

# MINING PROJECT APPROVALS IN WESTERN AUSTRALIA<sup>1</sup>

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**Abstract:** The State of Western Australia (WA) occupies 32.9% (2,532,400 km<sup>2</sup>) of the Australian land mass. Just over 2 million people are resident in WA with all but 500,000 of those persons residing within 50 km of the capital city, Perth. With one or two exceptions, all of the mining projects are located outside a 50 km radius of Perth in the arid rangelands.

At the present time, with the world-wide demand for mineral products, WA has enjoyed a mining boom and is the major minerals and petroleum/natural gas producing State in Australia (46% of Australian total production and 48% of Australian total minerals and energy exports). In 2008-2009, the major minerals and energy products from WA were: iron ore (316 M tonnes); crude oil/condensate (19.58 Mt); diamonds (9.2 Mct); alumina (12.3 Mt); gold (135.6t); heavy mineral sands (1.0 Mt); manganese (0.33 Mt);, copper (0.14 Mt); zinc (0.14 Mt), nickel (178 kt); LNG (13.9 Mt); natural gas (8.6 billion m<sup>3</sup>); gypsum (1.0 Mt) and solar salt (10.5 Mt).

To offset the value of mineral and petroleum production, WA is relatively undisturbed and many large sections of the State are encompassed within the conservation estate which includes National Parks, Conservation Parks, Nature Reserves, State Forests and Timber Reserves;, are World Heritage or Biosphere-listed areas, as recognised by the United Nations Educational, Scientific and Cultural Organisation (UNESCO); or are world “biodiversity hot-spots”.

Consequently, there is a need to balance “development” with biodiversity and conservation principles. This has resulted in a mining/petroleum approvals system that is reactive rather than proactive. In some cases, assessment systems are *ad hoc* with arrangements agreed between statutory authorities (with input from conservation interests) rather than contained within government policy.

The paper will outline the importance of the mining and petroleum industries to both WA and Australia and the approvals systems in place that are used to manage environmental issues associated with these industries. The paper will also outline the obstacles associated with the approvals process that need to be removed and which inhibit the expedited approvals process without compromising the preservation and protection of areas of significant conservation importance.

**Additional Key Words:** statutory approvals, environmental impact assessment

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## **Introduction**

Australia is a constitutional monarchy comprising six States and ten Territories. Five of the States and two Territories are located on the “mainland” and are self-governing. The remaining State (Tasmania) and one other Territory (Norfolk Island) are self-governing islands. The remaining seven Territories are controlled by the Commonwealth (Federal) Government and are located outside the boundaries of the States (one on the mainland and six as offshore islands).

Australia is approximately the same size as the continental United States of America excluding Alaska. Western Australia (WA) occupies 32.9% (2,532,400 km<sup>2</sup>) of the Australian land mass and contains approximately 10% (2 million persons) of the Australian population. The highest peak in WA is Mt Meharry at 1,253 m (4,111 ft) and the longest river is the Gascoyne River, an ephemeral river, with an approximate length of 760 km (471 miles). WA extends approximately 2,500 km (1,550 miles) east to west and 3,500 km (2,170 miles) north to south. There are approximately 3,747 islands around the coast of WA.

Apart from Antarctica, Australia is the driest continent in the world. About 35% of the continent receives so little rain it is effectively desert and of which, approximately 10.5% is located in WA. In total, 70% of the mainland receives less than 500 mm of rain annually, which classes it as arid or semi-arid.

The population of WA is concentrated around the coast and in the south-west corner (95%) with all but 500,000 people residing within 50 km of the State capital, Perth.

With all this “bad” news about WA being semi-arid to arid, with dry “rivers”, low elevation and small population, the State is rich in many minerals and is the largest exporter of minerals and mineral products of all the Australian States and Territories.

At the present time, with the world-wide demand for mineral products, WA has continued in a mining boom and is the major minerals and petroleum/natural gas producing State in Australia (46% of Australian total production and 48% of Australian total minerals and energy exports). In 2008-2009, the major minerals and energy products from WA were: iron ore (316 M tonnes); crude oil/condensate (19.6 Mt); diamonds (9.2 Mct); alumina (12.3 Mt); gold (136.6 t); heavy

mineral sands (1.0 Mt); manganese (0.33 Mt); nickel (178 kt); LNG (13.9 Mt); natural gas (8.6 billion m<sup>3</sup>); gypsum (1.0 Mt); and solar salt (10.5 Mt).

To offset the value of mineral and petroleum production, WA is relatively undisturbed and many large sections of the State are encompassed within the conservation estate, which includes National Parks, Conservation Parks, Nature Reserves, State Forests and Timber Reserves; are World Heritage or Biosphere listed areas, as recognised by the United Nations Educational, Scientific and Cultural Organisation (UNESCO); or are world “biodiversity hot-spots” (Fig. 1-2).



Figure 1. World Heritage listed Purnululu National Park (Bungle Bungles).



Figure 2. South-west of WA is recognised internationally as a ‘biodiversity hotspot’.

Consequently, there is a need to balance “development” with biodiversity and conservation principles. This has resulted in a mining/petroleum approvals system that is reactive rather than proactive. In some cases, assessment systems are *ad hoc* with arrangements agreed between statutory authorities (with input from conservation interests) rather than contained within government policy.

The paper will outline the importance of the mining and petroleum industries to both WA and Australia and the approvals systems in place that are used to manage environmental issues associated with these industries. The paper will also outline the obstacles associated with the approvals process that need to be removed and which inhibit the expedited approvals process without compromising the preservation and protection of areas of significant conservation importance.

## **Environmental Legislation in Australia**

There is a separation of powers between the Federal (or Commonwealth) Government and State/Territory Governments. In regard to environmental legislation, there is one principal Federal Act that assesses and controls environmental issues of national interest. The States and Territories have a plethora of environmental legislation that examines environmental matters, water and air, contamination, planning and environment, land degradation and protection of indigenous heritage.

### **Federal Environmental Legislation**

The Federal Act that controls environmental issues of national interest or importance is the *Environmental Protection and Biodiversity Conservation Act (EPBC) 1999*. Although this Act was passed in the Federal Parliament in 1999, it did not come into effect until February 2000.

The EPBC Act is the Australian Government's key piece of environmental legislation. Under the Act, approval is required from the Australian Government Minister for the Environment and Water Resources for any proposed action, including projects, developments, activities or alteration of these things, likely to have a significant impact on a matter protected by the EPBC Act.

The environmental assessment process of the Act protects matters of national environmental significance including:

- ◆ World Heritage properties
- ◆ National Heritage places
- ◆ Wetlands of international importance
- ◆ Threatened species and ecological communities
- ◆ Migratory species
- ◆ Commonwealth marine areas
- ◆ Nuclear actions (including uranium mines).

Other matters that come under the Act are:

- ◆ The environment, where actions proposed are on, or will affect Commonwealth land and
- ◆ The environment, where Commonwealth are proposing to take an action.

There are significant penalties, including fines and imprisonment, for taking an action without approval. Because the legislation relates to significant impact on matters of national importance, it is necessary for all proponents to consider seriously the impact that their proposed action may have and to submit a referral document for assessment by the Minister.

With any referral, the Minister must make a decision within 20 working days of receiving the referral document, unless the Minister requests additional information, and then the assessment clock stops until the additional information is submitted.

There are three decisions that the Minister may make:

1. It is a controlled action and thus will be assessed under the Federal environmental impact assessment system
2. It is a Not a Controlled Action (of a Particular Manner) – i.e. approved with conditions
3. It is a Not a Controlled Action – i.e. approval is not required if the action is undertaken in accordance with the referral.

In the case of decision 1, where the proposed action is clearly within the State jurisdiction, the Federal Minister usually defers to the State, and the action is assessed under the relevant State environmental impact assessment system with review by the Federal Department of Environment, Water, Heritage and the Arts (DEWHA).

### **Western Australian Legislation**

The principal pieces of legislation that assesses and/or manages environmental impact for mining projects in WA are:

- ◆ Mining Act 1978 and Mining Regulations 1981
- ◆ Environmental Protection Act 1986 and Regulations
- ◆ Rights in Water and Irrigation Act 1914
- ◆ Wildlife Protection Act 1950
- ◆ Aboriginal Heritage Act 1971.

### **Mining Act 1978 and Mining Regulations 1981**

The Mining Act controls the allocation of land for prospecting, exploration and mining purposes. In other words, this Act enables grant of licences and leases for mining purposes on all but Federal owned lands in WA. The Act also provides for environmental assessment and

approval for mining projects to enable them to proceed. Under the Act, a proponent is required to submit a Mining Proposal (MP) to the Department of Mines and Petroleum (DMP) for assessment and approval by the Director – Environment of DMP. The Mining Proposal must be of a sufficiently high standard to enable relevant government departments to undertake assessment and make an informed decision of the project’s environmental impacts and the management measures proposed to mitigate the impacts. Assessment of an MP by DMP is stated by the department as 30 working days (assuming all the necessary information is provided). This timeframe varies and is dependent on staff resources and experience.

The provisions in the Act enable the Minister to impose management measures (conditions) on the tenements, especially in those areas which may not have been adequately covered by the MP. Typical additional conditions relate to submission of an annual environmental report, imposition and submission of unconditional performance bonds and a requirement to submit a supplementary MP prior to any expansion or proposed modification to the mining operation.

The bonds take the form of an agreement between a financial institution (a bank) and the Minister for Mines to ensure that the State has financial protection in cases of proponent default. The Minister is able to call in the bond at any time and the bank must provide the money within seven days of the Minister’s request. The Minister has no interest in the arrangements made for the bond between the proponent and the financial institution.

The bond rate in WA is calculated on a rehabilitation rate per hectare for the various types of disturbance and is imposed separately on each lease. A staged bond is imposed annually. The amount of the bond money imposed on each separate tenement can only be used on that specific tenement, i.e. there is not a total “project” bond amount in WA. In other States of Australia, the bond amount is the total amount estimated to rehabilitate the site. Examples of mine rehabilitation are presented in Fig. 3 – 5.

The DMP has an Environment Division which undertakes assessments and inspections of prospecting, exploration and mining operations within WA.



Figure 3. Rehabilitated mine haul road.



Figure 4. Rehabilitated mine waste dump in central WA – 10-11 year old rehabilitation.



Figure 5. Rehabilitated mine waste dump - 3 year old rehabilitation.

### **Environmental Protection Act 1986**

This Act provides standards for environmental protection within WA. It also ensures that environmental impact assessments are undertaken for those projects that “*may have a significant impact on the environment*”. This clause is important as it requires a subjective interpretation of the term “significant”. The Act ensures that environmental assessments are undertaken and approves projects with conditions. The Act also ensures that projects operate with appropriate environmental controls and provides for inspection and auditing activities. Clearing of native vegetation throughout WA is assessed under this Act.

Under this Act, mining proposals are assessed for approval under Part IV and are operated (or licensed) under Part V.

#### **Part IV Assessments**

For mining proposals, to reduce the assessment workload on the Office of the Environmental Protection Authority (EPA), a Memorandum of Understanding (MOU) has been signed between the Director-General of the DMP and the Chairman of the EPA. This MOU sets down guidelines which enable the environmental officers in the DMP to assess whether the proposed project requires referral to the EPA. For example, the following projects would require referral of the proposal to the EPA:

- ◆ Removal (mining) of more than 10 Million tonnes per annum (Mtpa) of ore and waste rock
- ◆ Ore treatment rate in excess of 2 Mtpa
- ◆ Proposed project located within or within 2 km of the boundary of a conservation reserve or National Park
- ◆ Located within 2 km of the coast or an occupied town site
- ◆ Within 50 m of a known Aboriginal site.

If a proposal is referred to the EPA (either by the proponent, the public or the DMP), the EPA will decide whether to assess the project formally (i.e. put the proposal before the public for review) or not assess it formally. If it is not formally assessed, it is then managed by the relevant Department (e.g. DMP). There are four levels of formal assessment:

- ◆ Assessment on Referral Information (ARI)
- ◆ Environmental Protection Statement (EPS)
- ◆ Public Environmental Review (PER)
- ◆ Environmental Review and Management Programme (ERMP).

The levels of formal assessment relate to the complexity of the proposal and the significance of the impact on the environment. The period for public review varies between 4-8 weeks for a PER and 8-16+ weeks for an ERMP.

The EPA may make a fifth decision – that a Proposal is Unlikely to be Environmentally Acceptable (PUEA) – and reject a proposal.



During the assessment process undertaken by the EPA, a decision making body (e.g. DMP) is not permitted to give its approval until the EPA Minister's decision is known. The formal assessment process often takes 9-12 months for a PER and two years for an ERMP.

The Minister for the Environment may also impose a performance bond on any project in addition to any DMP bond, but more particularly, on those projects on which DMP is unable to impose a bond.

### **Part V Assessments**

The Department of Environment and Conservation (DEC) manages this part of the Act. The DEC requires a proponent to have a Works Approval granted to enable construction of a "prescribed premises". There are 95 prescribed premises described in the regulations and for the mining industry, these relate mainly to processing plants, tailings facilities, heap leach processes, discharge pipelines (water/tailings/effluent), sewage works, landfill and power generation plants.

A Works Approval basically is a proponent's licence to construct. Grant of a Works Approval normally takes 10-12 weeks and is subject to public appeal.

In addition, a mining proponent requires a licence to operate a prescribed premises. A licence also takes 10-12 weeks to be assessed and granted and must be held from commissioning of a plant or other facility.

Part V also administers the State-wide native vegetation clearing approval system. This process is quite convoluted and too detailed to be included in this paper.

### **Rights in Water and Irrigation Act 1914**

This Act protects the surface and ground waters of WA. For the mining industry, this means that a proponent must hold a valid licence to construct surface water dams, construct or install bores or wells, to abstract water from bores or wells or from surface dams.

In addition, the act protects the beds and banks of rivers (including ephemeral streams and drainage lines) and a permit is required to disturb, damage or destroy the bed or banks of a river.

### **Wildlife Protection Act 1950**

This Act protects all native (indigenous) flora and fauna in WA. Fauna protection includes vertebrates, invertebrates and subterranean fauna (Fig. 6 and 7). Lists of protected plants and

animals are issued regularly by the Government. Approval must be obtained to damage or destroy any of the species on those lists.



Figure 6. Western Pygmy-possum  
*Cercartetus concinnus*



Figure 7. Mound created by the endangered malleefowl  
*Leipoa ocellata*

### **Aboriginal Heritage Act 1971**

This Act only protects heritage sites, archaeological and ethnographic sites. It is illegal under this Act to damage or destroy any known site.

Matters relating to indigenous land ownership are managed by the Federal Native Title Act 1993 and will not be discussed further.

### **Conservation Estate of Western Australia**

Approximately 8.0% (21,000,000 ha) of WA is contained within the conservation estate. This estate is encompassed throughout all of WA from the tropical north to the arid interior and the forests of the Southwest.

By legislation, all areas of conservation estate are open to mining. However, access to the estate depends at the time on the policy of the government in power. For example, WA National Parks are open for mining but the project requires approval from both Houses of the State Legislature. The current policies of both of our two major parties (Liberal and Labour), mining in a National Park would be a most unlikely event.

The Southwest of WA is a World Biodiversity Hotspot and contains a World Biosphere area, the Fitzgerald River National Park, which contains approximately 1750 flora species.

## Obstacles to Development

It is recognised by both Government and the community in WA that the impact of mining and its areal extent pales in to insignificance when contrasted with agricultural and urban land development.

Even with this understanding, the mining industry is over controlled and over-managed (even micro-managed) but contributes a large amount of knowledge to the biological resources data of the State with little acknowledgement from Government and more particularly, from the Public Service. New flora and fauna species have been identified purely as a result of biological studies commissioned by industry.

Greater scrutiny is given to mining projects than land developments. Duplication in the assessment process by different government departments often sees timelines significantly increased to the extent that can impact the economic viability of a project.

Although governments set policy, a number of departments have “internal” policies that often conflict between departments or appear to have been developed specifically to reduce or prevent development of areas of the State deemed by these departments to be significant conservation areas, even without any evidence or scientific knowledge.

These ‘conservation significant areas’ are generally identified by self-interest groups or individuals within government departments and they usually lack scientific credibility. In many cases, the mining industry has to then “prove” that these significance bases for the department “policy” are incorrect, rather than the department being required to show data supporting an area’s conservation value. These significance bases are highly subjective, and while the use of the term ‘precautionary principle’ has its merit, it is a term often abused by government departments to support their own interests.

In addition, the industry constantly has to counter the hidden agendas of public service personnel that are outside the policy and guidelines issued by their respective departments.

The Governments that are in power at the time need to take action and set clear policies and guidelines which then must be adhered to by the departments (and industry) to enable industry to operate and develop new and old resources.