16 Environmental management framework

This chapter outlines the consideration of an environmental management framework for the proposed development which would ensure that the environmental values within the Project Area are protected and maintained in the long term.

The environmental management requirements would largely be defined by the environmental conditions applicable to the proposed development, the commitments made by Wesfarmers–Marubeni and the Water Corporation in this ERMP/draft EIS (see Chapter 17), and relevant statutory obligations.

16.1 THE NEED FOR AN ENVIRONMENTAL MANAGEMENT FRAMEWORK

The proposed development has a number of distinctive characteristics relevant to ongoing environmental management. These include:

- a Project Area that is relatively large and would include related but discrete activities such as the supply of irrigation water, farming and processing;
- a farmed area which would be predominately developed and operated by Wesfarmers–Marubeni in the initial phase but maybe sold down in part or whole to independent farmers in the future;
- a Project Area that straddles the border between Western Australia and the Northern Territory, which may induce cross border issues with respect to environmental compliance legislation;
- the legal recognition of Miriuwung and Gajerrong native title rights over a portion of the Project Area and the existence of native title claims over the balance of the Project Area;
- high community expectations with regard to environmental management.

To address the above-mentioned characteristics Wesfarmers–Marubeni and the Water Corporation consider it appropriate that an environmental management framework is developed for utilisation throughout the development and operational phases of the proposed development. Key elements of such a framework should:

- be structured to suit the proposed development and be site specific;
- clearly and transparently articulate environmental responsibilities and accountability;
- accommodate the need for ongoing environmental monitoring and reporting;
- be appropriately resourced over the long term.

A brief summary of each of the four key elements of the proposed framework is as follows:

A project-specific framework

The proposed development has a number of distinctive characteristics, as noted above. Any environmental management framework would ideally be able to integrate and co-ordinate the management of any potential environmental impact from any individual activity, from an industry-wide perspective, and from a cumulative perspective.

Clear allocation of responsibility and accountability

For effective ongoing environmental management, there would ideally be clear articulation of the responsibility and accountability of all industry participants. This would be important due to the interconnection, from an environmental outcome perspective, between some of the key industry activities.

Ongoing monitoring and reporting

Ongoing management of environmental issues within and around the Project Area would ideally be based on a preventative philosophy rather than the management of any environmental impact after it has occurred. To facilitate a preventative management programme, ongoing monitoring would be required on a range of issues for the thorough and continuous assessment of key environmental performance indicators. Subsequent analysis of the collected information, and the reporting of the results of the analysis against original targets, would ideally be implemented. The results would ideally be made available to appropriate parties to ensure environmental expectations are being met.

Appropriate level of resources

To effectively co-ordinate the environmental management framework, including the ongoing monitoring and reporting, adequate resources should be made available. Funding would ideally be made available for the engagement of personnel and/or consultants for ongoing environmental monitoring and analysis, and the production of reports from environmental analyses.

16.2 RELEVANT LEGISLATIVE ISSUES

As the Project Area straddles the border between Western Australia and the Northern Territory, the proposed development would be subject to a range of State and Territory legislation. Similarities and differences currently exist with respect to relevant State and Territory legislation applicable to the proposed development. For example, the portion of the proposed development within Western Australia would currently be subject to the *Environmental Protection Act 1986*, and the portion within the Territory would be subject to the *Environmental Assessment Act 1994*. Whilst the effect of each Act is substantially similar, differences exist which could give rise to complications during the development and operational phase of the Project.

To address any potential complications which may arise from legislative issues, the State and Territory governments have undertaken to form a Ministerial Council. The Ministerial Council is to comprise Ministers from the State and Territory Governments, and would oversee the recommendation and adoption of appropriate legislation to be applicable over the Project Area.

With respect to environmental issues, it is understood that the *Environmental Protection Act 1986* may apply over the entire Project Area. If that is to be the case, any conditions set by the Western Australian Minister for the Environment in relation to the proposed development would be applicable in Western Australia and the portion of the Project Area in the Northern Territory. Any such conditions would generally be applicable to the prospective asset owners in the initial phase, in this case being Wesfarmers–Marubeni and the Water Corporation.

16.3 ENVIRONMENTAL MANAGEMENT FRAMEWORKS FOR IRRIGATION PROJECTS IN AUSTRALIA

To assist in the conceptual development of an environmental management framework for the Project Area, analysis was completed of environmental frameworks currently being implemented in a number of irrigation areas in Australia. A summary of the research follows.

16.3.1 Ord River Irrigation Area Stage 1

ORIA Stage 1 was developed before environmental legislation existed in Western Australia. As a consequence, ORIA Stage 1 is currently not covered by a single comprehensive environmental management framework (section 2.3.5 refers). Environmental management has historically relied on the compliance of all relevant individuals, groups and agencies with laws and statutes that apply to the prevention of pollution and degradation of land.

Two significant initiatives with respect to a management framework are being undertaken by local industry participants; the preparation of a comprehensive Land and Water Management Plan, and the preparation of a new asset management structure in relation to irrigation and drainage services (Section 2.3.5 refers).

16.3.2 South West Irrigation

South West Irrigation comprises some 12,000 ha of irrigated farmland, in the districts of Waroona, Harvey and Dardanup in Western Australia. Irrigation water is sourced from seven local dams, and over 95% of the irrigation water is used on flood irrigated pastures. The balance of irrigation water is used for horticultural purposes.

The irrigation scheme has been owned and administered by the private sector since 1996. Scheme assets are held by the South West Irrigation Asset Co-operative (SWIAC), and the scheme is operated by the South West Irrigation Management Co-operative (SWIMCO). Both SWIAC and SWIMCO are wholly-owned by some 600 farmers.

Irrigation in the southwest of Western Australia commenced at the turn of the century, and the current scheme was substantially completed by 1966.

South West Irrigation has four key objectives with respect to the management of environmental issues:

- determination of the relevant environmental guidelines for the operation of the South West Irrigation districts;
- assessment of the implications of the environmental guidelines on South West Irrigation;

- promotion of best practice on-farm irrigation management;
- promotion and adoption of environmentally responsible farming.

In 1998, South West Irrigation appointed a Land and Water Management specialist to assist in the delivery of the abovementioned objectives.

16.3.3 Burdekin River Irrigation Area

The Burdekin River Irrigation Area in Queensland, covers 40,000 hectares and, is managed by the Department of Natural Resources of Queensland (QDNR).

Regulation is based on 'Environmentally Relevant Activities' under the Queensland *Environmental Protection Act 1994*.

The environmental management of the irrigation area presently revolves around meeting the requirements of the International Standards Organisation's relevant Standards. These requirements, however, relate only to the activities of staff, and the management and operation of the relevant department within QDNR. QDNR has no jurisdiction over its customers. Lease conditions can contain guidelines on environmental criteria, such as tree clearing, but the regulation and enforcement of these types of criteria are not presently in the scope of operations of QDNR. However, new customers requiring significant allocations of water must submit a Land and Water Management Plan along with any development proposal.

16.3.4 Murray Irrigation Limited

Murray Irrigation Limited is a private company which provides irrigation water and drainage services to 796,000 ha of farmland, and to the towns of Berrigan, Finley and Wakopool in New South Wales.

Each irrigator/landowner is a shareholder in Murray Irrigation Limited, and shares are held in proportion to the water entitlements held by each member. Murray Irrigation Limited has ten company Directors, including eight elected irrigation Directors and two Directors with specialist skills in engineering and finance.

Murray Irrigation Limited has an Irrigation Corporation Water Management Works Licence, a Pollution Control Licence, and water sharing Agreements. The irrigation licence defines the terms, limitations and conditions for the supply of irrigation water to its business. Compliance with this licence is dependent upon responsible use of irrigation water by landholders. The licence, which is issued by the NSW Environment Protection Authority, requires frequent monitoring of drainage water leaving the region for salinity, nutrients, pesticides and turbidity. The Pollution Control Licence includes a requirement for continuous improvement of farm water management and to protect the river environment and downstream water-users from poor quality water leaving their area.

Preparation of Land and Water Management Plans (LWMP) by water users, which are a mixture of environmental and farm management tools and are fundamental to compliance with the licences held by Murray Irrigation Limited. A number of LWMP's have also been developed by local communities—including Berriquin, Cadell, Denimein and Walcool—with support from the State Government. Murray Irrigation Limited is the implementation authority for these plans.

LWMP's are funded on a 'beneficiary pays' basis. The definition of beneficiary is wide and includes farmers and farming communities and downstream river users. Farming communities contribute more than 70% of the cost of LWMP's via levies. In 1997–98, 23% of Murray Irrigation Limited's operating revenue was derived from LWMP contributions. Another significant source of funding is from State Government grants.

16.3.5 Goulburn Murray Water

Goulburn Murray Water is a State government body, responsible for the provisions of rural water and drainage services to some 68,000 km^2 in Victoria.

In the district managed by Goulburn Murray Water, individual developers are required to undertake detailed investigation and design work, and to develop a Whole Farm Management Plan (WFMP). A WFMP is intended to provide the basis for high-level irrigation efficiency, leading to maximum productivity for the farmer and minimisation of off-site impacts. Relevant Government agencies—such as the Department of Natural Resources and Environment, local Government, the NSW Environment Protection Authority, Aboriginal Affairs Victoria and catchment management authorities—assess and comment on WFMP's prepared by farmers. These comments usually constitute acceptance or rejection of a WFMP, or require that further investigations be undertaken by proponents. Rejection of a WFMP must be based on legislative authority, approved Government policy or Government-approved independent standards.

Goulburn Murray Water would not approve the transfer of water entitlements to a new development until requirements of all other Government agencies have been met. When all requirements are met, Goulburn Murray Water would issue appropriate written approval for the proposal, and arrangements would then be made to issue a water entitlement for the proposed development.

16.3.6 Coleambally Irrigation Corporation

The Coleambally Irrigation Corporation (CIC) is State government entity, responsible for the provision of irrigation services to some 80,000 ha in New South Wales.

CIC is a Government entity with an independent Board, a Chief Executive Officer, and Administration, Operations and Environment divisions. CIC operates under an Irrigation Corporation Water Management Works Licence issued under the *Irrigation Corporation Act 1994*, and a Pollution Control Licence issued under the *Pollution Control Act 1970*. These licences set a range of conditions on the provision of water and irrigation services. Both of these licences require the preparation and implementation of a Land and Water Management Plan (LWMP), by CIC.

A LWMP has been prepared by the Coleambally community, and submitted to the Government for approval. It has been proposed that CIC be responsible for implementing the plan as the Corporation holds the Bulk Water Supply Licence, Operating Licence and Pollution Control Licence on behalf of landholder members. Water supply contracts between CIC and individual landholders would include conditions reflecting the terms of licences held by CIC. Individual LWMP's are prepared by landholders, and implementation is a contractual obligation on the landholder. Any disputes regarding compliance with LWMP would be dealt with by an Anomalies Committee, comprising landholder members and technical advisers.

A Community Environmental Committee, composed of local community members and a representative of the irrigation community, facilitates community involvement in decision-making.

Negotiations on funding for the implementation of a consolidated LWMP have been in progress since May 1997. The total cost of implementing the plan would be approximately $140 million. Agreement in principle has been reached on funding arrangements for implementing on-farm management options. Agreement has also been reached for the funding of an education programme.

16.3.7 The Murray–Darling Basin Commission

The Murray–Darling Basin Commission (MDBC) oversees the environmental management of over one million square kilometers of agricultural land in Queensland, New South Wales, Victoria, South Australia and the Australian Capital Territory. Irrigated agriculture in the Murray Darling Basin accounts for around 75% of Australia's estimated use of irrigated water and for around 70% of Australia's irrigated area (Crabb, 1997).

The MDBC is a government entity, which is responsible to the Murray–Darling Ministerial Council, which in turn is made up of ministers of the beforementioned State/Territory governments and the Commonwealth.

The MDBC is an autonomous organisation equally responsible to the Governments represented on the Ministerial Council and to the Council itself. The MDBC is not a Government department or a statutory body of any individual Government.

The MDBC consists of an independent President and two Commissioners from each of the contracting Commonwealth and State Governments, these normally being chief executives or senior officials of the agencies responsible for water, land and environmental resources. An ACT Government representative may participate in the deliberations of the MDBC, but not in decision-making. The prime functions of the MDBC are to:

- advise the Ministerial Council on the planning, development and management of the water, land and other environmental resources of the Murray–Darling Basin;
- assist the Ministerial Council in developing measures for the equitable, efficient and sustainable use of the water, land and other environmental resources of the Murray–Darling Basin;
- equitably and efficiently manage and distribute the water resources of the River Murray in accordance with the Murray–Darling Basin Agreement in order to obtain the highest quality and efficiency of use of such resources.

The MDBC has the mandate to initiate, support and evaluate integrated natural resources management across the Murray–Darling Basin. The Office of MDBC, which is located in Canberra, and MDBC staff are divided into the following two groups:

- The River Murray Water Branch, operating as River Murray Water, which is responsible for the management and distribution of the waters of the River Murray.
- The Natural Resources Management Branch which administers the provisions of the Murray–Darling Basin Agreement, and is responsible for managing the natural resources of the Murray–Darling Basin through the Natural Resources Management Strategy and the Basin Sustainability Program.

The work of the MDBC requires close and constant co-operation with the relevant departments and agencies of all the signatory Governments. Priority is given to those issues that require action by two or more Governments involved in the management of the Murray–Darling Basin.

The MDBC draws upon a network of more than twenty working groups and committees, composed of experts in the various aspects of natural resources management, and other areas for which the MDBC is responsible. The experts are drawn from Government departments and agencies, universities, private companies and community organisations. In this way, the MDBC brings together the best expertise available for the integrated planning and management of the Murray–Darling Basin.

A diagramatic representation of the Murray-Darling Basin environmental management framework is as follows:

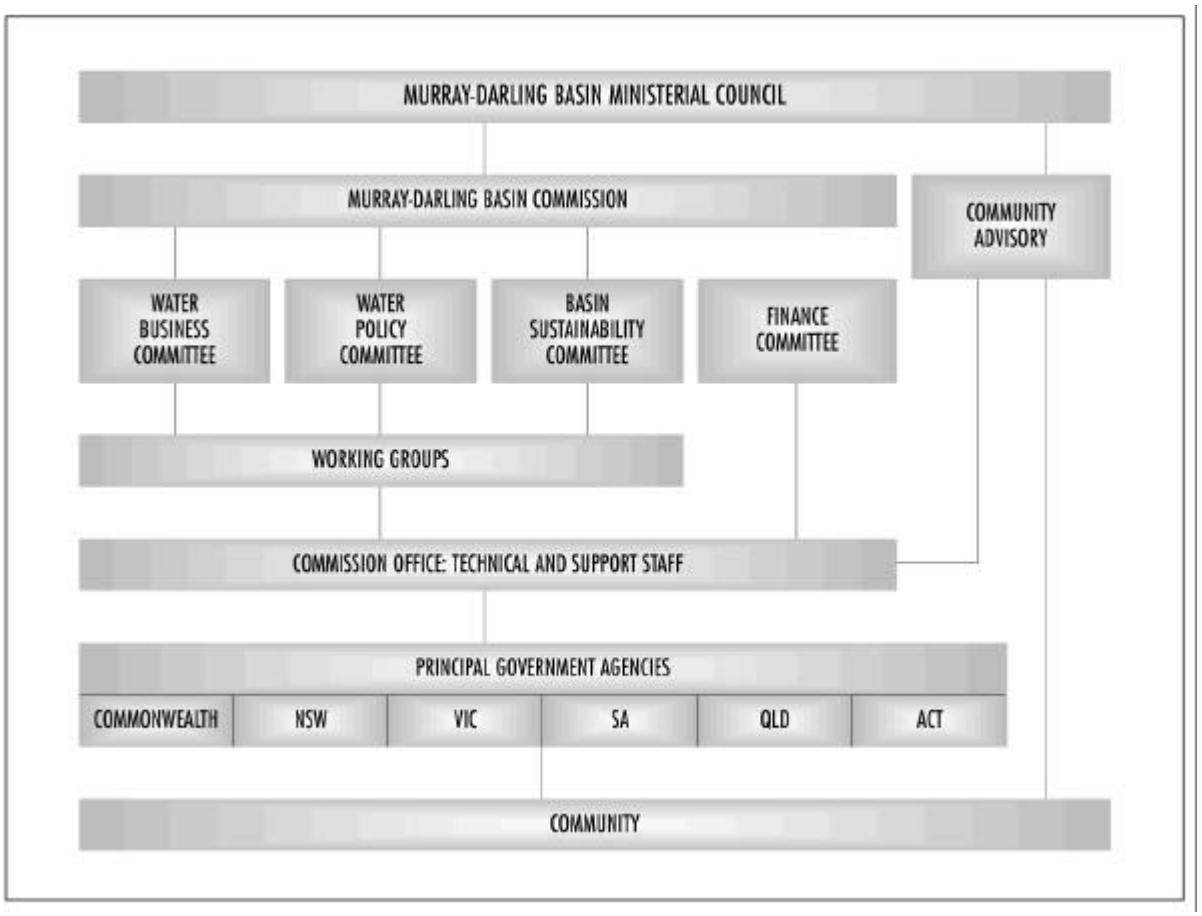

Figure 16.1 Murray-Darling basin environmental management framework

16.4 THE PROPOSED ENVIRONMENTAL MANAGEMENT FRAMEWORK FOR THE PROJECT

16.4.1 The Case for Self-Management

Most of the environmental management frameworks currently operational in Australia have been developed to 'retrofit' existing operations. Furthermore, the industry being retrofitted is often characterised by a relatively large number of participants, ranging from small-scale operators to government agencies. As a consequence, and to balance existing and often competing interests, the environmental frameworks can be relatively complex and involve significant government intervention.

In contrast to many existing irrigation schemes, the proposed development is to be initially characterised by the involvement of only three large and reputable organisations; Wesfarmers, Marubeni and the Water Corporation; and a relatively small number of small scale operators. This factor has been taken into consideration in the development of a conceptual framework for environmental management, in addition to the analysis of existing environmental frameworks in operation in Australia (see Section 16.3), and the distinctive characteristics of the proposed development (see Section 16.1).

It is the view of Wesfarmers–Marubeni and the Water Corporation that the nature of the proposed development, including the proposed industry structure, and the perceived key elements of an effective environmental management framework (see Section 16.1) lend themselves to industry self-management.

The environmental management framework proposed by Wesfarmers–Marubeni and the Water Corporation is considered to be an effective means of managing all environmental issues in relation to the proposed development. The proposed framework would clearly outline responsibilities and accountabilities of all industry participants, be self-funding, would facilitate community input, and would readily accommodate any future assignment of asset ownership. At the same time, the proposed framework would provide a transparent means for the reporting of compliance with relevant legislation. Details of the proposed framework are in the following sections.

16.4.2 Outline of the Proposed Environmental Management Framework

The Proposed development would comprise the following core industry activities:

- the development and operation of irrigated farmland, predominantly for the purpose of growing sugarcane;
- the development and operation of a raw sugar mill;
- the development and operation of irrigation and drainage infrastructure;
- the development and operation of storage and handling facilities at Wyndham.

It is envisaged that in the first instance any environmental conditions would be assigned to Wesfarmers–Marubeni and the Water Corporation. It would follow that each of the asset owners would have environmental responsibilities and obligations under the relevant environmental legislation. Furthermore, any Project water allocation would be made in accordance with the Interim Water Allocation Plan (Section 5.2 refers). The Interim Water

Allocation Plan, prepared by the Waters and Rivers Commission, is currently the subject of analysis by the EPA.

The three core industry activities would be interrelated. Key interrelationships are as follows:

- Irrigation water would be supplied by the owner of the irrigation and drainage infrastructure to the operator of the irrigated farmland, and some stormwater runoff from farmland would be accommodated by the drainage infrastructure.
- The sugar mill would require process cooling water. The cooling water would be sourced from the irrigation infrastructure, and it is envisaged that the cooling water would be reinjected into the irrigation system after utilisation in the milling process.
- Sugarcane would be supplied to the sugar mill from the irrigated farmland.

Wesfarmers–Marubeni and the Water Corporation propose that an entity is established to shoulder the operational aspects of ongoing environmental management in relation to the proposed development on behalf of the industry participants. The proposed entity, or Environmental Management Entity (EME), would be owned by the industry participants, and would provide environmental management services to the owners. Key features of the proposed EME would be as follows:

- The EME would be wholly owned by the industry participants, including all three core industry participants.
- The key objective of the EME would be the management of environmental issues within the entire Project Area, on behalf of the industry participants.
- The EME would be responsible for aspects such as ongoing monitoring, analysis, and reporting on behalf of industry within the proposed development—but legal responsibility for environmental compliance would rest with the individual asset owners.
- The EME would by the focal point for community input in relation to the Project environmental issues in relation to the proposed development.
- The EME would be resourced by the industry participants within the proposed development.
- Shareholder rights and obligations with respect to the EME would be assigned to any new asset owner in parallel with any future asset ownership transfer.

Ownership Structure of the EME

The EME would be formed prior to the commencement of any development works associated with the proposed development. Founding shares in the entity would be issued to the core industry asset owners, including owner/operators of the farmland, the sugar mill, and the irrigation and drainage infrastructure. In the case of the farmland, shares may be allocated on the basis of landholdings.

It is envisaged that the EME would have a chairperson, and a board of directors. Directors would comprise nominated representatives of the shareholders, and directors may also include representatives from the broader community (see Community Input below).

Objectives of the EME

The principle objectives of the proposed EME would be as follows:

- to protect and, where appropriate, improve the physical and biological environment of the Project Area in relation to the proposed development;
- to monitor the compliance of asset owners with relevant legislation, statutory approvals, and the EMP;
- to provide an adequate level of reporting to external bodies of environmental management within the Project Area.

Operations of the EME

It is envisaged that the EME would have an executive division, situated within the Project Area, with appropriate facilities and resources to carry out the activities on behalf of the asset owners as detailed below:

- finalise the EMP for the proposed development, which would take into account the commitments made by Wesfarmers–Marubeni and the Water Corporation in this ERMP/draft EIS, any environmental conditions set by the Minister for the Environment, and any other relevant statutory approvals (Section 16.5 refers);
- obtain approval for the EMP from the Minister for the Environment or the EPA as required;
- provide continuous technical support for the implementation of the EMP;
- prepare any other documentation required to obtain clearance of environmental conditions set by the Minister for the Environment;
- co-ordinate management activities in the conservation areas and buffer zones within the Project Area;
- monitor and report the environmental performance indicators identified in the EMP;
- identify and implement any corrective actions required to mitigate environmental impacts identified through the monitoring programme;
- review results of the monitoring programme in conjunction with the EMP on a regular basis, to determine whether environmental management measures are effective in mitigating environmental impacts;
- implement field audits of operator activities to ensure compliance with the EMP;
- periodically review and revise the EMP as appropriate;
- co-ordinate staff training programmes in relation to environmental issues on behalf of industry within the proposed development;
- reporting of environmental compliance with commitments made by Wesfarmers–Marubeni and the Water Corporation under this ERMP/draft EIS, and relevant statutory requirements on behalf of shareholders, in a consolidated industry-wide format.

Community Input

It is envisaged that the EME would be the repository of a broad range of environmental information relevant to the proposed development, and would be the avenue through which further information could be sought if considered necessary. The EME would be the 'human face' of the management of environmental issues in the Project Area.

The EME would provide the community with a focal point for interaction regarding environmental issues relevant to the proposed development, either through the board of directors, or the company management.

It is envisaged that community interaction with the EME could be via two avenues;

- direct consultation with the EME, and/or;
- community representation on the Board of the EME.

Resourcing of the EME

The EME would be fully resourced by the industry participants. It is envisaged that the resourcing requirements would include appropriate facilities located within the Project Area to perform the operations of the EME, and an ongoing operating budget for salaries, materials, consumables, and expenses associated with the continuous monitoring and reporting programme. Funding would be raised from industry for all capital and operating cost requirements of the EME.

Future Transfer of Asset Ownership

An important aspect of the environmental management framework is the implication, if any, of future transfer of asset ownership.

In the early years, it is planned to transfer land to independent farmers. Also, over time, it is conceivable that part or all of the Wesfarmers–Marubeni corporate sugarcane plantation may be transferred to third parties. Furthermore, it is conceivable that ownership of the sugar mill and/or ownership of the irrigation and drainage infrastructure may change over time.

It is the view of Wesfarmers–Marubeni and the Water Corporation that the proposed environmental management framework would be robust with respect to future transfer of asset ownership.

As stated previously, it is envisaged responsibility for legal and statutory environmental compliance would rest with the relevant individual asset owners. Assignment of an interest in any asset, in part or whole, would involve the transfer of legal or statutory environmental compliance responsibility to the new owner. It is also planned that shareholder rights and obligations with respect to the EME would be stapled to the asset, and flow with any asset transfer.

A diagrammatic representation of the proposed ownership, operating structure and resourcing of the EME is presented in Figures 16.2, 16.3 and 16.4.

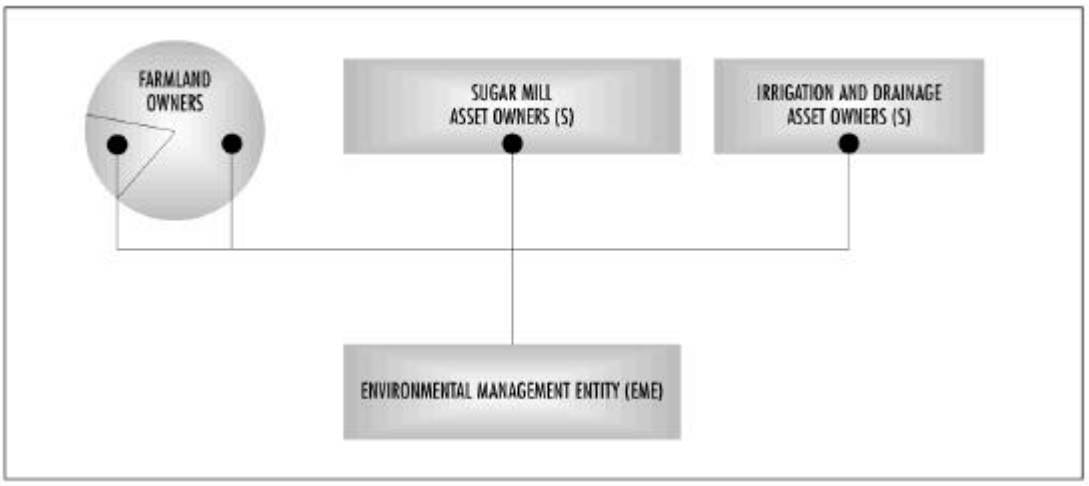

Figure 16.2 Ownership of the proposed Environmental Management Entity

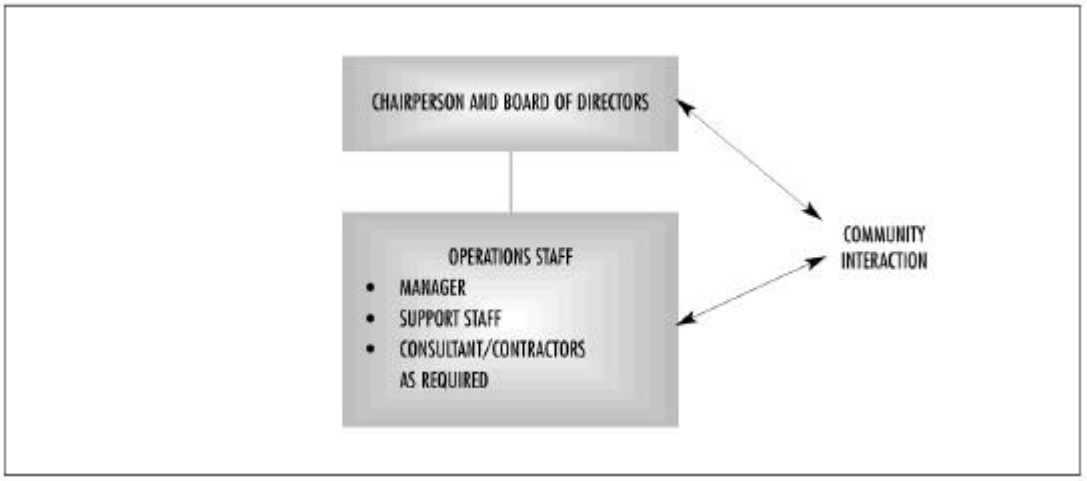

Figure 16.3 Structure of the Environmental Management Entity

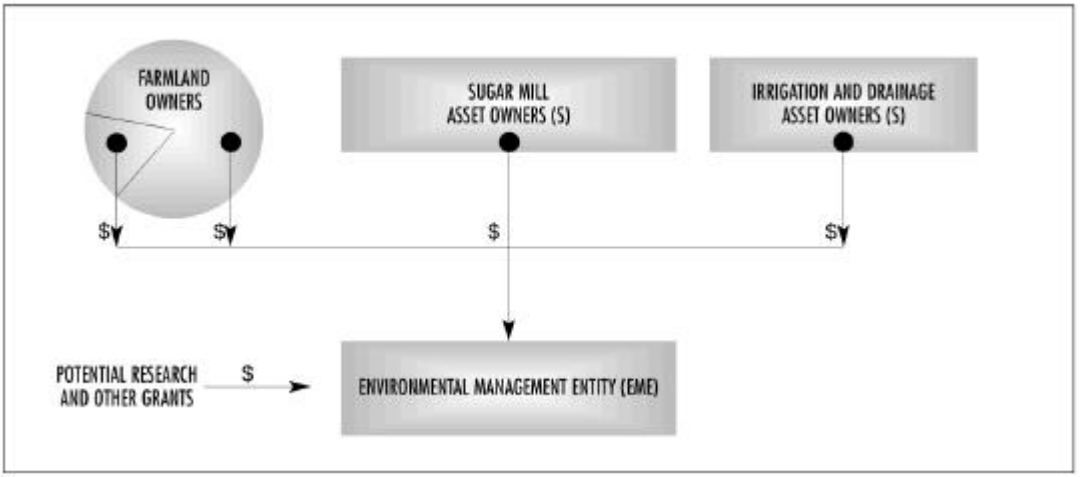

Figure 16.4 Resourcing of the Environmental Management Entity Operations

16.5 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) would be finalised prior to any development works to monitor and manage any potential environmental impact associated with the proposed development. The EMP would consider both construction and operation activities. An outline of the EMP has already been prepared (Appendix O) and finalisation of the EMP would be the responsibility of the EME, on behalf of Wesfarmers–Marubeni and the Water Corporation.

The finalised EMP would formally enshrine environmental commitments made within this ERMP/draft EIS, and ultimately incorporate any environmental conditions imposed on the proposed development by the Minister for the Environment. The EMP would also highlight any extracts of State, Territory or Commonwealth legislation relevant to the ongoing management of environmental issues in relation to the proposed development. Also, and prior to finalisation, the EMP would be the subject of a public review.

A summary of the process for finalisation of the EMP is as follows:

- assessment of the outline EMP (Appendix O of this ERMP/draft EIS) by the EPA and DLPE;
- the imposition of any environmental conditions by the Minister for the Environment;
- the granting of operational licenses and any associated conditions;
- consolidation by the EME of all the abovementioned points in a draft EMP;
- public review of the draft EMP;
- finalisation and approval of the EMP following the receival of public comments.

Following finalisation of the EMP, it is envisaged that the EMP would be reviewed and updated on a periodic basis, say every 3 to 5 years. The purpose of the periodic review would be to ensure the EMP reflected current trends in environmental standards and any interim changes in relevant legislation.

16.6 ENVIRONMENTAL COMPLIANCE/REGULATORY REVIEW

As detailed in previous sections, the proposed environmental management framework is based on the principle of self-management. It is recognised by Wesfarmers–Marubeni and the Water Corporation that self-management should be sufficiently transparent so as to provide an appropriate level of comfort to parties external to the proposed industry, such as relevant government agencies and community groups, with respect to environmental compliance and performance.

A comprehensive EMP is to be prepared prior to the commencement of any development works (section 16.5 refers). It is proposed that the monitoring of the implementation of the EMP is to be the responsibility of the EME, on behalf of the industry participants. The frequency of the monitoring process would relate to the particular aspect of the EMP being monitored, but in a conceptual sense the monitoring process could be considered continuous.

The results and interpretation of the monitoring process would be reported on an annual basis by the EME, on behalf of the industry participants. The annual report would detail actual environment performance against the environmental performance targets detailed in the EMP, and would be made readily available to the industry participants. The annual

report would also be made available to relevant government agencies and possibly to other organisations and community interest groups.

The annual report would provide a transparent means for the ready identification of compliance by the industry with all aspects of the EMP. The report would also articulate proposed remedial measures in any aspect of environmental management in which the performance did not meet expectations detailed in the EMP. The proposed remedial measures would be developed by the EME in conjunction with the relevant asset owners. Any asset owner found to be in breach of environmental conditions, including any aspect of the EMP, would be exposed to action under the *Environmental Protection Act 1986* (WA) and the *Environmental Assessment Act 1994* (NT).

A secondary mechanism for compliance would be through the supply of water to farms and the sugar mill. The Water Corporation would be the supplier of irrigation water and drainage services. As detailed in Chapter 5, the provision of water to the Project Area would be subject to:

- a volume allocation as stipulated in a Water Allocation Plan prepared by the Water and Rivers Commission;
- a water licence issued to the Water Corporation by the Water and Rivers Commission.

Prior to formalisation, both the water allocation and the water licence are to be reviewed by the EPA. It follows that any environmental conditions attached to either the water allocation and/or the water licence would be transferred from the Water and Rivers Commission to the Water Corporation under the terms of the allocation and the licence. Any breach of environmental conditions associated with water supply and drainage would expose the Water Corporation to action under the *Environmental Protection Act 1986*.

In summary, the compliance of all industry sectors with the EMP and environmental conditions would be continuously monitored, and reported in a transparent way on a regular basis. Also, whilst the onus of compliance will rest with the industry participants, all industry sectors would have legal responsibility to comply with environmental legislation, relevant to the activities of the respective industry sectors.

16.7 ALTERNATIVE OPTIONS FOR MANAGEMENT

A summary of various irrigation management frameworks currently in practice throughout Australia was presented in Section 16.3. The frameworks were assessed by Wesfarmers–Marubeni and the Water Corporation, in conjunction with the distinctive characteristics of the proposed development, to formulate conceptual options for a suitable environmental management framework for the proposed development. The alternative options were used as a basis for the environmental framework presented in Section 16.4.2. A summary of the alternatives that were considered follows.

Alternative 1—'Do nothing'

Alternative 1 would allow for the proposed development to proceed without any overall coordination of environmental management.

At face value, Alternative 1 would appear to be academic, and contravene current community expectations with respect to the responsible environmental management of significant development initiatives. However, it should be noted that land clearing for the

purposes of broadacre agriculture has not always attracted input from the EPA in the past, and the environmental approval processes associated with the development of sugar mills in Australia in recent years have not been as rigorous as the environmental approval process stipulated for the proposed development.

Despite the abovementioned comments, Alternative 1 has been discounted for application to the proposed development. It is the view of Wesfarmers–Marubeni and the Water Corporation that Alternative 1 does not allow for the identification and coordination of environmental management, monitoring and remediation requirements, nor does it accommodate for the responsibility of funding the environmental management. Therefore, it does not achieve the objectives identified for the environmental management framework.

Alternative 2—Government Agency Management

Under Alternative 2, a new or existing Government agency would manage the environmental issues in relation to the proposed development.

The responsibilities the Government agency in relation to the proposed development would need to be clearly defined. Also, a legal basis may need to be developed to provide funding and administer resources. This approach may require amendments to existing legislation or preparation of new legislation. The Government agency would have to accept responsibility for the environmental conditions and commitments, or it would have to establish a mechanism for third party implementation.

This option was considered to be unsuitable for the proposed development as it may detract from the rights and responsibilities of the developers and operators of the proposed development, and may result in sub-optimal performance of the proposed development.

Alternative 3—Management Entity based on Landholdings

Alternative 3 was based upon the formation of a management entity, with shareholdings in the entity issued in proportion to landholdings.

Whilst this alternative may address certain aspects of land management, it was considered deficient with respect to the integration of water management issues. Under Alternative 3, the demarcation of environmental responsibility between the landholders and the owner of the irrigation and drainage infrastructure may be unclear. For example, the management entity may identify, as a result of a groundwater monitoring programme, groundwater remediation measures and attribute the cause of the problem to the owner of the irrigation and drainage infrastructure. If the owner of the irrigation and drainage infrastructure attributed the cause of the groundwater problem to the landholder, there may be potential for a stalemate with respect to any remediation measures.

This alternative was discounted from consideration in favour of a framework which had a 'whole of industry' approach to management of the environmental issues. Wesfarmers–Marubeni and the Water Corporation consider that a 'whole of industry' framework would have the advantages detailed in Section 16.4.