



Policy Position Statement: Mining and
Extractive Industries

Background Paper

Prepared for Peel Alliance

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1 BACKGROUND & RATIONALE

1.1 About Peel Alliance

Peel Alliance consists of organisations across the region that are responsible for economic development, community development, regional catchment management, and local governance.

Peel Alliance members are City of Mandurah, Shire of Boddington, Shire of Murray, Shire of Serpentine-Jarrahdale, Shire of Waroona, Peel Community Development Group, Peel Harvey Catchment Council, Regional Development Australia – Peel, and Peel Development Commission (observing member).

The Alliance is guided by three pillars: Economic Prosperity; Environmental Sustainability; Social Wellbeing.

1.1 Purpose

This Background Paper provides context on the Peel Region and mining sector to inform the development of an evidence-based policy position on mining in the Peel Region by the Peel Alliance.

1.2 Areas of Concern

Alliance members have joint concerns about mining in the region, with several expansion and exploration applications underway in the forest and scarp areas. Mutual areas of concern include:

1. The cumulative impact of mining exploration and expansion does not appear to be considered when approvals are given, particularly with a number of ‘big players’ operating in the same region – in particular the protection of significant ecological assets.
2. The cost, time and resources required to respond to Public Environmental Review (PER) documents for proposed expansions in a meaningful way is a significant burden on organisations and requires the engagement of expert consultants and legal advice.
3. The process to respond to exploration licence applications is very difficult to navigate and laborious, sometimes impossible and also expensive/ time consuming.
4. Consultation by the mining companies and meaningful engagement on planned activities is poor, and there is no confidence in the protection of communities and sensitive environmental assets.
5. Poor response from mining companies to concerns raised about dust, pollution and hazards to communities.
6. The substantial investment in trails (both completed and planned), supporting infrastructure/services and ecotourism is not protected from mining activities and at risk.
7. State agreements do not provide a mechanism for these controls/ engagement and are largely out-of-date (there does not appear to be any another mechanism).
8. There is a need to address these concerns strategically and with impact.

Peel Alliance intend to develop a policy position statement to articulate the position of the Alliance in relation to mining and mineral extraction in the Peel region, from an environmental, social and

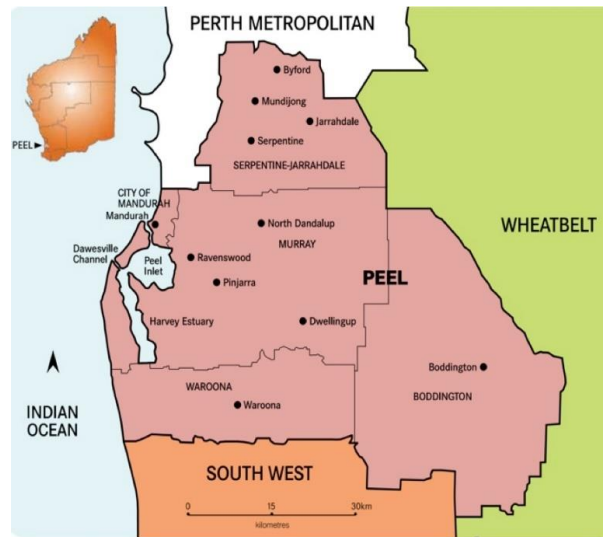
governance (ESG) perspective. It is intended to underpin advocacy efforts for effective legislation, recognition of cumulative impacts, and genuine engagement and participation as the host community.

1.3 Peel Region Overview

The Peel region (Regional Development Commissions Act) is bordered by the Perth metropolitan area to the north, the Wheatbelt region to the east and the South West region to the south, as shown in Map 1.

A snapshot of the Peel region communities is provided below.^{1, 2, 3}

In addition to the resident population, the region supports at least 673,000 overnight and 2.24 million day visitors per annum.⁴



Map 1: Peel Region (Peel Development Commission)

	Peel Region	City of Mandurah	Shire of Boddington	Shire of Murray	Shire of Waroona	Shire of Serpentine-Jarrahdale
Resident Population (2021)	151,517	90,305	1,705	18,641	4,234	32,173
Projected population 2031	204,280	113,061	1,857	23,734	5,768	57,785
SEIFA Score (WA 1,015)	983	971	991	962	945	1,040
Economic Output (Billions)	\$23.32	\$7.8	\$3.1	\$6.8	\$3.4	\$2.1
Largest Output Sector	Manufacturing (\$7.4 billion)	Construction	Mining	Manufacturing	Manufacturing	Construction
Largest Employing Sector	Health Care & Social Assistance	Health Care & Social Assistance	Mining	Manufacturing	Manufacturing	Construction
Mining - Jobs (8.1% WA)	6.5% (2,892)	0.5% (140)	65.9% (1,527)	9.4% (641)	17.6% (479)	1.9% (105)
Tourism - Jobs (3.6% WA)	3.6% (1,614)	3.6% (1,614)	1.2% (28)	2.8% (190)	1.6% (44)	3% (165)

2 ENGAGEMENT, PLANNING & REGULATION

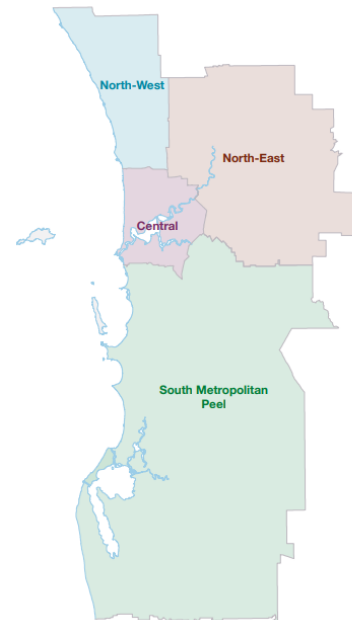
Under the Australian Constitution, state and territory governments are responsible for regulating onshore mineral and petroleum exploration and production, including the policies and frameworks that guide industry's engagement with local communities and businesses.⁵ Mineral and energy resources and land ownership rights in Australia are separated.

2.1 Current Situation

2.1.1 Planning

The Perth and Peel @3.5million suite of documents articulate what Perth could look like in the future, with the aim of maintaining the valued lifestyle while realistically accommodating a substantially increased population. It states a vision for Perth and Peel as: “a great, connected city that is globally competitive and technologically advanced; that is sustainable, resilient and respects its natural assets and heritage; that maximises the use of new and existing infrastructure; that offers a mix of housing and lifestyle choices; and that respects and acknowledges the regions’ sensitive natural environments and their respective ecosystems”.⁶

State government strategic land use planning at the sub-regional level combines Peel into the Southern metropolitan area, as shown in Map 2.



Map 2 : Sub-regional boundaries (DPLH)

In 2012 the Australian Government and WA State Government



Map 3: JAF01 Jarrah Forest, North

finalised terms of reference to undertake a comprehensive strategic assessment of the Perth and Peel Regions (SAPPR), in accordance with section 146 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).⁷ In 2022, the State Government announced that SAPPR was permanently discontinued, instead prioritising regional planning for Perth and Peel under WA's Native Vegetation Policy.⁸

Under the Interim Biogeographic Regionalisation for Australia (IBRA) version 7, a landscape-based approach to classifying the land surface of Australia, Peel is classified in the SWA (Swan Coastal Plain) and JAF (Jarrah Forest) regions, with JAF further classified into the JAF01 (Northern Jarrah Forest) sub-region, as shown in Map 3.

EFFECTIVENESS

An independent review of the *EPBC Act* (Commonwealth) released in October 2000 found that the Act lacks comprehensive plans to manage cumulative impacts, key threats and to set priorities, and that planning is patchy and often poorly implemented.⁹ The Environmental Protection Authority (EPA) WA has previously used a strategic assessment process in the Exmouth Gulf, which considered the potential cumulative impacts of activities and developments proposed.

2.1.2 Approvals

Extractive industry proposals other than those falling under the Mining Act are normally subject to approval by local government but may be determined to be environmentally significant and required to undergo environmental impact assessment under Part IV of the *Environmental Protection (EP) Act*.¹⁰ Exploration or mining proponents must obtain mining environmental approvals from Western Australian and Australian government agencies. The current approval pathways are outlined below.

EXPLORATION OR PROSPECTING

Stages for obtaining an approval for exploration or prospecting on tenure granted under the *Mining Act 1978* are¹¹:

1. Tenement in place
 - If tenement intersects private land, access consent must be granted ('surface rights').
 - If area overlaps an Aboriginal heritage site DPLH must be consulted.
2. Lodge a Programme of Work application (DMIRS target to complete 80% within 15 days).
3. Assessment process
 - Officer may make referrals and requests for advice to other agencies.
 - If clearing involved, additional assessment under Part IV of EP Act 1986. DMIRS and DWER are committed to parallel processing of environmental applications where multiple approvals are required.
4. Decision
5. Rehabilitate land within six months of completing the ground disturbance activities, or after an approved extension.

MINING

Mining approvals are granted in accordance with various legislation, by multiple agencies:

- 1 *Aboriginal Heritage Act 1972* - An Act to make provision for the preservation on behalf of the community of places and objects customarily used by or traditional to the original inhabitants of Australia or their descendants, or associated therewith, and for other purposes incidental thereto.
- 2 Programme of Work (PoW) - Must be lodged by an explorer or prospector who intends to undertake ground disturbing activities with mechanised equipment on a mining tenement (*Mining Act 1978*).

- 3 *Environmental Protection Act 1986* - An Act to provide for an Environmental Protection Authority, for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.
- 4 *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) - An Act relating to the protection of the environment and the conservation of biodiversity, and for related purposes.
- 5 *Mining Act 1978* - An Act to consolidate and amend the law relating to mining and for incidental and other purposes.
- 6 *Rights in Water and Irrigation Act 1914* - An Act relating to rights in water resources, to make provision for the regulation, management, use and protection of water resources, and for related purposes.
- 7 *Biodiversity Conservation Act 2016* - An Act to provide for the conservation and protection of biodiversity and biodiversity components in WA and the ecologically sustainable use of biodiversity components in WA.

An example approval journey is¹²:

1. Project preparation
 - Project design - Concept design, desktop research, project constraints, risk assessment, feasibility study, detailed design.
 - Environmental / heritage studies - Consult early with agencies to confirm key issues and application process, review relevant legislation, engage consultants (if required), scope environmental application, baseline studies including heritage, undertake targeted surveys, consider need for a cumulative impact assessment.
 - Stakeholder engagement - Map stakeholders, develop stakeholder engagement plan, engage with stakeholders including Traditional Owners and community groups, engage with agencies pre-submission.
 - Document preparation
2. Lodgement – may include multiple approval processes (see legislation above):
 - Mining proposal
 - Native vegetation clearing
 - EPA referral and assessment- If EPA is assessing, other applications will be parallel processed where possible. Other agencies must withhold their final decision until the Ministerial Statement has been issued or the EPA decides not to assess the proposal. EPA may seek comments from public and other agencies. Proponent may have to respond and make changes to proposal.
 - Emissions and Discharges
 - Water
 - Aboriginal Heritage
 - Threatened Species and Ecological Communities
 - Commonwealth
3. Assessment – depends on approval type above.
4. Decision (plus option to appeal).
5. Comply with applicable conditions.

MINING WARDEN'S COURT

The Warden's Court is constituted under the *Mining Act 1978 (WA)* and has jurisdiction to hear and determine actions, suits and other proceedings recognised by any court of civil jurisdiction as set out in Sec 132 of the Act.¹³ Anyone can object to an application for an exploration licence, under Sec 59(4) of the Mining Act, however the warden is not obliged to 'hear' an objector, and when making a recommendation, is confined to the policies and principles of the Mining Act. While the warden can make a recommendation, the Minister is the final decisionmaker and is not bound by the warden's recommendation.

A Rio Tinto proposal attracted 1,500 separate objections to the ten tenements in the Wardens Court in July 2022.¹⁴ SWALSC also lodged an objection in the Mining Warden's Court.¹⁵ In 2022, the WA Government introduced a second Warden to meet the increasing number of contested mineral title applications hearings. They attributed this to a 12 per cent increase in mineral title applications each year since 2019.¹⁶

REVIEW OF COMPLIANCE - WA

A 2022 performance review of Compliance with Mining Environmental Conditions by the Auditor-General concluded DMIRS and DWER are not fully effective in ensuring mining projects comply with conditions to limit environmental harm and financial risks to the State. The found their monitoring and enforcement currently provide a narrow view of operator compliance and do little to deter operators from breaching conditions. It made six recommendations, with all being accepted by both departments. It recommended DMIRS and DWER should¹⁷:

1. Fully document the risk-based approach that underpins their compliance activities to address sector risks, including how they select sites for their compliance programs and complete risk assessments when changing the activities or sites in the program.
2. Improve their compliance assessment processes to ensure appropriate, risk based verification of operator self-reported information through independent sources such as publicly available technology (e.g. ground monitoring and aerial imagery) and regional partners (e.g. Traditional Owners and/or regional staff from other State and local government entities).
3. Improve internal and inter-entity use of compliance and enforcement information to promote efficient access and informed regulation, for instance by collaborating on reporting requirements, resources and training and incorporating information-sharing mechanisms when developing digital platforms.
4. Strengthen their enforcement approaches to ensure effective action by including minimum indicative thresholds for action and guidance on how to resolve ineffective, unenforceable or unmonitorable conditions.
5. Consider publicly releasing information on operator compliance and non-compliance to promote transparency and encourage compliance, and document this consideration.
6. Prioritise plans to restore their compliance activities as part of delivering a balanced regulatory approach.

It did not assess environmental compliance with State Agreements.

2.1.3 State Agreement Acts

State Agreements detail the rights, obligations, terms and conditions for the development of a specific project. The Department of Jobs, Tourism, Science and Innovation (JTSI) administer five Statutes and 64 State Agreements on behalf of the WA Government and also negotiate new agreements, variations, terminations and repeals of State Agreement Acts.¹⁸

In 2019-20 there were State Agreements in place covering alumina, charcoal, coal, copper, diamonds, energy, forest products, gas, gold, iron ore and steel and more. Alumina State Agreements (current and terminated) are:

- *Alumina Refinery Agreement Act 1961*
- *Alumina Refinery (Pinjarra) Agreement Act 1969*
- *Alumina Refinery (Mitchell Plateau) Agreement Act 1971* [terminated]
- *Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978*
- *Alumina Refinery (Worsley) Agreement Act 1973*¹⁹

Alcoa's mineral lease in the northern jarrah forest pre-dates the *Mining Act 1978*, most of the conservation reserves in the Peel region²², as well as the South West Native Title Settlement which recognised the Noongar people as the Traditional Owners of the south west region of Western Australia.²⁰ Mining Lease 1SA (ML1SA) also covers 18 Public Drinking Water Source Areas (PDWSA) and their Reservoir Protection Zones (RPZ).²¹

South32 (Worsley) mines bauxite in the northern jarrah forest from a mineral lease adjoining Alcoa's. Its operations commenced in 1974. Land tenure within the leases is mostly state-owned forest, with the rest freehold private properties.²²

State Agreements can be varied, terminated and repealed. For example:

- The Alcoa lease initially covered 1.26 million hectares, including forested areas of the Darling Range and a significant area of private land on the coastal plain for refinery and transport. In 1994, the Alcoa area was reduced to 712,900 hectares when the lease was amended to cover only the bauxite resource.²²
- South32 convey bauxite by an overland conveyor to Collie. When their conveyor was unable to fully comply with current or draft noise regulations and impacted residences, their Act was amended to allow the conveyor to operate continuously and allow non-noise aspects of any conveyor extension to be assessed under the *Environmental Protection Act*.²³
- In 2003, WA's pre-1972 State Agreements with Alcoa, BHP Billiton and Rio Tinto were amended to make them subject to the *Environmental Protection Act* (some early State Agreement Acts did not include an environmental clause because the State's first environmental protection legislation did not come into effect until 1972).²⁴
- In 2021, the *Poseidon Nickel Agreement Act 1971* was terminated, with continuation of the mining lease under the *Mining Act 1978*.²⁵

Parliamentary sovereignty means a parliament can change or repeal any previous legislation (within its constitutional power) and there is general legislative power to amend or repeal previous statutes.²⁶

Alcoa's operations in ML1SA are overseen by the Mining and Management Program Liaison Group (MMPLG), chaired by JTSI (on behalf of the Minister for State Development) and including representatives from:

- Department of Mines, Industry Regulation and Safety, (DMIRS)
- Department of Biodiversity Conservation and Attractions, (DBCA),
- Water Corporation; and
- Department of Water and Environmental Regulation, (DWER).²¹

The MMPLG:

- Oversee all activities associated with Alcoa's mining, infrastructure and associated activities occurring within ML1SA.
- Provide advice to the Minister for State Development, Jobs and Trade on environmental and social acceptability of the Mining and Management Programs (MMP's).
- Authorise clearing for mining in line with MMP s approved by the Minister.
- Oversee ongoing development and approval of rehabilitation completion criteria.

The Mining Operations Group (MOG) is a principle sub-committee of the MMPLG. Its role is to oversee and report to the MMPLG on the environmental (including forest clearing) and community issues arising from day-to-day operational activities at Alcoa mine sites.²¹

Original State Agreements and subsequent parliamentary variations are publicly available from the Western Australian Legislation website maintained by the Parliamentary Counsel's Office within the Department of Justice.²⁷

In 2021 and 2022, proposed mining expansion in the Peel region prompted several Parliamentary Questions. As a result, the following information is available:

- The WA Government advised that documents outlining agreed working arrangements between Alcoa and State Government Departments and Trading Enterprises (referred to in the Alcoa application EPA assessment 2253), could not be tabled in Parliament as both parties would need to agree to the release of commercial agreement documents.²⁸
- Available information suggests that Alcoa and South32 are not required to pay the unit/hectare rates detailed in the Mining Rehabilitation Fund Reporting Guidelines (September 2021) on mining leases granted pursuant to State Agreements.^{27,29}
- In response to questions in Parliament in relation to Alcoa's recent application (EPA assessment 2253) about how much jarrah forest will be cleared to produce 2.5 million tonnes of bauxite³⁰, JTSI advised that bauxite for export is part of Alcoa's overall clearing activity for its bauxite mining operations and is not reported separately.³¹
- Economic costs in loss of habitat, social surroundings and biodiversity of areas to be cleared for mining expansion was also queried³⁰ and JTSI advised this information is not available.³¹
- On questions about the estimated revenue per annum that the state would earn from royalties associated with 2.5 million tonnes of bauxite³⁰, JTSI advised the WA Government does not release individual company royalty payments as these are dealt with in confidence.³¹

EFFECTIVENESS

A legal analysis to identify the effectiveness of the State Agreement mechanism found that the government will seek a State Agreement where it perceives that the general mining legislation is 'incapable of implementing government policy for a specific project'. It commented that in most circumstances their use will be lengthy and expensive, and therefore inefficient, and a significant element of their value is based on their ability to operate outside the general legislation. Therefore, it found in the long run that improving the existing legislative framework may be more efficient and effective and that an efficient system would not require exceptions.³²

The transparency and lack of engagement in State Agreement Acts operating in the Peel region are a key concern of Peel Alliance. They are viewed as largely out-of-date and there is inconsistency with Agreements operating in other parts of WA.³³ For example, the Iron Ore (FMG Chichester Pty Ltd) Agreement Act 2006 includes:

- Community development plan (Sect 7)
- Consultation with the relevant local government/s
- Based on consultation, development of a plan describing the Company's proposed strategies for achieving community and social benefits in connection with developments proposed.
- A process for regular consultation.

Conditions on reporting on local content in more modern State Agreement Acts has been attributed to findings of the WA Auditor General outlining concerns about inadequate monitoring of Agreements.

BAUXITE MINING

Bauxite is a rock composed mainly of aluminium-bearing minerals.³⁴ Aluminium is the most abundant metal in the Earth's crust, with Australia the largest producer of bauxite.³⁵ Bauxite mining in Western Australia typically consists of the following phases:²²

- 1 Exploration
 - Vegetation and dieback mapping
 - Heritage and fauna surveys
 - Exploration drilling (120 m or 60 m grid)
- 2 Forest Clearing
 - Salvage of marketable timber by the Forest Products Commission
 - Clearing of forest
 - Utilisation of wood waste and burning of remaining timber
- 3 Development
 - Removal of topsoil and overburden to stockpiles or directly into rehabilitation
 - Ripping or drilling and blasting of caprock
- 4 Mining
 - Loading and trucking of ore to the crusher
 - Crushing and conveying of ore to the refinery
- 5 Rehabilitation
 - Rehabilitation of mined areas and roads to Completion criteria standards

- Ongoing management of rehabilitated areas
- 6 Relinquishment of mined regions to the state

2.1.4 Engagement

FRAMEWORKS AND GUIDANCE

In response to conflict arising from land access and land uses (in the national setting), in June 2011 the then Standing Council on Energy and Resources commissioned development of a new framework. The aim was for a nationally consistent approach to land use development and planning across all jurisdictions, to “retain current and future land use options to maximise the net benefits for present and future generations”.³⁶ It was recognised that the development of many Australian industry sectors relies on access to land and should meet the needs of multiple stakeholders - economic, environmental, heritage, societal and cultural values.

In 2016 the Commonwealth Government released guidance for mining companies called ‘Leading Practice Sustainable Development Program for the Mining Industry’. It states that mining companies already contribute to the regions in which they operate, through tax and royalty streams, direct employment, fostering business opportunities, and by donations and sponsorships. However, it offers principles for community engagement including to start consultation early and valuing informal engagement and local knowledge.

The document steps out suggested community engagement and development activities for each stage of the project lifecycle, which includes the use of community relations officers, establishing a dialogue and channels for addressing community questions and concerns, managing expectations, carrying out desktop studies of communities and demographics, and ascertaining local development priorities from community leaders and local government.³⁷

It acknowledges that generally only large development projects in Australia are required to conduct a social impact assessment (SIA) as a small part of the environmental approvals process. However, leading companies in the industry are voluntarily undertaking the equivalent of SIAs at existing operations to develop a better understanding of local communities and manage significant events. They also address the issue of cumulative impacts, suggesting that where there are multiple mines in a region, there may be benefits in companies taking a more collaborative approach to engagement, before being compelled to do so.

The profession of community engagement has evolved rapidly in the past decade, and all levels of government now commonly have public participation or community and stakeholder engagement policies, specialist staff and practices.

The toolkit above urges mining companies to enter into genuine ‘partnership’ arrangements with other regional stakeholders, moving beyond “outdated notions of competitive advantage in community development”. They also identified that a ‘head office’ approach to sustainability reporting, which constrains community engagement as a perceived risk, can be to the detriment of local on the ground relationships, and can lead to accusations of ‘greenwashing’.

The COAG Energy Council handbook for industry covering the benefits of community engagement describes some measures of Social Licence to Operate (SLO) as being community sentiment on how credible, reliable and accepted the organisation and their operation is. The handbook recommends these principles to establish and maintain community acceptance:

- Early engagement.
- Establishing relationships based on mutual respect.
- Open and ongoing communication.
- Inclusion of all stakeholders.
- Honesty, plain disclosure of information and transparency.
- Sensitivity to local cultural norms.
- Establish and maintain realistic expectations.
- Fair and transparent conflict resolution mechanisms.
- Consistent and predictable behaviour.
- Flexible to accommodate the needs of the community.

Under the Local Government Act 1995 local governments are to use their “best endeavours to meet the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity. [Section 1.3 amended: No. 49 of 2004 s. 15.]

In December 2022, satisfaction of Peel Alliance members with how they are currently engaged on mining expansion and explorations ranged from very poor (1) to good (4), with the mean response neutral (2.5). See Figure 1.

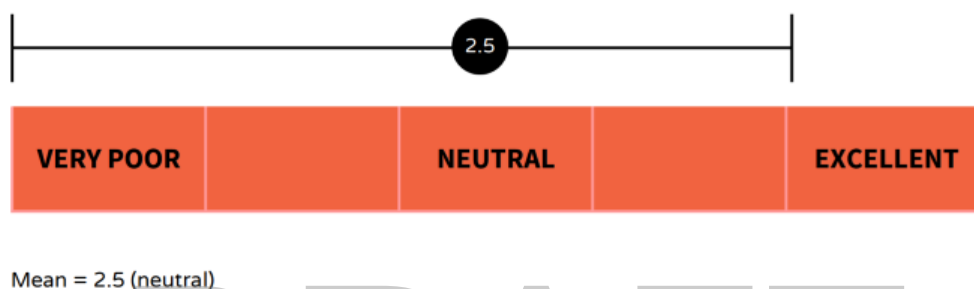


Figure 1: Responses from Peel Alliance members, December 2022

When asked how they feel about the current situation, members consistently reported feeling frustrated and concerned about the situation.

Peel Alliance (as an organisation) does not have a legislated role in the current processes listed in 2.1.2 or 2.1.3. Member organisations of Peel Alliance also currently have no formal role in those processes, but often choose to respond to proposals. For example:

- The Shire of Murray has lodged objections on proposed Exploration Licences.
- In 2021, the Shire of Serpentine-Jarrahdale Council resolved to take an active position responding to the environmental impact assessment (EIA) process in relation to future mining within the State Forest surrounds east and southeast of Jarrahdale.

- Other members such as the Peel Harvey Catchment Council also choose to participate via submissions and do so at their own time and cost.

These opportunities are currently only possible if proposals are referred for assessment and publicly advertised. Even then, the Shire of Waroona was unable to object to an exploration application within their LGA as the Minister has the right to disallow objections.

Involvement with mining companies may happen for Peel Alliance members in the mine operational stage, such as being an intermediary between community concern and monitoring requirements. Other potential involvement may be through community funding programs.

Alcoa's development of mine plans is described a complex and lengthy process, involving extensive inventory assessments of ore and environmental parameters, mining and logistics planning, and consultation with neighbours and local municipal government.²²

Some reasons why members of Peel Alliance have cited in individual submissions that the current processes for approvals and engagement is not effective are:

TRANSPARENCY OF INFORMATION

- The quality and quantity of environmental and social investigation work submitted by the Proponent is inadequate.
- Need greater transparency of State Agreements and Ministerial Statements (make them publicly available and available for public review).
- No publicly available centralised record of applications for the development of new, and expansion of existing, mining operations.

INADEQUATE LEGISLATION OR ASSESSMENT

- WA Environmental Protection Agency (EPA) have not undertaken a regional cumulative impact assessment.
- Need a strategic assessment of the potential cumulative impacts of past, current and proposed activities and developments (including but not limited to bauxite mining, logging and prescribed burning) on the Northern Jarrah Forest.
- An independent review of the EPBC Act (Commonwealth) in October 2020 found it lacks comprehensive plans to manage cumulative impacts, key threats and to set priorities.
- Current legislation needs stronger measures to conserve and protect northern jarrah forest (e.g. nomination of old growth forest and vegetation complexes within the NJF as a Threatened Ecological Community under the EPBC Act; no further clearing).
- Current legislation does not trigger Commonwealth assessment at small scale, but the combined impact is thousands of hectares. There is a desire for referral to Commonwealth

Minister for the Environment which would require amendment to the Environmental Protection and Biodiversity Conservation (EPBC) Act.

Requests by other stakeholders have been for the WA government to create and maintain an up to date, publicly accessible central record of native vegetation and biodiversity data that shows and tracks its extent and condition across the State, including showing and tracking the proportion cleared in each bioregion by each sector.³⁸

2.2 Projected Situation

PEEL REGION

Input from Peel Alliance members on how they are engaged about mining activities in their region was sought prior to a planning workshop to gain insights into aspirations across the organisations and help target efforts. Five of the eight organisations participated. There was consistency across responses, with the top 5 aspirations shown in figure 2 below. This was confirmed at the in-person workshop in December 2022.

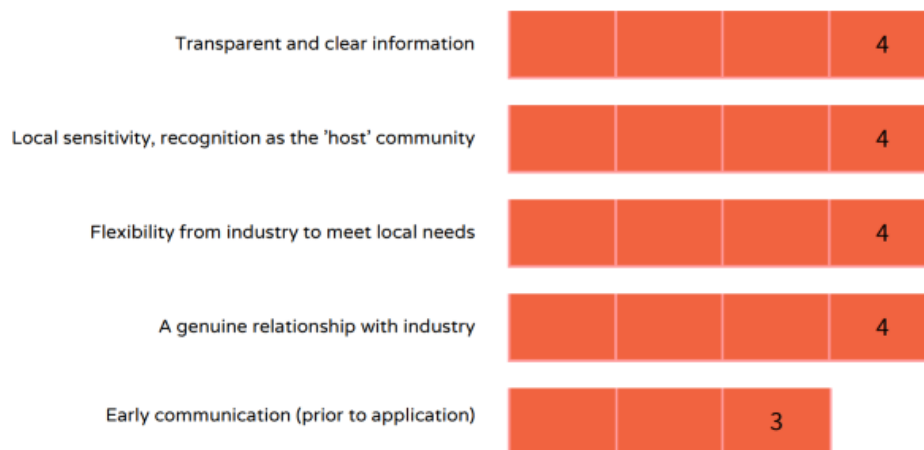


Figure 2: Peel Alliance top aspirations for engagement on local mining activities

Of the top five aspirations chosen, each corresponds to a recommendation in the COAG Energy Council Community Engagement Handbook, as shown below.

PEEL ALLIANCE ASPIRATION	COAG ENERGY COUNCIL COMMUNITY ENGAGEMENT KEY PRINCIPLES ³⁶
Transparent and clear information (4/6)	Honesty, plain disclosure of information and transparency
Local sensitivity and recognition as the 'host' community (4/6)	Sensitivity to local cultural norms
Flexibility from industry to meet local needs (4/6)	Flexible to accommodate the needs of the community

A genuine relationship with industry (4/6)	Establishing relationships based on mutual respect
Early communication - prior to application (3/6)	Early engagement

A review of WA State Agreement Acts amendments and creations over the past ten years projected that they are likely to remain a key part of the resources sector landscape for years to come, but with a likely increase in local content requirements.³⁹

BROADER PICTURE

EY report that environmental, social and governance (ESG) topics remain the number one challenge for mining and metals in 2023, a topic that is broadening in scope and complexity. They warn that mining companies need to consider different issues and broaden their capabilities to manage this effectively and avoid accusations of ‘greenwashing’. Biodiversity and water stewardship are reported as urgent issues to address, amid a changing climate and growing stakeholder expectations.⁴⁰

A two-year Australian research project into the governance challenges posed by large scale resource development in mining intensive regions of Australia (including WA) found a widespread perception among research participants that state governments are failing to provide adequate resources to assist local governments in meeting the challenges created by rapid expansion in the resources sector.

The main challenges faced specifically by local governments were found to be:

- Changing expectations of their role, in particular the expectation that they would provide a greater range of services to expanding populations.
- A narrow revenue base and difficulties in attracting and retaining staff.
- Legislative barriers that prevent them taking a more active role in planning for major resource projects.

Challenges facing state governments in meeting community expectations were found to be:

- Responding flexibly and in a timely manner to development applications.
- Ensuring equitable and prudent investment of royalties so that there is a positive legacy from the current mining boom.
- Balancing a ‘top down’ regulatory approach with more participatory forms of governance.
- Coordinating and integrating complex regulatory processes more effectively

The project mentioned made 13 recommendations for mining areas, themed under planning and regulation, council capacity and collaborative approaches, which may be of interest in policy development. They are⁴¹:

PLANNING AND REGULATION

- Local council authorities are engaged much earlier in information sharing and decision-making processes by state governments and mining companies when new projects or major expansions are in the pipeline.

- State governments provide additional resources to councils to enable them to prepare their responses to EISs and SIAs in a timely manner.
- State governments give consideration to strategic regional assessments, rather than having resource companies develop environmental and social impact statements on a project-by-project basis.
- State governments collect baseline data to build a common knowledge base that is accessible to all stakeholders. A comprehensive baseline study, funded by project proponents and executed by local and state government in a given region could become a resource to aid future planning. The formula for contributions would need to be negotiated with all parties.
- State governments collect data on non-resident workforces. Other state governments may wish to consider the approach currently adopted by the Office of Economic and Statistical Research (OESR) in Queensland.

COUNCIL CAPACITY

- Mining companies work with local councils to develop housing and accommodation policies that ensure availability of affordable housing and accommodation for council and other essential services employees.
- Companies support apprenticeships attached to local councils.
- Companies provide funding to support particular roles within council.

COLLABORATIVE APPROACHES

- Mining companies, local councils and state government collaborate more at the regional level.
- State governments take responsibility for identifying lead agencies to manage collaboration at the regional level.
- Councils in mining-intensive regions may wish to consider the NSW Mining Related Councils model as one means of working together collaboratively to share information and leverage advantages. An alternative model is the Local Leadership Group in each Queensland resource region.
- Mining companies reassess their social spend and community engagement priorities and align them with Council community (development) and social infrastructure plans.
- Mining companies collaborate with each other and pool their social spend to support larger scale social programs that contribute to a lasting legacy for mining communities. This need not preclude 'branding' opportunities.

Through this research, mining companies expressed views such as:

- Local governments' connection with their local community was viewed as advantageous and mining companies use Council as the 'eyes and ears in the town', providing information and advice on community sentiment and concerns.
- Local government was seen as the appropriate vehicle for lobbying state and Federal governments on behalf of the region, but through entities such as regional mayors' groups and ROCs.

- Among some mining companies, there was a feeling that councils should do more to represent business interests, rather than simply those of the community, and that local government could be more active in advocating on behalf of the regions' economic interests (i.e. promoting the benefits of mining).
- Mining companies acknowledged the resourcing and capacity problems faced by local councils but felt that it was the role of the state government to address shortfalls.
- Contestation over who should be responsible for infrastructure and services provision was prevalent in remote parts of WA where government provided services are lacking, and in regions with company towns where mining companies once accepted responsibility for service and infrastructure provision.

Both mining companies and local councils spoke of the potential for local government to adopt a strategic community leadership and coordination role, particularly in mining governance. Councils already playing this role were viewed by mining companies as being 'proactive'.

This coordination was two-fold:

- Coordinate state government departments at the local level (something that, in the opinion of both mine and council interviewees was severely lacking).
- Bring together the range of different stakeholders, including other local governments, to coordinate activities and to have a stronger voice lobbying Federal and state government.

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3 ECONOMY

3.1 Current Situation

This section covers economic development, industry and regional output. Employment and income are covered under Section 4: People.

ECONOMIC DEVELOPMENT

The overall vision for regional development in Western Australia is: “a diversified State economy that is independent of non-renewable resource extraction”.⁴²

The Peel Development Commission organises its goals and objectives under six themes:

1. Thriving industries
2. Agriculture and food innovation
3. Tourism excellence
4. Capable people
5. Strong and resilient communities
6. Organisational excellence.

ECONOMIC OUTPUT

The Peel region has an output of \$8.9 billion gross regional product and a regional economic output estimated at \$23.32 billion, representing 3.4% of output generated in Western Australia. Of the Peel region’s \$23.32 billion output, it is generated across the region as below:

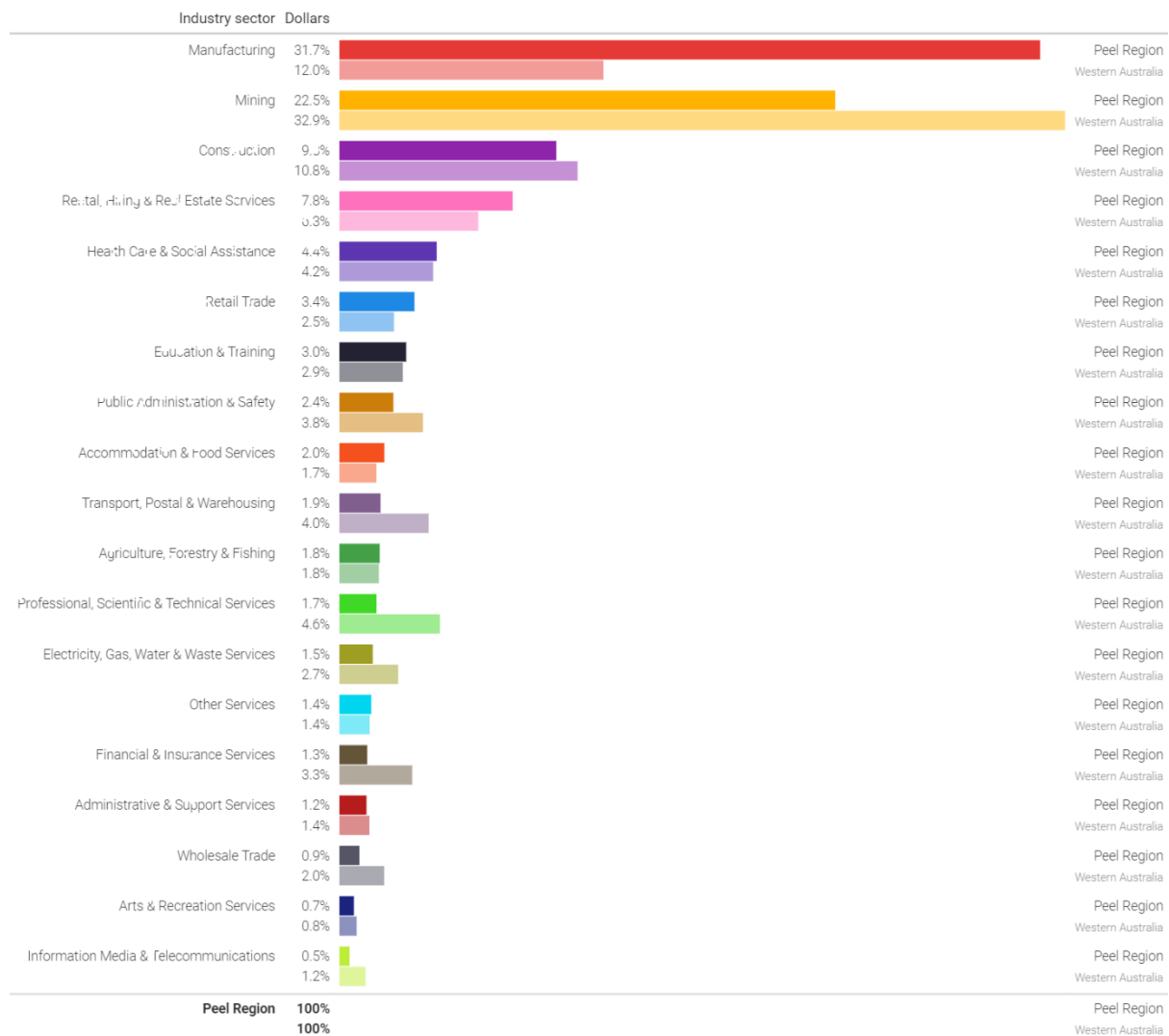
- \$7.47 billion is generated in Mandurah (32%)
- \$6.50 billion is generated in Murray (27.9%)
- \$3.90 billion is generated in Boddington (16.7%)
- \$3.01 billion is generated in Waroona (12.9%)
- \$2.42 billion is generated in Serpentine-Jarrahdale (10.4%)

According to REMPLAN, the top three industries in the Peel region by output are:

1. Manufacturing, \$7.40 billion, 31.7% of output
2. Mining, \$5.23 billion, 22.5% of output
3. Construction, \$2.29 billion, 9.8% output

Peel Region

Output



Benchmarks: Western Australia | Industry sectors: All Selected

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Figure 3: Industry output in Peel region, compared to WA

MANUFACTURING SECTOR

The largest contributor to annual economic output in Peel Region is Manufacturing, at \$7.4 billion or 31.7 percent of total output. This is over double the proportion of WA output from Manufacturing.

MINING SECTOR

Council of Australian Governments (COAG) state that “Mining is a significant primary industry and contributor to the Australian economy”.³⁶ Mining is the Peel region’s second largest output generating sector, with an estimated annual output of \$5.23 billion. It is also the region’s second

highest industry for wages and salaries, behind health care and social services, paying \$550.69 million per year in wages and salaries.

Alcoa Australia have been operating in the south-west of WA since 1963 and produce approximately 45% of Australia's alumina, the feedstock for aluminium.⁴³

Increasing world demand for minerals, driven by the growth and development of emerging economies, has induced a substantial increase in the size of the Australian mining industry. Modelling undertaken by the Centre for International Economics (CIE) for the Minerals Council of Australia estimates that in the absence of an expanded mining industry Australia's real GDP would have been 10 per cent lower during the height of the Global Financial Crisis (2008) and average annual real wage growth between 1998 and 2009 would have been negative (-0.58% instead of 0.53%).

CIE also estimates Australia's real GDP would have been 13 per cent lower during the first year of the COVID-19 pandemic (2020) and average annual real wage growth between 1998 and 2020 would have been even slower (0.47% instead of 0.74%).

1 Benefits from the expansion of mining

Scenario	Real GDP per person \$		Real consumption per household \$		Real wage growth (average annual %)	
	2008	2020	2008	2020	1998 to 2009	1998 to 2020
With more mining	69 789	75 771	102 459	105 976	0.53	0.74
Without more mining	62 256	66 036	90 237	91 170	-0.58	0.47
Difference	7 533	9 735	12 222	14 806	1.11	0.27

Source: CIE simulation estimates

Figure 4: CIE simulation estimates, benefits from mining

The wider mining industry is also a major purchaser of construction services, financial services and technical and scientific services.⁴⁴

TOURISM

Tourism can be an amalgam of several industries such as retail, accommodation, cafes & restaurants, cultural & recreational services. A combined measure of tourism found that In Peel Region, tourism supports an estimated 1,614 jobs (3.6% of total employment).

Of the total jobs supported by tourism in the Peel Region:

- 28 jobs are in Boddington (1.2%)
- 1,614 jobs are in Mandurah (3.6%)
- 190 jobs are in Murray (2.8%)
- 165 jobs are in Serpentine-Jarrahdale (3%)
- 44 jobs are in Waroona (1.6%)¹

By comparison:

- In WA, 3.6% of jobs are supported by tourism
- In Australia, 4% of jobs are supported by tourism

There were over 2.24 million day trip visitors to the Peel region in 2021-2022 (down from 3.1 million 2019) and 697,000 overnight domestic visitors.⁴⁵ The average annual spend since 2018 has been \$240 million per annum.⁴⁶

Trail development has been a key focus area in the region. Dwelling up is well established as a Trail Town and has won significant state tourism awards in recent years^{47,48} in recognition of the investment in ecotourism and visitor experiences and been a finalist at the national level.⁴⁹ There has also been ongoing consultation with the community and key stakeholders in relation to the creation of Jarrahdale as a Trail Town.

The Peel Trails Strategy highlights that the region is ideally situated to prosper in the growth and economic benefits of trails, particularly given its close proximity to Perth.⁵⁰ The Strategy was developed in consultation with key organisations, user groups and a public survey with 753 responses.

Peel Alliance members have focused and invested in the development of sustainable nature-based trails and activities which promote the protection and enjoyment of forests in the Peel region. In the last three years over \$18 million has been invested or committed by the State and Federal Governments to these initiatives.⁵¹

ECOSYSTEM SERVICES

Globally, ecosystem services are worth an estimated USD 125-140 trillion (AUD 182 to 203 trillion) per year, more than one and a half times the size of global GDP. Between 1997 and 2011, it is estimated the world lost USD 4-20 trillion (AUD 5.83 – 29 trillion) per year in ecosystem services owing to land-cover change and USD 6-11 trillion (AUD 8.74 to 16 trillion) per year from land degradation.

Valuing of biodiversity impacts by businesses and financial organisations remains limited⁵² and erosion of natural capital usually goes unrecorded in official economic statistics because Gross Domestic Product (GDP) does not record depreciation of capital assets.⁵³

The overall global trend for the capacity of nature to sustain good quality of life has been downwards since 1970. Eighteen areas are identified where nature contributes to people, with ten related to regulation of environmental processes, as shown in figure 5.

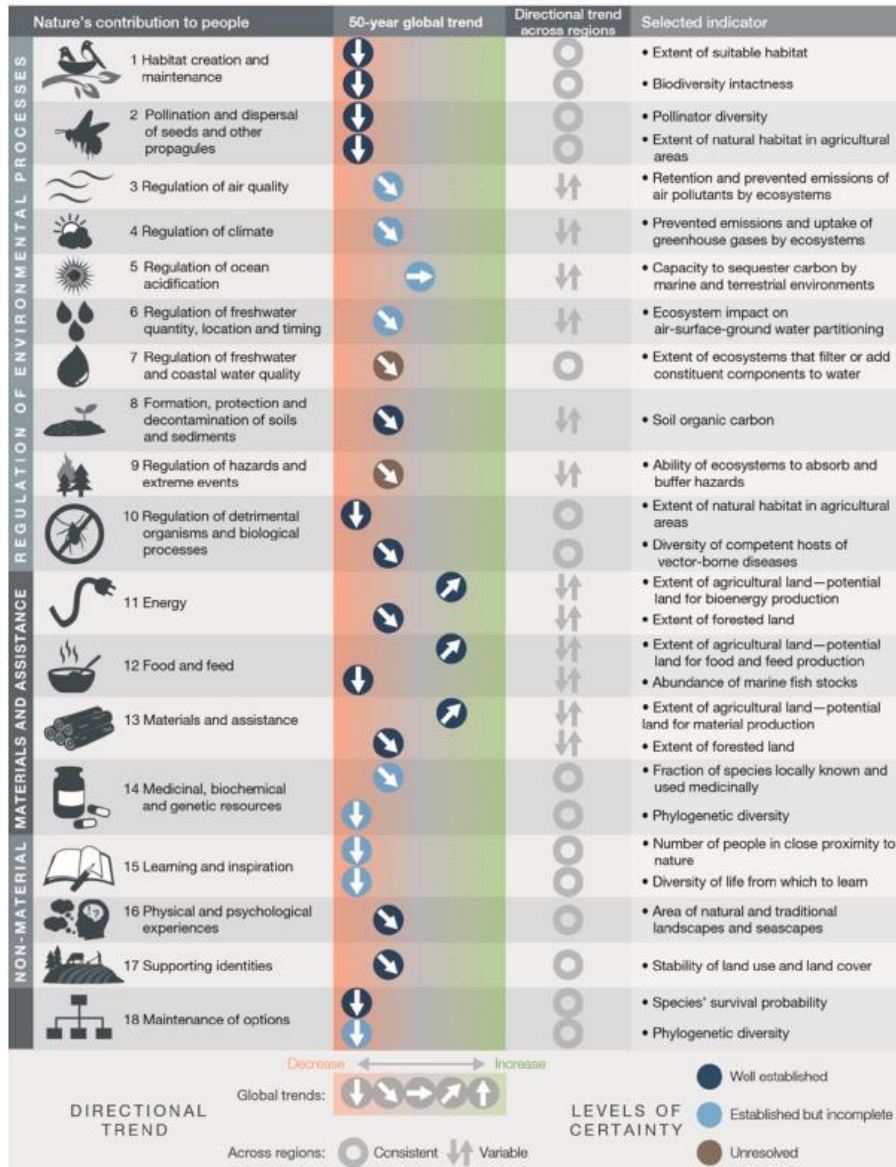


Figure 5: Global Trends in the Capacity of Nature to Sustain Contributions to Good Quality (IPBES) ⁵⁴

3.2 Projected Situation

Local governments are generally supportive of projects which benefit their local economies, however as the Shire of Boddington stated in their submission on the South32 Worsley Alumina Proposed Mine Expansion, “this is contingent on these projects ensuring that their environmental and social impacts are fully identified and minimised”.

Several projects are currently being developed in the Peel region, with an emphasis on agriculture and the environment. Transform Peel is an integrated project encompassing water, energy and waste management solutions through three strategic initiatives: Peel Business Park, including the WA Food Innovation Precinct, the Peel Agri Food Study and the Peel Integrated Water Initiative. ⁵⁵

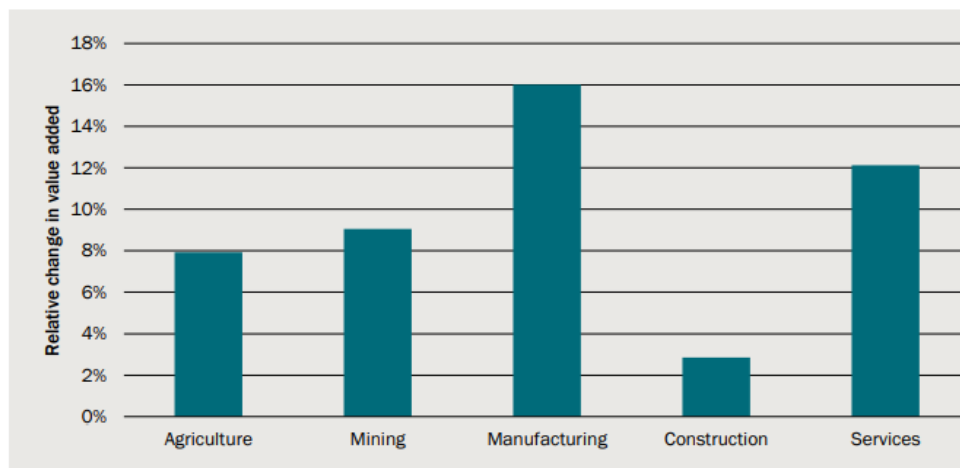
PRODUCTIVITY

The Centre for International Economics (CIE) cite the need to balance demand for resources, with the need to establish a long-term microeconomic or structural framework to ensure continued and improved growth in productivity.

Using economic modelling, CIE estimate that a 1 per cent a year labour productivity improvement would lead to economic benefits very similar in magnitude to the mining expansion, by 2030. They state this could be achieved through a relatively modest reform agenda, however greater reforms would lead to greater benefits. This is shown in figure 6.

Manufacturing (Peel’s largest industry sector) could deliver the highest value add through productivity gains, followed by the labour-intensive Services sector.

3.5 Percentage change in value added by sector in 2030, higher labour productivity relative to BAU



Data source: CIE estimates

Figure 6: Value add by sector in 2030 with higher labour productivity

MINING SECTOR

In the Shire of Murray, Dwellingup was modelled under three future scenarios. Under all scenarios, mining at Holyoake had the potential to continue to make significant contributions to the regional and local economy.

TOURISM SECTOR

As part of Dwellingup Futures, the community engagement process asked: “What excites you most about the future?”, with the top responses natural, sustainable, environmental protection and eco-tourism, nature-based activities. The Dwellingup Futures report found that for tourism, education and training and scientific services industries to have a comparable economic impact to mining in terms of regional output, they would need to generate 4,400 jobs within the region by 2036.

In Serpentine-Jarrahdale, a business case for Jarrahdale as a Trail Town forecast that the total direct economic impact of investing in the concept would be \$54.44 million and this would support

up to 124 jobs (73 direct and 51 flow on/indirect jobs) over the lifespan of the implementation plan. The additional economic impact because of the development of the visitor economy and increased visitation within Jarrahdale was forecast at \$452.63 million over 10 years. This included \$260.76 million directly and \$191.86 million indirectly through the supply chain and consumption effect. This would support up to 979 jobs over a minimum 10-year period.

ECOSYSTEM SERVICES

The Dasgupta Review demonstrates that to judge whether a path of economic development is sustainable, nations need to adopt a system of economic accounts that records an inclusive measure of wealth – including nature as an asset. Natural capital accounting is a step towards the creation of inclusive wealth.

Frameworks for natural capital accounting are being developed, mainly through the UN System of Environmental and Economic Accounts. This field of work also considers the concept of global public goods and how to consider them when they are located within national boundaries.

Suggestions from the OECD for policy-makers involved in ecosystem services include:

- Require business and financial organisations to publish long-term plans factoring in the assessment and management of biodiversity.
- Mainstream the reporting requirement for quantitative biodiversity assessments, impact assessments and risk-management tools.
- Set policies promoting improved due diligence for responsible business conduct, drawing on OECD Due Diligence Guidance for Responsible Business Conduct.
- Raise awareness among financial regulators of the systemic implications of biodiversity factors, which do not only have local impacts.
- Encourage businesses, finance and other stakeholders to make and share commitments and contributions to biodiversity.

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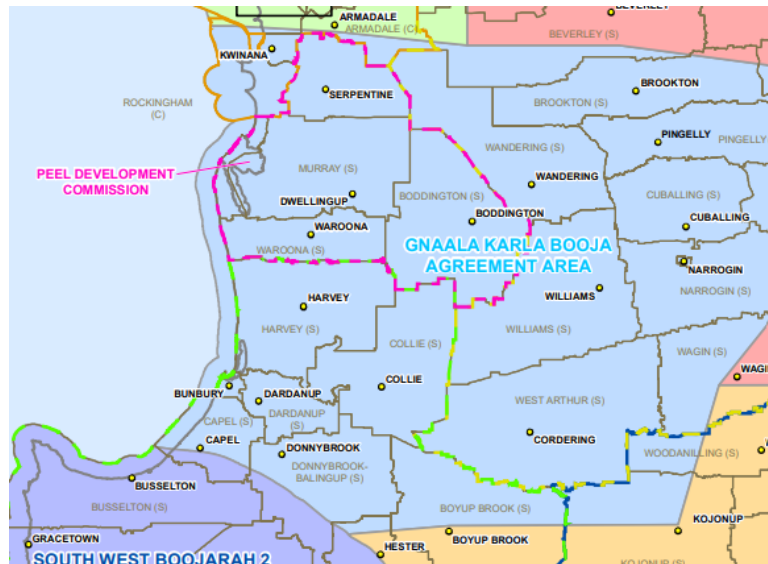
4 PEOPLE

4.1 Current Situation

POPULATION AND WELLBEING

The Peel region supports a population of 151,517 people, and until recently, Mandurah was one of Australia's fastest growing local government areas.

The Peel region is part of the wider South West Native Title Settlement Area and the Binjareb/Pinjarup and Wilman peoples are recognised as the Traditional Owners of the Gnaala Karla Boodja region. The Gnaala Karla Boodja Indigenous Land Use Agreement covers Peel, as shown in Map 4.⁵⁶

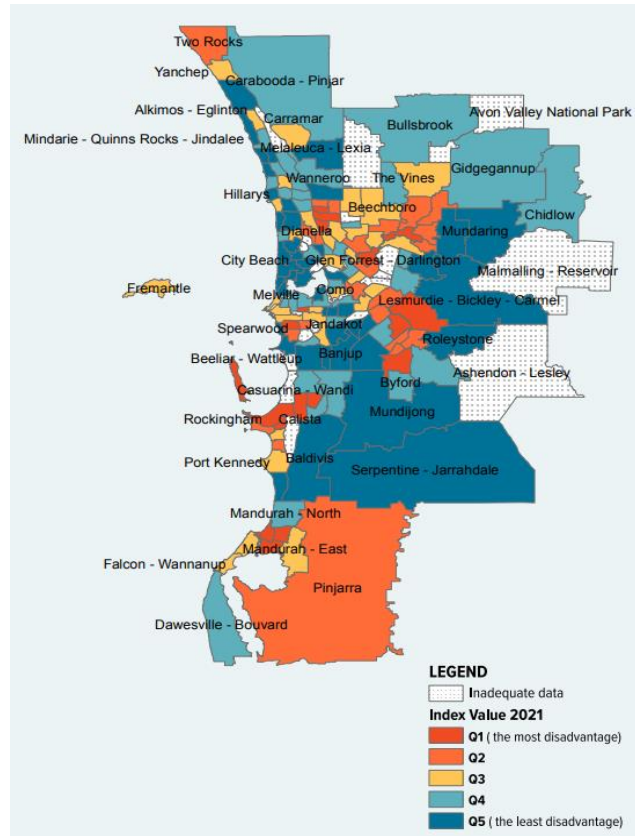


Map 4: Gnaala Karla Boodja ILUA in Peel region

The Northern Jarrah Forest holds significance to Noongar people of the Gnaala Karla Boodja region, who consider it vital for environmental sustainability. The South West Aboriginal Land and Sea Council (SWALSC) consider that large parts of this land have been affected by mining for bauxite and believe that further mining in this area will be detrimental to Noongar cultural heritage, a threat to the environment and efforts to combat climate change. In 2022 SWALSC lodged an objection to a new licence in the northern jarrah forest with the Mining Warden's Court.⁵⁷

A recent study of over 5,000 mining projects found approximately 54% are located on or near Indigenous peoples' lands which have ecological and cultural values.⁵⁸ In Australia, the OECD estimate around 60 percent of mining is happening, or is planned on, land that is subject to native title, yet Traditional Owners often struggle to benefit from economic opportunities and are often only minimally involved in decision making around mine development.

All local government areas except for Serpentine-Jarrahdale have SEIFA scores below the WA average and Mandurah, Murray and Waroona have SEIFA scores below the Peel region average. According to the Dropping off the Edge Report 2021, Greenfields, Mandurah and Mandurah – South SA2 areas are in the worst quartile for disadvantage (1 -most disadvantaged) and Pinjarra was in the second quartile (second most disadvantaged). Mandurah was in the 10 most disadvantaged locations in Western Australia.⁵⁹ Part of the region is shown in Map 5.



Map 5: DOTE Map of Disadvantage, Perth and Peel (2021)

Across 37 indicators, SA2 areas in Peel were ranked in the worst quartile (1) for the indicators below. A large number of poor indicators were focused in economic and education domains.

Domain	Indicator	Areas ranked 1 (highest disadvantage)
Social distress	Low family income <\$650 per week	Greenfields, Mandurah, Mandurah South, Pinjarra
	No internet at home	Mandurah, Mandurah South
Health	Disability support pension	Greenfields, Mandurah, Mandurah South, Pinjarra
	Suicide	Greenfields, Halls Head, Mandurah East
	Needing assistance with core activities	Greenfields, Mandurah, Mandurah South, Pinjarra
Community safety	Juvenile convictions	Mandurah East
	Family violence	Pinjarra
Economic	Unskilled work	Greenfields, Mandurah East, Mandurah South, Pinjarra

Domain	Indicator	Areas ranked 1 (highest disadvantage)
	Long-term unemployment >1 year	Whole region
	People under 24 not in education, training or employment	Dawesville, Greenfields, Mandurah, Mandurah South, Pinjarra
	Housing stress	Greenfields, Mandurah, Mandurah North, Mandurah South
	Receiving rent assistance	Whole region except Dawesville and Mandurah North
	Financial stress	Whole region
Education	Low school attendance	Greenfields, Halls Head, Mandurah, Mandurah South, Pinjarra
	Early school leaving	Greenfields, Mandurah, Mandurah East, Mandurah South, Pinjarra
	No post-school qualification	Greenfields, Pinjarra
	Early childhood development	Halls Head, Mandurah
	Teenage pregnancy	Mandurah, Mandurah North
Lifetime disadvantage	Families with jobless parents	Greenfields, Mandurah, Mandurah South, Pinjarra

Peel Away the Mask is a longitudinal socioeconomic study of the Peel Region published at regular intervals. Peel Away the Mask III (2022) found:

- Mixed improvement in education indicators, except apprenticeship and traineeship commencements.
- Increasing prevalence and complexity of family domestic violence and sexual violence.
- Stable crime rate (reported).
- Number of people living with a disability increasing.
- Physiological and mental health risk factors above WA average.
- Decreasing unemployment.
- Resident perceptions of the availability of local, well paid, good quality jobs mostly negative across all LGAs.
- Median house prices lower than Perth, but rental costs increasing and homelessness increasing in some areas.⁶⁰

The OECD says that increased community well-being is needed to secure social acceptance of mining projects and to maintain regional competitiveness and future prosperity, as inequalities weaken social cohesion, increase economic vulnerability and reduce equality of opportunity in mining regions. The degradation of natural capital limits further future development and negatively impacts health.

They found negative externalities are contained more locally than once thought and often around, or in close proximity to, mining operations. They include:

- Income inequalities between population groups.
- Limited job opportunities for local workforce and skills mismatches.
- Pressures on public services and infrastructure.
- Volatility in housing prices, limited affordability or abandonment.
- Depletion of natural capital (degraded air, land, water), land use conflicts, health impacts.
- Weakened social cohesion and limited civic engagement.

They state that good infrastructure and service delivery is needed to attract and retain workers as well as effective place-based regional development policies to ensure a “just transition” where regions can benefit from transition and manage associated challenges.⁶¹

A two-year research project in mining locations across Australia found common community concerns in relation to economic, social and environmental impacts of mining were:

- Chronic skills shortages.
- A two-speed economy, which resulted in uneven wealth creation.
- Housing availability/ affordability challenges.
- Challenges managing and accommodating a rapidly expanding fly-in fly-out workforce.
- Conflicts between resource developers and other rural residents over land use.
- Conflicts over water quality and supply.

There was also evidence that local residents feel disillusioned about local governments’ perceived failure to represent community interests about mining impacts.

INCOME AND EMPLOYMENT

The Peel region’s rapid population has been driven by lifestyle-based in-migration rather than the supply of local employment. Approximately 29 percent of those living in the region work in the Perth metropolitan area⁶², estimated to be as high as 43.7 percent in the City of Mandurah.⁶³

Of the 44,361 jobs in Peel Region there are⁶⁴:

- 26,019 in Mandurah (58.7%)
- 6,566 in Murray (14.8%)
- 2,574 in Boddington (5.8%)
- 2,431 in Waroona (5.5%)
- 6,771 in Serpentine-Jarrahdale (15.3%)

The largest employing sectors region-wide are:

1. Health Care and Social Assistance, estimated 6,617 jobs (14.9%)
2. Retail Trade, estimated 5,675 jobs (12.8%)
3. Education and Training, estimated 4,806 (10.8%)
4. Construction, estimated 4,397 jobs (9.9%)

Mining is the seventh largest employing sector, accounting for 2,892 (6.5%) direct jobs, but is the second highest paying sector in the Peel Region, paying \$550.69 million in wages and salaries.

CURRENT COMMUNITY PRIORITIES

Some local governments conduct perception surveys to gauge levels of community satisfaction and priorities. Priorities from some recent surveys are shown below, or engagement results from strategic planning where not available. Most community priorities focused around ‘day-to-day’ issues such as safety, streetscapes and amenities or services for specific cohorts.

	Community priorities
City of Mandurah	<ul style="list-style-type: none"> ● Safety and security ● Graffiti, vandalism and antisocial behaviour ● Health and community services ● Playgrounds, parks and reserves ● Youth services and facilities ● Conservation and environmental management ● Management of coastal and estuary areas ● Employment opportunities
Shire of Boddington	<ul style="list-style-type: none"> ● Seniors' services and care ● Boddington town centre ● Tourism attractions and marketing ● Economic development and jobs ● Telecommunications/internet ● Responsible growth and development
Shire of Murray	The community is strong in its desire to keep Murray’s distinctive country feel. The community also has a deep respect for the environment and is proud of and wishes to vehemently protect its heritage - challenges that need to be actively considered, particularly in terms of broadening the economic base. ⁶⁵
Shire of Serpentine-Jarrahdale (2020)	<ul style="list-style-type: none"> ● Local roads ● Value for money from rates ● Streetscapes ● Bulk waste / rubbish ● Footpaths, trails and cycleways ● Safety and security⁶⁶
Shire of Waroona	<ul style="list-style-type: none"> ● Creating events and tourist attractions ● Developing walk and bike trails ● Enhanced caravan and camping accommodation ● Increased local and tourism signage ● More activities for youth ● Community and night markets ● Regular streetscaping and verge maintenance ● Appealing entry statements ● Better access to healthcare professionals ● Public transport⁶⁷

VALUES

A submission made to the 2017 Senate enquiry into rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities, stated that since the commencement of Alcoa's State Agreement, community attitudes to forest conservation have changed dramatically.²²

The Western Australian Biodiversity Science Institute (WABSI), an independent research organisation, was tasked with undertaking a survey to seek the views of Western Australians on the value and use of the state's south-west native forests now and into the future, prior to the development of the next Forest Management Plan.

The survey (n = 16,944) found that biological diversity was the most highly valued aspect of WA's south-west native forests, followed by habitat provision for threatened species and communities and a provision of ecosystem services. Old growth forest areas, threatened species and communities, and forest connectivity were the most important aspects of WA's south-west native forests to the majority of respondents.⁶⁸

Other key findings were:

- Having native forests near Perth and regional towns adds to quality of life (98%).
- Having access to Western Australian native forests was highly important (91%).
- More areas of native forests should be protected (87%).
- All current management practices and industries operating in the south-west native forests would not be appropriate under an altered climate (75%).

Mining, native timber harvesting, and fire management were the top three practices that were deemed necessary to change. Tourism, recreation and bee keeping were deemed the most sustainable activities.

Overall, both the response rate and results of this survey show that people care strongly about protecting WA's South-West native forests and feel that they need to be sustainably managed. Respondents also felt that native forests were important for their role in carbon capture and storage, which would facilitate resilience against climate change.

Over 75 percent of people in Australia and New Zealand agree that climate change is occurring and over 60 percent believe climate change is caused by humans, giving climate adaptation and mitigation action further social legitimacy.⁴¹

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4.2 Projected Situation

The future aspirations of all communities and regional organisations in the Peel region were found to have a strong emphasis on the natural environment and quality of life / lifestyle, as shown below.

	Strategic Vision
Peel Alliance	Peel Alliance is guided by three pillars: economic prosperity, environmental sustainability, social wellbeing.
City of Mandurah	Woven by waterways, a city with a village heart.
Shire of Murray	By 2030, the Shire of Murray will be a place where business thrives, we protect our environment, and all people enjoy an outstanding quality of life. ⁶⁹
Shire of Boddington	A vibrant and connected community with excellent lifestyle and employment opportunities in a beautiful natural environment.
Shire of Waroona	The Shire of Waroona will create a sense of place and identity, embracing creativity, our natural environment and a strong and diverse economy. ⁶⁷
Shire of Serpentine-Jarrahdale	City living offering a rural lifestyle with abundant opportunities for a diverse community. ⁷⁰
Peel Harvey Catchment Council	The Peel-Harvey catchment is once again a flourishing network of interconnected, productive landscapes, with diverse, healthy and resilient ecosystems, globally and locally recognised, acknowledged and embraced for its environmental significance. It is wisely managed by a community that values it – people working together for a healthy environment. ⁷¹
Peel Community Development Group	Our aim is for a vibrant and thriving Peel Region, offering an exceptional quality of life shaped by our unique setting of coast, bushland and waterways with a rich urban and rural character. ⁷²
Regional Development Australia - Peel	A thriving and prosperous Peel Region that is sensitive to the needs of residents, visitors, enterprise and the environment. ⁷³

The Peel region's rapid population has been driven by lifestyle-based in-migration. Continue population growth is projected for all areas in the Peel region, with estimates below updated based on the current WA Tomorrow band the local government is in (as of 2021).

	Peel Region	City of Mandurah	Boddington	Murray	Waroona	Serpentine-Jarrahdale
Resident Population (2021)	151,517	90,305	1,705	18,641	4,234	32,173
Projected population 2031	204,280	116,900 (Band A)	1,850 (Band B)	22,210 (Band D)	4,700 (Band C)	59,220 (Band A)

The Shire of Waroona has initiated a proposed Local Planning Policy 'Social Impact Assessment' (SIA) to assist applicants, the community and industry to identify and address potential social impacts of development. In its current form (out for consultation) the Shire may recommend an SIA be submitted for proposals that do not require development approval under the provisions of the Scheme and Regulations but are required to be referred to the Shire for comment, such as proposals under the Mining Act 1978; and/or proposals covered by a State Agreement ratified by Acts of Parliament.⁷⁴

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5. ENVIRONMENT

5.1 Current Situation

The OECD states that biodiversity loss is among the top global risks to society, with human pressures undermining the biodiversity that underpins all life on land and below water.⁵² The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) found that economic policies have favoured expanding economic activity over conservation or restoration, and that biodiversity is declining faster than any time in human history.⁷⁵

The Peel region is located within the southwest Australia world biodiversity hotspot, one Earth's most biologically diverse yet threatened terrestrial areas. The region has matters of national environmental significance such as:

- wetlands of international importance (Ramsar wetlands)
- nationally threatened species and ecological communities
- migratory species

The region's flagship tree species include three eucalyptus: jarrah (*Eucalyptus marginata*), marri (*E. calophylla*) and karri (*E. diversicolor*).⁷⁶

According to the WA Forest Alliance, the primary cause of deforestation in Western Australia's South West forests is bauxite mining, which has cleared at least 32,130 hectares of publicly owned forest (80 times the size of Perth's Kings Park) and fragmented 92,000 to 120,000 hectares of the Northern Jarrah Forest to December 2019. Of the 32,130 hectares, 11,290 hectares (more than a third) was cleared between 2010 and 2020.⁷⁷

Alcoa World Alumina Australia (Alcoa) commenced operations in the jarrah forest of Western Australia in 1963.¹⁴ Bauxite forms in shallow pods and mining areas are determined by the extent of each bauxite deposit, so a constantly moving mining footprint occurs followed by progressive rehabilitation.⁷⁹ Mine pits range in size from 5-50 hectares, and on average, ore depth is 4-5 metres in depth. The WA Government estimates the total area of forest cleared for mining purposes (excluding Basic Raw Materials) to date is approximately 50,000 hectares.⁷⁸

Species	Pre-1750 extent	Post-1750 extent
Jarrah	2.8 million ha	1.8 million ha
Karri (no bauxite mining)	230,000 ha	190,000 ha

At the 2017 Senate enquiry into rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities, information was submitted that Alcoa surface mining commenced at about 30 hectares per year and has increased to current levels (2017) of about 550 hectares per year, so far concentrated in parts of the lease that have the densest ore. In these regions, which they state are generally heavily infested with dieback disease, 35-50 percent of land within the first-order stream catchments has been disturbed for mining.²²

Alcoa undertake studies prior to mining to identify and (where appropriate) protect important environmental, cultural, and social values. Alcoa state that less than 4 percent of their bauxite mineral lease has been cleared to date, with less than 8 percent expected to be cleared over the life of operations.⁷⁹ To date, they state they have rehabilitated 77% of all areas cleared for mining.⁷⁹ Alcoa is one of the few companies to have achieved mine closure and relinquishment in Australia⁸⁰ and Alcoa's bauxite mines in Western Australia operate under an ISO14001 certified Environmental Management System (EMS).⁷⁹

The Senate submission explained that, whilst the forest ecosystems of the south-west are largely intact, clearing for agriculture and urbanisation had caused species extinction to the east (Wheatbelt – 43 species and 450 plant species endemic to the Wheatbelt threatened with extinction due to rising groundwater levels and salinity) and the west (Swan Coastal Plain – 26 species). The authors viewed that these wider impacts were the cause of an elevated focus on the importance of the management of south west forests for biodiversity conservation.²² As of 2006 the WA Environmental Protection Authority estimated that a cumulative total of 166,000 hectares of vegetation across WA has been disturbed by mining operations and 25,000 hectares rehabilitated.⁸¹

The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) states that adaptation limits are being approached for some species and ecosystems in Australasia and the northern jarrah forest is listed among nine key risk areas for Australasia, as shown in figure 7.⁸²

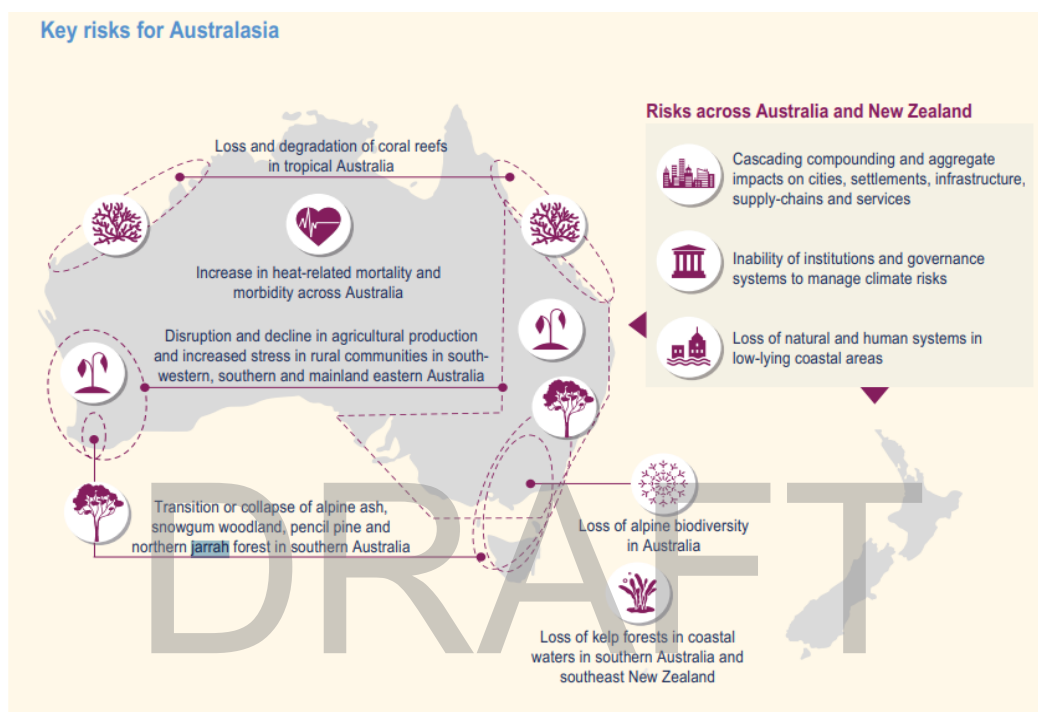


Figure 7: Key risks for Australasia from IPCC Sixth Assessment

The IPCC also reported that progress in adaptation planning, implementation, monitoring and evaluation is lagging, with barriers such as lack of consistent policy direction, competing objectives, divergent risk perceptions and values, knowledge constraints, inconsistent information, fear of litigation, upfront costs and lack of engagement, trust and resources.⁸²

While the OECD cite strong evidence that mining and extractive industries generate localised environmental impacts and externalities, they also note that across OECD countries, mining and extractive activities are regulated closely to reduce environmental risks and impacts.⁶¹

International Council on Mining & Metals (ICMM)

Several mining entities in the Peel region are members of the International Council on Mining & Metals (ICMM). ICMM members recognise that they have an active role to play in creating a safer and more sustainable mining and metals industry. Through their commitments, company members work together, alongside governments and local communities, to improve quality of life beyond the provision of the minerals and metals that sustain modern living. All company members are represented on ICMM's Council by their CEOs and on various committees by nominated representatives.

The ICMM state that it is important to “define and commit to no-go areas, to safeguard areas of outstanding universal and high biodiversity value from development”. Since 2003 ICMM members voluntarily agreed not to mine or prospect in World Heritage Sites.⁸³

In an open letter to the International Union for Conservation of Nature (IUCN), the ICMM President and CEO describes the “current economic model, at current course and speed, is leading us to ecological suicide”. While calling on the private sector to move towards a nature-positive model, he acknowledged the biggest impact would come from government legislating against industrial activity in areas of outstanding universal value as well as shifting focus from the mine site to the landscape-scale.⁸⁴

HABITAT

The northern jarrah forest of south-west Western Australia is home to several iconic species that are in rapid decline. Habitat loss appears to be the principal cause of the decline of Baudin's Cockatoo (*Calyptorhynchus baudinii*), the threatened Forest Red-tailed Black Cockatoo (*C. banksii naso*) and endangered Carnaby's.⁸⁵ The joint Recovery Plan for Baudin's and Forest Red-tailed warns that the long-term effects may not yet be fully realised due to their long life span. Climate change is an additional threat that is likely to exacerbate the threatening processes because of changes to biodiversity and ecosystem function.

Both Baudin's and Red-tailed Black cockatoos nest in the hollows of mature Marri, Karri and Jarrah, and the Forest Red Tail may only breed in years when Marri is fruiting in abundance (about 20–50 per cent of trees most years).⁸⁶ Habitat critical for survival of the endangered Baudin's and Forest Red-tailed Black Cockatoo is all Marri, Karri and Jarrah forests, woodlands and remnants in the south-west of Western Australia receiving more than 600 mm of annual average rainfall.

The conservation of feeding and breeding habitat of these cockatoos depends on the protection and management of habitats in the Northern and Southern Jarrah Forest in WA and recovery action seven is to determine and implement ways to minimise the effects of mining and urban development on habitat loss.⁸⁶

Quokkas were once widespread, as shown in figure 8, and the northern jarrah forest is one of seven distinct subpopulations. A 2007 estimation of subpopulation sizes presumed the Holyoake and Wild Pig Swamp populations to be locally extinct, with populations at Chandler Rd, Rosella Rd and Kesners Swamp below 110 combined.

Habitat critical to survival of the quokka in the northern jarrah forest includes areas of natural vegetation where the understorey is sufficiently thick and complex to provide a refuge from predators close to more open, recently burnt vegetation which is used as a food source. In addition, based on records a number of declared rare flora or priority flora are also located within quokka habitat.⁸⁷

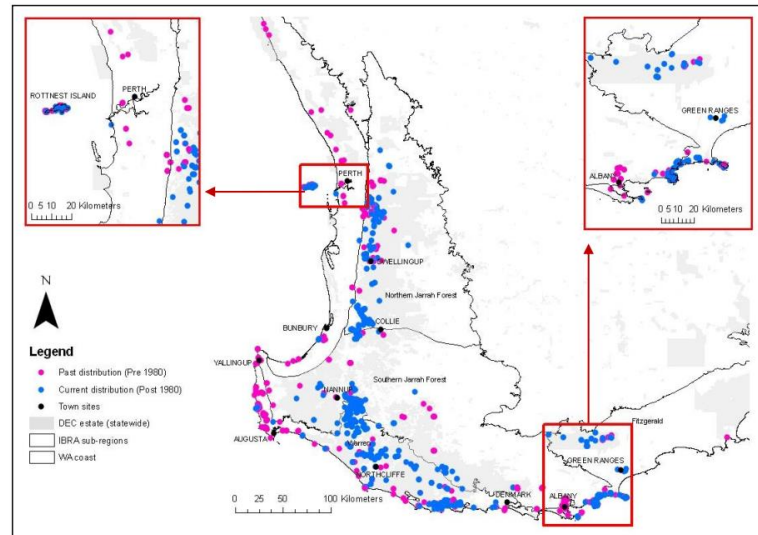


Figure 8: Past and current distribution of quokka in the south-west of WA (based on DEC records)

Alcoa carries out flora and fauna studies ahead of mining. These surveys are used to map the site vegetation types and to find declared rare or priority flora, or rare and endangered fauna. They state that mine plans are modified where appropriate and mining operations are managed to minimise the risk to flora or fauna. Undisturbed areas within mining pods are used as refuge areas for flora and fauna in the company's rehabilitation program.³¹

The Peel region also supports the Peel-Yalgorup System which is 26 530 hectares and on the List of Wetlands of International Importance developed under the Ramsar convention.⁸⁸

The Peel Regional Park was first proposed in 1993 and is based on recommendations in the System Six Report (1984), which resulted in the Regional Park System established in 1997. Planning was completed in 2007, and the Urban Bushland Council of WA report that all of the land involved is already in the conservation estate, however the park has not been formally established. They advocate that the creation of this park will help to protect the conservation values of the Ramsar-listed Peel-Yalgorup wetland system and enhance the local tourist industry.⁸⁹

In 2022, the WA Forest Alliance recommended that:

- No further clearing or fragmentation of native forest in the Northern Jarrah Forest for mining be authorised.
- The EPA undertake a strategic assessment of the potential cumulative impacts of past, current and proposed activities and developments (including but not limited to bauxite mining, logging and prescribed burning) on the Northern Jarrah Forest.

- There be a WA government inquiry into the efficacy of current processes (including Recovery Plans and Habitat Protection Plans) in arresting the decline of threatened native forest species, obstacles to implementing recovery actions and whether there is a need for an emergency plan to arrest the decline of threatened native forest species.

5.2 Projected Situation

Members of Peel Alliance report that their communities are coming under increasing pressure from mining exploration, proposals or expansion, with concerns about tourism, recreation, social amenity and adverse impacts on the forest.

In 2022 one company applied for new mining exploration permits covering in total over 1,000 km² of the Darling Range from near Pinjarra to south of Collie. Proposals include expansion of current mines, production increases, exploration and licences for rare earths, iron ore and / or other minerals. In some cases, there is no trigger for referral under EPBC at the individual scale.

The IPCC's Sixth Assessment report states with very high confidence that further climate change is inevitable, with the rate and magnitude largely dependent on the emission pathway. The Northern Jarrah forests of south western Australia have experienced tree mortality and dieback from long-term precipitation decline and acute heatwave-compounded drought and its resilience and adaptive capacity is being reduced by ongoing land clearing and degrading land management practices.

The northern jarrah forest in Western Australia is projected to transition to a new state or collapse due to hotter and drier conditions with more fires. The risk has the potential to be severe but could be reduced substantially by rapid, large-scale and effective mitigation and adaptation. A key implementation risk cited was the inability of institutions and governance systems to manage climate risks.⁴¹

The IPCC cite key enablers for effective adaptation as:

- A greater understanding of impacts on natural system dynamics.
- Shifting from reactive to anticipatory planning.
- Integration and coordination across levels of government and sectors.
- Inclusive and collaborative institutional arrangements.
- Government leadership.
- Policy alignment.
- Robust, consistent and strategic policy commitment.
- Nationally consistent and accessible information and decision-support tools.
- Adaptation funding and finance.

They warn a delay in implementing adaptation and emission reductions will impede climate resilient development, and projected warming under current global emissions reduction policies would leave many of Australasia's human and natural systems at very high risk and beyond adaptation limits.⁴¹

BEYOND 2024

The Beelias Group is a multidisciplinary group of professors “dedicated to furthering the principles and practices that protect, sustain and nourish the environment”.⁹⁰

In response to the WA Government’s proposed new Forest Management Plan, the Beelias Group and the Leeuwin Group of Professors for Environmental Responsibility published ‘Defining and Creating New Protected Areas in the South West Forests Beyond 2024’⁹¹ which included mapping by Daniel Jan Martin. The Beelias Group state that the process was conducted in consultation with Traditional Owners, community groups and scientists.

The mapping of remaining forests, woodlands and associated ecosystems in the South West found only 23% of the Northern Jarrah Forests is protected and it proposes formalising new protected areas in the northern jarrah forest as an urgent task given the extent of clearing and logging that has occurred to date.

The report states the proposals for new protected areas do not intersect any Mining Areas or Live Mining Leases, with the exception of Mining Lease 258SA in the Northern Jarrah Forests (areas in 258SA given cursory approval to mine under Ministerial Statement 719 do not intersect these proposals). Peel Alliance members have reviewed this document and consider it provides a balance of economic prosperity, environmental protection and social wellbeing.

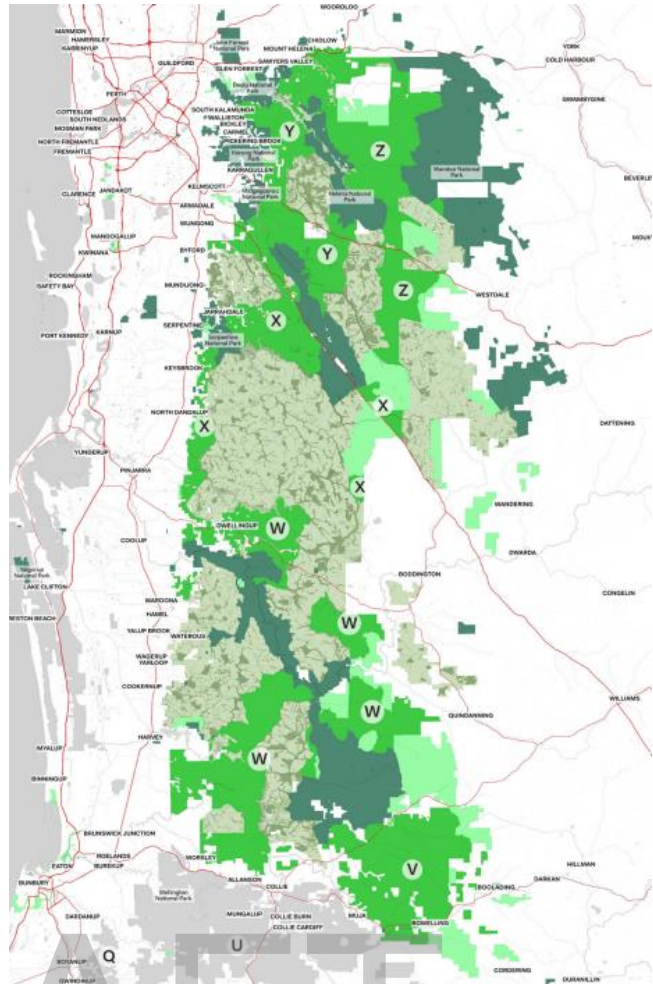


Figure 9: Beyond 2024 Northern Jarrah Forests Region proposal

6 CASE STUDIES

6.1 Engagement

Hillgrove Copper Pty Ltd - Community engagement exploration through mine development and current mining operations

The Kanmantoo Copper Mine is located 55 kilometres east of Adelaide between the Kanmantoo and Callington townships. The Kanmantoo Callington Community Consultative Committee (KCCCC) has been considered one of South Australia's leading practice examples of effective and meaningful engagement within the resources industry.

Hillgrove state their view is that the leadership team should be highly visible and at the table during engagement to ensure that decisions and responses can be made quickly, even though this can be challenging with many competing business commitments.⁹²

Prior to any mining, Hillgrove established the Kanmantoo Callington Community Consultative Committee (K4C) to provide the local community with a forum to raise issues, provide comments and suggestions. Hillgrove host a public forum for K4C on their website with access to information.

In 2019 they launched a Master Plan which was developed as a joint collaborative project between the K4C and Hillgrove Resources. It aims to maximise benefits for the local community following closure and develop a stronger tourism industry. It also aims to demonstrate a leading approach for mining companies to engage with the communities in which they operate through the gathering and collation of community feedback over time.⁹³

6.2 Governance & Coordination

Bowen Basin - Mining Related Groups

In the Bowen Basin, there was an identified need to bring together the range of different stakeholders, including other local governments, for the purpose of coordinating activities, but also to have a stronger voice in lobbying Federal and state government.

This led to the establishment of a range of mining-related groups under the auspices of local governments, including the Isaac Regional Council and Central Highlands Regional Council. Both small and larger councils were constrained by a lack of formal/ regulatory frameworks that legitimised their role in this process or provided them with the resources they needed.

Beginning with the project proposal stage, they noted that:

- It is difficult to plan when councils are treated as 'just another concerned citizen' in relation to Environmental Impact Statements (EIS)
- There is an enormous burden placed on councils when responding to one or more EIS, especially for small councils
- It is important to consider the cumulative impacts of mining, not just of individual project proposals.

The central Queensland town of Moranbah is the administrative hub of Isaac Regional Council (IRC) and is surrounded by coal mines. Facing increasing community concern about the nuisance, amenity and potential health impacts of dust, the IRC convened a workshop in 2009 to discuss how these impacts could be managed. The meeting was attended by stakeholders from mining companies, the community, and State and local government.

The outcome was the formation of the Moranbah Cumulative Impacts Group – a multi-sector collaboration which chose to operate as a sub-committee of council – to improve monitoring and reporting of cumulative impacts on the town. This is an example of a local government playing a coordinating role and facilitating collective action beyond the authority of any individual stakeholder groups.⁹⁴

Mining and Energy Related Councils of New South Wales (MERC)

The association is an advocacy entity for their respective communities on mining and energy related activity matters. Their vision is: “As the peak body in NSW empowering, resourcing and advocating on behalf of local councils impacted by mining and energy production”.⁹⁵

They cite recent work as⁹⁶:

- Voluntary Planning Guidelines for Councils in NSW
- Participatory Modelling to improve the planning development consultation process (PhD project)
- Resources for Regions review
- Coal Seam Gas Policy

6.3 Approvals

The northern jarrah forest crosses into several local government areas, some of which are outside the Peel region.

Shire of Toodyay

The Shire of Toodyay is in close proximity to Perth and is increasingly home to hobby farms and those seeking a ‘treechange’ lifestyle. The Shire of Toodyay was one appellant to a Chalice mining proposal in Julimar, which resulted in added exploration conditions.

Shire President Rosemary Madacsi said the added exploration conditions imposed was a welcome compromise, but further applications in the forest were still a concern. She said the Shire still wanted to see the forest become an A-class reserve, which is one step below a national park “the original integrity of the Julimar Forest cannot be restored once lost,” she said. “We have a duty to ensure our community is not poorer for our stewardship and believe that contemporary mining technology has the ability to deliver such an outcome”.⁹⁷

The CEO of Chalice is reported in the media as previously ‘talking up’ the willingness of the WA Government to allowing mining in state forests, although the examples – such as Boddington gold

mine, Alcoa and South32's bauxite operations, and the Greenbushes lithium mine – all started or were approved decades ago.⁹⁷

The details of the appeal and response from convenor stated agreement with several points, a few of which are:

- Julimar State Forest is at the northern extent of the Jarrah Forest IBRA bioregion. We note the recent IPCC3 advice that global warming poses a threat to the region, with predictions of potential transition or collapse of the forests due to heat and drying climate. These predictions came with a 'high confidence'. We therefore agree with the appellants that the application area is of exceptional environmental value and that those values are a central consideration in this report.
- The application area is important for threatened fauna - it is located in an extensively cleared area and is known to support a number of threatened fauna species.
- While the Shire of Toodyay acknowledged it has no authority over mining exploration activities on Crown Land, it has expressed strong and consistent advocacy for the protection of biodiversity within the Shire over many years, including documented in the Community Strategy Plan, Local Planning Scheme and Economic Development Plan. It was recommended that 'Mining Operations' be included in the zoning table of the new LPS as a discretionary use, as this will allow the local government to advise the Minister for Planning and the Minister for Mines and Petroleum that proposed mining operations may conflict.

A key point was that the Julimar forest was deemed to be in 'excellent' condition, with significant environmental value and has been managed for conservation (rather than logging) for many years.

6.4 Perspectives from Other Stakeholders

These perspectives are from local reports as well as studies conducted in mining regions elsewhere. They are intended to give indicative insights and do not necessarily represent the views of stakeholders or companies in the Peel region.

LOCAL GOVERNMENT

In regions outside WA where land use conflict is high, local governments reported a disinterest from mining companies in filling gaps in community services, which was interpreted as them having no interest in providing core services (such as health), only in sponsoring community events and groups. One council representative termed this the 'netball bib' approach.

Both mining companies and local councils spoke of the potential for local government to take a strategic community leadership and coordination role, particularly in mining governance. Councils already playing this role were viewed by mining companies as being 'proactive'.

Coordination was seen as two-fold: coordinating state government departments at the local level (something that, in the opinion of both mine and council interviewees was severely lacking); and bringing together the range of different stakeholders, including other local governments, to coordinate activities and to have a stronger voice in lobbying Federal and state government.

In the consultation process for a new Forest Management Plan in WA, the local government group two had key themes:

- Establish governance framework for managing mining (encroachment, rehabilitation).
- A view that mining practices operate by their own rules, with a separate governance framework, and will be unaffected by FMP 2024-2033.

MINING INDUSTRY

Association of Mining and Exploration Companies (AMEC) is a national industry association representing over 460 members from all around Australia - explorers, emerging miners, producers, and a wide range of businesses working in and for the industry.

AMEC made a submission to the Minister for Local Government on the Local Government Act 1995 reform to highlight areas of concerns that exist in the WA Local Government rating structures on the mining and mineral exploration industry. Their view is that:

- The current rating structure adopted by some LGAs is taking advantage of mining and mineral exploration, with minimal oversight from the State Government.
- This has resulted in situations where there is a perception that LGAs take advantage of the resources industry.

AMEC also previously provided feedback to the Department of Local Government, Sport and Cultural Industries (DLGSC) on this topic.

In January 2018, AMEC and the Chamber of Minerals and Energy of Western Australia (CME) commissioned Economics Consulting Services (ECS) to provide a report on the way local government rates are set for mining and exploration tenements in WA. The report, titled Local Government Rating of Mining Tenements (ECS Report), outlines a significant rate burden being placed on mining and mineral exploration companies. The ECS report made a wide range of findings and a total of 18 recommendations, all of which are supported by AMEC.

In the consultation process for a new Forest Management Plan in WA, mining stakeholders raised the need to:

- Develop a values hierarchy to promote greater transparency of end use, clarify community benefits delivered and impacts associated with different uses.
- Further develop the current foundations of economically sustainable forest management to continue clarifying trade-offs.
- Develop a specific approach to controlled opening access to forests, e.g. public/recreational use, mining etc.

Other comments by mining companies from a two-year Australian research project in mining locations were that they were unwilling to fill the gaps in community services and cynical about being treated as a so-called 'cash cow' by local councils.⁴¹

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