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Part 2 - Environmental Regulation in WA - 2

Environmental Essentials WA





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EPBC Act assessment - Comparing WA and Commonwealth EIAs

Environmental Essentials WA



- **WA**
- Proposal and schemes
- Referral is proposal likely to have significant impact on environment
- **EPBC Act**
- Actions – ‘controlled actions’ if assessed
- Referral is action likely to have a significant impact on a MNES
- Other referrals
 - Commonwealth land, and
 - Commonwealth agencies are proposing to take an action



Referral to

4

- WA
- EPA
- EPBC Act
- Minister for environment



Who can refer?

- **WA**
- Proponent
- DMA
- Third party referrals
- EPA can call in
- Minister can refer

- **EPBA Act**
- Proponent
- Third party referrals
- Minister can call in



- **WA**
- EPA decides
 - Could have a significant effect on environment
- **EPBC Act**
- Minister determines if action is a “controlled action”
 - Could have significant impact on MNES



- **WA**
- EPA
- Advice to Minister

- **EPBC Act**
- Department of Climate Change, Energy, the Environment and Water(DCCEEW)
- Advices Minister for Environment (one exception)
- Cannot over-ride State decision
- Can decide differently than State EIA



- **WA**

- Assessment on referral documentation only – no public review
- Assessment on referral documentation and additional information – can be targeted public review
- Referral Information (with or without additional information) with public review
- ERD required (referral document inadequate) – no public review
- Public Environmental Review - (referral document inadequate) – full public review

- **EPBC Act**

- Accredited - State EIA or other
- Assessment of referral documentation only – public process
- Assessment of referral documentation plus other published information only – public process
- EIS required (public environmental review)
- Public inquiry (commissioners appointed)



- WA
- EPA approves

- EPBC Act
- Minister approves



- **WA**

- Minister for Environment
- Report default position – but Minister can decide different from EPA report and any appeals

- **EPBC Act**

- Minister for Environment
- Report informs the Minister not 'default' position



- **WA**
 - Appeals convener
 - Ministers decides
 - Not assess decision
 - EPA Report
- **EPBC Act**
 - Limited
 - Not on Minister's decisions
 - Only where he delegates
 - To Administrative Appeals Tribunal



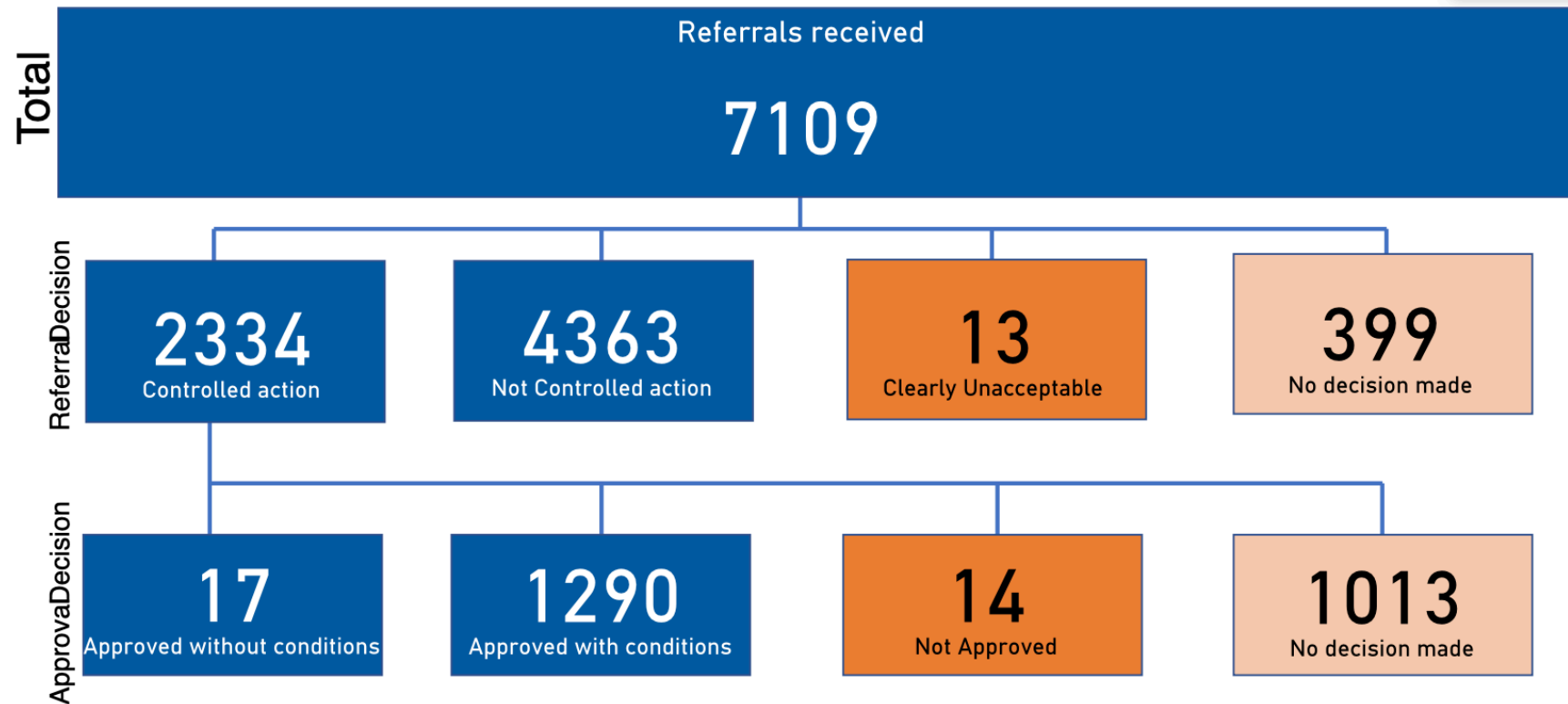
- The Australian Government has bilateral agreements with all state and territory governments to accredit EIA processes that meet set standards.
- State assessing agency provides report to Minister
- Commonwealth Minister still gives approval
 - One assessment process but two approvals
- No example of delegation of decision making yet



Referral data

Outcomes of all referrals received under the EPBC Act from July 2000 to 31 March 2023

Financial Year
□ 2022-2023

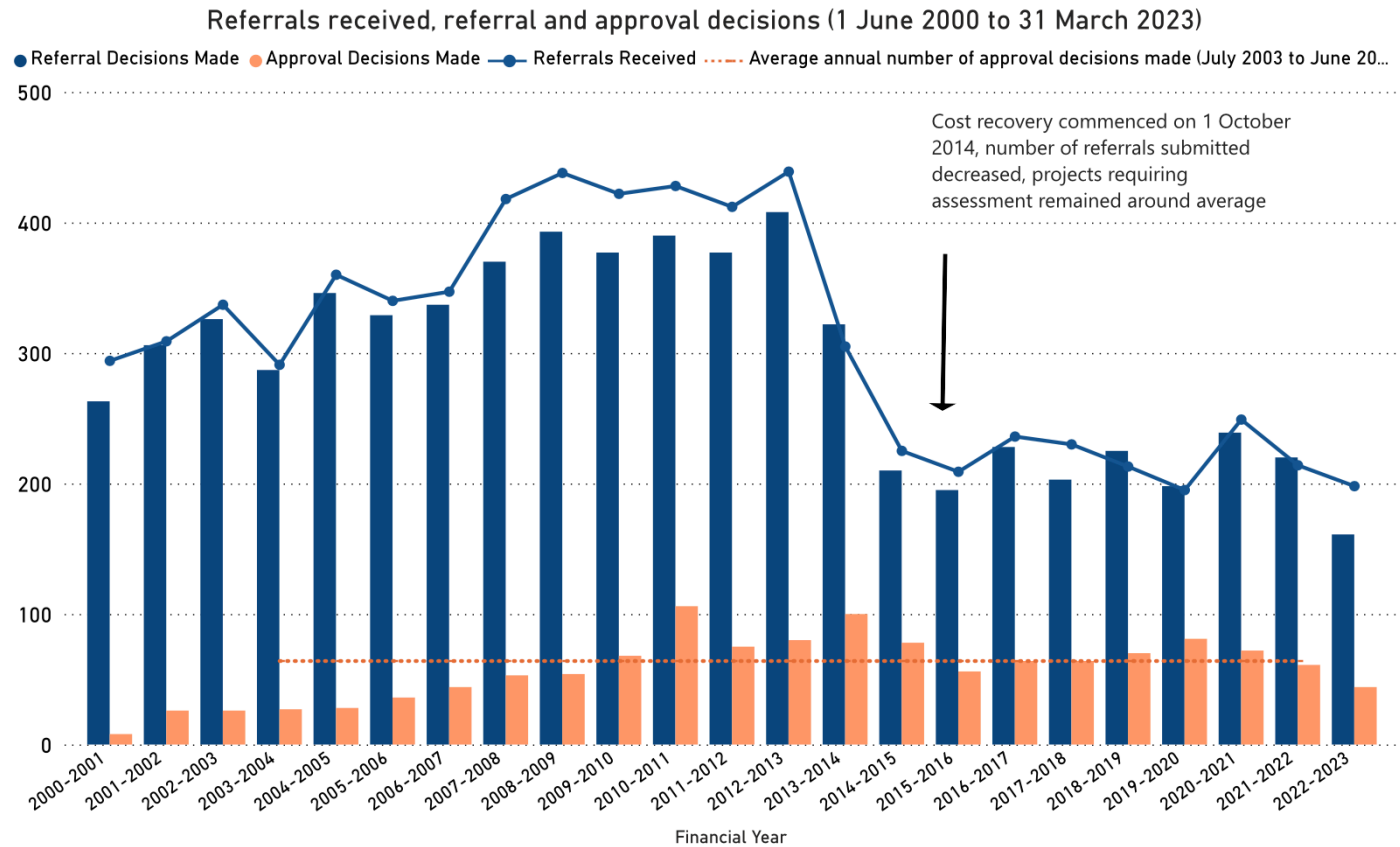


The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* came into force on 16 July 2000. This chart represents the outcome of all 68 referrals submitted since then to 31 March 2023. 'No decision made' includes projects that at the reporting date were undergoing assessment; on hold pending information from the referrer; not progressing to a decision and being formally lapsed. During the 2022-2023 financial year, 98 referrals received were determined to be controlled actions. These referrals will likely have their approval decisions made between approximately 6 months to 2 years from now.

Data extracted from the Portal and Assessment System on 04 April 2023.



Overview of outcomes for projects referred under the *Environment Protection and Biodiversity Conservation Act 1999*



Graphic

Table

Jurisdiction

All

Industry Type

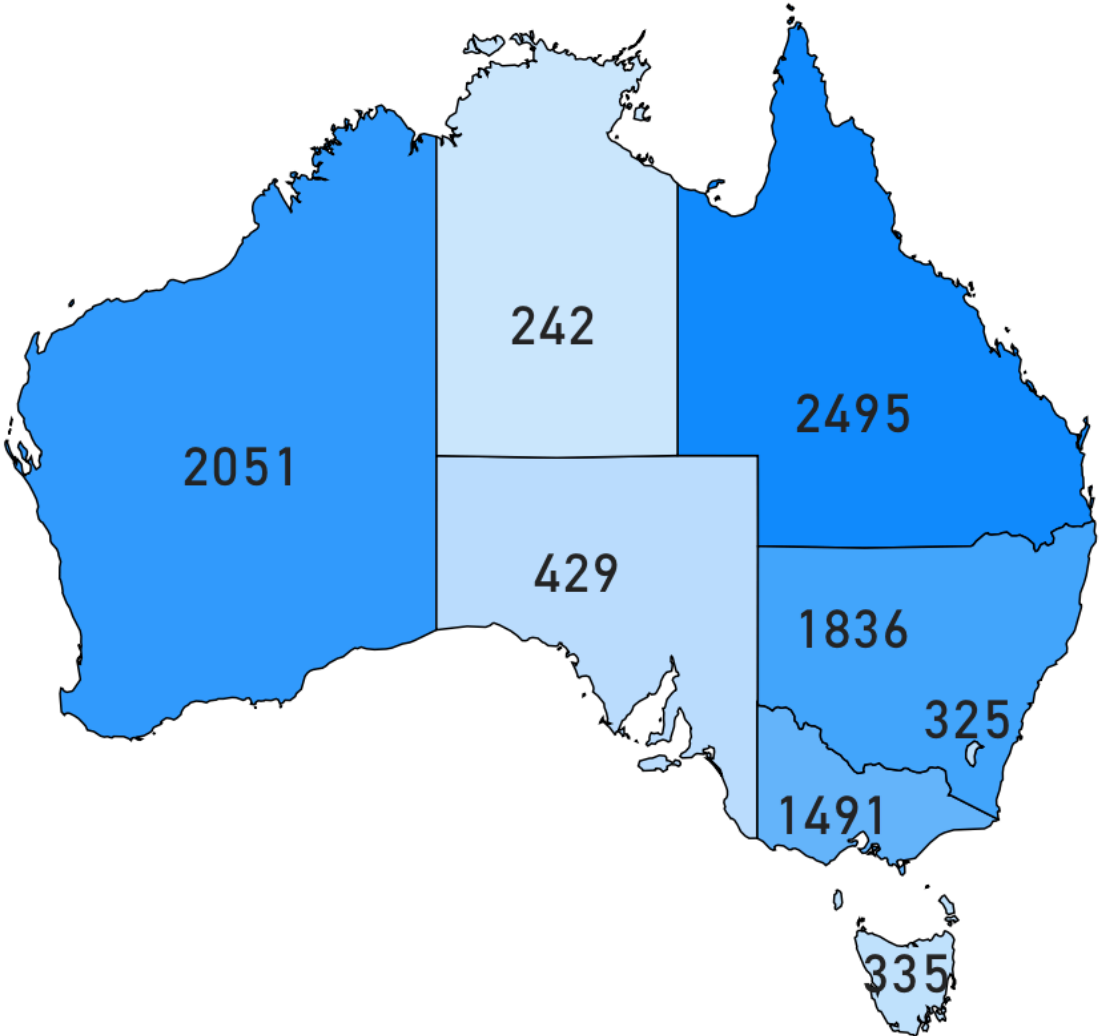
All

Data extracted from the Portal and Assessment System on 04 April 2023.

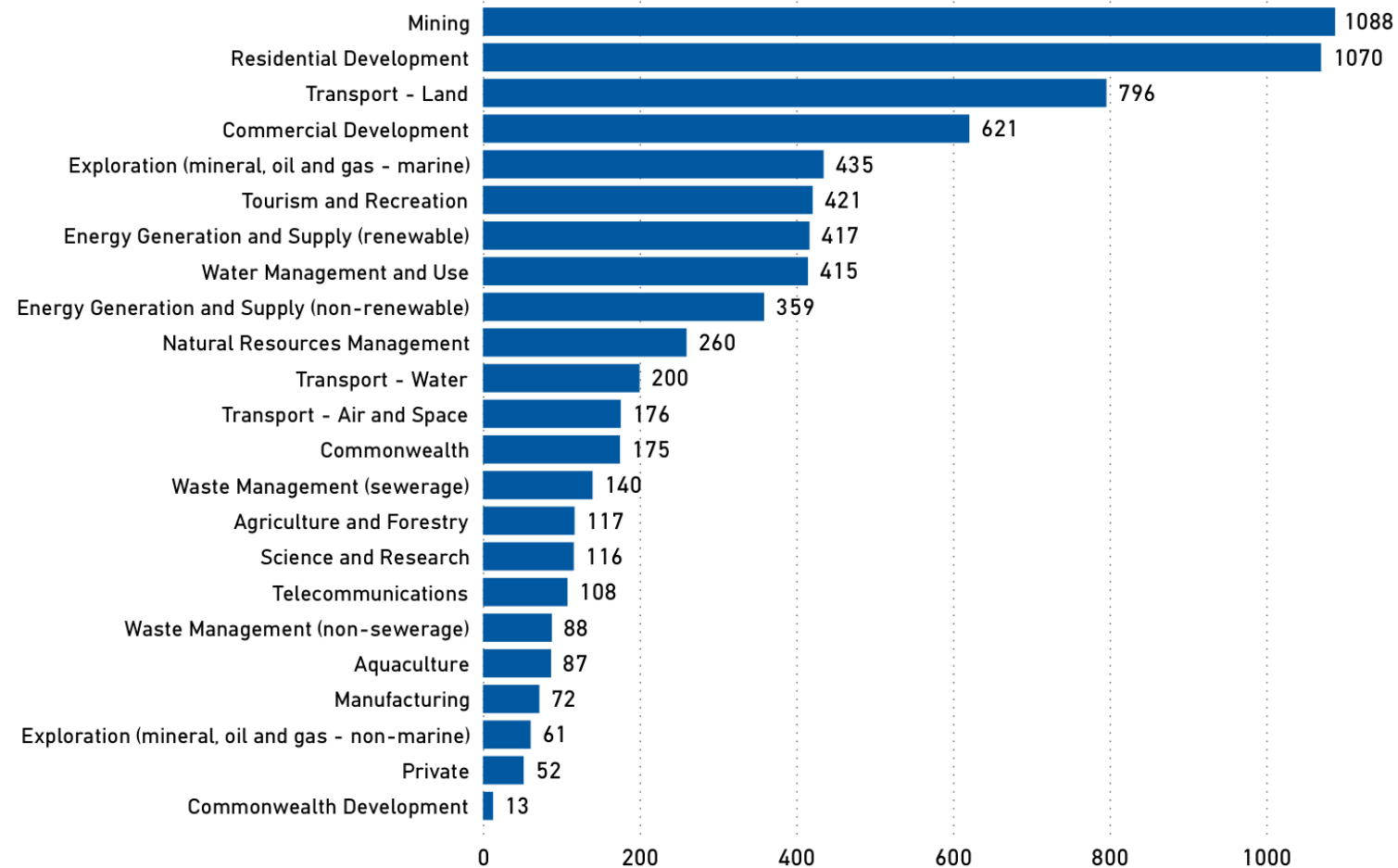


Geographic distribution of projects

EPBC Act decisions from July 2000 to 31 March 2023
(by Jurisdiction)



EPBC Act Referrals received from July 2000 to 31 March 2023 (by Industry Type)

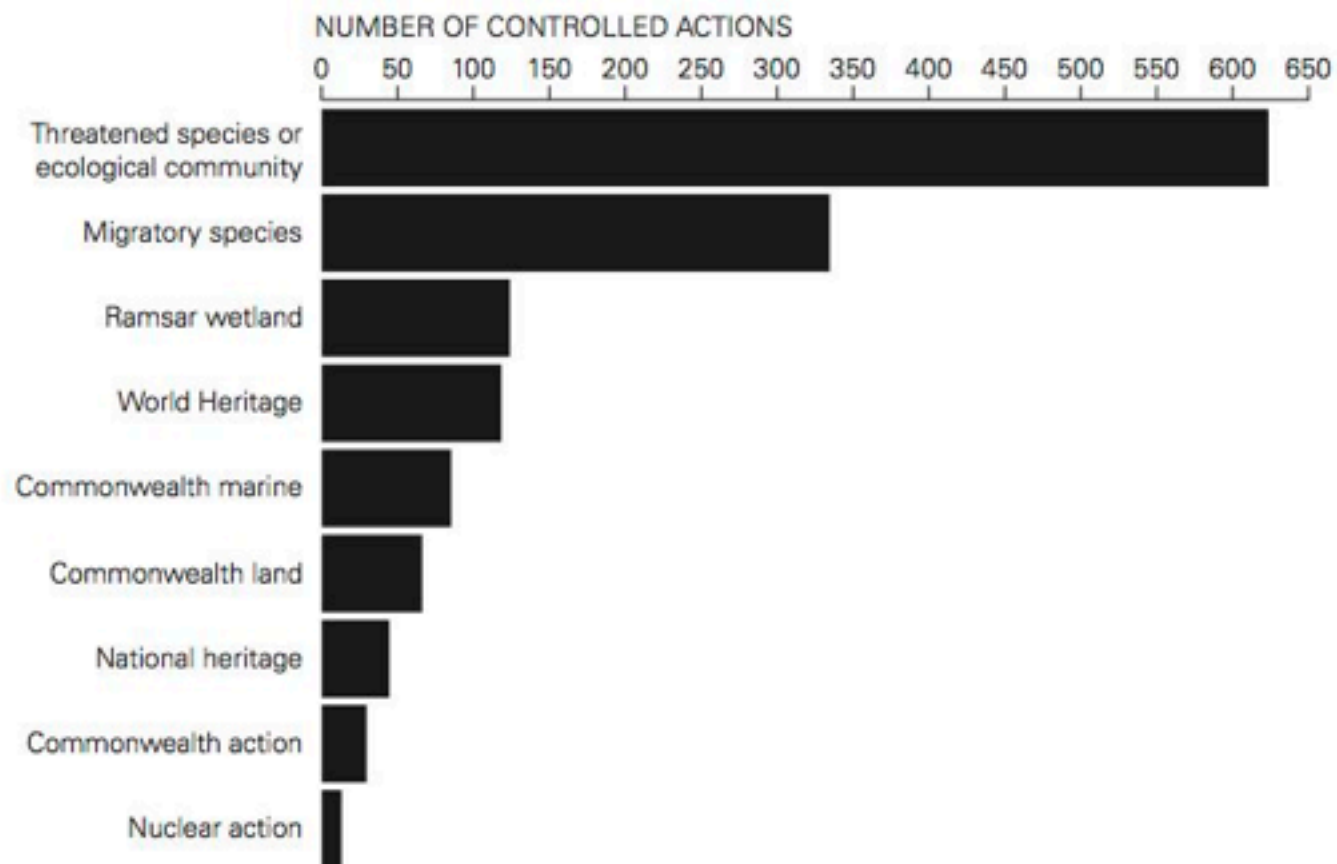


Data extracted from the Portal and Assessment System on 04 April 2023.

Note: This chart includes all s68 Referrals and s160 requests for Advice submitted from July 2000 to 31 March 2023.



Figure 5.5: Criteria for controlling provisions against the number of controlled actions for the *EPBC Act 1999*, July 2000 to July 2008



(Sources: DEH 2001; 2002; 2003; 2004; 2005; 2006; DEWR 2007; DEWHA 2008; 2009c)



Australia's natural environment and iconic places are in an overall state of decline and are under increasing threat. The current environmental trajectory is unsustainable.

The EPBC Act is ineffective. It does not enable the Commonwealth to play its role in protecting and conserving environmental matters that are important for the nation. It is not fit to address current or future environmental challenges.

Recommendations include:

- Greater decision making power to States and Territories
- establishing legally enforceable 'national environmental standards' for matters of national environmental significance with a greater emphasis on regional (landscape) level planning
- establishing an independent regulator focused on enforcement and compliance
- reducing reliance on, and reviewing, environmental offsetting arrangements
- greater inclusion of Indigenous peoples' traditional knowledge and views in science processes and decision-making
- Regional and strategic planning



- Nature positive
- National Environmental Standards
- Establishing an independent national environment protection agency—to be known as Environment Protection Australia (EPA)
 - issuing permits and licenses
 - project assessments, decisions and post-approvals
 - compliance and enforcement
 - assuring states, territories and other Commonwealth decision makers apply National Environmental Standards under accredited arrangements.
- Improving environmental data and information
- Regional Planning
- Environmental offsets reform
- Improving conservation planning arrangements
- Working with First Nations partners



EPBC Act 1999

- If proposed clearing (Part V only) will have or is likely to have an impact on a Matter of National Environmental Significance (MNES) = assessed under bilateral agreement
- Bilateral agreement: impacts of clearing on relevant MNES as part of Part V clearing permit assessment
- Only applies to clearing applications initially referred to the Commonwealth and which the Commonwealth has determined to be a 'controlled action'





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Biodiversity Conservation Act 2016 (BC Act)

Environmental Essentials WA



- ‘take’ flora – i.e. destroy or remove flora,
- ‘take’ fauna – “to kill, injure, harvest or capture fauna by any means”,
- ‘disturb’ flora – altering or damaging flora without taking,
- ‘disturb’ fauna – “chase, drive, follow, harass, herd or hunt fauna by any means” or attach a tag.
- ‘modify’ a threatened ecological community – an action that destroys an occurrence or modifies an occurrence to such an extent that its species composition and/or structure is unlikely to recover.



- The taking flora (including flowers, seeds, whole plants, timber and firewood) from Crown and private land for commercial purposes is not permitted unless done under an appropriate licence.
- Private use on private land doesn't require licence
- The taking any non-threatened fauna from any land requires an appropriate licence.
- Modifying a TEC must be authorised by the Minister. This has been delegated to the CEO
- Taking or disturbing threatened species of flora or fauna must be authorised by the Minister. This has been delegated to the CEO
- The taking or disturbing flora from Crown or private land for biological assessment, relocation, scientific or other non-commercial purposes (including consultants) may be authorised under an appropriate licence. The permission of the private land owner or occupier is required



- If a proposal has approval under the EP Act (Part IV or V) or is covered by an exemption under Part V or the EP Act Regulations, approval to take non-threatened flora under the BC Act is not required. Authorisation to take threatened flora is still required under section 40 of the BC Act.
- If a proposal has approval under the EP Act (Part IV or V), authorisation to disturb threatened fauna will not be required. Authorisation to take threatened fauna is still required under section 40 of the BC Act.
- Ministerial authorisation under BC Act section 45 is required to modify a TEC even if an approval has been granted under the EP Act or is covered by an exemption





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Rights in Water and Irrigation Act 1914 (RiWI Act)

Environmental Essentials WA



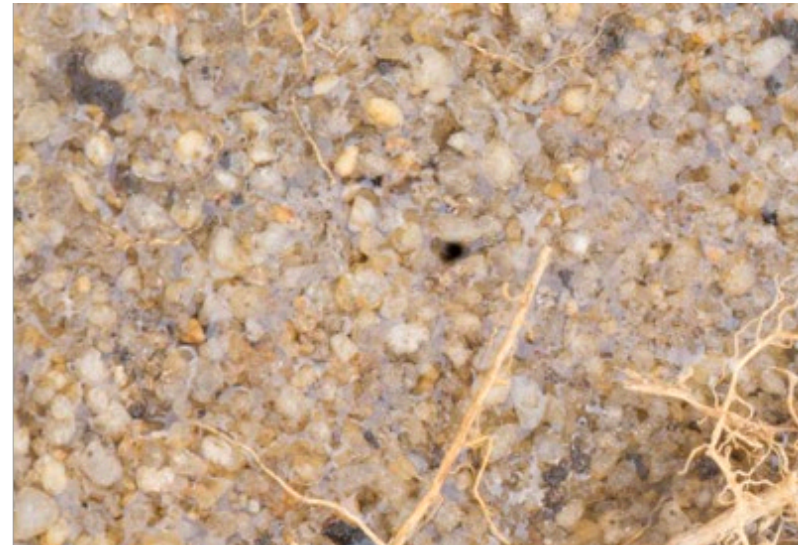
- Governs the regulation and rights associated with water resources
- Licences and permits define how much water can be taken and specify required management conditions
- The DWER issues licences and permits under the RiWI Act to
 - Granting section 5C licences to take water from proclaimed areas for surface water and unconfined aquifers;
 - Granting section 5C licences to take water from any artesian (confined) aquifer
 - Granting section 5C licences to take water where an artesian aquifer discharges at the surface and it is not a proclaimed area;
 - Granting section 26D licences to construct and alter wells for artesian and non artesian wells
 - Interfere with the bed and banks of a watercourse (Section 11/17/21A)

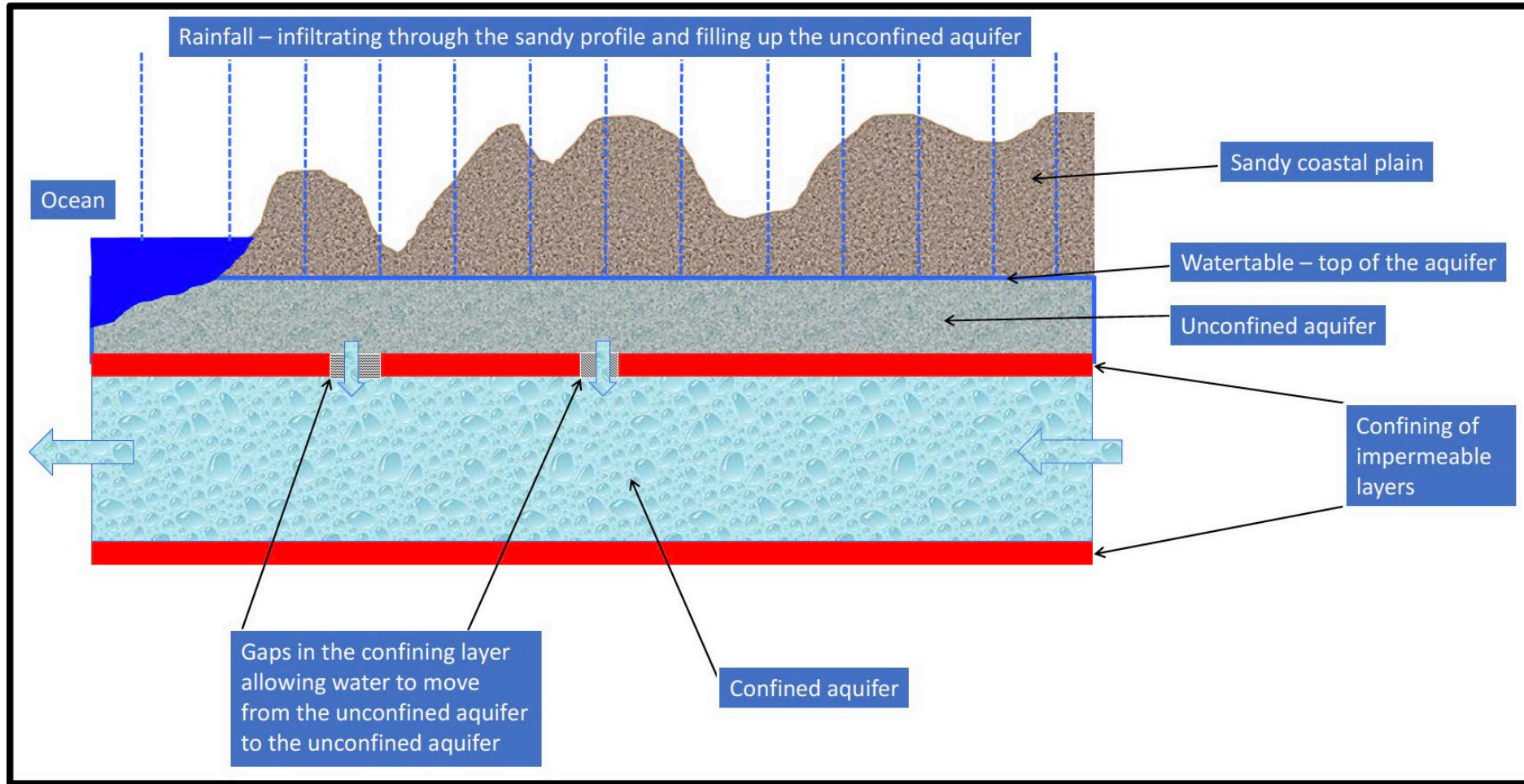


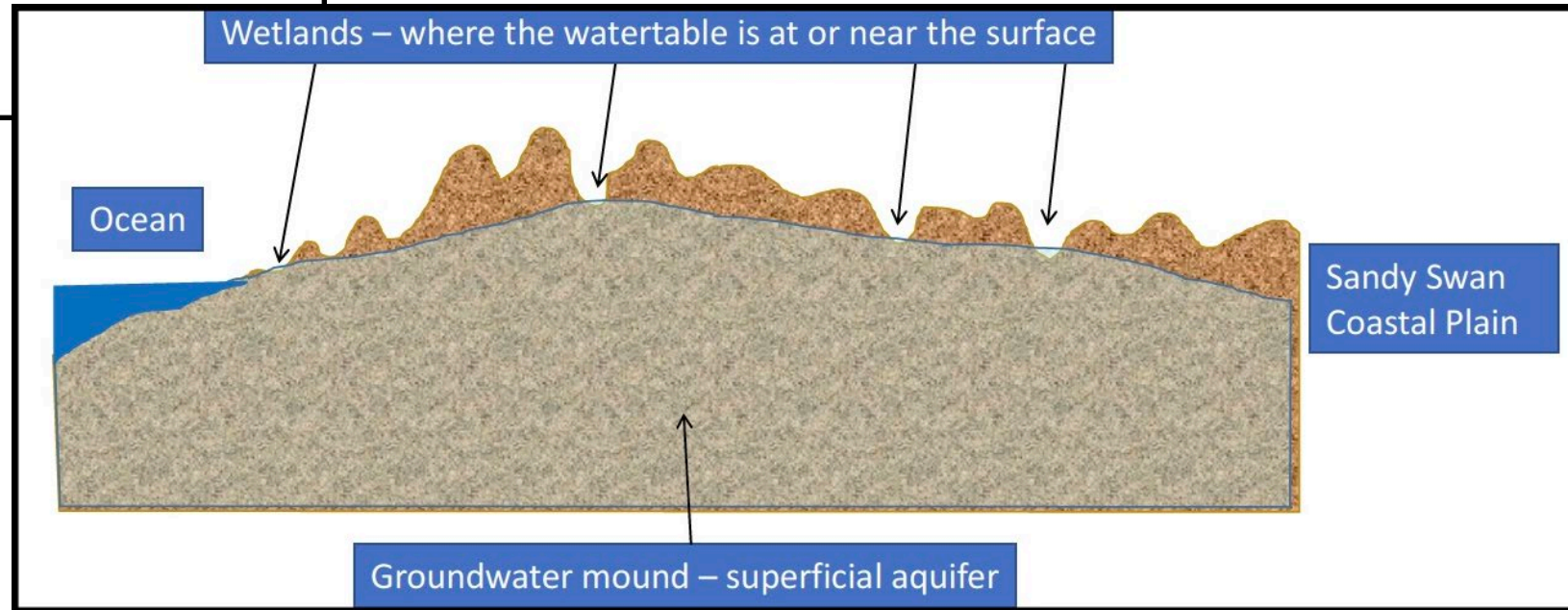
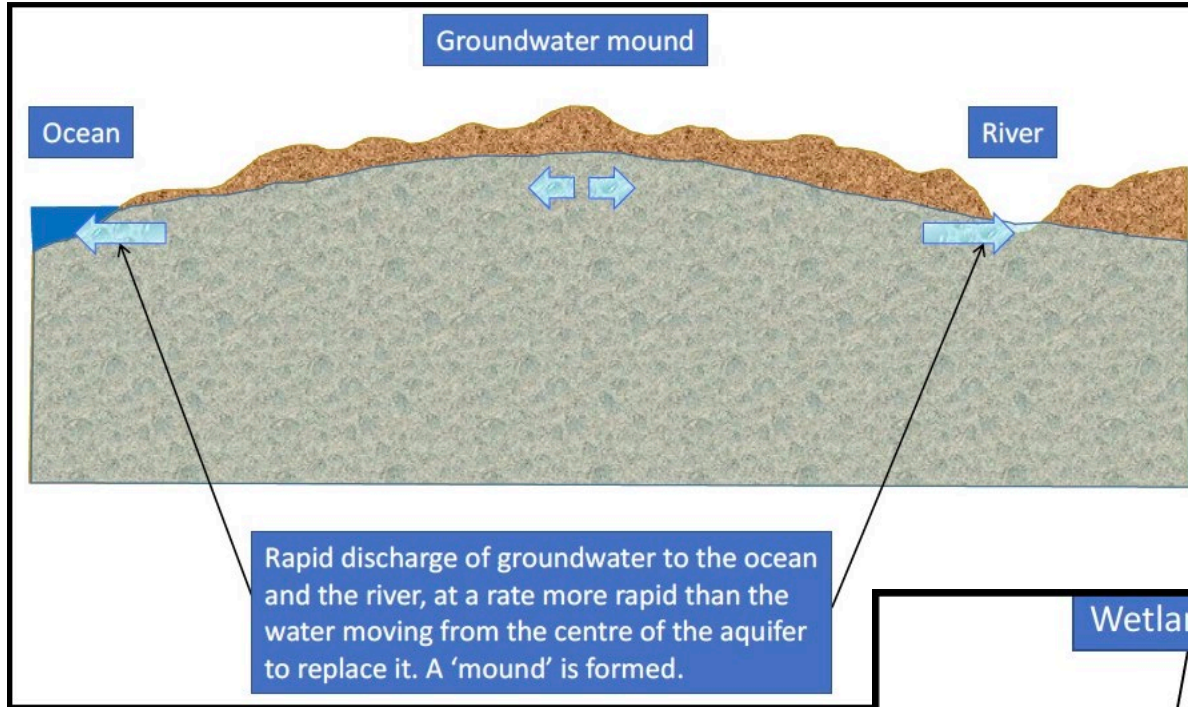
- For water table aquifers relating to:
 - small scale construction dewatering (not for mining);
 - domestic water use;
 - stock that is not intensively farmed;
 - constructing monitoring wells, and
- Riparian rights on a watercourse for stock and domestic use includes irrigation of a small garden (permit is required to interfere with the watercourse).



- Mostly on sandy type soils
- Water held in the gaps between the particles
- Aquifers
 - Confined
 - Unconfined





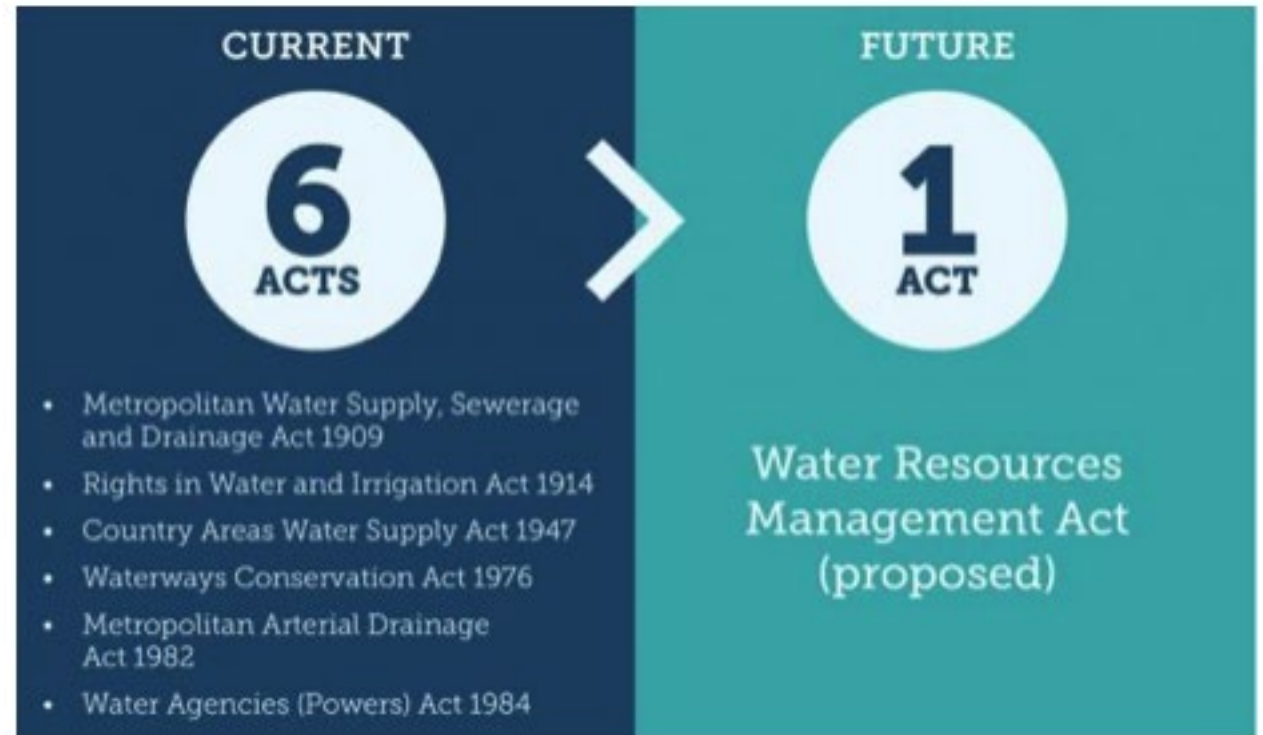


Water resources management is currently managed under six separate Acts.

New water legislations has been promised by current Government.

Policies and guidelines:

- Western Australian water in mining guideline
- Take and use of water
- Water resource assessment and planning
- Protecting public drinking water supplies and natural environment
- Measuring the taking of water
- Manage breaches of water laws
- Managing unlicensed groundwater use
- State Planning Policies – SPP 2.9 from WAPC



- The RiWI Act has provisions that ensure catchments of drinking water sources are protected by proclaiming them
 - Underground Water Pollution Control Areas (UWPCA) for groundwater or
 - Water Reserves, or Catchment Areas for surfacewater.
- Collectively these areas are referred to as Public Drinking Water Source Areas (PDWSAs)
- 3 levels of protection (or zones) can be declared on different sections of land- called Priority Protection areas
 - Priority 1 (P1) offers the highest level of protection and has strictest land use controls. It usually covers land owned by the State.
 - Priority 2 (P2) offers medium level of protection and land use controls so that no increase in risk of pollution to the water source. P2 areas can be declared over private land by only allowing low intensity land uses, Normal residential development is not permitted.
 - Priority 3 (P3) provides the lowest level of protection and land use controls, with the aim of limiting the risk of pollution to the water source. Water supply sources need to co-exist with other land uses such as residential, commercial and light industrial developments.



- EPA recognizes three categories of wetlands
 - Conservation category wetland (CCW) – are wetlands with a high degree of naturalness;
 - Resource enhancement (R) – wetlands with some level of degradation although higher levels of human use; and
 - Multiple use (M) – largely degraded with little human use value.
- The EPA views CCWs as deserving the highest level of protection.
- Some CCWs are also TECs
- Ramsar wetlands
 - internationally important because they are either habitats for migratory waterbirds, or are of world scientific significance
 - Ramsar treaty or the Convention on Wetlands of International Importance signed in Ramsar, a city in Iran, on 2 February 1971
 - There are 61 Ramsar sites in Australia, 10 of which are in WA



WA Ramsar wetlands

- Ord River Floodplain,
- Lakes Argyle and Kununurra,
- Roebuck Bay,
- Eighty-mile Beach,
- Forrestdale,
- Thomsons Lakes,
- Peel-Yalgorup System (including the Peel-Harvey estuary and the chain of coastal wetlands which includes Lake Clifton,
- Toolibin Lake,
- Vasse-Wonnerup System, and
- Lake Warden System.





Western Australian water in mining guideline





	Stage A Preliminary consultation	Stage B Scoping the Water Management Task	Stage C Water Licence Application and EPA Assessment	Stage D Development of an Operating Strategy and Final Licence Decision	Stage E Construction, Operation and Closure Planning	Stage F Decommissioning and Closure
Inputs	<ul style="list-style-type: none"> Regulatory consultation – assess complexity of water issues Preliminary Conceptual Water Balance 	<ul style="list-style-type: none"> Proponent scopes assessment requirements and timetable Apply for 26D licence Conceptual Water balance (updated – will dewatering be required) 	<ul style="list-style-type: none"> Proponent conducts investigations and prepares hydrogeologic assessment documents <p>Operational policy no. 5.12 – Hydrogeological reporting associated with a groundwater well licence</p> <ul style="list-style-type: none"> Applications for 5C licence for the mining project (and permit applications where relevant) 	<ul style="list-style-type: none"> Proponent drafts operating strategy Finalise any additional work <p>Operational policy 5.08 – Use of operating strategies in the water licensing process</p>	<ul style="list-style-type: none"> Carry out water approval consistent with conditions Licensed proponent provides monitoring reports and other information required during term of licence, conditions and commitments of the operating strategy 	<ul style="list-style-type: none"> Proponent implements mine closure plan
Outputs	<ul style="list-style-type: none"> Clarity on any critical issues and conceptual water balance 	<ul style="list-style-type: none"> Agreed scope of hydrological assessment and other investigations Section 26D for exploration and investigations 	<ul style="list-style-type: none"> Finalised hydrogeologic reports Input into preliminary mine closure plan EPA assessment and approval parallels this stage 	<ul style="list-style-type: none"> Approved mine site operating strategy 5C Licence issued 	<ul style="list-style-type: none"> Reporting requirements agreed scope of works for decommissioning the mine’s water-related assets and rehabilitating the mine site 	<ul style="list-style-type: none"> Decommissioning of water related assets





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Contaminated Sites Act 2003

Environmental Essentials WA



Big Picture:

- Primary legislation for assessment and management of contamination
- S9(1) of the CS Act requires the function of the Act be complementary to and not to override other Acts – i.e. compliance with the CS Act required
- Key component to mine closure and relinquishment.
- Having a Part V license does not exclude proponent from CS Act requirements
- CS Act requirements for Mine Closure Plan and approval

Noted Elements:

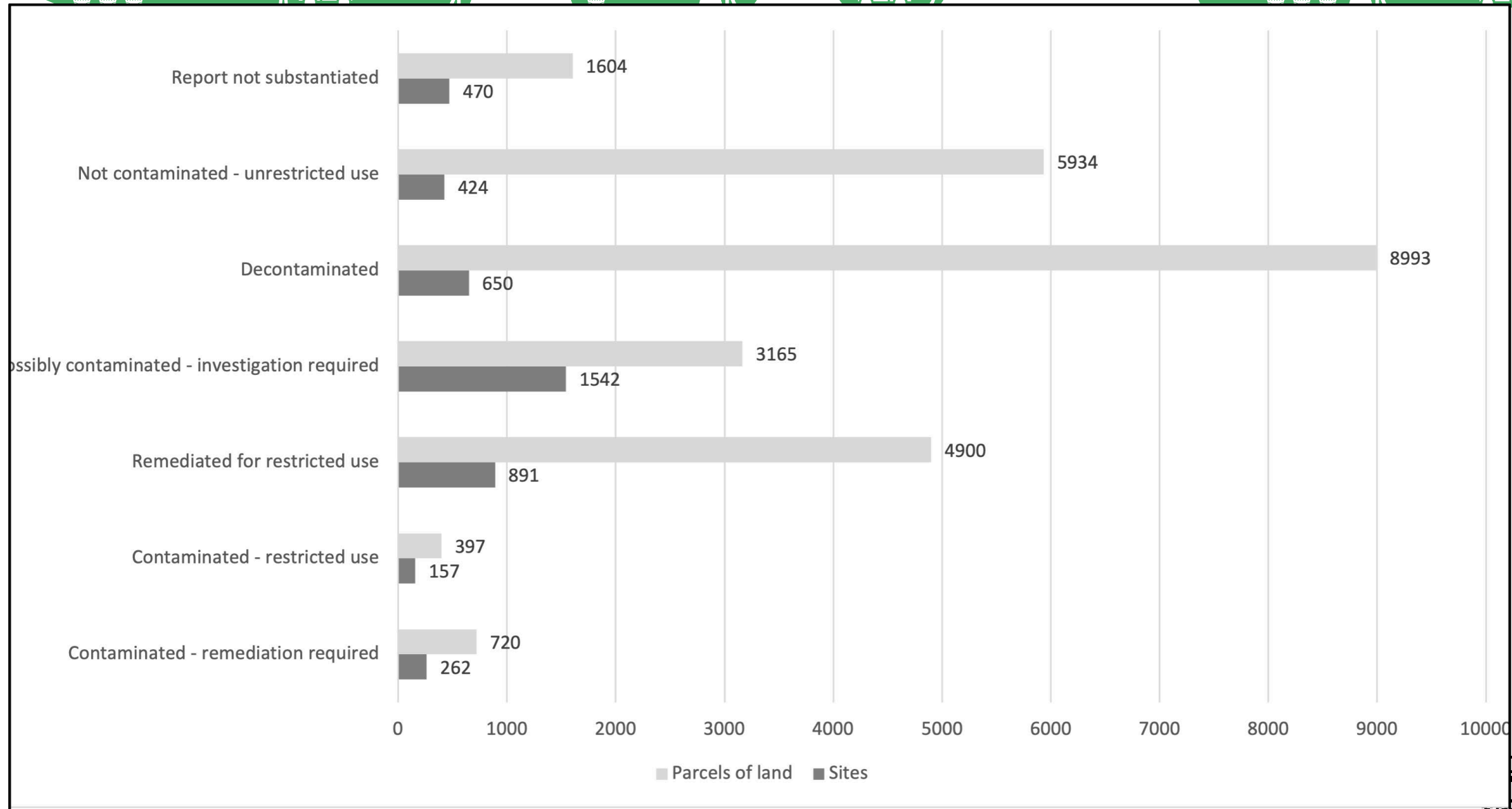
- Protect human health, the environment and environmental values by providing for the identification, recording, management and remediation of contaminated sites in the State of Western Australia.
- Under the Act, land owners, occupiers and polluters must report known or suspected contaminated sites to DWER. Any person can make a report
- Contaminated defined as *“in relation to land, water or a site, means having a substance present in or on that land, water or site at above background concentrations that presents, or has the potential to present, a risk of harm to human health, the environment or any environmental value”*.



- Report not substantiated – following a report being submitted under s11, there is no evidence of contamination;
- Possibly contaminated — investigation required – some evidence of contamination and further investigation needed to confirm status;
- Not contaminated — unrestricted use - no evidence of contamination;
- Contaminated — restricted use - the site is contaminated but suitable for limited and restricted use;
- Remediated for restricted use - the site is contaminated but some level of remediation has occurred so that it is suitable for restricted use;
- Contaminated — remediation required; and
- Decontaminated - the site has been remediated and is suitable for all uses.



Status of the contaminated sites database as at 30 June 2021



- DWER is required to place a memorial on the title of land classified as either:
 - Contaminated — remediation required;
 - Contaminated — restricted use;
 - Remediated for restricted use; or
 - Possibly contaminated — investigation required



- all sites classified as ‘contaminated — remediation required’ are to be remediated (s23)
- the sites classified as ‘contaminated, restricted use’, ‘remediated for restricted use’ or ‘contaminated, remediation required’ need to be clearly specified
- CS Act defines ‘person responsible’ for sites classified as ‘contaminated — remediation required’ who is responsible for remediation of the site
- Anyone who caused or contributed to the contamination of a site is responsible for remediation, whether the action that caused the contamination was lawfully approved or not, if that action occurred after the CS Act came into effect (2 August 2006)
- If the action occurred before the CS Act came into effect anyone who caused or contributed to the contamination is responsible for remediation only if that action was carried out unlawfully
- Change of land uses under PD Act triggers a clean up to the level required for that land use. DWER sign-off agencies to clear a planning condition
- If an owner or occupier of a site classified as ‘contaminated — remediation required’ proposes a change of land use or has carried out a change of land use after the CS Act came into effect, then that owner or occupier is responsible for remediation of the site and not the person who caused or contributed to the contamination



- NEPM ASC (National Environment Protection (Assessment of Site Contamination) Measure 1999) provides national framework for assessment of site contamination and recommends that the investigation of contaminated sites be carried out in stages.
- Only address site characterisation
- DWER has published a “Guideline: Assessment and management of contaminated sites”
- Remediation involves the development of a remedial action plan (RAP), its implementation and, where required, a management of residual contamination via a site management plan (SMP).
- The RAP needs to include the specific remedial targets to be achieved for the chemical of concerns.
- These targets need to be agreed to by DWER on advice of Department of Health





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Planning and Development Act 2005 (PD Act)

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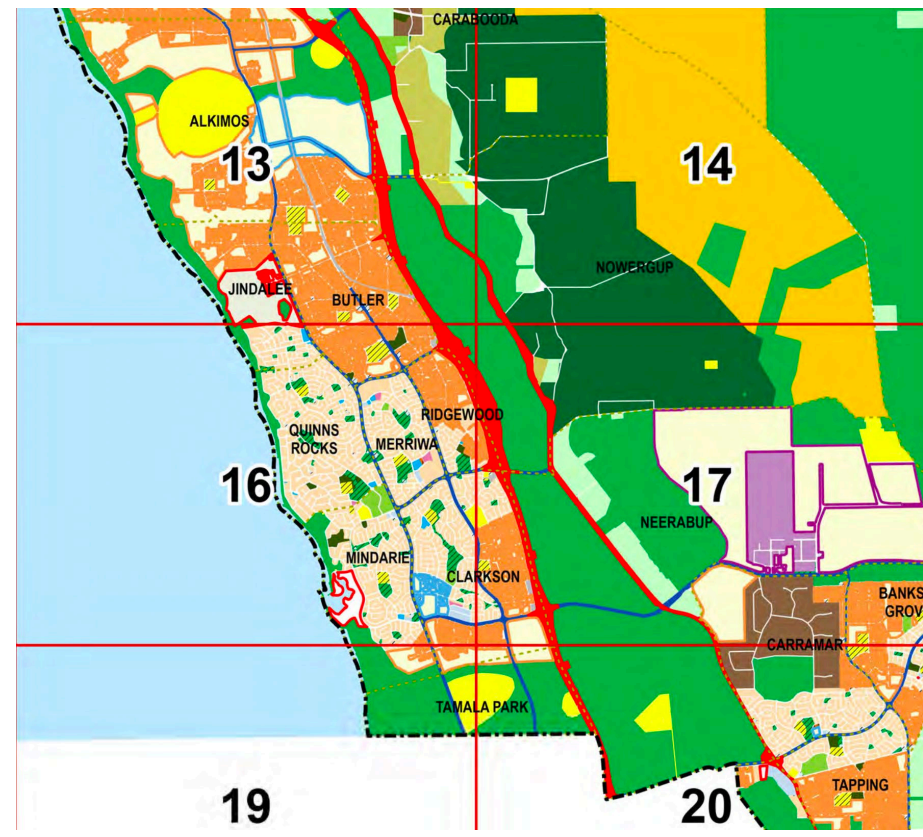
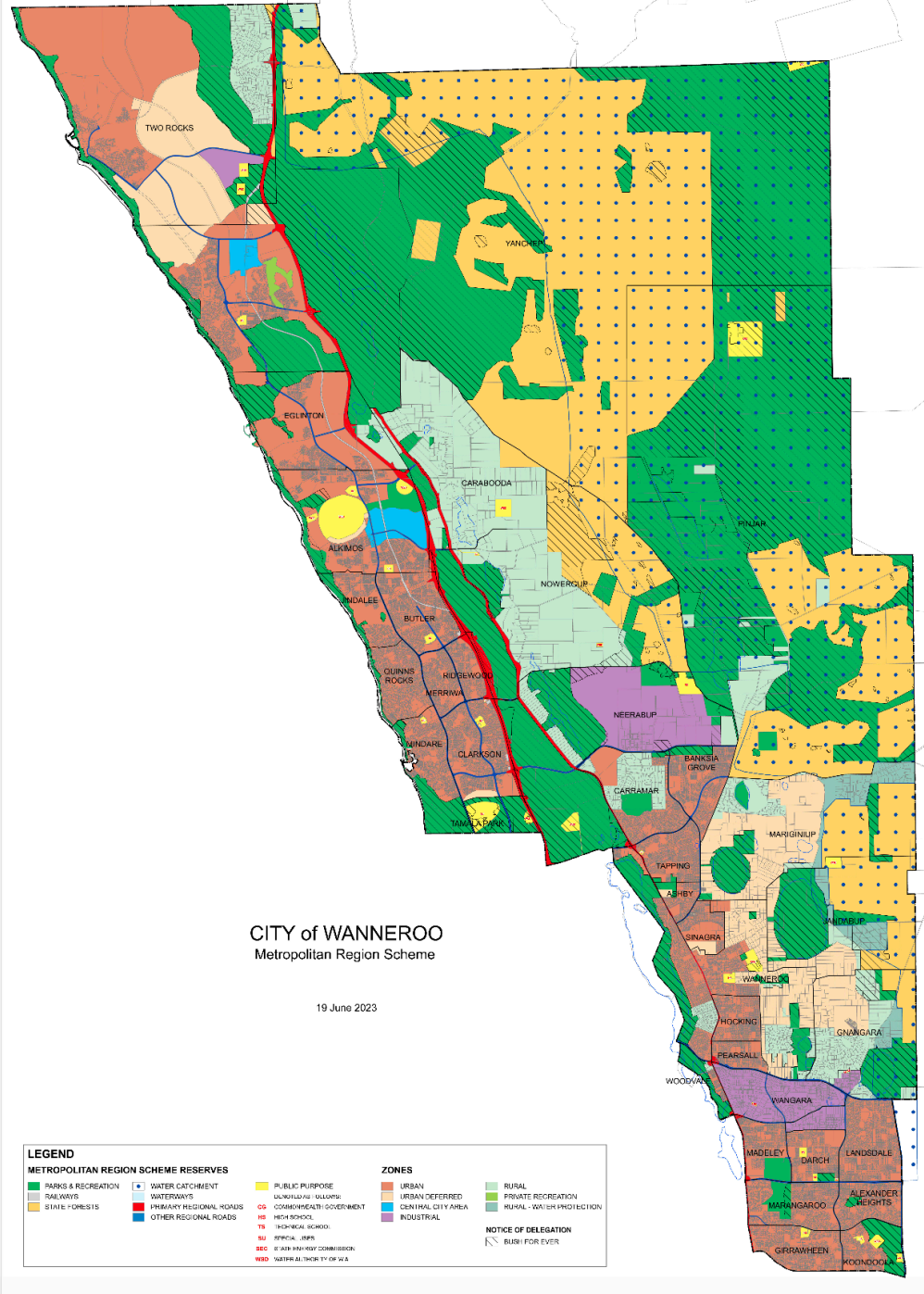


- To provide for a system of land use planning and development in the State
- State Planning Policies (SPP)
- Region Planning Schemes
 - Perth
 - Peel
 - Bunbury
- Local Planning Schemes – 137 Local Governments



- Crown land is 'Reserved'
- Private land 'zoned' and general land uses defined
 - Region – broad zones
 - Urban
 - Commercial
 - Industrial
 - Rural
 - Local – very specific zoning and land uses
 - Land use table
- Zoned land can be subdivided consistent with local zoning
- Subdivided land can be developed consistent with zoning with conditions
- Decision making also guided by State and Local Policies





Schedule 1 – Zoning Table



ZONES	RESIDENTIAL	MIXED USE	COMMERCIAL ³	SERVICE COMMERCIAL ³	PRIVATE COMMUNITY PURPOSES	GENERAL INDUSTRY	LIGHT INDUSTRY	RURAL	RURAL RESIDENTIAL	LANDSCAPE ENHANCEMENT	RURAL RESOURCE
USE CLASSES											
abattoir	X	X	X	X	X	D	X	X	X	X	X
agriculture – extensive	X	X	X	X	X	X	X	P	X	X	P
agriculture – intensive	X	X	X	X	X	X	X	P	X	D	P
amusement parlour	X	D	D	D	D	X	D	X	X	X	X
ancillary dwelling	P	D	X	X	X	X	X	D	D	D	D
art gallery	X	P	P	D	P	X	X	A	A	D	A
animal establishment	X	X	X	X	X	X	X	D	X	X	D
animal husbandry – intensive	X	X	X	X	X	X	X	D	X	X	D
bed and breakfast	D	D	D	X	X	X	X	D	D	D	D
betting agency	X	D	P	P	D	X	X	X	X	X	X
brewery	X	X	A	A	X	D	D	A	X	A	A
bulky goods showroom	X	X	D	P	X	X	P	X	X	X	X
industry – cottage	A	A	D	D	X	D	P	D	D	D	D
industry – extractive	X	X	X	X	X	D	X	D	X	X	D
industry	X	X	X	X	X	P	A	X	X	X	X

- P means that the use is permitted if it complies with all relevant development standards and requirements of this Scheme;
- I means that the use is permitted if it is consequent on, or naturally attaching, appertaining or relating to the predominant use of the land and it complies with any relevant development standards and requirements of this Scheme;
- D means that the use is not permitted unless the local government has exercised its discretion by granting development approval;
- A means that the use is not permitted unless the local government has exercised its discretion by granting development approval after advertising the application in accordance with clause 64 of the deemed provisions;
- X means that the use is not permitted by this Scheme except where the provisions of the Scheme specifically provide for the local government to approve a use that is otherwise not permitted.

Planning approval and a licence maybe required



- State Planning Policy 2.4 - Planning for Basic Raw Materials
- Covers extraction of
 - sand (including silica sand)
 - clay
 - hard rock (including dimension stone)
 - limestone (including metallurgical limestone)
 - agricultural lime
 - gravel
 - gypsum
 - other construction and road building materials
 - materials which may substitute BRM.
- Policy recognizes
 - Significant Geological Supplies (SGS) - the highest priority extraction areas for BRM that represent strategic, long-term supplies of BRM requiring protection
- WAPC approval maybe required





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Mining Act 1978: Mining Proposal - overview

Environmental Essentials WA



- a prospecting licence,
 - carry out certain activities in searching for minerals and to extract or disturb up to 500 tonnes of material from the ground
- exploration licence,
 - Carry out low impact activities including soil sampling and rock chip sampling, as well as higher impact activities such as drilling
- retention licence,
 - allow more time for the holder to develop a mining proposal once the mineral resource has been identified
- mining lease,
 - commence commercial mining production and covers only the mining (extraction) operations
- general purpose lease or
 - for non-mining purposes including operating machinery, handling tailings
- a miscellaneous licence
 - are generally supporting infrastructure not specifically related to the extraction or processing of minerals, and includes roads, abstracting water, aerodrome, tunnels, powerlines, power generation, pipelines and workers' accommodation



- DMIRS has produced “Statutory Guidelines for Mining Proposals” that sets out:
- Definition of small mining operations; and
- General table of contents for large proposals, including
 - Proposal description,
 - Activity (project elements) details,
 - Disturbance envelop,
 - Site plan,
 - Stakeholder engagement,
 - Baseline environmental data,
 - Environmental risk assessment,
 - Expected environmental outcomes,
 - Environmental management system, and
 - Mine closure plan



- for prospecting licences and there is no similar document for exploration licences
 - Area to be disturbed;
 - List of activities and infrastructure;
 - A description of the existing environment, in particular the vegetation to be cleared and its significance;
 - Proposed environmental management; and
 - Proposed rehabilitation



- “Environmental Objectives Policy for Mining” (Department of Mines Industry Regulation and Safety 2020);
- “Environmental Applications Administrative Procedures” (Department of Mines Industry Regulation and Safety 2022),
- a ‘principle objective’ for mining regulation which is:
 - *“Resource industry activities are designed, operated, closed, decommissioned and rehabilitated in an ecologically sustainable manner, consistent with agreed environmental outcomes and post-mining land-uses without unacceptable liability to the State.”*
- Sets environmental objectives for four key factors

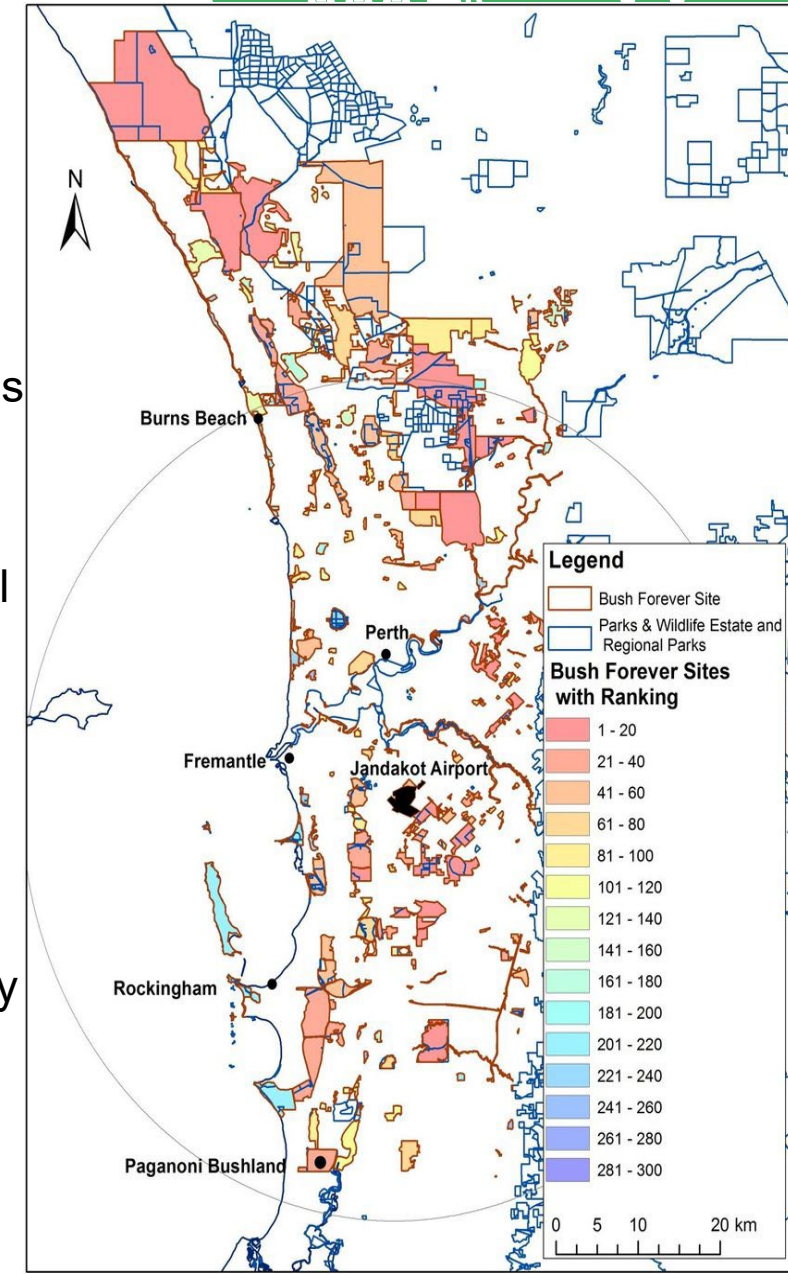


- Biodiversity - To maintain representation, diversity, viability and ecological function at the species, population and community level.
- Water Resources - To maintain the hydrological regimes, quality and quantity of groundwater and surface water to the extent that existing and potential uses, including ecosystem maintenance, are protected.
- Land and Soils - To maintain the quality of land and soils so that environmental values are protected.
- Rehabilitation and Mine Closure - Mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geo-technically stable, geo-chemically non-polluting/non-contaminating, and capable of sustaining an agreed post-mining land use, and without unacceptable liability to the State.

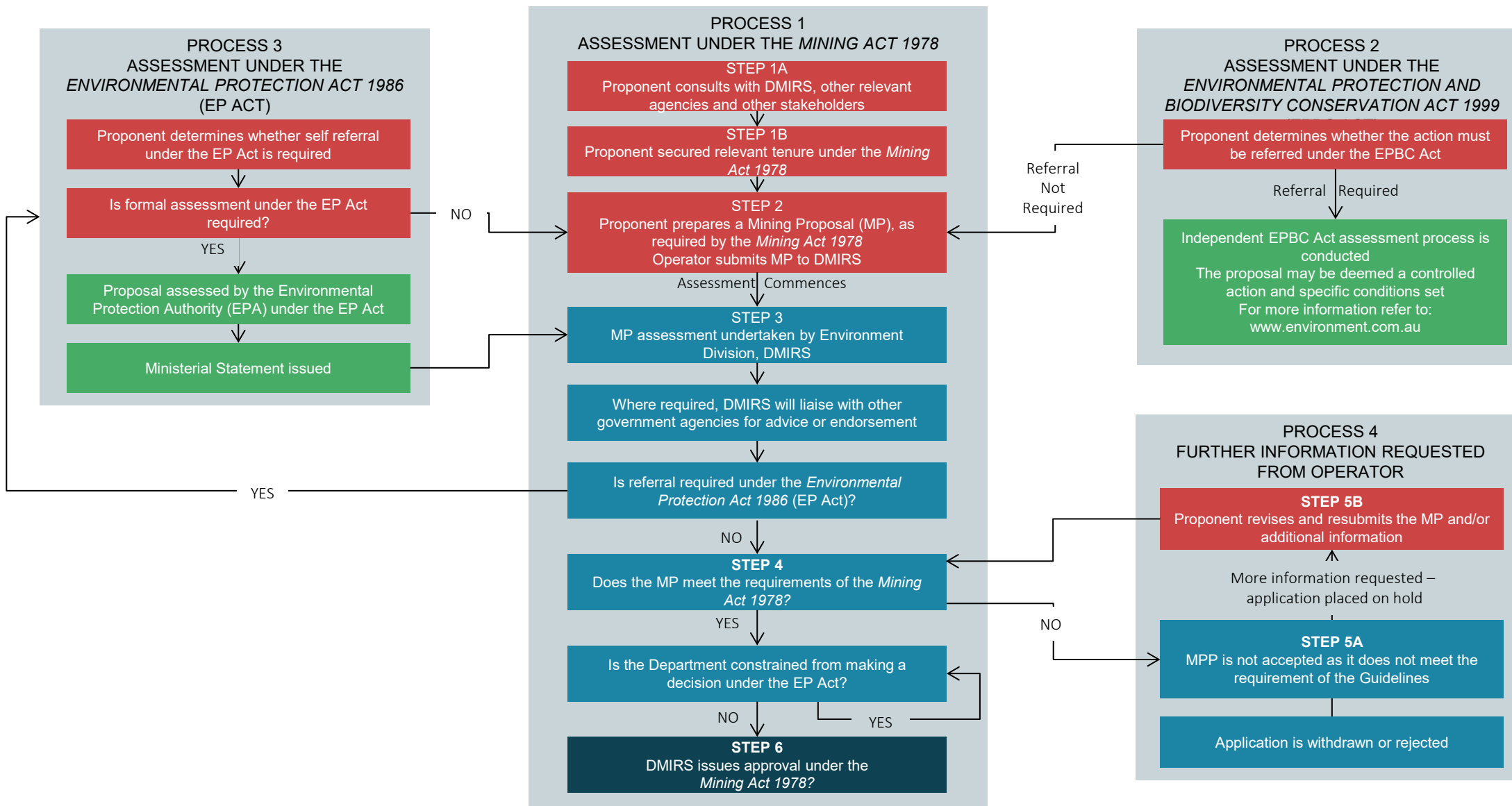


DMIRS and EPA will confer on whether to refer (off shore criteria not shown)

- Environmentally Sensitive Areas including:
 - Within 500m of World Heritage Property
 - Within 500m of a Bush Forever site
 - Within 500m of a Threatened Ecological Community
 - Within 500m of defined wetlands (including Ramsar wetlands, ANCA wetlands Conservation category wetlands)
- Area containing rare flora Area covered by an Environmental Protection Policy.
- Within 500m of a declared/proposed State Conservation Estate, including National Park, Nature Reserve, Conservation Park, or State Forest and Timber Reserves.
- Within a Public Drinking Water Source Area.
- Within 2 kilometres of a declared occupied town site (for Mining Proposals and petroleum Environment Plans only).
- Hydraulic fracturing exploration and development activities.
- Activities within the Strategic Assessment for the Perth Peel Region and potentially in conflict with the outcomes of the Strategic Assessment.
- Area previously or currently subject to formal assessment by the EPA.



Approval Assessment and Determination Process





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Mine rehabilitation and mine closure

Environmental Essentials WA



Mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geo-technically stable, geo-chemically non-polluting/non-contaminating, and capable of sustaining an agreed post-mining land use, and without unacceptable liability to the State.



Definition

The Society for Ecological Restoration (SER) says that rehabilitation is:

*‘...the process of assisting the **recovery** of an ecosystem that has been damaged, degraded or destroyed.’*

*‘...creation of a **self-supporting** ecosystem that is **resilient**...’*

- Specific indicators are selected to help evaluate whether these targets, goals and objectives are being met as a result of the interventions.



The SER recommends the use of nine ecosystem attributes for measuring rehabilitation success:

1. Similar ecosystem diversity and community structure to those of reference sites
2. Presence of indigenous species
3. Presence of functional groups necessary for long-term stability
4. Capacity of the physical environment to sustain reproducing populations
5. Normal functioning
6. Integration within the landscape
7. The elimination of potential threats
8. Resilience to natural disturbances
9. Self-sustainability.



- Prospecting and exploration activities approved under a Programme of Work (PoW) must be rehabilitated within six months of completion of ground disturbance or following an approved extension.
- Rehabilitation reports should be submitted to DMIRS and include both before and after photographs (including a significant landmark) with captions detailing location, date and a brief description of the content of the photograph.
- The Programme of Work Rehabilitation Report Template can be lodged in hardcopy over the counter at any DMIRS office, or submitted electronically via the DMIRS website.
- Progressive rehabilitation preferred – also so Mining Rehabilitation fund.



Poor rehabilitation performance of the industry to date:

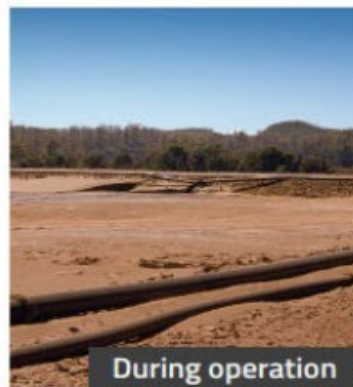
- Complex design life and durability standards pertaining to mine waste landforms such as tailings storage facilities and waste rock dumps against which performance can be assessed
- Unique and diverse array of sites and material available for landform construction creates complex issues — no one size fits all scenarios
- A highly informed and sceptical public may no longer accept assurances that structures will be forever risk free

Industry and the regulator therefore must present realistic expectations, be clear about, and have *mechanisms* in place to manage possible residual risks.

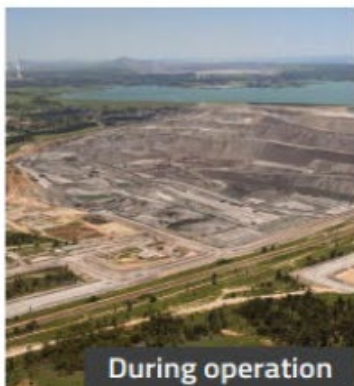




CROPPING Coal & Allied are rehabilitating land for crop production, producing a hybrid of wheat and rye. After three years of production, hay yields are now above the district average.



CONSERVATION Bluestone Mines and CSIRO have revealed a way to create a cap to exclude oxygen and neutralise water. Once implemented, water quality rapidly improved and environmental standards met.



GRAZING Glencore land is now used as a grazing pasture with cattle growing faster and averaging an extra 79 kgs over neighbouring pasture cattle. This returned a 25% price increase at the abattoir.



NATIVE RESTORATION Cristal Mining have re-established a semi-arid vegetation ecosystem with native flora species and native lizard and bird species now resettled in the area.



Statutory Documents



[ProForma - Mining Closure Plan for Small Mining Operations - March 2020 - 474 Kb](#)

Proforma to be used for reviewed Mine Closure Plans - as per the Statutory Guidelines for Mine Closure Plans - effective 3 March 2020 (word version)



[ProForma - Mining Closure Plan for Small Mining Operations - March 2020 - 201 Kb](#)

Proforma to be used for reviewed Mine Closure Plans - as per the Statutory Guidelines for Mine Closure Plans - effective 3 March 2020 (pdf version)



[Statutory Guideline for Mine Closure Plans - March 2020 - 473 Kb](#)

Mandatory form and content for Mine Closure Plans under the Mining Act 1978 effective 3 March 2020

Policies



[Environmental Objectives Policy for Mining - March 2020 - 223 Kb](#)

Identifies environmental factors and objectives for decision making under the Mining Act 1978

Guidelines



[Mine Closure Plan Guidance - how to prepare in accordance with the Statutory Guidelines - March 2020 - 1 Mb](#)

Supporting guidance information to inform the preparation of Mine Closure Plans



[Mine Closure Plan Checklist - 1 Mb](#)

Checklist to assist with the preparation of a mine closure plan.

Technical guidance



[A framework for developing mine-site completion criteria in WA - 5 Mb](#)

Supports the development of completion criteria and monitoring outlined in the Guidelines for Preparing Mine Closure Plans.



[Guide to departmental requirements for the management and closure of tailings storage facilities \(TSFs\) - August 2015 - 337 Kb](#)

This guide has been provided to assist tailings storage facilities (TSFs) designers and operators with preparing the required reports for managing a TSF.



The 4 Tenets of Mine Closure

- Safety
- Stability
- Non-polluting
- Sustainability



Mine Closure in Western Australia

- 2015 MCP Guidelines released
- Size of MCP documents have increased
- Greater number of MCPs submitted since the requirement for MCPs in Mining Proposals
- Many consultants have emerged providing support to industry
- Mines are not actually closed:
 - Care and Maintenance
 - Close-up shop or abandon the site (Ellendale)
 - Sell to another company who may or may not understand the risk.



Status of Mine Closure in Western Australia

- Mine footprints growing
- Stakeholder knowledge and expectations increasing
- Minimal investment in closure related R&D
- The real cost to close not fully understood
- Closure planning governance developing
- Divestment of liability at closure still happening
- Benchmarking required to improve understanding.





Government of Western Australia
Department of Mines, Industry Regulation and Safety

GUIDELINES

Mine Closure Completion Guideline –

For demonstrating completion of
mine closure in accordance with an
approved Mine Closure Plan

Version 1.0
November 2021

- First released by DMIRS February 2020
- Updated November 2021
- Provides guidance on demonstrating completion of the agreed closure obligations and environmental conditions as outlined in their Mine Closure Plan

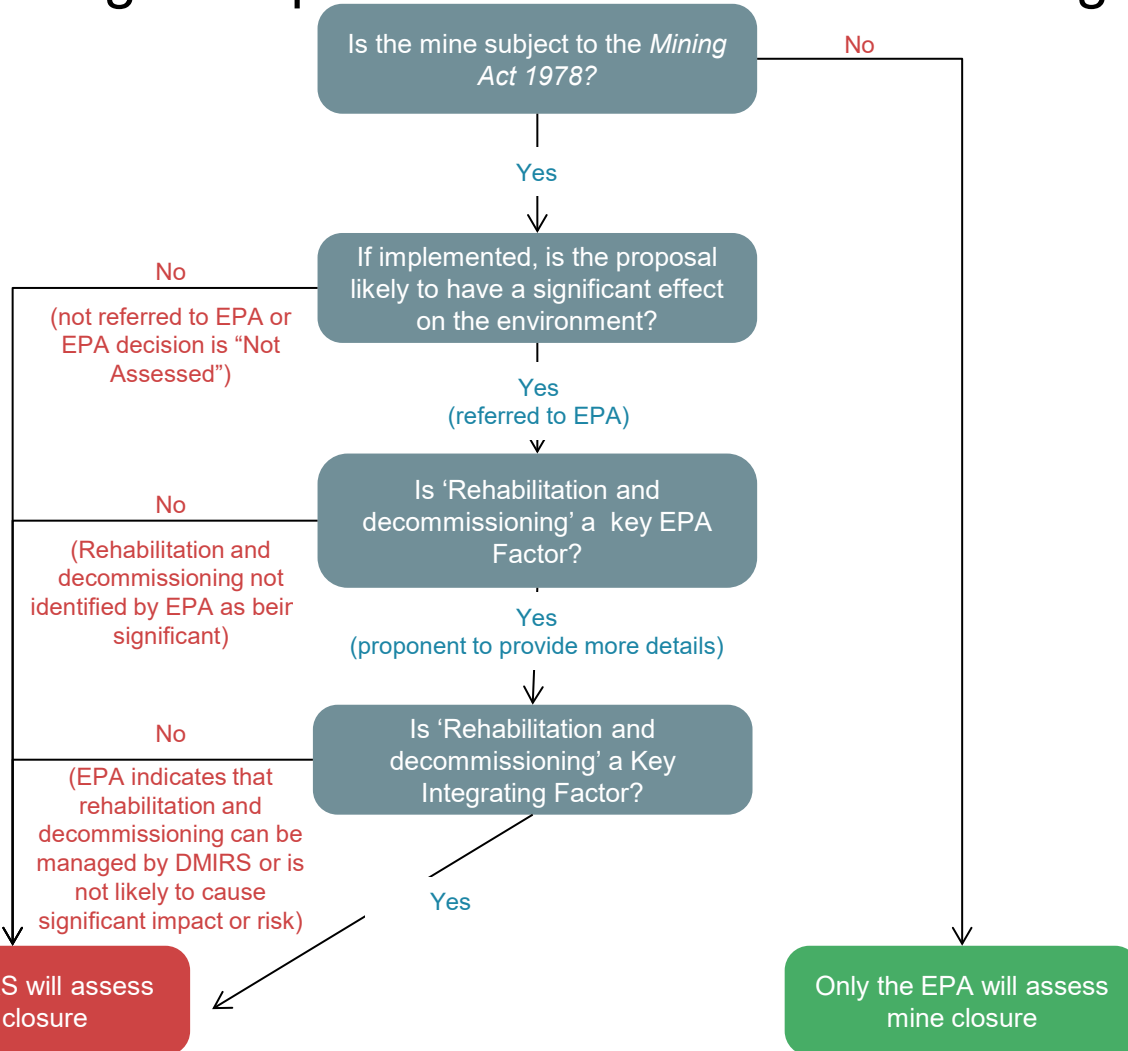
<https://www.dmp.wa.gov.au/Documents/Environment/REC-EC-237D.pdf>



Mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geo-technically stable, geo-chemically non-polluting/non-contaminating, and capable of sustaining an agreed post-mining land use, and without unacceptable liability to the State.



Mine closure plans – submitted by a company associated with a mining proposal and covering all aspects of mine decommissioning and rehabilitation



- Cover Page
- Summary
- Identification of Closure Obligations and Commitments
- Stakeholder Engagement
- Baseline and Closure Data Analysis
- Post Mining Land Uses
- Closure Risk Assessment
- Closure Outcomes and Completion Criteria
- Closure Implementation
- Closure Monitoring and Maintenance
- Financial Provisioning for Closure
- Management of Information and Data
- Reviewed Mine Closure Plans



- The 2010 amendments to the Mining Act require a Mine Closure Plan to be submitted to DMP for assessment and approval as part of Mining Proposal applications.
- DMP's Draft Guidelines for Preparing Mine Closure Plans 2019, available on the DMP website:
 - Project Summary
 - Closure obligations and commitments
 - Stakeholder engagement
 - Baseline closure data and analysis
 - Closure risk assessment
 - Post mining land use and closure objectives
 - Closure outcomes; closure criteria and closure performance indicators
 - Closure Implementation
 - Closure Monitoring and Maintenance
 - Financial Provisioning for Closure
 - Management of Information and Data



- the establishment of the MRF
- the declaration of abandoned mine sites
- a levy payable in respect of mining authorisations
- Rehabilitation Liability Estimate Calculator
 - estimate of rehabilitation liability and the associated MRF levy under a variety of scenarios.
 - demonstrates how to reduce the levy through progressive rehabilitation of disturbances on the tenement
 - Tenement holders who use the calculator must still submit their annual MRF disturbance report



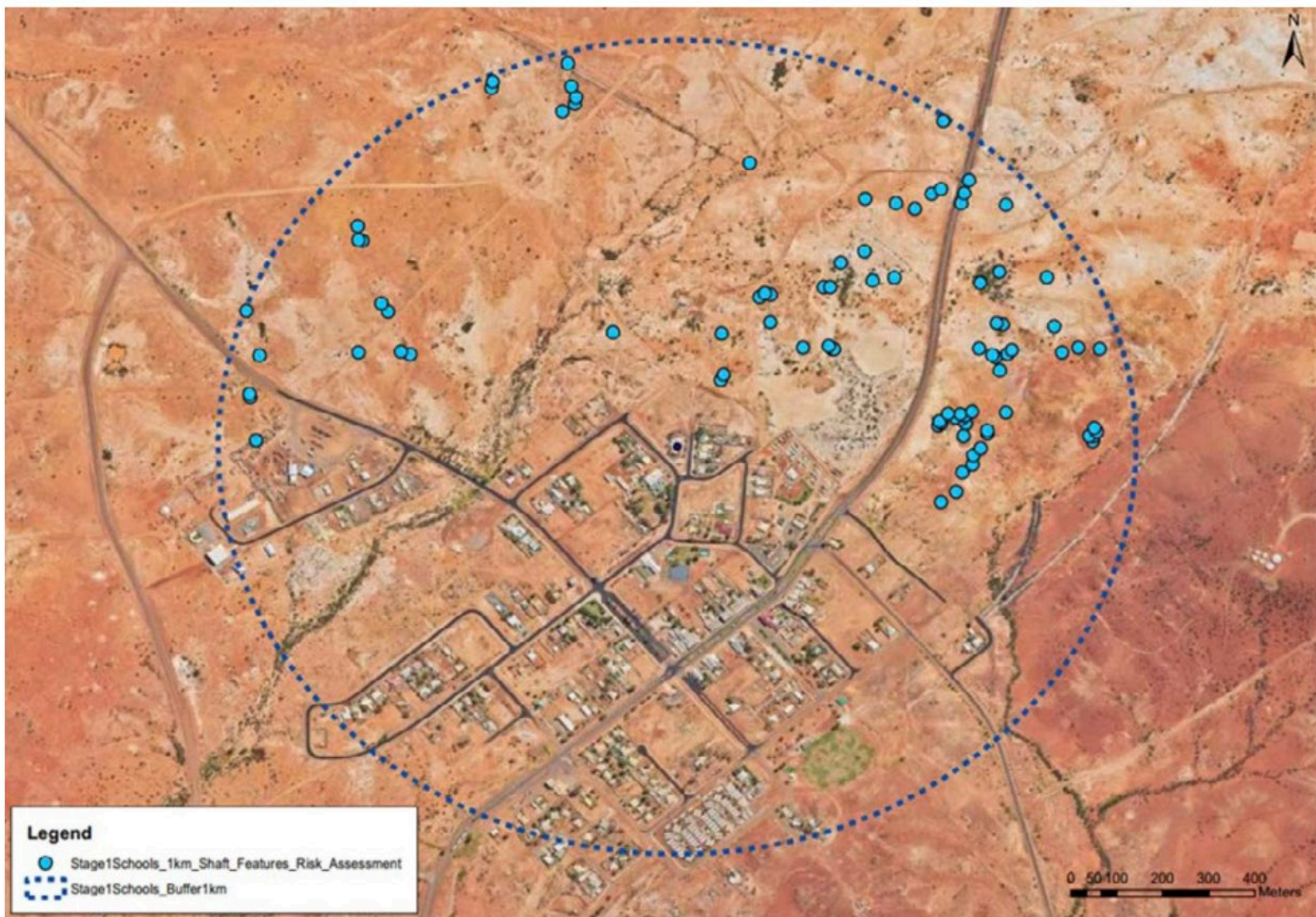


Image 5 – Abandoned shaft features identified in the inventory within 1km radius of Cue Primary School



- All tenement holders (with the exception of tenements covered by some State Agreements), are required to report disturbance data and most must contribute annually to the fund.
- Tenements with a Rehabilitation Liability below \$50,000 (i.e. payment less than \$500) are not required to make a payment into the MRF
- Interest earned from the fund is available to rehabilitate abandoned mines where the tenement holder/operator has failed to meet rehabilitation obligations and efforts to recover funds from the holder/operator have been unsuccessful
- levy is based on the average expected cost of rehabilitation of different types of land disturbances, multiplied by the “fund contribution rate”, which was set at one per cent
- It replaced an Unconditional Performance Bond system (that still exists on some tenure) because companies would go into liquidation and then the Government was left with the rehabilitation costs
- Bonds are still imposed or retained where DMIRS considers there is high risk that a tenement holder’s rehabilitation liability may revert to the State
- Reporting is required 30 June each year
- Auditing of the MRF reports are done periodically
- Document previous disturbance on a tenement before commencing your own disturbance.





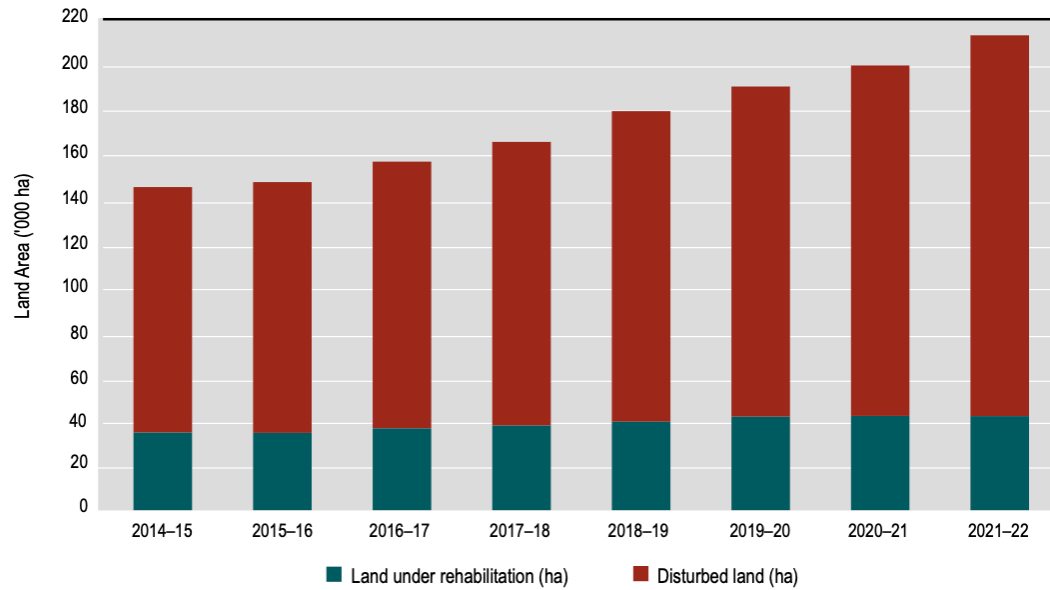
Rehabilitation Liability Categories and Unit Rates

The following table has been reproduced from Schedule 1 of the MRF Regulations

Description of infrastructure or land	Category	Unit rate
Tailings or residue storage facility (class 1) Waste dump or overburden stockpile (class 1) Heap or vat leach facility Dam – saline water or process liquor	A	\$50,000
Tailings or residue storage facility (class 2) Waste dump or overburden stockpile (class 2) Low-grade ore stockpile (class 1) Plant site Fuel storage facility Workshop Mining void (with a depth of at least 5 metres) – below ground water level Landfill site Diversion channel or drain Dam - fresh water	B	\$30,000
Low-grade ore stockpile (class 2) Sewage pond Run-of-mine pad Building (other than workshop) or campsite Transport or service infrastructure corridor Airstrip Mining void (with a depth or at least 5 metres) – above ground water level Laydown or hardstand area Core yard Borrow pit or shallow surface excavation (with a depth of less than 5 metres) Borefield Processing equipment or stockpile associated with <i>Basic Raw Material</i> extraction Land (other than land under rehabilitation or rehabilitated land) that is cleared of vegetation and is not otherwise described in this Table	C	\$18,000
Land (other than land under rehabilitation or rehabilitated land) that has been disturbed by exploration operations	D	\$2,000
Land (other than land that has been disturbed by exploration operations) Topsoil stockpile	E	\$2,000
Exploration operations: land under rehabilitation, rehabilitated land	No rate applicable	-



Some data on clearing/disturbance



Disturbance (ha)

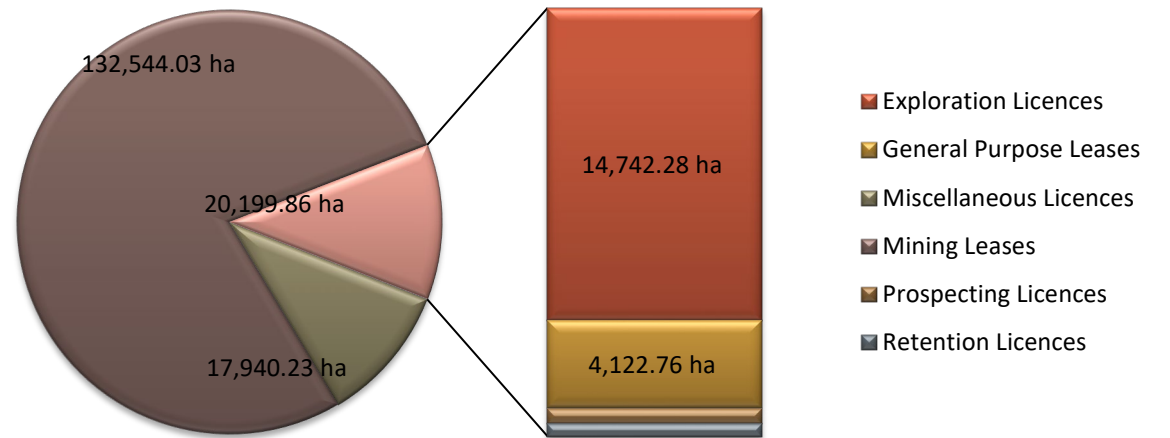


Figure 5 – MRF data reported for land under rehabilitation



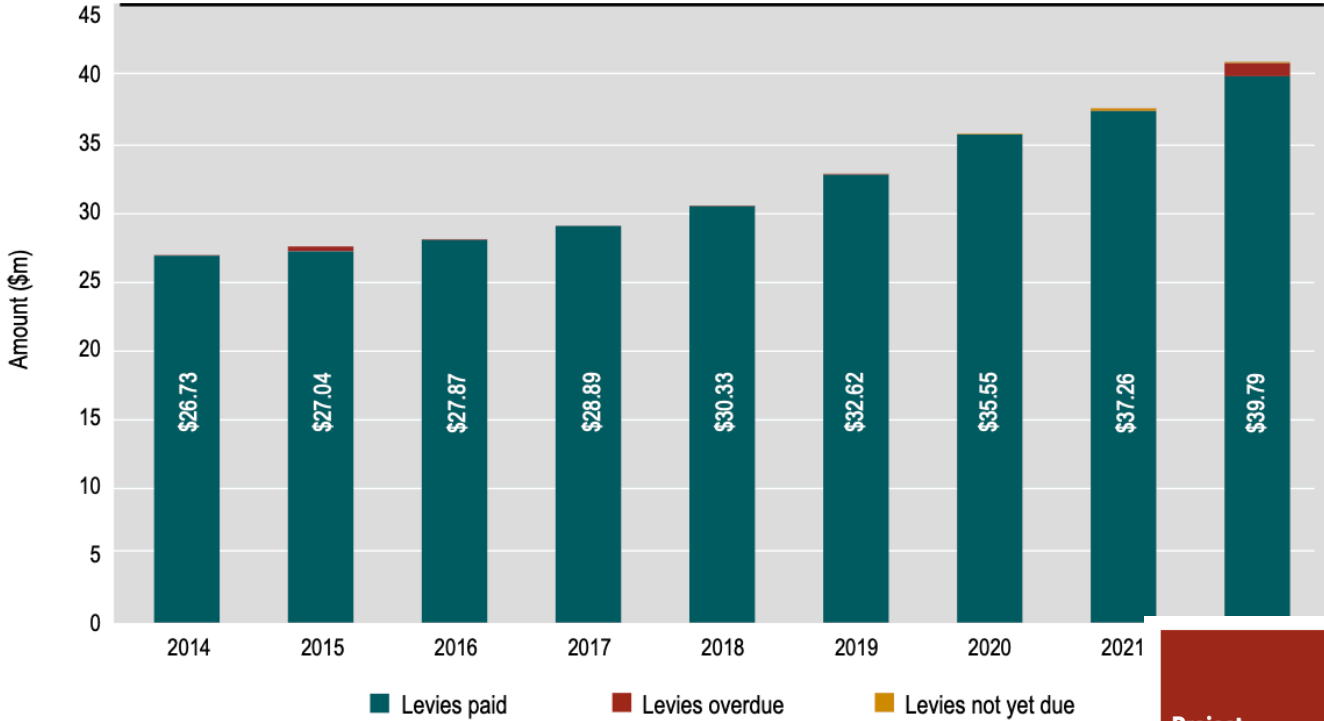
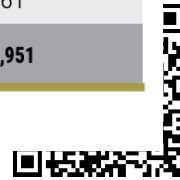


Figure 2 – Levies assessed and paid 2014–2022

Project	Expenditure from MRF Principal \$'000	Expenditure from MRF Interest \$'000	Total Expenditure to 30 June 2022 \$'000
	Project Costs	Project Costs	
Elverdton	-	3	3
Donnybrook shafts	-	40	40
Safe Shafts for Towns		231	231
Ellendale	2,616		2,616
Ashmore-Seppelt	61	-	61
Total	2,677	274	2,951

Table 3: Breakdown of sources and applications of funds for Abandoned Mine projects 2021–22



- EPBC Act assessment - Comparing WA and Commonwealth EIAs
- *Biodiversity Conservation Act 2016*
 - Approvals for taking of flora and fauna
- RiWI Act
 - approvals to take water
 - Protecting water resources
- *Contaminated Sites Act 2003*
 - Includes clean-up
- *Planning and Development Act 2005*
 - Relevance to mining
- Mining Act proposals – referrals
- Min rehabilitation and mine closure
 - Mining Rehabilitation Fund

