

**Conservation Commission
Conservation Reserve Management Plan
Performance Assessment**

**Wanjarri Nature Reserve Management Plan
1996-2006**

Performance Assessment Number CRMPPA - 01/05



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Wanjarri Nature Reserve Management Plan 1996-2006 – Performance Assessment Number
CRMPPA - 01/05 -

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Conservation Commission Performance Assessments are undertaken primarily to fulfil the functions described in S 19(g) of the Conservation and Land Management Act 1984. That is to “assess and audit the performance of the Department and the Forest Products Commission in carrying out and complying with the management plans”. They will also help inform its policy development function and its responsibility to advise the Minister on conservation and management of biodiversity components throughout the State.

This performance assessment was undertaken in accord with the “Conservation Commission policy and guidelines for the performance assessment of conservation reserve and forest management plans and biodiversity management in WA”. Further details are available at www.conservation.wa.gov.au.

Approved at Conservation Commission meeting - 14 November 2005

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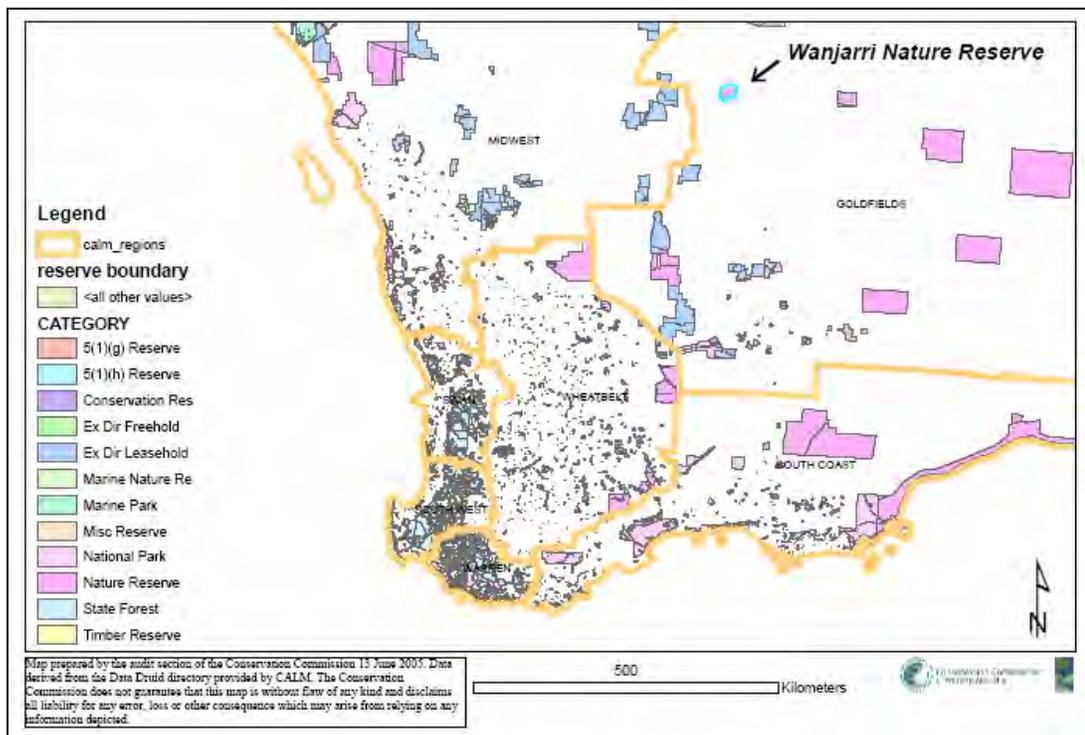
INTRODUCTION

This Conservation Reserve Management Plan Performance Assessment (CRMPPA) reviewed the implementation of the Wanjarri Nature Reserve Management Plan 1996-2006¹. Wanjarri Nature Reserve is located in CALM's Goldfields Region approximately 400 km north of Kalgoorlie (Figure 1). This management plan was identified as a priority for performance assessment by CALM as it is nearing its nominal term end and because adjacent proposed mining developments were considered to have implications for the reserve.

As this performance assessment was undertaken prior to the development of Conservation Commission policy and guidelines for performance assessments, some inconsistencies occur because not all data required for the new format was collected at the time of the assessment. However it was considered that the data collected was adequate and of sufficient importance for it to be adapted so that it is as consistent as possible with the Commission's current reporting structure for CRMPPAs. It is published to communicate management performance and to show the structure of the new reporting format.

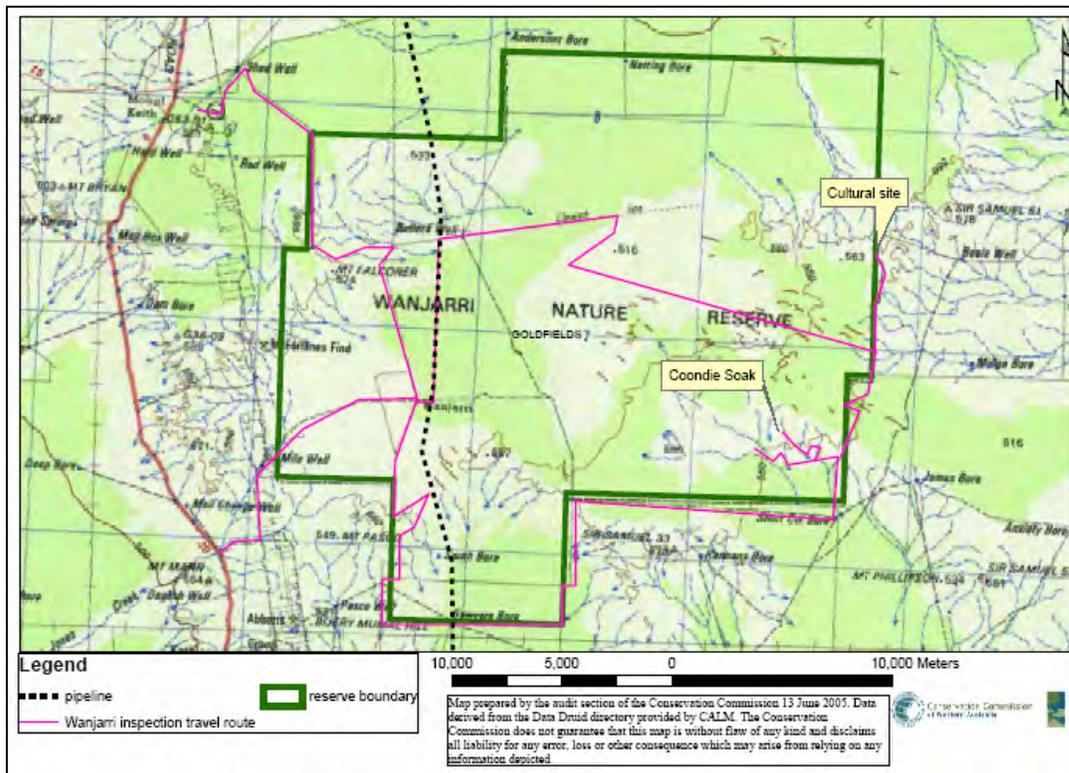
This performance assessment focussed on the assessment of outputs against clearly identified strategies or actions in the management plan. Where practicable an assessment was made on the outcomes of those strategies and actions against the objectives established for the management plan and for the management of nature reserves as required under the CALM Act. This incorporated checks of office records, interviews with staff responsible for the implementation of actions and strategies, and site inspections within the reserve. The assessment process is summarised in Appendix 1. A detailed map of the reserve and the travel route taken during inspections is shown in Figure 2.

Figure 1 Wanjarri Nature Reserve location.



¹ The management plan can be accessed at www.calm.wa.gov.au/national_parks/management/pdf_files/wanjarri_nr.pdf

Figure 2 Wanjarri Nature Reserve detail and travel route during assessment.



DESCRIPTION OF WANJARRI NATURE RESERVE

Wanjarri Nature Reserve is located in CALM's Goldfields Region approximately 400 km north of Kalgoorlie (Figure 1). The Reserve was a small pastoral lease (53,000 ha) until purchase by the then Department of Fisheries and Wildlife in 1971 when it was destocked and became an "A" Class Nature Reserve.

The reserve sits among a number of active or proposed mining operations with the four adjoining pastoral properties owned by mining companies. The Goldfields Gas Transmission Pipeline, which was constructed in 1995/96, dissects the reserve. Funding for the development of the management plan for Wanjarri was provided by Goldfields Gas Transmission Pty Ltd.

Wanjarri is dominated in the east by extensive undulating sand plains with localised reticulate or parallel sand dunes. The key vegetation components on this landform are the spinifex grasses. Other landforms on the south and west of Wanjarri include broad valley surfaces, granites, drainage lines and breakaways. On these landforms mulga is commonly the dominant vegetation form.

Wanjarri has significant conservation, educational and research values and is listed on the Register of the National Estate where it is described as having "diverse flora and fauna; many varieties of birds (122 species), largely because of its location where ranges of species with predominantly southern, eastern or northern distribution overlap. It includes areas of ungrazed mulga" (Australian Heritage Commission, 1978)².

² Australian Heritage Commission; Register of the National Estate, Registered 21/03/1978

OVERVIEW OF FINDINGS AGAINST PERFORMANCE ASSESSMENT OBJECTIVES

Elements		Findings
CONTEXT	<p><i>To assess whether there have been any changes to the context under which the management plan was developed (e.g. biological, social, new threats) that may affect the ongoing implementation of the plan or point to a need to review or amend the plan.</i></p>	<p>A number of changes to context have significantly influenced the implementation of the plan and so need to be acknowledged. Major changes since the formulation of the management plan include:</p> <ul style="list-style-type: none"> • The way staffing of mining operations near Wanjarri is managed. This has significantly reduced the level of visits and thus influences the necessity for a number of strategies related to managing recreation use. • Changes of ownership of adjoining properties which has occurred because of mining company take-overs or sale. This has caused significant difficulties in maintaining strategies related to cooperative management arrangements. • The implementation of a mining proposal immediately adjacent to the reserve which was imminent at the time the plan was developed has not proceeded thus affecting the need for a number of strategies which were designed to mitigate potential impacts on the reserve. • Native title and joint management developments and policy have progressed and have established a number of processes that influence the ability and/or necessity to apply some strategies.
PLANNING	<p><i>To review the adequacy of the management plan to support the achievement of the objectives for the reserve and to identify any areas where changes are required.</i></p>	<p>Two substantial policy issues are referred back to the Conservation Commission for guidance. Firstly the way strategies which are outdated should be managed during plan implementation, especially in instances where resourcing priorities makes a review of the plan unlikely. The second issue is in relation to the management of recreation use of nature reserves, where in this instance it had been proposed to change the purpose of the reserve to conservation park to allow more flexible management. The appropriateness of such a strategy, with inherent legislative and policy requirements and resourcing implications, in instances such as this should be considered and guidance given.</p> <p>See Recommendations 1 and 2.</p>

INPUTS	<i>To review financial, human and other resources allocated to implement the management plan to assess the adequacy of these relative to the reserve's context.</i>	Reserve management plan audits are generally focussed on outputs and outcomes. An indication of the adequacy of inputs can be derived from findings related to outputs.
MANAGEMENT SYSTEMS	<i>To review the management systems that are used to implement the plan, including any subsidiary policies or guidelines that are referred to in the plan, and their appropriateness within the context of the reserve.</i>	Reserve management plan audits are generally focussed on outputs and outcomes. An indication of the adequacy of management systems can be derived from findings related to outputs.
OUTPUTS	<i>To review the products and services which were provided against strategies identified in the management plan.</i>	The Conservation Commission performance assessment of the implementation of Wanjarri Nature Reserve Management Plan found that most strategies had been implemented or had been substantially progressed (see summary table below). Of those not implemented, action on most was not progressed because of changes to the context within which the reserve operates (e.g. changes to visitor levels). A few minor recommendations for action are made in relation to interpretation and signs, the collation of survey and research information, and the monitoring of visitor numbers. An update of the status of a number of strategies and their implementation was received from CALM on 11 November 2005 noted further progress in these areas (Appendix 3, Attachment 6)
OUTCOMES	<i>To assess broad levels of achievement against goals and objectives identified in the management plan.</i>	Overall achievements against goals and objectives has been satisfactory.

DETAILED PERFORMANCE ASSESSMENT FINDINGS

The assessment results are presented under the Performance Assessment Framework headings of Context, Planning, Inputs, Management Systems, Outputs and Outcomes. The assessment observations are documented as either a 'Finding' or a 'Key Finding'. Where a 'Key Finding' has been identified it will be accompanied by a recommendation.

CONTEXT

Objectives of the performance assessment

To assess whether there have been any changes to the context under which management plan was developed (e.g. biological, social, new threats) that may affect the ongoing implementation of the plan or point to a need to review or amend the plan.

Finding

A number of changes to context have significantly influenced the implementation of the plan and so need to be acknowledged. Major changes since the approval of the management plan include:

- The way staffing of mining operations near Wanjarri are managed. This has significantly reduced the level of visits and thus influences the necessity for a number of strategies related to managing recreation use.
- Transfer of ownership of adjoining properties which has occurred because of mining company takeovers or sale. This has caused significant difficulties in maintaining strategies related to cooperative management arrangements.
- The implementation of a mining proposal immediately adjacent to the reserve which was imminent at the time the plan was developed has not proceeded thus affecting the need for a number of strategies which were designed to mitigate potential impacts on the reserve.
- Native title and joint management developments and policy have progressed and have established a number of processes that influence the ability and/or necessity to apply some strategies.

PLANNING

Objectives of the performance assessment

To review the adequacy of the management plan to support the achievement of the objectives for the reserve and to identify any areas where changes are required.

The overarching purpose of the CALM Act as stated in its long title is to make “better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof”. Within this overarching purpose section 56 (1)(d) of the Act describes required objectives for nature reserves: *to maintain and restore the natural environment, and to protect, care for, and promote the study of, indigenous flora and fauna, and to preserve any feature of archaeological, historic or scientific interest.*

Key Finding

The management plan has identified management goals to cover key issues under the categories of conservation, recreation, community relations and research and monitoring. Strategies to address these key issues are generally consistent with the purpose and objective for nature reserves noted above. An exception lies with strategies under the recreation goal which is to “facilitate recreation in a manner compatible with conservation and other goals”. This is not consistent with the purpose of a nature reserve. These strategies were put in place to accommodate and manage existing recreational uses on the reserve. Since the approval of the plan however there has been a significant downturn in recreational use. While the current visitor use of Wanjarri is low and is generally focused on scientific uses consistent with the purpose of the reserve, there is a need to continue close monitoring of visitor patterns and for a re-evaluation of strategies should recreational use increase significantly. The desirability or need for a change in purpose from nature reserve to conservation park as proposed in the plan should be reevaluated

Recommendation 1

It is recommended that the Conservation Commission broadly consider and provide guidance on the policy issue of recreational use of nature reserves so that the most appropriate mechanisms for management can be used to ensure the environmental objectives for nature reserves are maintained. This consideration should be broad in its context as it is understood to be a situation that exists in a number of areas.

Key Finding 2

This review has identified a number of strategies that are outdated and should not be implemented. Notes in relation to these strategies are provided in the performance assessment findings and comments in Appendix 2.

Recommendation 2

The findings of this performance assessment should be considered in any a mid-term review and subsequent amendments to the plan. However, it is considered unlikely that a review of the Wanjarri Management Plan is of high priority, and there is also a lack of general guidance on the management of outdated strategies in plans.

Therefore, the Conservation Commission should endorse the non-implementation of strategies identified as redundant through this assessment including those related to recreation management strategies. It is also recommended that the Conservation Commission review how redundant strategies within management plans should be managed and develop an appropriate and transparent mechanism for the dealing with them. This may require the inclusion of such a mechanism in future management plans. Some of the examples of strategies detailed in this performance assessment represent examples that could be used as a case study in the consideration of this policy issue.

INPUTS

Objectives of the performance assessment

To review financial, human and other resources allocated to implement the management plan to assess the adequacy of these relative to the reserve's context.

Findings

Reserve management plan audits are generally focussed on outputs and outcomes. An indication of the adequacy of inputs can be derived from findings related to outputs.

MANAGEMENT SYSTEMS

Objectives of the performance assessment

To review the management systems that are used to implement the plan, including any subsidiary policies or guidelines that are referred to in the plan, and their appropriateness within the context of the reserve.

Findings

Reserve management plan audits are generally focussed on outputs and outcomes. An indication of the adequacy of management systems can be derived from findings related to outputs.

OUTPUTS

Objectives of the performance assessment

To review the products and services which were provided against strategies identified in the management plan.

Findings

Conservation Commission findings in relation to each of the strategies in the plan are provided in Appendix 2. The Region's implementation plan (Appendix 3, Attachment 1), which provides comments on progress and intended actions against each of the strategies, provides an accurate reflection of the performance assessment findings in most instances. Together these documents provide a comprehensive assessment of the outputs and proposed outputs.

The assessment showed that the majority of strategies have been implemented or are ongoing (Table 1). The most significant achievement in terms of potential benefit to the management of the reserve was the development of the Wanjarri Area Management Group

(WAMG) designed to help integrate management of the reserve and surrounding pastoral leases and issues such as fire management planning (see records in Appendix 3, Attachments 2&3). While this group is not currently active because of property ownership changes, the work already done will enable the rapid reactivation of this strategy when the need arises.

Table 1 Summary table of achievement of actions against management plan priority rankings

Management Plan Priority	Achievement				
	Done	Partly done	Ongoing or underway	Not done – no further action required	Not done – action required
High	24	3	7	5	1
Medium	14	2		1	2
Low	2	1	3	4	

A number of key strategies have not been implemented, primarily because of the changes to context described above. For example a change in visitor patterns has been observed as a result of altered staff management arrangements at nearby mines. This has significantly affected the need for many strategies related to visitor impacts, including the proposed change in purpose of the reserve.

There are a small number of strategies that have not been implemented which warrant action. Although in general the level of information provided to the public is adequate some related strategies require attention. There should be ongoing improvement in the standard of interpretation and signs and the information they provide, including the addition of information on the prohibition of domestic pets on the reserve (strategies 19.1 & 19.2) and information on wildfire impacts as listed in the management plan (strategy 17.3). This information should be added to the photocopied maps and camping information sheets that are provided to prospective visitors (see Appendix 3, Attachments 4&5). Another strategy from the plan required the provision of interpretative information on geology, landforms and soils and their vulnerability to damage (strategy 7.1). Work on this was proposed for 2002-2003 financial year.

The ongoing monitoring of visitor levels also requires implementation (strategy 16.1). A car counter that was in place should be replaced and maintained so that visitor levels can be accurately monitored and any required responses can be acted upon.

Strategy 8.1 required further detailed vegetation and flora surveys to be undertaken. While this has been done at the time of assessment the work had not been collated. Work on this was proposed for 2002-2003 financial year.

An update of the status of a number of strategies and their implementation was received from CALM on 11 November 2005 which noted further progress (Appendix 3, Attachment 6) including in the areas of interpretation and visitor management, and fire management measures.

OUTCOMES

Objectives of the performance assessment

To assess broad levels of achievement against goals and objectives identified in the management plan.

Findings

As there are no quantitative measures for most objectives, observation and qualitative comments against each objective are provided in Appendix 2. These were used to inform the following comments on the management goals for the reserve which cover the key management issues and provide the structure of the management plan.

• **Conservation**

Conserve biological, physical, cultural and landscape resources.

Appropriate management strategies have been implemented that support the achievement of this goal and observations made in the field indicates satisfactory achievement of conservation outcomes.

• **Recreation**

Facilitate recreation in a manner compatible with conservation and other goals.

Although a number of management strategies related to this goal have not been implemented, the level and mode of facilitation of recreation is appropriate for a nature reserve. Recreation is confined to a minimal provision of facilities which are primarily used for study and passive activities such as bird watching. Field observations indicate that these activities have no adverse impact on conservation or other values. This indicates satisfactory achievement of recreation outcomes.

• **Community Relations**

*Promote informed appreciation of natural and cultural values; and
Promote cooperation in the management of land for conservation of natural and cultural resources.*

In relation to the promotion of the appreciation of natural and cultural values some information is available to the public. However further work is required to improve outcomes in this area as per the recommendations detailed under the outputs section above (e.g. interpretive information).

Significant achievements have been made with respect to cooperative management with the reserve's surrounding landholders. Although this is currently inactive systems are in place that will enable reactivation should the need arise. This indicates satisfactory achievement of this aspect of community relations outcomes.

• **Research and Monitoring**

Seek a better understanding of the natural and cultural environment and the impact of management activities and visitor use.

Although there has been limited research and monitoring activity on the reserve there are a number of relevant and significant research and monitoring activities on other areas within the region. These are efficiently and effectively contributing to knowledge that can support decision making within Wanjarri Nature Reserve. This indicates satisfactory achievement of this aspect of research and monitoring outcomes.

APPENDIX 1 - Assessment Process Summary

The performance assessment was conducted from the 28-30th of May 2002. The Region staff were provided with approximately 4 weeks notice of the performance assessment during which time they updated the Implementation Plan for Wanjarri (Appendix 3, Attachment 1) and compiled records that would provide verification of action on strategies. These were reviewed in the course of the performance assessment.

Key staff were also interviewed to provide clarification of the background to strategies or to verify elements where documentation was not available. A listing of persons interviewed is provided below.

During the review of records, and interviews with staff, key sites or areas for field assessment were identified. These included sites that could provide verification that strategies had been implemented and more generally to allow observation of the environmental outcomes being achieved through management. Figure 2 shows the travel route in the reserve with key sites identified. The field assessment, together with the review and interview process, enabled an assessment of the overall performance against outcomes and objectives.

Approximately one day was spent in the review of records and interviewing including time spent on follow-up after the field inspection. The inspection of sites at Wanjarri took approximately a half a day excluding travel time. One night was spent camping at the shearing shed (field study centre) at Wanjarri.

List of people consulted

Ian Kealley, Regional Manager, Goldfields Region, CALM

Brad Barton, Regional Leader Nature Conservation, Goldfields Region, CALM

Barry Hooper, Regional Leader Parks and Visitor Services, Goldfields Region, CALM

Phil Spencer, Operations Officer, Goldfields Region, CALM

Val Boyes, Clerical Officer, Goldfields Region, CALM

June Anderson, Administration and Finance Manager, Goldfields Region, CALM

Sarah Adriano, Reserves Officer, Goldfields Region, CALM

Appendix 2 Performance assessment findings and comments against objectives and strategies, and priority as detailed in the management plan.

Verification Code: (Documentation Review (DR), Staff Interview (SI), Field Observation (FO))

Nature Conservation Strategies

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
<i>5. LAND TENURE AND BOUNDARIES - The objective is to ensure that the values of the Reserve are adequately protected by the gazetted purpose, vesting and tenure of the Reserve.</i>		<i>The reserve is still gazetted as nature reserve, vested in the Conservation Commission as a Class A reserve. This objective has been achieved.</i>
5.1 Ensure reserve boundaries are clearly demarcated in the field where development activities occur adjacent to the reserve	High	Done. Signs demarking the boundary are present at a number of key locations. Boundary fencing to a range of standards of quality and function is also in place to support demarcation. This strategy was probably mostly focused around a proposed mining development near the reserve which did not proceed. (FO)
5.2 Ensure fences are maintained in a stock proof condition where necessary and reconstruct only on cadastral boundaries	Medium	Done. Fences to range of standards of function and quality. Recent fence construction in response to restocking proposals has been on cadastral boundaries. (FO, DR, SI)
5.3 Reclassify the nature reserve to conservation park	High	Not done. Changes to context – reduced visitor levels and Native title processes and joint management suggest this strategy should be reconsidered. This issue is referred to the Conservation Commission for consideration (SI).
<i>7. GEOLOGY, LANDFORMS AND SOILS - The objective is to conserve geological features, landforms and soils.</i>		<i>Field observations indicated that geology, landscape and soils were stable and thus were being conserved however there is no comparative benchmark or monitoring information to provide quantitative measure of achievement for this objective.</i>

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
7.1 Provide interpretive information on the geology, landforms and soils of the reserve and their vulnerability to damage.	Medium	Not done. Proposed for 2002-2003. Reduced priority because of change to visitor levels. Some information on this should be collated and be available to visitors. (SI, FO)
7.2 Identify areas that are vulnerable to damage and develop measures to protect them.	Medium	Done. Limited visitor levels and stable nature of reserve with respect to feral animals means limited action required. Where required bunding of roads has been undertaken to reduce erosion. (DR, FO, SI)
7.3 Liaise with adjacent landholders to develop compatible conservation land management strategies.	High	Done. In the early stages of the plan effective structured systems for liaison were in place (MOU). These systems have been impacted by changes to ownership of adjoining properties and liaison is now less structured but able to be reactivated if needed. (SI, DR)
8. <i>VEGETATION AND FLORA - The objectives are to:</i> <ul style="list-style-type: none"> • <i>conserve vegetation communities including their structure, diversity and distribution.</i> • <i>conserve flora with an emphasis on declared rare or priority extant taxa.</i> 		<i>No monitoring is undertaken to quantify if this objective is being achieved. This objective is likely to be achieved through the feral control programs and the control of artificial watering points that has been undertaken.</i>
8.1 Undertake further detailed vegetation and flora surveys of the reserve.	High	Partly done. Surveys have been done but data is not collated. Work proposed for 2002-2003. Region to report on achievement to Conservation Commission by December 2005. (SI)
8.2 Locate any threatened or priority flora species and develop management strategies for their conservation.	High	Done. <i>Grevillia inconspicua</i> location mapped. (DR)
8.3 Rehabilitate areas of vegetation degraded by pastoral activities.	Low	Partly done. No active rehabilitation. Focus is on allowing degraded areas to rehabilitate naturally by ensuring animal numbers do not artificially increase because of the presence of water. All bores on the property except for that at the shearing shed have been closed. The shearing shed bore is a closed system designed to ensure that free water is not available for feral animals and wildlife. Minor problem with this bore observed caused by leaking pipes. Such issues are

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
		effectively managed through a routine maintenance procedure in the Region. It is recommended that the strategy wording should be reconsidered as it suggests active rehabilitation such as revegetation which is not warranted in this instance and would be beyond available resources. (SI, FO)
8.4 Minimize or prevent the removal of, or damage to, vegetation from the development of facilities for visitor use, particularly firewood collection.	High	Done. No evidence of significant impacts from visitors. Changes to visitor numbers affect this strategy and more direct action may be required should there be further change. (FO)
8.5 Provide visitors with interpretive information about the vegetation and flora of the reserve and the fauna dependent upon it.	High	Done. Small quantity of information held at shearing shed. Adequate given nature and number of visitors. (SI, FO)
8.6 Continue research into the effects of fire on the vegetation and flora of the reserve.	Medium	Done. Some photo monitoring seen but it should be noted that this is a regional or state strategy and it is more important that lessons learned from research are applied appropriately on the reserve. To this end there is a current regional review of fire management strategies which is to draw together research and may result in changes to fire management practices. (SI, DR)
8.7 Develop conservation management opportunities with adjoining landholders.	High	Done. In the early stages of the plan effective structured systems for liaison were in place (MOU). These systems have been impacted by changes to ownership of adjoining properties and liaison is now less structured. (DR, SI)
9. FAUNA - The objective is to conserve indigenous fauna populations and their habitats.		<i>No monitoring is undertaken to quantify if this objective is being achieved. This objective is likely to be achieved through the feral control programs and the control of artificial watering points that has been undertaken.</i>
9.1 Carry out and promote research into the biology and habitat requirements of the fauna of the reserve and use this knowledge to improve management.	High	Done/ongoing. A number of relevant activities including work on mulgara, feral cats. Propose to collate work done 2002-2003. Report to Conservation Commission December 2005 (SI, FO).

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
9.2 Prepare recovery plans for the management of threatened species including the reintroduction of species once present but now not known from the area.	High	Underway. Not specific to Wanjarri. Recovery plan development is a statewide strategy. (SI)
9.3 Carry out research into the impact that prescribed burning programs have on fauna survival and fauna habitat.	High	Underway. No specific research in Wanjarri. Protection burn for mulgara habitat undertaken. Note that regional fire management strategies are under review which will utilise research . (SI)
9.4 Monitor and control feral animal populations, particularly where habitat rehabilitation or species reintroduction programs are undertaken.	High	Done. Feral cat work underway. Other major feral problems controlled through bore closure. Data from feral animal monitoring (e.g. goats) done by the Agriculture Department is used to identify management actions. No observations of significant impacts from feral animals. (DR, SI, FO)
9.5 Provide interpretation opportunities for the general public about the fauna of the area.	High	Done. Small quantity of information held at shearing shed. Adequate given nature and number of visitors. (FO)
9.6 Carry out research into feral animal control and the impacts on non-target species. This will involve co-operative arrangements with adjoining landholders.	High	Done. Focus on cat research at the moment. (FO) Considerable overlap of research with neighbours with excellent co-operation.
10. ABORIGINAL HISTORY - <i>The objective is to protect and conserve the Aboriginal cultural heritage of the Reserve.</i>		<i>Site inspection showed no evidence of damage to aboriginal cultural sites visited.</i>
10.1 Ensure Departmental staff are trained in the recognition of Aboriginal sites and are aware of the provisions of the WA <i>Aboriginal Heritage Act 1972-80.</i>	Medium	Partly done. Cross cultural awareness training done for all CALM Goldfields Region Staff and cultural awareness is one of the selection criteria for new staff. No specific training in identification of sites. The Region questions the current relevance of this aspect of the strategy. It is recommended that training in recognition of sites not be implemented. (SI, DR)
10.2 Promote public understanding and appreciation of the Aboriginal culture.	Medium	Partly done. Actions such as the MOU with the Goldfields Land and Sea Council (GLSC) and the appointment of aboriginal

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
		trainees in the Region refer. No action focused on developing this strategy specifically at Wanjarri. (SI)
10.3 Consult local Aboriginal groups in the management of significant sites.	High	Done. MOU with GLSC and some joint field inspections. (SI)
10.4 Protect significant Aboriginal sites from damage by visitors.	High	Done. Strategy of not making sites known to visitors. No evidence of impacts from field observation. (SI, FO)
<i>11. EUROPEAN HISTORY - The objective is to protect and conserve the European cultural heritage of the Reserve.</i>		<i>Site inspection showed no evidence of damage to European cultural sites.</i>
11.1 Carry out historical research into the exploration and development of the area.	Low	Not done. Low priority and not relevant to purpose of reserve. (SI) Some historical data compiled.
11.2 Provide interpretive material for visitor information.	Medium	Done. Limited amount of information in box at shearings sheds appropriate. (FO)
11.3 Where possible protect relics and structures of significance from damage.	Medium	Done. Maintenance program for shearing shed and surrounds. (FO, DR)
<i>12. LANDSCAPE - The objective is to protect and conserve the landscape values of the Reserve.</i>		<i>Site inspection showed no evidence of damage to landscape values.</i>
12.1 Encourage adjoining landholders to recognize the importance of landscape management by the sensitive siting of facilities and signs and careful planning and siting of utilities and roads.	Medium	Done. Liaison with Goldfields Gas Pipeline company re signage and management. Other significant mining development has not proceeded, future work may be required. (SI, DR, FO)
12.2 Implement CALM's policy No. 34 (Landscape Management of CALM's Lands and Waters) in all aspects of land management within the Reserve.	Medium	Done. Action undertaken to ensure telecom tower not constructed on reserve. (SI)
12.3 Implement CALM's Visual Landscape Management Guidelines.	Medium	Done. (SI)
<i>13. EROSION, MINING AND REHABILITATION - The objectives are to:</i>		<i>Site inspection showed no evidence of significant impacts from exploration or mining. Gas pipeline rehabilitation was</i>

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
<ul style="list-style-type: none"> • <i>minimise the impacts of exploration and mining that modify or destroy habitats.</i> • <i>restore degraded areas to a stable condition, resembling the natural environment as much as possible.</i> • <i>protect the conservation and landscape values from the impacts of exploration and mining.</i> 		<i>seen to be effective. It is likely that this objective has been achieved.</i>
13.1 Monitor erosion of tracks and implement appropriate measures for control.	High	Done. See 7.2
13.2 Continue to assess all applications for mining tenements to ensure impacts on the conservation values of the reserve are minimized.	High	Done. Part of a Statewide process. Ongoing informal liaison with DOIR and companies locally to monitor likely future applications. (SI)
13.3 Rehabilitate degraded areas to a stable state resembling the surrounding landform using local plant species. Rehabilitation will be in accordance with Departmental policy.	Low	Done. Gas pipeline work completed. (FO)
13.4 Monitor and evaluate the effectiveness of rehabilitation programs.	Low	Done/Ongoing. Regular monitoring done by the Department as part of agreement with Goldfields Gas pipeline company. (DR)
13.5 Investigate the establishment of a zone of influence adjacent to the reserve within which development projects are likely to have an impact on the values within the reserve.	High	Done. Part of the MOU with adjoining landholders. (DR, SI)
13.6 Initiate a memorandum of understanding with DOME (now DOIR) that includes the referral of development proposals within the zone of influence for CALM's assessment and recommendations.	High	Not done. Informal liaison with DOIR underway, considered low risk as any major development will be referred under legislative requirements. (SI)
13.7 Ensure the offsite impacts of the gas pipeline construction and operation are minimized.	High	Done. Monitoring of pipeline rehabilitation. (DR, FO)
13.8 Monitor the effects on vegetation of any large-scale water abstraction operations on or near the reserve.	High	Not done. Strategy probably developed in anticipation of large mine development nearby which has not proceeded. (SI) Mt Keith bore fields do not impact on the

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
		reserve.
<i>14. FIRE - The objective is to protect people, property and conservation values in and around the Reserve.</i>		<i>There is no evidence that people, property or conservation values have been impacted by wildfire or prescribed burning.</i>
14.1 Develop a strategic burning plan to protect the conservation values of the reserve.	High	Ongoing. Some work done but to be part of Region Fire Management Review to be undertaken (SI)
14.2 Carry out prescribed burning to protect values and create diversity within habitats.	High	Done. Edge burning takes into account values. (DR, SI, FO) Aerial burning done on surrounding pastoral leases under the MOU.
14.3 Liaise with adjoining landholders and Shires to achieve an integrated approach to fire suppression and prescribed burning programs.	High	Partly done. No integrated approach to suppression, some integration with prescribed burning. Inactive MOU refers. (DR, S)
14.4 Provide information to the public about the risks of wildfires and their impacts on the environment.	High	Done. Limited but appropriate information in relation to this at shearing shed. (FO)
Research and Monitoring		
<i>23. NATURE CONSERVATION RESEARCH - The objectives are to:</i> <ul style="list-style-type: none"> • <i>increase knowledge of the flora and fauna of the Reserve.</i> • <i>increase knowledge and understanding of the natural processes occurring within the Reserve.</i> 		<i>Research and surveys are being undertaken and the level of knowledge in relation to reserve management requirements is increasing. This objective is being achieved.</i>
23.1 Continue biological inventories, research and monitoring programs within the reserve and adjoining lands.	High	Underway. Refer W 8.1, 8.2
23.2 As a priority, carry out research into the habitat requirements of threatened or priority flora or fauna.	High	Done. Refer W 9.1 to 9.6 Why are these high priorities when they are done? I would have thought the rankings would refer to the risk of them not being done, which would be most use to the user to prioritise outstanding actions.

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
23.3 Continue research into the role of fire in habitat modification and effect of fire on the flora and fauna of the reserve.	High	Done. Refer W8.6, 9.3
23.4 Continue to control and monitor feral animal populations.	High	Done. Refer W 9.4
23.5 Carry out inventories of declared and environmental weeds and implement control and monitoring programs.	High	Done. Database maintained, control work identified in works program as required. (DR, S)I
23.6 Carry out research into mulga regeneration.	Low	Not done. This work is being done elsewhere, this strategy is not specific to Wanjarri. (SI)
23.7 Carry out research into the reconstruction of the habitat requirements of the mallee fowl and consider the re-introduction of this animal to the reserve.	Low	Not done. This work is being done elsewhere, this strategy is not specific to Wanjarri. Reintroduction to be considered pending outcome of cat control and monitoring (SI)

Parks and Visitor Services Strategies

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
16. <i>ACCESS - The objective is to provide suitable visitor access while minimising any adverse impact on the conservation values of the Reserve.</i>		<i>The field inspection indicates satisfactory visitor access with no significant impacts on conservation values observed. The objective is likely to have been achieved.</i>
16.1 Monitor visitor pressures and modify access where these pressures conflict with conservation or scientific values of the reserve.	Medium	Done. Car counter was in place (approx 100 per annum). Needs replacement. Progress report to Conservation Commission by December 2005 (DR, SI)
16.2 Confine vehicular access to developed tracks where possible.	Medium	Done. Work to control access in place around shearing shed. No other evidence of problem areas observed (FO)
16.3 Provide interpretive opportunities through the provision of a self-guided walk track.	Low	Not done. Visitation levels changed and thus now question this as a necessary strategy for the reserves current purpose in this environment. (SI)
17. <i>DAY USE - The objective is to provide day use recreation facilities</i>		<i>The field inspection indicates a satisfactory level of day use facilities</i>

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
<i>appropriate to the environmental setting and consistent with the Reserve purpose.</i>		<i>appropriate to the environmental setting and consistent with the Reserve purpose. The objective is likely to have been achieved.</i>
17.1 Develop the day use site at the old shearing shed.	High	Done. Limited work required as visitor levels changed (SI, FO)
17.2 Provide environmentally sensitive toileting facilities.	High	Done. Appropriate toilet facilities given level of use (FO)
17.3 Provide information about lighting fires in the reserve.	High	Not done. No specific or general sign in relation to fire at the shearing shed. Appropriate fireplaces provided.
17.4 Carry out appropriate maintenance of facilities and provide safety information to users of the area.	High	Ongoing. Maintenance program being implemented. (DR) No safety information provided.
18. <i>CAMPING - The objective is to ensure visitors are aware of the statutory requirements regarding camping in nature reserves.</i>		<i>While information about visiting Wanjarri is available it does not specify the statutory requirements on camping. This objective is not achieved, however there does not appear to be any adverse impact from this as there was no evidence that there is camping away from the shearing sheds.</i>
18.1 Provide information to visitors about camping.	High	Ongoing. Low key information available, booking system in place for use of shearing shed. (FO, SI)
18.2 Appoint locally based Honorary CALM officers.	Medium	Done. One was appointed but is no longer in the area, others to be identified on an opportunity basis. (DR, SI)
18.3 Develop management zones for the area	High	Not done. No formal zoning system in place. This strategy was developed to manage the previous high level of visitors and is no longer required. (SI)
18.4 Develop a site plan and facilities for camping.	High	Partly done. No formal site plan developed. Adequate camping facilities available at shearing shed. This strategy was developed to manage the previous high level of visitors and is no longer required. (SI,FO)
19. <i>DOMESTIC ANIMALS - The objective is to protect the conservation values of the Reserve and visitors, from the negative impacts of pets.</i>		<i>While there was no evidence of adverse impacts from domestic pets this objective may not have been achieved as neither strategy has been implemented.</i>
19.1 Prohibit domestic animals in the Reserve.	High	Not done. No specific signage in place that advises of the prohibition of domestic animals on the reserve. Signage required

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
		and information should be developed. (FO).
19.2 Provide information about the impacts of domestic animals on conservation values.	Medium	Not done. No information on site. Information on the potential impact of domestic animals to conservation values should be provided on site. (FO).
20. <i>INFORMATION AND INTERPRETATION - The objective is to increase awareness, appreciation and understanding of the Reserve's values and purpose, and encourage a responsible attitude towards nature conservation.</i>		<i>The information available on site supports an increase in awareness. This objective has been achieved.</i>
20.1 Appoint appropriate personnel as Honorary CALM Officers to provide informal contact with visitors.	Medium	Done/Ongoing. One was appointed but is no longer in the area, others to be identified on an opportunity basis. (SI)
20.2 Prepare information and interpretation material and facilities.	Medium	Done. Limited information available at shearing shed. (FO)
20.3 Liaise with study groups using the Reserve, such as the Royal Australasian Ornithologists Union (RAOU), (now Birds Australia) in the exchange of information.	Low	Ongoing. Limited activity with respect to Wanjarri although there has been previous work. This strategy is managed on a regional basis.(SI)
21. <i>EDUCATION - The objective is to facilitate and encourage the use of the Reserve by educational groups, maximise information dissemination and minimise impact on the conservation and other values of the Reserve.</i>		<i>This objective is implemented on a regional basis thus limited Wanjarri specific action is undertaken. However the objective is likely to have been achieved.</i>
21.1 Liaise with educational or scientific institutions over the use of the Reserve for field study.	Low	Ongoing. Limited activity with respect to Wanjarri although there has been previous work. This strategy is managed on a regional basis. (SI)
21.2 Provide educational opportunities or assistance wherever possible.	Low	Ongoing. Limited activity with respect to Wanjarri although there has been previous work. This strategy is managed on a regional basis. (SI)
Research and Monitoring		
24. <i>SOCIAL RESEARCH - The objectives are to:</i> <ul style="list-style-type: none"> • <i>monitor visitor use of the Reserve.</i> • <i>monitor the impact of visitor use on management activities and</i> 		<i>Strategies have been implemented to achieve these objectives.</i>

Management Plan		Performance Assessment
Objectives and Strategies	Priority	Finding and Comments (How Verified)
<i>conservation values.</i>		
24.1 Conduct appropriate visitor surveys to determine patterns of use, attitudes and expectations.	Medium	Not done. Requirement for this strategy significantly reduced with changes to use patterns. (SI) Visitor book is monitored for use and comments.
24.2 Monitor visitor impacts on the environment to ensure adverse environmental impacts do not occur.	High	Ongoing. Inspections and reporting system in place. Visitor book comments useful. (SI, DR, FO).
24.3 Appoint and train Honorary CALM officers to assist with informal contact with visitors and to monitor visitor usage	Medium	Done/Ongoing. One was appointed but is no longer in the area, others to be identified on an opportunity basis. (SI, DR)

APPENDIX 3 - Supporting documentation

- | | |
|---------------------|---|
| Attachment 1 | Wanjarri Nature Reserve Implementation Plan – CALM Goldfields Region |
| Attachment 2 | The Wanjarri area management group – Background |
| Attachment 3 | Wanjarri Nature Reserve and Surrounding Pastoral Leases – Integrated Fire Management Plan |
| Attachment 4 | Wanjarri Nature Reserve – How to Get there – Leaflet |
| Attachment 5 | CALM Cottages in Goldfields Region – Leaflet |
| Attachment 6 | CALM update of progress on achievement of Wanjarri Nature Reserve management plan strategies at 11 November 2005 |

Attachment 1 Wanjarri Nature Reserve Implementation Plan – CALM Goldfields Region

Wanjarri Nature Reserve Implementation Plan Nature Conservation

Strategy No	Strategy	Priority	KPI	2000 - 2001	2001- 2002	2002- 2003	2003- 2004	2004- 2005	Other Stakeholders	Comments
W5.1	Ensure Reserve boundaries are clearly demarcated in the field where development activities occur adjacent to the Reserve	High								Ongoing, partly completed, signs in place,
W5.2	Ensure fences are maintained in a stock proof condition where necessary and reconstruct only on cadastral boundaries	Med								In place where required, reevaluate on an as needs basis.
W5.3	Reclassify the Nature Reserve to Conservation Park	High								Native Title Developments restricting tenure change.
W7.1	Provide interpretive information on the geology, landforms and soils of the Reserve and their vulnerability to damage.	Med				X				Nothing completed. PVS?
W7.2	Identify areas that are vulnerable to damage and develop measures to protect them.	Med							GGT and Agility	Some bunding and drainage work complete, other rehab work identified.

W7.3	Liase with adjacent landholders to develop compatible conservation land management strategies.	High							WMC, Pastorlists, CALMscience	WAMG has stalled, last meeting in 1998, difficulties with WMC and staff turnover.
W8.1	Undertake further detailed vegetation and flora surveys of the Reserve.	High				X				Some done, data needs to be collated
W8.2	Locate any threatened or priority flora species and develop management strategies for their conservation.	High								Done. Grevillia inconspicua located and recorded.
W8.3	Rehabilitate areas of vegetation degraded by pastoral activities.	Low								No action taken, removal of stock and closure of waters has aided in vegetation recovery
W8.4	Minimize or prevent the removal of, or damage to, vegetation from the development of facilities for visitor use, particularly firewood collection.	High				X	X			Action required (PVS), wood stockpile, salvage from mining ops
W8.5	Provide visitors with interpretive information about the vegetation and flora of the reserve and the fauna dependent upon it.	High				X				some in visitor box, needs upgrading (PVS)

W8.6	Continue research into the effects of fire on the vegetation and flora of the reserve.	Med		X	X	X	X	X	Science Division, WMC	Feral Cat Control Research undertaken, Wanjarri is a likely site for reintroductions of arid zone species
W8.7	Develop conservation management opportunities with adjoining landholders.	High			X	X				WAMG see W7.3, surrounding areas of conservation importance identified in 2015 process
W9.1	Carry out and promote research into the biology and habitat requirements of the fauna of the Reserve and use this knowledge to improve management.	High			X	X			Science division, WMC	Mulgara project, ecological survey collation of data
W9.2	Prepare recovery plans for the management of threatened species including the reintroduction of species once present but now not known from the area.	Med		X	X	X	X	X	WATSCU, Science division	Feral Cat Control Research undertaken, Wanjarri is a likely site for reintroductions of arid zone species
W9.3	Carry out research into the impact that prescribed burning programs have on fauna survival and fauna habitat.	High								No action taken.

W9.4	Monitor and control feral animal populations, particularly where habitat rehabilitation or species reintroduction programs are undertaken.	High		X	X	X			Science division, WMC	Ongoing, cat work with Dave Algar / John Angus
W9.5	Provide interpretation opportunities for the general public about the fauna of the area.	Med								
W9.6	Carry out research into feral animal control and the impacts on non-target species. This will involve co-operative arrangements with adjoining landholders.	High		X	X	X			Science division	Cats - Dave Algar / John Angus
W10.1	Ensure Departmental staff are trained in the recognition of Aboriginal sites and are aware of the provisions of the WA Aboriginal Heritage Act 1972-80.	Med		X					Aboriginal communities, GLSC, Native Title Claimants, DIA	Cross cultural training course attended by all regional staff
W10.2	Promote public understanding and appreciation of the Aboriginal culture.	Med								MOU with GLSC, Aboriginal trainees
W10.3	Consult local Aboriginal groups in the management of significant sites.	High								Ongoing
W10.4	Protect significant Aboriginal sites from damage by visitors.	High								Ongoing
W11.1	Carry out historical research into the exploration and development of the area.	Low								
W11.2	Provide interpretive material for visitor information.	Med								Regional magazine and information on site.

W11.3	Where possible protect relics and structures of significance from damage.	Med		X	X	X	X	X		Problems with termites in the shearing shed and buildings, regular maintenance each year.
W12.1	Encourage adjoining landholders to recognize the importance of landscape management by the sensitive siting of facilities and signs and careful planning and siting of utilities and roads.	Med							WMC, pastoralists	WAMG
W12.2	Implement CALM's policy No. 34 (Landscape Management of CALM's Lands and Waters) in all aspects of land management within the Reserve.	Med								
W12.3	Implement CALM's Visual Landscape Management Guidelines.	Med								
W13.1	Monitor erosion of tracks and implement appropriate measures for control.	High				X			GGT, Agility	Ongoing monitoring, bunding and rehab complete in some areas, more planned.
W13.2	Continue to assess all applications for mining tenements to ensure impacts on the conservation values of the Reserve are minimized.	High								Ongoing

W13.3	Rehabilitate degraded areas to a stable state resembling the surrounding landform using local vegetative species. Rehabilitation will be in accordance with Departmental policy.	Low								Ongoing
W13.4	Monitor and evaluate the effectiveness of rehabilitation programs.	Low								
W13.5	Investigate the establishment of a zone of influence adjacent to the reserve within which development projects are likely to have an impact on the values within the Reserve.	High							WMC, pastoralists	WAMG, MOU's and off reserve conservation
W13.6	Initiate a memorandum of understanding with DOME that includes the referral of development proposals within the zone of influence for CALM's assessment and recommendations.	High								No memorandum signed. WAMG
W13.7	Ensure the offsite impacts of the gas pipeline construction and operation are minimized.	High								Done, ongoing monitoring program sponsored by GGT
W13.8	Monitor the effects on vegetation of any large-scale water abstraction operations on or near the Reserve.	High								Nil proposed, PER's will pick up.

W14.1	Develop a strategic burning plan to protect the conservation values of the Reserve.	High			X	X			Fire Services, WMC	Region undertaking a Fire management review across all reserves \$ and priority from RSD and fire services required
W14.2	Carry out prescribed burning to protect values and create diversity within habitats.	High					X	X	Fire services, WMC	some burning initially however \$ and priority from RSD and CALMfire
W14.3	Liaise with adjoining landholders and Shires to achieve an integrated approach to fire suppression and prescribed burning programs.	High							Shire Leonora, WMC, pastoralists	WAMG, MOU's
W14.4	Provide information to the public about the risks of wildfires and their impacts on the environment.	High								
Research and Monitoring										
W23.1	Continue biological inventories, research and monitoring programs within the Reserve and adjoining lands.	High							Science division	Mulgara project ongoing
W23.2	As a priority, carry out research into the habitat requirements of threatened or priority flora or fauna.	High								Department should set priority
W23.3	Continue research into the role of fire in habitat modification and effect of fire on the flora and fauna of the Reserve.	High								Department should set priority

W23.4	Continue to control and monitor feral animal populations.	High								CALMscience	Cats ongoing
W23.5	Carry out inventories of declared and environmental weeds and implement control and monitoring programs.	High									Weed control done on an annual basis as part of reserve maintenance.
W23.6	Carry out research into mulga regeneration.	Low									Department should set priority
W23.7	Carry out research into the reconstruction of the habitat requirements of the mallee fowl and consider the re-introduction of this animal to the Reserve.	Low									To be considered when feral cat control is achieved.

**Wanjarri Nature Reserve Implementation Plan
Parks and Visitor Services**

Strategy No	Strategy	Priority	KRA	2000 - 2001	2001-2002	2002-2003	2003-2004	2004-2005	Other Stakeholders	Comments
W16.1	Monitor visitor pressures and modify access where these pressures conflict with conservation or scientific values of the Reserve.	Med								Vehicle counter in use, review?
W16.2	Confine vehicular access to developed tracks where possible.	Med								Done, roads closed and rehabilitated.
W16.3	Provide interpretive opportunities through the provision of a self-guided walk track.	Low								
W17.1	Develop the day use site at the old shearing shed.	High								Upgrade site plan

W17.2	Provide environmentally sensitive toileting facilities.	High									New facility required
W17.3	Provide information about lighting fires in the Reserve.	High									Upgrade info box, new sign?
W17.4	Carry out appropriate maintenance of facilities and provide safety information to users of the area.	High									ongoing
W18.1	Provide information to visitors about camping.	High									need information shelter.
W18.2	Appoint a locally based Honorary CALM officers.	Med									Investigate and appoint.
W18.3	Develop management zones for the area	High									Done
W18.4	Develop a site plan and facilities for camping.	High									Done
W19.1	Prohibit domestic animals in the Reserve.	High									Done, through signage
W19.2	Provide information about the impacts of domestic animals on conservation values.	Med									
W20.1	Appoint appropriate personnel as Honorary CALM Officers to provide informal contact with visitors.	Med									Done, investigate and appoint replacement
W20.2	Prepare information and interpretation material and facilities.	Med									Requires an information shelter, possible sponsorship
W20.3	Liaise with study groups using the Reserve, such as the Royal Australasian Ornithologists Union (RAOU), in the exchange of information.	Low									

W21.1	Liaise with educational or scientific institutions over the use of the Reserve for field study.	Low								
W21.2	Provide educational opportunities or assistance wherever possible.	Low								
Research and Monitoring										
W24.1	Conduct appropriate visitor surveys to determine patterns of use, attitudes and expectations.	Med								VISTAT, new counter required.
W24.2	Monitor visitor impacts on the environment to ensure adverse environmental impacts do not occur.	High								
W24.3	Appoint and train Honorary CALM officers to assist with informal contact with visitors and to monitor visitor usage	Med								

**Attachment 2 The Wanjarri area management group – Background prepared by
CALM Regional Manager Ian Keally**

THE WANJARRI AREA MANAGEMENT GROUP - BACKGROUND

The Wanjarri Area Management Group was formed in April 1996 to facilitate integrated management in the Wanjarri area including the Nature Reserve and surrounding pastoral leases. Prior to forming the official group there were numerous individual informal and official meetings between CALM and the surrounding leaseholders and mining project proponents and operators. With the development of large resource projects in the area and the change to mining company ownership of pastoral leases it became necessary for the various companies involved and CALM to meet more regularly and formally. It was more efficient to develop a management group and the WAMG was formed, initially with a management group and a technical sub committee then with the one main group.

Previous meetings of the WAMG are as follows:

For the Wanjarri Area Management Group.

- #1. 24 April 1996, at Mt Keith.*
- #2. 4 July 1996, at Yakabindie camp.*
- #3. 12 November 1996, at Wanjarri.*
- #4. 18 March 1997, at Bronzewing.*
- #5. 29 July 1997, at Bronzewing (combined with TSC). The management group and Technical Sub Committee were combined and the one WAMG was formed dealing with all issues.*
- #6. 24 November 1997, at Wanjarri.*
- 1998. A number of informal meetings were held relating to the feral cat research and control project and related fieldwork.*
- #7. 28 January 1999, at Mt Keith.*

For the Technical Sub Committee.

- #1. 3 July 1996, at Mt Keith.*
- #2. 11 November 1996, at Wanjarri.*
- #3. 18 March 1997, at Bronzewing.*
- #4. 29 July 1997, at Bronzewing (combined with the Management Group)*

There have been a number of achievements for the WAMG including:

- A management plan for the Wanjarri Nature Reserve*
- Development of the "Managing Biodiversity in the NorthEast Goldfields" concept paper.*
- Integrated fire management planning*
- Major information exchange and networking*
- Cooperative integrated prescribed burning on Wanjarri and surrounding leases*
- A biological data base and sharing of information*
- The feral cat biology and control research project. Including major fieldwork, establishment of monitoring grids on leases and parallel fauna work.*
- Mulgara research, location and relocation*
- Land exchange options, boundary adjustments and approvals*
- Cooperative boundary demarcation and fencing*
- Honorary CALM officer training and reserve inspection and management work*
- Formal and informal input to NRI's and CER's*
- Management, mapping and information on rare and restricted flora*

WANJARRI NATURE RESERVE

AND SURROUNDING PASTORAL LEASES

INTEGRATED FIRE MANAGEMENT PLAN

November 1997

INTRODUCTION:

Wanjarri Nature Reserve is the only dedicated conservation reserve in the northern part of the Eastern Goldfields. As an arid zone reserve Wanjarri is small in area and not fully representative of the surrounding land types. The much broader biological diversity represented on the adjoining pastoral lands offers opportunities for a regional approach to ecologically sustainable land management. Integrating management practices will enhance the conservation values of the region, while supporting a wide variety of land uses.

This concept of co-operative land management has been formally agreed by the Department of Conservation and Land Management, WMC Resources Ltd and Dominion Mining Pty Ltd through the signing of Memoranda of Understanding.

Great Central Mines and Arimco are also supportive of the proposal.

This fire management plan details a joint approach to fire prevention, use and control on Wanjarri Nature Reserve and adjoining pastoral leases. It will be updated annually.

BACKGROUND:

Fire Behaviour and Ecology

Hummock grassland (spinifex) will burn under fine weather conditions, with fire behaviour particularly sensitive to wind strength.

Based upon the current understanding of arid zone ecology, mosaic burning of spinifex dominated vegetation communities is required in order to maintain and promote flora and fauna species diversity. Large scale uniformity of disturbances such as fire has probably contributed to the decline in mammal fauna, many of which depend on diverse vegetation and irregular fire-induced boundaries for suitable habitat. (Saxon 1984)

Mulga Woodlands will burn in Summer or Autumn if sufficient germination and growth of annual grasses has occurred. Fire can then consume this ground fuel, and if sufficient intensity is reached, spread through the Mulga tree tops.

Mulga is sensitive to fire - frequent low intensity fires and occasional high intensity fires are thought to reduce the occurrence, distribution and long term viability of Mulga Woodlands.

Fire can be used as a tool to favour specific management and ecological requirements such as fauna habitat creation or enhanced pasture production.

Fire History

Some protective burning has been carried out at Wanjarri in the form of wind driven strips and roadside edging in spinifex fuels and associated vegetation types.

The aim of this burning was to "break the country up" so that the potential size of a wildfire could be limited through such a fire running only to the edge of recently burnt fuel.

There has also been a history of wildfire, generally caused by ignition of fuels by lightning.

Other Considerations

There is increasing population pressure in the North Eastern Goldfields.

This is due to the impacts of workers going about their daily business in the mining, exploration and pastoral industries, and the recreational pursuits of both locals and visitors.

Increasing numbers of people visiting, residing and recreating in an area create an increased risk of fire ignition, and the extra need for fire protection measures.

Protection of property, especially mining related infrastructure is important, as huge investments have been made by the owners.

Objectives

The objectives of this Integrated Fire Management Plan are to;

1. Protect people, property (including infrastructure) and conservation values on Wanjarri Nature Reserve and the surrounding pastoral leases of Mt Keith, Yakabindie, Barwidgie and Yandal.
2. Use fire as a management tool to enhance biological diversity and other land management requirements.

Overall Strategies

1. Implement a program of prescribed burning in the Wanjarri Reserve and surrounding pastoral leasehold lands to satisfy protection, management and conservation requirements, consistent with the Wanjarri Nature Reserve management plan and management plans for the pastoral leases.
2. Provide information to the public about the risks of wildfire and their impacts on the environment.
3. Evaluate the effectiveness of prescribed burning operations.

4. Apply research findings to this Management Plan.
5. Implement a program of pre fire season preparation activities for the region.
6. Implement an action plan detailing responses in the event of wildfire in the region.

Prescriptions

1. Liaison

Representatives of CALM and the surrounding mining operations and pastoral leases will meet annually to discuss pre-fire season arrangements.

All organisations will provide information to their staff and visitors about fire prevention, reporting the risks of wildfire and their impacts on the environment.

2. Road, firebreaks and Water Point Maintenance

A system of strategic roads and firebreaks will be maintained on an annual basis depending on seasonal conditions.

Defined waterpoints will be constantly maintained in serviceable condition.

These tasks are the responsibility of the individual land managers

3. Master Burning Plan

A master prescribed burning plan will be developed to show areas intended to be burnt during the next five years.

Types of burns include;

- a) Broadscale mosaic burns in hummock grasslands to favour species diversity.
- b) Small scale fuel reduction burns adjacent to buildings and other property values.
- c) Buffer and edge burns adjacent to fire susceptible plant communities such as Mulga woodlands.
- d) management burns for reasons such as pasture improvement or regeneration of degraded sites.

When resources are shared during burning operations, costs and responsibilities will be defined in accordance with the Memorandum of Understanding and an Interagency Agreement.

4. Training

Each organisation will establish and maintain a trained fire fighting capability.

5. Action in the Event of a Fire

All fires on Wanjarri Nature Reserve or adjacent pastoral stations should be reported immediately to the manager of the land on which the fire is situated and the managers of adjoining properties which could be threatened.

The manager of the land on which the fire is situated will nominate a Controller, who will notify the local government authority and the BFB.

The controller will decide whether suppression action is required, in consultation with the local government authority.

If suppression action is required the Controller will establish an appropriate incident management structure and determine the objectives and strategies required to combat the incident.

If the Controller's own resources appear insufficient to meet the task, he should seek assistance from the manager of the threatened adjoining property and the broader community if necessary.

In such a mutual aid situation the guidelines of the Bush Fires Board "Goldfields Bush Fire Response Plan" must be followed. This will ensure that financial responsibilities are understood and requests for financial assistance are processed correctly.

6. Manpower and Equipment Resources

CALM Kalgoorlie - Office: (08) 90212677 Fax: (08) 90217831 After Hours Fire Emergency: 018 935 692

Regional Manager - Ian Kealley

Senior Operations Officer - Geoff Young

Operations Officer - Phil Spencer

Resources - 2 x 4wd Light Units
1 x 4wd Tractor

Leonora Shire - Office: (08) 90376044 Fax: (08) 90376295 After Hours Emergency: (08) 90376195

CEO & Chief Fire Control Officer - Jim Epis

Works foreman - Rick Mirams. After Hours (08) 90376263

Wiluna Shire - Office: (08) 99817010 Fax: (08) 99817110 After Hours Emergency: (08) 99817135

CEO & Chief Fire Control Officer - Neville Browne

Works Foreman - Robert Ford After Hours: (08) 99817113

Bush Fires Board Northam - Office: (08) 96227311 Fax: (08) 96225178 After Hours Emergency: (08) 92790777 Swan Region

Liaison Officer - Allan Daw

Liaison Officer - Bob Smith

Liaison Officer - Wayne Jones

Mt Keith - Derek Lenartowic - Office: (08) 90378520 Fax: (08) 90378503 After Hours Emergency: (08) 90378566
Station Manager - Adrian Leeds (Albion Downs) BFCO Phone/Fax: (08)90375928
All requests for Mt Keith/Albion Downs through Adrian.

Resources

Barwidgee

Mine Manager Bronzewing - Peter Johnston Office: (08) 90378000 Fax: (08) 90378001 After Hours Emergency: (08) 90378000
Station Manager - Len Boladeras FCO Phone/Fax: (08) 9075941

Resources

Yandal

Mine Manager Mt McLure - Ian Gipps Office: (08) 90379112 Fax: (08) 90379072 After Hours Emergency: (08) 90379112

Resources

Yakabindie

Project Manager - Peter Sperring or Paul Beer Office: (08) 94266400 Fax: (08) 4811 378 After Hours Emergency: (08) 94487140
Station Manager - Mark Townsend Phone/Fax (08) 90375944

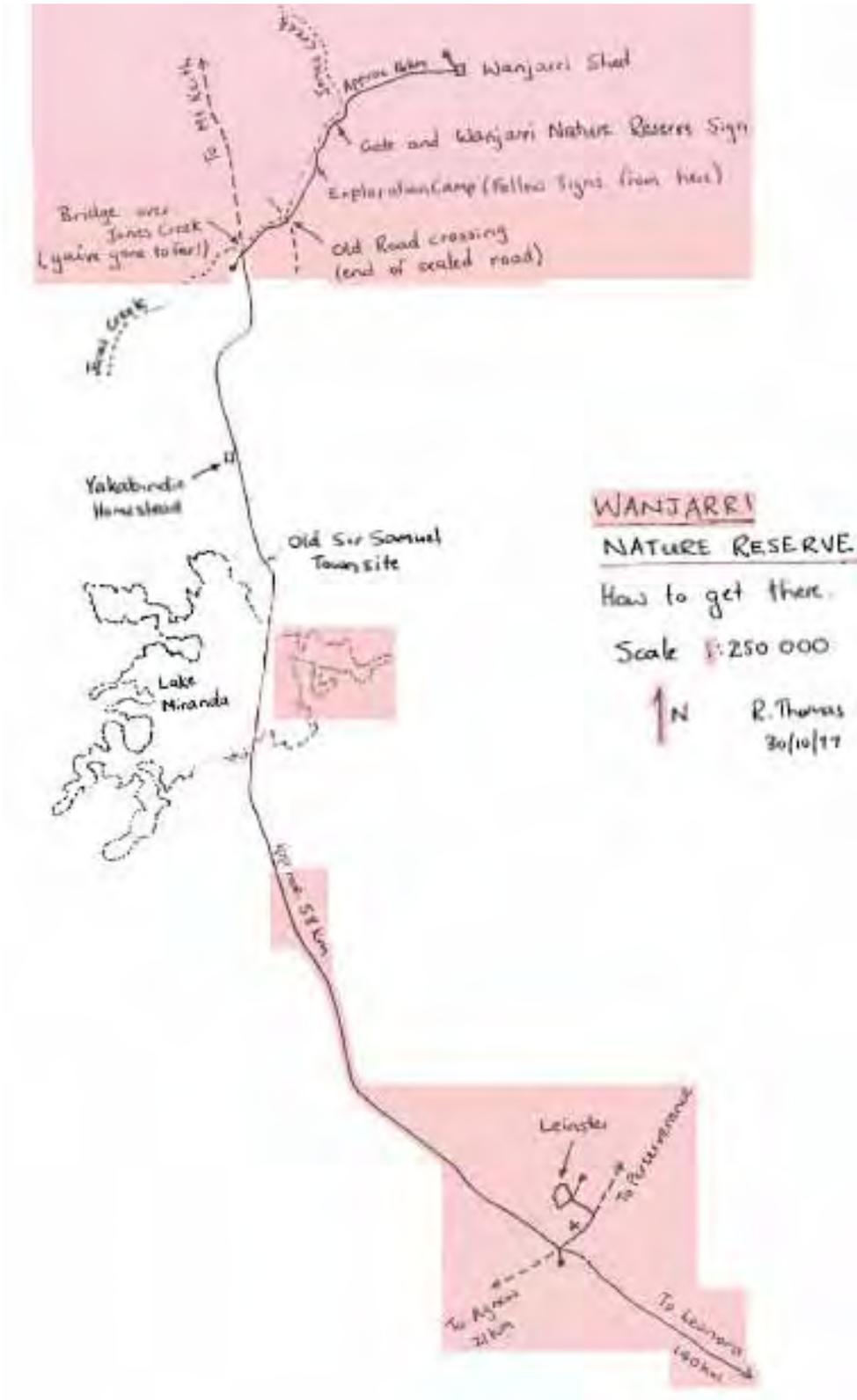
Resources

7. Research and Monitoring

A co-operative approach to fire management through the sharing of resources and knowledge will help achieve a greater understanding of the effects of fire on the environment.

All parties will monitor the effectiveness of fire management practices in meeting management goals.

Management practices will be revised in line with research findings, and the results will be disseminated to other pastoralist in the region and to the general community.



Attachment 5

CALM Cottages in Goldfields Region - Leaflet



Goldfields Region – Post Office Public Building – Hannan Street -
 PO Box 10173
 KALGOORLIE WA 6433
 Tel: (08) 9021 2677 Fax: (08) 9021 7831

CALM COTTAGES

										Cost of Sites per night 1-2 people Inc GST	Each Additional Person	Each Additional school-age child under 16
WANJARRI - Shearing Shed	1	6	✓	✓	1 Only	BYO	✓	✓	✓	\$10.00	\$5.50	\$2.00
JAUARDI - Shearers Quarters - Open Shed	3 1	6 2	✓	✓	1 Only	BYO	✓	✓	✓	\$10.00	\$5.50	\$2.00
MT ELVIRE - Homestead - Shearers Quarters	3 1	4 -	✓	✓	1 Only	BYO	✓	✓	✓	\$10.00	\$5.50	\$2.00
GOONGARRIE - Homestead - Cottage - Sandalwood Camp	4 4 4	10 10 12	✓	✓	Four	RAIN WATER TANKS	✓	✓	✓	\$12.50	\$5.50	\$2.00

No inside cooking facilities provided

No bins provided

No Firewood provided, but available

No. of Bedrooms

Wood Hot Water

Toilets

Wood BBQ

Electricity – wired for generator BYO

Number of Beds

Shower

Drinking Water

Picnic Table

Camping

Attachment 6 CALM update of progress on achievement of management plan strategies at 11 November 2005

The following comments are provided on the “findings and comments against objectives and strategies” section of the report:

Strategy 5.2

Fencing. Recent fencing work with new neighbours, mining developments and changes relating to ownership of neighbouring pastoral properties and pastoral lease management are having impacts in this area.

Strategies 5.3, 7.1, 16, 17, 18

Recent infrastructure developments in the North East Goldfields have increased visitation and pressure at Wanjarri Nature Reserve. Developments include sealing of the road to Wiluna and the road from Mt Magnet to Leinster, development of heritage trails, tourism promotion and increasing 4WD touring. In addition the Leonora Shire is proposing a northern extension of the Golden Quest Heritage Trail that could include the Wanjarri area. Visitor use and impacts are being closely monitored and the strategies in the plan may again be relevant.

Strategies 7.3, 12.2, 13.2, 13.5, 14.3

There has been a significant change to mining company ownership of surrounding pastoral leases and major changes to mining operations in the past three years. The Yakabindie and Mt Keith pastoral leases are now owned by BHP Billiton (Nickel West) and development of the Yakabindie 6 Mile mine is back on the agenda, linked to a major expansion of the Mt Keith Nickel Mine. CALM is engaged in active discussions with BHP Billiton relating to mining proposals, land swaps, Section 16A agreements and conservation opportunities other than reservation. Mining operations and pastoral leases to the east of Wanjarri have changed ownership again and mining is greatly reduced. Maintaining relationships with mining company neighbours to the east is proving to be increasingly difficult.

Strategies 8.1, 9.1, 23

Research is ongoing at a level lower than during the 1990s due to the focus on arid area research (cat predation, biological survey and reintroductions) now being undertaken at Lorna Glen. Some of the previous work has been compiled and written up (eg. cat predation, biological survey). As time and capacity permits, additional scientific work will be published or included in Departmental reports.

Strategies 8.5, 9.5, 11.2, 18.1, 19.2, 20, 21

Additional interpretive material has been provided in recent years. Wanjarri Nature Reserve and relevant general information is included in the Goldfields Regional information magazine. New signage has been installed at the Wanjarri shed.

Strategies 8.7, 12.1, 1.3, 13.5, 16

With the purchase of Mt Keith and Yakabindie pastoral leases by BHP Billiton (Nickel West) there have been recent extensive discussions about the Yakabindie 6 mile mine, proposed new access to the reserve (away from the exploration areas and proposed minesite), mining proposals, land exchanges (including additional areas as conservation offsets) and management for conservation of adjacent pastoral leases. With the mine planning now underway, all mining access issues and the achievement of management plan objectives and strategies related to mining will be linked to the proposed development.

Strategies 9, 9.1, 9.2

Feral cat research is now located at Lorna Glen. Data are still being compiled and published, however not specifically for the Wanjarri work. An expansion of the Western Shield program into the rangelands is still being planned, initially at Lorna Glen with Wanjarri and other areas still a future possibility.

Strategies 13, 16

Extensive access, firebreak and erosion control work has been completed through the Bushfire Mitigation Programme funding.

Strategies 14, 23

A Regional Fire Coordinator was appointed in 2005, thus increasing capacity for fire planning and operational work. Planning for fire regimes at Wanjarri will be included.