

FINAL REPORT

Scorecard of Mining Project Approval Processes

Prepared for

Minerals Council of Australia

8/51 Queen Street
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24 May 2006

43283191



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Date: **24 May 2006**
Reference: 43283191
Status: Final report

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Executive Summary

This report presents the results of a one-day workshop involving key consulting firms with exploration and mining project approvals experience across Australia. The consultants developed a ‘scorecard’ for the purpose of assessing and comparing approval processes in seven state and territory jurisdictions.

The aim of the exercise was, firstly, to objectively define areas of concern to frequent users of the statutory approvals systems across Australia and, secondly, to engage with governments in a process to address the identified weaknesses and thereby, increase the efficiency of those systems. This work comes at a time when a resources boom is placing additional stresses on statutory approvals systems.

The scorecard was directed at criteria in two key areas, specifically:

A. How well the policy and regulations are *designed* in each jurisdiction.

Policy and regulatory design was scored against the criteria including: institutional framework, clarity of policy objectives, stakeholder input & appeals, opportunity and efficiency of chosen regulatory measures in achieving policy outcomes.

B. How well these policies and arrangements are *administered* in each jurisdiction.

The policy and process administration was scored against the following criteria: clarity of process; timeliness; compliance cost; government agency capacity; predictability and certainty; and effectiveness in achieving policy outcomes.

The assessment included 17 issues the consultants deemed were important in effecting mining investment, including environmental, mining specific, land access and other issues. Processes relating to each issue were given a score on a scale of 1 (poor) to 5 (very effective) relative to their perceived ability to meet the Mineral Council of Australia’s defined goal for mining industry regulation. This goal relates to the achievement of nationally consistent, efficient, effective, transparent and non-prescriptive processes based on common standards and codes of practice. The MCA is not endeavouring to reduce prevailing standards for environmental protection or safety management.

The results demonstrate that while there is variation between jurisdictions in the quality of the processes in place for obtaining approvals, the total scores for each jurisdiction were not markedly different (i.e. there were no stand-out States or Territories). Rather, substantial differences were recorded between jurisdictions on various issues and between issues in the same jurisdiction.

Processes generally scored higher in their design than in their administration. This reflects a common observation by the consultants that there is a major problem with the skills and resources available in government agencies and with the co-operation displayed between agencies involved in the approvals processes. The prevailing view is that Government agencies are inadequately resourced and changes in staff, amongst non-mining agencies in particular, creates serious problems for the processing of timely and informed responses to mining related applications.

Processes that scored highly include environmental impact assessment processes in New South Wales; mining tenure in the Northern Territory; native title in South Australia; and private land access in Victoria.

Executive Summary

Processes that scored poorly included the Commonwealth's environmental impact assessment processes; South Australian Native Vegetation Management; New South Wales private land access and Western Australian mining tenure.

The results of the workshop should be considered as the best judgement of selected consultants with extensive experience of approval processes to this point in time. Challenges in analysis included the significant variation in mine approval processes undertaken between jurisdictions and that some processes are currently undergoing change and are yet to be fully tested. These issues aside, the assessment does show that information exists from which jurisdictions can learn about options for improving their project approvals processes. It is vital that initiatives are taken to promote this learning in order to achieve rational change for the benefit of the mining industry and the broader community.

In February 2006 URS Australia, on behalf of the Minerals Council of Australia, completed the National Audit of Regulations Influencing Mining Exploration and Project Approval Processes (“The National Audit”). This work:

- mapped the processes for gaining mining and exploration project approvals in each Australian jurisdiction;
- highlighted areas where problems currently exist; and
- explored ways in which reform of these arrangements could be achieved for the benefit of the mining industry *without* lowering standards for managing environmental or social issues.

This study found that the design of regulatory frameworks in each jurisdiction differed significantly despite having similar policy objectives. Significant differences between jurisdictions were noted in the way these frameworks are administered and in the mining industry’s compliance obligations.

The National Audit found that, as a general rule, long established policy objectives, such as those relating to access to mineral rights, such as exploration and mining tenement licensing systems, are clear and well understood as the regulatory systems have been established and refined over a long period. The principle concerns of industry relate to the regulatory systems for currently evolving policy objectives especially those involving environmental protection and land and water access.

As well as specific approvals processes, general concerns were reported about the resources available to government agencies and the extent and effectiveness of co-operation between agencies in a given jurisdiction.

The complexity of arrangements in each jurisdiction prevented a quantitative assessment of the performance of approval processes in each jurisdiction from being conducted under the National Audit. A rigorous quantitative assessment to quantify timelines, costs, and other measures of performance would be a major task. Rather than to attempt such a project in the first instance, it was considered by MCA that it would be useful to first draw on the experience of consulting firms who are active in assisting mining companies, and governments, to complete project approvals around Australia. These firms experience first-hand the systems that operate in each jurisdiction and are thus in a good position to compare these systems and to score them.

The qualitative assessment (albeit using a quantitative scale) approach used has provided a rapid, but effective, way of indicating the relative performance being achieved in each jurisdiction across a range of issues. This assessment entailed the development and completion of a comprehensive ‘scorecard’ to document the consultants’ experience and perceptions. This report outlines the process for conducting this exercise and the results that were produced.

The assessment was conducted by a panel of consultants with extensive experience in the mining industry. The panel was formed comprising a representative from the following consulting firms to provide input for the jurisdiction they hold particular expertise as stated below:

- Enesar Consulting Pty Ltd – Victoria and Tasmania
- Environment Action Pty Ltd – New South Wales
- GHD - Queensland
- Sinclair Knight Merz Pty Ltd – Western Australia and Northern Territory (indigenous only)
- URS Australia Pty Ltd – Victoria, South Australia, and Northern Territory

The experience of these firms in exploration and mining project approvals is summarised in Appendix 2.

2.1 Key issues

The mining exploration and project approvals processes were divided around 17 key issues.

These are listed below. The 17 issues were those considered most important in influencing investment decision-making for mining projects. The issues relate to four broad categories:

Category 1: Environmental issues

- Environmental impact assessment
- Native vegetation management
- Environmental standards for air pollution
- Environmental standards for noise pollution
- Fauna management

Category 2: Mining specific issues

- Exploration tenure
- Mining tenure
- Mine operating conditions

Category 3: Land access issues

- Crown land access
- Private land
- Access to land under pastoral leases
- Indigenous land access
- Native title

Category 4: Other issues

- Planning approval
- Water access
- Water management (which includes discharge of water from mine sites)
- European and indigenous cultural heritage

2.2 Assessment criteria

In developing the criteria for assessing the design and performance of approvals processes the principles for good government developed by the Council of Australian Governments were drawn upon. These principles provided a basis for how Australian governments should design their policies in order to best meet the interests of their citizens. For further information on these refer to the following weblink: <http://www.coag.gov.au/meetings/250604/coagpg04.pdf>

The assessment criteria were divided into two key areas:

- A. How well the policy and regulations are *designed* in each jurisdiction; and
- B. How well these policies and arrangements are *administered* in each jurisdiction.

2.2.1 Assessing the design of policies and regulations

The design of policies and regulations was assessed according to the following criteria:

1. *Clarity of Processes.*

For approvals processes to be effective, there must be clarity in what they are actually trying to achieve. Policies without a clear objective make it difficult for governments to implement and for mining companies to adhere to them.

2. *Institutional Framework.*

This criterion relates to the way that government organizations have been designed to manage approvals processes in each jurisdiction. This includes the extent to which the responsibility for key policy areas has been allocated to specific departments and the degree to which processes exist to ensure that departments work well together in achieving outcomes for the whole government.

3. *Stakeholder Input & Appeals.*

An important element of gaining project approvals is to ensure that all parties affected by a development have the opportunity to provide input on the concerns they have. Furthermore, all parties including proponents should have the right to appeal any decision made by a government department that may have a significant impact on a mining project.

4. *Efficiency of Chosen Regulatory Measure.*

This criterion relates to the selection of specific tools to implement a policy objective. For example, detailed and constant supervision of a mine site by government officials is a less efficient mechanism than a more flexible approach which requires companies themselves to document and demonstrate to the regulator their success in achieving compliance.

2.2.2 Assessing Administration and Compliance

The criteria for assessing the administration and compliance for each issue reflects the key factors that are important to mining companies in assessing needs, planning and financing investments in exploration mine development and expansion projects. These include the following five factors.

1. *Timeliness*

Time delays have an important impact on mining companies due to the costs of finance and for achieving a positive return on investment from operations. These can be negatively affected when significant

investment is required in developmental activities undertaken in advance of operational cash flow. In assessing timeliness consideration was given to the fact that sufficient time is required to undertake approvals processes properly. Furthermore approval process can sometimes be delayed by echelon changes in hazard model concepts.

The latter issues aside, an approval process for a major mine will require at least several months to undertake properly. Low scores against this criteria reflect cases where the consultants believe excessive time is required to undertake assessments properly. This is especially due to lengthy waiting periods for receiving feedback and responses from regulators and requests by the regulators for additional data on aspects not previously foreseen as being necessary for evaluation.

2. Compliance cost

Mining companies have a goal of maximizing returns to shareholders. They will always prefer regulations that allow them to achieve outcomes at lower cost without comprising their social and corporate responsibility to meet best practice. Compliance to regulatory approval processes can impose significant costs that have the potential to cause projects to be uneconomic. Assessment against this criterion was used to highlight areas where costs were considered to be excessive when compared to best practice situations.

3. Government Agency Capability

This criterion relates to the number, skills and experience of staff in government agencies involved in conducting mining project approvals. This is an important area as it can have a major bearing on the time and cost taken to achieve approval. More effective outcomes will always be achieved when government staff are knowledgeable of mining operations, issues affecting mining and regulations that apply to the mining industry.

4. Predictability and Certainty

Mining projects are often complex and inevitably evolve over time with the final project often being substantially different to the original proposal. This can create uncertainties in the approvals process. With this in mind, this criterion reflects the effectiveness of: regulators to communicate the standards by which they expect mining projects to achieve; and the application of the approvals processes in providing consistent and predictable outcomes across all issues. This criteria really asks the question: “To what extent are two identical mine development projects in the same jurisdiction likely to receive a similar approvals journey?”.

5. Effectiveness

This criterion reflects the success with which policies and regulations actually achieve their outcome. For example, “Do the native vegetation regulations in Western Australia achieve better native vegetation

management?” or “do Victorian noise pollution management arrangements protect the community from exposure to excessive noise pollution?”.

6. Transparency

An additional criterion of ‘transparency’ was applied to the environmental impact assessment process. The consultants agreed that this aspect is particularly important given the complexity of assessments and the number of stakeholders involved. In such a process it is important that all interested stakeholders are aware of how decisions were made.

2.3 Assessment score

Under each criterion a score of 1 to 5 was given by the panel of consultants. This score is based on the consultants’ opinion as to the extent that the MCA’s goal (outlined below) is met for *that* issue in *that* jurisdiction. A score of “1” reflected that policy and regulations in that jurisdiction are “poor” in achieving this goal while a score of “5” reflects that policy and regulations are “very effective” in achieving this goal. A score of 5 essentially represents ‘best-practice’.

MCA goal: "The Minerals Industry seeks nationally consistent project approval processes that encourage continuous improvement in environmental and social outcomes. The industry does not seek reduced or lesser standards. The nationally consistent project approval processes should be *efficient, effective* and *transparent* and *non-prescriptive* and based on common standards and codes of practice."

The scores were developed during a workshop with a representative from each consulting firm to provide input for the jurisdiction they have particular expertise. Following the workshop, the consultants reviewed the scores provided for their jurisdiction they represented, in consultation with colleagues within their organisation. The product of this process is the results presented in section 3.

The results should be considered as the best judgement of a select number of consultants from participating consulting companies. Uncertainty exists in some cases where policy and regulations are undergoing changes, or where changes have recently been made but are yet untested. These cases are noted below – a particularly important example is the recent significant reform to the New South Wales planning arrangements. In addition, some inconsistency in scoring may derive from the very different numbers of project approvals and project complexity which exist between the various jurisdictions.

The results of the consultants’ assessment are presented below. For each issue assessed in each jurisdiction, a matrix was completed covering all criteria. Figures that are *underlined* represent *preliminary results* – where processes have recently changed or are undergoing reform. Details about these areas of uncertainty are provided in notes to each table.

3.1 Environmental issues

3.1.1 The environmental impact assessment process

In making an assessment of the Commonwealth process, a distinction has been made between those jurisdictions where bilateral agreements under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 exist and those where no bilateral agreements exist, namely New South Wales, Victoria, and South Australia. This distinction is based on the consultants’ experience that Commonwealth environmental processes operate better in those jurisdictions where agreements are in place. This highlights the importance of developing bilateral agreements in those jurisdictions where they currently do not currently exist.

Table 3-1: Results for Environmental Assessment Processes

| | Assessing the design of policies and regulations | | | | | | Assessing administration and compliance | | | | | Average |
|--------------------|--|------------------------------|-----------------------------|---|--------------------|------------|---|----------------------------|------------------------------|---------------|--------------|------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | Transparency | |
| NSW | 5 | 4 | <u>4</u> | 5 | 3 | 4 | <u>5</u> | <u>4</u> | <u>3</u> | <u>3</u> | 5 | 4.1 |
| Vic | 3 | 4 | 5 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3.2 |
| Qld | 3 | 4 | 4 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 4 | 3.1 |
| W.A | <u>3</u> | 4 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3.2 |
| S.A | 3 | 4 | 2 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 3.5 |
| Tas | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 3.5 |
| NT | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 4 | 2 | 3 | 3 | 2.6 |
| Cth (no bilateral) | 5 | 3 | 1 | 2 | 4 | 4 | 3 | 1 | 2 | 1 | 2 | 2.5 |
| Cth (bilateral) | 5 | 3 | 1 | 4 | 4 | 4 | 4 | 1 | 2 | 1 | 2 | 2.8 |

Notes to the assessment

- **NSW:** In late 2005 there were significant changes to the Environmental Planning and Assessment Act 1979. This included new arrangements in the way that Major Projects, including most mining projects, are assessed and approved. To date, new Major Projects have been subject to transitional arrangements. None have had experience of the new processes from planning inception to approval under the new regime. The NSW Government’s (principally Department of Planning) delivery and implementation of these reforms for real projects is at this time largely untested. The assessment scores reflect an improvement in the institutional and regulatory arrangements for Major Projects. Time is required to evaluate whether the planning reform promises can actually be effectively and efficiently implemented as promised.
- The EIA process in Western Australia will be influenced by the establishment of the Office of Development Approvals (ODAC). This new arrangement provides some scope for improvement but remains untested. Scores are based on the experience of Western Australian arrangements in recent years.

3.1.2 Native vegetation management

Table 3-2: Results for Native Vegetation Management Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 5 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3.7 |
| Vic | 4 | 4 | 5 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3.0 |
| Qld | 4 | 4 | 4 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3.0 |
| W.A | 4 | 4 | 5 | 3 | 4 | 2 | 3 | 2 | 3 | 3 | 3.3 |
| S.A | 3 | 4 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2.6 |
| Tas | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 3 | 3.3 |
| NT | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2.9 |

Notes to the assessment

- **NSW:** These scores are largely aligned with EIA Process, however there has been little experience as to how native vegetation management will be implemented for Major Projects (mines) by the Department of Planning rather than Department of Environment and Conservation (DEC) alone following the planning reforms. Currently in draft development by DEC is a Biodiversity Banking regime that could significantly modify the process for evaluating vegetation community characteristics/value (positive or negative) if it becomes applicable to mining projects.

- **Victoria:** There is some uncertainty with the Victorian arrangements consequent upon the development of new arrangements such as the “Bushbroker” scheme. This is an area of ongoing development, thus the assessment scores for predictability and uncertainty has been marked as preliminary.
- **WA:** Low score reflects ongoing changes in the relevant government agencies. Shortage of resources to process Clearing Permits has been recognised by the Department of Environment and the Department of Industry and Resources as a contributing factor to approval delays.

3.1.3 Environmental standards for air pollution

Table 3-3: Results for Air Pollution Management Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3.5 |
| Vic | 5 | 5 | 5 | 5 | 2 | 3 | 2 | 3 | 2 | 2 | 3.4 |
| Qld | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 2 | 3 | 3.7 |
| W.A | 5 | 5 | 4 | 5 | 3 | 3 | 2 | 3 | 3 | 3 | 3.6 |
| S.A | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4.0 |
| Tas | 4 | 2 | 3 | 5 | 4 | 4 | 2 | 3 | 3 | 2 | 3.2 |
| NT | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2.8 |

Notes to the assessment

- **NSW:** Scores are largely aligned with new EIA Process & Planning Approval regimes but mines remain subject to licensing by Department of Environment and Conservation (DEC). However there has been no indication to date that there would be any effective change in how air quality standards are determined and implemented for mining projects.
- Air pollution assessments are based on the National Environment Protection Measures (NEPM) guidelines, while the Queensland and Western Australian processes also use the NEPM guidelines but also have site-specific guidelines for major industrial areas.

3.1.4 Environmental standards for noise pollution.

Table 3-4: Results for Noise Pollution Management Processes

| | Assessing the design of policies and regulations | | | | | Assessing administration and compliance | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|--------------------|---|-----------------|----------------------------|------------------------------|---------------|------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 3.8 |
| Vic | 5 | 5 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.8 |
| Qld | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3.7 |
| W.A | 5 | 5 | 4 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3.7 |
| S.A | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4.0 |
| Tas | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3.8 |
| NT | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2.8 |

3.1.5 Fauna management

Table 3-5: Results for Fauna Management Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|--------------------|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 3.5 |
| Vic | 5 | 4 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3.7 |
| Qld | 4 | 3 | 4 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2.9 |
| W.A | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3.3 |
| S.A | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4.0 |
| Tas | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3.7 |
| NT | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 3.2 |
| Cth (no bilateral) | 5 | 3 | 1 | 2 | 4 | 4 | 3 | 1 | 2 | 1 | 2.6 |
| Cth (bilateral) | 5 | 3 | 1 | 4 | 4 | 4 | 4 | 1 | 2 | 1 | 2.9 |

Notes to the assessment

- Scores for New South Wales scores have been marked as preliminary due to the new planning arrangements in the State as noted earlier regarding native vegetation management.

3.2 Mining specific issues

3.2.1 Exploration tenure

Table 3-6: Results for Exploration Tenure Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4.2 |
| Vic | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4.8 |
| Qld | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4.8 |
| W.A | 5 | 5 | 5 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 4.1 |
| S.A | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4.5 |
| Tas | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4.7 |
| NT | 4 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4.6 |

Notes to the assessment

- Scores for Western Australia are based on general knowledge of the consultant, given that no direct involvement has occurred for obtaining exploration tenure for mining industry clients.

3.2.2 Mining tenure

Table 3-7: Results for Mining Tenure Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | Average | |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------|---------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | | Effectiveness |
| NSW | 5 | 5 | 2 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.7 |
| Vic | 5 | 5 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4.4 |
| Qld | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 4.2 |
| W.A | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.9 |
| S.A | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4.4 |
| Tas | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| NT | 4 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4.6 |

Notes to the assessment

- Scores for Western Australia are based on general knowledge of the consultant, given that no direct involvement has occurred for obtaining exploration tenure for mining industry clients.

3.2.3 Mine operating conditions

Table 3-8: Results for Mine Operating Conditions Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3.2 |
| Vic | 5 | 4 | 4 | 4 | 5 | 3 | 3 | 3 | 3 | 4 | 3.8 |
| Qld | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3.8 |
| W.A | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3.7 |
| S.A | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4.3 |
| Tas | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 4.3 |
| NT | 4 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.8 |

3.3 Land access issues

3.3.1 Crown land access

Table 3-9: Results for Crown Land Access Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | Average | |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------|---------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | | Effectiveness |
| NSW | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3.7 |
| Vic | 3 | 5 | 3 | 2 | 4 | 2 | 3 | 2 | 3 | 3 | 3.0 |
| Qld | 4 | 5 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 3.5 |
| W.A | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 3.6 |
| S.A | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3.7 |
| Tas | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 3.5 |
| NT | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Notes to the assessment

- Scores for Western Australia are based on general knowledge of the consultant, given that no direct involvement has occurred for obtaining crown land access for mining industry clients.

3.3.2 Private land

Table 3-10: Results for Private Land Access Processes

| | Assessing the design of policies and regulations | | | | | Assessing administration and compliance | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|--------------------|---|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2.7 |
| Vic | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 4.2 |
| Qld | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3.3 |
| W.A | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3.4 |
| S.A | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3.7 |
| Tas | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 3.5 |
| NT | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Notes to the assessment

- Scores for Western Australia are based on general knowledge of the consultant, given that no direct involvement has occurred for obtaining private land access for mining industry clients.

3.3.3 Access to land under pastoral leases

Table 3-11: Results for Pastoral Lease Land Access Processes

| | Assessing the design of policies and regulations | | | | | Assessing administration and compliance | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|--------------------|---|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2.7 |
| Vic | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Qld | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.7 |
| W.A | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3.4 |
| S.A | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3.7 |
| Tas | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3.9 |

Notes to the assessment

- Scores for Western Australia are based on general knowledge of the consultant, given that no direct involvement has occurred for obtaining pastoral lease access for mining industry clients.

3.3.4 Indigenous land access

Table 3-12: Results for Indigenous Land Access Processes

| | Assessing the design of policies and regulations | | | | | Assessing administration and compliance | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|--------------------|---|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2.7 |
| Vic | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Qld | 3 | 5 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2.2 |
| W.A | 3 | 3 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | 4 | 3.1 |
| S.A | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.0 |
| Tas | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT | 4 | 4 | 4 | 3 | 4 | 2 | 4 | 3 | 3 | 4 | N/A |

Notes to the assessment

- **NSW:** Indigenous land in this context is regarded as land which is effectively now freehold land held by a Local Aboriginal Land Council that was claimed under Aboriginal Land Rights Act 1983.

3.3.5 Native title

Table 3-13: Results for Native Title Processes

| | Assessing the design of policies and regulations | | | | | Assessing administration and compliance | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|--------------------|---|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 2 | 3.1 |
| Vic | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 3.7 |
| Qld | 4 | 4 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2.5 |
| W.A | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2.8 |
| S.A | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4.3 |
| Tas | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| NT | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2.8 |

Notes to the assessment

- **Tasmania:** Native Title was not included as it was not deemed a major issue in this jurisdiction.

3.4 Other issues

3.4.1 Planning approval

Table 3-14: Results for Planning Approvals Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | Average | |
|-----------|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------|---------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | | Effectiveness |
| NSW-Pt3 A | 5 | 5 | 4 | 5 | 4 | 3 | 5 | 3 | 4 | 4 | 4.2 |
| NSW-Pt4 | 3 | 5 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3.4 |
| Vic | 4 | 4 | 3 | 4 | 5 | 3 | 4 | 3 | 4 | 4 | 3.8 |
| Qld | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 3.6 |
| W.A | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3.9 |
| S.A | 3 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 4.0 |
| Tas | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| NT | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Notes to the assessment

NSW: Similar comments as for EIA Process above. The design of policies and regulation are near to best practice. However, the entire administration and compliance implementation scorecard is preliminary only while the planning reforms are tried and tested. NSW planning was split between approvals for small projects (approved by local government under Part 4 of the EP&A Act) and large projects (approved by the Minister for Planning under Part 3A of the EP&A Act). While at the time of writing there had not been mining project applications lodged, assessed and approved wholly under the new Part 3A provisions, it is anticipated that this will provide particular advantages for compliance cost, predictability and certainty for mining project developments.

3.4.2 Water access

Table 3-15: Results for Water Access for Mining Operations Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| Vic | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3.4 |
| Qld | 2 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3.2 |
| W.A | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| S.A | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3.7 |
| Tas | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| NT | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 3.2 |

Notes to the assessment

- NSW:** The Part 3A EP&A Act planning reforms provide for by-passing of certain approvals and licensing requirements of the Water Management Act 2000. Hence, these factors are now within the assessment and approvals regime of the Department of Planning and, accordingly, largely reflect *Planning Approval*, above. As with *Planning Approval*, these scores are also regarded as provisional while the new system becomes fully introduced in practice for mining projects.

3.4.3 Water management

Table 3-16: Results for Water Management on Mine Sites Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| Vic | 2 | 1 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2.3 |
| Qld | 3 | 4 | 4 | 4 | 2 | 3 | 3 | 3 | 3 | 3 | 3.2 |
| W.A | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3.4 |
| S.A | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3.7 |
| Tas | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 3.7 |
| NT | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3.7 |

Notes to the assessment: NSW - as for water access.

3.4.4 Cultural heritage

Table 3-17: Results for Cultural Heritage Processes

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average |
|-----|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|---------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3.8 |
| Vic | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.0 |
| Qld | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 3.6 |
| W.A | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 3.5 |
| S.A | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.0 |
| Tas | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 4 | 3.7 |
| NT | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3.8 |

Notes to the assessment:

- **NSW:** This issue is also reliant on incorporation in the new planning reforms. Although the Department of Planning will be responsible for the key assessment and approval role for cultural heritage, new guidelines covering these matters are not yet finalised.
- **Victoria:** New draft legislation has been developed on this issue which creates some uncertainty about the cultural heritage process in this State. The scores provided represent an assessment of the performance of existing arrangements.

4.1 Summary of design and administration criteria scores

The average scores for each jurisdiction, shown in Table 4-1 are quite similar. As discussed further below, differences are recorded between jurisdictions on issues or between issues for a given jurisdiction.

The amalgamated results presented in Table 4-1 also illustrate that processes generally scored higher for their design than for their management. This reflects a common observation made by the consultants that there is a major problem with staffing, expertise and resources available to those government departments charged with administering mining project approvals. Consultants noted discrepancies in government department capacity in dealing with issues depending on the individual assigned to the tasks and/or due to lack of continuity due to high staff turnover.

Conceptually the above result could make achieving improvements more straightforward, i.e. it may be easier to re-allocate resources rather than to redesign processes. Although attaining resources may appear quite simple, it takes substantial time to train staff and it is difficult for government to retain them. The current resources boom is characterised by a high demand for skilled personnel, which has caused remuneration packages to become increasingly attractive with higher paying salaries and additional benefits. In many cases, government departments are not able to provide competitive remuneration packages due to budgetary constraints and the potential to cause inequity with other departments. This issue is a significant problem that requires urgent attention from industry and government combined, to achieve a common goal of improving the administration of mining approvals.

Table 4-1: Average score for each jurisdiction across all criteria.

| | Average score - Design criteria | Average score - Administration criteria | Average score |
|------------------------------------|---------------------------------|---|---------------|
| NSW | 3.9 | 3.4 | 3.6 |
| Vic | 4.0 | 3.4 | 3.6 |
| Qld | 3.9 | 3.1 | 3.4 |
| W.A | 3.9 | 3.2 | 3.5 |
| S.A | 4.0 | 3.8 | 3.9 |
| Tas | 3.9 | 3.6 | 3.7 |
| NT | 3.6 | 3.3 | 3.4 |
| Commonwealth Env | 2.9 | 2.6 | 2.5 |
| Average - all jurisdictions | 3.8 | 3.3 | 3.5 |

4.2 Summary of scores by criteria

Assessment scores are amalgamated at the criteria level in Table 4-2, with a summary of the variation in scores assigned. More detailed figures are provided in Table 6-1.

In respect to Policy Design a key concern was with the processes for stakeholder input and appeals under Commonwealth environmental impact assessment, fauna, and air pollution management processes.

In respect to Process Administration and compliance criteria, government agency capacity was, scored lowest of all criteria overall. This was expected from the results of the National Audit. This is of particular concern for those agencies handling Commonwealth environmental processes and also those in Queensland. Effectiveness of the Commonwealth environmental approvals processes was also marked down heavily, as were predictability and certainty.

Particularly low scores were recorded for timeliness in Western Australia, Queensland and Victoria, and for compliance cost in Queensland, Northern Territory and Western Australia.

Table 4-2: Average score for criteria across all jurisdictions.

| Criteria | Range in scores | | Australian average | Lowest scoring jurisdiction | Highest scoring jurisdiction |
|------------------------------|-----------------|---------|--------------------|-----------------------------|------------------------------|
| | Lowest | Highest | | | |
| Institutional Framework | 3.6 | 5.0 | 4.2 | NT | Comth env |
| Clarity of policy objectives | 3.0 | 4.4 | 4.0 | Comth env | SA |
| Stakeholder Input & Appeals | 1.0 | 4.1 | 3.4 | Comth env | VIC |
| Efficiency of chosen measure | 2.7 | 4.0 | 3.6 | Comth env | Tas |
| Clarity of Process | 3.3 | 4.1 | 3.7 | NT | Tas |
| Timeliness | 2.9 | 4.0 | 3.4 | WA | Comth env |
| Compliance cost | 3.0 | 3.7 | 3.3 | Qld | SA |
| Government Agency Capacity | 1.0 | 3.8 | 3.0 | Comth env | SA |
| Predictability and certainty | 2.0 | 3.9 | 3.2 | Comth env | SA |
| Effectiveness | 1.0 | 3.8 | 3.2 | Comth env | SA |
| Total | 2.5 | 3.9 | 3.5 | Comth env | SA |

4.3 Summary of assessment scores by issue

The average score for each issue assessed is provided in Table 4-3. The assessment corresponds closely with the findings of the National Audit. The audit found that the design and operation of mining-specific issues, such as issuing mining titles, have been well refined over many years. There is however potential for improvement in the newer and evolving policy areas relating to the environment and land access.

Table 4-3: Average score for each issue assessed

| Overall performance ranking | Issue | Average score (out of a potential 5) |
|------------------------------------|---------------------------------|---|
| 1 | Exploration tenure | 4.5 |
| 2 | Mining tenure | 4.1 |
| 3 | Mine operating conditions | 3.8 |
| 4 | Planning approval | 3.8 |
| 5 | Cultural heritage | 3.8 |
| 6 | Noise pollution standards | 3.7 |
| 7 | Water access | 3.6 |
| 8 | Crown land access | 3.5 |
| 9 | Land access - pastoral leases | 3.5 |
| 10 | Private land access | 3.5 |
| 11 | Air pollution standards | 3.5 |
| 12 | Water management | 3.4 |
| 13 | Fauna management | 3.3 |
| 14 | Native title | 3.2 |
| 15 | Environmental impact assessment | 3.2 |
| 16 | Native vegetation management | 3.1 |
| 17 | Indigenous land access | 3.1 |

4.4 Summary of the difference in scores between jurisdictions

As noted above, there is a tendency for jurisdictions to be strong on some issues and weak on others. Results for this variation are presented in Table 4-4 which also provides a summary of jurisdictions with low and high scores.

Table 4-4: Assessment scores by issue

| Issue | Range in scores | | Australian average | Lowest scoring jurisdiction | Highest scoring jurisdiction |
|---------------------------------|-----------------|------------|--------------------|-----------------------------|------------------------------|
| | Lowest | Highest | | | |
| Environmental issues | 2.8 | 3.7 | 3.3 | Cth & NT | NSW |
| Environmental impact assessment | 2.5 | 4.1 | 3.2 | Com (no-bilat) | NSW |
| Native vegetation management | 2.6 | 3.7 | 3.1 | SA | NSW |
| Air pollution standards | 2.8 | 4.0 | 3.5 | NT | SA |
| Noise pollution standards | 2.8 | 4.0 | 3.7 | NT | SA |
| Fauna management | 2.6 | 4.0 | 3.3 | Com (no bilat) | SA |
| Mining specific issues | 3.7 | 4.4 | 4.2 | NSW | SA |
| Exploration tenure | 4.1 | 4.8 | 4.5 | WA | Vic/Qld |
| Mining tenure | 3.7 | 4.6 | 4.1 | NSW | NT |
| Mine operating conditions | 3.2 | 4.3 | 3.8 | NSW | SA/Tas |
| Land access issues | 3.0 | 3.9 | 3.4 | NSW/Qld | SA/Vic |
| Crown land access | 3.0 | 3.7 | 3.5 | Vic | SA/NSW |
| Private land access | 2.7 | 4.2 | 3.5 | NSW | Vic |
| Land access - pastoral leases | 2.7 | 3.9 | 3.5 | NSW | NT |
| Indigenous land access | 2.2 | 4.0 | 3.1 | Qld | SA |
| Native title | 2.5 | 4.3 | 3.2 | Qld | SA |
| Other issues | 3.5 | 3.8 | 3.6 | NSW/SA | WA/Tas |
| Planning approval | 3.4 | 4.2 | 3.8 | NSW (small projects) | NSW (major projects) |
| Water access | 3.2 | 3.8 | 3.6 | Qld/NT | Several |
| Water management | 2.3 | 3.8 | 3.4 | Vic | NSW |
| Cultural heritage | 3.5 | 4.0 | 3.8 | WA | Vic/SA |

A summary of the main observations about specific issues in each jurisdiction is provided below.

New South Wales

The assessment scored New South Wales highly in the areas of environmental impact assessment, native vegetation management and water management. This partly reflects that the New South Wales Department of Planning will now be the assessor and decision-maker for numerous issues that previously had separate permits, licences and approvals under other statutes and agencies (such as flora/fauna, water access, water management, and Aboriginal cultural heritage). The positive assessment for EIA is also based on the development of a 'concept approval' option for new mining projects that are complex and staged. It is hoped that these changes will provide smoother approvals processes and provide greater certainty for companies to assist them finance projects.

Positive early indications of the new planning approval system for ‘major’ projects (\$30m investment of 100 employees) in New South Wales (with approval by the Minister for Planning) was commended in the assessment. However expectations of the process for ‘other’ projects (through local government) are low. However, as for concept approvals, this new process is largely untested - further experience with projects in a variety of provinces and scales from inception to approval will be required to test these arrangements.

However New South Wales scored poorly regarding access to *private land, pastoral leases, and indigenous land* due to fundamental deficiencies relating to “landholder veto” and interpretations of “improvements” and “agricultural land”. While obtaining land access is smooth in the vast majority of cases, potential still exists to trigger adverse processes, reflected by a markdown in administration and implementation.

Victoria

Victoria recorded the highest, or equal highest, scores in the areas of mining exploration tenure, private land access, and cultural heritage. In particular, the system for determining compensation for private landholders was viewed favorably in the assessment. Victoria also scored well for native title processes. The negotiation of Indigenous Land Use Agreements across the State, similar to those in South Australia, has generated arrangements that are very workable relative to arrangements in other jurisdictions. Admittedly, Victoria tends to have fewer native title claims than some other jurisdictions.

Areas of concern in Victoria relate to water management and crown land access. In particular the consultants noted specific experiences of difficulty in obtaining clearances, for example for dewatering operations which essentially resulted in the extraction from an aquifer for immediate return to the same aquifer. Uncertainty about the creation of parks and reserves is one area of concern regarding crown land.

Queensland

The assessment was positive for Queensland in the areas of air pollution standards and exploration tenure. Queensland tended to record scores in the middle range relative to other jurisdictions.

Queensland scored poorly in the areas of developing mine operating conditions, indigenous land access, native title, and water access approvals. Indigenous land in Queensland exists as Deed of Grant in trust (DOGIT). While no right to veto exists for this process, the consultants’ experience is that this is a time-consuming process largely due to the negotiation and appeals processes. Scope exists for its improvement. The poor scores for Queensland under native title reflect the consultants’ experience of excessive delays and costs regarding the treatment by native title administrators that ‘no response’ is deemed to be ‘no objection in principle’. For example, several cases have occurred where responses come much later in the process but were still admitted.

Western Australia

Western Australia scored highly in native title and poorly in exploration tenure and cultural heritage. The low score for exploration tenure partially reflects the inability of the Western Australian agencies to keep up with the large quantity of applications. Some uncertainty exists towards the improvement of the Western Australian assessment process given the new Office of Development Approval Co-ordination, which the industry keenly hopes will contribute to more efficient and streamlined project approvals practices.

South Australia

A stand out for South Australia is its high score for native titles processes. South Australia's Mining Act is the only one in Australia incorporating a program to settle Native Title, which removes the interaction between State and Commonwealth legislations. Furthermore, regional ILUAs (Indigenous Land Use Agreements) for exploration activities, negotiated between the government, industry and aboriginal groups have assisted greatly in delivering streamlined processes in this area.

A low scoring area for South Australia is native vegetation management. This reflects experience that the guidelines for native vegetation offsets are overly complex which results in excessive cost and time delays and a lack of clarity and predictability for mining projects.

Tasmania

Tasmania was assessed to have better processes for fauna management and mining operating conditions. There were not many issues for which Tasmania stood out for being a particularly poor or good performer. This may reflect the lack of mining projects in the State in recent years which reduces the number of cases with which to test these processes. As shown in Table 4-1, Tasmania had the second highest aggregate score, albeit by a slim margin. Tasmania was in the top 3 jurisdictions for exploration tenure which is some reflection of the existence of its prospectivity zones which are favorably recognized by the mining industry. It also had a relatively high average score for the administration criteria possibly reflecting its small size and the ability for closer relationships to develop between companies and government agencies.

Northern Territory

The Northern Territory scored well for mining tenure which may reflect the single point of contact with Department of Primary Industries Fisheries and Mines. Indigenous land access was also scored highly relative to other jurisdictions, possibly reflecting the extensive experience of this issue in the Territory. However, this is in the context a low total score for the management of this issue in relevant jurisdictions.

Issues of concern shown by the consultants' scores are in the areas of water access, native vegetation management and noise pollution standards. In the Northern Territory noise pollution is managed using a complaints based systems, a reflection of its relatively sparse population distribution. An area of change

regarding environmental assessments in the Northern Territory is the ongoing development of a new Environment Protection Agency.

Commonwealth

The Commonwealth was scored poorly for the issues of Environmental Impact Assessment (particularly for jurisdictions without a bilateral agreement), air pollution standards, and fauna management. This raises the important point that bilateral agreements for assessments under the EPBC Act needs to be progressed between the Commonwealth and New South Wales, Victoria and South Australia as a matter of urgency. While not being brought out in the scoring exercise, an important issue raised by industry has been the overlap between State/Territory and Commonwealth cultural heritage assessment processes.

URS Australia Pty Ltd (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Minerals Council of Australia and only those third parties who have been authorised in writing by URS to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the contract agreement between the Minerals Council of Australia and URS commencing on 22 March 2006.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between 22 March and 28 March and is based on the conditions encountered and information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

Table 6-1: Amalgamated scores by criteria for each jurisdiction.

| | Assessing the design of policies and regulations | | | | Assessing administration and compliance | | | | | | Average Score across all criteria |
|-----------|--|------------------------------|-----------------------------|---|---|------------|-----------------|----------------------------|------------------------------|---------------|-----------------------------------|
| | Institutional Framework | Clarity of policy objectives | Stakeholder Input & Appeals | Efficiency of chosen regulatory measure | Clarity of Process | Timeliness | Compliance cost | Government Agency Capacity | Predictability and certainty | Effectiveness | |
| NSW | 4.2 | 4.1 | 3.5 | 3.8 | 3.5 | 3.5 | 3.5 | 3.2 | 3.3 | 3.4 | 3.6 |
| Vic | 4.0 | 4.1 | 4.1 | 3.9 | 3.8 | 3.1 | 3.3 | 3.3 | 3.4 | 3.5 | 3.6 |
| Qld | 4.0 | 4.3 | 3.6 | 3.5 | 3.4 | 3.1 | 3.0 | 2.8 | 3.2 | 3.2 | 3.4 |
| W.A | 4.2 | 4.2 | 3.7 | 3.6 | 3.6 | 2.9 | 3.1 | 3.0 | 3.3 | 3.4 | 3.5 |
| S.A | 4.1 | 4.4 | 3.6 | 3.8 | 4.0 | 3.7 | 3.7 | 3.8 | 3.9 | 3.8 | 3.9 |
| Tas | 4.1 | 4.0 | 3.6 | 4.0 | 4.1 | 3.7 | 3.6 | 3.2 | 3.4 | 3.6 | 3.7 |
| NT | 3.6 | 3.7 | 3.6 | 3.5 | 3.3 | 3.4 | 3.1 | 3.3 | 3.4 | 3.5 | 3.4 |
| Comth Env | 5.0 | 3.0 | 1.0 | 2.7 | 4.0 | 4.0 | 3.3 | 1.0 | 2.0 | 1.0 | 2.5 |

Enesar: Mining Project Experience – Statutory Environmental Approvals/Advice/Support

Enesar has completed 45 Environmental and Social Impact Assessments in Australia and overseas. In Victoria it includes IPRH's West Field brown coal project, RZM's Wemen mineral sand project, Iluka Resources KWR mineral sand project and the Basslink electricity interconnector to Tasmania.

Elsewhere in Australia our projects include gold, base metals, mineral sands, oil and gas, power generation, urban development and other infrastructure (pipelines etc.). We have operational experience in every state of Australia and 34 countries.

Enesar is a specialist in the area of ESIA and is currently working on one or more ESIA's in every state of Australia.

Environment Action Pty Ltd: Mining Project Experience – Statutory Environmental Approvals/Advice/Support

The firm and its Director, Mr Peter R Smith, have had direct experience in planning, approvals and environmental management for numerous mining projects and operations in New South Wales and elsewhere. These include:

- Wallarah No2 Coal Project (Wyang Areas Coal Joint Venture)
- Bulga Open Cut Coal Mine, Hunter Valley NSW
- South Bulga Underground Mine, Hunter Valley NSW
- Clarence Colliery, Western Coalfields, NSW
- Springvale Colliery, Western Coalfields NSW
- Baal Bone Colliery, Western Coalfields NSW
- Gretley Colliery, Newcastle Coalfields NSW
- Pelton-Ellalong Colliery, Lower Hunter NSW
- Lemington Open Cut Coal Mine, including South Lemington extension
- Ulan Open Cut and Underground Mines
- Mt Thorley Coal Loader
- Eraring Power Station Coal Rail Receiving Facility

-
- Golden Grove (Scuddles) mine in WA
 - Woodcutters Mine, NT
 - Mt Thorley Open Cut Coal Mine, Hunter Valley NSW
 - Berrima Colliery, Southern Coalfields NSW
 - Hunts Creek Joint User Rail Facility
 - Invincible Colliery, Western Coalfields NSW
 - Numerous gravel extraction and quarry projects in NSW.

Environment Action is a consulting company specialising in environmental management strategies and development approval for mining, industrial and infrastructure developments. It is currently engaged in a strategic management and advisory role with a major coal mining project in NSW in the areas of Environment, Community and External Relations.

Its Director, Mr Peter R Smith, established the company in 2005 after having worked for 25 years in environmental and engineering consulting and corporate environmental management. Mr Smith fulfilled the roles of Manager, Environment with Cyprus Australia Coal/Oakbridge Ltd and Corporate Environmental Co-ordinator - Exxon Coal and Minerals Limit. Mr Smith also recently held the position as Director – Environment and Development at the NSW Minerals Council, in which he regularly reviewed and critiqued draft policy and regulation across all areas affecting the minerals industry, particularly in strategic planning, approvals, land and water management, emissions management and environment protection. This covered both industry initiatives and codes of practice as well as Commonwealth and NSW Government regulatory and policy regimes.

GHD: Mining Project Experience – Statutory Environmental Approvals/Advice/Support

Coal

- **BHP Billiton Illawarra Coal.** Dendrobium - Mining under Stored Waters. Assessment of subsidence impact from coal mining by Dendrobium Colliery within the DSC notification zone of Cordeaux Dam.
- **Rail Corporation New South Wales.** Review of Draft Mining Deed for RailCorp. Undertake a review of a draft mining deed for RailCorp where mining takes place under a RailCorp Corridor.
- **Brambles Mining & Industrial.** Ridgeway Mine Miscellaneous Works. GHD was commissioned to review and update mining and industrial plans and work processes. This

included review of environmental compliance and environmental performance enhancement opportunities.

- **Babcock & Brown Pty Limited.** Due Diligence Reviews for Bellambi Coal Mine. Due Diligence Reviews for Proposed Acquisition of Bellambi Coal Mine by Babcock & Brown Pty Limited, included complete assessment of statutory environmental compliance processes and requirements.
- **Thiess Mining.** Southland Mine Reinstatement - Review of options for management of saline water at the mine. Reinstatement advice in relation to reinstatement of a tailings dam embankment and also an open cut mine area over an underground mine.
- **Excel Mining Pty Ltd.** Wambo Rail Spur - Preparation of concept design for rail spur from Jerrys Plains Rail Spur to Wambo Mine in accordance with our letter 39211 of 8 November 2001. Included scoping study for amendments to statutory environmental requirements pertaining to changed activities.
- **Warkworth Mining Limited.** Warkworth MOP - Prepare text for mining operation plan for Warkworth Coal Mine detailing all mining and environmental activities for the next 7 years of operations.
- **Coal & Allied Mount Pleasant Mine Coal & Allied Operations P/L** GHD was engaged to assist in the preparation of a pre-feasibility report into possible integration of adjacent mining operations 29/07/2004
- **Coal & Allied Operations P/L.** West Pit MOP - Preparation of Mining Operations Plan (MOP) for next 7 years of mining and rehabilitation activity within the West Pit open cut coal mine extension, part of Coal & Allied's Hunter Valley Operations. Included review of changed environmental liabilities and statutory approvals requirements.
- **Warkworth Mining Limited.** Warkworth Mine Closure Statement - Preparation of closure statement for infrastructure costs for Warkworth Mine. Included statutory requirements negotiations with regulators.
- **Wambo Coal Pty Ltd.** Wambo Mine Environmental Management program - GHD was commissioned by Wambo Coal Pty Ltd to undertake the role of mine environmental consultant, responsible for undertaking all environmental works at the site. This project involved undertaking the Environmental Management Program over a 4 year period from 1999 to 2003, which included high volume air sampling, both PM10 and TSP (calibration and filter paper change), monthly environmental inspections/audits, water quality sampling for field, chemical and biological parameters (groundwater, piezometer network and surface water (including V-notch, Mine Water Reuse and Hunter Salinity Discharge monitoring)), dust deposition gauge monitoring, ground vibration and noise monitoring (continuous, attended monitoring and data manipulation), and maintenance of Monitoring Results Database and weather data.

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- **Wambo Coal Pty Ltd.** Environmental documents prepared included: Environmental Monitoring Report for the 2002 -2003 Wambo Annual Environmental Management Report (AEMR), Wambo AEMR for 1999-2000, 2000-2001, and 2001-2002, Mining Operation Plan (MOP), Monthly Environmental Monitoring Reports, Monthly Environmental Inspection Reports, Dewatering Borehole Erosion and Sediment Control Plan, Water Management Plan and Bushfire Management Plan.
 - **Wambo Coal Pty Ltd.** Additional environmental works undertaken on site include: contaminated site assessment for diesel spill on site, including site inspection, water monitoring and soil/stockpile sampling and the Wambo community consultation program, including involvement in the Community Consultative Committee and liaison with local landholders. The Community Liaison Program involved a community newsletter letterbox drop and survey and the establishment of a community database of the residents surrounding the Wambo Mine.
 - **White Mining Limited.** White Mining, Ashton Scoping Study - Preparation of Scoping Study for the Ashton Mine Infrastructure, including definition of battery limits and allocation of responsibilities for WML and external contractors. Study included review of environmental statutory and performance requirements.
 - **Caterpillar Global Mining Pty Ltd.** MAC Spec E 789C Review - GHD was commissioned by Caterpillar Global Mining to undertake a review of the Mount Arthur Coal Noise Specification 'E'. The review was specifically focussed on the GHD noise attenuated Caterpillar 789C class mining trucks which were acoustically attenuated on behalf of WesTrac for the end client BHP Billiton's Mount Arthur Coal open cut mine in the Hunter Valley NSW. The original acoustic / engineering design specification was to MAC Spec 'D'. The purpose of the undertaking is part of the six Sigma program which Caterpillar is involved with BHP Billiton and to ascertain the appropriateness of MAC Spec 'E' when compared specifically to the GHD noise attenuated 789C class trucks. The study involved review of widely used noise standards for mining activities.
 - **Ashtonfields Pty Ltd.** Ashtonfields - Land at Stony Pinch - Planning and investigations to support the development of a 2,000 Ha site at Stony Pinch between Maitland and Beresfield, NSW. The site is currently used as an open cut colliery and the master plan anticipates redevelopment as industrial, residential and ecological uses in an ecologically sustainable community.
 - **Exergen Pty Ltd.** Exergen Coal Resource Investigation - Reviewed location of coal deposits in Latrobe Valley. Identified potential brown coal deposits suitable for 1M t/a mine and 1000 to 2000 MW power station. Generated plans showing available coal fields, and reviewed validity of existing mining and exploration licenses with plans to acquire those necessary for ongoing works.
 - **Silcar - Yallourn Mine.** YE PCB Training (Mine) - Preparation and delivery of PCB Handling and Training Course/s for Silcar mine personnel at Yallourn Mine.
 - **Hazelwood Power.** NMITAB Hazelwood Power Mine - Represent Hazelwood Power Mine (as well as other brown coal mines on the National Mining Industry Advisory Body and associated

committees for the 2003 year. Representation covered all submissions on policy including tenement management and environmental and cultural approvals processes.

- **IPRH - West Field EES Impacts Assessment Study.** Hazelwood Mine Impact assessment study for environmental effects study for International Power Hazelwood Mine West Field development.
- **Victorian Minerals and Energy Council.** Support to Victorian Minerals and Energy Council for the development of a Protocol for Environmental Management for Mining under the State Environment Protection Policy (Air Quality Management) - funded by the Latrobe Valley mine owners.
- **Yallourn Energy.** YE Mining Licence Bond Estimate - Finalise rehabilitation stage plans update for 2002, tabulate rehab areas, show unit rates for rehab work, calculate rehab liability for "close now" and "close at end of mine life" scenarios.
- **Australian Power & Energy Ltd.** Preliminary Assessment of Flynn Mine Water Management - GHD undertook a preliminary assessment of all mine site water management issues associated with the Flynn's Creek tenement. The study identifies all the relevant water issues, possible optional strategies, statutory approvals processes and likely cost levels.
- **Hunter Valley Energy Coal - Mt Arthur Coal Pty Ltd.** MAC Underground Project Prefeasibility Risk Assessment - GHD have been commissioned to provide risk management and safety services to BHP Billiton for a proposed underground energy coal mine in the Hunter Valley. This project is an extension of an existing project by the Qest risk team. It also builds upon other project risk and HSEC work that Qest has provided to BHP, including recent work for the Illawarra Coal operation and Pilbara LNG Projects. BHP Billiton has a very robust investment review or "toll gating" process for all new major projects. The project toll gating process is a critical part of BHP Billiton's corporate governance and project risk management framework. The process requires independent risk assessments to be completed for each main project phase: Concept, Pre Feasibility and Feasibility. The level of detail for the risk assessments increases as the projects move through the toll gating process. GHD have been commissioned as the independent facilitator of risk assessment for the Pre Feasibility phase. All risk assessments are completed in line with the BHP Billiton risk management standards, which apply a semi-quantitative risk assessment process. The work involves the comparative analysis of varying mining and processing options (Business Cases) for the proposed mine, with recording of all risk information into an integrated and customised risk register database. The Pre feasibility work will cumulate in an EWRM and HSEC risk profile and treatment plan for the preferred mining option.
- **Ernest Henry Mining Pty Ltd.** Groundwater Monitoring, Ernest Henry Mine - GHD Pty. Ltd. (GHD) was engaged by Xstrata Ernest Henry Gold Mine to complete field work required for the collection of groundwater samples (purging and sampling) of the 50 bores in and surrounding the mine site. This was inclusive of their annual monitoring program as a licence requirement.

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- **BMA QLD Coal.** Saraji Coal Mine - Effluent disposal system - GHD was commissioned by BHP Billiton Coal - Saraji Mine to undertake a range of wastewater management investigations for their site. The current sewage treatment plant and effluent disposal system was reviewed to optimise STP performance (due to historical problems with solids overflow) and to investigate alternative effluent disposal options due to the current risk of effluent flow off-site and into environmentally sensitive downstream watercourses. The option of irrigating the mine's land farm (hydrocarbon remediation area) was investigated. GHD also reviewed industrial wastewater management undertaken at the mine and provided a management program for the existing oil and sediment traps. The use of oil skimmers was also investigated.
 - **Moranbah North Coal.** Moranbah North Mine Reference Plot Monitoring - The Moranbah North Environmental Authority prescribes the monitoring of 'analogue sites' (i.e. Reference Plots) to define suitable rehabilitation criteria. The monitoring of reference plots also allows Moranbah North to meet the requirements of Commitment 3 - "Non-riverine land that is subject to the direct and indirect impacts of subsidence will be returned to a stable condition with the objective that the majority of the land will be returned to its pre-mining use but with limited downgrading of land suitability in some areas". One of the Measurable Indicators and Standards of this commitment is the monitoring of reference plots. The aim of the reference plot monitoring is to measure baseline vegetation and soil data, to establish landform stability standards to be used to assess the rehabilitation success of subsided areas following mining activities.
 - **Roche Mining.** Douglas Mine MSP EMP – GHD was responsible for developing a workable environmental management plan for Douglas Mine to ensure environmental performance criteria could be successfully met.

Iron Ore

- **Aker Kvaerner Australia Pty Ltd.** Rio Tinto Brownfields Mine Upgrade Project - With alliance partners Aker Kvaerner and URS, GHD will conduct feasibility studies for a massive expansion of iron ore mining and processing at three Rio Tinto mines in the Pilbara region of Western Australia - Tom Price, Paraburdoo and Marandoo. This includes assessment of all necessary environmental and mining approvals to proceed.

Copper

- **Mt. Lyell AMI Review for Dept. AFFA.** GHD was engaged by the Department of Agriculture, Forestry and Fisheries to complete a review of a proposed drainage treatment to be built and operated by Australian Mining Investments (AMI) at the Mt Lyell mine site. The review included a technical capability study of a new, proprietary technology owned by AMI for its ability to extract copper and aluminium 'heavy' metals from the drainage, as well as an investigation into the financial capacity of AMI to access the capital required for the construction and operation of the plant.

Aluminium

- **Chelco Alliance.** Aurukun Mine, smelter and associated port, rail/road infrastructure. GHD has been commissioned to conduct the complete Environmental Impact Assessment, with all associated design and specialist studies (flora, fauna, hydrology, geohydrology, mine planning, social impact assessment, community consultation, air quality and noise) for the complete Aurukun package.

Gold

- **Ballarat Goldfields Pty Ltd.** EMP - Ballarat Gold Fields - Ballarat is a town whose history has revolved around gold mining. There is still an estimated 1.1 million ounces of gold below its streets, which the Ballarat Gold Fields project will attempt to recover. GHD has been engaged for the preparation of an Environmental Management Plan (EMP) for the entire mine on behalf of Ballarat Gold Fields. The EMP will include a description of all significant environmental issues including proposed management measures, a detailed risk assessment and also a short and long term action plan (EIP). The EMP will also consider elements of the recently prepared GHD Environmental Monitoring Plan.
- **Mine Closure Plan - Rosebery Zinifex.** Prepare Mine Closure Plan for Rosebery Zinifex Mining Operations, to meet the requirements of DPIWE EPN and associated criteria.
- **Henty Gold Limited.** Mine Closure Plan - Henty Gold Mine. Prepare Henty Gold Mine - Mine Closure Plan to meet the requirements of DPIWE Environmental Protection Notice and Barrick gold Corporate. Includes preparation of community consultation plan, exit strategy and closure strategy.
- **Curragh Queensland Mining Pty Ltd.** Curragh Mine Audit and general environmental advice.
- **Newmont Australia Pty Ltd.** Mt Leyshon mining rehabilitation – GHD was responsible for assessing current contamination and rehabilitation status at Mt Leyshon and negotiating closure criteria for the purpose of developing a rehabilitation plan to ensure closure could be successfully achieved.

Mineral Sands

- **Roche Mining (JR) Pty Ltd.** Douglas Mineral Sands Project - Geotechnical and Environmental Support for Iluka Resources proposed mineral sands operations in Western Victoria, working through Roche Mining (JR) Pty Ltd to provide geotechnical and environmental support for the following developments: Hamilton Mineral Separation Plant and Douglas Mine Site.
- **Iluka Resources Limited.** Pre-mining Vegetation Survey - Vegetation and Flora survey of new mining site. Includes determination of the presence of Declared Rare and Priority Flora,

Threatened Ecological Communities, and other significant flora. The report shall be used in preparation of a Notice of Intent to mine.

Sinclair Knight Merz: Mining Project Experience – Statutory Environmental Approvals/Advice/Support

Coal

- **BHP Billiton Mitsubishi Alliance (BMA), 2004.** Environmental Approvals, Poitrel Coal Mine Project, Qld. SKM was commissioned by BMA to undertake environmental studies and prepare an Environmental Management Overview Strategy (EMOS) / EIS / InAs / Referral / EA for environmental approvals for the new Poitrel Coal Mine near Moranbah, Qld.
- **Anglo Coal Australia Pty Ltd, 2005.** Draft ToR, Environmental Impact Statement, Kilburnie Coal Project, Qld.
- **BP Coal Development Australia Pty Ltd and Novacoal Australia Pty Ltd, 1991.** Environmental Impact Statement, Airly Coal Mine, NSW. Sinclair Knight Merz was engaged to prepared an EIS for a proposed underground coal mine at Airly, approximately 50 kilometres north-west of Lithgow NSW.
- **Exxon Coal and Minerals Australia Pty Ltd and Lemington Coal Mines Ltd, 1998.** Environmental Impact Statement, South Lemington Open Cut Coal Mine, NSW. Preparation of an environmental impact statement for South Lemington open cut and highwall coal mine.
- **Pacific Coal Pty Ltd, current (2006).** Environmental Impact Statement, Clermont Coal Mine, Qld. Compile the Clermont Coal EIS from consultants reports and original work performed by SKM.
- **BHP Billiton Mitsubishi Alliance (BMA), 2006.** Environmental Studies, Extension of Norwich Park Coal Mine, Qld. BMA is proposing to extend/open a new pit at their Norwich Park Mine Site. Stage 1 of this project will involve the review of the proposed extension in the context of EP Act Triggers for an EIS, to determine statutory requirements. Stage 2 will be the follow up on any identified actions i.e. preparation of EIS, EPBC Referral etc
- **Shell Coal (Australia) Ltd, 1998.** Environmental Feasibility, Mt Arthur North Coal Exploration Lease, NSW.. Environmental feasibility assessment of Mount Arthur North coal exploration lease.
- **BHP Billiton Limited, 2004.** Engineering, Procurement and Construction Management (EPCM), Mount Arthur North Project, NSW. Sinclair Knight Merz in joint venture with Roberts & Schaefer was appointed to undertake the EPCM of BHP Billiton's new greenfields Mount Arthur North coal project in the Hunter Valley of NSW.

Nickel

- **BHP Billiton Nickel West, current. Northern Nickel Projects, WA.** Statutory approvals for mine development and infrastructure corridor, management of baseline environmental surveys and technical studies for EIA.
- **Ravensthorpe Nickel Operation. 2003.** Approval Facilitation and Documentation, Ravensthorpe Nickel Operation, WA. BHP Billiton required the preparation and technical certification of a Notice of Intent for the Ravensthorpe Nickel Operation for referral under the Mining Act.
- **Ravensthorpe Nickel Operation, 2002.** Additional Environmental Services, Ravensthorpe Nickel Project, WA. RNO require the completion of several small studies to address specific responses from the community to the S46 Environmental Review submitted by RNO for statutory approval of the project. These studies include but are not limited to assessment of vegetation impacts, emissions remodelling and drainage remodelling.
- **WMC Leinster Nickel Operations, 2004.** 11 Mile Additional Development Proposal, Leinster Nickel Operations, WA.. WMC Resources Leinster Nickel Operation requires the preparation of an Additional Development Proposal and Works Approval application for the proposed 11 Mile Well Open Cut Development.
- **WMC Resources Ltd, current (2006).** Notice of Intent, Cliffs Underground Nickel Mine, WA.. Preparation of a Notice of Intent document to gain approval for the development of the Cliffs underground nickel mine. Management of subconsultant studies.
- **WMC Resources Ltd, current (2006).** Notice of Intent, Rocky's Reward Open Cut, Leinster Nickel Operations, WA. SKM. Preparation of a Notice of Intent and Project Management Plan for the Rocky's Reward Open Cut Cutback at Nickel West's Leinster Nickel Operations (LNO).
- **WMC Resources Ltd, 1996.** Notice of Intent for Exploration on Lease WA-264-P, North West Shelf, WA.
- **MPI Mines Ltd, 2004.** Environmental Concept Study, Honeymoon Well Mine, WA. Environmental scoping and approvals strategy for mine development.
- **MPI Mines Ltd, 2004.** Wedgetail Underground Mine – Notice of Intent and Works Approval. .

Iron Ore

- **Robe River Mining Co. Pty Ltd. 2003.** Dredging Approvals, Cape Lambert Upgrade, WA.. Environmental studies and documentation necessary to obtain environmental approval for dredging and disposal associated with the Cape Lambert Upgrade

Appendix 2: Consultants' experience in mining project approvals

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- **Hamersley Iron Pty Limited, 2004.** Environmental Approvals, Dampier Port Upgrade (DPU), WA. Obtain Environmental Approvals for capacity and product expansion at Dampier Port Operations.
 - **Hamersley Iron Pty Limited, 2005.** Public Environmental Review, Brockman Syncline 4 Iron Ore Project, WA.. Hamersley Iron Pty Limited proposes to develop an iron ore mine and 35 km rail spur approximately 60 km west-north-west of Tom Price, in the Pilbara Region of Western Australia.
 - **Pilbara Iron Pty Ltd, 2006.** Environmental Approvals, Cape Lambert Upgrade, WA.
 - **Hamersley Iron Pty Limited, 2006.** Environmental Approvals, Expansion of Export Facilities, Parker Point, WA. SKM Ref: WV03010. Prepare environmental approval documentation for expansion of Parker Point export facilities to 145 Mtpa.
 - **Mine and Port Developments Joint Venture (MPDJV) and BHP Billiton Iron Ore Pty Ltd, current.** Products and Capacity Expansion (PACE) Project and Mining Area C Project, Pilbara Region, WA.
 - **BHP Billiton Iron Ore Pty Ltd, 2004.** Dust Study, Shiploading System, Finucane Island, WA.. Provide EPCM for dust control systems on the HBI ship loading system at Finucane Island.
 - **BHP Billiton Iron Ore Pty Ltd, 2002.** Water Management Audit, WA. Audit and review of the water sampling contract.
 - **BHP Billiton Iron Ore Pty Ltd, 2002.** Review and Redesign of Pilbara Air Quality Monitoring Network, WA. Upgrade of the existing air quality monitoring network for BHPBIO Pilbara Operations.
 - **BHP Billiton Iron Ore Pty Ltd, current (2006).** Dust Modelling, Nelson Point and Finucane Island, WA. Ongoing project. Numerous modelling runs over a 2 year period to aid in reducing dust emissions from the Nelson Point and Finucane Island.
 - **BHP Billiton Iron Ore Pty Ltd, 2003.** Rail Corridor Planning, Port Hedland to Newman, WA. Rail corridor planning for BHP Billiton Iron Ore between Port Hedland and Newman for future expansion capacity planning purposes.

Gold

- **Sunrise Dam Gold Mine, 2003.** Underground Mining Notice of Intent, Sunrise Dam Gold Mine, WA. Prepare a Notice of Intent for approval to commence underground mining at the Sunrise Dam gold mine.
- **Sunrise Dam Gold Mine, 2005.** Expansion of CTD Tailings Storage Facility, Sunrise Dam Gold Mine, WA.

Mineral Sands

- **Iluka Resources Limited.** Water Assessment, Environmental Effects Statement, Kulwin Woorneck Rownack (KWR) Development, Vic, 2005. Prepare the water assessment component of the Environment Effects Statement (EES) for the proposed KWR development in north western Victoria.
- **Iluka Resources Limited, current (2006).** EPCM, Gingin Mineral Sands Project, WA, inclusive of environmental support.

URS: Mining Project Experience – Statutory Environmental Approvals/Advice/Support

URS provides specialist environmental and engineering expertise to the mining industry. Our team has extensive experience in the fields of environmental management, strategic planning, tailings and waste management, water resources, geotechnical and mining engineering, risk management and community consultation. Our range of services provide environmental and financial benefits to our clients.

Key clients:

Iluka Resources Limited

URS has a long involvement with Iluka Resources Limited. Recent projects include: tailings management strategies for Eneabba West Mine; groundwater contamination assessment and air quality monitoring for Narngulu Synthetic Rutile Plant; water supply development for Capel Mine and Brandy Flats Project; and contaminant assessment and remediation at Capel. Our closure and rehabilitation strategy for Eneabba West Mine included geotechnical, hydrogeological and environmental investigations and stakeholder consultation.

BHP Billiton (Nickel)

Our long association with QNI/Billiton in Queensland and South-East Asia has included: an environmental manual for nickel mining in New Caledonia and the Philippines; an environmental impact study for a major extension of an existing nickel refinery (including community consultation, social impact assessment, reviews of existing environmental studies, studies on dust, air and noise emissions, potential traffic impacts and public safety risk); environmental due diligence assessments of potential projects and liability assessments for existing operations; and verification of data generation and management for the annual public health safety environment and quality report in Australia and Colombia.

BHP Iron Ore

URS has conducted work for various BHP Iron Ore projects. Projects included: baseline environmental studies; preparation of a Public Environmental Review; flora and fauna surveys; water resource investigations and modelling; water management systems; dewatering investigation and design; and development of infrastructure (accommodation village, rail spur, crushing and rail loading facilities and process water). Also undertaken, dredging for the Port Hedland port expansion, environmental approvals, permit applications, mangrove habitat description and assessment, and environmental monitoring programmes associated with the port.

Specific projects

Matilda Minerals Sand Mining, Notice of Intent and EPBC Referral

Client: Matilda Minerals Limited

Location: Tiwi Islands, Northern Territory

Performance Period: February – April 2005

Services: Notice of Intent and Environment Protection and Biodiversity Conservation (EPBC) Referral

Voyager Quarry Public Environmental Review

Client: BGC (Australia) Pty Ltd

Location: Northam, Western Australia

Performance Period: 2002 to 2003

Services: Environmental Impact Assessment

BGC (Australia) Pty Ltd (BGC) proposed to relocate the Voyager Quarry to the west of its existing site on Great Southern Highway located approximately 47 km southwest of Northam and 16 km east of Mundaring, Western Australia. URS prepared a Public Environmental Review (PER) for the project on behalf of BGC.

Boddington bauxite mine and refinery operations

Client: Worsley Alumina Pty Ltd

Location: Boddington, WA

Performance Period: 2004 - 2005

Services: Environmental approvals support

URS was commissioned by Worsley Alumina to provide support to the Efficiency and Growth Expansion project at the Boddington bauxite mine and refinery operations in Western Australia. URS assisted

Appendix 2: Consultants' experience in mining project approvals

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Worsley in evaluating various environmental approval scenarios to access the bauxite resource. URS was also involved in reviewing the various environmental management procedures currently operating at the mine and refinery.

Environmental Monitoring Program

Client: Bendigo Mining NL

Location: Bendigo

Performance Period: January 2004 to December 2005

Services: Ongoing Review of the Environmental Monitoring Program

As part of the Bendigo Mining NL (BMNL) Mining Licence an environmental monitoring program must be conducted under the supervision of an environmental auditor.

EIS Olympic Dam Team

Name of Client: BHP Billiton

Project Location: Adelaide and Roxby Downs

Performance Period: August 2005 to December 2006

Services: The Environmental Impact Statement (EIS) for the Olympic Dam Copper/ Uranium Development Study

Fosterville Mine - Bankable Feasibility Study (Environmental Issues)

Client: Perseverance Corporation Ltd

Location: Fosterville, Victoria

Performance Period: February 2003 to July 2003

Services: Tailings Management, Groundwater Impact Assessment, Site Hydrology and Environmental Assessment

Alcan Gove EIS

Client: Alcan

Location: Gove, NT

Performance Period: 2003-2004

Services: Preparation of an EIS for the proposed expansion of the existing alumina refinery

Appendix 2: Consultants' experience in mining project approvals

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Ok Tedi Ltd (OTML)

Location: Papua New Guinea

Performance Period: 1996 - ongoing

Services: Quantitative Engineering, Environmental and Social Risk Assessment

Dampier Port Upgrade, Assistance with Environmental Approvals

Client: Hamersley Iron Pty Limited

Location: Dampier, Western Australia

Performance Period: September to December 2003

Services: Environmental Assessment

Environmental Impact Assessment

Client: BHP Iron Ore

Location: Perth, Western Australia

Performance Period: 1998

Services: Baseline Environmental Studies and Public Environmental Review

URS was commissioned to conduct baseline environmental studies and prepare a Public Environmental Review for BHP Iron Ore's proposed Mining Area C project.

Environmental Assessment of Ellendale Diamond Project Stage 2A Development

Client: Kimberley Diamond Company NL

Location: Derby, Western Australia

Performance Period: 2002-2003

Services: Environmental Impact Assessment, Strategic Environmental Advice

Speewah Fluorspar Project - Environmental Approvals

Client: Doral Mineral Industries Limited

Location: Speewah Deposit, southwest of Kununurra

Performance Period: October 2003 - June 2004

Appendix 2: Consultants' experience in mining project approvals

SECTION 7

Services: Strategic advice for the EIA, Stakeholder consultation, Environmental referrals (state and federal) and Environmental scoping document

SLN Tiebaghi Mine Expansion EIS

Client: A2EP and Societe Le Nickel (SLN)

Location: Tiebaghi, New Caledonia

Performance Period: April-May 2002

Services: Advice on specific components of the mine expansion EIS

Murrin Murrin Nickel Cobalt Project

Client: Anaconda Nickel Ltd

Location: Western Australia

Performance Period: 1995 - Present

Services: Environmental Impact Assessment, Auditing, Reporting, Consultative Reviews, Hydrogeological.