

Performance Assessment Name:

Lesueur Coomallo

PA Category:

Conservation Reserve Management Plan PA

Lead Auditor: Audit Manager

Twelve month review:

31/10/2007

Twelve month review undertaken

Further action required

Comments:

The details of the interim fire plan were presented at the August 2007 Commission meeting and endorsed as an adaptive management plan.

Twelve month review details:

Update on some key findings from DEC were provided in March 2007 as follows:-

Key finding 1

The issue of providing additional resources to address issues such as increased visitor numbers resulting from the construction of Indian Ocean Drive will be addressed through the annual budgeting process. As stated previously, the allocation of any additional resources is on a priority basis and a specific timeline cannot be provided until the construction of Indian Ocean Drive is confirmed. A more specific response regarding additional resources can be made to the Commission in the event of the construction of Indian Ocean Drive commencing.

The construction of the Pinnacles Desert Discovery Centre in Nambung National Park will result in additional resources being provided at this site next financial year. The provision of other visitor facilities and services in parks and reserves across the area will be addressed through the capital works program.

The Commission needs to be mindful that the Department's ability to apply increased staffing and resources to any individual park is dependent on our overall budget situation. A proposal to increase park management staffing capacity across the State was put forward in the 2006/07 budget process, but without success. A similar proposal was submitted for the 2007/08 budget process, which is not yet complete.

Key finding 4

The District has reviewed its operational procedures to ensure future compliance with Policy Statement 3 Management of Phytophthora and disease caused by it. The District is currently pulling together details of dieback management strategies used for past operations in Lesueur National Park and will include this information in a hygiene management plan for human access. A briefing of the Commission will be arranged on finalisation of the hygiene management plan.

Key finding 5

A planning team is being convened to consider the issues raised by the Commission with respect to the fire management section of the Lesueur plan. The group will be chaired by the District Manager of the Moora District and will consist of representatives from Science Division, Fire

Management Services and operations staff associated with nature conservation and fire management in the region. Since the plan was released in 1996, there has been improvement in the Department's capability to use prescribed wind-driven fires to establish low fuel buffers. There is also a better understanding of the life history and fire sensitivity of a range of plant and animal species from this area. In addition, a project investigating suitable fire regimes for representative vegetation types of the northern agricultural area has been initiated with the University of Melbourne. The outcomes from this work will contribute to a better understanding of fire response in a broad range of plant species of the northern Kwongan vegetation.

This planning team will prepare an interim fire plan for Lesueur National Park, due to be completed by the end of July 2007, based on a review of the implementation of the existing plan, threats to flora and available ecological information to enable effective fire management and nature conservation outcomes to continue until a new management plan for the park is prepared. The plan will be made available to the Commission on completion.

Conservation Commission Conservation Reserve Management Plan Performance Assessment

Lesueur National Park and Coomallo Nature Reserve
Management Plan 1995 - 2005

Performance Assessment Number CRMPPA - 01/06



Conservation Commission
of Western Australia



Conservation Commission
Conservation Reserve Management Plan Performance Assessment

Lesueur National Park and Coomallo Nature Reserve Management Plan 1995 -
2005 – Performance Assessment Number CRMPPA - 01/06 -

Conservation Commission of Western Australia
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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.

The use of Department of Environment and Conservation (DEC) data for the production of maps in this report is acknowledged.

Approved at Conservation Commission meeting – September 2006

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EXECUTIVE SUMMARY

This Conservation Commission performance assessment reviewed the implementation of the Lesueur National Park and Coomallo Nature Reserve Management Plan 1995 - 2005¹. This report presents information gathered in 2003 and 2006.

Lesueur National Park (26 987 ha) and Coomallo Nature Reserve (8 815 ha) are located near the coastal town of Jurien Bay, about 220 km north of Perth. The Lesueur-Coomallo area has long been recognised as an area of outstanding flora conservation values, complex geological features and unusually rugged terrain in the otherwise subdued landforms of the northern kwongan region.

Overall the assessment found that management of Lesueur-Coomallo has been effective in providing for both conservation and recreation outcomes within a relatively constrained budget. Most of the strategies in the plan are being applied effectively and as required on an ongoing basis. However the assessment showed that a number of key strategies have not been implemented and that overall only a relatively small number have been completed. It is acknowledged that the recent completion of the tourist access road will lead to the fulfillment of a number of other strategies including the provision of interpretive materials.

The assessment identified 5 key findings that have resulted in management responses from the Conservation Commission or Department of Environment and Conservation (DEC).

In relation to changes to **context** there was one key finding.

Key finding 1 - Likely changes in the context to which the management plan applies have been identified. These relate to use levels and community interest in management which are likely to increase significantly in the near future with completion of the tourist road and the rapid population growth of Jurien Bay and nearby coastal areas. This is likely to have implications for management that have not been identified in the current management plan.

DEC response

The review is accurate in its assessment of the contextual change in the Geraldton Sandplain Biogeographical Region. Many of the threats identified for this region in the Biodiversity Audit of Western Australia's 53 Biogeographical Subregions were generic and did not relate specifically to Lesueur-Coomallo. The review should not, however, consider Lesueur-Coomallo in isolation. The Department's ability to respond to threats in Lesueur must be considered in the context of competing priorities in the region and indeed across the State. As outlined in the Biodiversity Audit the area is experiencing significant threats, all of which must be addressed in a climate of limited resources.

The changing social context, to which the review refers, needs further consideration. A factor identified in Key finding 1 of the review is the planned completion of the Indian Ocean Drive in 2011, opening a major transport corridor between the region and Perth. Indian Ocean Drive is likely to be the preferred route to Geraldton from Perth. The opening of the Indian Ocean Drive will further increase visitor numbers and significantly alter visitor patterns to the park and region beyond present growth. It would not be unreasonable to expect the region to grow significantly in the years following the opening of the Indian Ocean Drive, resulting in a proportionate increase in pressure on the conservation estate. There is expected to be a dramatic increase in traffic on the western boundary of Lesueur National Park, increasing the potential for wildfires in the western section of the park.

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

In terms of the influence of increased numbers on the rest of the park and reserve, DEC has invested \$1.8M in improving and developing visitor infrastructure, to mitigate threats associated with the growth. These include a high quality sealed park access road (identified in the plan) and provision of other facilities such as toilets, walk trails and interpretive displays. Along with the increase in environmental protection benefits provided by a sealed access and quality interpretation that assists in developing a better informed visitor, these facilities also further promote the area as an attraction.

It is identified that there will be a demand for further resources to manage the increased numbers and maintain the facilities to an acceptable standard, however this challenge is not limited to the Lesueur area and needs to be considered in a statewide context. Subject to budgets, DEC plans to increase park management staff numbers across the State, however these increases will be allocated on a priority basis and the Lesueur area will be considered for additional staffing and resources during that assessment process.

The significant increase in visitation, the potential for considerable development associated with the coast road and the additional access already provided in accordance with the current plan will increase the risk of fire ignitions from accidental or arson causes. The current plan does not cater for this risk profile and in fact encourages the maintenance of high fuel loads across extensive areas. These extensive areas of high fuel load are near areas frequented by the public and across areas that have significant biological values. The plan needs revision to accommodate this change in risk profile.

Conservation Commission response

The Conservation Commission accepts that resources for the management of threats and for general reserve management in Lesueur must be considered in the context of competing priorities in the region and the State. The findings of this performance assessment should be used to help inform resource allocation within this context. A report on the outcomes of such resource allocation considerations in the light of these assessment findings will be requested from DEC. The suggested review and revision of the management plan to accommodate changes in risk profile is noted and will be included as a matter of priority in further considerations of State wide management planning priorities undertaken by DEC and the Conservation Commission.

In relation to the adequacy of **planning** there were two key findings.

Key findings 2 & 3 - Two aspects of the management plan are identified as inadequate. These relate to fire management and feral animal management. The fire management section of the plan lacks specific strategies to deal with uncertainty of knowledge while the feral animal management section lacks information of threats and specific strategies for action.

DEC response [Key Finding 2]

Fire management –The fire management section of the plan does not clearly document strategies to deal with the uncertainty of knowledge. The existing plan requires a very conservative approach to fire management. The plan identifies open edge buffers as a primary strategy to provide a degree of protection from spread of fire that may burn the entire park, while also providing a level of protection to surrounding properties. This strategy has been successful in achieving these outcomes to date. This has primarily been due to the mosaic of low fuel areas existing in the park (mostly from wildfire events) when the plan was approved allowing relatively safe and effective burning of wind driven buffers. In doing so fire has been applied under prescribed conditions immediately adjacent to extensive areas of high fuel load. These operations

are inherently high risk and the greater the adjacent fuel loads become, the greater the risk that prescribed fire will escape and cause unintended impacts of surrounding values. After 10 years of applying this strategy, the resultant extensive areas of high fuel levels in the park now exhibit a level of threat beyond the ability of the current strategy to mitigate in coming years.

This point is further covered in the response to Key finding 5.

Conservation Commission response

The Conservation Commission notes the acceptance of the finding of the limitations of the management plan. As noted elsewhere the suggested review and revision of the fire strategies in the management plan is noted and will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC.

DEC response [Key Finding 3]

Feral animals - Our present knowledge of the range of environmental impacts and threats from introduced animals is reasonably good, and could therefore be better represented in Section 7.3 of the management plan. Research on particular species, threats and techniques is continuing at a Departmental level, and in association with other agencies through the Invasive Animals Cooperative Research Centre, continuing to add to our knowledge and understanding and providing more effective strategies for control.

Strategies for the management of feral animal species requires a broadscale coordinated approach at no less than a District scale. Management of feral animals is based on identifying priorities using the level of risk they present, resources available and the likelihood of a successful outcome. Currently, the areas of Crown land south of the Hill River are covered by the Western Shield program, but the Lesueur-Coomallo area is not covered.

The inclusion of specific strategies in Lesueur-Coomallo in isolation may be restrictive in the broader control of introduced species. Strategies that include the ongoing monitoring of feral animals and effective responses to threats to the reserves in association with other regional programs may be appropriate.

The Department will continue to pursue partnerships and funding to address feral animal management on a species level, and apply the latest knowledge of threats and management techniques to managing the impacts from introduced species in Lesueur-Coomallo.

Conservation Commission response

The Conservation Commission accepts that management of feral animal species requires a broadscale coordinated approach at no less than a District scale and that specific strategies in Lesueur-Coomallo in isolation may be restrictive in the broader control of introduced species. The suggestions that the present knowledge of the range of environmental impacts and threats from introduced animals is reasonably good, and could therefore be better represented in Section 7.3 of the management plan, and that strategies to monitor feral animals and effective responses to threats to the reserves in association with other regional programs may be appropriate are noted. Consideration of the review and revision of the management plan to accommodate the above suggestions will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC.

In relation to the **outputs** of implementation of the plan there were two key findings.

Key finding 4 - The assessment found that the requirements of DEC Policy Statement Number 3 (*Phytophthora dieback*) were not properly applied during the planning for the tourist road. This resulted in the lack of production of a specific hygiene management plan. While it does not appear that this has resulted in any shortfall in the implementation of preventative measures or adverse impact, given the importance of Lesueur-Coomallo for plant biodiversity and the impact that infection with *Phytophthora* could have it is expected that exceptional standards of implementation of relevant policies and procedures are applied.

DEC response

This finding of the review has been noted. The potential impact of *Phytophthora* on the plant diversity of the region is understood and the management of this threat is a significant aspect of day-to-day operations in the DEC Moora District.

While there has been a shortfall in the documentation of the procedures followed in the planning and design phase of the roadworks, this primarily appears to have been a breakdown in administrative procedure, rather than in an operational sense. Operationally all precautions and checks were adhered to, however procedures were not documented in the form of a plan. The District has undertaken to review procedures to ensure compliance to policy statement no. 3 during future operations, thereby limiting the potential for introduction of the disease into the Lesueur-Coomallo area. In addition, the Moora District will ensure that all relevant staff are appropriately trained in dieback management and policies and that standards and procedures are applied.

Conservation Commission response

The Conservation Commission accepts the response and will request a briefing of the outcome of the District review of procedures for early 2007. The Conservation Commission considers that the threat of the spread of Phytophthora and potential impacts on biodiversity values is one of the most significant in the State. The Conservation Commission will maintain a close involvement in ongoing policy review and development and will maintain Phytophthora management as a high priority for future performance assessments, including the conduct of performance assessments of a number of aspects of Phytophthora management during late 2006 and the first part of 2007.

Key finding 5 – The assessment found that while prescribed burning had been applied according to the requirements of the fire management plan, there had been no action to determine how areas classified as Vegetation Management Regime in the plan would be managed in the future. These requirements should have been advanced by this stage of the plan's life.

DEC response

As mentioned in the response to key finding 2, the fire management section of the plan had a very conservative approach to fire management. The use of Vegetation Management Regimes (VMR) as a fire management zone is not specific to the Lesueur-Coomallo plan, however the restrictive condition of limiting the burning of these areas without additional information, is. This caveat is in conflict with the application of the precautionary principle.

Some research is being carried out by the University of Melbourne that will contribute information, although it will not provide conclusive outcomes in terms of VMR management. Engaging in the necessary quantity and breadth of research and

monitoring that is required under the current plan has been beyond the resources of the Department and has attracted limited interest from third party research organisations. The nature of the research concerning responses of biota to fire necessitates long-term experiments. As a result, insufficient knowledge has been gathered to fill all the knowledge gaps concerning fire ecology in these ecosystems.

Fire exclusion from most areas of the park using the 'open edge burn' buffers as a containment strategy has been successful, primarily due to a pre-existing mosaic of lower fuel levels at the starting point of the plan and the application of fire by knowledgeable and experienced officers from the Department's local District office. However, this success has resulted in a significantly increased threat posed by high fuel loadings in VMR and No Plan Burn (NPB) areas that constitute large areas of the reserve tenure. The plan, with its limitations on burning in VMR areas and the extensive areas of NPB, has resulted in a high risk of unacceptable damage to biodiversity and community assets after 10 years of application.

It is broadly accepted that intense fires of a landscape scale that result in a single fuel age are undesirable. This threat is real and current and raises doubts concerning the wisdom of continuing the management of the reserves under the current strategy, in particular managing the VMR under a caveat that requires managers to wait for new information and the numerous and extensive NPB areas. This approach guarantees the risk of damage associated with wildfire to broad areas of the reserves will increase. It is desirable that some of the VMR areas are subjected to prescribed fire and the number and extent of NPB areas be decreased.

It is unlikely that the Lesueur-Coomallo plan requires a review in its entirety. However, to achieve effective and sustainable fire management, it is essential to review the fire section of the management plan to determine strategies based on the precautionary principle and adaptive management.

Conservation Commission response

The Conservation Commission notes the response from DEC that highlights the seriousness of the threat now posed by the inadequacy of knowledge that prevents prescribed burning in VMR areas and its concerns with the number and extent of NPB areas. The Conservation Commission considers that, given this response, it is not unreasonable that DEC should have acted on the requirements of the management plan by now by either ensuring that resources were made available or internal research priorities were amended to undertake the necessary research and monitoring that is required under the current plan; and/or identified and acted on the need to review the plan through routine District reviews and management planning processes. The suggested review and revision of the fire strategies in the management plan is noted and will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC. These considerations will include a more detailed analysis of the threats and whether there may be provision to prescribe burn VMR areas under the caveats provided in the plan i.e. that:

- mechanisms have been devised to install wind driven buffers in a controlled way; and
- it is assessed that, on balance, it would be preferable to burn at least part of these areas.

INTRODUCTION

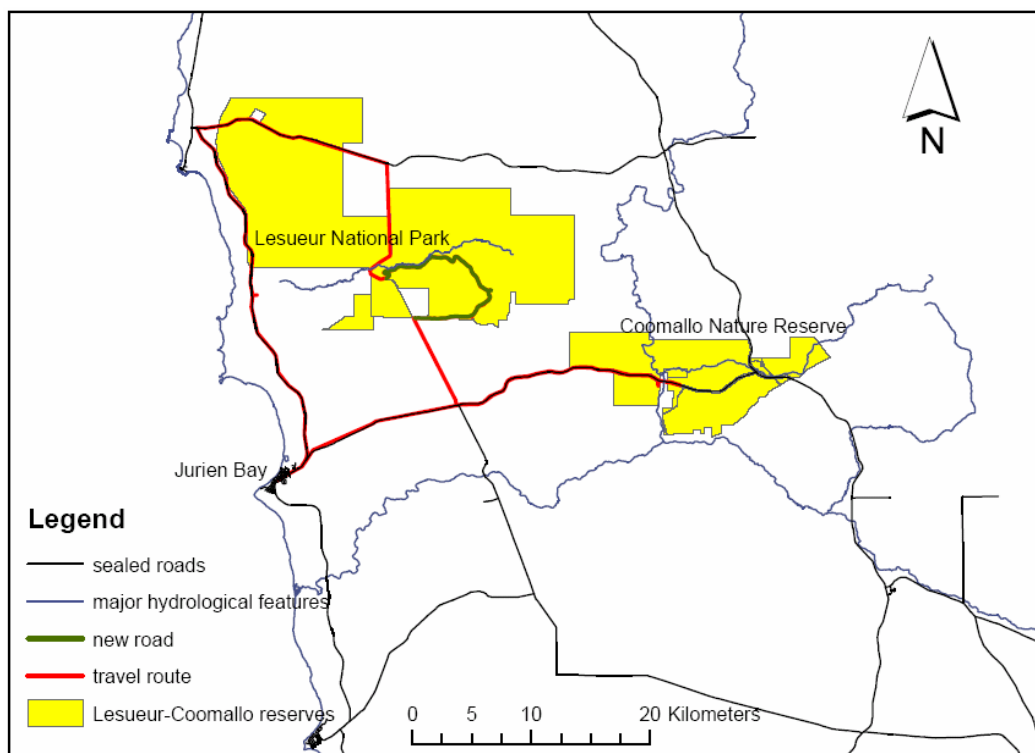
This Conservation Reserve Management Plan Performance Assessment (CRMPPA) reviewed the implementation of the Lesueur National Park and Coomallo Nature Reserve Management Plan 1995 - 2005². Lesueur National Park and Coomallo Nature Reserve (Lesueur-Coomallo) are located in DEC's Moora District approximately 220 km north of Perth in close proximity to Jurien Bay (Figure 1). This management plan was identified as a priority for performance assessment by Department of Environment and Conservation (DEC) and the Conservation Commission as it has reached its nominal term end and because of the very high biodiversity values within Lesueur-Coomallo.

This performance assessment was undertaken in 2006 in accord with the Conservation Commission policy and guidelines for performance assessments, but also draws on work undertaken during 2003. This assessment includes information from both of these assessments to show progress in a number of areas and to provide a benchmark.

The 2003 assessment focussed on the assessment of outputs against clearly identified strategies or actions in the management plan and included a "self assessment" of progress completed by the District. The assessment done in 2006 reviewed context, the effectiveness of the management plan, inputs to implementation and outputs. Broad judgement of outcomes against plan objectives is reported where possible. The 2006 assessment was focused on key operational issues, i.e. fire and dieback protection and recreation access, and other issues identified during context review including changes to feral animal impacts, salinity impacts and visitor use levels.

The assessment processes incorporated checks of office records, interviews with staff responsible for the implementation of strategies and actions, and site inspections within the reserve. The assessment process is summarised in Appendix 1. The travel route taken during inspections is shown in Figure 1.

Figure 1 Lesueur-Coomallo detail and travel route during assessment.



² The management plan can be accessed at www.calm.wa.gov.au/national_parks/management/pdf_files/lesueur.pdf

DESCRIPTION OF LESUEUR NATIONAL PARK AND COOMALLO NATURE RESERVE

Lesueur National Park (26 987 ha) and Coomallo Nature Reserve (8 815 ha) are located near the coastal town of Jurien, about 220 km north of Perth. The Lesueur-Coomallo area has long been recognised as an area of outstanding flora conservation values, complex geological features and unusually rugged terrain in the otherwise subdued landforms of the northern kwongan region.

The area's exceptionally diverse flora of more than 900 species represents 10% of the State's known flora. The Lesueur National Park has seven species of declared rare flora, nine endemic taxa, 111 regionally endemic taxa, and 81 taxa at their northern or southern limits. Lesueur ranks as one of the three most important areas for flora conservation in southern Western Australia and its diversity is of international significance. The Lesueur fauna is also diverse with at least 15 mammal, 124 bird, 48 reptile and nine frog species.

Lesueur's recreation values are regionally important. Its scenery and viewsheds attract a wide range of recreational use, including nature study, pleasure driving, sightseeing, photography, bushwalking and camping. The biological diversity of Coomallo Nature Reserve has not been studied in the same depth as Lesueur National Park; nevertheless, it also has high conservation value and provides an important biological corridor between Lesueur and conservation reserves further inland.

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 management response that is developed following provision of the draft to DEC and consideration of the response by the Conservation Commission.

CONTEXT

Objectives of the performance assessment

To determine if there have been any significant changes in management context since the development of the management plan.

Finding

The assessment focused on three possible areas of change identified from review of the DEC publication A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 which, for the Geraldton Sandplain 3 within which the reserves are located, identified the following with respect to reserve management standard:

Many GS reserves are becoming saline or encountering rising water tables. Wildfire management facilities are limited by resources, except for fire breaks and fire access tracks which are installed and maintained except on Zuytdorp Nature Reserve, areas of Beekeepers Nature Reserve and Nature Reserves smaller than 200 ha. Feral herbivore grazing activities are now widespread (e.g. Callicivirus hasn't made a observable difference to rabbit numbers, goats are common in the north and east, pigs are undergoing drastic increases in numbers

and spread). Feral predator control systems are in place on Kalbarri, Badgingarra and Nambung National Parks only³. The overall reserve management rank for GS3 is (i) (poor).

(A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002, Ed. J.E. May and N.L. McKenzie, Department of Conservation and Land Management, 2003. page 300)

Thus specific review was made of changes to threat levels since the development of the management plan from salinity or watertable changes, wildfire and feral animals.

In respect of salinity and watertable issues it was determined that this applied to parts of the bioregion in general but was not a specific threat to Lesueur-Coomallo.

For wildfire the review indicated that the level of threat from these had not increased significantly and were adequately identified in the management plan. For feral animals the status was reported to be the same with the possible exception of an increase in feral pig numbers. Further comment on these key issues is provided below with respect to the adequacy of the management plan responses and the implementation of plan strategies.

Key Finding 1

One area of management context that will require further consideration is the change to visitor use that is likely to arise from the completion of the tourist road through Lesueur. This has the potential to increase management requirements for such issues as accidental and intentional fire ignitions and inappropriate use of tracks by vehicles. It is also noted that there has been significant coastal residential development in recent years around Jurien Bay within 10 to 20 km from Lesueur National Park. While this will also influence visitor patterns it may also result in increased community interest in the overall management of the reserves, for example, in fire management practices to help ensure protection of life and property from wildfires.

These changes are likely to have implications for management that have not been identified in the current management plan.

DEC response

The review is accurate in its assessment of the contextual change in the Geraldton Sandplain Biogeographical Region. Many of the threats identified for this region in the Biodiversity Audit of Western Australia's 53 Biogeographical Subregions were generic and did not relate specifically to Lesueur-Coomallo. The review should not, however, consider Lesueur-Coomallo in isolation. The Department's ability to respond to threats in Lesueur must be considered in the context of competing priorities in the region and indeed across the State. As outlined in the Biodiversity Audit the area is experiencing significant threats, all of which must be addressed in a climate of limited resources.

The changing social context, to which the review refers, needs further consideration. A factor identified in Key finding 1 of the review is the planned completion of the Indian Ocean Drive in 2011, opening a major transport corridor between the region and Perth. Indian Ocean Drive is likely to be the preferred route to Geraldton from Perth. The opening of the Indian Ocean Drive will further increase visitor numbers and significantly alter visitor patterns to the park and region beyond present growth. It would not be unreasonable to expect the region to grow significantly in the years following the opening of the Indian Ocean Drive, resulting in a proportionate increase in pressure on the conservation estate. There is expected to be a dramatic increase in

³ The District has advised that the treated areas now include Southern Beekeepers Nature Reserve, areas of Unallocated Crown Land and Department of Defence managed lands.

traffic on the western boundary of Lesueur National Park, increasing the potential for wildfires in the western section of the park.

In terms of the influence of increased numbers on the rest of the park and reserve, DEC has invested \$1.8M in improving and developing visitor infrastructure, to mitigate threats associated with the growth. These include a high quality sealed park access road (identified in the plan) and provision of other facilities such as toilets, walk trails and interpretive displays. Along with the increase in environmental protection benefits provided by a sealed access and quality interpretation that assists in developing a better informed visitor, these facilities also further promote the area as an attraction.

It is identified that there will be a demand for further resources to manage the increased numbers and maintain the facilities to an acceptable standard, however this challenge is not limited to the Lesueur area and needs to be considered in a statewide context. Subject to budgets, DEC plans to increase park management staff numbers across the State, however these increases will be allocated on a priority basis and the Lesueur area will be considered for additional staffing and resources during that assessment process.

The significant increase in visitation, the potential for considerable development associated with the coast road and the additional access already provided in accordance with the current plan will increase the risk of fire ignitions from accidental or arson causes. The current plan does not cater for this risk profile and in fact encourages the maintenance of high fuel loads across extensive areas. These extensive areas of high fuel load are near areas frequented by the public and across areas that have significant biological values. The plan needs revision to accommodate this change in risk profile.

Conservation Commission response

The Conservation Commission accepts that resources for the management of threats and for general reserve management in Lesueur must be considered in the context of competing priorities in the region and the State. The findings of this performance assessment should be used to help inform such judgements with threats identified through the risk of dieback introduction and inappropriate fire management. The requirement for the review and revision of the management plan to accommodate changes in risk profile is noted and will be included as a matter of priority in further considerations of State wide management planning priorities undertaken with DEC.

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)(c)&(d) of the Act describes required objectives for national parks and nature reserves respectively as:

- to fulfil so much of the demand for recreation by members of the public as is consistent with the proper maintenance and restoration of the natural environment, the protection of indigenous flora and fauna and the preservation of any feature of archaeological, historic or scientific interest;

- 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.

In support of these broad objectives the management plan has identified six management goals. These are:

Conservation: Conserve biological, physical, cultural and landscape resources.

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

Community Relations: Promote informed appreciation of natural and cultural values.

Research and Monitoring: Seek a better understanding of the natural and cultural environments, and the impacts of visitor use and management activities.

Commercial and other Uses: Manage commercial and other uses in a manner that minimises impact on other values.

Protection: Protect the value of resources entrusted to the Department so as to meet, as far as possible, the diverse expectations of the community.

It also identifies 15 issue specific objectives with supporting strategies. These are listed as part of the 2003 assessment provided as Appendix 2.

Finding

The management plan has generally appropriately identified management goals, objectives and strategies to cover key issues identified in the plan. Strategies to address these key issues are generally consistent with the purposes and objectives for national parks and nature reserves noted above. Two areas where the management plan does not appear to adequately address key issues are with respect to fire protection and introduced animal management.

Key Finding 2

The fire protection section of the management plan makes significant reference to the uncertainty of knowledge that would influence appropriate fire management measures, particularly prescribed burning. For example on page 28 of the plan it is stated that:

Appropriate fire-free intervals are yet to be determined. This is a complex issue as the rate of regeneration of the most vulnerable species varies greatly. Limited research has suggested that a fire-free interval of greater than 15 years is desirable in the Coomallo area.

This lack of knowledge has clearly influenced a number of the strategies in the plan, most significantly with respect to the Fire Management Plan which establishes the following management categories (page 31):

No Planned Burn Regime (NPB)

Sections of the Park and Reserve are to be designated 'No Planned Burn'. These areas will not be burnt for the duration of this plan and may be retained for reference in the long term. If wildfires should occur in these areas, the strategy will be to allow them

to burn to surrounding buffers or to use back burning from existing management tracks. Fires in these areas will not be attacked directly.

Vegetation Management Regime (VMR)

Prescribed burning will be excluded from these areas for the life of this plan until:

- mechanisms have been devised to install wind driven buffers in a controlled way; and
- it is assessed that, on balance, it would be preferable to burn at least part of these areas.

Prescribed Burning Buffers

Burn buffers will play a major role in protecting the area. Basically two types of buffers are planned. Most north-south oriented buffers are 50 - 100 m wide with firebreaks on both sides. These buffers will be burnt approximately every 8 to 10 years and the firebreaks upgraded relatively frequently. Most east-west buffers will be a set of four or five open edge burns each 200 - 400 m wide. These will be burnt in sequence from north to south, one every three or four years, so that each strip is burnt only once every 15 years or more. Open edged burning is a technique being developed to carry out buffer burns without the need for construction of mineral earth breaks. This technique does pose a higher risk of escape than burning between two mineral earth breaks, however, the advantage of not needing to construct new breaks far outweighs the higher risk of burns escaping. In some instances and with some vegetation types scrub-rolling may be required to ensure a safe and effective burn.

It is particularly notable that for the Vegetation Management Regime category there are no strategies specifically designed to resolve these key issues for ongoing fire management. This is a flaw in the plan and may have contributed to the lack of action in resolution of these significant issues. Given the plan is now some eleven years old it is important that action is taken in the near future. This is especially so given numerous developments related to fire management such as the revision of the DEC fire management policy, recently identified management problems with the use of wind driven buffer burns (e.g. Nuyts wilderness prescribed burn escape 2005), progress in using Landscape Conservation Units to guide prescribed burning planning and the evolution of knowledge of fire management in South coast heath vegetation types that may have relevance to similar vegetation types elsewhere.

DEC response

Fire management –The fire management section of the plan does not clearly document strategies to deal with the uncertainty of knowledge. The existing plan requires a very conservative approach to fire management. The plan identifies open edge buffers as a primary strategy to provide a degree of protection from spread of fire that may burn the entire park, while also providing a level of protection to surrounding properties. This strategy has been successful in achieving these outcomes to date. This has primarily been due to the mosaic of low fuel areas existing in the park (mostly from wildfire events) when the plan was approved allowing relatively safe and effective burning of wind driven buffers. In doing so fire has been applied under prescribed conditions immediately adjacent to extensive areas of high fuel load. These operations are inherently high risk and the greater the adjacent fuel loads become, the greater the risk that prescribed fire will escape and cause unintended impacts of surrounding values. After 10 years of applying this strategy, the resultant extensive areas of high fuel levels in the park now exhibit a level of threat beyond the ability of the current strategy to mitigate in coming years.

This point is further covered in the response to Key finding 5.

Conservation Commission response

The Conservation Commission notes the acceptance of the finding of the limitations of the management plan. As noted elsewhere the requirement for the review and revision of the fire

strategies in the management plan is noted and will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC.

Key Finding 3

Although the review of context did not identify any significant change with respect to introduced animals it is noted that elsewhere in the District they are a significant enough threat to biodiversity values to warrant specific management action (such as the application of Western Shield baiting program in Nambung National Park). At present this section of the plan is very brief and quite general with respect to what feral animals are present and what threats they pose. Additionally there are only two strategies in this section of the plan:

1. Monitor the incidence of feral animals, prepare a five-year control program and implement programs.
2. Liaise and coordinate feral animal control programs with neighbouring land owners.

Notwithstanding that the first strategy could generate numerous actions, these somewhat generic strategies have resulted in little or no action. Overall the information provided and strategies for management are considered inadequate.

DEC response

Feral animals - Our present knowledge of the range of environmental impacts and threats from introduced animals is reasonably good, and could therefore be better represented in Section 7.3 of the management plan. Research on particular species, threats and techniques is continuing at a Departmental level, and in association with other agencies through the Invasive Animals Cooperative Research Centre, continuing to add to our knowledge and understanding and providing more effective strategies for control.

Strategies for the management of feral animal species requires a broadscale coordinated approach at no less than a District scale. Management of feral animals is based on identifying priorities using the level of risk they present, resources available and the likelihood of a successful outcome. Currently, the areas of Crown land south of the Hill River are covered by the Western Shield program, but the Lesueur-Coomallo area is not covered.

The inclusion of specific strategies in Lesueur-Coomallo in isolation may be restrictive in the broader control of introduced species. Strategies that include the ongoing monitoring of feral animals and effective responses to threats to the reserves in association with other regional programs may be appropriate.

The Department will continue to pursue partnerships and funding to address feral animal management on a species level, and apply the latest knowledge of threats and management techniques to managing the impacts from introduced species in Lesueur-Coomallo.

Conservation Commission response

The Conservation Commission accepts that management of feral animal species requires a broadscale coordinated approach at no less than a District scale and that specific strategies in Lesueur-Coomallo in isolation may be restrictive in the broader control of introduced species. The suggestions that the present knowledge of the range of environmental impacts and threats from introduced animals is reasonably good, and could therefore be better represented

in Section 7.3 of the management plan, and that strategies to monitor feral animals and effective responses to threats to the reserves in association with other regional programs may be appropriate are noted. The requirement for the review and revision of the management plan to accommodate the above suggestions will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC.

INPUTS

Objectives of the performance assessment

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

Findings

There are no specific allocations of resources or staff made to implement specific strategies in the management plan in the District operating budget for 2005-2006. Management activities in Lesueur-Coomallo are generally undertaken from within the pooled District allocations for staff and fire management which are applied across the whole District as determined by the priorities established by the District Manager and his team. Without specific allocations for the Jurien Bay Marine Park this was approximately \$1.35 million in 2005-2006. Fire management allocations of both staff and budget have been increased in recent years.

There is however a carryover capital allocation of \$500,000 for Lesueur infrastructure development related to toilet, lookout and walk path construction, and signage and other materials to complete those works associated with the tourist road construction in the park. This will bring total expenditure on this development to approximately \$2 million.

Resources are also sometimes provided through arrangements made between resource exploration companies for the provision of pre-disturbance assessments. These are generally managed to provide funding for additional contract staff.

The development of a new powerline through Coomallo also resulted in the provision of funds for the purchase of appropriate land additions to offset disturbances and losses of biodiversity values. During interviews the District Manager indicated a preference for these funds to go to purchases of land additions that reduced management costs where possible, or otherwise provided a component for management (at least for any initial works required such as fencing or other capital items such as infrastructure like sheds or equipment that enabled savings from recurrent budgets that could be used for management purposes). As such offset matters are brought before the Conservation Commission for noting these considerations will be made as applicable.

While the lack of specific allocations to the implementation of Lesueur-Coomallo management strategies hamper the assessment of the adequacy of inputs, it is likely that a number of strategies in the management plan were not implemented due to resource constraints. However, overall it appears that the financial and human resources of appropriately skilled staff have generally provided for reasonable management. It is likely that the implementation of responses to strategy specific findings elsewhere in this report will require resources to be allocated to them.

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

There are a number of management systems that are implemented in the process of effecting the management of Lesueur-Coomallo. These include DEC policies on fire management, dieback management, landscape, weeds, rehabilitation of disturbed areas and basic raw materials policies. With the exception of those comments provided in relation to fire management above, these management systems are considered to be adequate to support management actions. Comment is provided on the adequacy of implementation of management systems for dieback and fire under the outputs section below.

OUTPUTS

Objectives of the performance assessment

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

Findings

The assessment undertaken in 2003 (Appendix 2) assessed outputs against clearly identified strategies or actions in the management plan and included an internal review of progress undertaken by the District. The District's internal review was verified to ensure that it provided an accurate reflection of performance.

Key findings at that time were:

Some difficulties are being experienced with tenure issues, due in part to aspects of the Native Title process.

The audit did not highlight any need for a review of the current classification of Lesueur National Park and Coomallo Nature Reserve although a recommendation in the Plan to upgrade Coomallo from a "C" class reserve to an "A" class reserve has not progressed and will need to be reviewed.

A key factor in the measurement of progress against the Plan was the slow progress made with the establishment of the access road through Mt. Lesueur National Park. A significant capital allocation will be required to complete this project and bring related aspects of the Management Plan into play.

Other factors were highlighted during the audit which will have a significant bearing on the future implementation and / or review of the Management Plan. These include:

- Increases, during the life of the Plan, in levels of visitation to Nambung National Park (currently with 200,000 visitors per year) means District

resources will need to be allocated towards visitor services, patrols aimed at ensuring protection of conservation values, and revenue collection.

- The requirements of implementing other Management Plans (currently Nambung National Park, Wanagarren, Nilgen and Southern Beekeepers Nature Reserves, and in the future, the Turquoise Coast Islands and Jurien Bay Marine Park Management Plans) will affect the level of resources that can be directed towards management of Lesueur and Coomallo.
- The eventual completion of the Indian Ocean Drive from Perth to Jurien Bay is expected to significantly increase visitors to the region. It is understood that the final leg of this project has been deferred from within the current Main Roads budget.
- Progress against strategies relating to scientific issues was difficult to assess due to the imprecise nature of the wording, an issue common to all Management Plans written prior to 2000 (Dr. N. Burrows, pers. comm.). While an attempt was made by the Science division to collate all of these strategies, they generally have not been implemented unless specific targeted research programs have been developed that coincide with the requirements of the Management Plan.

The assessment showed that a number of key strategies have not been implemented and that overall only a relatively small number were categorized as having been completed at the time of the 2003 assessment (Table1). However this finding is somewhat misleading as the nature of most of the strategies in the plan is that they are applied on an ongoing basis and are being applied effectively and as required.

Table 1 Summary table of achievement of actions against management plan priority rankings as rated by District internal review in 2003

Management Plan Priority	Achievement						
	Standard practice	Not commenced – simple task	Not commenced – complex task	Not completed – simple task	Not completed – complex task	Ongoing implementation	Completed
High	32	1	12	1	9	52	1
Medium	10		11		14	25	1
Low	2	1	5		1	11	
Ongoing	7				5		

The 2006 assessment showed that there have been a number of significant advances of strategies most notably the completion of the access road through Lesueur which partially satisfies the objective to provide nature based recreation opportunities (Figures 1 and 2). This road very effectively provides access to the interior of the reserve and a great scenic opportunity. Its design generally helps retain the landscape values and takes into account measures to reduce dieback risk and potential impact. It has also served to allow completion of a number of other strategies in the plan such as provision of walking trails and interpretive materials.



Figure 1: New tourist road completed.



Figure 2: Picnic area at Cockleshell Gully along new tourist road.

Key Finding 4

Strategies related to preventing the introduction of plant diseases require the implementation of DEC Policy Statement Number 3 (*Phytophthora* dieback). This would require the development of a hygiene management plan for disturbance activities. In this assessment aspects of dieback management were reviewed with respect to the road development in Lesueur. This showed that while dieback interpretation along the road route and measures to protect against spread had been undertaken (such as including clean on entry provisions in contractual requirements for road construction), there was no specific hygiene management

plan document developed for the construction. While it does not appear that this has resulted in any shortfall in the implementation of preventative measures or adverse impact, given the importance of Lesueur-Coomallo for plant biodiversity and the impact that infection with *Phytophthora* could have it is expected that exceptional standards of implementation of relevant policies and procedures are applied.

The reason for this lack of full implementation of policy requirements is unclear although it was noted in the review of documentation associated with the road construction project that locating relevant documents was difficult. For large and significant projects such as this simple checklists and approval summaries can be useful, as is already done within DEC for the approval of timber harvesting operations for example. It was unclear whether such a project management checklist was used in this instance.

DEC response

This finding of the review has been noted. The potential impact of *Phytophthora* on the plant diversity of the region is understood and the management of this threat is a significant aspect of day-to-day operations in the DEC Moora District.

While there has been a shortfall in the documentation of the procedures followed in the planning and design phase of the roadworks, this primarily appears to have been a breakdown in administrative procedure, rather than in an operational sense. Operationally all precautions and checks were adhered to, however procedures were not documented in the form of a plan. The District has undertaken to review procedures to ensure compliance to policy statement no. 3 during future operations, thereby limiting the potential for introduction of the disease into the Lesueur-Coomallo area. In addition, the Moora District will ensure that all relevant staff are appropriately trained in dieback management and policies and that standards and procedures are applied.

Conservation Commission response

The Conservation Commission accepts the response and will seek a briefing of the outcome of the District review of procedures for early 2007. The Conservation Commission considers that the threat of the spread of Phytophthora and potential impacts on biodiversity values is one of the most significant in the State. The Conservation Commission will maintain a close involvement in ongoing policy review and development and will maintain Phytophthora management as a high priority for future performance assessments, including the conduct of performance assessments of a number of aspects of Phytophthora management during late 2006 and the first part of 2007.

Key Finding 5

In relation to the implementation of fire management strategies in the plan, the assessment found that while prescribed burning had been applied according to the requirements of the fire management plan, there had been no action to determine how areas classified as Vegetation Management Regime in the plan would be managed in the future as was anticipated to have been done by this stage of the plan's life.

DEC response

As mentioned in the response to key finding 2, the fire management section of the plan had a very conservative approach to fire management. The use of Vegetation Management Regimes (VMR) as a fire management zone is not specific to the Lesueur-Coomallo plan, however the restrictive condition of limiting the burning of

these areas without additional information, is. This caveat is in conflict with the application of the precautionary principle.

Some research is being carried out by the University of Melbourne that will contribute information, although it will not provide conclusive outcomes in terms of VMR management. Engaging in the necessary quantity and breadth of research and monitoring that is required under the current plan has been beyond the resources of the Department and has attracted limited interest from third party research organisations. The nature of the research concerning responses of biota to fire necessitates long-term experiments. As a result, insufficient knowledge has been gathered to fill all the knowledge gaps concerning fire ecology in these ecosystems.

Fire exclusion from most areas of the park using the 'open edge burn' buffers as a containment strategy has been successful, primarily due to a pre-existing mosaic of lower fuel levels at the starting point of the plan and the application of fire by knowledgeable and experienced officers from the Department's local District office. However, this success has resulted in a significantly increased threat posed by high fuel loadings in VMR and No Plan Burn (NPB) areas that constitute large areas of the reserve tenure. The plan, with its limitations on burning in VMR areas and the extensive areas of NPB, has resulted in a high risk of unacceptable damage to biodiversity and community assets after 10 years of application.

It is broadly accepted that intense fires of a landscape scale that result in a single fuel age are undesirable. This threat is real and current and raises doubts concerning the wisdom of continuing the management of the reserves under the current strategy, in particular managing the VMR under a caveat that requires managers to wait for new information and the numerous and extensive NPB areas. This approach guarantees the risk of damage associated with wildfire to broad areas of the reserves will increase. It is desirable that some of the VMR areas are subjected to prescribed fire and the number and extent of NPB areas be decreased.

It is unlikely that the Lesueur-Coomallo plan requires a review in its entirety. However, to achieve effective and sustainable fire management, it is essential to review the fire section of the management plan to determine strategies based on the precautionary principle and adaptive management.

Conservation Commission response

The Conservation Commission notes the response from DEC that highlights the seriousness of the threat now posed by the inadequacy of knowledge that prevents prescribed burning in VMR areas and its concerns with the number and extent of NPB areas. The Conservation Commission considers that, given this response, it is not unreasonable that DEC should have acted on the requirements of the management plan by now by either ensuring that resources were made available or internal research priorities were amended to undertake the necessary research and monitoring that is required under the current plan; and/or identified and acted on the need to review the plan through routine District reviews and management planning processes. The suggested review and revision of the fire strategies in the management plan is noted and will be included as a matter of priority in further considerations of management planning priorities undertaken with DEC. These considerations will include a more detailed analysis of the threats and whether there may be provision to prescribe burn VMR areas under the caveats provided in the plan i.e. that:

- mechanisms have been devised to install wind driven buffers in a controlled way; and
- it is assessed that, on balance, it would be preferable to burn at least part of these areas.

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 are provided 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.*

In general 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. An example of this achievement can be seen through the various rehabilitation measures taken on tracks and seismic lines. These activities are clearly seen in before and after images from 2003 to 2006 (Figures 3 to 6).

As noted above findings in regard to fire management and feral animal management indicate that additional work may be required before it can be assumed this management goal can be delivered more securely.

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

Until recently recreation activities in Lesueur were constrained by the limited nature of the access. The recent development of the road into Lesueur will support this goal and has been developed in a manner that is compatible with conservation and other goals. Photographic examples of the road development and the opportunities for recreation are provided in Figures 5 and 6.

Community Relations: *Promote informed appreciation of natural and cultural values.*

In relation to the promotion of the appreciation of natural and cultural values some information is available to the public. However further work is underway in association with the road development and significant further improvement to the level of achievement of this goal is anticipated.

Research and Monitoring: *Seek a better understanding of the natural and cultural environments, and the impacts of visitor use and management activities.*

Limited achievement of this goal with some significant areas where knowledge needs development (i.e. fire and fauna). It is acknowledged that the development of knowledge through research and monitoring is an expensive exercise and must be prioritised on a needs basis across the State. The Conservation Commission's Research Advisory Committee has a role in ensuring this is done in an appropriate manner.

Commercial and other Uses: *Manage commercial and other uses in a manner that minimises impact on other values.*



Figure 3: Rehabilitated track in Lesueur National Park 2003.



Figure 4: Rehabilitated track 2006



Figure 5: “Chicken Leap” in 2003. As viewed from first stopping point on new access road – to be rehabilitated.



Figure 6: “Chicken Leap” in 2006 after rehabilitation.

There has been little requirement for this due to relatively limited access. With the new access road it is anticipated that there will be increased requirements to ensure uses are appropriate and minimise impacts.

Protection: *Protect the value of resources entrusted to the Department so as to meet, as far as possible, the diverse expectations of the community.*

The values of resources within Lesueur-Coomallo have been appropriately protected.

CONCLUSION

This Conservation Commission performance assessment reviewed the implementation of the Lesueur National Park and Coomallo Nature Reserve Management Plan 1995 - 2005 reporting on information gathered in 2003 and 2006.

Lesueur National Park (26 987 ha) and Coomallo Nature Reserve (8 815 ha) are located near the coastal town of Jurien Bay, about 220 km north of Perth. The Lesueur-Coomallo area has long been recognised as an area of outstanding flora conservation values, complex geological features and unusually rugged terrain in the otherwise subdued landforms of the northern kwongan region.

Overall the assessment found that management of Lesueur-Coomallo has been effective in providing for both conservation and recreation outcomes within a relatively constrained budget. Most of the strategies in the plan are being applied effectively and as required on an ongoing basis. However the assessment showed that a number of key strategies have not been implemented and that overall only a relatively small number have been completed. It is acknowledged that the recent completion of the tourist access road will lead to the fulfillment of a number of other strategies including the provision of interpretive materials.

The assessment identified 5 key findings that have resulted in management responses from the Conservation Commission or DEC.

APPENDIX 1 - Assessment Process Summary

Assessment undertaken in 2003

The verification audit was based on a self-assessment of the progress made against each strategy detailed within the Management Plan. The self-assessment was undertaken by staff at the DEC Moora District Office located at Jurien Bay. The verification was undertaken by a consultant engaged by the Conservation Commission and a Conservation Commission staff member. A visit to the District Office in Jurien Bay was undertaken on 27-28 May, 2003. The self-assessment was reviewed with the District Manager, Mr. Keith Hockey, and the following other DEC personnel:

- Mr. Peter Fishwick,
- Mr. Rick France,
- Ms. Rebecca Carter,
- Ms. Gina Broun, and
- Mr. Dave Atkins.

Where relevant, key files and correspondence were briefly reviewed. Inspections of some aspects of Lesueur National Park (new access road alignment, viewing points, track rehabilitation), the adjoining Beekeepers Nature Reserve (examples of interpretive displays and lookouts), Coomallo Nature Reserve and the more recently vested Coomallo Conservation Park (day use area) were also undertaken. Contact was also subsequently made with Mr. David Hampton and Dr. Neil Burrows (DEC, Kensington) regarding tenure and scientific issues respectively.

In addition to the review of the Management Plan, other relevant matters were considered. These included:

- Whether the statutory purpose of the reserves as outlined within section 56 of the *CALM Act 1984* is being met,
- Whether other factors developing during the life of the Plan, or in the foreseeable future, were likely to have a significant future impact on the statutory purpose and vesting of the reserves, and
- Whether the original vesting (tenure and purpose) was inappropriate and should be amended.

Assessment undertaken in 2006

The performance assessment undertaken by Conservation Commission staff was conducted from the 7th-8th of February 2006. District staff were provided with approximately 4 weeks notice of the performance assessment during which time they 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 1 shows the travel route in the reserves. The field assessment, together with the review and interview process, enabled an assessment of the overall performance against outcomes and objectives.

Approximately half a 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 Lesueur-Coomallo took approximately a half a day.

List of people consulted

Keith Hockey, District Manager, Moora District, DEC

Rebecca Carter, Nature Conservation Coordinator, Moora District, DEC

George Watson, Parks and Visitor Services Coordinator, Moora District, DEC

APPENDIX 2 – 2003 Internal review and audit findings for outputs

Lesueur NP & Coomallo NR Management Plan Implementation Program

Conservation Commission Monitoring 2003

Performance Indicator (PI)

- (1) Standard Practice
- (2) Not commenced - simple task
- (3) Not commenced - complex task
- (4) Not completed - simple task
- (5) Not completed - complex task
- (6) Ongoing implementation
- (7) Completed

Section	Strategy (Priority)	Resp.	SELF ASSESSMENT	VERIFICATION	AUDITING
			Comment (CALM management)	Comment (Auditor)	Audit evidence
3.0	LAND TENURE				
	<p>Objectives: <i>Encourage owners of nearby lands to manage their properties in a sympathetic way to the Park and Reserve.</i> <i>Seek to incorporate appropriate lands within the Park and Reserve</i></p> <p>Strategies:</p> <p>1. Liaise with owners and managers of properties and lands with boundaries common with the Park and Reserve to establish cooperative management, particularly with regard to fire management and vermin control. (H)</p> <p>2. Prepare interim management guidelines for the Drovers Cave National Park and adjoining Beekeeper's Nature Reserve that complement strategies in this plan. (H)</p>	<p>District</p> <p>District</p>	<p>(5&6) This is an ongoing strategy that has achieved good outcomes mainly through the Fire Advisory forum where the opportunity for other management issues can be discussed with neighbours in a group setting.</p> <p>(4) Drovers Cave – preparation of guidelines has not rated as a high priority for District due to comparatively few management issues arising compared to other areas.</p>	<p>NHT funding received for pig control in Coomallo.</p> <p>Caves Access Group makes application to access locked caves.</p>	<p>Agendas and minutes sighted for meetings of the Lesueur National Park and Coomallo Nature Reserve Fire Advisory Committee (meets annually).</p>

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
		District	(7) Beekeepers Nature Reserve – these guidelines were a high priority to produce mainly due to fire management issues. They have been updated on one occasion, however are due for an update this year (2003).		“Interim Guidelines for Necessary Operations for the Beekeepers Nature Reserve and adjoining Crown land of the northern sandplains” dated April 1993 sighted.
	3. Continue negotiations with relevant bodies to include Reserve No. 24276 in the Coomallo Nature Reserve. In the meantime, endeavour to manage it as part of Reserve 41933. (M)	District	(5) There have been some sensitivities with the local authority regarding gravel supplies that may be in this reserve. Negotiations will recommence when the best opportunity arises. (6) The reserve is currently managed as per 41933.	Current tenure of reserve unclear (University of WA?).	
	4. Continue negotiations with relevant bodies to have Shire Reserve No. 29901 vested in the NPNCA for the purpose of Conservation Park. (M)	District	(7) Reserve 29901 is vested with the Commission and on site management strategies have been implemented. (Gazettal Notice 9 Dec. 1997)		
	5. Incorporate Reserve 40544 into Lesueur National Park following implementation of the Government’s squatter shack policy and construction of the coast road. (M)	District	(6) Agreement has been reached through land swaps with the Shire of Coorow regarding the future vesting of this Reserve with the CCWA. The CCWA endorsed the future vesting arrangements of this Reserve and associated lands in the arrangement at the 16 November 2001. I understand the exchanges are now with DOLA for implementation.		Endorsement by Shire of Coorow sighted (Resolution No. 194/01).
	6. Upgrade Coomallo Nature Reserve from a ‘C’ class to an ‘A’ class reserve. (M)	District and CALM	(5) No progress has been made with this due to the seemingly low priority. It is also likely that	Unsure of background to requirement – possible use of reserve as a recreation site or better	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>7. Seek the support of the Shires of Coorow and Dandaragan to manage Shire reserves adjacent to Lesueur and Coomallo in a coordinated and compatible manner to management of the Park and Reserve. (M)</p> <p>8. Acquire, by purchase or exchange when available, private properties adjoining the Park and Reserve that have exceptional conservation values not adequately represented within the Park and Reserve, or that have recreation values, management benefits, or that could protect areas with these values within the Park. Purchase or exchange must also consider other land uses and the views of the local community. (L)</p>	<p>Land & Planning Section</p> <p>District</p> <p>District</p>	<p>objections will be raised from Dept. of Mineral & Petroleum Resources as has occurred with other proposed reserve changes in the District.</p> <p>(6) Ongoing liaison with local authorities regarding this issue.</p> <p>(6) The District has been pro active in identifying and assessing land for inclusion in the parks and reserves as they have become available. Information regarding lands identified has been passed on to utility bodies such as MRWA and Western Power for consideration in meeting Environmental Offset packages associated with their proposals. Private Property Location No 3860 has recently been purchased by CALM and will be added to Lesueur National Park.</p>	<p>protection from mining activity. There may be mineral exploration leases over the reserve. Plan refers to the “long term”.</p> <p>Issues raised by exception at Shire of Dandaragan meetings, usually in relation to feral animals.</p> <p>Private land (10351) connecting Lesueur and Coomallo identified as desirable. Contains a Threatened Ecological Community (TEC).</p>	
4.0	MANAGEMENT ZONES				
	<p>Objective: <i>The objective is to assist in protecting conservation values and providing for appropriate recreation and other uses by means of zoning where appropriate.</i></p> <p>Strategy: Base future Park and Reserve management on the zoning scheme (Map 3). (H)</p>	<p>Planning team 2005 review</p>	<p>(5) (6) Generally this has occurred, however there is an inconsistency in the plan between Section 4 Zoning</p>	<p>No recreation except for as shown on Maps 3 and 8. Zoning scheme system appears to conflict with</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
			and Section 10 Access. Some of the access options identified in Section 10 have been taken up (loop road back to Cockleshell Gully Rd) however the Recreation Zone does not extend to cover this access option. Recommend an amendment to the plan to extend the Recreation Zone	objectives as major recreation sites will occur within Special Conservation Zone (consistent with Map 8 of Management Plan).	
6.1	GEOLOGY, LANDFORMS AND SOILS				
	<p>Objectives: <i>Protect and conserve geological features, landforms and soils.</i> <i>Minimise the disturbance to the soil from any permitted activities.</i></p> <p>Strategies: 1. Provide interpretive material to visitors on the geology, landforms and soils of the area. (H)</p> <p>2. Design recreation sites that avoid special geological features and landforms, or consider their significance during the design phase to minimise the impact of development. (M)</p> <p>3. Identify special and fragile geological features and landforms. (L)</p>	<p>District & CALM Interpretation and Visitor Inform. Unit</p> <p>District and CALM Rec. & Land. Planning & Design</p> <p>District</p>	<p>(6) A park brochure has been produced that provides information regarding geology. Additional, more detailed interpretive information will be provided at proposed day use areas.</p> <p>(6) Recreation site planning has considered these issues.</p> <p>(6) Done in areas likely to be effected by recreation development</p>	<p>Proposed recreation sites restricted to lowlands mainly for dieback prevention reasons.</p>	<p>Lesueur brochure sighted.</p>

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>4. Encourage further research into the geology and geomorphology of the area. (L)</p> <p>5. Liaise with speleologist groups regarding management operations likely to impact on karst features. (L)</p>		<p>(3) No dedicated studies have occurred</p> <p>(6) To date no karst features have been identified that have been likely to be impacted upon.</p>		
6.2	WATER CATCHMENTS AND HYDROLOGY				
	<p>Objective: <i>Protect and conserve the quality and quantity of surface water and groundwater.</i></p> <p>Strategies:</p> <p>1. Limit the abstraction of groundwater to use within the Park. (H)</p> <p>2. Investigate the likely impacts of providing a water supply for fire-fighting, dieback washdown facilities and drinking. (H)</p> <p>3. Design recreation sites to minimise impact on water catchments. (H)</p> <p>4. Confer with the Water Authority of Western Australia to ensure that Park management does not detrimentally</p>	<p>District</p> <p>District</p> <p>District and CALM Rec. & Land. Planning & Design</p> <p>District</p>	<p>(6) No abstraction of groundwater has occurred for use outside of the park</p> <p>(6) No water has been provided for these purposes to date.</p> <p>(6) This has been considered in site design</p> <p>(6) The District Manager sits on a Watercorp consultative group set up to assist in a development of a total</p>	No groundwater abstraction at all.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>affect groundwater and surface water supplies. (M)</p> <p>5. Encourage research into the hydrology of the Park and Reserve and the impacts of management practices on surface and groundwater. (L)</p> <p>6. Consider the catchments of the Park as natural benchmarks for catchments in the region. (L)</p>	District	<p>water use plan for the Jurien Bay area. Issues such as these are discussed.</p> <p>(6) Several research programs have or are occurring as part of the development Jurien total water use plan. These are not specifically for the Lesueur area however do include it. These projects are encouraged.</p> <p>(6)</p>	<p>Intention of this recommendation unclear.</p>	
6.3	VEGETATION				
	<p>Objective: <i>Protect and conserve native plant communities.</i></p> <p>Strategies:</p> <p>1. Identify plant communities that are rare, unique or in some way warranting special consideration. (H)</p> <p>2. Design facilities and management practices that minimise adverse impacts on these values. (H)</p>	<p>District and WATSCU</p> <p>District and CALM Rec. & Land. Planning & Design</p>	<p>(6) Two threatened Ecological Communities have been identified within Lesueur NP.</p> <p>(1&6) Flora surveys are carried as part of facility design</p>	NHT-funded project underway.	Recovery Plan for Lesueur-Coomallo Floristic Community A1.2 (Species-rich heath with emergent <i>Hakea obliqua</i>) sighted.

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	3. Protect vegetation from <i>Phytophthora</i> dieback with emphasis on regionally rare communities. (H)	District	(1&6)	No known threatened ecological communities near developments. All planned developments are downslope of DRF populations.	
	4. Protect populations of species that are vulnerable to particular fire regimes by implementing appropriate fire management strategies. (M)	District	(5) As far as possible with existing knowledge	Flora considered in fire management strategy (see Map 7).	Example of Burn Prescription sighted (Burn No. M-20, June 2002) – considered and excluded DRF.
	5. Minimise removal or damage to vegetation caused by developing and maintaining visitor facilities. (M)	District	(1&6) Considered in design and maintenance work		
	6. Provide visitors with information on the area's vegetation, its features and the need to protect it. (M)	District & Interpretation and Visitor Information Unit	(6) A park brochure has been produced that provides information regarding vegetation. Additional, more detailed interpretive information will be provided at proposed day use areas.		Specific brochure on Lesueur sighted plus another (“Kwongan Connections”) that includes reference to Lesueur.
	7. Use the established monitoring plots as reference areas for further research and monitoring. Monitor to determine the longer term responses by plants to fire and other impacts. (M)	District & Science and Information Division	(3) Many of the plots have been remarked with metal pegs as they were previously marked with wooden pegs and prone to fire. Locations have been GPSd.	No baseline data – no monitoring done.	
	8. Research the response of plant community types to management regimes, especially fire. Modify management practices as necessary.(L)		(3) Research has not occurred.		
6.4	FLORA				
	Objective: <i>Protect and conserve indigenous flora, especially threatened and other priority species.</i>				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>Strategies: 1. Protect DRF, locally endemic and other priority flora, particularly those susceptible to plant diseases and vulnerable to fire management regimes. (H)</p> <p>2. Survey areas for DRF and priority flora before undertaking management actions. (H)</p> <p>3. Encourage research on the area's priority flora, including distribution mapping, responses to disturbance, reproductive biology and taxonomy. (M)</p> <p>4. Provide opportunities for visitors to increase their knowledge and develop an appreciation of the area's flora, including appropriate walk tracks, a field herbarium and interpretive material. (M)</p>	<p>District</p> <p>District</p> <p>District</p> <p>District and CALM Rec. & Land. Planning & Design</p>	<p>(1&6) All care is taken to protect flora.</p> <p>(1&6) This has occurred prior to disturbance operations to date and will continue</p> <p>(3) Encouraged however has not been a high priority</p> <p>(5&6) Dedicated walk trails will be identified after the access road is provided. A field herbarium is set up at the Cervantes Office and a limited amount of interpretive material is available.</p>	<p>Very little disturbance other than roadworks. DRF surveyed and logged. Some GIS data may not be verified to correct grid. Updates driven by Interim Recovery Plans, dictated by successful NHT funding.</p> <p>Some interpretive information seen at adjacent Beekeepers Reserve.</p>	<p>Example of Rare Flora Report Form sighted (<i>Grevillea batrachioides</i>, 11 September 2001) . Interim Recovery Plan for <i>G. batrachioides</i> sighted, allowing for translocation work.</p> <p>“Proposed Road, Lesueur National Park, Rare Flora” by Hart, Simpson & Associates, September 1999 sighted.</p> <p>Plates 1 and 2.</p>
6.5	FAUNA				
	<p>Objective: <i>Protect and conserve indigenous fauna with emphasis on threatened and other priority species.</i></p> <p>Strategies:</p>				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>1. Identify and protect the habitats of significant vertebrate and invertebrate fauna. (H)</p> <p>2. Design facilities and management practices to accommodate these values. (H)</p> <p>3. Monitor fauna in Lesueur National Park and Coomallo Nature Reserve. (M)</p> <p>4. Encourage research to identify the key terrestrial and aquatic invertebrate fauna, with emphasis on those most likely to be rare or threatened. (M)</p> <p>5. Provide interpretive material to visitors on the fauna of the Park and Reserve. (H)</p>	<p>Science Division</p> <p>District and CALM Rec. & Land. Planning & Design</p> <p>District and Science Division</p> <p>District and Science Division</p> <p>District</p>	<p>(5) Little work has occurred in this area.</p> <p>(6) To the best of ability with available resources and knowledge</p> <p>(5) Limited to specific research – no ongoing monitoring programs</p> <p>(5) Little work has occurred in this area</p> <p>(5) Limited information available on fauna, however what is available will be included in day use area interp.</p>	<p>Western Shield Does not extend to Lesueur or Coomallo.</p> <p>Some trapping done in Lesueur.</p>	
6.6	CULTURAL HERITAGE				
	<p>Objective: <i>Protect and conserve the Park's and Reserve's cultural heritage and values.</i></p> <p>Strategies: 1. Protect all known Aboriginal sites and other historic sites of significance. (H)</p> <p>2. Incorporate information on the</p>	<p>District</p> <p>District</p>	<p>(2) No significant Aboriginal sites have been discovered.</p> <p>(3) Interpretation material is limited</p>	<p>One site identified in Plan (p.20).</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>European and Aboriginal history of the area into interpretive material (see section 15.0 Information, Interpretation and Education). (H)</p> <p>3. Liaise with local Aboriginal communities on the significance of the Lesueur-Coomallo area to Aboriginal people. (L)</p> <p>4. Encourage the study of the area's cultural history by tertiary institutions and interested individuals. (L)</p>	<p>and CALM Rec. & Land. Planning & Design</p> <p>District</p> <p>District</p>	<p>to the park brochure. This does not detail history of the area. It is intended to provide this detail as opportunity for more detailed interpretive initiatives become available</p> <p>(5&6) Liaison with Aboriginal people has occurred as part of the consultative process undertaken during archaeological and ethnographic studies.</p> <p>(6) No opportunity has arisen</p>	<p>Ethnographic clearance obtained for Mt Lesueur recreation and access work. Four sites identified by DIA database but not encountered in survey work.</p>	<p>Letter from South West Aboriginal Land & Sea Council Aboriginal Corporation dated 1 July 2002 sighted.</p>
6.7	LANDSCAPE MANAGEMENT				
	<p>Objective: <i>Protect and restore the Park's and Reserve's visual landscape qualities.</i></p> <p>Strategies:</p> <p>1. Implement CALM's Policy No. 34 (Landscape Management of CALM's Lands and Waters) in all aspects of land management of the Park and Reserve. (O)</p> <p>2. Implement CALM's Landscape Management Preservation Objective in managing the Park and Reserve. (O)</p>	<p>District and CALM Rec. & Land. Planning & Design</p> <p>District and CALM Rec. & Land. Planning</p>	<p>(6) Ongoing</p> <p>(6) Ongoing</p>		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	3. Implement the landscape management guidelines set out in Table 4. (H)	& Design District PVS and CALM Rec. & Land. Planning & Design	(6) Ongoing		
	4. Encourage surrounding Shires, other Government agencies and private landholders to recognise the importance of landscape management by the sensitive siting of facilities and signs, selection of site-compatible materials and colours, and careful planning and siting of utilities and roads. (L)	District	(6) Ongoing as opportunity arises.		
7.1	PLANT DISEASES				
	Objective: <i>Prevent introducing plant diseases into disease-free areas and control their spread where they are already present.</i>				
	Strategies: 1. Implement CALM's Policy Statement No. 3 (<i>Phytophthora</i> Dieback) and the Moora District Dieback Protection Plan (1990) to manage disease in the Park and Reserve. (O)	District	(1&6) The Moora District Dieback Plan has expired however the principles are still adopted	Probably needs updating.	Moora District Dieback Protection Plan 1990-94 sighted.
	2. Continue to investigate, and regularly monitor, known infections to determine their impact and extent. (H)	District	(1&6) Known infection sites were low impact and it is now difficult to detect them.		
	3. Implement a program of opportunistic	District	(1&6) Staff remain vigilant	No formal program.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	survey of the Park and Reserve to determine whether other infections occur. (H)				
	4. Instigate control and eradication procedures while ensuring that they do not place other areas or values at risk. Eradicating isolated infections should be of the highest priority. (H)	District	(3) No requirement		
	5. Train staff associated with the area to recognise dieback and in sampling and management techniques. (H)	District	(1) All staff are trained in dieback management	CALM runs training course.	
	6. Include disease management specifications in contract documents (including scientific flora collecting licences) and job prescriptions, where appropriate. (H)	District	(1) Done for clearing contract for road works.	Contract for new road includes requirements for hygiene measures (Section B, Item 1.12.3). Also addresses Flora and fauna (1.12.5), aboriginal heritage (1.12.4) and fire prevention (1.12.6).	Contract RFQ37434/02 (Lesueur National Park – Jurien Scenic Road Clearing), 18 December 2002, sighted.
	7. Close particular areas, roads, tracks and walks if the presence of dieback is suspected or confirmed, or if a high risk of introducing dieback is identified. (H)	District	(3) There has been no requirement.		
	8. Inform Park users about dieback and its management, and why it is important to prevent its introduction and spread (see 15.0 Information, Interpretation and Education). (H)	District & Interpretation and Visitor Information Unit	(5&6) Interpretation is limited to park brochure however future interpretation will provide this opportunity.		
	9. Investigate the potential to remove utility easements from the Coomallo Reserve, and pursue any opportunity to decrease the potential of utility users to introduce disease to the Reserve. (H)	District	(3&6) The potential for removal has not occurred, in fact additional infrastructure is being installed. However opportunities to pursue potential to decrease disease spread	Western Power required to address dieback issues in formal referral through EPA.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	10. Investigate means by which cost effective and efficient washdown facilities for public use can be installed especially at the entrance to Lesueur National Park. (L)	District	by utility users are vigorously taken up. Such a facility has not been identified	Not feasible, low risk. No known examples elsewhere in CALM estate.	
7.2	FIRE PROTECTION				
	<p>Objectives: <i>Use Wildfire Threat Analysis to define values at risk from wildfire and as a basis for fire management planning. Protect visitors, neighbours, departmental staff, fire-fighters and property from wildfire. Protect plant communities and ecosystems, physical and landscape values from the effects of frequent uncontrolled fires and from inappropriate burning regimes and suppression techniques. Where possible, restrict fires to single management blocks, and maintain as much as possible of the vegetation free from fire for the duration of this management plan where this does not pose a direct threat to adjoining community assets. Reduce the risk and frequency of unplanned fires starting near or within the Park as a result of human activity.</i></p> <p>Strategies: <u>Prescribed Burning</u> 1. Continue to apply standard Departmental requirements for an</p>	District	(1) Prescriptions are prepared taking into account the identified	Fire Co-ordinator prepares, District Manager approves.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	approved prescription before initiating a planned fire. The prescription must take particular account of environmental values, especially the need to control dieback, and minimise impacts on the landscape and visual resources. (O)		issues. These are approved prior to the burn proceeding.		
	2. Implement the Fire Management Plan (Map 7). (H)	District	(6) The fire management plan has been implemented as per Map 7. after consultation with the Fire Advisory Committee.		
	3. Monitor the Fire Management Plan annually to take into account major wildfires, and the inability to achieve burning programs. (H)	District	(6) The fire management plan is monitored and reviewed annually in consultation with the Fire Advisory Committee.	One modification made due to overburn of open edge burn zone.	
	4. Modify, relocate or defer burns where Declared Rare Flora or Fauna occur within proposed burn areas. Where it is essential for protection purposes for burning to occur, Ministerial permission to 'take' rare species must be obtained before conducting a burn. (H)	District	(1&6) In most cases impacts on DRF have been minimised by exclusion from burn with Ministerial Permits to Take being a last resort.		
	5. Conduct fuel reduction burning in the open-edge burn zones and parallel buffers only. (M)	District	(6) Only fuel reduction burning has occurred in the identified zones		
	6. Consider scrub-rolling of heath vegetation buffers where this is considered advantageous. Scrub-rolling may only be carried out under dry soil conditions, and must take into account landscape impacts and soil erosion potential. (L)	District	(2) There has not been a need to employ scrub rolling techniques to date.		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><u>Liaison</u> 7. Establish a Fire Advisory Committee with representatives from local bushfire organisations, Shires, Bush Fires Board, beekeepers and CALM to meet at least annually and review implementation of the fire plan and priorities. This group will make recommendations on the program priorities for the next year. CALM will aim to implement each annual program as recommended by the Advisory Committee after considering other District and Departmental priorities. (H)</p>	District	(6) The Fire Advisory Committee was formed in 1995 and has met annually since. The group has worked well and ongoing implementation is recommended.		
	<p>8. Continue to work closely with local authorities and brigades, beekeepers, adjacent landholders and the Bush Fires Board to ensure an effective fire management force is in place. The mutual-aid arrangements in carrying out burns and suppression activities will be encouraged in accordance with the Central West Coast Fire Protection Plan. In particular, Park perimeter buffer burns should be conducted in conjunction with local bush fire brigades and neighbouring landholders. (H)</p>	District	<p>(6) The Central West Fire Protection Plan has fallen into abeyance, however it is intended to re activate it.</p> <p>Brigades and other stakeholders have assisted with burns however this is limited by seasonal conditions and availability of resources.</p>		
	<p><u>Pre-suppression</u> 9. Develop a fire emergency contingency plan as part of the Moora District Fire Control Working Plan. Include standby and response arrangements and update the plan annually. (H)</p>	District	(1&6) The District Fire Control Working Plan has evolved into a document that identifies standby and response arrangements and is updated annually.		Department of CALM, Moora District Fire Control Working Plan 2002/03 sighted.
	<p>10. Maintain a network of fire management access and firebreaks using</p>	District	(6) A District firebreak maintenance program is		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	methods that minimise soil erosion and do not increase the risk of, or contribute to introducing, spreading and intensifying dieback. (H)		implemented annually with due consideration of this network of firebreaks.		
	11. Maintain an effective fire detection system involving CALM staff, local bushfire brigades and neighbours. (H)	District	(1&6) The fire detection and contact system that exists results in rapid reporting and response.	Fire Emergency Availability (FEA) system so someone always available.	
	12. Prohibit the lighting of woodfires within the Park and Reserve. (H)	District	(1&6) It is not permitted to light wood fires in the Park or Reserve.	Hikers informed directly about fire.	
	13. Establish cost-effective water supply points at strategic locations within or near the Park and Reserve. Design such storage points to prevent fauna from using them. (M)	District	(5) Two fauna proof water supplies have been established at strategic locations. More will be developed as the opportunity arises.		
	<u>Suppression</u> 14. In the event of a wildfire in or near the Park, fire suppression arrangements must be in accordance with the Central West Coast Fire Protection Plan and the Moora District Fire Control Working Plan. (H)	Incident Controller	(1&6) The Central West Fire Protection Plan is in abeyance, however it is intended to reactivate the plan. All fires are suppressed in line with the Fire Control Working Plan and standard Departmental procedures.		
	15. Endeavour to contain wildfires that enter or start in the Parks within a management block defined by the strategic buffers given in Map 7. (H)	Incident Controller	(1) This has and will continue to occur.		
	<u>Information</u> 16. Prepare a communication plan to promote the Park's and Reserve's values and visitor appreciation and support for fire management programs, and fire safety and survival. (M)	District	(3) This has not occurred.		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	17. Develop bushwalker registration points. (M)	District	(5) Bush walkers are encouraged to register at the District or Cervantes Park Office. On site registration points will be developed at Trail Heads of set walks as part of their design.		
	<u>Research and Monitoring</u> 18. Record and analyse details of all fires, including fire behaviour information. (H)	District	(3) Although some records have been kept regarding fires, this has been limited due to the lack of protocols for collecting more detailed information.	Fuel age maps generated from fire history	Various fuel age maps sighted.
	19. Encourage research on the regeneration of flora after fire, with particular emphasis on fire vulnerable species such as obligate seeders. (M)	District	(3) No formal encouragement has occurred.	Dr. N. Burrows advises that, while no specific research within Lesueur has been conducted, a recent publication brings together much of the known information.	“Fire in ecosystems of south-west Western Australia: impacts and management” by I. Abbott and N. Burrows (eds.), Backhuys Publishers, 466 pages.
	20. Prepare and implement a program to monitor changes in vegetation and weed structure and composition following fire. (L)	District	(3) No formal program has been implemented however no visible changes have occurred in relation to weed composition and structure after fire.		
7.3	INTRODUCED ANIMALS				
	Objective: <i>Minimise the impact of introduced animals on ecosystem values.</i>				
	Strategies: 1. Monitor the incidence of feral animals, prepare a five-year control program and	District	(6) Ongoing opportunistic monitoring occurs. (3) A 5 year	Neighbours report pigs in Coomaloo, baiting program planned.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	implement programs. (H) 2. Liaise and coordinate feral animal control programs with neighbouring land owners. (M)	District	implementation and control program has not occurred. Western Shield is not implemented in the Park or Reserve. (3) This has not occurred	Translocation of rare flora to Coomaloo will require pig removal. Western Shield funding aimed at areas of greatest need and in proximity to sponsor.	
7.4	INTRODUCED PLANTS				
	Objective: <i>Minimise the impact of introduced plants on ecosystem values.</i> Strategies: 1. Prepare and initiate a weed management program in accordance with CALM Policy Statement No. 14 (Weed Management). Update the program annually seeking specialist advice as required.(H) 2. Give priority to controlling weeds that are encroaching on threatened flora. (H) 3. Eradicate, where practical, isolated outbreaks of weeds while the infestations are small and easily controlled. (H) 4. Liaise with neighbours, local Government and other relevant authorities to encourage an integrated approach to weed management (M) 5. Monitor weed control measures to determine their success and the need for further treatment. (L)	District District District District District	(6) Ongoing weed control occurs mainly targeting Paterson's Curse. (1) No known infestations encroaching on threatened flora. (1&6) Concentrated effort on Paterson's Curse on north boundary. (5) Ongoing as the opportunity arises. (1&6) Ongoing follow up inspections and treatment	Shire carries out weed control on their roads. Informal communication with Shire.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
7.5	REHABILITATION				
	<p>Objective: <i>Rehabilitate degraded areas to a stable condition resembling as closely as possible the natural environment.</i></p> <p>Strategies:</p> <p>1. Rehabilitate degraded sites in accordance with CALM Policy Statement No. 10 (Rehabilitation of Disturbed Land) and guidelines. (H)</p> <p>2. Prepare a detailed rehabilitation program. Review the rehabilitation program on an annual basis. (M)</p> <p>3. Monitor the effectiveness of rehabilitation works on a regular basis. Recommend changes to rehabilitation strategies to effect improvement.(M)</p> <p>4. Provide opportunities for interested individuals and groups to be involved in rehabilitation projects. (L)</p>	<p>District</p> <p>District</p> <p>District</p> <p>District</p>	<p>(5&6) Some rehabilitation of disturbed sites has occurred. This has generally been in conjunction with realignment of inappropriately sited fire lines and tracks.</p> <p>Rehabilitation of tracks and firebreaks no longer required since the road alignment has been cleared has occurred.</p> <p>(5&6) A detailed program was identified for rehabilitation of tracks and firebreaks made redundant by the new public access road. A further program will be developed once this road is in place to address impacts on visual amenity.</p> <p>(6) Ongoing</p> <p>(3) To date this has not occurred due to the nature of the rehabilitation works.</p>	<p>Cleared vegetation has been translocated to help rehabilitate areas of similar vegetation.</p> <p>Too early to assess effectiveness of current methods.</p> <p>The scale of the works has not permitted this – may use ATCV for ‘Chicken’s Leap’ (Plate 4).</p>	<p>Plate 3.</p>
9.0	RECREATION OPPORTUNITIES				
	<p>Objective: <i>Provide a range of nature-based</i></p>				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><i>recreation opportunities while minimising environmental impacts and conflicts between user groups.</i></p> <p>Strategies:</p> <p>1. Provide recreation opportunities in the Park and Reserve to complement opportunities available elsewhere on CALM-managed and other public land in the region. (H)</p> <p>2. Provide recreation opportunities and facilities with minimal environmental impact as in the zoning plan (see 4.0 Management Zones) for the widest group of people possible. (H)</p> <p>3. Determine visitor numbers and patterns of use by monitoring vehicle numbers, and conducting site surveys and interviews to determine recreation needs. (L)</p>	<p>District and CALM Rec. & Land. Planning & Design</p> <p>District and CALM Rec. & Land. Planning & Design</p> <p>District</p>	<p>(3&6) The construction of the scenic access road will provide a wide range of recreational opportunities ranging from scenic driving to bush walking and picnicking.</p> <p>(3&6)</p> <p>(1&6) Visitor numbers are monitored, however no detailed surveys have been undertaken as yet.</p>	<p>No budget 1995-98, \$50K/year thereafter. Letter to Nyoongar Land Council dated 5 February 1999 initiated work on site assessment but delays with agreement about survey work led to further delays. Road project could be complete by 2005 but \$1.2M required to complete project.</p> <p>Prison has done some work at Coomallo, PVS five year plan includes provision for similar work at Lesueur.</p> <p>Road traffic counter used at Lesueur.</p>	
10.0	ACCESS AND RECREATION SITES				
	<p>Objective:</p> <p><i>Provide and maintain suitable access and recreation sites ensuring dieback control receives the highest priority.</i></p> <p>Strategies:</p> <p>1. Subject all road and track maintenance and construction to strict dieback hygiene</p>	District	(1&6) All road and track construction are subject to strict	See 7.1.6.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	measures. (O)		hygiene standards. New construction is assessed as to the position and risk posed by the new road or track.		
	2. Design the proposed new access road into Lesueur National Park to comply with standards established by CALM and Main Roads W.A. (H)	District	The new access road into Lesueur will be designed to comply with Australian Road standards.		
	3. Determine the most appropriate alignment of any additional access with regard to the Park's conservation and other values. (H)	District	(1&6) All additional road alignments have been selected after extensive consideration to the Parks conservation, cultural and aesthetic values. All future alignment will also consider these values.	Stopping points on new alignment offer scenic views.	Plates 5 and 6.
	4. Progressively develop a system of walk tracks in Lesueur National Park and Coomallo Nature Reserve (see also 11.1 Bushwalking). (M)	District	(6) Only limited formal walktrail development has occurred. It is intended to develop a network in conjunction with day use site development now the new vehicle access has been opened.		
	5. Assess and redesign the Coomallo picnic area to maximise visitor enjoyment of the area while minimising loss of natural attributes. (M)	District and CALM Rec. & Land. Planning & Design	(6) Recreational site planning has been carried out, site definition has been implemented along with provision of a small bridge to protect the water course and provide safe visitor passage to a composting toilet.		
	6. Develop the Lesueur day use area and redesign the Coomallo picnic area according to site development plans. (M)	District and CALM Rec. & Land. Planning	(6) Day use areas at both Lesueur and Coomallo have been subjected to site development planning. Future development will be guided by these plans.	Picnic area at Coomallo vested as Conservation Park on 9 December 1997. Toilet installed, bridge not yet in place.	Coomallo Nature Reserve Day Use Area Concept Development Plan August 1998 sighted. Toilet facilities shown in Plates 7 and 8.

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>7. Close and rehabilitate tracks that are not required for management activities. Involve the community in rehabilitation projects (see 7.5 Rehabilitation). (M)</p> <p>8. Close particular areas, roads, tracks and walks if the presence of dieback is suspected or confirmed or if a high risk of introducing or spreading dieback is identified so that control measures can be evaluated or other strategies can be implemented. (M)</p>	<p>& Design</p> <p>District</p> <p>District</p>	<p>(6) Tracks superseded by the new road alignment have been rehabilitated. Further track closures and realignment are being considered. There has been little opportunity for community assistance due to the scale of rehabilitation works undertaken to date, however a project has been identified and a proposal submitted.</p> <p>(1) No new infections have been detected.</p>	<p>85 km of tracks have been closed off with about 5 km covered with brush. Most were old access or seismic lines.</p>	
11.1	BUSHWALKING				
	<p>Objective: <i>Provide a variety of bushwalking opportunities that do not adversely affect conservation and landscape values.</i></p> <p>Strategies: 1. Develop a network of foot access in Lesueur and Coomallo. (H)</p> <p>2. Promote a code of ethics for walkers in the Park (refer to 15.0 Information,</p>	<p>District and CALM Rec. & Land. Planning & Design</p> <p>District & Interpretat</p>	<p>(6) Foot access to date is mainly restricted to existing tracks and fire lines. A dedicated foot access network will be planned to complement the new road alignment and the opportunities it presents.</p> <p>(1&6) Information relating to walking in the park is provided in</p>	<p>Coomallo Plan includes provision for walk trails (not yet in place).</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	Interpretation and Education). (H)	ion and Visitor Information Unit	the park brochure. This information will be developed further to constitute a “code” and will then be displayed in interpretive displays at trail heads and day use areas.		
	3. Close foot access temporarily or permanently where the results of monitoring indicates that this is appropriate to protect the environment or, in extreme fire danger, the walker. (H)	District & Interpretation and Visitor Inform. Unit	(1&6) We have not had to do this to date, however it will occur as risks are identified.		
	4. Provide adequate information from which visitors can choose the walk that is best suited to them. (M)	District	(1&6) Although no formal access network has been developed, staff provides this information to park visitors on request. This will be further formalised following access development and opportunity for interpretive displays provided at trail heads and day use areas.		
	5. Provide self-registration points for walkers using remote areas for safety reasons and to evaluate the effects of users on remote areas. (M)	District	(5) No self registration points have been developed due to the limited walker access opportunities into remote areas.		
	6. Monitor the environmental effects of bushwalking and how bushwalking opportunities meet visitor needs. (M)		(6) To date bushwalking has been limited due to poor vehicle access options and therefore environmental effects are low to non existent. We know bush walking opportunities fall short of visitor needs and will be remedied when a formal network of trails is developed.		
11.2	CAMPING				
	Objective:				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><i>Provide limited camping opportunities.</i></p> <p>Strategies:</p> <p>1. Provide opportunities for backpack camping in Lesueur National Park. (M)</p> <p>2. Monitor the environmental impacts associated with camping. Use the results to refine management practices. (M)</p> <p>3. Liaise with other organisations to provide information on camping opportunities available elsewhere in the region. (L)</p>	<p>District</p> <p>District</p> <p>District</p>	<p>(6) Back pack camping opportunities are provided. Although use is not high, dedicated walkers enjoy this option.</p> <p>(1&6) Usage levels are not high enough to produce detectable levels of environmental impact.</p> <p>(6) Information is provided as required.</p>		
11.3	GROUP AND CLUB-BASED ACTIVITIES				
	<p>Objective:</p> <p><i>Accommodate use by groups and clubs to the extent that their activities are compatible with the goals of this plan.</i></p> <p>Strategies:</p> <p>1. Provide for group and club-based activities in a manner consistent with the goals for the Park. (H)</p> <p>2. Liaise with representatives of groups to discuss their needs and how these needs might be met. (H)</p> <p>3. Endeavour to meet the special needs of community groups where this does not compromise the natural environment or</p>	<p>District</p> <p>District</p> <p>District</p>	<p>(1&6) Groups including botanical interest groups, students and walkers are assisted as required.</p> <p>(1&6) Opportunities have been few due to limitations of poor access. It is anticipated interest and the opportunities for groups will grow as the access is improved.</p> <p>(1) As above. 12.2</p>		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	other visitors' enjoyment. (H)				
12.0	VISITOR SAFETY				
	<p>Objective: <i>Take all reasonable and practicable steps to ensure the safety of visitors to the Park and Reserve.</i></p> <p>Strategies:</p> <p>1. Advise visitors of natural hazards. Provide and support educational material aimed at visitor safety. Include visitor safety information in Park and Reserve literature. (H)</p> <p>2. Design recreation facilities to minimise potential risks to visitors. (H)</p> <p>3. Liaise with the appropriate emergency services to prepare plans including an evacuation plan, to deal with accidents and search and rescue operations. (M)</p> <p>4. Provide and maintain rescue equipment and train staff to assist in emergency situations. (L)</p>	<p>District & Interpretation and Visitor Information Unit</p> <p>District PVS and CALM Rec. & Land. Planning & Design</p> <p>District</p> <p>District</p>	<p>(1&6) Information pertaining to visitor safety is provided in the park brochure and will be included in future interpretive displays.</p> <p>(1&6) Visitor risk assessments have been carried out for the public access areas of the park and reserve and considered in facility design.</p> <p>(1&6) The Department hold a position on the Local Emergency Advisory Committee (LEMAC) as through this role provides advice and assistance in determining emergency response strategies throughout the District. No specific plans have been developed for these reserves.</p> <p>(3) To date a need for specialised rescue equipment has not been identified. Staff are trained in Incident Control Systems and First</p>	<p>To CALM standards.</p> <p>Apparently FESA now has role of carrying out special rescues.</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
			Aid.		
13.0	DOMESTIC ANIMALS				
	<p>Objective: <i>Protect the Park, Reserve and visitors from the impacts of domestic animals.</i></p> <p>Strategies:</p> <p>1. Prohibit domestic animals, including horses and dogs, in Lesueur National Park and Coomallo Nature Reserve, excluding the Coomallo picnic area. (H)</p> <p>2. Allow pets under restraint at the Coomallo picnic area only. (H)</p> <p>3. Inform visitors why domestic animals are not allowed in the Park and Reserve. (H)</p>	<p>District</p> <p>District</p> <p>District & Interpretation and Visitor Information Unit</p>	<p>(1&6) Ongoing</p> <p>(6) As per plan</p> <p>(1&6) As required.</p>		Signs sighted at Lesueur showing pets are prohibited.
14.1	COMMERCIAL OPERATORS				
	<p>Objective: <i>Ensure that commercial visitor services are conducted in an environmentally and socially sensitive manner.</i></p> <p>Strategies:</p> <p>1. Encourage external agencies to be involved in providing for visitors' needs that are compatible with strategies contained in this management plan. (H)</p> <p>2. Set charges and other licence fees where it is appropriate. (H)</p>	<p>District</p> <p>Parks Policy and</p>	<p>(3) No opportunity or interest from external agencies to date – probably due to restricted access.</p> <p>(1&6) All commercial operators are licensed as per CALM Policy and</p>	<p>Visitors to Lesueur who have already been to the Pinnacles are</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
		Services Section	appropriate fees collected.	not charged. Donation box present at Lesueur.	
14.2	MINING, MINERAL AND PETROLEUM EXPLORATION				
	<p>Objective: <i>Minimise the impact of mining, mineral and petroleum exploration on Lesueur National Park and Coomallo Nature Reserve.</i></p> <p>Strategies: 1. If mining activities are to occur, ensure that stringent conditions are in place in order to minimise its impact. (H)</p> <p>2. As far as possible, minimise the impact that any mining operations might have on the Park and Reserve, particularly with regard to introducing or spreading plant diseases, reducing landscape values, and decreasing water quality. (H)</p>	<p>District & Environmental Protection Section</p> <p>District & Environmental Protection Section</p>	<p>(1) No mining activities have occurred in the park. Standard practise would ensure stringent conditions would be set.</p> <p>As above.</p>		
14.3	BASIC RAW MATERIAL EXTRACTION				
	<p>Objectives: 1. <i>Wherever possible obtain gravel and other industrial materials for internal construction work from outside the Park and Reserve.</i> 2. <i>Allow quarrying only after the absence of other suitable sources has been demonstrated. Quarrying should then be limited to areas where such activity will have minimal impact on</i></p>				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><i>increasing the spread of dieback disease, public use and the area's flora, fauna and landscape.</i></p> <p>3. <i>Minimise the risk of spreading dieback disease from activities associated with quarrying and transporting gravel and other industrial materials.</i></p> <p>Strategies:</p> <p>1. Follow the NPNCA's Policy on Basic Raw Materials when extracting raw materials from the Park and Reserve. (O)</p> <p>2. Enforce dieback hygiene measures when extracting raw material and maintain dieback free pits in a dieback free condition. (O)</p> <p>3. Rehabilitate all or parts of pits as soon as material extraction is complete. Remove top-soil separately and store it for later rehabilitation work. Use seeds collected within the area for rehabilitation work wherever possible. (O)</p> <p>4. Follow the Central Coast Region's draft basic raw materials protection policy. (O)</p>	<p>District & Environmental Protection Section</p> <p>District & Environmental Protection Section</p> <p>District</p> <p>District & Environmental Protection Section</p>	<p>(1) No gravel or other raw materials have been extracted from the park.</p> <p>(1) As above.</p> <p>(1) As above.</p> <p>The policy has been followed</p>	<p>Unsure of current status of NPNCA policies but no extraction anyway.</p> <p>Gravel reserve in Coomallo has recovered naturally.</p>	
14.4	UTILITIES AND SERVICES				
	Objective:				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><i>Minimise the impact of utilities and services on the values of the Park and Reserve.</i></p> <p>Strategies:</p> <p>1. When the opportunity arises, negotiate to place new utility and service corridors outside the Park and Reserve. (H)</p> <p>2. If a utility or service corridor must go through the Park or Reserve, ensure that its placement and maintenance have minimal impact on the environment. (H)</p> <p>3. Control and monitor the effects of utility corridors and their maintenance upon the Park's conservation, landscape and recreation values. (M)</p> <p>4. Investigate the potential to remove utility easements from Coomallo Nature Reserve. (M)</p>	<p>District & Environmental Protection Section</p> <p>District & Environmental Protection Section</p> <p>District</p> <p>District & Environmental Protection Section</p>	<p>(6) A power line has been placed through Coomallo Nature Reserve. Negotiation to place the line outside of the Reserve was unsuccessful.</p> <p>(6) Negotiations CALM and members of the Conservation Commission resulted in strategies to minimise impacts and provided funding for environmental offsets.</p> <p>(1&6) Monitoring of impacts is carried out during standard reserve operations.</p> <p>(5) No progress to date.</p>	<p>Two existing power lines through Coomallo, a third to be constructed.</p>	
14.5	APICULTURE				
	<p>Objective:</p> <p><i>Minimise the impact of apiculture on ecosystem values.</i></p> <p>Strategies:</p> <p>1. Require beekeepers to notify and consult with the local CALM office before visiting their sites so that a review of access and hive locations can be</p>	<p>District & Parks Policy and Services</p>	<p>(1&6) As per the Beekeepers Code of Practise and per license conditions. A high compliance level is now experienced</p>		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p>conducted. (O)</p> <p>2. Require beekeepers to forward to CALM maps with all the tracks and firebreaks they use in Lesueur National Park and Coomallo Nature Reserve. (H)</p> <p>3. For dieback reasons, cancel or relocate sites in the Special Conservation Zone in Lesueur National Park in consultation with apiarists. (H)</p> <p>4. Review management of existing apiary sites in 1995, taking due regard to research results relevant to managed hives. (H)</p> <p>5. Do not approve any additional apiary sites before the review in 1995. (H)</p>	<p>Section</p> <p>District & Parks Policy and Services Section</p> <p>District & Parks Policy and Services Section</p> <p>District & Parks Policy and Services Section</p> <p>District & Parks Policy and Services Section</p>	<p>(1) We have this information.</p> <p>(5&6) The majority of Apiary sites within the SCZ have been relocated and marked “not for re issue”. The remaining sites are on the perimeter of the park and are of a lower risk. It is not intended to re issue these sites if they become vacant.</p> <p>(5) No formal review was instigated.</p> <p>(6) No additional apiary sites have been approved.</p>	<p>Only three sites in Lesueur with only one of these, at the edge of the Park, still in use.</p> <p>Additional Note: Dr. N. Burrows advises that a PhD project on the impact of bees on biodiversity has recently been completed. It was funded from the proceeds of licensing fees paid to CALM.</p>	
15.0	INFORMATION, INTERPRETATION AND EDUCATION				
	Objective: <i>Increase awareness, appreciation and understanding of the values of Lesueur</i>				

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	<p><i>National Park and Coomallo Nature Reserve, and support the strategies used to manage and conserve them.</i></p> <p>Strategies:</p> <p>1. Develop a range of interpretive education programs that highlight the Park's and Reserve's natural features (including flora and fauna), cultural heritage, and management issues. (H)</p> <p>2. Develop and implement a communication plan for Lesueur National Park and Coomallo Nature Reserve. (M)</p> <p>3. Provide opportunities for visitors to make contact with CALM staff. (M)</p> <p>4. Establish volunteer programs to use community expertise, knowledge and enthusiasm for interpretation and education purposes. (M)</p> <p>5. Develop and implement schemes within the Park and Reserve that will foster positive visitor attitudes to environmental issues. (M)</p>	<p>District & Interpretation and Visitor Information Unit</p> <p>District & Interpretation and Visitor Information Unit</p> <p>District</p> <p>District</p> <p>District & Interp. and Visitor Inform. Unit</p>	<p>(5&6) Several interpretive program days were held, however this has not been ongoing due to lack of staff resources.</p> <p>(3) Not implemented.</p> <p>(1&6) Staff regularly visit the park. Contact details are provided on brochures. The CALM District Office has been relocated to Jurien Bay from Moora making staff more available for contact.</p> <p>(5&6) Limited opportunity has arisen for volunteer programs due to restricted access and staff availability.</p> <p>(1) Limited opportunity to date.</p>	<p>Additional ranger allocated to District in 1996 did conduct field days. Concentration now on the Pinnacles.</p> <p>Best done when roadwork completed.</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	6. Monitor all programs regularly and revise as required. (M)	District & Interpretation and Visitor Information Unit	As above.		
16.0	INTERACTION WITH THE COMMUNITY AND OTHER AUTHORITIES				
	<p>Objective: <i>Develop, encourage and facilitate effective involvement of the community and other relevant authorities in management.</i></p> <p>Strategies:</p> <p>1. Develop volunteer programs to implement the management plan where appropriate. (H)</p> <p>2. Review the structure, membership and role of the existing Advisory Committee and the possibility of a new Committee. (H)</p> <p>3. Involve individuals and organisations in helping to implement the management plan. (M)</p>	<p>District</p> <p>District Planning Branch</p> <p>District</p>	<p>(3) The “keystone” to park development is the access road. Implementation of the plan sections that offer opportunity for volunteer groups have therefore been restricted to date.</p> <p>(3) The Advisory Committee has not reconvened since completion of the plan. It is not anticipated for this group to meet prior to a full plan review or a serious management issue arises requiring community input. Membership will be reviewed prior to a re convening.</p> <p>(6) Some members of the Advisory Committee have provided ongoing support and provided input into implementation.</p>	<p>“Friends of Lesueur” activity has dropped off since Park established.</p>	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	4. Continue to liaise with other Government agencies and Shires, and involve them in managing and protecting the Park and Reserve. (M)	District	(1&6) Ongoing as required.		
17.0	RESEARCH AND MONITORING				
	<p>Objective: <i>Plan and implement an integrated program of survey, research and monitoring by:</i></p> <ul style="list-style-type: none"> • <i>developing an understanding of natural and cultural environments; and</i> • <i>assessing visitor use including experiences and perceptions.</i> <p>Strategies:</p> <p>1. Encourage volunteers, educational institutions and other organisations to participate in research projects. Promote research programs and findings that address key issues. (H)</p> <p>2. Encourage the Lesueur National Park and Coomallo Nature Reserve to be considered as benchmarks for environmental research and monitoring programs in the region. (H)</p> <p>3. Implement an integrated program of survey, research and monitoring, including social monitoring, based on the strategies in the relevant sections of this</p>	<p>District and Science Division</p> <p>District and Science Division</p> <p>District and Science Division</p>	<p>(1&6) Research projects are supported as required. These include visiting interest groups, CALM operations and educational groups from Secondary and University institutions. Licence applications are assessed in a timely manner to ensure appropriate conditions apply to protect the parks values.</p> <p>(3) No opportunity to date.</p> <p>(3) No integrated programs have been implemented.</p>	<p>Occasional university project. A permit condition is that data collected to be provided to CALM.</p> <p>Funding directed to species/TECs rather than areas such as Lesueur. Attempt made by Science Division (c. 2000) to collate all research requirements outlined in Management Plans. Objectives generally to numerous and too vague to implement (Dr. N. Burrows, pers.comm.). Furthermore, general scientific</p>	<p>Report: "CALM References to Research and Monitoring Post 1985 Management Plans", 48 pp. (via Dr. N. Burrows).</p>

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	plan. (M) 4. Integrate research and monitoring in Lesueur National Park and Coomallo Nature Reserve with studies outside the Park and Reserve. (L)	District and Science Division	(3) No implementation	research emphasis has been on forest areas as a consequence of the setting of Ministerial conditions.	
18.0	MANAGEMENT STRUCTURE AND STAFF RESOURCES				
	Objective: <i>Provide staff and funds from sources internal and external to CALM to implement this plan.</i> Strategies: 1. Provide adequate staff numbers and train staff to implement the strategies contained in this plan. (H) 2. Take advantage of resources from both Government and private sources to implement this plan. (H) 3. Investigate and implement revenue raising mechanisms with the intention of retaining within the District the revenue raised. (H)	District & CALM Corpex District & CALM Corpex District	(5) One additional staff member was allocated to the District when the park was declared, however this position has been absorbed into higher District priorities mainly associated with the management of Nambung National Park. (5&6) Negotiations have taken place regarding sponsorship for provision of park facilities by developers Ardross Estates. Environmental Offset funding from utility infrastructure developers and external grant funding sources have been identified to finance land acquisitions. (1&6) Donations are collected at the park entrance – future initiatives will be investigated as visitation numbers rise.	After capital works conducted additional staff may be required. Completion of the Indian Ocean Drive will increase visitors to the region. Research funding is obtained through NHT.	

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	4. Develop volunteer programs. (M)	District	(3&6) Formal programs will be identified as opportunities arise and adequate staff resources are available to supervise and monitor.		
19.0	PRIORITIES				
	Objective: <i>Manage Lesueur National Park and Coomaloo Nature Reserve according to assigned priorities.</i> Strategy: 1. Prepare a 10-year implementation plan taking into account the priorities outlined in Table 5. Prepare an annual progress report and review the implementation plan annually or as circumstances change. (M)	District	(3) A 10 yr implementation plan has not been prepared.	Plan notes "subject to availability of staff and funds".	
20.0	EVALUATION AND REVIEW				
	Strategies: 1. Review the implementation of the plan annually, prior to preparing the works program for the following year. The review should identify which strategies have been achieved and to what degree, and any new information that may affect management. (H) 2. Review the plan within 10 years of its gazettal. This review should identify the	District District and	(3) This is the first review and report on the plan. Implementation of the plan has been aligned with maintenance of conservation values. In order to achieve this access has been restricted due to unsuitable track alignments and associated dieback risk. The new access alignment has been designed to minimise risk and impacts in case of disease introduction. Once the new access is constructed implementation of strategies other than maintenance will be possible. The plan is being reviewed after 8 years.		

Section	Strategy (Priority)	Resp.	Comment (CALM management)	Comment (Auditor)	Audit evidence
	extent to which the objectives have been achieved and strategies implemented, the reason for lack of achievement or implementation, and a summary of information that may affect future management. (M)	Planning Branch			