Environmental Impact Assessment Administrative Procedures

A Review of Current Procedures and Recommendations for Change

A Report to the
Environmental Protection Authority

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ENVIRONMENTAL IMPACT ASSESSMENT ADMINISTRATIVE PROCEDURES

A REVIEW OF CURRENT PROCEDURES AND RECOMMENDATIONS FOR CHANGE.

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A REPORT TO THE

ENVIRONMENTAL PROTECTION AUTHORITY

SCHOOL OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

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- Mr R. Sippe, Acting Director, Evaluation Division, Environmental Protection Authority; and

- Ms R. Nova who organised the EPA officers workshop.

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SUMMARY AND RECOMMENDATIONS

Following the proclamation of the Environmental Protection Act 1986 in February 1987 the EPA, recognising the evolving nature of environmental impact assessment (EIA) in Western Australia, requested Murdoch University to undertake a review of EIA administrative procedures. Whilst there are specific requirements for the assessment of proposals set out in Part IV of the Act, the administrative procedures for EIA are non-statutory. The administrative procedures describe the steps that should be undertaken by the proponent in the course of proposal review, the levels and documents used in assessment, and the length and nature of public review of the EIA document. In general terms, the EIA administrative procedures describe the way in which the statutory requirements for EIA are carried out, i.e. the EIA process.

In reviewing the EIA administrative procedures, we sought to critically examine the EIA process, to identify the nature of the process, and ways in which it may be improved to increase the effectiveness of EIA as a tool for environmental protection. We also examined the involvement of key participants in the process, with the objective of maximising the effectiveness of these groups' contribution to EIA.

The review examined EIA practices in Australia and internationally. In addition to this, five workshops were conducted with participants in the EIA process in order to identify participants' views on key issues in EIA, and on mechanisms by which the process and their involvement in it could be made more effective.

The review has examined both general and specific issues in EIA, and has suggested changes in a number of areas. A summary of our conclusions and recommendations in these areas appears below. One general observation which can be made is that our present system has a number of advantages and qualities compared with those under other jurisdictions. Our suggestions should therefore be regarded a fine tuning only.

LEVELS OF ASSESSMENT

We have concluded that the levels of assessment need to be clarified in order to better identify and describe their functions. We have recommended therefore the adoption of terminology to clarify the roles of the EIA documents, and have examined appropriate public participation in various levels of assessment. The introduction of Class EIA, whereby a class of similar proposals with a small number of associated environmental impacts of a low magnitude are assessed as a whole, has been proposed.

INVOLVEMENT OF KEY PARTICIPANTS

EIA is dependent, in part, on a flexible process which allows for a wide range of participation in the assessment of proposals. We concluded that the constructive involvement of key participants should be increased proportional to the level of assessment, to achieve the following objectives:

- better environmental protection;

- increased opportunities for participant concerns and views to be taken into account; and

- reduced conflict arising from poor communication and lack of participation.

ENVIRONMENTAL SIGNIFICANCE

We concluded that the criteria of environmental significance should remain flexible and non-statutory. However further guidance on what is considered environmentally significant by the EPA is necessary.

SETTING OF EIA STUDY GUIDELINES

Having addressed the increased involvement of key participants in the EIA process, we have concluded that involvement of groups outside the EPA in the setting of EIA study guidelines (scoping) should facilitate achievement of the following objectives:

- identification of the range and depth of the EIA study;

- ensuring that major issues of community concern are addressed in the EIA document; and

- increased communication between the proponent, the community and the EPA.

We have recommended that such involvement occur, proportional to the level of assessment, and have suggested appropriate scoping procedures. We have also concluded that guidelines will need to be more project specific if they are to effectively communicate the required range and depth of studies.

PREPARATION OF THE EIA DOCUMENT

We have concluded that the environmental data-base from which proponents, the community and the EPA work is inadequate both in terms of availability of environmental data, and our understanding of the way ecosystems function and interact. We have recommended that a central computerised data-base be established to collect and centralise available data and research information.

We also concluded that, in addition to increasing the availability of data, guidance may be required on prediction techniques considered appropriate by the EPA.

The content, format and quality of the EIA document was addressed. We feel that there is a need to improve document content and format, to better serve the objective of effective EIA, and have recommended

several changes to the preparation, presentation and distribution of the document.

COMMUNITY REVIEW OF THE EIA DOCUMENT

We have concluded that constructive and informed public participation is dependent, to a large degree, on the availability of proposal information and effective avenues of participation. We have recommended that an EIA bulletin be produced regularly by the EPA, providing information on aspects of EIA of interest to the community.

In order to enable and encourage participation by those members of the community who do not have the time or resources to prepare detailed written submissions, we have suggested that the EPA should consider increasing the number of avenues available for public participation in the review process.

We have also concluded that consideration be given to the allocation of funds specifically towards effective community participation in the EIA process.

EPA REVIEW OF THE EIA DOCUMENT

We have concluded that through increased involvement of key participants and improvements in document content and format, the EPA should be provided with more detailed and accurate information for use in the proposal assessment. We have recommended that the EPA consider direct interaction with such persons as the proponent and authors of major and significant submissions in order to clarify issues that arise during assessment.

THE SETTING OF ENVIRONMENTAL CONDITIONS AND POST-ASSESSMENT EVALUATION

It is clear that effective EIA is dependent, not only on the initial evaluation of the proposal, but particularly on successful environmental management. Effective environmental conditions and post-assessment evaluation are essential components of successful environmental management.

In order to increase the effectiveness of environmental conditions and to enable their auditing and evaluation, we have recommended a number of changes in the setting of conditions. We have also recommended that a group within the EPA or an appropriate tertiary institution be established to address aspects of post-assessment evaluation including the accuracy of predictions, the effectiveness of monitoring and management techniques and the effectiveness of environmental conditions in reducing and avoiding environmental impacts.

The discussion and recommendations for change have focused on what we consider to be the key issues in the evolution of effective EIA procedures in W.A. We have attempted to critically examine these issues and recommend ways in which the EIA administrative process can further serve the objective of environmental protection.

RECOMMENDATION 1

It is recommended that in the reassessment of controversial proposals public input be sought from authors of submissions to the original proposal.

RECOMMENDATION 2

It is recommended that the following terminology be adopted in place of Notice of Intent:

•Starting Document - for the initial referral document;

•Internal Environmental Assessment- in the place of the NOI as a level of assessment; and

•Special Environmental Assessment- in the place of Managed NOIs.

RECOMMENDATION 3

It is recommended that the two current levels of fully public assessment be replaced by one, and that the ERMP be retained to describe fully public assessment. Within the ERMP level of assessment the scope, depth and duration of the review is expected to differ between proposals. The requirements for study breadth and depth should be detailed in the EIA study guidelines.

RECOMMENDATION 4

It is recommended that staged assessment be employed whenever appropriate and especially in situations where there is a range of alternatives requiring assessment. The second stage should be in the form of an environmental management programme made available for comment to authors of submissions to stage 1, or as a stage 2 ERMP.

RECOMMENDATION 5

It is recommended that Class EIA be introduced for proposals of prescribed classes with a small number of associated environmental impacts of a low magnitude; assessment should involve the production of a Class ERMP and subsequent binding prescriptions.

RECOMMENDATION 6

It is recommended that Class EIA prescriptions be implemented as an Environmental Protection Policy under Part III of the Environmental Protection Act 1986, and therefore be reviewed every 7 years, or sooner if considered necessary by the EPA.

RECOMMENDATION 7

It is recommended that scoping be implemented, proportional to the level of assessment, for use in the preparation of EIA study guidelines. The EPA should be responsible for:

- the initiation of the scoping process;
- choosing the participants to be involved in the scoping process;
- convening the meeting of selected participants;
- ensuring that adequate background information is provided to participants involved in scoping; and
- setting the guidelines after receiving input from the scoping process.

RECOMMENDATION 8

It is recommended that a central computerised clearing house or data-base be established by the EPA, and that environmental studies by Government agencies, proponents, consultants and other bodies such as tertiary institutions be included, and made publicly available.

RECOMMENDATION 9

It is recommended that a stand-alone summary should be prepared by the proponent and should include information on:

- the proposal;
- the receiving environment;
- the predicted impacts; and

- management commitments.

This summary should be prepared to accompany all public assessments and be widely available, free of charge, from the EPA and other outlets such as public libraries.

RECOMMENDATION 10

It is recommended that the stand-alone summary should contain a tabulation presenting information on the predicted impacts (including indirect as well as direct impacts); and the corresponding mitigation measures proposed. It would be useful if the table were cross-referenced to the complete report.

RECOMMENDATION 11

It is recommended that the bases for impact predictions shoud be made explicit within the EIA document.

RECOMMENDATION 12

It is further recommended that the implications which the proposal has with respect to the implementation of environmental policies and guidelines such as the State Conservation Strategy should be included in the stand-alone summary and EIA document.

RECOMMENDATION 13

It is recommended that the EPA produce a publicly available EIA bulletin. The bulletin should provide information on the following aspects of EIA:

- scoping exercises in progress;

• the effectiveness of environmental conditions, monitoring and management programmes.

The funding for such research should be the conjoint responsibility of both the public and private sectors. The results of post-assessment evaluation should be stored in the data-base recommended in Section 3.2.4.

1. INTRODUCTION

Environmental protection and conservation have become two of the major issues of our time. Western Australia has recently adopted a State Conservation Strategy (1987) recognising "that the community is a part of the environment which must continue to function as a healthy whole if we are to achieve a high quality of life that is sustainable" (p1). The Strategy also states that "the development of resources and use of our environment will have to be carefully planned and managed to ensure sustainability" (p1).

Environmental impact assessment (EIA) is an environmental protection tool used by governments to seek a balance between conservation and sustainable development by ensuring that environmental considerations are afforded an appropriate weight in the planning and management of development proposals and in the political decision-making process.

Environmental impact assessment is "widely acknowledged as being a basic tool for the sound assessment of the environmental implications of development proposals" (Anderson, 1986, p2). There is no generally accepted definition of EIA, but it can be stated that it seeks to analyse and evaluate the environmental consequences of proposals, where proposals can include projects, programmes, plans and policies (Clark *et al.*, 1980, p1). In W.A. the purpose of EIA is to "protect the environment by ensuring that environmental factors are considered explicitly by decision-making and action-implementing authorities" (Sippe, 1987).

A formal requirement for EIA was first initiated in the USA under the National Environmental Policy Act 1969. In Western Australia EIA was introduced in 1971 under the Environmental Protection Act 1971 although not by name. The responsibility for conducting EIA lies with the Environmental Protection Authority, an independent body, supported by a Government agency.

After its commencement in 1971, EIA evolved in W.A. in a largely *ad hoc* manner until 1978, when the publication of Procedures for Environmental Assessment of Proposals in Western Australia (Department

of Conservation and Environment, 1978) introduced specific requirements for EIA. The election of the Labor Government in 1983 was a catalyst for the review of the State's environmental legislation. Following a public seminar on EIA in July 1983 and the submission of public comments, a new Environmental Protection Act was introduced in 1986.

With the proclamation of the Environmental Protection Act in February 1987, the EPA was given specific powers to conduct EIA. In addition to this, the Act provides for second and third party appeals at various points of the EIA process. The increase of statutory powers for the conduct of EIA has broadened the scope of EIA and as a result many more proposals are now assessed, with a coincident increase in the number of participants in the EIA process.

Whilst the number and type of proposals assessed has changed markedly since the proclamation of the Act in February 1987, the EIA administrative procedures (i.e. the details of the EIA process) have not.

The current administrative procedures for EIA are non-statutory, and are used by the Authority as a guide only. The procedures describe the steps that should be undertaken by the developer in the course of proposal review, the levels and documents used in assessment, and the length and nature of public review of the EIA document. In general terms, the administrative procedures define the way the statutory requirements for EIA are carried out, i.e. the EIA process.

Recognising the evolving nature of EIA in Western Australia the EPA requested Murdoch University to undertake a review of the administrative procedures.

While acknowledging the qualities of the present system especially in comparison with that under other jurisdictions, a primary objective of the review was to critically examine the nature of the process, and to identify ways in which it may be improved to facilitate effective EIA and thereby environmental protection. The review also examined the involvement of key participants in the process, with the objective of

maximising the effectiveness of the contribution of these groups to EIA.

Before addressing the review process, it is important to discuss the constraints within which it was conducted.

The financial and temporal resources of the EPA are limited, therefore any recommended changes were considered, not only in terms of effective EIA, but also, given these limitations, in terms of their practicability .

When reviewing the involvement of key participants we considered that any recommended changes to their involvement in the EIA process needed to be constructive, both for the participants and the assessment process itself, otherwise the commitment of those groups' resources would be unlikely.

We also concentrated on the administrative procedures appropriate to the assessment of projects. There is not yet sufficient experience with EIA of programmes, plans and policies to permit a useful review thereof. It is vital that research in this area be commenced as a priority.

Finally the review addressed itself to changes in the EIA process that were non-statutory. In addition to retaining flexibility in the process, such changes can be implemented without requiring legislative amendments and hence time delays.

The review involved the examination of EIA procedures in other States, and in several countries including the Netherlands, the United Kingdom, Canada and the USA. To assist in the identification of key issues and concerns within the local EIA community, we conducted a series of workshops involving the following participants (see Appendix 1 for the names of individual participants): the community, EPA officers, Government proponents and reviewers, non-government proponents, and private consultants.

In addition to identification of key issues and concerns, the aim of the workshops was to gain an understanding of the ways in which participants felt the process could be improved.

Workshop discussions focused on the following aspects of EIA:

- Environmental significance;
- EIA study guidelines;
- Non-specific EIA guidelines;
- Functions of the EIA documents and levels of assessment;
- Preparation, quality and format of the EIA document;
- Public participation;
- EPA review of the proposal;
- Setting of environmental conditions; and
- Timing of the EIA process.

Issues and suggestions arising from the workshops are addressed throughout the text.

The workshops, in combination with other discussions and a review of Australian and overseas EIA practices, provided the background for this review.

In Section 2 current EIA administrative procedures and developing trends in EIA in Western Australia are reviewed. Section 3 contains an analysis and recommendations on the administrative procedures, and in Section 3.1. examines the general issues of levels of assessment, staged assessment and class environmental impact assessment. Specific issues are then addressed in Section 3.2., including the involvement of key participants, environmental significance, setting of EIA study guidelines, preparation of the EIA document, EPA review of the proposal, the setting of environmental conditions and post-assessment evaluation.

2. CURRENT ENVIRONMENTAL IMPACT ASSESSMENT ADMINISTRATIVE PROCEDURES

The head powers for the environmental impact assessment process are contained in Part IV of the Environmental Protection Act 1986 which refers to the assessment of proposals that appear likely, if implemented, to have a significant effect on the environment (section (38)). While the term significant is not defined, the EIA net is widely cast by the definitions of proposal and environment contained in section (3) of the Act:

> "proposal means project, plan, programme, policy, operation, undertaking or development or change in land use, or amendment of any of the foregoing";

and

> "environment, subject to subsection (2), means living things, their physical, biological and social surroundings, and interactions between all of these".

The qualification to the definition of the environment acts to limit the social surroundings of people to those directly affected by or affecting the physical or biological surroundings.

The first division of Part IV is concerned with the referral and assessment of proposals, while the second division addresses the implementation of proposals. The legislation establishes the general framework only, and although there is provision for the Authority to draw up formal administrative procedures to establish the principles and practices of EIA (section (122)) it has not yet done so. Consequently only informal procedures exist (Environmental Protection Authority, 1987).

A proposal may be referred to the Environmental Protection Authority (EPA) for assessment by the proponent (i.e. the developer), by a member of the public , and by the Minister for the Environment. In

addition, decision-making authorities involved with a proposal must refer it to the EPA if it appears likely, if implemented, to have a significant effect on the environment. Finally, if a proposal comes to the notice of the EPA but has not been formally referred, then the Authority must require either the relevant decision-making authority or the proponent to refer the proposal; again only if it appears likely to have a significant effect on the environment. These alternatives are explicitly provided for under section (38) of the Act.

The referral of a proposal can occur simply by means of a letter, or a more comprehensive document known as a Notice of Intent (NOI) can be used.

The NOI usually contains a brief description of the proposal, the receiving environment, and any possible environmental impacts associated with the proposal. The NOI is designed to provide enough information to allow a preliminary evaluation to be undertaken by the EPA. This document is submitted to the EPA by the proponent.

Having determined the potential environmental significance of a proposal the EPA must then decide whether to assess the proposal ,and if so at what level. Several options are available:

1. Not to assess the proposal. This occurs when the EPA considers that the proposal would have no significant effect on the environment;

2. To assess the proposal, but not formally. Where the EPA considers the potential impacts of the proposal sufficient to be of some concern, it may give advice and make recommendations on ways to mitigate possible environmental impacts. The EPA may also attach conditions to such a proposal using Part V of the Act; Control of Pollution;

3. To formally assess the proposal under Part IV of the Act.

It is clear, therefore, that the scope of assessment is largely dependent upon the EPA's interpretation of environmental significance.

One interpretation of environmental significance is given in The Environmental Protection Act 1986: A New Era In Environmental Impact Assessment In Western Australia (Sippe, 1987), and appears below:

> "Environmental significance in the EIA context is a judgement based upon the degree of acceptability of anticipated change imposed on the environment by a proposal. The degree of acceptability is conditioned by the potential to modify existing environmental systems to the point where permanent or long-term instability exists or the capabilities (resilience) of a system are exceeded".

The EPA has established or is establishing understandings, regarding criteria of significance of varying degrees of formality, with several Government agencies, including the Department of Mines, the Water Authority of Western Australia, the Department of Resources Development and the State Planning Commission. Increasing proponent, community, and Government understanding of criteria for environmental significance is an on-going task within the EPA.

If the EPA decides to formally assess a proposal, it may determine the form, content, timing, and procedure of any environmental review (section (40)). Currently there are four levels of formal assessment:

1. Notice of Intent. The NOI can be used to assess proposals where the potential impacts are not very large in magnitude or extent. Assessment of NOIs is conducted by either the Evaluation Division of the EPA, or the five person Authority. Assessment carried out by officers within the Evaluation Division of the Authority is called Divisional Assessment, and is conducted using information provided in the NOI. This form of assessment provides a mechanism for attaching binding conditions, under Part IV, to small proposals that do not require assessment by the Authority itself. Public involvement is not provided for although advice from other Government agencies may be sought. Assessment at NOI level by the Authority itself also does not

usually involve public comment. However, the NOI may be released with the EPA assessment report for public information.

NOIs may also be used to assess changes in proposals which have already undergone assessment at the PER or ERMP level (see below). Assessment at the level of NOI may apply to proposals such as small surface goldmines, or a small change to an existing chemical plant.

2. Managed NOI. EPA experience has indicated that for a number of small proposals public interest is limited largely to the local community. Thus, the Managed NOI is used in the assessment of small projects where the EPA considers that public review of the proposal is warranted, and would be of use, but that the nature of the proposal is such that it would only be of concern to, or affect, the local community, and particular interest groups. Therefore, whilst participation of other groups in the assessment process is not prohibited, opinion is sought from the local community and relevant interest groups only. Recent examples of this approach are the assessment of the Proposed Sheepskin Tannery, Bakers Hill (Binnie and Partners, 1988), the Relocation of Proposed Dry Process Plant, Muchea (Maunsell and Partners, 1988) and the Heavy Mineral Sand Secondary Treatment Plant, Harris Rd, Picton (Martinick and Associates, 1988).

3. Public Environmental Report (PER). The PER was introduced with the aim of providing a level of assessment which would allow public review of proposals which do not warrant the preparation of an ERMP (see below). The scope and content of PERs is expected to be less comprehensive than that of ERMPs. PERs are prepared in accordance with guidelines issued to the proponent by the EPA, and are usually available for an eight week public review period. PERs are used in several circumstances:

- where the overall potential environmental impacts of the proposal are less complex or significant than those requiring an ERMP, but may be of public interest or concern;

- where changes are proposed to a proposal which has already been subject to an ERMP;

• where details of a proposal are already subject to public review through some other process (e.g. a planning process) but insufficient information on environmental concerns is given;

• where a proposal (by a different proponent) is ancillary to one already subject to an ERMP and does not itself require an ERMP, e.g. transmission lines to an aluminium smelter (Sippe, 1987).

4. Environmental Review and Management Programme (ERMP). ERMPs are the most comprehensive and detailed level of assessment used in WA; they are prepared in accordance with guidelines issued to the proponent by the EPA and, as with PERs, must contain a description of the proposal and the receiving environment, and a discussion of the predicted impacts. Of particular note is the requirement for ERMPs to contain a management programme which must detail the unavoidable environmental impacts; propose a programme of environmental management including provision for research, monitoring, periodic reassessment and reporting; and contain a commitment by the proponent to amend management in the light of monitoring results (Department of Conservation and Environment, 1980). ERMPs are made available for public review and comment, normally for ten weeks; and are the norm for, for example, major industrial projects and significant resource developments such as mining and forestry proposals.

An additional option available to the EPA but not yet employed is the Public Inquiry. Under section (40), the EPA may initiate a Public Inquiry with the approval of the Minister (in this report 'Minister' refers to the Minister for the Environment). Public Inquiries may be conducted by Authority members themselves, or in combination with others, or the EPA may appoint a committee to conduct the Inquiry. Public Inquiries would probably be an appropriate form of assessment for proposals that have many indirect consequences, such as the development of associated infrastructure; that have a large number of major and significant impacts; and are of great public concern. It has been argued by some workshop participants that some proposals of this type have been assessed as ERMPs since the Act came into operation.

As an indication of the numbers of proposals referred to the Authority each year 855 proposals were received and 65 were subject to formal assessment in 1987/88 (Environmental Protection Authority, 1986, p36).

There is a general right of appeal to the Minister for the Environment against the EPA's decision on whether to undertake EIA, and if so at what level. If the Minister upholds an appeal then he or she may direct the Authority accordingly. Such directions can only raise, not lower, the level of assessment - the words used in section (43) of the Act are:

"more fully or more publicly or both".

Once the level of assessment has been set,the proponent is responsible for the preparation of the EIA document; the NOI, PER or ERMP.

EIA documents are prepared in accordance with requirements outlined in the EIA study guidelines. These guidelines are issued by the EPA to assist and direct the proponent in their study of the existing environment and the prediction of environmental impacts, and to ensure the quality of the EIA document.

Once the proponent has prepared the EIA document it is submitted to the EPA, who then decides whether it is of a quality suitable for assessment, and, where appropriate, for public review. If the EPA finds the document unsatisfactory it has the authority to direct the proponent to resubmit.

Public review of a proposal is, currently, mainly through written submissions on the EIA document. Other, less common, forums for public input are public meetings and invitations to speak directly with the EPA.

Submissions from Government agencies in response to the proposal are also sought during the public review period.

After the end of this period, the proponent is required to respond to Government agency comments and a summary of public submissions forwarded to it by the EPA. The issues addressed in public submissions, and the proponent's response usually appear in the EPA assessment report. The EPA then begins its assessment of the proposal. Upon completion of its assessment the EPA submits a report and recommendations on the proposal to the Minister for the Environment, who must then publish and circulate the report as soon as is reasonable (section (44)). There is a general right of appeal to the Minister against the EPA's report and recommendations.

An important feature of the current Act is that once a proposal is subject to formal assessment all relevant decision-making authorities are prevented from making any decisions that could have the effect of causing or allowing the proposal to be implemented until the EIA is completed (section (41)). At that time the procedures put into place under Division 2 of Part IV of the Act come into play. The Minister for the Environment (informed by the report and recommendations of the EPA) then becomes a joint decision-maker and negotiates with other decision-making authorities as to whether the proposal should be allowed to proceed and under what conditions. These conditions are imposed on the proponent by the Minister for the Environment under the Environmental Protection Act 1986, and are usually drawn from the recommendations in the EPA's report. Once imposed such conditions have the force of law.

The nature of the joint decision-making is spelt out in detail in the legislation. If the Minister for the Environment and the other decision-making authorities are in agreement, then that agreement is given effect to by the Minister. Otherwise the area of disagreement is resolved by referral to the Governor, if another Minister is involved, or, if not, to an appeals committee whose decision is final (section(45)). There is a third right of appeal, by the proponent only, against the imposed environmental conditions (section (100)). This appeal is made to an appeals committee whose decision is binding.

The Minister for the Environment has wide powers to ensure compliance with the imposed conditions. These powers include issuing orders

requiring proponents to undertake steps to comply with conditions and causing such steps to be undertaken if the need arises.

In Western Australia EIA has been developed with a strong emphasis on the management of environmental impacts associated with development proposals. Thus proponents are usually required to prepare an Environmental Management Programme (EMP) or an Environmental Monitoring and Management Programme for submission to the EPA once formal assessment has occurred. EMPs consolidate and expand upon the management proposals put forward during the assessment and are not subject to public review, although on occasions they are made available for information.

This procedure can be regarded as a form of staged assessment in which the major, or macro, environmental questions are considered in the first stage, leaving detailed management questions to be dealt with in the EMP. An extension of this two-stage approach is in the use of the stage 1 and stage 2 ERMP. Although used infrequently, this approach is potentially of great advantage, especially in situations where there are several alternatives to be decided among. Thus the stage 1 ERMP can address the choice of alternative, leaving the detailed assessment until stage 2. Being only the first of two stages, stage 1 need not contain as much information as would otherwise be necessary and can therefore occur earlier in the planning and design of the proposal. In this way EIA can occur at a stage in proposal development when major environmental issues can readily influence the planning and design of the proposal.

Several workshop participants noted that in proposals undergoing single stage assessment, addressing alternatives was difficult as the proposals were often too far advanced by the time EIA took place. Often by the time a proposal is referred for assessment, so much work has been done on detailed planning that neither the proponent nor the EPA is in a position to negotiate major modifications. The process of staged assessment was seen as allowing major environmental impacts to be addressed and mitigated before detailed project planning is completed.

Staged assessment is currently the only form of EIA in which proposal alternatives can be realistically addressed. Further, staged assessment allows public involvement in the initial stages of proposal decision making. Community workshop participants see input at this stage of proposal development as being of major importance to ensure meaningful public participation in the assessment.

If stage 1 of the proposal is approved the proponent has the advantage of working with a fundamentally acceptable proposal, and of gaining an understanding of what is likely to be environmentally acceptable before detailed project design, which is financially and temporally expensive, occurs. Thus detailed environmental studies and predictions become more financially feasible if an in principle approval of the proposal exists.

Whilst agreeing that staged assessment can be useful, proponents and consultants were concerned about several aspects of staged EIA. Some of these concerns were:

•duplication of work that can occur in the preparation of stage 1 and stage 2;

•the time taken by staged assessment; and

•the requirement to address alternatives that were not within the scope or objectives of the proponent.

These matters have been addressed in the course of this review.

3. ANALYSIS AND RECOMMENDATIONS

3.1. GENERAL ISSUES

3.1.1. LEVELS OF ASSESSMENT

As was reviewed in Section 2 there are presently four levels of assessment in use. It is possible to classify these alternatives as shown:

1. Non-Public EIA; that is NOIs, whether assessed at Divisional or Authority level;

2. Limited Public EIA; currently conducted using Managed NOIs; and

3. Fully Public EIA; including PERs and ERMPs.

Each of these categories will now be considered.

Non-Public Environmental Impact Assessment and Notices of Intent

Non-public, or internal, EIA is felt to be useful as a level of assessment, as it allows small projects to be formally assessed under Part IV of the Act, and provides a mechanism whereby environmental conditions can be attached to projects that the EPA considers do not warrant public review.

The use of internal EIA to assess proposed changes in projects that have already been assessed at the PER or ERMP level has, however, been the subject of some concern. Proposals of a controversial nature that have been assessed and rejected by the EPA may, at a later date, be modified by the proponent and referred to the EPA for reassessment. Recent examples of such proposals are the Woodchip Export Proposal (McLean Consolidated, 1988) and the Boddington Gold Mine Project - Enhancement of Facilities (Worsley Alumina, 1987). The modified proposal is assessed by the EPA as a new proposal, but, as many of the potential environmental impacts have been addressed previously, the

EPA may see no need, on environmental grounds, to assess the project at a level higher than NOI. However participants in the community workshop expressed the view that in the assessment of modified proposals of this nature, public review would be appropriate. We support this view and suggest that the use of internal assessment in the reassessment of controversial proposals is inappropriate.

RECOMMENDATION 1

It is recommended that in the reassessment of controversial proposals public input be sought from authors of submissions to the original proposal.

There is some confusion regarding the multiple role of the NOI; as a referral document, a document used in internal assessment, and a document used in limited public assessment. The use of one document in serving a number of functions has made the role of the NOI unclear to both proponents and the public. In the case of proponents specifically, there are problems with the preparation of NOIs, as proponents may be unsure whether the document will be an assessment document or merely a referral document, and therefore uncertain as to the scope and depth necessary in the preparation of the document.

RECOMMENDATION 2

It is recommended that the following terminology be adopted in place of Notice of Intent:

•Starting Document - for the initial referral document;

•Internal Environmental Assessment- in the place of the NOI as a level of assessment; and

•Special Environmental Assessment- in the place of Managed NOIs.

The objective of Recommendation 2 is to clarify and better describe the different functions currently conducted using the NOI. The names recommended above are suggestions only, and may be improved upon.

Limited Public Environmental Impact Assessment

As discussed in Section 2, only proposals where the environmental impacts are largely relevant and of concern to the local community alone should be subject to limited public review.

The objective of limited public EIA is to enable public input to the assessment of small projects that would otherwise be assessed at the level of Internal Environmental Assessment. The goal is not to exclude the general public from the assessment process, but rather to focus on the views and concerns of the local community and special interest groups.

It is expected that some proposals currently reviewed at PER level would, in the future, undergo limited public EIA. As recommended above, a possible name for the relevant document could be Special Environmental Assessment (SEA).

Public review at the SEA level should involve seeking, as appropriate, opinions from local communities, special interest and environmental groups, but should not exclude input or submissions from the wider community should they be forthcoming.

Fully Public Environmental Impact Assessment

The assessment of smaller or less complex proposals has been successfully achieved with the introduction of the PER, and is now an accepted part of EIA. Whilst the definitions and applications of PERs and ERMPs have not changed, the distinction between them is no longer clear. Both PERs and ERMPs are part of the public assessment process, and whilst PERs may deal with a smaller range of issues, the issues addressed may be no less significant, individually, than those found in an ERMP. Within both the PER and ERMP assessment levels, a wide range of documents has been produced, in terms of scope and depth.

Therefore, the boundary between the PER and the ERMP can be seen as largely artificial. This lack of a clear distinction between the PER and the ERMP has caused some confusion and concern in both proponents and reviewers, due to uncertainty regarding what each level of assessment means and hence what can be expected in the respective documents. Furthermore, the issue of whether a PER or an ERMP is required in a given situation may emerge and cause unnecessary conflict.

We discussed this issue at all workshops and it was generally agreed that only one document need be used to describe the fully public assessment process.

RECOMMENDATION 3

It is recommended that the two current levels of fully public assessment be replaced by one, and that the ERMP be retained to describe fully public assessment. Within the ERMP level of assessment scope, depth and duration of the review is expected to differ between proposals. The requirements for study breadth and depth should be detailed in the EIA study guidelines.

Thus, those proposals currently assessed as PERs and of sufficient concern to warrant fully public exposure (i.e. not at the level of Special Environmental Assessment) would be assessed as ERMPs of appropriate scope.

3.1.2. STAGED ASSESSMENT

Having examined the use of staged assessment, and in particular the use of staged ERMPs, we have concluded that staging is an effective assessment mechanism for major proposals, although with a limited applicability, largely restricted to proposals where there are site alternatives, technology alternatives or design or product flexibility.

In the further development of the use of staged ERMPs, we consider that the following procedures may be applicable.

The objective of the stage 1 ERMP should be to identify and assess major environmental issues, to find the most environmentally acceptable alternative, and to propose this alternative as the basis for detailed project planning and assessment; i.e. to address the question of the selection of the environmentally preferred alternative.

Stage 1 must occur at the initial planning stages of the proposal for alternatives to be feasible and adequately addressed, for example, before the proposal becomes site specific. In this way inappropriate choices of siting, technology, product etc. can be avoided. At Stage 1, the proponent should only address the type of development, the 'macro' environmental issues likely to be associated with it, and a number of feasible alternatives which are likely to achieve proposal objectives. This will, we hope, avoid the duplication of work in stages 1 and 2, and encourage proponents to refer proposals to the EPA at an earlier stage where substantive changes in site or technology used will not present prohibitive redesigning costs to the proponent.

The stage 1 ERMP should be subject to full public review.

Approval of stage 1 will imply a conditional, or in principle, approval for the proposal and should act as a trigger for detailed assessment of the approved alternative.

The second stage should be a detailed environmental impact assessment of the selected alternative and can take two forms, an Environmental Management Programme (EMP) made available to authors of submissions to stage 1 or a fully public stage 2 ERMP. The EMP case would be analagous to the EMP produced as a consequence of the assessment of most ERMPs, with the difference that it would be available for limited public comment.

RECOMMENDATION 4

It is recommended that staged assessment be employed whenever appropriate and especially in situations where there is a range of alternatives requiring assessment. The second stage should be in the form of an environmental management programme made available, for comment, to authors of submissions to stage 1, or as a stage 2 ERMP.

3.1.3 CLASS ENVIRONMENTAL IMPACT ASSESSMENT

The assessment of relatively small proposals in terms of their scale and impacts has become more common in recent years. These proposals include, for example, subdivisions and gas pipeline laterals. In many cases a Government agency is the proponent. This trend is to be encouraged particularly as it provides one means of assessing cumulative impacts that are individually small but collectively significant. The assessment of such proposals, whilst increasing the effectiveness of EIA by subjecting a larger range of projects to impact assessment, has increased the EPA workload and may take valuable resources away from the assessment of major proposals.

One mechanism that can be introduced to alleviate this problem is Class Environmental Impact Assessment. The term Class EIA describes a process of assessment where proposals that fall within a prescribed class are assessed as a whole (i.e. as a generic proposal) in order to identify impacts and issues specific to that kind of proposal; and to propose appropriate approaches to their environmental management. Class EIA results in the production of Class EIA prescriptions which can then be used by the EPA and other Government agencies in the assessment of specific proposals in that class. A Class EIA would only apply to a range of similar proposals that would currently be assessed at NOI or Managed NOI level. This is because proposals of a more complex nature requiring fully public assessment could not be properly assessed other than on a case-by-case basis.

The introduction of Class EIA would involve EPA assessment of a class of proposal. This assessment would occur in a similar way to that

undertaken at the level of an ERMP. The relevant document (a Class ERMP) would propose a set of prescriptions outlining the process to be used and issues to be considered in the assessment of future specific proposals. After an assessment of the Class ERMP, the EPA would issue binding Class EIA prescriptions. These prescriptions would set out the assessment requirements for proposals in that class and would allow the appropriate Government agency (who is the proponent or has a decision-making role) to conduct the assessment of future specific proposals within that class. It is envisaged that the EPA would only be involved in a final auditing role. In this role, the EPA would then comment and make additional recommendations on any specific proposals to the Minister if deemed necessary. The role of the Minister for the Environment as contained in Division 2 of Part IV of the Act would remain unaltered.

RECOMMENDATION 5

It is recommended that Class EIA be introduced for proposals of prescribed classes with a small number of associated environmental impacts of a low magnitude; assessment should involve the production of a Class ERMP and subsequent binding prescriptions.

Class ERMPs have been introduced as a new level of assessment. We believe that they can produce the following benefits:

• The further incorporation of EIA and environmental awareness into Government agency activities; and

• Lessening EPA workload by avoiding repetition in the assessment of similar proposals (while maintaining adequate environmental assessment) thus enabling the EPA's resources to be concentrated on the review of major proposals.

We will now consider the procedures applicable to Class EIA in more detail.

Procedures for Class EIA

The initiation of a Class EIA could occur either by a responsible Government agency or by the EPA itself. In the first case a Government agency is the proponent. EIA would be conducted on a class of project often proposed or approved by that agency. For example, the Water Authority of Western Australia may be the proponent and pipehead dams the proposal. Upon referral of proposals of a suitable class to the EPA assessment would be commenced at the level of ERMP involving the proponent agency preparing the EIA document, addressing not only any specific proposals which may be of immediate concern, but also a general proposal of that type.

In addition to normal considerations, Class EIA would address the upper limit, or threshold, of application; i.e. exemptions from the Class EIA prescriptions which are to be assessed by the EPA as usual would be identified. The Class ERMP, together with the EPA report and recommendations on it (i.e. the Class EIA prescriptions), could be reviewed as a draft Environmental Protection Policy. The EPA is empowered to formulate such policies under Part III of the Act. The policy would prescribe the process to be followed in the assessment of future specific proposals and be available for use by the appropriate agency in the future assessment of proposals for which it is the proponent, or has a decision-making role.

The implementation of the Class EIA prescriptions as an Environmental Protection Policy would allow, under Part III of the Act:

- any person to make representations to the EPA regarding the Class EIA prescriptions (section (27));

- the enforcement of Class EIA prescriptions as an Environmental Protection Policy (section (35));

- the review of the Class EIA within a period of seven years (section (36)); and

• minor changes to the Class EIA with Ministerial approval(section (37)).

RECOMMENDATION 6

It is recommended that Class EIA prescriptions be implemented as an Environmental Protection Policy under Part III of the Environmental Protection Act 1986, and therefore be reviewed every 7 years, or sooner if considered necessary by the EPA.

The second case in which a Class EIA could be prepared is where there is a proposal of a general type suitable to be assessed under Class EIA, but for which there is no single Government agency with a role as either proponent or decision-making authority. For example, some quarries would be suitable for Class EIA but may have either a private or public proponent; and may require approval from more than one decision-making authority. In such a case, the EPA may choose to initiate Class EIA itself. Class EIA initiated in this way would be formulated and reviewed in the same way as agency initiated Class EIA. The EPA would then be responsible for delegating the use of the resultant prescriptions to the appropriate authorities. Unlike the first case of Class EIA, the assessing agency in this case may change from proposal to proposal.

Responsibility for Class EIA

Under Part IV of the Act, the EPA is responsible for the assessment of environmentally significant proposals. The EPA could, however, choose to employ Class EIA, and thereby delegate the assessment of individual proposals without simultaneously relinquishing its responsibility. Whilst Class EIA would result in the delegation of the EIA process to a Government agency, the EPA would remain responsible for the assessment of all proposals. As discussed, the EPA would audit the assessment after implementation of the Class EIA prescriptions. This would not only ensure the most effective EIA possible, but should also assist the proponent agency in effective use of the prescription through feedback and advice from the EPA.

The suitability of any specific proposal for assessment under Class EIA prescriptions would remain subject to EPA discretion. Thus if the EPA, or the Minister, considers that a specific proposal should undergo assessment within the EPA, rather than under Class EIA, the EPA could call that proposal in.

There are several differences between assessment using Class EIA prescriptions and current assessment procedures. These are summarised below:

1. The EPA would not prepare specific guidelines for each proposal, but instead instruct the proponent to use the Class EIA prescriptions as guidelines; and

2. The assessment process would be carried out by the delegate agencies rather than by the EPA. Therefore, after the initial referral of the proposal to the EPA, the Authority does not view the proposal until assessment is complete.

Class EIA would need to be monitored and reviewed on a regular basis to ensure that it is effective in addressing the significant environmental issues within a prescribed class of proposal.

To enable on-going review and evaluation of Class EIA, Government agencies conducting the environmental impact assessment of proposals should include in their annual reports an evaluation of all proposals assessed in this way.

Public Participation in the Development and Use of Class EIA Prescriptions

Public participation in the formulation of Class EIA prescriptions would necessarily differ from public involvement in other forms of EIA since Class EIA does not assess a specific project, nor is it specific to any area or any one community. Thus, whilst Class EIA may be prepared for use in future non-public or limited assessments the resultant prescriptions would affect the community as a whole.

Therefore the assessment of a Class ERMP warrants full public participation. Furthermore, if Class EIA is to be implemented as an Environmental Protection Policy, then there are specific public participation requirements under Part III of the Act.

As an Environmental Protection Policy Class EIA prescriptions would be in operation as a form of EIA for up to seven years before they are reviewed. It is therefore vital that public participation is encouraged, and made available to the majority of the community.

The following steps should be undertaken to facilitate effective public participation:

1. Notification of assessment and distribution of background information. As with any EIA, when a Class EIA is initiated the EPA would be required to keep a public record of the assessment. In particular, the Authority should make information available on the type of project under assessment, the types of impacts commonly associated with that class of proposal, and any past EPA assessment reports dealing with similar proposals. This information should be made available in appropriate libraries (both metropolitan and non-metropolitan), from the EPA office, and by mail upon request.

2. Establishing the guidelines for the preparation of the Class ERMP. Before the EPA sets the guidelines for the assessment of a generic proposal using Class EIA, public comment on issues to be addressed should be invited.

3. Review of the Class ERMP. The public review period for the Class ERMP should be similar in length to that of a normal ERMP. As discussed, Class EIA should only apply to proposals for which non-public or limited public assessment is appropriate. In the latter case the public review period, and the extent of public participation to be used in the assessment of specific proposals, should be outlined in the Class EIA prescriptions, at the time of formulation.

4. Confidentiality. As public review of specific proposals would be conducted by the proponent agency or relevant decision-making

authority, confidentiality of submissions may become an issue. Upon request, provision should be made for the submission of views and concerns directly to the EPA.

Class EIA would be subject to the same appeals provisions (under section (100)) as any other form of EIA. Thus any member of the public who considers that a specific proposal should not be assessed using established Class EIA prescriptions, or that the assessment itself is unsatisfactory, may appeal to the Minister.

A record of all specific proposals undergoing assessment using Class EIA, the agency conducting the assessment, and a contact number within that agency where more information can be obtained, should be kept in the EPA's public record system.

3.2. SPECIFIC ISSUES

3.2.1. INVOLVEMENT OF KEY PARTICIPANTS

One of the issues addressed in the review was the involvement of key participants in the assessment process. By key participants we mean:

- the community (this can include local residents, the general public, and single or multi-issue environmental groups);
- consultants
- Government proponents and reviewers (both local and State); and
- proponents.

All workshop groups expressed a desire for increased involvement, interaction and direct communication in various aspects of the EIA process. Some of the areas in which further involvement of key participants was sought are:

- in the setting of EIA study guidelines;
- direct communication with the EPA during its review of the proposal;
- in the setting of environmental conditions attached to proposal implementation;
- involvement in the review of changed proposals; and
- greater participation in general.

The above list is an indication of the extent of the desired involvement. It is a compilation of views expressed rather than views common to all workshops, as each group had a different focus and different priorities. Furthermore, groups that may have expressed the same opinions on where greater involvement in the process was

necessary, may not have agreed on who should be involved at that stage.

Having considered this issue in detail, it is our view that: while recognising the financial and temporal limitations of the EIA process; the constructive involvement of key participants should be increased, proportional to the level of assessment. The objectives which we believe can be achieved by increased participant involvement are:

- better environmental protection;

- increased opportunities for participant concerns and views to be taken into account; and

- reduced conflict arising out of poor communication and lack of participation.

We have concluded that effective EIA is dependent, in part, on a flexible process which allows for a wide range of participation in the assessment of proposals. To achieve greater participation in EIA throughout the process will require greater communication between the proponent and the EPA, the proponent and the community, and the EPA and the community.

Mechanisms and recommendations for increasing the involvement of key participants in the EIA process are addressed throughout the following pages.

3.2.2. ENVIRONMENTAL SIGNIFICANCE

The importance of, and need for, criteria for environmental significance were discussed in some detail in the workshops. Most participants were satisfied with a non-statutory working definition of environmental significance as it provides flexibility in determining the environmental significance of proposals. However, many participants felt that greater guidance on what was considered to be environmentally significant by the EPA would be useful. Concern that

the criteria of environmental significance were not consistent from proposal to proposal was also expressed by some participants.

To assist proponents' understanding of what is considered environmentally significant by the EPA, we suggest that general guidelines on environmental significance be circulated to proponents, and updated when necessary. Sippe's (1987) paper contains the EPA's working definition of environmental significance and may be suitable to provide general guidance in this respect.

3.2.3. SETTING OF EIA STUDY GUIDELINES

EIA study guidelines are issued to the proponent by the EPA at the beginning of the assessment process. These guidelines guide the proponent in:

- the aspects of the environment which should be studied;
- the potential impacts that need to be predicted; and
- the EPA's expectations regarding the presentation of the EIA document.

In summary, guidelines are issued with the objective of ensuring that the EPA's requirements, both in range and depth of assessment, are met in the EIA document. In combination with liaison and communication with the EPA, the guidelines should play a key role in ensuring the adequacy of the EIA document, and therefore of the EIA process as a whole.

Currently, guidelines are largely the product of internal identification of the issues that need to be addressed. In addition to consultation with the proponent, which can occur, Government agencies and community groups may, on occasions, be asked to comment on draft guidelines to identify their major concerns with a proposal before the guidelines are issued. This practice, however, is fairly uncommon.

In the internal setting of guidelines it is the EPA's responsibility to identify all potentially significant environmental impacts which should be addressed. Whilst the EPA clearly endeavours to ensure that an adequate range of issues is covered, EIA documents on occasions have not addressed key issues from the community's perspective. Community workshop participants identified this as a major problem, and felt that the public review stage occurs too late in the EIA process for additional issues to be addressed if they have escaped the review net. We recognise that not all community concerns with regard to a proposal will be associated with environmentally significant impacts, and do not suggest that the EPA take on all aspects of proposal assessment. However, the EIA document should, as far as is possible, address all significant environmental issues associated with the proposal, including those expressed by the community. This suggests a need for greater community involvement in the setting of the EIA guidelines.

Proponents also expressed a desire to be further involved with the setting of guidelines.

The involvement of groups outside the EPA in the setting of guidelines should facilitate the preparation of a widely accepted EIA document. This in turn should provide a firmer basis for subsequent debate, enabling issues of concern to be effectively addressed in the EIA process.

It should be pointed out that whilst many of the workshop participants thought that greater involvement in the setting of guidelines would be useful, views on which parties should be involved differed greatly in some cases. Whilst the views and concerns of workshop participants have been taken into account in the formulation of this discussion, the recommendations and suggestions which make up this Section should not be taken as representative of any consensus view on the setting of guidelines.

Scoping is one mechanism that is widely used to assist in the early identification of the necessary range and depth of the EIA document. In simple terms, scoping would mean that guidelines are produced by

the EPA after consultation with groups outside the EPA. Groups involved can include the local community, Government agencies, the proponent and special interest groups. In addition to facilitating the identification of the necessary range and depth of the EIA study, such involvement should meet the objective of increased participation by key participants discussed in Section 3.2.1.

Guidelines should not be seen by the proponent, or any other group, as the final word on the contents of the EIA document. Guidelines are intended to set goals for EIA, but not to limit the proponent or consultant in their study. Therefore, in the setting of guidelines, there must be recognition that the process of developing and selecting alternatives and identifying issues and impacts continues throughout the EIA process. Scoping must not produce rigid instructions on what a study must examine.

Concern was expressed at the proponents' workshop that going public with a proposal at the early guideline setting stage, and therefore without any detailed information on environmental impacts or management programmes, may only serve to raise unwarranted public alarm. Whilst it is recognised that some, even many, proposals may, and do, become an issue of public concern, both proponents and the community should realise that scoping is a process whereby groups are given the opportunity to participate in identifying the range and depth of possible environmental issues, in full recognition that detailed information regarding likely impacts and the receiving environment may not yet be available.

Clearly, involvement of a wide range of groups in the setting of guidelines at all levels of assessment would be inappropriate. External involvement in the setting of guidelines should reflect the significance of the proposal itself, and the level of participation in the review of the EIA document. Thus, for a small proposal which is to be assessed at the Internal Environmental Assessment level, extensive scoping would not be required. Similarly, assessment at the Special Environmental Assessment level would require only limited scoping. In other words, scoping procedures should be implemented in proportion to the level of assessment.

RECOMMENDATION 7

It is recommended that scoping be implemented, proportional to the level of assessment, for use in the preparation of EIA study guidelines. The EPA should be responsible for:

- **the initiation of the scoping process;**
- **choosing the participants to be involved in the scoping process;**
- **convening the meeting of selected participants;**
- **ensuring that adequate background information is provided to participants involved in scoping; and**
- **setting the guidelines after receiving input from the scoping process.**

Suggested scoping procedures appropriate to the various levels of assessment will now be outlined.

Community involvement in scoping at the IEA level of review would be inappropriate as the proposals are small and are not publicly assessed. Some discussion with the proponent and relevant Government agencies, however, may be necessary and appropriate.

For proposals undergoing Special Environmental Assessment, it would be appropriate that interest groups, local government authorities, and the local community are involved in scoping, as they are also involved in the subsequent review stage.

In the case of proposals that are to undergo full public assessment the following procedures are worthy of consideration.

A scoping group with a maximum of 6-8 people could be established by the EPA and comprise the following:

• the proponent;

• a local community representative (where appropriate; i.e. if the project site has been selected);

• a representative from the conservation movement;

• representation from relevant State and local government agencies; and

• any individuals with special knowledge relevant to the proposal.

The role of the scoping group is to advise the EPA on the range of issues that should be addressed in the EIA document, and the depth to which they should be studied. In order to do this, the scoping group should act as a focus for community input on the proposal. Thus the scoping group should be able to seek the views and concerns of those not otherwise involved and bring them to the scoping group forum. Having received such input, the scoping group should identify the range of issues that exists and, if possible, reach agreement on the relative importance of those issues, seeking any necessary technical and other advice. A checklist of environmental factors that the scoping group could work through may be useful here.

Whilst general agreement on key issues should be attempted, consensus should not be required of the scoping group. We recognise that the divergent priorities of those involved may preclude constructive consensus. All issues identified as important by members of the scoping group, or by members of the community, should be reported by the scoping group to the EPA at the end of the scoping exercise, whether consensus has been reached or not. Using the information provided in this way, the EPA then has the responsibility of determining what the guidelines should include.

In recommending this mode of operation, we hope to avoid the possibility of scoping or the scoping group becoming an arena of conflict between disparate groups.

The role of the scoping group in staged ERMPs would be slightly different. As stage 1 would focus on macro environmental issues and alternatives, the major responsibility of the scoping group should be to identify such issues and feasible alternatives.

If the stage 1 ERMP is approved by Government, stage 2 may be assessed at one of two levels (as discussed in Section 3.1.2.). Stage 2 may be a fully public ERMP or it may be a published Environmental Management Programme and assessed at the SEA level, dependent on the proposal.

If the assessment is to be fully public, the scoping group should be reconvened with local community representation to advise on the preparation of guidelines that address the more detailed aspects of the proposal. Some of this work will have already been done in stage 1; decisions made at stage 1 will set the agenda for issues to be addressed in stage 2.

In the case of stage 2 assessment undergoing limited public review, the EPA may choose to solicit the views of the scoping group, authors of submissions to the stage 1 ERMP, and the local community in a less formal manner.

Clearly adequate time must be allowed for scoping to be effective. For fully public assessment involving a scoping group and soliciting a wide range of views, a period of 8 weeks may be necessary. However, baseline environmental studies can be started once the level of assessment and some guidance, in the form of draft guidelines, have been provided by the EPA. A clear understanding on the proponent's part that the scoping process may result in changes to the guidelines will be necessary. Scoping, therefore, need not delay the commencement of environmental research by the proponent and consequently should not lengthen the time taken for EIA. Indeed, effective scoping may reduce the number of appeals and hence reduce the duration of the assessment process.

The appropriate scope of EIA was discussed by many workshop participants, a number of whom felt that the social impacts of

proposals are not adequately addressed and that the EPA should broaden the scope of EIA to take these factors into account.

Currently, the EPA has determined the scope of EIA to include a number of social factors, including the following:

- impacts upon people arising from impacts on the bio-physical environment (For example smell, noise);

- social impacts with identifiable environmental consequences (For example recreational activities of shift workers in remote areas);

- social impacts in the form of aesthetics; and

- risk and hazard analysis. (Sippe, 1987)

It is difficult, in practice, to separate the assessment of biological and physical impacts from social impacts. Whilst the important role that social impact assessment has to play in the consideration of proposals is increasingly recognised by EIA practitioners in Australia and internationally, there is an understandable reluctance to take on board further factors in the assessment process. Such broad assessment may detract from the proper examination of the bio-physical impacts of the proposal. Currently, EIA is the only part of the Government decision-making process that explicitly examines and assesses the environmental significance of proposals. In our view, this role must be maintained, and should not be obscured by the inclusion of socio-economic factors in environmental impact assessment.

We have concluded, therefore, that social impact assessment, whilst being an important part of proposal assessment (perhaps undertaken by an appropriate authority), should not be combined with EIA other than in the areas discussed above.

3.2.4. PREPARATION OF THE EIA DOCUMENT.

In this section we will focus on the EIA document, by which we mean the report submitted to the EPA for assessment: the starting document

is therefore excluded. Having introduced the concept of more detailed and project specific guidelines to facilitate the preparation of an adequate EIA document, it is important to address the nature of the data-base from which the proponents, public and the EPA work.

There are two major problems in the preparation of adequate EIA documents, lack of knowledge and lack of access to knowledge. This includes lack of environmental data, lack of knowledge about the way ecosystems function and interact, and the absence of a centralised data-base. In addition, there has not yet been enough post-assessment auditing to assess the accuracy of environmental predictions, and ensure that we can learn from experience.

A large amount of environmental research has been conducted in the preparation and assessment of documents. However, much of the knowledge and experience gained by consultants and proponents in the preparation of EIA documents is retained by those bodies, and is not generally available. Whilst recognising, in particular, that consultants' knowledge and expertise is their source of income it is essential for effective EIA that access to environmental data not be restricted.

There is, therefore, a need to collect and centralise available environmental data and research information. Further research into the nature, functioning and resilience of ecosystems is also needed.

RECOMMENDATION 8

It is recommended that a central computerised clearing house or data-base be established by the EPA, and that environmental studies by Government agencies, proponents, consultants and other bodies such as tertiary institutions be included, and made publicly available.

In addition to the need to increase the availability of data, greater guidance may be required on the EIA process as a whole, and may also be required on techniques considered appropriate by the EPA. Such guidelines were discussed in the workshops, and participants felt that

non-specific guidelines would be useful, if not essential, to proponents and consultants in the preparation of EIA documents. Guidelines on the following may be of use:

- the scope of application of EIA;
- criteria for environmental significance (discussed in Section 3.2.2.);
- the responsibility for various stages of EIA; and
- appropriate techniques for impact prediction and presentation.

Such guidelines are not new to EIA. An example that is worth mentioning is Notes for the Preparation of an ERMP (Environmental Protection Authority, 1984), which includes the definition of an ERMP, objectives, appropriate methodologies for environmental research, and a description of baseline information requirements.

The establishment of a centralized clearing house, more detailed project guidelines, and the distribution of non-specific EIA guidelines should facilitate effective EIA and the production of high quality documents. However, inadequacies in baseline data and uncertainty in the prediction of environmental impacts are unavoidable, due in part to time limitations. However, even without time constraints, some uncertainty in impact prediction will always remain.

Some of the sources of this uncertainty are in the:

- selection of what to predict;
- collection of baseline data;
- selection of prediction techniques;
- application of techniques; and

• the presentation of results.

All of these factors will affect the accuracy of prediction of impacts. Whilst emphasis should be placed upon increasing knowledge and understanding of ecosystem functioning, uncertainty should be recognised as an inherent factor in EIA by those preparing and reviewing EIA documents, and it should be clearly stated in the document where such uncertainty arises. Such an approach will clarify areas of uncertainty for reviewers and will facilitate the management of uncertainty by indicating where further research and monitoring are necessary. Statements of uncertainty should not be interpreted by proponents or reviewers (the EPA, the community, and Government agencies) as a failure to fulfil EIA guidelines. Those involved in EIA should be aware of this, and be prepared to accept uncertainty as a part of the process.

We will now consider the content, format and quality of the EIA document. The primary objective of the document must be to enable the EPA to advise the Government on the environmental acceptability of the proposal after (where appropriate) consultation and specialist advice.

To fulfil this requirement, the EIA document should:

• contain a short non-technical summary of the main issues;

• provide details of the technical information used and how this information was interpreted;

• provide details of the bases for the prediction of impacts as well as the impacts themselves (i.e. the justification for predictions needs to be made explicit);

• clearly address the issues raised in the project guidelines; and

• be clearly presented and easily understandable.

The extent to which presently produced PERs and ERMPs satisfy these requirements is somewhat variable. In recent times some excellent

documents have been prepared. However, on occasions documents of insufficient quality are sometimes used as the basis for assessment. This is not in the best interests of the environment nor the proponent. We feel that there is a need to improve document content and format to better serve the objective of effective EIA.

In order to improve the contribution that the document makes to EIA, we feel that it should be presented in such a way as to emphasize the key factors of the proposal. These include the predicted impacts (both direct impacts and their effect on the surrounding environment), the bases for the predictions, and the implications that the proposal has, if any, for current environmental policies and guidelines. A number of changes in document content and format is suggested below.

In addition to the summary within the EIA document, a separate summary is occasionally prepared; this is to be encouraged.

RECOMMENDATION 9

It is recommended that a stand-alone summary should be prepared by the proponent and should include information on:

- **the proposal;**
- **the receiving environment;**
- **the predicted impacts; and**
- **management commitments.**

This summary should be prepared to accompany all public assessments and be widely available, free of charge, from the EPA and other outlets such as public libraries.

Currently, essential information relating to key environmental issues is often difficult to locate within the document. To clarify these issues the stand-alone summary should also contain a tabulation of the

impacts and information stating where the complete report may be found.

RECOMMENDATION 10

It is recommended that the stand-alone summary should contain a tabulation presenting information on the predicted impacts (including indirect as well as direct impacts); and the corresponding mitigation measures proposed. It would be useful if the table were cross-referenced to the complete report.

A table such as that recommended could also be included in the summary section of the EIA document itself.

The nature of the impacts should be described, however briefly, in the table; although undue reliance upon numerical values is to be discouraged since this can lead the reader to assume a greater accuracy than is warranted. Where the proponent has been unable to adequately predict impacts, their extent and duration and reversibility, the uncertainty should be clearly stated. As discussed, uncertainty in the prediction of impacts is an integral part of EIA.

RECOMMENDATION 11

It is recommended that the bases for impact predictions should be made explicit within the EIA document.

For example, a prediction may be based upon the scientific literature, expert opinion or a mathematical model. This should be discussed, and the reasons for choosing such an approach in prediction should also be explained.

RECOMMENDATION 12

It is further recommended that the implications which the proposal has with respect to the implementation of environmental policies and guidelines such as the State Conservation Strategy should be included in the stand-alone summary and EIA document.

In recommending the inclusion of implications for current environmental policies our objective is to:

- encourage the integration of environmental policy with EIA;

- provide a broader context within which to assess the acceptability of proposals; and

- internalise within the public and private sector those environmental objectives.

While there is clearly a temptation to discuss at length the benefits of the proposal, such discussions should not form a major argument within the EIA document, which should primarily address the environmental impacts of the proposal.

Some workshop participants expressed a desire to have the consultant's name attached to all EIA documents. They felt this would increase accountability in the quality of the document. Whilst this method may not be appropriate, the EPA should give consideration to means of ensuring greater accountability in document quality.

3.2.5. COMMUNITY REVIEW OF THE EIA DOCUMENT

Public participation in the EIA process was one of the topics discussed in the workshops. The major contribution to this aspect of EIA came from the community workshop. One of the issues discussed was that of access to information. Some of the problems associated with attaining information on a proposal were the size, expense and availability of documents and supporting papers, and availability of

references. In addition, avenues for comment other than the use of written submissions were desired and discussed.

Increased involvement of all key participants throughout the EIA process would address many of the issues raised regarding public participation. Thus many of the issues relevant to public participation are addressed in other parts of the text. However, there are several issues associated with the review of EIA documents by the public that warrant individual discussion.

Timely and constructive and informed public participation in EIA is dependent, to a large degree, on the availability of information. A suggestion made in the community workshop was the production and distribution of a monthly gazette or bulletin by the EPA. The point was made that EPA notices in the West Australian are often difficult to find and, as proposal announcements are unaccompanied by location maps, it is often difficult to ascertain the proposal's location. A regular bulletin available in the EPA library, other metropolitan and non-metropolitan libraries, and to subscribers, could collate EIA information and distribute it more effectively.

RECOMMENDATION 13

It is recommended that the EPA produce a publicly available EIA bulletin. The bulletin should provide information on the following aspects of EIA:

- **scoping exercises in progress;**
- **EIA study guidelines; and**
- **proposals referred (including a location map) and their level of assessment;**
- **public review periods.**

In order to maximize constructive public participation in project review, EIA documents need to be more accessible. As the quality and

format of the EIA document have been discussed in Section 3.2.4., they will not be addressed here.

Currently, distribution of the EIA document is limited, and documents may be quite expensive. Participants in the community workshop commented that the number of free copies sent to the Environment Centre of W.A. is not adequate, and that for many of them the cost of ERMPs is prohibitive. The availability of a stand-alone summary document free of charge would help alleviate this problem and has already been discussed.

ERMPs should be available from the State Government Information Office and the EPA, in addition to being available from the proponent and local libraries. Technical appendices and supporting documents however could be lodged at the EPA library for reference use by those who require them, with limited numbers only being available for purchase. In this way the expense incurred in producing these ancillary documents could be reduced. References, or relevant parts thereof, that were used in the preparation of the EIA documents, should also be lodged with the supporting documents if they are not readily available in W.A.

The EPA should consider increasing the number of copies made available free of charge to community environment centres such as those in Perth and Denmark. Finally, in the interests of maximum community access to the EIA document within the public review period, proponents should waive copyright on all EIA documents where copies are to be used by non-profit community groups.

Experience has shown that exercises such as public meetings, and discussions with special interest groups and authors of major submissions, have been valuable for both the EPA and the proponent in their understanding of public concerns. Interaction between the community, the EPA, and the proponent has clarified issues, and in some cases allayed fears and misunderstanding for all parties. Furthermore, direct participation mechanisms enable and encourage participation by those members of the community who do not have the time or the resources to prepare detailed written submissions.

Therefore, the EPA should consider increasing the number of alternative mechanisms for public participation in the review process. Such mechanisms could include: public hearings with oral submissions; public meetings with the proponent, the consultant and the EPA present; and meetings between the EPA and key community groups. The use of environmental conflict resolution techniques such as joint problem solving and environmental mediation are worthy of consideration.

When reviewing community participation in EIA, the limited resources of voluntary organisations was discussed. Community workshop participants noted that one of the major limiting factors in effective participation in the review process was the lack of resources available to voluntary groups. We believe that any recommended community involvement in the EIA process has to be constructive, both for the community and EIA as a whole, before the commitment of resources is warranted.

Furthermore, whilst acknowledging the Government's financial contribution to the voluntary conservation movement, we feel that consideration should be given to the allocation of funds specifically towards effective community participation in the EIA process.

Both proponents and consultants have requested that they be allowed access to the original public written submissions rather than an EPA summary. This would assist in the proponent's understanding of the issues and arguments raised in public submissions. It is therefore suggested that the EPA should consider forwarding public submissions to the proponent with the authors' consent.

3.2.6. EPA REVIEW OF THE EIA DOCUMENT

Through increased involvement of key participants in many stages of the EIA process, and improvements in document content, format and quality, we hope that the EPA will be provided with more detailed and accurate information for use in proposal assessment.

Participants in community, consultants', and proponents' workshops expressed a desire for greater direct access to the Authority itself during EPA review of the proposal. Whilst this may not always be appropriate or practical, we feel that such direct interaction may serve to clarify issues that arise during assessment.

RECOMMENDATION 14

It is recommended that the Authority provide increased opportunities for meetings with such persons as the proponent and authors of major and significant submissions during proposal assessment.

Another issue raised in workshops was that of changes to the proposal made during assessment, and how these should be dealt with. Concern was expressed in the community workshop that changes in proposal design after public review has occurred leaves them with no opportunity to participate in the assessment of what may be, in effect, a new proposal.

Changes in the proposal in response to environmental and social considerations are quite common and an important part of the EIA process. It is important, however, that reassessment occurs if the changes are sufficiently major.

3.2.7. THE SETTING OF ENVIRONMENTAL CONDITIONS

The setting of environmental conditions by the Minister for the Environment is based upon the EPA's report and recommendations, and has the objective of ensuring that implementation of the proposal is environmentally acceptable. Effective environmental conditions need to be both practical and able to reduce or avoid undesirable environmental impacts.

Participants from all workshops contributed views on possible improvements to the procedures for setting environmental conditions. Some of these were:

• that consultants and proponents be consulted in the setting of environmental conditions to ensure that they are practical and implementable by the proponent;

• that environmental conditions should be phrased to enable subsequent auditing of them; and

• that amendments to environmental conditions made in response to monitoring be made public, along with the monitoring reports themselves.

From these suggestions and our own research, we recommend the following changes in the setting and implementation of environmental conditions:

RECOMMENDATION 15

It is recommended that in the setting and implementation of environmental conditions the following should occur:

• that the Minister for the Environment should consider consulting proponents and, where applicable, consultants before the setting of environmental conditions;

• that environmental conditions be set in such a way as to enable their subsequent auditing; and

• that all environmental conditions and monitoring reports be made publicly available.

3.2.8. POST-ASSESSMENT EVALUATION

Having discussed the importance of environmental conditions to effective EIA, it should be stressed that good EIA and successful environmental management does not end with the setting of conditions. Through monitoring and auditing environmental conditions can be

evaluated for their effectiveness in reducing environmental impacts. Furthermore, the accuracy of impact predictions upon which they were based can be examined. Information gained from such evaluation may be used to adjust environmental conditions of present and future projects, thereby becoming a mechanism for managing and reducing uncertainty in EIA. This may result in a lessening or, conversely, a strengthening of environmental controls.

Post-assessment evaluation will therefore assist the accuracy of impact prediction and effective and efficient environmental management of proposals.

Whilst the importance of this aspect of EIA is generally recognised, certainly within the EPA, there are currently insufficient resources available for effective auditing and evaluation.

RECOMMENDATION 16

It is recommended that a group within the EPA or alternatively within an appropriate tertiary institution be established to address aspects of post-assessment evaluation including:

- **the accuracy of predictions;**

- **the effectiveness of environmental conditions, monitoring and management programmes.**

The funding for such research should be the conjoint responsibility of both the public and private sectors. The results of post-assessment evaluation should be stored in the data-base recommended in Section 3.2.4.

4 REFERENCES

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APPENDIX 1

LIST OF EIA WORKSHOP PARTICIPANTS

We have included a list of invited workshop participants for information. Not all those invited were able to attend the workshops. Participants are indicated by an asterisk. We gratefully acknowledge the contribution of workshop participants to this review of EIA administrative procedures.

Community Workshop

Ms P. Browning *
Ms N. Calcutt *
Ms B. Churchward
Ms L. Duxbury *
Mr R. Humphries *
Dr P. Jennings *
Ms C. Jerovich *
Ms N. Keys *
Mr B. Schur
Ms N. Segal
Mr A. Weston *

EPA Officers Workshop

Ms M. Andrews *
Mr I. Briggs *
Ms G. Hanran-Smith *
Mr P. Holmes *
Mr B. Kennedy *
Mr J. Malcolm *
Mr C. Murray *
Ms S. Robinson *
Mr C. Sanders *
Mr J. Singleton *
Mr R. Sippe *
Mr M. Waite *

Government Proponents and Reviewers Workshop

Department of Agriculture * Ms R. Oma

Department of Conservation and Land Management	
Department of Marine and Harbours	
Department of Mines *	Mr M. Mouritz
	Mr A. Bradley
	Mr R. Griffiths
Department of Resources Development *	Mr J. Quilty
Kwinana Town Council *	Mr R.J. Nokes
Main Roads Department *	Mr J.G.O. Hackett
	Mr M.J. Wheeler
State Energy Commission of WA *	Mr J. Robinson
State Planning Commission *	Mr G. Taylor
Swan Shire Council	
Technology and Industry Development Authority	
Water Authority of W.A. *	Mr J. Kite

Non-Government Proponents Workshop

Alcoa of Australia Ltd. *	Mr O. Nicholls
Associated Minerals Consolidated	
Barrack Mines	
Bond Corporation Petroleum Division *	Mr P. Webb
Chamber of Mines *	Mr C. John
Confederation of W.A. Industry	
CSBP and Farmers Ltd. *	Mr S. Fitzpatrick
Rhône-Poulenc Chimie Australia Pty. Ltd.	
Westralian Sands *	Mr B. Masters
Woodside Petroleum Ltd. *	Mr R. Nunn

Private Consultants Workshop

Bowman, Bishaw and Associates	
Dames and Moore *	Mr N. Daetwyler
David Bennet Consulting	
Dinara *	Mr H. Butler
Ian Pound and Associates *	Mr I. Pound
Kinhill Stearns	
Le Provost, Semeniuk and Chalmers *	Mr I. Le Provost
Maunsell and Partners	

McArthur and Associates

R.D. Taylor, Town Planner

West Australian Petroleum Pty. Ltd. * Mr R. Lagdon