Productive reuse of former mining and power station lands

Research into post-closure land use in regional Australia

Over coming decades, some major mining and power generation assets will close due to a combination of market conditions, resource depletion and the global energy system transition.

Many of these closures are concentrated in regional areas where energy and mining assets have shaped jobs, local identity and community life for generations. When these sites close, what happens next matters. Decisions about rehabilitation and reuse can influence long-term social, economic and environmental outcomes for regions.

This research explores how existing policy, legislation and regulation shape what is possible on former mining and power station sites, and how those settings can either enable or limit beneficial and productive reuse.

What does 'beneficial reuse' mean?

Beneficial reuse goes beyond making land safe or stable. It focuses on outcomes that support regional communities, including First Nations communities. It recognises local priorities, while promoting the creation of locally meaningful jobs, sustainable land management and strengthened regional resilience.

Key findings

1. **Regulatory settings strongly influence what reuse is possible**. The future of former mining lands and power stations is shaped less by site potential and more by how policy, regulation, tenure and liability settings interact. Fragmented responsibilities, unclear liability and misaligned planning systems can delay or limit productive reuse, even where communities and investors are ready to act.
2. **Gaps between closure and reuse create real regional impacts.** There is often a long lag between asset closure and new land uses becoming operational. This transition gap affects workers, local businesses and community confidence, particularly where planning for reuse begins late.
3. **Productive reuse works best when it is place-based.** Successful reuse approaches respond to local conditions, infrastructure, markets and community priorities. Early and ongoing engagement with local stakeholders, including First Nations, helps build trust, manage risk and align reuse with local aspirations.

Land reuse lifecycle

Closure is one stage in a longer transition

Operation	→	Closure	→	Decommissioning	→
Potential reuse	←	Interim period	←	Rehabilitation	

Understanding post-closure land use

Large industrial and energy sites often operate for decades. When they close, the transition does not end with decommissioning.

The research also highlights the importance of recognising the role of Traditional Owners in decisions about land use, governance and long-term outcomes, particularly where post-closure uses affect Country.

These sites are typically:

◆ large in scale

◆ supported by existing energy, transport and water infrastructure

◆ subject to long-term environmental management

◆ located near regional towns and established workforces.

In some circumstances, these characteristics may support future land uses. Outcomes vary significantly depending on site conditions, market demand, community priorities and regulatory settings.
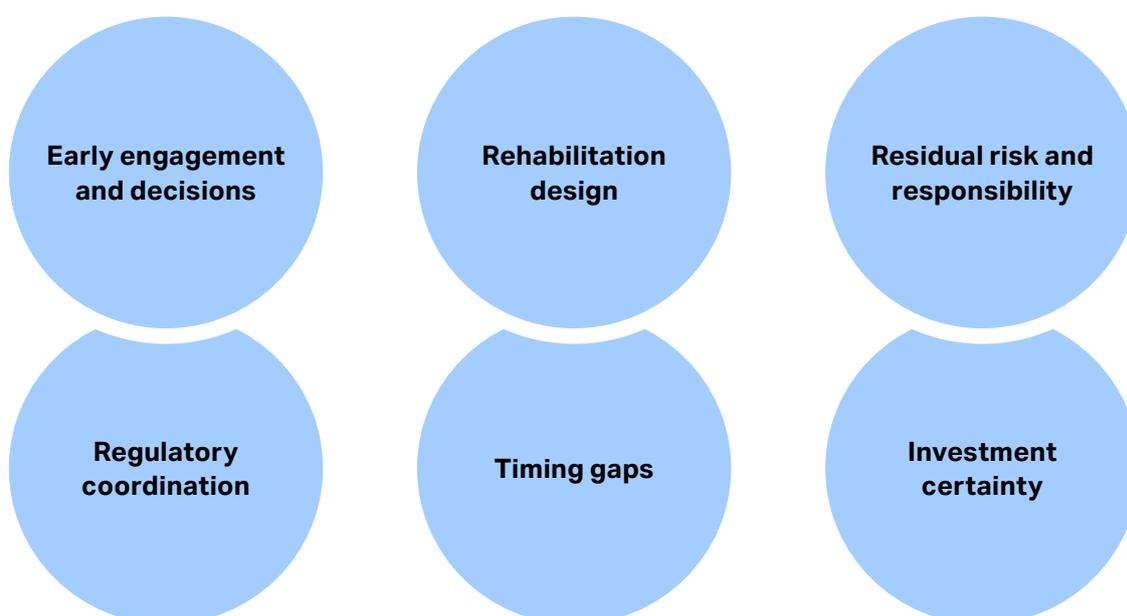
Potential post-closure land uses

Across Australia, former mining and power station sites have a range of potential reuses:

◆ energy and energy-related activities

◆ industrial or innovation precincts

◆ agricultural, conservation or land stewardship uses

◆ First Nations ownership and/or beneficial management

◆ recreational or amenity uses.

The research highlights the importance of place-based approaches that reflect local conditions, community priorities and long-term regional contexts.

Other factors shaping post-closure outcomes

Early engagement and decisions

Rehabilitation design

Residual risk and responsibility

Regulatory coordination

Timing gaps

Investment certainty

What happens in practice: case study insights

The research examined a range of Australian and international case studies involving former mining sites and coal- and gas-fired power stations.

While each site is different, some key learnings are:

- Changes to regulatory enforcement and frameworks can influence industry behaviour, supporting more proactive approaches, rather than reactive responses later in the lifecycle. Where planning and zoning settings are more flexible, and approval processes are clearer, site repurposing can progress more quickly.
- Coordinated leadership and the availability of multi-layered incentives can act as catalysts for unlocking private sector investment and attraction by reducing financial risk.
- Early and ongoing engagement with employees, industry, unions and the community, including First Nations peoples, environmental groups, landholders and local residents can ensure smoother transitions.
- Where financial arrangements for closure and rehabilitation are clearly defined and enforceable, transitions are more predictable. Early consideration of funding needs can avoid later delays.

Areas shaping long-term post-closure outcomes

interaction between rehabilitation and long-term land use flexibility

approaches to managing residual risk over time

sequencing of closure, rehabilitation and reuse

governance arrangements that embed First Nations decision-making and economic participation

coordination across regulatory and planning systems

About the research

The research was delivered by Urbis, Norton Rose Fulbright, and Indigenous Energy Australia to provide research into policy and legislation governing the reuse of mining lands and coal- and gas-fired power stations in Australia.

This research draws on:

◆ analysis of policy, legislative and regulatory frameworks
◆ consultation insights from organisations involved in planning, regulation, operations, finance, research and workforce transition, including First Nations organisations
◆ applied case studies illustrating post-closure pathways.

The research identifies common challenges, opportunities, areas of uncertainty and themes raised by stakeholders across jurisdictions.

The Authority supports evidence-based conversations that help regions navigate change and realise long-term opportunities.

Further information

If you are interested in finding out more about this research and other NZEA reports, visit the Net Zero Economy Authority website at **netzero.gov.au**