

REVIEW PAPER. MANAGEMENT OF REMNANT BUSHLAND FOR NATURE CONSERVATION IN THE WEST AUSTRALIAN WHEATBELT.

B) THE ROLE OF PLANNING IN MANAGEMENT by Susan A Moore

This section of the paper discusses one aspect of planning in detail; that of management plan preparation and development. Management plans have been chosen as they provide an effective means of resolving some management problems. Management plans are here defined as documents containing resource information, a statement of management objectives, strategies to achieve these objectives and operational prescriptions.

Three management plans or case studies are used in this paper to provide practical examples of ways in which some management problems of remnant areas may be resolved. These plans were prepared using the management planning process as developed by the Western Australia Department of Fisheries and Wildlife in 1980-81. This process has the following features:

1. Provision for a number of reserves, either of a similar type or in the same general area (such as within a single Local Authority) to be covered by one management plan;
2. Provision for intensive consultation with Local Authorities in whose districts the reserves occur;
3. Provision for full consultation with the public and for promotion of draft plans to encourage public comment;
4. Special provision for consultation with reserve neighbours and members of the local community;
5. Procedures for the assessment of plans, accompanied by summaries of the public submissions, by the vested Authority (i.e. the Authority responsible for the management of land to which the plan refers); and
6. Procedures to fulfil statutory requirements.

This process emphasises the importance of involving the public, and the local community, in management plan formulation and development.

Each case study is based on a particular management plan. The first two studies are Local Authority based, covering groups of nature reserves, the third is a plan for an individual reserve.

The case studies provide examples of how the development of management plans has:-

1. enabled a lack of management resources to be overcome (Case Study No.1)
2. informed the public and made them more sympathetic to conservation (Case Study No. 2)
3. emphasised the importance of planning for biological management (Case Study No. 3).

#### CASE STUDY NO. 1

##### MANAGEMENT IN THE FACE OF INADEQUATE MANAGEMENT RESOURCES

One factor limiting management is a lack of resources, a problem which has been discussed in the first half of this paper. Resources can be increased by co-operating with local communities and Local Authorities. Such co-operation may provide additional man-power, or funding for management works, or both.

One objective of the management plan for nature reserves in the Shire of Wyalkatchem was to address this problem of inadequate resources.

The Shire of Wyalkatchem, 170 km north-east of Perth, lies in the heart of the Western Australian Wheatbelt (Fig. X). Nature reserves occupy 1.0% of the Shire area, however, 9.5% of the Shire is occupied by Crown reserves (includes water, timber, railway, road and public utility reserves). The management plan covers seven nature reserves, ranging in size from 14 ha to 259 ha with a median size of 130 ha. Therefore, in the Western Australian context, we are truly dealing with remnant areas of bushland.

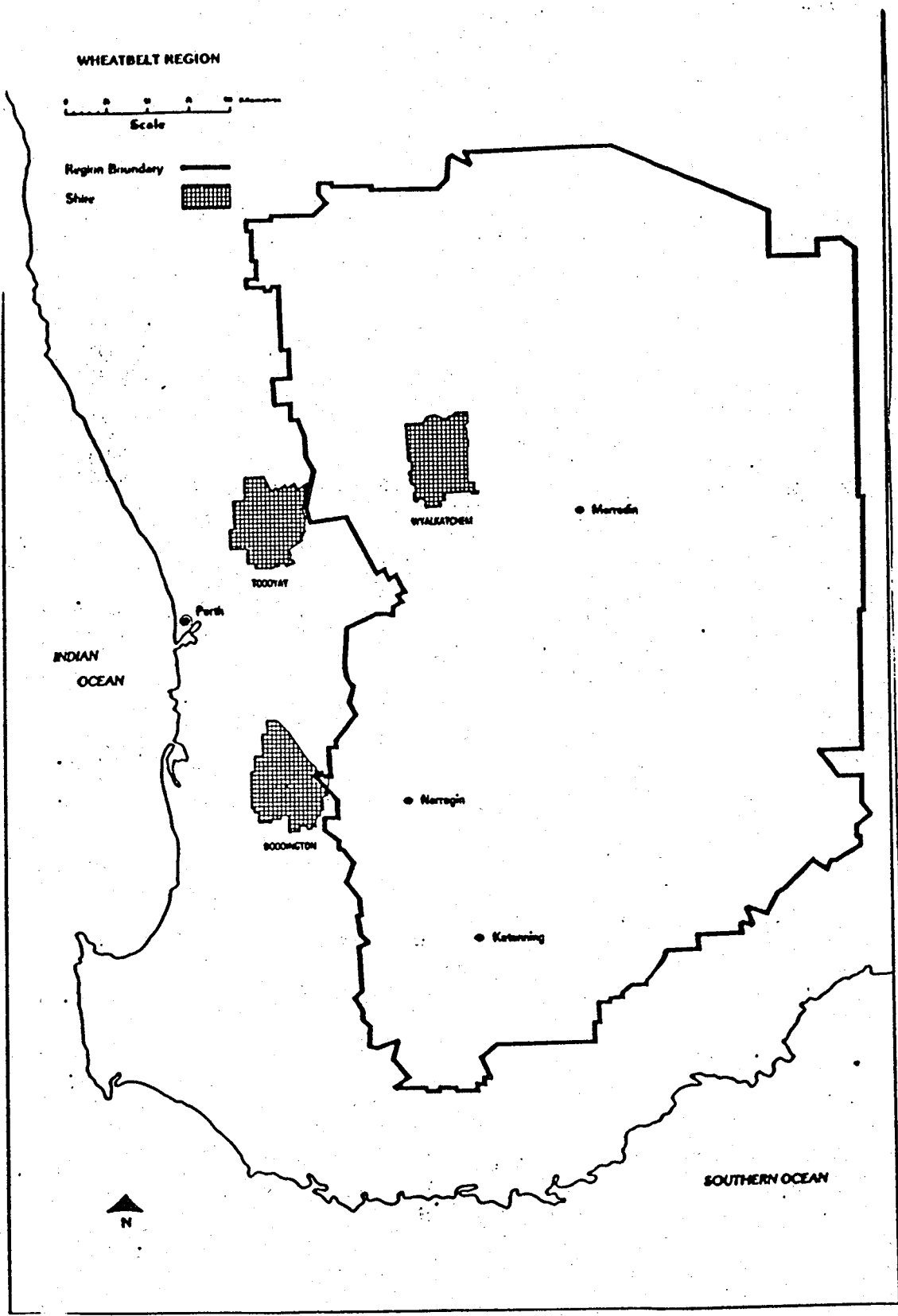


Figure x. Location of case study areas

These nature reserves include samples of most of the vegetation formations that occur in the Shire-ranging from salt-tolerant communities growing along drainage lines, through eucalypt woodlands, to a mixed kwongan scrub of acacia, allocasuarina and melaleuca. Occasional granite outcrops, and their associated vegetation, are also a significant part of the landscape.

Development of the plan was instigated by vesting most of the nature reserves under consideration in both state and local government (in the National Parks and Nature Conservation Authority and the Shire of Wyalkatchem respectively). In general, most nature reserves are vested only in State government - more specifically the National Parks and Nature Conservation Authority). This meant that the two vested agencies were jointly responsible for the management of these nature reserves. This was done to encourage Shire involvement and interest.

Plan formulation was based on the definition of management objectives, followed by brief resource surveys, with only 1-2 days in the field spent on each nature reserve. The surveys involved mapping the vegetation at a broad scale, general descriptions of the soils, listings of birds sighted, and general notes on past uses and management practices. The development of strategies to achieve the management objectives, plus formulation of operational prescriptions, followed. Very often, staff working on the reserves were approached by adjacent landholders and this provided an ideal opportunity for information exchange.

One of the main aims of plan development was to work with the Shire Council towards a management commitment. The initial step involved showing a group of councillors the conservation values of the reserves on the one hand, and mis-use on the other. This provided an opportunity for the Shire Council to discuss the problems of nature reserve management on-site, with a departmental officer.

Therefore, both adjacent landholders and the Shire Council were able to provide input prior to the publication of the draft management plan. Following publication of the draft, a display was erected and manned during business hours in the main street of Wyalkatchem, as part of the effort to canvass public comment. This provided a further opportunity for information

exchange between the Department, the Shire and members of the local community. The exercise proved highly successful as it provided an excellent opportunity with the public to discuss with the public the management and conservation values of the nature reserves. In one night this technique enabled the department to discuss management with approximately 90% of the adjacent landholders. It also allowed management issues, which had remained unresolved for years, such as horse-riding and kangaroo-shooting, to be rapidly clarified.

At this time a firm commitment (that is, a financial commitment) was made by the Shire Council to begin rehabilitation works. These works were detailed in the draft plan, and included rubbish removal and gravel pit rehabilitation.

Furthermore, discussions between the Shire Council and adjacent landholders, led to a rationalisation of fire protection on the reserves. Adjacent landholders suggested that the boundary firebreaks on the nature reserve be left to regenerate, on the proviso that the landholders adequately maintain their adjoining boundary breaks to a standard considered satisfactory by the Shire Council. This will add to the vegetated area of the reserves (once regeneration has occurred) as well as reducing the costs of fire protection.

Thus, development of a management plan has provided solutions to a lack of management resources in two ways:

1. By sharing management responsibilities and management costs with the local Shire Council; and
2. By close liaison and interaction with the local community (e.g. the decision by adjacent landholders regarding firebreaks on reserves; a decision which will result in financial savings).

## CASE STUDY NO. 2

### PLANNING TO EDUCATE

This case study demonstrates how a management plan can both inform the public and make them more sympathetic to nature conservation.

The example used is the management plan for nature reserves in the Shire of Toodyay.

The Shire of Toodyay lies approximately 90 km north-east of Perth (Fig. X) and is the northernmost of 4 Shires which encompass the fertile Avon Valley. Nature reserves occupy only 1.8% of the Shire area, however 35.1% of the Shire is occupied by Crown Reserves (includes State forest, army training land, national parks and timber, water, railway, road and public utility reserves). The management plan covers 8 nature reserves, ranging in size from 39 ha to 1991 ha with a median size of 87 ha.

The nature reserves included in this plan encompass samples of most of the vegetation types that occur in the Shire. The vegetation ranges from jarrah and marri forests in the west (higher in the landscape and with higher rainfall) through woodlands of marri, wandoo and powderbark, to York gum, salmon gum and kwongan scrub in the east.

The Toodyay area is an old, well-established agricultural district, settled early in the State's history. Most of the land suitable for agriculture was taken up at least 100 years ago, although some of the rugged upland country is still being cleared. Most of the existing reserve system has been isolated for many years, and therefore forms a prominent part of the landscape. In addition, these remnants are the only record of once extensive vegetation associations and as such are invaluable.

It was against this background and with strong interest from the local community, that the management plan was developed.

As with the Wyalkatchem management plan, plan preparation was based on a definition of management objectives, followed by brief resource surveys and the development of management strategies and prescriptions. The collection of resource information was greatly enhanced by the work of amateur naturalists based locally and in Perth.

The interest shown by the local community in "their" nature reserves made it desirable to encourage public involvement in all stages of plan preparation.

After informal discussions with the local community, a "prepublication" draft was published and distributed to reserve neighbours, the Toodyay Naturalists' Club and the Shire Council. This was accompanied by invitations to a public release of the plan. This release was based on a slide show, followed by a "question-time" when people were free to ask questions of the Minister, Departmental head, senior research staff and the senior author of the management plan. The presence of the Minister and senior staff enabled all questions to be answered "on-the-spot", rather than having to refer the issue elsewhere. The ensuing response was excellent, with many submissions received. Before such an approach is taken it is essential to ensure that there is agreement within the Department on the objectives of the plan, plan implementation and the dedication of resources to implementation.

Following publication of the draft, the Department led an informal tour, for members of conservation groups, around the Toodyay nature reserves. Again, the response was excellent. The draft plan was amended in the light of comments received, both from the tour and in formal submissions.

One of the most important ways in which the development of management plans has aided management, has been through informing and educating the public. One example of this, taken from the Toodyay planning process, illustrates the value of this educative role. Prior to completion of the final plan, a section of the local community demanded the frequent burning of two small nature reserves (each with areas less than 50 ha) in the Shire. These people had been stimulated to air their views by the production of the draft plan and its circulation through-out the local community. Prior to this they had either spasmodically burnt sections of the reserve, or canvassed their local member to stir the relevant government department into action to look more closely at the issue. An on-site meeting was arranged. Once the reasons for fire exclusion were explained, most of the people accepted the management prescriptions given in the plan. At a later date the same prescriptions were defended by one of the former protagonists!

Public participation in planning is a natural extension of informing the public and increasing their awareness of nature conservation. There are three reasons for encouraging public participation.

1. By an open approach to land management, members of the community will accept provisions and restrictions with which they may not initially agree, or which may affect them personally, providing the provisions are applied fairly and the reasons for them are logically argued and explained. Also, people respond to being asked, rather than told. This approach has been employed by ensuring that management plans contain full explanations and rationalisations of the provisions they contain, and by publishing them for free distribution to all interested parties. It is a logical extension of this approach to invite the community to contribute to the development of management provisions.
2. Successful management is dependent on the active support of the local community. Nature reserves should be considered as much a part of the local community as they are of the landscape, and it is well accepted that the successful management of natural areas for conservation requires, at the very least, the understanding and sympathy of neighbouring landowners and local authorities.
3. Better decisions result from the consideration of as wide a range of view points as possible.

The final role of the Toodyay management plan was to ensure the dedication of resources to management. The detailing of management works in a management plan convinces community members and departmental staff alike that a firm commitment has been made to the implementation of management prescriptions. However, it must be emphasised that management plan development must proceed within the constraints of operational resources.

Thus, management plans:

1. Provide a way of informing and educating the public regarding management for nature conservation; and
2. Enable the public to become involved in the development of management provisions.



### CASE STUDY NO. 3

#### BIOLOGICAL MANAGEMENT AND MONITORING

This case study illustrates the role of management plans in biological management. All plans are based on biological management; it is a fundamental objective. The management plan for Mooradung Nature Reserve is a good example.

Mooradung Nature Reserve, covering an area of 630 ha, lies 120 km south-east of Perth in the Shire of Boddington (Fig. X). It lies on the western edge of the Wheatbelt. Eucalypt woodlands of jarrah, with small areas of wandoo, dominate the reserve. Several small areas of lithic complex and heath also occur.

Mooradung management plan was approached in a similar way to the two aforementioned plans - with objectives being defined, a resource survey carried out and management strategies and prescriptions determined. One of the major considerations in this plan was fire management, an area of concern in the management of many remnant areas through-out the wheatbelt.

Biological management, in terms of fire, was achieved in two ways.

Firstly, the plan stated that part of the reserve would be kept free of fire. This statement was accompanied by reasons which explained how the area had been selected. Selection was based on considerations such as the presence of: gazetted rare species; species near the limits of their distribution; and, the number of associations contained in a particular block.

Secondly, the plan detailed programs to monitor the vegetation in those parts of the reserve proposed to be burnt (as prescribed in the plan), and to monitor changes in the frequently burnt buffer around the edge of the reserve. In both cases the aim of monitoring will be to determine the effects of burning on the native flora. Monitoring of the buffer strips will have an additional aim, that of determining the rates of invasion by exotic species.

In terms of biological management and monitoring, management plans are vitally important as they:

1. Provide an outline of the rationale behind management actions, as well as providing a record of management intent;
2. Give details on the history of management;
3. Detail the role of monitoring; and
4. Supply resource information (biological), which also serves to highlight areas where biological information is lacking.

Many points have been made in this paper. However, one warrants special emphasis, that is, the importance of fostering a positive attitude to conservation in both local communities and the public at large. Unless we inform and educate both of these groups, and actively encourage them to become involved in planning and management, these remnant areas will become increasingly degraded. Management plans provide one solution.