



Statement No.

**MINISTER FOR THE ENVIRONMENT AND HERITAGE;
WATER RESOURCES**

000585

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

ORD RIVER IRRIGATION AREA STAGE 2 (M2 SUPPLY CHANNEL), KUNUNURRA

Proposal: The proposal is to develop a raw sugar industry on the Weaber, Keep River and Knox Creek Plains, as documented in schedule 1 of this statement.

Proponent: Wesfarmers Sugar Company Pty Ltd, Marubeni Corporation and the Water Corporation

Proponent Address: Wesfarmers Limited, 11 th Floor, "Wesfarmers House",
40 The Esplanade, Perth WA 6000

Assessment Number: 1240

Reports of the Environmental Protection Authority: Bulletins 988 and 1016

The proposal to which the above reports of the Environmental Protection Authority relate may be implemented subject to the following conditions and procedures:

Procedural conditions

1 Implementation

1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

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- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment and Heritage under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment and Heritage has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment and Heritage within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment and Heritage will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment and Heritage for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.

- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

Environmental conditions

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.
- 5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment and Heritage.

6 Environmental Management System

- 6-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedure in this statement, prior to ground-disturbing activities, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Water and Rivers Commission and the Northern Territory Department of Lands, Planning and Environment that there is in place an environmental management system which includes the following elements:
- 1 An environmental policy and corporate commitment to it;
 - 2 Mechanisms and processes to ensure:
 - (1) planning to meet environmental requirements;
 - (2) implementation and operation of actions to meet environmental requirements;
 - (3) measurement and evaluation of environmental performance;
 - 3 Review and improvement of environmental outcomes; and
 - 4 Nomination of environmental management responsibilities.

- 6-2 The proponent shall implement the environmental management system referred to in condition 6-1.

7 Environmental Management Programme

- 7-1 Prior to commencement of ground-disturbing activities, the proponent shall prepare an Environmental Management Programme, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management, the Northern Territory Department of Lands, Planning and Environment, the Northern Territory Parks and Wildlife Commission, the Waters and Rivers Commission, the Health Department of Western Australia and the Shire of Wyndham-East Kimberley.

This Programme shall relate to the "Project Area", activities associated with the proposal at Wyndham, and along the transport link between the "Project Area" and Wyndham.

The Programme shall include environmental management plans as listed in table 2, schedule 2, as well as environmental management plans for:

- 1 chemicals management;
- 2 the Sugar Mill and associated activities;
- 3 sodic soil management; and
- 4 infrastructure maintenance (including flood levee location and management).

The plans shall specify:

- environmental management measures, criteria and standards to be used to measure performance;
 - remedial action to be undertaken;
 - performance monitoring requirements;
 - annual and triennial monitoring and reporting requirements; and
 - peer review requirements.
- 7-2 The proponent shall implement the Environmental Management Programme required by condition 7-1 to the requirements of the Environmental Protection Authority.
- 7-3 The proponent shall make the Environmental Management Programme required by condition 7-1 publicly available, to the requirements of the Environmental Protection Authority.

8 Buffer Management Plan

- 8-1 Prior to ground-disturbing activity, the proponent shall prepare a Buffer Management Plan, as part of the Environmental Management Programme, to protect the environmental values of the buffer, including the protection of watercourses, wetlands, native fauna and vegetation, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management, the Water and Rivers Commission, the Northern Territory Department of Lands, Planning and Environment, and the Northern Territory Parks and Wildlife Commission.

This Plan shall address:

- 1 tenure of the buffer area;
 - 2 the role and purpose of the buffer area;
 - 3 management objectives and priorities for the buffer area;
 - 4 management practices to apply to the buffer area;
 - 5 management of chemicals within or potentially affecting the buffer;
 - 6 the environmental values of the buffer area;
 - 7 methods to control human and vehicular access to environmentally sensitive portions of the buffer area;
 - 8 methods to minimise the impacts of construction activities;
 - 9 rehabilitation of disturbed portions of the buffer area; and
 - 10 responsibilities for the maintenance of the buffer area.
- 8-2 The proponent shall implement the Buffer Management Plan required by condition 8-1 as specified in that Plan.
- 8-3 The proponent shall make the Buffer Management Plan required by condition 8-1 publicly available, to the requirements of the Environmental Protection Authority.

9 Flora and Fauna Protection Plan

- 9-1 Prior to the preparation of the Final Project Design Plan, as required by condition 11-1, the proponent shall prepare a Flora and Fauna Protection Plan for the "Project Area", as part of the Environmental Management Programme, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management, the Water and Rivers Commission, the Northern Territory Department of Lands, Planning and Environment, and the Northern Territory Parks and Wildlife Commission.

The objectives of this Plan are to conserve and protect:

- listed species;
- vegetation associations / communities;
- aquatic fauna species; and
- subterranean fauna species.

This Plan shall address:

- 1 additional surveys of terrestrial fauna, including frogs, bats and reptiles;
 - 2 additional surveys of aquatic fauna within the Keep River system (including estuarine fauna);
 - 3 the protection of vegetation associations / communities G1, G4, Em8, Em9, Gt2 and ET4 within proposed reserves adjacent to the "Project Area"; and
 - 4 the identification and protection of subterranean fauna.
- 9-2 Prior to the preparation of the Final Project Design Plan, as required by condition 11-1, the proponent shall implement the Flora and Fauna Protection Plan required by condition 9-1 as specified in that Plan.
- 9-3 The proponent shall make the Flora and Fauna Protection Plan required by condition 9-1 publicly available, to the requirements of the Environmental Protection Authority.

10 Hydrodynamic Survey Plan

- 10-1 The proponent shall prepare a Hydrodynamic Survey Plan for the Keep River, Border Creek and Sandy Creek, as part of the Environmental Management Programme, prior to intended discharge of harvested groundwater or drainage from the project development area, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management, the Northern Territory Department of Lands, Planning and Environment, the Northern Territory Parks and Wildlife Commission, and the Water and Rivers Commission.

The objectives of this Plan are to determine:

- the hydrodynamic, including flushing, characteristics of the Keep River and Sandy Creek;
- the flow characteristics of Border Creek including under drainage discharge conditions; and

- the estuarine dynamics of the Keep River.

This Plan shall include:

- 1 surveys of the flushing characteristics of the Keep River;
 - 2 surveys of the flushing characteristics of Sandy Creek;
 - 3 surveys of the flow characteristics of Border Creek; and
 - 4 hydrodynamic investigations of the estuarine portion of the Keep River.
- 10-2 The proponent shall commence implementation of the Hydrodynamic Survey Plan required by condition 10-1, at least five months prior to ground disturbing activity, as specified in that Plan.
- 10-3 The proponent shall make the Hydrodynamic Survey Plan required by condition 10-1 publicly available, to the requirements of the Environmental Protection Authority.

11 Final Project Design

- 11-1 Following completion of the requirements of conditions 8 and 9, and prior to ground-disturbing activities, the proponent shall prepare a Final Project Design Plan for the "Project Area" and related activities in Wyndham, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management, the Water and Rivers Commission, the Aboriginal Affairs Department, the Northern Territory Department of Lands, Planning and Environment, and the Northern Territory Parks and Wildlife Commission.

The objectives of the Plan are to ensure that:

- listed flora and fauna species are protected; and
- the Miriuwung and Gajerrong peoples' environmental values in the "Project Area" are documented and considered.

This Plan shall address:

- 1 the outcomes of the plans / surveys required by conditions 8 and 9;
 - 2 the outcomes of the Aboriginal Socio-Economic Impact Assessment and other related studies (commitment 8); and
 - 3 the boundaries of the buffer area.
- 11-2 The proponent shall implement the Final Project Design Plan required by condition 11-1 as specified in that Plan.

11-3 The proponent shall make the Final Project Design Plan required by condition 11-1 publicly available, to the requirements of the Environmental Protection Authority.

12 Decommissioning Plans

12-1 Prior to construction, the proponent shall prepare a Preliminary Decommissioning Plan which provides the framework to ensure that the site is left in a suitable condition, with no liability to the State or Northern Territory, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

The Preliminary Decommissioning Plan shall address:

- 1 the conceptual plans for the removal or if appropriate the retention of plant and infrastructure and conceptual plans for its / their removal or, if appropriate, retention;
 - 2 conceptual rehabilitation plans for all disturbed areas and a process to agree on the end land use(s); and
 - 3 management of noxious materials to avoid the creation of contaminated areas.
- 12-2 At least six months prior to the anticipated date of decommissioning, or at a time agreed with the Department of Environmental Protection, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in a suitable condition, with no liability to the State or Northern Territory, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

The Final Decommissioning Plan shall address:

- 1 removal or, if appropriate, retention of plant and infrastructure;
 - 2 rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
 - 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.
- 12-3 The proponent shall implement the Final Decommissioning Plan required by condition 12-2 until such time as the Minister for the Environment and Heritage determines that decommissioning is complete.
- 12-4 The proponent shall make the Final Decommissioning Plan required by condition 12-2 publicly available, to the requirements of the Environmental Protection Authority.

13 Performance Review

13-1 Each three years following the commencement of construction, the proponent shall submit a Performance Review Report to the Department of Environmental Protection and the Northern Territory Department of Lands, Planning and Environment:

- to document the outcomes, beneficial or otherwise;
- to review the success of goals, objectives and targets; and
- to evaluate the environmental performance over the three years;

relevant to the following:

- 1 environmental objectives reported on in Environmental Protection Authority Bulletins 988 and 1016, and Northern Territory Department of Lands, Planning and Environment Reports 34a and 34b;
- 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
- 3 environmental management system environmental performance targets;
- 4 environmental management programs and plans; and/or
- 5 environmental performance indicators;

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection and the Northern Territory Department of Lands, Planning and Environment.

Note: The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment and Heritage following consideration of the Performance Review Report.

Procedure

14 Regional Conservation Initiatives

14-1 The Government of Western Australia will create the following conservation reserves, within two years:

- Livistona Range Conservation Area;
- Pincombe Range Conservation Area;
- Ninbing Range Conservation Area;

- Weaber Range Conservation Area; and
- Mt Zimmerman Conservation Area.

14-2 The Government of the Northern Territory will create the following conservation reserves, within two years:

- Spirit Hills as National Park; and
- Western Legune as National Park.

Note

- 1 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.
- 2 Procedure 14 is not subject to proponent compliance.

DR JUDY EDWARDS MLA
MINISTER FOR THE ENVIROMENT AND HERITAGE

- 6 FEB 2002

Schedule 1

The Proposal (Assessment No. 1240)

The M2 project is located within the Victoria-Bonaparte Biogeographic Region. The Project Area extends over approximately 76,000 hectares (ha) of land comprising the Weaber, Keep River and Knox Creek Plains, and involves approximately equal areas within Western Australia (WA) and the Northern Territory (NT) (see Figure 1).

The M2 project involves (see Figure 2):

- development of 30,500 hectares (ha) for irrigated agriculture;
- development of 3,000 ha for water supply and land protection infrastructure;
- establishment and management of 42,500 ha of land as a buffer for conservation purposes;
- construction of a raw sugar mill, with the capacity to produce approximately 400,000 tonnes per annum (tpa) of raw sugar and 160 000 tpa of molasses, near the centre of the M2 Area, in Western Australia; and
- development of raw sugar and molasses storage and handling facilities at Wyndham.

The main characteristics of the proposal are summarised in Table 1 below.

Table 1 - Key Proposal Characteristics

Element	Description	Amount
Land within the Project Area	<ul style="list-style-type: none"> • "Project Area" • Land managed as a buffer[†] • Land for irrigable development • Infrastructure area 	<ul style="list-style-type: none"> • 76,000 ha* • 42,500 ha* • 30,500 ha* • 3,000 ha*
Land outside the "Project Area"	<ul style="list-style-type: none"> • M2 Channel (Lake Kununurra to "Project Area") • Wyndham Port Facilities 	<ul style="list-style-type: none"> • 690 ha • 1 ha
Production	<ul style="list-style-type: none"> • Raw sugar • Molasses 	<ul style="list-style-type: none"> • 400,000 tpa • 160,000 tpa
Infrastructure	<ul style="list-style-type: none"> • Irrigation channels • Annual water requirement • Drains • Flood protection levees • Balancing storage dams (operating volume) • Roads • Power lines 	<ul style="list-style-type: none"> • 160 km* • 740 GL* • 153 km* • 142 km* • 5.6 GL • 161 km • 165 km
Wyndham Port	<ul style="list-style-type: none"> • Raw sugar store • Molasses store 	<ul style="list-style-type: none"> • 180,000 t • 75,000 t

Key:

*	=	approximate
GL	=	Gigalitres
ha	=	hectares
km	=	kilometres
tpa	=	tonnes per annum
t	=	tonnes
+	=	conservation reserve proposals by the Western Australian and Northern Territory Governments

are

referred to as 'conservation areas' and the areas within the "Project Area" proposed by the proponent in the ERMP / draft EIS to be protected from development are referred to as 'buffer areas'.

Figures (attached)

Figure 1: Overview of the Ord Region and "Project Area"

Figure 2: Project Layout

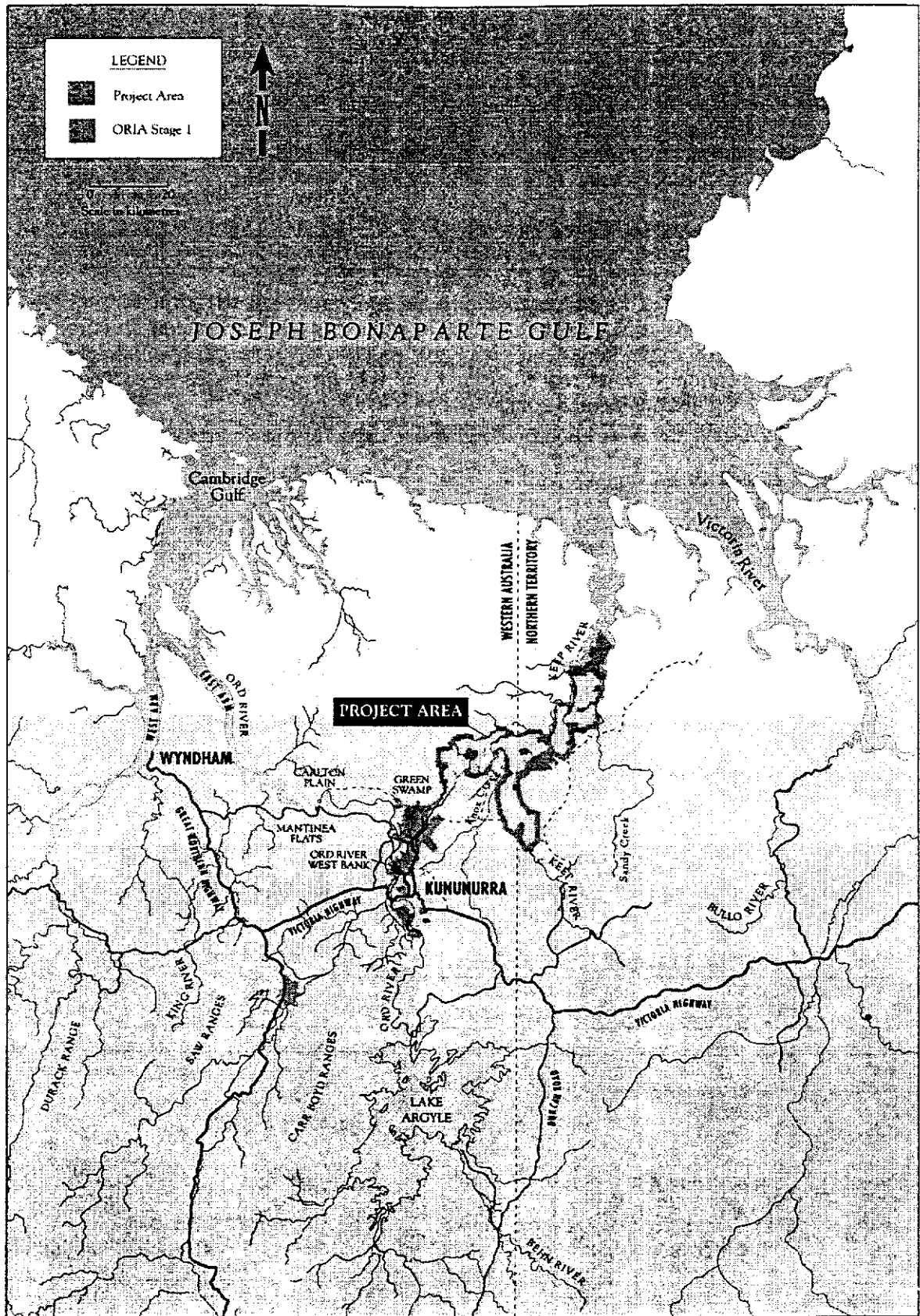


Figure 1: Overview of the Ord Region and Project Area (Kinhill, 2000)

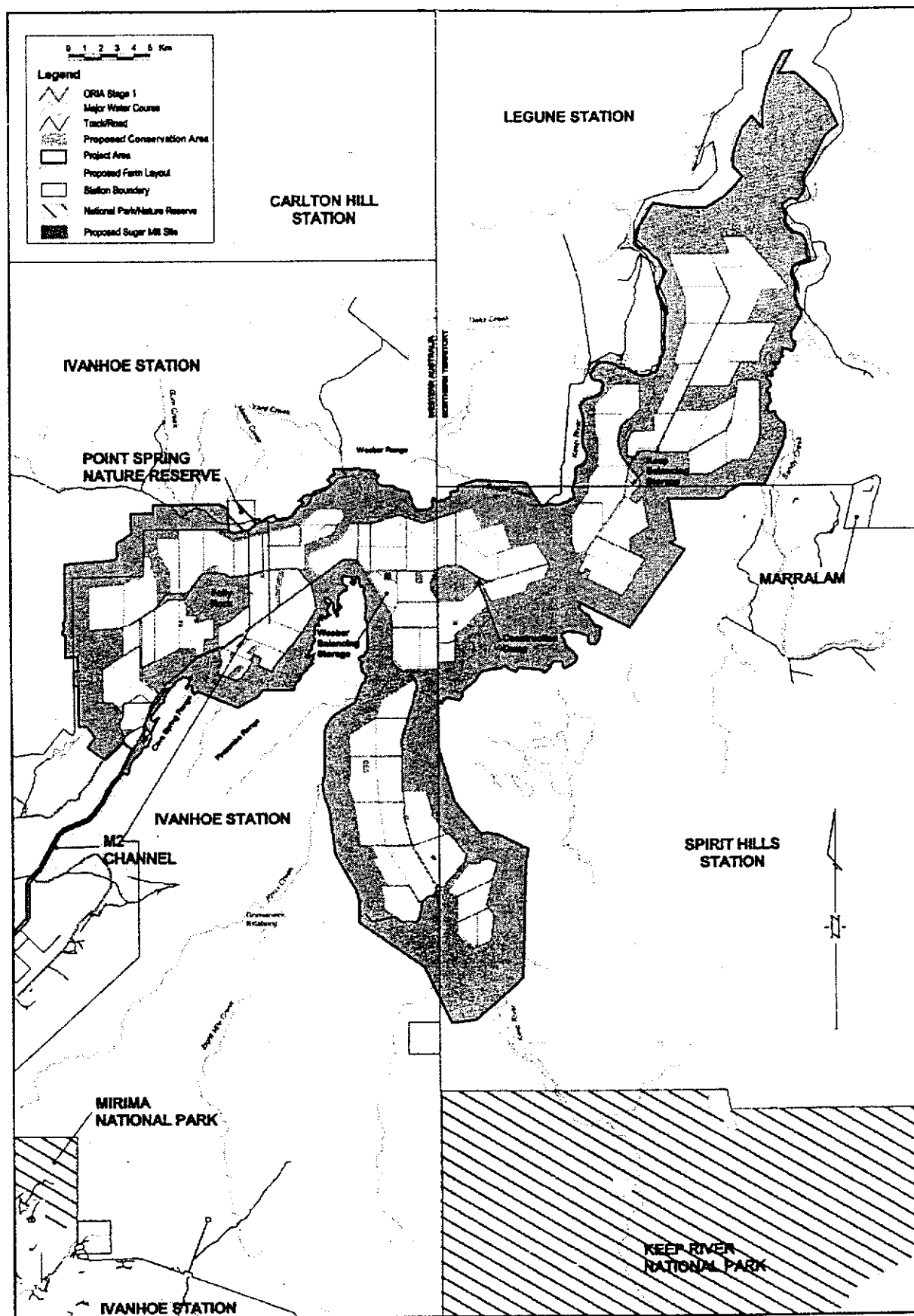


Figure 2. Project layout (Wesfarmers et al, 2000)

**Proponent's Consolidated Environmental Management
Commitments**

March 2001

**ORD RIVER IRRIGATION AREA STAGE 2
(M2 SUPPLY CHANNEL), KUNUNURRA**

(Assessment No. 1240)

**Wesfarmers Sugar Company Pty Ltd, Marubeni Corporation and
the Water Corporation**

Proponent's Environmental Management Commitments (see footnote for glossary)

ORD RIVER IRRIGATION AREA STAGE 2 (M2 SUPPLY CHANNEL), KUNUNURRA (Assessment No. 1240)

No.	Relevant ERMPEIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
ENVIRONMENTAL MANAGEMENT SYSTEM								
1	Appendix O	<p>An environmental management system (EMS) conforming to the requirements of the AS/NZ ISO 14000 series of standards will be developed for the project. The EMS will have the following key components:</p> <ul style="list-style-type: none"> • organisational commitment; • environmental policy; • environmental aspects and impacts register; • regulatory and legal compliance register; • objectives and performance indicators; • environmental management program documentation (ie. EMP); • operational and emergency procedures; • responsibility and reporting structure; • training and awareness program; • environmental performance reviews, audits, monitoring and measurement. 	Before construction, construction and operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Develop a framework for environmental management.	As committed.	DEP and DLPE.	Requirements of AS/NZ ISO 14000 series of standards.
2	3.2.4, Appendix O	<p>An Environmental Management Plan (EMP) will be prepared for the Project. The EMP will consist of a series of sub-plans as indicated in Table 2. The sub-plans will be prepared, updated, approved and implemented in a progressive basis as required for the various stages of Project development in accordance with Table 2. The EMP will contain provisions to review monitoring data and to modify management measures as appropriate.</p>	Before construction, construction and operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Provide management plan to guide environmental management.	As committed.	Public scoping of EMP in consultation with DEP and DLPE.	To satisfaction of DEP and DLPE

No.	Relevant ERMPEIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
		NATIVE TITLE						
3	12.5.8	Best endeavours will be made to resolve native title issues by way of a negotiated settlement, preferably an Indigenous Land Use Agreement.	Before construction.	Wesfarmers-Marubeni, the Water Corporation.	Ensure protection where possible of any Native Title rights.	As committed.	Aboriginal Representative Bodies, the Miriuwung and Gajerrong people and relevant Government agencies.	In accordance with the Native Title Act 1993.
		CULTURAL HERITAGE						
4	12.5.3	Archaeological and ethnographic assessments of the Project Area will be undertaken.	Before construction.	Wesfarmers-Marubeni and the Water Corporation	Ensure protection of cultural heritage sites.	As committed.	Aboriginal Representative Bodies, the Miriuwung and Gajerrong people, AAPA, the HCB and the AAD.	In accordance with the <i>Aboriginal Heritage Act 1972</i> , the <i>Northern Territory Sacred Sites Act 1995</i> , the <i>Heritage Conservation Act 1996</i> , and the <i>Aboriginal and Torres Strait Islander Protection Act 1984</i> .
5	12.5.3	Cultural Heritage Protection Procedures will be established and implemented.	Before construction, construction and operation.	Wesfarmers-Marubeni and the Water Corporation	Ensure protection of cultural heritage sites.	By providing the Procedures to all contractors.	Aboriginal Representative Bodies, the Miriuwung and Gajerrong people, AAPA, HCB and AAD.	To satisfaction of the Miriuwung and Gajerrong people, the AAPA, HCB and the AAD.

No.	Relevant ERM/PEIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
6	12.5.3	A Cultural Heritage Management Plan will be developed and implemented.	Before construction, construction and operation.	Wesfarmers-Marubeni, the Water Corporation and Environmental Management Entity.	Ensure protection of cultural heritage sites.	By involving the Aboriginal Representative Bodies and Miriuwung and Gajerrong people.	Aboriginal Representative Bodies, the Miriuwung and Gajerrong people, AAPA, the HCB and the AAD.	To satisfaction of the Miriuwung and Gajerrong people, the AAPA, the HCB and the AAD.
ABORIGINAL SOCIAL IMPACT								
7	12.3	Regular meetings will be held with Miriuwung and Gajerrong people.	Before construction, during construction and operation.	Wesfarmers-Marubeni, the Water Corporation and Environmental Management Entity.	Ensure people are informed about the Project and to provide a venue for feedback.	By regular meetings.	Aboriginal Representative Bodies and the Miriuwung and Gajerrong people.	To satisfaction of the Miriuwung and Gajerrong people, the EPA and DLPE.

No.	Relevant ERMPEIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
8	12.6.2	An Aboriginal Socio-Economic Impact Assessment will be completed.	Before construction.	Wesfarmers-Marubeni Water Corporation	To ensure that the Miriuwung and Gajerrong view of the Project is understood and reflected in the final Project design.	By involving the Miriuwung and Gajerrong and Aboriginal representative Bodies.	Aboriginal Representative Bodies and the Miriuwung and Gajerrong people.	To satisfaction of the Miriuwung and Gajerrong people, the EPA and DLPE.
		COMMUNITY ISSUES						
9	14.1.3	<p>Management action will be taken in conjunction with the proposed development to reduce the risk of increased infection with arboviruses. These actions will concentrate upon the following activities:</p> <ul style="list-style-type: none"> designing and operating the Project so as to reduce the potential for increased mosquito-breeding activity; implementing education programmes for the Project's construction and operational workforce on measures that could be taken to reduce their personal risk of infection; extending the existing monitoring programmes to cover the Project Area. 	Before construction and operation.	Wesfarmers-Marubeni Water Corporation (to end of construction), Environmental Management Entity on behalf of Wesfarmers-Marubeni independent farmers and the Water Corporation (thereafter).	Reduce risk of infection through lower mosquito numbers and public awareness.	As committed.	Health Departments (WA) and (NT).	-
10	13.3.2	Burning of cleared vegetation will be managed to occur at times when prevailing winds will direct smoke and ash away from residential areas.	Construction.	Wesfarmers-Marubeni Water Corporation.	Avoid nuisance from smoke and ash fallout.	By including requirements into construction contracts and monitor.	CALM and PWCNT.	-

No.	Relevant ERM/EIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
11	13.6	Construction activities will be restricted to daylight hours for all activities within 500 m of an existing residence. All occupiers of residences within 1 km of construction activities will be advised of the nature and duration of the activities planned, and well in advance of construction commencing.	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Avoid nuisance to existing residents.	By incorporating requirements into construction contracts and monitoring.	Occupiers of residences within 1 km of construction works.	Noise abatement regulations.
12	13.2	A dust monitoring programme will be established as part of the EMP and administered throughout the construction and operational phases of the Project, using dust deposit gauges that comply with AS 3580.10.1—1991. Periodic dust monitoring will also be undertaken using portable monitors.	Construction and Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Provide data for management.	As committed.	DEP and DLPE.	-
13	11.5.1	Signs will be erected at strategic locations throughout the Project Area to advise travellers that access to pastoral leases is restricted.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Avoid unwanted visitors to pastoral leases.	By erection of signs.	Local pastoralists.	-
SOIL CONSERVATION, REPAIR AND RESTORATION								
14	3.10	Borrow pits will be selected in accordance with Aboriginal cultural and heritage considerations of the land and operated as far as practicable with a view to minimising erosion, damage to surrounding vegetation and visual impact. Once construction is completed, areas no longer required will be rehabilitated by a combination of contouring, slope stabilisation, topsoil spreading and seeding.	Construction.	Wesfarmers—Marubeni and the Water Corporation.	Achieve appropriate rehabilitation.	By including requirement in construction contracts and monitoring.	Miriwung and Gajerrong people, CALM, PWCNT and the Shire of Wyndham — East Kimberley.	To satisfaction of CALM and PWCNT.

No.	Relevant ERM/FIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
15	4.5.2, 10.5.2	Soil erosion in the Project Area will be controlled by a combination of the following management strategies: <ul style="list-style-type: none"> • staging vegetation clearance so that areas are cleared only as required; • controlling drainage by providing levee banks to prevent floodwaters entering the developed area; • grading of land on farms so as to minimise stormwater runoff velocities; • sizing and designing receiving drains to accommodate anticipated flow regimes; • providing buffer zones on both sides of watercourses to allow riparian vegetation to continue to stabilise soils in these areas; • rehabilitating disturbed areas as soon as possible following disturbance during construction; • formulating and implementing appropriate rehabilitation plans and programmes including topsoil stripping and stockpiling, land preparation, and reseedling with local native species to facilitate regeneration of disturbed areas. 	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Minimise soil erosion.	By including rehabilitation requirements and plans in construction contracts and monitoring.	Commissioner of Soil and Land Conservation (WA) and DLPE.	To satisfaction of Commissioner of Soil and Land Conservation (WA) and DLPE.
16	10.5.6	Rehabilitation of any sites disturbed during development will be undertaken progressively using topsoil and seed species collected from the Project Area. Monitoring of the success of rehabilitation will be undertaken.	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Effective rehabilitation of disturbed sites.	By including requirements in construction contracts and monitoring.	Miriuwung Gajerrong people, CALM and PWCNT	To satisfaction of Miriuwung Gajerrong people, CALM and PWCNT.
17	10.5.7	A seed collection programme will be undertaken before vegetation is cleared. Only seeds of plant species endemic to the Project Area will be used in revegetation projects.	Construction.	Environmental Management Entity on behalf of Wesfarmers-Marubeni, independent farmers and the Water Corporation.	Effective rehabilitation of disturbed sites.	Seed collection and use in rehabilitation projects.	Miriuwung Gajerrong people, CALM and PWCNT.	To satisfaction of Miriuwung Gajerrong people, CALM and PWCNT.
SOIL CHEMICAL STATUS								

No.	Relevant ERM/EIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
18	4.5.4	Long-term monitoring will be undertaken to ascertain any changes to surface and subsoil salinity and soil chemical status, including sodicity.	Operation.	Environmental Management Entity on behalf of Wesfarmers-Marubeni and independent farmers.	Avoid significant increases in subsoil salinity and sodicity levels.	Monitor sodium adsorption ratio, ESP, and electrical conductivity levels. Advise farmers of optimal watering strategies.	AGWEST.	Target sub-soil ESP of 15.
SURFACE WATER RESOURCES								
19	5.3.1, 5.4.1	Complete further analysis of predicted water velocity regime and stability of soils along the lower 20km of Border Creek	Before construction	Wesfarmers-Marubeni and the Water Corporation	To ensure erosion effects in and around Border Creek are not significant	By implementing appropriate design	WRC and DLPE	To satisfaction of WRC and DLPE
20	5.4.1	Appropriate erosion protection measures such as stone pitching and bridge abutments will be developed in localised areas of high water velocity and implemented.	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Minimise erosion of watercourses.	By implementing protective measures at watercourse crossings.	-	To satisfaction of Commissioner of Soil and Land Conservation (WA) and DLPE.

No.	Relevant ERM/ERIS Section	Commitment	Timing	Responsibility	Objective	Action	Further consultation	Compliance Criteria
21	5.5.1	<p>Sedimentation effects by will be managed by:</p> <ul style="list-style-type: none"> • wherever practicable, restricting ground-disturbing operations to the dry season; • restricting ground-disturbing operations to the minimum area required to facilitate construction; • collecting and storing for future use any topsoil from areas to be disturbed; • installing and maintaining temporary sediment traps downstream of any areas to be disturbed; • progressive clearing, developing and rehabilitating, wherever possible using locally won topsoil, of any areas that are no longer going to be disturbed. 	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Minimise sediment load to receiving waters.	By incorporating requirements into construction contracts and monitoring.	Commissioner of Soil and Land Conservation (WA) and DLPE.	To satisfaction of Commissioner of Soil, Land Conservation (WA) and DLPE.
22	3.3.2, 4.5.3	<p>All farms in the Project Area will be developed with irrigation tailwater management systems. The volume of tailwater dams in these systems will be optimised during detailed design with the objective being to minimise discharges of irrigation tailwater during the dry season. As a minimum, the tailwater dam capacity will be sufficient to provide first-flush stormwater retention capacity of 12 mm of rainfall runoff for sugarcane farms, and 25 mm of rainfall runoff from other farms. Farm maintenance will include regular desilting of these drains and return of the collected material to the cropped area.</p>	Construction and Operation.	Wesfarmers-Marubeni and independent farmers.	Minimise water pollution.	By constructing, operating and maintaining the tailwater return system.		Quality (suspended solids) of drainage waters to be in natural range of Keep River.

23	3.4.2, 5.6.1	<p>Regimes of chemical and fertiliser usage, in terms of type, timing and method of application will be incorporated into the EMP to be developed for the Project Area. These restrictions will as a minimum include:</p> <ul style="list-style-type: none"> • pesticide application in accordance with the annual spray calendar prepared for the ORIA; • the use only of chemicals that are approved by the Governments of Western Australia and the Northern Territory; • the successful completion of training for farm staff required to spray chemicals; • commercial spray operators being required to be fully accredited under a national standards system; • a ban on the use of endosulphan during the wet season (November to March) and at other times when the crop areas have free-standing water in either the furrows or tail drains; • application of any endosulphan to comply with NRA review recommendations. • interim restrictions will require each application of endosulphan to receive prior approval from the Environmental Management Entity, as well as monitoring of farm drains, tailwater return systems and drainage flows. 	Operation.	Environmental Management Entity on behalf of Wesfarmers-independent farmers and the Water Corporation.	Minimise use of pesticides. Manage endosulphan levels in receiving waters to below guideline levels.	By incorporating into EMP and implementing.	AGWEST.	NRA recommendations and National Standards.
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24	5.4.1	Monitoring of erosion along all watercourses, including constructed drains, will be undertaken and remedial measures would be undertaken on an as-needed basis.	Operation.	Environmental Management Entity on behalf of Wesfarmers-Marubeni, independent farmers and the Water Corporation.	Minimise erosion water courses.	By monitoring and implementing remedial measures as needed.		
25	5.1005.1	Fertilisers or chemicals will not be applied to cropped areas when the first-flush basin capacity is not available.	Operation.	Wesfarmers-Marubeni and independent farmers.	Minimise water pollution.	Only apply fertilisers and pesticides when first flush basin capacity available.		Nutrients within natural range for receiving waters. Pesticides within national guidelines to maintain aquatic ecosystems in receiving waters.
26	5.5.2	Effects of any spray drift will be minimised by: <ul style="list-style-type: none"> • minimisation of the use of aerial spraying, by using tractor-based spraying to the maximum extent possible; • avoidance of unsuitable weather conditions such as surface temperature inversions and unstable conditions during aerial spraying whenever possible; • utilisation of a larger droplet size settings for spray equipment during aerial spraying; 	Operation.	Wesfarmers-Marubeni and independent farmers.	Minimise pesticide levels in receiving waters.	By incorporating requirements into EMP and implementing.	AGWEST.	National guideline values for pesticides for maintenance of aquatic ecosystems.
27	5.5.2	Effects of airborne dust on water quality in receiving waters will be minimised by: <ul style="list-style-type: none"> • provision of dedicated on-farm access tracks that will not have agricultural chemicals applied directly to them; • wherever possible, adoption of 'minimum tillage' farming practices. 	Operation.	Wesfarmers-Marubeni and independent farmers.	Minimise spread of pesticides by minimising dust.	As committed.	AGWEST.	National guideline values for pesticides for maintenance of aquatic ecosystems.

28	5.5.4	<p>Aquatic weeds in the irrigation channels and balancing storage dams will be controlled by a combination of mechanical weed removal and periodic dosing with a chemical such as acrolein.</p> <p>Chemical dosing will be in accordance with best-practice procedures as outlined below:</p> <ul style="list-style-type: none"> • emptying the channel, locking off-takes, erecting warning signage and notifying farmers prior to injection of the chemical; • releasing a known flow of water to obtain a water depth of approximately 0.5 m into the channel and releasing the chemical from a controllable release point to maintain an initial concentration (15 ppm in the case of acrolein); • releasing a marker dye to denote the chemical front; • shutting flow to the channel and holding the chemical in the channel for a minimum of forty-eight hours before diluting by release of additional water and use of the water for irrigation; • monitoring the watercourses downstream of the Project Area for acrolein and if detected, review the above procedure in conjunction with the Water and Rivers Commission and the DLPE. 	Operation.	Water Corporation.	Manage chemical use and minimise discharges to receiving waters.	By incorporating requirements into EMP and implementing.	WRC and DLPE.	National guideline values for maintenance of aquatic ecosystems.
29	14.2.4	<p>Rapid assessment of the placement deposit patterns in the field following spray operations will be implemented by the proposed Environmental Management Entity to monitor spraying operations within the Project Area.</p>	Operation.	Environmental Management Entity on behalf of Wesfarmers--Marubeni, independent farmers and the Water Corporation.	Provide data for management.	By incorporating requirements into EMP and implementing.	DEP and DLPE.	-
GROUNDWATER RESOURCES								

30	2.4.2	Engineering design standards for all irrigation channels and regulating storage's intended to convey or store water for prolonged periods will be adopted to restrict seepage to a maximum of 2mm/d.	Before construction.	Water Corporation.	Minimise accessions.	By implementing appropriate design, material selection and construction method and monitor.	-	Maximum seepage rate of 2 mm/d.
31	3.5.2	Incorporate wider, shallower drains than were built in ORIA Stage 1. Where deeper drains are required, the excavated surface of the drain will be compacted to minimise seepage.	Construction.	Water Corporation.	Minimise groundwater accessions.	By implementing design and construction standards and monitoring.	-	-
32	6.5.5	Groundwater delineation drilling across the interpreted position of the palaeochannel aquifers will be implemented in order to define the position of aquifers beneath the irrigation area. An extensive network of groundwater monitoring bores will be installed within and adjacent to the irrigation area prior to the commencement of irrigation. This network will include bore transects aligned perpendicular to the Keep River and Sandy Creek to acquire additional data in relation to the river-groundwater interactions, as well as the establishment of monitoring bores adjacent to Milligan Lagoon. Groundwater samples will be collected during the delineation drilling to quantify the vertical and horizontal water quality distribution.	Construction.	Wesfarmers-- Marubeni and the Water Corporation.	Confirm parameters adopted for groundwater modelling.	Conduct further groundwater monitoring.	WRC and DLPE.	To satisfaction of WRC and DLPE.
33	2.4.2	Groundwater levels will be controlled via the utilisation of bores and subsoil drains if necessary.	Operation.	Environmental Management Entity on behalf of Wesfarmers-- Marubeni, independent farmers and the Water Corporation.	Minimise impacts on proposed land use.	By use of bores and subsoil drains.	WRC and DLPE.	-

34	2.4.2	A comprehensive monitoring programme for groundwater levels and quality, and use of the collected data to modify management practices will be practiced.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Monitor groundwater levels.	By regular monitoring of observation wells.	WRC and DLPE.	WRC and DLPE.
35	6.5.5	Test dewatering bores will be installed to confirm aquifer yields and the response of the aquifers to pumping. The data collected from the groundwater monitoring programme will be used to continually update the groundwater model and to optimise the extent and timing of installation of the groundwater management system.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Optimise groundwater management.	Install and operate bores.	WRC and DLPE.	To satisfaction of WRC and DLPE.
36	14.2.4	Groundwater will be tested on a regular basis for all chemicals used in the Project Area to ensure compliance with national drinking water quality guidelines.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Ensure safe drinking water supplies.	As committed.	WRC and DLPE.	National guidelines for drinking water.
37	6.5.5	The quality of groundwater adjacent to watercourses will be monitored. The groundwater pumping strategy will include provision for the capture of additional groundwater adjacent to the watercourses if considered necessary.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Maintain health of riparian vegetation.	Monitor groundwater adjacent to watercourse and implement control measures of needed.	WRC and DLPE.	To satisfaction of WRC and DLPE.

FIRE

38	10.5.2	A fire control strategy and plan will be developed for the farms and for the proposed conservation areas. This will include monitoring areas to determine the need for burning.	Before construction.	Wesfarmers-Marubeni and the Water Corporation.	Develop appropriate fire management practices	Be developing a fire control strategy and plan including it in the EMP.	CALM and PWCNT.	To satisfaction of CALM and PWCNT.	
	NATIVE VEGETATION AND FAUNA CONSERVATION								
39	10.5.2	To limit any potential for over clearing, all areas designated for construction works will be clearly marked on development maps and on the ground prior to commencement of works.	Before construction.	Wesfarmers-Marubeni and the Water Corporation.	Limit any potential for over clearing and improve environmental awareness.	As committed.	-	-	
40	10.5.1	Permanent monitoring sites for flora, fauna and biodiversity will be established in conservation areas, along ecological corridors and in selected sites in the Project Area. Monitoring will be undertaken on a regular basis with the monitoring parameters clearly defined following consultation with the staff of CALM and the Parks and Wildlife Commission of the Northern Territory.	Before construction and operation.	Environmental Management Entity on behalf of Wesfarmers-Marubeni, independent farmers and the Water Corporation.	Monitor flora, fauna and biodiversity.	By incorporating requirements into the EMP and implementing.	CALM and PWCNT.	To satisfaction of CALM and PWCNT	
41	3.10	In areas where reserve widths are significantly greater than those required for construction, only the sections necessary for construction and future maintenance purposes will be cleared.	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Avoid excessive clearing.	By including requirement in construction contracts and monitoring.	-	-	
	WEEDS, PLANT PATHOGENS AND PEST ANIMALS								
42	10.5.3	All construction machinery will be cleaned of soil and other organic debris prior to being transported to the Project Area. If borrow is required, it will be obtained from surveyed weed-free sites.	Construction.	Wesfarmers-Marubeni and the Water Corporation.	Minimise potential for introduction of weeds to Project Area.	As committed.	AGWEST, Department of Primary Industries and Fisheries, CALM and PWCNT.	To satisfaction of AGWEST and Department of Primary Industries and Fisheries	
43	10.5.5	People will be discouraged from taking dogs and cats into the conservation areas.	Operation.	Environmental Management Entity on behalf of Wesfarmers-Marubeni, independent farmers and the Water Corporation.	Minimise potential for feral pests.	By erection of signs.	-	-	

44	11.4.4	Access to the Keep River within the Conservation Area, for recreational purposes, will remain open at designated recreation sites. Access to the remainder of the conservation area will be restricted.	Operation.	Environmental Management Entity on behalf of Wesfarmers-independent farmers and the Water Corporation.	Control erosion and weeds.	By providing designated recreation sites and control access.	Miriwung Gajerrong people and local recreation groups.	To satisfaction of Miriwwung Gajerrong people and local recreation groups.
	BIODIVERSITY AND NATURE CONSERVATION							
45	10.2.2	All undeveloped land in the Project Area will be managed for conservation.	Before construction, construction and operation	Environmental Management Entity on behalf of Wesfarmers-independent farmers and the Water Corporation.	Management of a world-class broad-scale agricultural development, with integral conservation areas, in accordance with Australia's ESD and biodiversity policies.	Establish conservation areas and manage in accordance with the EMP.	CALM and PWCNT	-
46	10.3.5	Redesign Farms W511, W65, K31, X442, W36, W41, X41, X431, X432, X441, W11, W12, W14, W110, K41 and the M2N irrigation channel	Before construction	Wesfarmers Marubeni and the Water Corporation	To ensure adequate conservation of vegetation associations ET4, Ct1, Me3, Cc1, Gt3, Em8, Em7, Gt2, ET5, Ct2, Cb9, Bc3, Gt6 and Gt8.	By implementing appropriate design	-	To the satisfaction of the DEP
47	2.4.2, 10.3.5	Reconfigure the design of the Keep River balancing storage	Before construction	Water Corporation	To ensure adequate conservation of vegetation association Gt5	By implementing appropriate design	-	-

48	10.3.5	Confirm the location of vegetation associations G1 and G4 outside of the Project Area	Before construction	Wesfarmers Marubeni and the Water Corporation	To ensure adequate conservation of vegetation associations G1 and G4	By implementing appropriate survey work	-	-
49	10.3.5	Redesign Farms W11, W12, W14, W36 and the M2N irrigation channel; and confirm the location of vegetation association Em9 outside of the Project Area	Before construction	Wesfarmers Marubeni and the Water Corporation	To ensure adequate conservation of vegetation association Em9	By implementing appropriate design and survey work	-	-
50	5.5.2, 10.3.3	Redesign boundaries to Farms X41, X431, X432, and X441	Before construction	Wesfarmers Marubeni and the Water Corporation	To ensure conservation of all riparian vegetation, and adequate setback of the developed area from natural watercourses	By implementing appropriate design	-	-
51	10.3	Redesign flood protection levees east of Farm X23, east of Farm W64, and east of conservation areas E46 and E410	Before construction	Wesfarmers Marubeni and the Water Corporation	To ensure the inundation of the conservation areas by natural flooding, and associated drainage	By implementing appropriate design	-	-
52	5.3.1, 6.5.3	Redesign flood protection HDX1 and design a drainage corridor through Farm X432	Before construction	Water Corporation	To ensure minimal hydrological impact on Milligan Lagoon	By implementing appropriate design	WRC and DLPE	To satisfaction of WRC and DLPE

53	9	Complete an additional biological survey of the Keep River in the vicinity of the Project Area	Before construction	Wesfarmers and Marubeni Water Corporation	To confirm current predictive models, and provide additional baseline data for inclusion in the EMP	By implementing survey work	DEP, DLPE, NT Dept. of Fisheries	To the satisfaction of DEP, DLPE, and NT Dept. of Fisheries
54	10.5.2	All contractors and consultants will be required to participate in a formal environmental and cultural heritage induction programme on the importance of the natural and social environment.	Construction	Environmental Management Entity on behalf of Wesfarmers-Marubeni, independent farmers and the Water Corporation.	Improve environmental awareness	Incorporate into site induction.	-	-
		OTHER						
55	16.4.2	An entity will be 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), will be owned by the industry participants, and will provide environmental management services to the owners. The EME will be formed prior to the commencement of any development works associated with the proposed development.	Before construction.	Wesfarmers-Marubeni and the Water Corporation.	Establish an entity to provide environmental services to the owners.	As committed.	-	-
56	3.7.3	Emissions from the boiler will be passed through a scrubber to achieve a maximum particulate discharge of 32 kg/h from the 40 m high chimney. Bagasse firing will be a complete combustion process with excess oxygen available at all times.	Operation.	Wesfarmers-Marubeni.	Avoid air and water pollution.	By implementing design and construction standards and monitoring.	DEP.	National standards for emissions from stationary sources.

57	16.6	The results and interpretation of the monitoring implemented by the EME will be reported on an annual basis on behalf of the industry participants. The annual report will detail actual environmental performance against the environmental performance targets detailed in the EMP, and will be made readily available to the industry participants. The annual report will also be made available to relevant government agencies and possibly other organisations and community interest groups.	Operation.	Environmental Management Entity on behalf of Wesfarmers—Marubeni, independent farmers and the Water Corporation.	Provide ready identification of compliance by industry with the EMP.	Prepare annual reports and make available to industry participants and relevant government agencies.	EPA, and DLPE.	-
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Glossary

- AAD Aboriginal Affairs Department (WA)
- AAPA Aboriginal Areas Protection Authority (NT)
- AGWEST Agriculture Western Australia
- CALM Department of Conservation and Land Management (WA)
- DEP Department of Environmental Protection (WA)
- DLPE Department of Lands, Planning and Environment (NT)
- EPA Environmental Protection Authority (WA)
- HCB Heritage Conservation Branch of the DLPE (NT)
- PWCNT Parks and Wildlife Commission Northern Territory
- WRC Water and Rivers Commission (WA)

Table 2 Scope of EMP (as outlined in Appendix O of the Environmental Review and Management Programme /draft Environmental Impact Statement) and timing of sub-plans

EMP Sub-plan	Timing of implementation		
	Before Construction (design)	Construction	Operation
Environmental education and training		√	√
Legislation, policy and standards	√	√	√
Records and information	√	√	√
Native title	√	√	√
Cultural Heritage	√	√	√
Aboriginal social impact	√	√	√
Community issues		√	√
Dust and particulates		√	√
Mosquito and disease vectors *	√	√	√
Soil conservation, repair and restoration		√	
Soil chemical status			√
Surface water resources		√	
Groundwater resources			√
Fire			√
Greenhouse gas emissions*			√
Native vegetation and fauna conservation	√	√	√
Revegetation		√	√
Weeds, plant pathogens and pest animals		√	√
Biodiversity and nature conservation	√	√	√

* Additional to sub-plans in Appendix O of the ERMP/draft EIS.