to plan for or incentivise beneficial reuse. Across the jurisdictions and sites researched, several consistent themes have emerged that underscore these limitations and the opportunities for reform.

The table below consolidates the key findings from the legislative and regulatory review, stakeholder insights, and case study evaluations.

1) **Absence of Proactive Reuse Planning**
Unlike the regulatory regimes that apply to mining land, there is generally no requirement for power station operators to identify or plan for productive post-closure land uses during a site's operational phase. Closure and rehabilitation activities are primarily focussed on decommissioning, remediation, and risk reduction. This creates a *regulatory gap*, where reuse considerations are often delayed until after operations cease, missing opportunities to integrate redevelopment objectives into closure and remediation planning.

2) **Contamination as a Critical Barrier**
Power station sites are frequently affected by legacy contamination, managed under separate environmental legislation. While site management plans and contamination controls are designed to protect human health and the environment, they can significantly constrain redevelopment potential. In many cases, remediation is costly and complex, and requirements may add multiple layers of approvals. This raises the financial and procedural burden of reuse compared to other brownfield sites, reducing investment attractiveness.

3) **Fragmented and Complex Approvals Processes**
Reuse proposals typically require multiple planning approvals, rezoning processes, licences, and consents across several government agencies and tiers of government. A lack of coordination, overlapping mandates, and lengthy statutory processes increase costs, extend timeframes, and create uncertainty for proponents. This complexity reduces investor confidence and discourages early or ambitious reuse planning.

4) **Zoning and Land Use Constraints**
Power station sites are often zoned for "special infrastructure" or equivalent purposes. Transitioning to alternative uses generally requires a planning scheme amendment or rezoning, which is a complex, lengthy, and uncertain process requiring state and local government support. This adds another significant barrier to adaptive and innovative reuse.

5) **Inflexibility and Minimum-Compliance Culture**
In the absence of clear statutory requirements for beneficial outcomes, operators often focus on achieving minimum standards for compliance, decommissioning, and remediation. This reduces opportunities to align site closure with strategic planning objectives or higher-value redevelopment pathways. Inflexible requirements or restrictive site management plans may further limit the scope for adaptive reuse.

6) **Missed Opportunities for Coordination and Reform**
Across jurisdictions, a recurring issue is the lack of coordination between environmental regulators, planning authorities, and economic development agencies. This fragmentation delays decision-making and undermines efforts to align rehabilitation and closure activities with broader regional or national priorities, such as renewable energy zones, industrial transition precincts, or housing supply. Some reform efforts are underway, but their success will depend on whether they simplify processes, provide flexibility, and create clear incentives for beneficial reuse.

Summary
The regulatory frameworks governing power station sites in Australia prioritise environmental protection and risk management, but do not systematically support or incentivise productive reuse. This results in lost opportunities for strategic redevelopment and regional transition. A more integrated, flexible, and forward-looking framework would ensure that the decommissioning of power stations contributes to long-term economic, environmental, and community outcomes, rather than leaving behind under-utilised or constrained sites.

8 Comparison of the Regulatory Frameworks for mining lands and power station sites

Despite differences in their operational contexts, the regulatory frameworks governing both mining lands and power station sites exhibit similar systemic issues. Both in some instances are fragmented and compliance driven, with limited emphasis on proactive planning for productive reuse. Contamination risks, zoning rigidity, and complex multi-agency approvals present substantial barriers in each case, while the absence of early integration with strategic regional or national priorities leads to missed opportunities for economic diversification and just transition outcomes. These parallels suggest that a coordinated reform agenda - focusing on streamlined processes, early end-use planning, and stronger incentives for beneficial outcomes - could deliver significant benefits across both asset classes.

The table below provides a high-level overview of the regulatory frameworks governing mining lands and power stations, and highlights the potential for identifying similar areas for reform.

Regulatory area	Mining Lands	Power Station Sites	Similarities
Regulatory Landscape	Multiple pieces of legislation across state, territory, and Commonwealth levels; overlapping roles between environment, resources, and planning regulators.	Governed through environmental, planning, and contamination frameworks; responsibilities spread across agencies with no unified pathway.	Both are fragmented, duplicative, and create uncertainty for investors and communities.
End-Use / Closure Planning	Closure plans required, but typically framed around 'safe and stable', non-polluting' outcomes rather than productive land use.	No proactive requirement to plan for post-closure land use; focus is on decommissioning and remediation.	Both lack early integration of reuse into closure planning, leading to missed opportunities for strategic outcomes.
Contamination & Remediation	Legacy contamination (tailings, groundwater impacts) adds high costs and regulatory hurdles.	Legacy contamination (asbestos, hydrocarbons, heavy metals, ash ponds) is a major redevelopment barrier.	In both, contamination is often managed in silos, increasing costs and delaying reuse.
Zoning & Land Use Constraints	Often zoned for "resource" or "special use"; re-zoning for alternative uses is lengthy and uncertain.	Typically zoned for "special infrastructure" purposes; rezoning is complex and requires state/local approvals.	Zoning rigidity in both asset classes can provide constraints to productive reuse potential.
Compliance Focus	Operators aim to meet minimum regulatory standards; limited drivers for innovation or beneficial outcomes.	Operators focus on decommissioning to regulatory minimums; little incentive to align with broader regional objectives.	Both frameworks incentivise minimum compliance, not ambitious or innovative reuse.
Approvals & Processes	Proposals require multiple approvals across environmental, planning, and resource agencies which can be often sequential and slow.	Reuse proposals require planning scheme amendments plus environmental and contamination approvals, which can be complex and time-consuming.	Both face lengthy, multi-agency approvals, which can lead to increased costs and costly delays.
Strategic Integration	Rarely linked to wider regional economic development, net zero energy transition, or land use planning strategies.	Seldom aligned with renewable energy zones, housing, or economic development priorities.	Both miss opportunities to connect closure with broader 'just transition' or wider regional economic growth objectives.
Reform	Calls for more flexible closure planning, streamlined approvals, and incentives for beneficial reuse.	Reform opportunities include streamlining approvals processes, better integration of contamination and planning, and stronger	Both require reform to simplify processes, embed reuse planning early, and create

Regulatory area	Mining Lands	Power Station Sites	Similarities
		economic development alignment.	incentives for higher-value outcomes.

9 Stakeholder key insights

Engaging with stakeholders is crucial for understanding the multifaceted issues surrounding the decommissioning and repurposing of former mining and power station sites. In collaboration with the Authority and guided by the outcomes of the policy, legislation, and regulatory review, we have identified and mapped key stakeholder groups requiring engagement and consultation.

To ensure a thorough and meaningful engagement process, 30 one-hour virtual consultations with a diverse range of stakeholder groups were planned. At the time of preparing this document, 30 consultations had been completed. Given the complexity of the subject matter and the variation across jurisdictions and contexts, a qualitative, direct engagement approach was adopted. While the overarching themes remained consistent throughout the consultation process, minor adjustments were made to reflect the specific context of each stakeholder group and to ensure the questions were relevant and relatable to each participant.

Stakeholders consistently emphasise that the opportunity for productive and beneficial reuse is significant but will only be realised if systemic barriers — fragmented regulation, investor uncertainty, and weak coordination — are addressed. Government has a pivotal role to play in creating a clear, nationally consistent framework while also tailoring solutions to regional contexts through investment, workforce planning, and community partnerships.

Legislative, Regulatory & Policy Hindrances

- Governance remains fragmented across jurisdictions, with overlapping regulatory roles, inconsistent standards, and slow, duplicative processes that create uncertainty.
- Lack of coordinated national frameworks results in uneven progress, divergent approaches, and investor hesitation.
- Ongoing liability and residual risk discourage operators from pursuing ambitious reuses, especially where financial safeguards are weak or unclear.
- Outdated or rigid legislation often prioritises minimum compliance and risk management, rather than enabling innovation, economic diversification, or proactive reuse planning.
- Misaligned objectives between different levels of government and agencies further complicate approval pathways and slow redevelopment.

Challenges & Opportunities

- Regulatory uncertainty, lengthy approvals, and fragmented governance undermine investor confidence and delay redevelopment.
- Effective workforce transition is critical: skills mapping, retraining, and aligning education with emerging industries are essential to retain talent and build new local industries.
- Environmental risks — including contamination, water management, and legacy hazards — increase complexity and costs, but can also drive innovation in remediation technologies.

- Building genuine community partnerships, including early and meaningful engagement with Traditional Owners, is essential to securing social licence and ensuring reuses align with regional aspirations.
- Sequencing rehabilitation with reuse planning can reduce time lags, accelerate new investment, and maintain regional economic momentum.

Beneficial and Productive Reuse

- Strong potential exists for renewable energy hubs, industrial precincts, advanced manufacturing, and circular economy ventures that leverage existing infrastructure.
- Agricultural, conservation, and recreational reuses can diversify local economies, enhance biodiversity, and create tourism offerings.
- First Nations ownership and governance of post-closure lands can enable community-led enterprises that embed cultural values and deliver long-term social and economic benefits.
- Repurposing opportunities are highly place-based, with viability shaped by site context, location, and regional economic dynamics.

10 Case Studies

The case studies for this project, which can be accessed in the companion report ***Research into Policy and Legislation Governing the Reuse of Mining Lands and Coal- and Gas-Fired Power Stations in Australia*: *Case Studies,*** were selected in close collaboration with the Authority to ensure that the themes chosen reflect diverse issues and jurisdictions, and provide practical insights and learnings into the productive and beneficial rehabilitation and reuse of mining lands and coal- and gas-fired power stations.

The table below provides a high-level overview of the case studies selected.

Case Study	Reason for Selection	Key Learnings
Legislation as an enabler to unlocking productive reuse and rehabilitation – learnings from Queensland ***(PRCP framework Legislative reform)***	A structured legislative reform focused on progressive rehabilitation as a strategic lever to drive productive post-mining land re-use, with potential for key learnings for other jurisdictions.	▪ A comprehensive regulatory reform mandate and strong institutional mechanism can establish a critical foundation for sustained, proactive and more accountable land rehabilitation. ▪ Structured, progressive closure requirements can catalyse industry-wide adoption of proactive, well-funded, and transparent post-mining land uses. ▪ Embedding the public interest as a justification for rehabilitation and productive reuse ensures action is no longer optional. ▪ Significant legislative enforcement and regulatory framework overhauls can play a strategic role in resetting industry behaviours, encouraging more proactive actions as opposed to reactive responses.

Case Study	Reason for Selection	Key Learnings
Private repurpose-focused investment to drive transformative change – learnings from Lithgow, NSW ***(Wallerawang Power Station)***	The strategic, focused and progressed reuse planning of an existing power station by a repurpose investor, with high levels of community consultation, economic diversification and multi-reuse typologies currently in planning.	▪ Illustrates the importance of regulatory and rezoning frameworks in unlocking investment. ▪ Demonstrates the community opportunities that can emerge from industrial transformation, including new jobs, housing, recreational and tourism opportunities, driving regional economic development outcomes. ▪ Government support through planning, zoning flexibility, and streamlined approvals can accelerate repurposing of sites sooner. ▪ Risk-sharing mechanisms and strong governance are essential to ensuring the financial feasibility of rehabilitation efforts. ▪ Inclusion and transparency are critical enablers, requiring conscious effort. ▪ Major infrastructure redevelopments like Wallerawang present significant opportunities for First Nations communities to participate in the benefits from new economic and social outcomes.
Missed opportunities: the cost of getting it wrong – learnings from Hazelwood, Victoria ***(Hazelwood Power Station, VIC)***	A failed transition, highlighting the risks of inadequate planning, and a sudden closure with lack of workforce or community consultation, demonstrating that successful post-use redevelopment requires early stakeholder engagement, workforce transition support, and clear pathways for land repurposing.	▪ Emphasise a regional approach to mine rehabilitation rather than a mine-by-mine basis, ensuring cohesive management of land use, water resources, and community outcomes. ▪ Ensure financial mechanisms are accurate and enforceable, guaranteeing that mine operators can bear the full cost of closure and rehabilitation, or seek opportunities for funding support early in the process. ▪ Conduct geotechnical and hydrological studies early in the process, which allows for community and independent scrutiny, fostering trust and informed decision-making. ▪ Engage early and consistently with employees, industry, unions, and the community, including Traditional Owners, environmental groups, landholders, and local residents. ▪ Implement long-term planning for a socio-economic transition, including phased retraining programs, local investment in industries, and deliberate strategies to build resilience in coal-dependent communities. ▪ The lack of meaningful consultation meant that First Nations voices were initially absent from

Case Study	Reason for Selection	Key Learnings
		legacy planning, perpetuating patterns of dispossession and disempowerment.
Government funding to generate impact at scale – learnings from Collie, Western Australia ***(Collie, WA)***	A proactive and inclusive approach to transition, emphasised by state government support, providing insights for other regions across community involvement and worker support.	▪ Public investment can function as a critical catalyst for driving change. ▪ Strong government leadership and advocacy are essential to driving alignment of transition goals. ▪ Initiatives like the Collie Jobs and Skills Centre have facilitated the transfer of desired and emerging skills to clean energy sectors. ▪ Institutionalised governance models and proactive community, industry, employee, and union engagement builds social license, trust in government, and ensures greater inclusivity in the planning of regional development outcomes. ▪ The Australian Research Council is using Collie as a case study to explore how the coal phase-out, including decommissioning of Collie Power Station, can support First Nations self-determination and embed Traditional Owner perspectives in transition planning.
The role of incentives in driving productive reuse – learnings from the United State of America ***(USA)***	International example of a federal incentive program targeting reuse of brownfield sites that can provide key learnings to Australian jurisdictions.	▪ Federal leadership and multi-layered incentives can act as catalysts for unlocking private sector investment and attraction by reducing financial risk. ▪ Despite strong federal leadership, program delivery within the US has been hindered in some jurisdictions by state-level bottlenecks and inconsistency in oversight. ▪ While the US' incentives model is substantial, the complexity of eligibility criteria, definitions and requirements creates uncertainty and potential inequitable access for smaller, resource constrained groups. ▪ Future simplification and accessibility improvements should be prioritised in the design of rehabilitation programs to better ensure rules and standards are clearly understood. ▪ While these programs demonstrate a commitment to site reuse and economic renewal, they also highlight the importance of alignment between legislation and best-practice engagement with First Nations people and Indigenous communities globally.

Case Study	Reason for Selection	Key Learnings
Public-private collaboration as a critical enabler – learnings from the Hunter Region, NSW ***(Hunter, NSW)***	A transformative project of national significance in the context of it being in the heartland of previous mining land, and with ambitions of becoming a net zero leading site.	▪ Policy and strategic infrastructure alignment forms the critical foundation of transition success. ▪ Alignment between planning and policy is essential to driving regional rehabilitation and transition, enabling outcomes that deliver lasting value for industry, communities, government, the environment, and the wider economy. ▪ Transitions can only succeed when they are given legitimacy through effective community engagement. ▪ By positioning communities and organisations as active participants in rehabilitation and energy transition processes, the public and private sector can build trust, foster transparency and maintain social license to operate. ▪ Alignment of renewable energy policy and legislation under the *Electricity Infrastructure Investment Act 2020* and the declaration of Renewable Energy Zones across the region and country, in addition to regional economic development and workforce transition plans, have provided clear and aligned policy direction for the state's transition imperative. ▪ Well-established commitments through formal governance models between the public and private sector, as well as regional and community groups, rehabilitation objectives, infrastructure delivery and workforce transition and upskilling can be pursued in a stable, coordinated way across the full lifecycle of transition, maximising outcomes for all. ▪ First Nations stakeholders emphasise the need for them to continue to be included in key decision-making and involved in determining community led outcomes of decommissioning and future land use planning.

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