WA PLANTATION RESOURCES

DONNYBROOK WOODCHIP PROJECT PUBLIC ENVIRONMENTAL REVIEW

VOLUME 2 - APPENDICES

VERSION 1

MARCH 2002

REPORT NO: 2001/33

ATA Environmental
environmental scientists

WA PLANTATION RESOURCES

DONNYBROOK WOODCHIP PROJECT PUBLIC ENVIRONMENTAL REVIEW

VOLUME 2 - APPENDICES

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DONNYBROOK WOODCHIP PROJECT

PUBLIC ENVIRONMENTAL REVIEW

VOLUME 2

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APPENDIX 1

ENVIRONMENTAL PROTECTION AUTHORITY GUIDELINES, ASSESSMENT 1425

Environmental Protection Authority
Guidelines for preparation of PER

DONNYBROOK WOODCHIP PROJECT

(Assessment Number 1425)

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These guidelines are provided for the preparation of the proponent's environmental review document. The specific environmental factors to be addressed are identified in Section 4.2.

The environmental review document must address all elements of these guidelines prior to approval being given to commence the public review. The Environmental Protection Authority (EPA) expects the proponent to fully consult with interested members of the public and relevant stakeholders, and to take due care in ensuring any other relevant environmental factors, which may be of interest to the public and stakeholders, are addressed. The environmental review should document the results of all consultation undertaken.

Guidelines for the preparation of the PER document

1. Overview

All environmental reviews have the objective of protecting the environment. Environmental impact assessment is deliberately a public process in order to obtain broad ranging advice. The review requires the proponent to:

- describe the proposal;
- describe the receiving environment;
- outline the potential impacts of the proposal on factors of the environment;
- identify the proposed management strategies to ensure those environmental factors are appropriately protected; and
- demonstrate that the proposal should be judged by the EPA to be environmentally acceptable.

Throughout the assessment process it is the objective of the Environmental Protection Authority (EPA) to help the proponent to design the proposal to improve the protection to the environment. The EPA Service Unit administers the environmental impact assessment process on behalf of the EPA Board.

The primary purpose of the environmental review is to provide information to the EPA on the proposal within the local and regional framework, with the aim of emphasising how the proposal may impact the relevant environmental factors and how those impacts may be mitigated and managed so as to be environmentally acceptable.

The language used in the body of the environmental review should be kept simple and concise, considering the audience includes non-technical people, and any extensive, technical detail should either be referenced or appended to the environmental review. The environmental review will form the legal basis of the Minister for the Environment and Heritage's approval of the proposal and therefore the environmental review should include a description of all the main and ancillary components of the proposal.

Information used to reach conclusions should be properly referenced, including personal communications. Such information should not be misleading or presented in a way that could be construed to mislead readers. Assessments of the significance of an impact should be soundly based rather than unsubstantiated opinion, and each assessment should lead to a discussion of the management of the environmental factor.

2. Objectives of the environmental review

The objectives of the environmental review are to:

- place this proposal in the context of the local and regional environment;
- adequately describe all components of the proposal, so that the Minister for the Environment and Heritage can consider approval of a well-defined project;

- provide the basis of the proponent's environmental management program, which shows that the environmental impacts resulting from the proposal, including cumulative impact, can be acceptably managed;
- communicate clearly with the public (including government agencies), so that the EPA can obtain informed public comment to assist in providing advice to government; and
- provide a document which clearly sets out the reasons why the proposal should be judged by the EPA to be environmentally acceptable.

3. Preparation of the environmental review document

Proponents are encouraged to maintain close contact with the EPA officer during the preparation of the environmental review. The environmental review should be provided to the EPA officer for comment. At this stage the document should have all figures produced in the final format and colours.

The proponent and EPA officer/Manager should agree on the time to be taken to review the draft, taking into account the level of consultation during the environmental review preparation, EPA officer's availability and the need for external review. Revision of the document may be requested to ensure that it addresses all topics and issues in these guidelines, can be read by the educated lay-person, contains no significant error of science and meets the required format.

When the EPA is satisfied with the standard of the environmental review document it will provide a written sign-off to the proponent, giving approval to advertise the document for public review. The review document may not be advertised for release before written approval is received.

Following approval to release the review for public comment, the final environmental review document should also be provided to the EPA project officer as an electronic copy, in PC Microsoft Word 2000 format, and any scanned figures. Where possible, these figures should be legible and meaningful in a black and white format.

4. Contents of the environmental review document

The environmental review document should include an executive summary, introduction and at least the following:

4.1 The proposal

General requirements

The environmental review document should provide a comprehensive description of the proposal including its location (address and certificate of title details where relevant). Specific matters requiring attention are:

- justification and objectives for the proposed development;
- the legal framework, including existing zoning and environmental approvals, and decision making authorities and involved agencies; and
- consideration of alternative options.

Brief description of the proposal which is the subject of these guidelines

WA Plantation Resources Pty Ltd (WAPRES), the proponent, proposes to construct and operate a woodchip mill at Preston AA Lot 262, about six kilometres south east of Donnybrook. The proposal involves:

- a woodchip mill capable of producing 1 million tonnes per annum of woodchips;
- the transport of logs to the site by road;
- the transport of wood chips to Bunbury Port by rail; and
- the storage and export of woodchips from Bunbury Port.

The provision of a rail siding, if required, would be the subject of a separate referral.

The proposal location is indicated on the attached plan (Attachment 1).

Key characteristics of the proposal

The Minister's statement will bind the proponent to implementing the proposal in accordance with any technical specifications and key characteristics[1] in the environmental review document. It is important therefore, that the level of technical detail in the environmental review, while sufficient for environmental assessment, does not bind the proponent in areas where the project is likely to change in ways that have no environmental significance.

Include a description of the components of the proposal, including the nature and extent of works proposed. This information must be summarised in the form of a table, an example of which follows:

Table 1: Key characteristics (example only)

Element	Description
Life of project (mine production)	< 5 yrs (continual operation)
Size of ore body	682 000 tonnes (upper limit)
Depth of mine pit	less than 30m
Water table depth	50m below ground surface
Area of disturbance (including access)	100 hectares
Mine operation	Daylight hours only, Monday to Friday
List of major components • pit • waste dump • infrastructure (water supply, roads, etc)	refer 'Plans, specifications, charts' section immediately below for details of map requirements
Ore mining rate • maximum	• 200,000 tonnes per year
Solid waste materials • maximum	• 800,000 tonnes per year

[1] Changes to the key characteristics of the proposal following final approval would require assessment of the change and can be treated as non-substantial and approved by the Minister, if the environmental impacts are not significant. If the change is significant, it would require assessment under section 38 or section 46. Changes to other aspects of the proposal are generally inconsequential and can be implemented without further assessment. It is prudent to consult with the Department of Environmental Protection about changes to the proposal.

Water supply • source • maximum hourly requirement • maximum annual requirement	 • XYZ borefield, ABC aquifer • 180 cubic metres • 1 000 000 cubic metres
Fuel storage capacity and quantity used	litres; litres per year

Plans, specifications, charts

Provide adequately dimensioned plans showing clearly the location and elements of the proposal which are significant from the point of view of environmental protection. Locate and show dimensions (for progressive stages of development, if relevant) of plant, amenities buildings, access ways, stockpile areas, dredge areas, waste product disposal and treatment areas, all dams and water storage areas, mining areas, storage areas including fuel storage, landscaped areas etc.

Only those elements of plans, specifications and charts that are significant from the point of view of environmental protection are of relevance here.

Always include:

- a map showing the proposal in the local context - an overlay of the proposal on a base map of the main environmental constraints;
- a map showing the proposal in the regional context; and, if appropriate,
- a process chart / mass balance diagram showing inputs, outputs and waste streams.

The plan/s should include contours, north arrow, scale bar, legend, grid coordinates, the source of the data, and a title. The dates of any aerial photos should be shown.

Other logistics

- timing and staging of project; and
- ownership and liability for waste during transport, disposal operations and long-term disposal (where appropriate to the proposal).

4.2 The environment

Provide a description of the existing environment in a local and regional context which includes, if appropriate:

- ecosystem processes;
- biodiversity;
- existing site contamination (soil and groundwater); and
- other environmental factors / constraints that may be fatal flaws to the proposal.

4.3 Environmental factors

The environmental review should focus on the relevant environmental factors for the proposal, and these should be agreed in consultation with the EPA and relevant public and government agencies.

At this preliminary stage, the EPA believes the specific relevant environmental factors, objectives and work required for this proposal are as detailed in the table below:

CONTENT		SCOPE OF WORK	
Factor	**Issue**	**EPA Objective**	**Work required for the environmental review**
BIOPHYSICAL			
Vegetation	Clearing	Maintain the abundance and diversity of species, and geographic distribution and productivity of vegetation communities.	Undertake a flora and vegetation survey of the proposed site. Describe any clearing that is required and mitigation measures to minimise the impact.
POLLUTION MANAGEMENT			
Emissions to Air	Dust	(i) Ensure that dust generated during construction and operation does not cause any environmental or human health problem or significantly impact on amenity; and (ii) Use all reasonable and practicable measures to minimise airborne dust.	Provide details of dust emission sources during construction and operation and how these will be managed, both at the woodchip mill site and the Port. Provide details of any potential impacts and measures to minimise impacts of dust.
Other emissions	Noise	To ensure noise emissions from the plants operations are as low as reasonably practical and comply with the Environmental Protection (Noise) Regulations 1997.	Undertake noise modelling (in accordance with EPA Draft Guidance for the Assessment of Environmental Factors No. 8 – Environmental Noise) to show that noise limits are met at the boundary of the premises and at surrounding noise sensitive premises, both at the woodchip mill site and at the port. Provide details of noise management during the construction of the plant.
Water protection	Ground water quality.	To ensure that the beneficial uses of groundwater can be maintained, consistent with the Australian and New Zealand Guidelines for fresh and marine water quality (Oct. 2000) and the NHMRC / ARMCANZ Australian Drinking Water Guidelines- National Water Quality Management Strategy 1996.	Describe potential sources of groundwater contamination and proposed management measures. Show that any environmentally hazardous liquids are stored in accordance with the DEP's secondary containment policy. Describe control of leachate from woodchip storage and handling areas.

	Surface water quality.	To ensure that surface water is managed to prevent discharge of contaminated water from site or to groundwater.	Describe potential impacts on surface water and proposed management measures.
SOCIAL SURROUNDINGS			
Social Surrounds	Road transportation.	To ensure that the increase in traffic activities resulting from the project does not adversely impact on the social surroundings.	Describe the increases in traffic movements and any impacts from the increase. Describe traffic management measures.
	Social Impact	To ensure social impacts are minimised.	Undertake a Social Impact Study to determine how the proposal will affect peoples living, working and leisure environments and identify options for minimising those impacts.

These factors should be addressed within the PER document for the public to consider and make comment to the EPA. The EPA expects to address these factors in its report to the Minister for the Environment and Heritage.

The EPA expects the proponent to fully consult with interested members of the public and take due care in ensuring all other relevant environmental factors, which may be of interest to the public, are addressed.

Further environmental factors may be identified during the preparation of the environmental review, therefore on-going consultation with the EPA and other relevant agencies is recommended. The EPA Service Unit can advise on the recommended EPA objective for any new environmental factors raised. Minor matters which can be readily managed as part of normal operations for the existing operations or similar projects may be briefly described.

For discussion under each environmental factor:

- a description of where this factor fits into the broader environmental / ecological context (only if relevant - may not be applicable to all factors);
- a clear definition of the area of assessment for this factor;
- the EPA objective for this factor;
- a description of what is being affected - why this factor is relevant to the proposal;
- a description of how this factor is being affected by the proposal - the predicted extent of impact;
- a straightforward description or explanation of any relevant standards / regulations / policy;
- environmental evaluation - does the proposal meet the EPA's objective as defined above;
- if not, environmental management proposed to ensure the EPA's objective is met; and
- predicted outcome.

The proponent should provide a summary table of the above information for all environmental factors, under the three categories of biophysical, pollution management and social surroundings as shown below:

Table 2: Environmental factors and management (example only)

Environ-mental Factor	EPA Objective	Existing environment	Potential impact	Environmental management	Predicted outcome
BIOPHYSICAL					
vegetation community types 3b and 20b	Maintain the abundance, species diversity, geographic distribution and productivity of vegetation community types 3b and 20b	Reserve 34587 contains 45 ha of community type 20b and 34 ha of community type 3b	Proposal avoids all areas of community types 20b and 3b	Surrounding area will be fully rehabilitated following construction	Community types 20b and 3b will remain untouched Area surrounding will be revegetated with seed stock of 20b and 3b community types
POLLUTION MANAGEMENT					
Dust	Ensure that the dust levels generated by the proposal do not adversely impact upon welfare and amenity or cause health problems by meeting statutory requirements and acceptable standards	Light industrial area - three other dust producing industries in close vicinity Nearest residential area is 800 metres	Proposal may generate dust on two days of each working week.	Dust Control Plan will be implemented	Dust can be managed to meet EPA's objective
SOCIAL SURROUNDINGS					
Visual amenity	Visual amenity of the area adjacent to the project should not be unduly affected by the proposal	Area already built-up	This proposal will contribute negligibly to the overall visual amenity of the area	Main building will be in 'forest colours' and screening trees will be planted on road	Proposal will blend well with existing visual amenity and the EPA's objective can be met

4.3. Environmental management

The EPA expects the proponent to have in place an environmental management system (EMS) appropriate to the scale and impacts of the proposal, including provisions for performance review and a commitment to continuous improvement.

The system may be integrated with quality and health and safety systems and should include the following elements:

- environmental policy and commitment;
- planning of environmental requirements;
- implementation of environmental requirements;
- measurement and evaluation of environmental performance; and
- review and improvement of environmental outcomes.

A description of the environmental management system should be included in the environmental review documentation. If appropriate, the documentation can be incorporated into a formal environmental management system (such as AS/NZS ISO 14001). Public accountability should be incorporated into the approach on environmental management.

The environmental management program (EMP) is the key document of an environmental management system. The EMP should provide plans to manage the relevant environmental factors, define the performance objectives, describe the resources to be used, outline the operational procedures and outline the monitoring and reporting procedures which would demonstrate the achievement of the objectives.

4.4. Environmental management commitments

The final stage of the Environmental Impact Assessment (EIA) process is reached when the Minister for the Environment and Heritage issues the Ministerial Statement for the project, which is a set of legally enforceable conditions and procedures for the implementation of the project. One of the standard procedural conditions is a requirement for the proponent to implement the key commitments which have been made during the EIA process and which the EPA and the proponent wish to become legally enforceable.

It is accepted practice for a list of the proponent's key commitments to be attached to the Minister's statement, however, it is not compulsory for the proponent to make any legally enforceable commitments. The EPA will recommend conditions to address environmental matters that the implementation of the proposal should be subject to. The EPA expects proponents to implement all the commitments, which are made as part of the public review of the proposal, as part of their commitment to good environmental management.

Commitments that are to be made legally enforceable should not be made lightly and should focus on the important, on-going, high-risk issues that will need a higher level of environmental management in terms of achieving a satisfactory outcome. They would be key components within the proponent's environmental management system and would be subject to both internal (company) and external (regulator) audit processes to ensure both compliance as well as outcome.

Smaller-scale, generalised, overly-specific and/or non-controversial management actions, objectives and policies that the proponent intends to undertake in implementing the proposal (eg. return 150mm of topsoil, avoid coral reefs, minimise clearing of vegetation) do not need to be included in the list of legally enforceable commitments.

Ideally, management actions, etc, should be separated from the commitments in the public review document and they would not become specifically legally binding as would the commitments. However, the proponent would still be expected to implement these management actions as part of responsible environmental management as this is what the EPA will base its recommendations of acceptability upon.

It is important to ensure the commitments are auditable and, therefore, proponents are advised to follow a tabular format as explained below.

4.4.1. Commitment components

The commitments need to be framed in a format similar to that of the environmental conditions so that they have clarity and enforceability and, therefore, can be readily

implemented by the proponent and audited efficiently by the DEP. The required standard format for all commitments comprises a number of components as follows:

The proponent will, for a specific topic (environmental issue), undertake an action (**what, how, where**) to meet an environmental objective (**why**) to a time frame (**when**), and on advice from a relevant advisory agency (**from whom**, eg. government agencies such as Department of CALM, Department of Mineral and Petroleum Resources, Shire Council). With regard to 'advice from whom', this need only be included if the expertise and/or statutory responsibilities of the third party is relevant to implementing the commitment.

It is important for the consolidated list of commitments to be numbered correctly for easy reference in the implementation and auditing stages of the project. These should therefore be sequentially numbered 1, 2, 3, ... without use of subgroups such as 1.1, 1.2 or -2(i) or 2(a), 2(b).

4.4.2. Paragraph format

In applying the standard components (topic what, why, when, from whom) an example of a commitment in paragraph form is as follows:

Prepare and implement a Dust Control Plan that will minimise dust generation on-site and aim to prevent dust emission from construction of the foreshore extension in order to protect the amenity of nearby land users. The Plan will be prepared during the design (project planning) phase and will include measures that ensure dust levels do not exceed EPA dust control criteria (EPA, 1996). The Plan will be prepared and implemented on advice from the Shire of Widgie. The approved Plan will be implemented during the construction phase.

However, writing the commitment in paragraph form can result in a confusing or clumsy sentence structure that may be difficult to interpret for future auditing purposes. Hence, a paragraph format is not acceptable and a tabular format is now required.

4.4.3. Tabular format

It is recommended that the table column headings be titled: 'commitment number', 'topic', 'actions', 'objectives', 'timing' and 'advice from'. The example in paragraph format above can be written in tabular form as per example 1 below. Note that the tabular format also overcomes the sometimes long-winded sentence structure where there are multiple specific actions for the plan to address. Also, it is desirable to create a separate commitment for the preparation and implementation parts of the commitment. Finally, the tabular format provides an immediate audit framework for use both by the proponent and the DEP, which enables efficient administration of environmental approvals. An example of the three most common formats is given below and Example 4 shows how to rewrite a management strategy into a commitment.

Example 1. Prepare and Implement format

This is the most common format and will apply most of the time where there is an on-going need to address the issue.

No.	Topic	Actions	Objectives	Timing	Advice from*
1.	Dust management	Prepare a Dust Control Plan for the foreshore construction site which addresses: 1) prevention of dust generation; 2) prevention of dust emissions off-site; and 3) monitoring and compensatory measures to address accidental emissions off-site.	1) Maintain the amenity of nearby residents. 2) Dust levels at nearest critical premise are within EPA dust control criteria (EPA, 1996).	Design phase (prior to the start of construct-ion)	Shire of Widgie
2.	Dust management	Implement the approved Dust Control Plan referred to in commitment 1.	Achieve the objectives of Commitment 1.	During constructi on	Shire of Widgie

* this may be left blank if no advisory local or state government agency is relevant; note that the DEP or the EPA or the Minister for the Environment and Heritage are never noted in this column. They are the regulators and the commitments are to their requirements, not advice.

Example 2. Once-off Action format

This format is for actions that have a clear completion time.

No.	Topic	Action	Objectives	Timing	Advice from
3.	Fauna protection	Undertake a trapping programme, approved by CALM, for capturing and relocating the Southern Brown Bandicoots from the area to be cleared.	Relocate the Southern Brown bandicoots to an area and in a manner where the population will be protected	Design (prior to the start of ground disturbance)	CALM

Example 3. Prepare, Implement and Upgrade format

This format is for circumstances when there is a clear need to modify a plan based on a study that is yet to be completed.

No.	Topic	Action	Objectives	Timing	Advice from
4.	Waste Rock Dump	Prepare a Waste Rock Dump Management Plan that: 1) ensures natural drainage is reinstated; 2) identifies rehabilitation options and techniques; 3) achieves a visual quality objective of level 3; 4) etc.	Construct a waste rock dump that: 1) blends with local landscape; 2) is stable in the long-term; and 3) will not produce leachate that would pollute the nearby wetlands.	Prior to the start of construction of the mine	Dept. Minerals and Energy
5.	Waste Rock Dump	Implement the WRDM Plan referred to in commitments 4 and 6.	As for commitment 4.	During construction and operations	DME
6.	Waste Rock Dump	Modify the WRDM Plan referred to in commitment 4 after the Acid Mine Drainage study referred to in commitment 9 is completed and the study findings approved by the EPA.	Ensure that drainage, including subsurface leachate, does not exceed water quality criteria (NHMRC, 1999).	During operations	DME

Example 4. How to rewrite a management action, etc, into a commitment

No.	Topic	Action	Objectives	Timing	Advice from
1.	Waste material	Remove waste material which cannot be accommodated on-site due to potential changes in final design levels to an acceptable landfill. **this is a management action and is rewritten below**	To prevent contaminated material removed from the western part of the site being relocated inconsistent with the final plans for the development.	During remedial works	Shire of Widgie
1.	Excess waste material	Prepare a Waste Material Plan for any excess contaminated material that: 1) identifies the quantity and location of the material; 2) specifies the methods of removal and transport of the material; and 3) identifies the landfill site for disposal and the monitoring methods for the landfill disposal operation.	Ensure that contaminated material that cannot be contained on-site is disposed of at an acceptable landfill site.	During the remedial stage (prior to the validation stage)	Shire of Widgie
2.	Excess waste material	Implement the approved Waste Material Plan referred to in commitment 1.	Achieve the objectives of commitment 1.	After plan is approved by the DEP (during remedial stage)	Shire of Widgie

5. Public consultation

A description of the public participation and consultation activities undertaken by the proponent in preparing the environmental review should be provided. It should describe the activities undertaken, the dates, the groups/individuals involved and the objectives of the activities. Cross reference should be made with the description of environmental management of the factors which should clearly indicate how community concerns have been addressed. Those concerns which are dealt with outside the EPA process can be noted and referenced.

5.1. Availability of the environmental review

Copies for distribution free of charge

Supplied to EPA/DEP:

- Library/Information Centre 9
- EPA members 6
- Officers of DEP/EPA (Perth) 6

Distributed by the proponent to:

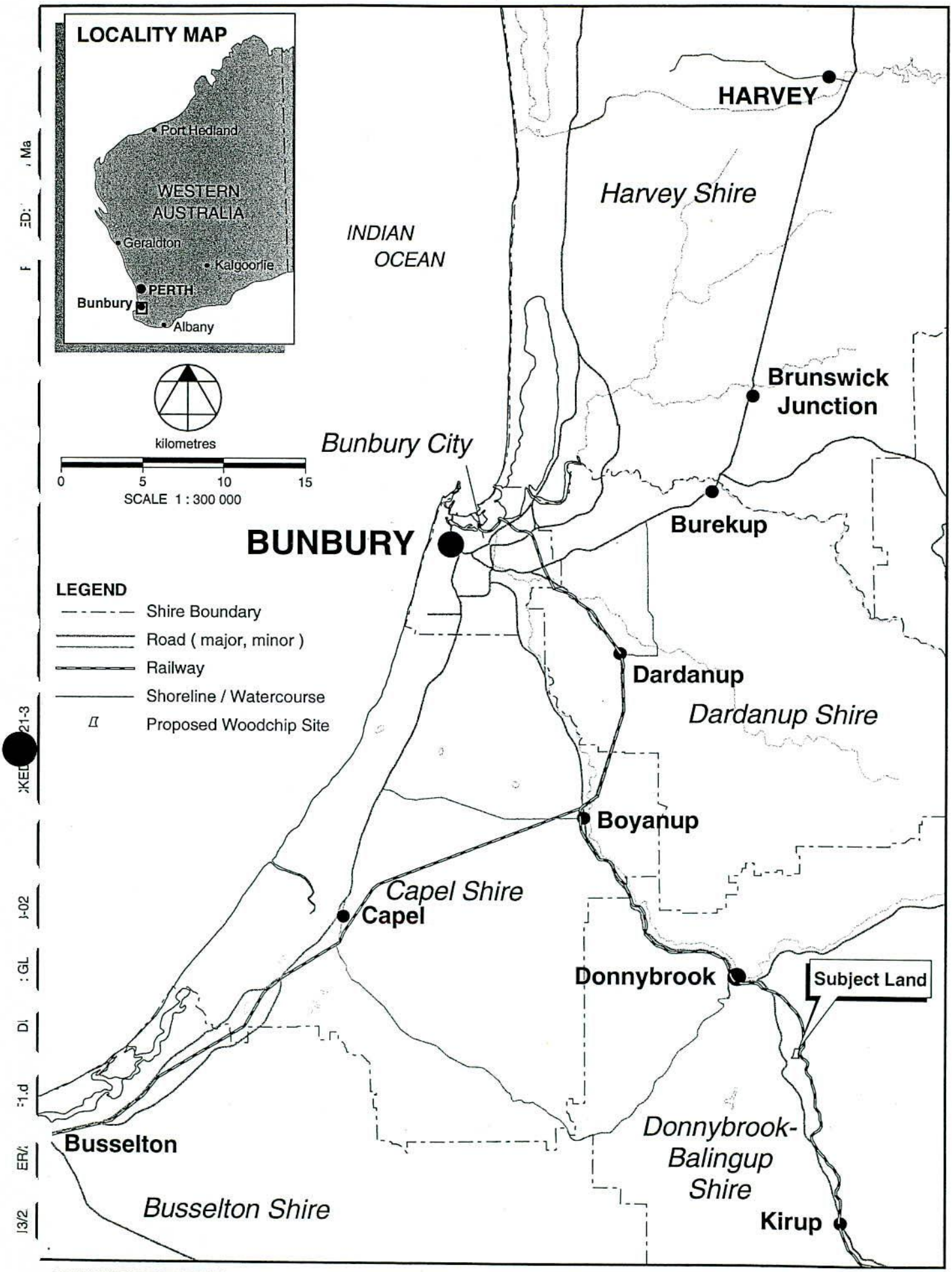
Government departments	• Department for Planning and Infrastructure ..... 1 • Department of Transport ..... 1 • Main Roads Department ..... 1 • South West Development Commission ..... 1 • DEP Bunbury Office 2
Local government authorities	• Shire of Donnybrook 2
Libraries	• J S Battye Library ..... 3 • The Environment Centre ..... 2 • Shire of Donnybrook Library 2
Others	• Conservation Council of WA ..... 1 • 1

Available for public viewing

- Department of Environmental Protection Library, Perth;
- Department of Environmental Protection Library, Bunbury;
- Shire of Donnybrook Library;
- J S Battye Library, Perth; and
- [anywhere else, for example on your website]

6. Other information

Additional detail and description of the proposal, if provided, should go in a separate section.



ATA Environmental
environmental scientists

DONNYBROOK WOODCHIP PROJECT
PUBLIC ENVIRONMENTAL REPORT

REGIONAL LOCATION

FIGURE 1

Attachment 2

The first page of the proponent's environmental review document must be the following invitation to make a submission, with the parts in square brackets amended to apply to each specific proposal. Its purpose is to explain what submissions are used for and to detail why and how to make a submission.

Invitation to make a submission

The Environmental Protection Authority (EPA) invites people to make a submission on this proposal. If you are able to, electronic submissions emailed to the EPA Project Assessment Officer would be most welcome.

[The proponent] proposes [the rezoning of land and the development of a Marina Complex in the City of Bunbury]. In accordance with the Environmental Protection Act, a PER has been prepared which describes this proposal and its likely effects on the environment. The PER is available for a public review period of [4] weeks from [**date**] closing on [**date**].

Comments from government agencies and from the public will help the EPA to prepare an assessment report in which it will make recommendations to government.

Why write a submission?

A submission is a way to provide information, express your opinion and put forward your suggested course of action - including any alternative approach. It is useful if you indicate any suggestions you have to improve the proposal.

All submissions received by the EPA will be acknowledged. Submissions will be treated as public documents unless provided and received in confidence subject to the requirements of the Freedom of Information Act, and may be quoted in full or in part in the EPA's report.

Why not join a group?

If you prefer not to write your own comments, it may be worthwhile joining with a group interested in making a submission on similar issues. Joint submissions may help to reduce the workload for an individual or group, as well as increase the pool of ideas and information. If you form a small group (up to 10 people) please indicate all the names of the participants. If your group is larger, please indicate how many people your submission represents.

Developing a submission

You may agree or disagree with, or comment on, the general issues discussed in the PER or the specific proposals. It helps if you give reasons for your conclusions, supported by relevant data. You may make an important contribution by suggesting ways to make the proposal more environmentally acceptable.

When making comments on specific elements of the PER:

- clearly state your point of view;
- indicate the source of your information or argument if this is applicable;
- suggest recommendations, safeguards or alternatives.

Points to keep in mind

By keeping the following points in mind, you will make it easier for your submission to be analysed:

- attempt to list points so that issues raised are clear. A summary of your submission is helpful;
- refer each point to the appropriate section, chapter or recommendation in the PER;
- if you discuss different sections of the PER, keep them distinct and separate, so there is no confusion as to which section you are considering;
- attach any factual information you may wish to provide and give details of the source. Make sure your information is accurate.

Remember to include:

- your name;
- address;
- date; and
- whether you want your submission to be confidential.

The closing date for submissions is: [**date**]

Submissions should ideally be emailed to

project.officer@environ.wa.gov.au

OR addressed to:

The Environmental Protection Authority
PO Box K822
PERTH
WA 6842

[Westralia Square
141 St George's Terrace
PERTH WA 6000]

Attention: [**Project Officer name**]

Attachment 3

Advertising the environmental review

The proponent is responsible for advertising the release and arranging the availability of the environmental review document in accordance with the following guidelines:

Format and content

The format and content of the advertisement should be approved by the EPA before appearing in the media. For joint State-Commonwealth assessments, the Commonwealth also has to approve the advertisement. The advertisement should be consistent with the attached example.

Note that the EPA officer's name should appear in the advertisement.

Size

The size of the advertisement should be two newspaper columns (about 10 cm) wide by about 14 cm long. Dimensions less than these would be difficult to read.

Location

The approved advertisement should, for PER's and ERMP's, appear in the Saturday edition of the news section of the main daily paper ("The West Australian"), and in the news section of the main local paper at the commencement of the public review period, and again two weeks prior to the closure of the public review period.

Timing

Within the guidelines already given, it is the proponent's prerogative to set the time of release, although the EPA should be informed. The advertisement should not go out before the report is actually available, or the review period may need to be extended.

Attachment 4 Example of the newspaper advertisement

Proponent Name

Public/ Environmental Review/and Management Programme

TITLE OF PROPOSAL

(Public Review Period: [**date**] to [**date**])

Proponent is planning to [brief description of proposal].

A Public Environmental Review (PER) / Environmental Review and Management Programme (ERMP) has been prepared by the company to examine the environmental effects associated with the proposed development, in accordance with Western Australian Government procedures. The PER / ERMP describes the proposal, examines the likely environmental effects and the proposed environmental management procedures.

[Proponent] has prepared a project summary which is available free of charge from the company's office address.

Copies of the PER/ERMP may be purchased for $10 from:

Company Name
Street
Suburb/Town WA Postcode
Telephone: (08) 9xxx xxxx

Copies of the complete PER/ERMP will be available for examination at:

- Department of Environmental Protection
  Library Information Centre
  8th Floor, Westralia Square
  141 St Georges Terrace
  PERTH WA 6000
- Relevant local libraries
- Department of Environmental Protection
  Regional Office - if appropriate

Submissions on this proposal are invited by [**closing date**]. Please email your submission to:

project.officer@environ.wa.gov.au OR address to:

Chairman
Environmental Protection Authority
PO Box K822
PERTH WA 6842
Attention: [**Project Officer name**]

If you have any questions on how to make a submission, please ring the project officer, [**Project Officer name**], on (08) 9222 7xxx.

APPENDIX 2

LIST OF KEY ASSUMPTIONS

APPENDIX 2
LIST OF KEY ASSUMPTIONS
SOUTH WEST WOODCHIP MILL STRATEGIC SITE ASSESSMENT STUDY
Final report October 2001

In response to significant public interest, an Electors Meeting was held by the Shire of Donnybrook Balingup on 31 July 2001. One of the key outcomes was to call on the Minister for Planning and Infrastructure to undertake a strategic assessment of several possible mill sites in the South West. The following assumptions were made for the purposes of assessment:

- Sites considered: Donnybrook, Kirup, Greenbushes, Hester, Wilga, Picton, Hester/Collie and Bunbury Port. A number of site specific assumptions are made that are detailed in the assessment of each option.
- All the bluegum plantation resource in the SW catchment area is contained within the DPI plantation database and will be processed by WAPRES.
- Plantations will yield 250 tonnes of green logs/ha and are harvested every 10 yrs.
- All bluegum will be transported in accordance with the Log Haul Network allotted to each option.
- Transport of timber will be in B-Doubles with a payload of 45 tonnes.
- Logs will be transported Mon-Fri on 12 hr shift basis.
- The 2006, 2007 and 2009 harvest years are indicative of transport task that will occur when the industry stabilises at around 1.5million ton per annum.
- Specific road transport and rail transport rates are set.
- Logs are converted into woodchips at a conversion rate of 93%.

The truck logistics in this referral differ from those used in the DPI report for the following reasons:

- The DPI report considers all the traffic associated with bluegum transport – not just that traffic related to the Donnybrook mill as in the PER.
- The DPI report considers different operating and trucking hours.
- The DPI report assume a Diamond mill capacity less than the WAPRES forecast.

The log haul routes assumed in both reports have minor differences.

APPENDIX 3a

COPIES OF CORRESPONDENCE FROM DECISION MAKERS IN RELATION TO THIS PROJECT

Enquiries: Peter Bromley on (08) 9725 5677
Our Ref: 600-5-1 (pb01Jul03.doc)
Your Ref: 21013_027_hs

MAIN ROADS
Western Australia

Robertson Drive
Bunbury WA 6230
PO Box 5010
BUNBURY WA 6231
ABN: 50 860 676 021
Telephone: (08) 9725 5677
Facsimile: (08) 9725 4013

Mr A H (Henk) Van Der Wiele
Director
ATA Environmental
21 Howard Street
PERTH WA 6000

Dear Sir

I refer to your letter of June 20 2001 regarding the Donnybrook Woodchip Project.

Main Roads comments on the issues raised are as follows:

Noise and Dust

Issue

Nearby residents and their homes will be affected by truck vibration impacts.

Comment

- Main Roads has an ongoing program to provide additional overtaking lanes and improve the geometry of South Western Highway between Donnybrook and Bridgetown independent of the transport requirements of plantation bluegum timber.

- WA Plantation Resources have recently met with Main Roads to discuss road issues. The discussion included the South Western Highway / Donnybrook – Kojonup Road intersection and the need for left and right slip lanes on South Western Highway at the entrance to the mill.

Public Health and Safety

Issue

Hazards to the public range from direct (collision) to indirect (road damage from heavy vehicle use).

Comment

- The only recent documents I am aware of relating to transport of plantation bluegum timber that deal directly with road condition are:

  (1) South West Region - Plantation Bluegum Timber Log Haul Road Transport Study (May 1999), and

  (2) TIRES South West - Timber Industry Road Evaluation Strategy -Log Haul Road Transport Study, Stage 2 (December 2000).

  The December 2000 report was an upgrading of the May 1999 report using more up to date timber tonnages and a more refined model for road standard.

- Pavement strength is difficult to assess without considerable investigation. To date the pavements of Local Authority roads within the South West that will be used for bluegum timber carting have not been assessed for strength. In the two reports noted above an allowance was made for pavement strengthening on roads that are known to have inadequate pavement strength. However, there are many roads for which the pavement strength is not known which may perform poorly when timber carting commences. No allowance was made for improving the pavements on many of these roads.

- To date insufficient funds have been set aside to implement all of the projects identified in the December 2000 report.

If you require any further information please contact Peter Bromley on (08) 9725 5677. In reply please quote file reference 600-5-1.

Yours faithfully

P Bromley
ASSET MANAGER

July 3 2001

Enquiries: Peter Bromley on 9725 5677
Our Ref: 600-5-1V2 (pb01Nov12.doc)
Your Ref: 21013-053-hs

MAIN ROADS
Western Australia

Robertson Drive
Bunbury WA 6230
PO Box 5010
BUNBURY WA 6231
ABN: 50 860 676 021
Telephone: (08) 9725 5677
Facsimile:

Ms Helen Sivertsen
Senior Environmental Engineer
ATA Environmental
21 Howard Street
PERTH WA 6000

Dear Ms Sivertsen

I refer to your letter 7 November 2001 and Main Roads previous comment in our letter of 3 July 2001 regarding the Donnybrook Woodchip Project.

Additional Main Roads comments on the issues are as follows:

1. Design of the intersection of the access road with South Western Highway must meet all of the requirements of Austroads Guide to Traffic Engineering Practice Part 5, Intersection of Grade. It is important in design of the intersection that the Safe Intersection Site Distance of 290m and Entering Site Distance of 500m be achieved.

2. Public Health and Safety

   In the column for Proposal Characteristics and Potential Impact there is a comment "Significant funding has already been identified to construct or upgrade critical roads". This sentence should be prefaced by the words "A need for....".

If you require any further information please contact Peter Bromley on 9725 5677. In reply please quote file reference 600-5-1V2.

Yours faithfully

D H Lee
REGIONAL MANAGER SOUTH WEST

15 November 2001

Facsimile Message

Department of Environmental Protection

South-West Regional Office
PO Box 818 Bunbury WA 6231
Tel (08) 9722 0800 Fax (08) 9791 5514

For environmental emergencies, freecall 1800 018 800

ATTENTION	Henk Van der Wiele
ORGANISATION	ATA Environmental
FROM	Guy Watson
DATE	6 July 2001
FAX NUMBER	9481 3435
PAGES	1
SUBJECT	Donybrook Woodchip Project

Henk,

As requested please comments as to the South West Regional Offices viewpoints in relation to your letter of 20 June 2001.

- Construction noise (and vibration) is touched on, but is an issue. I believe there is a need to develop up a Noise Management Plan for construction activities.
- Community consultation, especially with the local landowners is paramount. As they will be most affected by both construction and operation activities, it is important to fully explain the construction and operation plan, and provide contact details for any concerns. You may also consider assistance to undertake works on their homes as a gesture of good faith/method of noise reduction.
- I note that dieback is an issue, so this would indicate summer clearing. Accordingly, site clearing activities, with the greatest potential for dust should be undertaken when prevailing winds are away from neighbouring residences. Water carts tend not to work.
- Noise is going to be the biggest issue. Impulsive noises from chainsaws being used to clear jammed logs, reversing beepers, logs being dropped/loaded onto conveyors, train noise during shunting (engine noise and connections between railcars) and blowing of whistles at crossings/leaving the site need to be carefully addressed.
- Premises being about 300 metres away is an issue. Although you can 'engineer' a lot of problems out, I believe that you will have some unhappy neighbours, whatever you do.

I hope the above is of assistance.

South-West Regional Office
PO Box 818 Bunbury WA 6231
Tel (08) 9722 0800 Fax (08) 9791 5514

Department of Environmental Protection

Head Office:
Westralia Square
141 St Georges Terrace
Perth, Western Australia 6000
Tel (08) 9222 7000 Fax (08) 9322 1598
http://www.environ.wa.gov.au

Postal Address:
PO Box K822
Perth, Western Australia 6842

The Manager
ATA Environmental
21 Howard Street
PERTH WA 6000

Your Ref 21013_54_hs
Our Ref Pending:SW13986
Enquiries Guy Watson

Attn: Ms Helen Sivertsen

Dear Madam

DONNYBROOK WOODCHIP PROJECT

I refer to your letter dated 7 November 2001, advsing of a proposed change in location of the above project.

I offer the following comments with respect to this proposal:

- I believe the many of the same issues that applied to Reserve C7859 apply to the new site. I recognise that as the site is primarily cleared and is freehold, some of the complexities of rezoning, land tenure and clearing are less.
- I believe that it is extremely important to consult with neighbouring residences at least one kilometre from the proposed site, and to address issues they raise in any assessment documentation.
- I consider the following to be potential issues –
  1. noise from trains and from the unloading of logs,
  2. noise from vehicle movements after hours,
  3. dust during construction and operation,
  4. the increase in truck movements,
  5. vehicle access off the highway (new sealed access road?),
  6. frequency/increase in rail movements,
  7. clearing of native vegetation, and
  8. management of waste products.

I trust this advice provides you with guidance on the proposal.

Should you have any questions in relation to the above matter, please contact Mr Guy Watson at the South West Regional Office on 9722 0800 or facsimile 9791 5514.

Yours faithfully

Tim McAuliffe
ACTING DIRECTOR
ENVIRONMENTAL REGULATION DIVISION

12 November 2001

APPENDIX 3b

COMMENTS FROM KEY STAKEHOLDERS AND DECISION MAKERS IN RELATION TO THIS PROJECT

APPENDIX 3b
COMMENTS FROM KEY STAKEHOLDERS

Discussions with Water & Rivers Commission - *Wayne Tingey, Barry Halligan*

A meeting was held on 6 June 2001 to discuss the project (with reference to the initial Donnybrook site, Reserve 7859) and to seek comments in relation to the protection of water resources for both the Minninup Creek and the Bunbury Port. Questions arose to the similarity of operations (and hence impacts on the ground and surface water) of the existing Diamond Mill and the proposed Donnybrook Mill. There are a number of fundamental differences in the operations:

- Donnybrook will not have on site vehicle servicing
- Donnybrook will have minimum storage of logs and woodchips
- The quality and timber type of the logs to be handled by Donnybrook will be different (plantation logs as opposed to hardwoods, hence smaller, less dust etc) and the handling system will differ
- All Donnybrook drainage is contained and no discharge license required
- All Donnybrook water is recycled

The proponents have agreed to a number of commitments including:

- Install piezometers and undertake groundwater monitoring upgradient and down gradient of the mill site.
- Establish surface water monitoring sites upstream and downstream of the mill site on Minninup Creek. Implement a surface water monitoring program as agreed by DEWCP.
- careful management of the site during construction so as to ensure soils on the site remain stable. The timing of the earthworks, site rehabilitation and development of contingency plans in the event of exceptional rainfall events (as cause significant loss of topsoil to the creek and Preston River following an exceptional storm event several years ago.

DEWCP noted there were local water supplies that could be obtained from paleochannels surrounding (and therefore possibly within) the subject land. As the site is outside the groundwater control area, a licence to extract would not be needed.

When Preston AA Lot 262 became the preferred site, the DEWCP were sent a revised summary of the project and further comment sought.

Discussions with the Shire of Donnybrook-Balingup – Mr Robert Quinn

A meeting was held on 6 June to discuss the project and to seek comments and advice on the perceived problems. The site under consideration at the time was Reserve 7859. The following points were discussed:

- Woodchipping is not an allowable activity for Reserves under the current TPS;
- Accordingly WAPRES will, in Mr Quinn's view, need to go through a re-zoning;
- Due to statutory periods, a rezoning will take a minimum 6 months, and likely closer to 12 months.

- Council are currently processing a rezoning of reserve land to the west of the town centre. TME were engaged to complete the rezoning documentation and progress it through the system;
- Non conforming use cannot be allowed (nor would they advise this course of action be adopted) by nature of the reservation;
- Mr Quinn advised a planning consultant be engaged to progress the matter of the re-zoning.

In the recent Albany Project, Council allowed the activity without rezoning as they accepted that woodchipping constituted an agricultural activity occurring on agricultural land (freehold farm land). This cannot be applied in this case.

It is critical to obtain schedules of meeting dates for all relevant bodies (Council, MfP) and these used to develop the time lines.

When Preston AA Lot 262 became the preferred site, the Shire of Donnybrook was further consulted on zoning and planning issues.

Discussions with CALM – Mr Bob Chandler and Mr Kim Williams

A meeting was held on 13 June 2001 to discuss the project and to seek comments and advice on CALM's position on the System 6 issue relevant to Reserve 7859, the site under consideration at the time.

- CALM position is that they would prefer the Woodchip plant to be located on cleared farmland rather than in remnant vegetation. Their response will reflect this preference as a matter of principal, however they do concede the management opportunities for the balance of the subject land by leasehold conditions.

- They acknowledged the reserve did not contain a threatened ecological community, nor was it likely to be recommended for conservation through the RFA process but that it was likely to have conservation value through its linkage function.

- CALM would prefer the reserve to be vested in the Shire, and would like to have input into the vesting conditions rather than use the mechanism of a Management Order. The purpose of the vesting should reflect both the recreation and conservation (corridor) values.

- Bob Chandler has previously had meetings with the Shire over the issue of 'green initiatives' for land under Council care. The balance of the reserve managed for conservation in partnership with the Shire may meet this end.

- CALM's recommendations on the vesting conditions would include preparation and implementation of an EMP, with particular emphasis on vegetation, weed, fire and dieback management.

- CALM also raised the issue of offsetting the environmental cost of clearing approximately 10ha of remnant vegetation by purchasing a similar area of remnant vegetation which has high environmental values and donating it to the

conservation estate of WA. CALM indicated that such a commitment would remove any perception that WAPRES would benefit financially from leasing rather than purchasing the land (leasing rather than purchasing the reserve has timing advantages to WAPRES). An alternative was to contribute to the [cost of] management of adjoining bushland. They acknowledged that management of the balance of the reserve would most likely improve the environmental values of the remaining bushland.

- CALM indicated that in light of the above comments, they didn't see any major obstacles to the proposal.

Recommended Action

1. Meet with the Shire to discuss their response to the vesting of Reserve C7859 in the Shire.
2. Assuming the Shire agree to the proposal, meet with Conservation branch at the DEWCP to outline proposal.

Discussions with Department of Environment, Catchment and Water Protection - Mr Guy Watson

A meeting was held on 6 June 2001 to discuss the project and to seek comments and advice on the perceived problems. The site under consideration at the time was Reserve 7859. The following issues were discussed:

- noise with respect to site operations. Mr Watson suggested options be considered such as loading the trains in daytime hours, attenuating impulsive noises such as the dropping of logs on metal racks through equipment design and engineering solutions such as shielding the loading ramp with a pre-fabricated concrete wall softened with noise absorbent material or similar.

- confirmed shunting operations were considered premises specific and accordingly must comply with Noise Regulations;

- The DEWCP is aware of the current levels of noise from the port, especially the dozers on the woodpile and the night trains' activities. Opportunities for decreasing rail noise will be discussed further with Australian Western Railroads.

- The implications of the proposed site being a C-class reserve are that die back issues will need addressing, weed and fire control plans developed and a minimum 50m vegetation corridor maintained along the northern boundary. It was questioned whether this corridor would be enhanced by incorporating a small triangle of reserve just north of the proposed site into the C7859 block and a fauna underpass for the railway tracks (separate lease).

- Construction issues to be addressed must include dust control (especially with respect to the surrounding vineyards) and if deemed necessary dust monitors set up. The timing for clearing the land must be taken into account with respect to die-back control.

Options for dealing with oversize and undersize chips included sending them to a particle board wood factory or dedicated green waste mulcher.

When Preston AA Lot 262 became the preferred site, the DEWCP were sent a revised summary of the project and further comment sought.

Discussions with MRWA – Mr Peter Bromley

A meeting was held on 6 June 2001 1999 to discuss the project and to seek comments and advice on the perceived problems. Reserve 7859 was the site under consideration at the time. The following points were raised:

- MRD felt the SW Highway had enough capacity to handle the extra traffic of approximately 170 trucks per day. The access to the Mill site of the South Western Highway was the main concern and slip lanes of a reasonable length would be required.

- The Boyup Brook Road-SW Highway intersection is being considered for a modification in the current 5 yr plan, and could be further modified to accommodate a left slip lane / acceleration lane for trucks turning left onto the SW Highway.

- MRWA felt the increased heavy traffic at this intersection would not be an issue for other road users.

- Funding in the 5yr plan was available for upgrading, the indication from Government is that funds will be made available later rather than sooner.

- The impact on Local Authority roads (arterial roads and minor roads) could be a concern. However, this was being addressed by the TIRES process.

ATA Environmental requested vehicle count data for the SW Highway south of the proposed site and north of Donnybrook and for the Donnybrook-Kojonup Rd just east of the SW Highway intersection.

The public's concerns about the increase in heavy traffic around Donnybrook and the associated noise, vibrations and emissions are noted in Appendix 3 and the proponent's intended management plan for these potential impacts in Section 5.3.

When Preston AA Lot 262 became the preferred site, MRWA were sent a revised summary of the project and further comment sought.

APPENDIX 4

PUBLIC CONSULTATION - RESPONSE MATRIX

APPENDIX 4
DONNYBROOK WOODCHIP MILL
Issues Raised during Public Consultation
June 2001 – July 2001

NAME	ISSUES RAISED																							
	Benefit Donnybroook & Region (employment, industry, economics, community)	Support project - issues addressed thoroughly	Support rail rather than road for chip transport from mill to port	Informative project display – interesting project concept	General attitude that project will commence	Tree plantations provide an alternative to traditional farming	Tree plantation reduces dependency on logging old growth forests	Transport route for logs to Mill	Need to be kept involved at all stages of proposal & project development-community consultation most important	Flora and fauna impacts incl dieback	Uncertainty regarding proposal and possible future expansion	Road concerns – road maintenance, funding, safety, condition, tourist impact, noise and vibration of trucks	Impact of chemical use to surrounding properties	Impact of noise - increased rail & truck transport, rail frequency & timing, chip mill operation, truck reversing beepers	Water resource protection – groundwater, Minninup, Preston River , tributaries, Port	Interested in basic information regarding technical aspects of operation (logging, noise emissions)	Require justification for chosen/ preferred options	Powerlines	Train noise and movements	Affect on tourism	Visual impact of Mill or Port infrastructure eg. stockpiles	Planning approvals and rezoning issues	Light Overspill	Concern regarding land de-valuation due to Impact of mill location & associated infrastructure
C Hunt									X	X	X	X	X	X	X		X	X	X		X			X
H Reading	X						X	X				X		X	X			X						X
A Brooks			X	X			X	X	X		X	X			X		X							
C Castledine							X					X		X	X	X	X	X						X
G Ammon	X	X	X	X	X	X	X	X																
D Cooper			X	X	X	X	X	X			X	X		X			X			X	X			X
J Helsham			X	X		X	X	X	X		X	X		X	X		X	X						X
F Patane	X	X	X	X	X																			
J and R Robson												X		X	X			X	X		X		X	X
J Attwood														X	X			X						
G and E James									X	X	X	X		X	X									X
K and P White								X		X				X	X				X	X				X
D and M Bredrow	X	X	X									X		X										
A and T Campagnone	X	X																						X
A Torrisi	X		X	X	X	X						X												X
H and C Sampson									X		X	X		X										
T and P Barecca														X					X		X			
C and H Salter									X		X			X	X					X			X	X
A.Castelli									X					X										
S and S Collis		X										X		X										
G Chapman														X										
Supporters of the Donnybrook Woodchip Mill	266 signatures in support of the proposal																							

	S Keene	G Fortesque	F Coucil	J Coucil	M and M Sampson	H Tuia	J Jons	A McCutcheon	V Toohey	S Barrat	C Guallano	B Celton	D Harfield	D Louis	C Ngan	D Buchanan	T Connell	A Johnson	G Buchanan	S and D Barrett	L Hutchinson	A Clarke	J Valastro	J Bishop	C and M Beeson	E Farley	A Kerk	J Green	G Lyons
Benefit Donnybroook & Region (employment, industry, economics, community)		X				X	X	X		X	X		X		X	X								X	X	X	X		
Support project - issues addressed thoroughly						X		X			X															X	X	X	X
Support rail rather than road for chip transport from mill to port		X				X	X	X			X	X	X											X		X	X	X	
Informative project display – interesting project concept								X			X		X																X
General attitude that project will commence						X					X	X														X			X
Tree plantations provide an alternative to traditional farming						X	X	X			X	X			X	X	X									X	X		X
Tree plantation reduces dependency on logging old growth forests						X					X		X																X
Transport route for logs to Mill	X				X			X		X	X			X							X		X	X	X				
Need to be kept involved at all stages of proposal & project development- community consultation most important															X	X			X										
Uncertainty regarding proposal and future expansion																				X									
Flora and Fauna issues					X			X												X					X				
Road concerns – road maintenance, funding, safety, condition, tourist impact, noise and vibration of trucks					X					X				X	X	X	X	X		X	X			X	X				
Impact of chemical use to surrounding properties, dust issues																				X							X		
Impact of noise - increased rail & truck transport, rail frequency & timing, chip mill operation, truck reversing beepers, Port activities	X				X																				X				
Water resource protection – groundwater, Minninup, tributaries, Port								X					X																
Interested in basic information regarding technical aspects of operation (logging, noise emissions)	X									X																			X
Require justification for chosen/ preferred options										X																			
Powerlines (amenity, location, safety)					X																								
Train noise and movements																													
Affect on tourism																													
Visual impact of Mill or Port infrastructure eg. stockpiles																													
Planning approvals and rezoning issues																													
Light Overspill																													
Concern regarding land de-valuation due to Impact of mill location & associated infrastructure	X				X			X			X																		

	A Swarbrick	D Dawson	B Dawson	R Neil	P Gardiner	M Neil	T Whittington	G Mc Brearty	C Parke	J Knox	A Simms	Woodchip Mill Proposal Action Group	WRC	MRWA	DEWCP-SW Regional Office	F Patane	K Day and L Burkett	R Atherton	J O Donnell
Benefit Donnybroook & Region (employment, industry, economics, community)	X	X	X	X	X	X	X		X		X					X	X		X
Support project - issues addressed thoroughly	X	X	X	X	X	X										X	X		X
Support rail rather than road for chip transport from mill to port	X	X	X	X	X	X			X		X					X			X
Informative project display – interesting project concept		X	X	X	X	X													
General attitude that project will commence		X	X	X	X	X					X					X			
Tree plantations provide an alternative to traditional farming				X	X	X					X								X
Tree plantation reduces dependency on logging old growth forests				X	X	X			X		X						X		
Transport route for logs to Mill					X				X	X	X								X
Need to be kept involved at all stages of proposal & project development-community consultation most important			X		X				X	X					X				
Flora and fauna impacts incl dieback															X				X
Road concerns – road maintenance, funding, safety, condition, tourist impact, noise and vibration of trucks				X	X	X		X	X	X	X			X				X	X
Impact of chemical use to surrounding properties																			
Impact of noise - increased rail & truck transport, rail frequency & timing, chip mill operation, truck reversing beepers, Port activities									X	X	X				X				X
Water resource protection – groundwater, Minninup, tributaries, Port									X	X	X								X
Interested in basic information regarding technical aspects of operation (logging, noise emissions)										X									
Require justification for chosen/ preferred options																			
Powerlines									X		X							X	
Train noise and movements										X									
Affect on Tourism									X		X								
Visual impact of Mill or Port infrastructure eg. stockpiles																			
Planning approvals and rezoning issues																			
Concern regarding land de-valuation due to Impact of mill location & associated infrastructure									X		X								X

21 signatures

APPENDIX 5a

LISTING OF RECENT NEWSPAPER ARTICLES RELATING TO THIS PROJECT

APPENDIX 5a
LISTING OF RECENT NEWSPAPER ARTICLES AND MEDIA STATEMENTS REGARDING THE DONNYBROOK WOODCHIP MILL

NEWSPAPER	DATE	TITLE
ABC News Online	4/12/01	Information Sessions to discuss woodchip mill plan
Donnybrook Bridgetown Mail	27/11/01	New Woodchip Mill Proposal before Council but opposition remains despite site change
South Western Times	1/11/01	Chipmill sights still set on Donnybrook
Donnybrook Bridgetown Mail	30/10/01	Mill Trucks: New Study
www.mp.wa.gov.au/sharp/issues/buck.htm	25/10/01	Minister passes the buck on chip mill decision
www.mediastatements.wa.gov	25/10/01	Woodchip Mill Report Released
Donnybrook Bridgetown Mail	9/10/01	Face to Face on Mill
The West Australian	22/9/01	'Best' Mill site at Donnybrook
ABC News Online	21/09/01	Company won't rule out original woodchip mill site
www.mediastatements.wa.gov	19/09/01	Donnybrook emerges as leader for SW woodchip site
Manjimup-Bridgetown Times	4/9/01	Rail option favoured for chipmill
South Western Times	30/8/01	Firm chips mill 'backflip'
Donnybrook Bridgetown Mail	28/8/01	Log truck fears
Donnybrook Bridgetown Mail	21/8/01	Wilga welcome for chipmill
Media Release	17/8/01	Company remains committed to Donnybrook Mill
Manjimup-Bridgetown Times	8/8/01	MLC's parochial plea over bluegums
Donnybrook Bridgetown Mail	7/8/01	Nod of approval for chipmill plan
The South West Times	2/8/01	Mill the wrong mix for grape growers
The West Australian	2/8/01	Town fights mill plans
ABC News Online	31/7/01	Donnybrook divided over woodchip mill
Donnybrook Bridgetown Mail	24/7/01	Meeting set to discuss proposed chipmill site
Donnybrook Bridgetown Mail	24/7/01	Striving for the best of both worlds
Media Release	19/7/01	WA Plantation Resources after the best outcome for the community
Donnybrook Bridgetown Mail	10/07/01	Local businesses to benefit: Telfer
Donnybrook Bridgetown Mail	10/07/01	Chipmill should be welcomed
Donnybrook Bridgetown Mail	10/7/01	Packed house supports chipmill
Donnybrook Bridgetown Mail	4/7/01	Keep the woodchipmill in perspective
www.mp.wa.gov.au/sharp/issues/new_parl.htm	5/7/01	Progress in new parliament
Donnybrook Bridgetown Mail	3/7/01	$25million plan for SW Highway
		Chip truck traffic concern
www.mp.wa.gov.au/sharp/issues/q-01.htm	27/6/01	Question without notice
Donnybrook Bridgetown Mail	26/6/01	Mill benefits to flow on
www.mediastatements.wa.gov.au	26/6/01	Government decision ensures rail has a key role in Albany woodchip mill
www.mp.wa.gov.au/sharp/issues/endorse.htm	26/6/01	Greens endorse rail decision
www.mp.wa.gov.au/sharp/issues/no-print.htm	22/06/01	Donnybrook Chipmill debate

NEWSPAPER	DATE	TITLE
www.mp.wa.gov.au/sharp/main.htm	22/06/01	Proposed Export chipmill
South Western Times	21/6/01	Mill is a road train threat say Greens
www.mediastatements.wa.gov	20/06/01	No Confusion over rail and road in the transport of timber products
The West Australian	21/06/01	Greens Question Woodchip Mill
www.mp.wa.gov.au/sharp/issues/rail.htm	19/6/01	Donnybrook Chipmill Plan-Risks closure of the SW railway line to Manjimup
www.mp.wa.gov.au/sharp/issues/rail.htm	19/6/01	Donnybrook Chipmill Plan-Risks closure of the SW railway line to Manjimup
www.mp.wa.gov.au/sharp/issues/trucks.htm	19/4/01	Woodchip trucks threaten Donnybrook
Donnybrook Bridgetown Mail	19/6/01	Opposition to chipmill grows
Collie Mail	31/5/01	Pulp mill possible
Donnybrook Bridgetown Mail	26/05/01	Advert for Public Information day: Sat 30 June
Donnybrook Bridgetown Mail	29/5/01	Advert for Public Information days: 5,6 June
Donnybrook Bridgetown Mail	29/5/01	$10m mill
ABC News Online	28/5/01	Vineyard owner raises woodchip mill concerns
www.mp.wa.gov.au/sharp/issues/mill.htm : Media Release	28/5/01	Greens MLC calls for long term thinking on the chipmill
Media Release	25/5/01	New Woodchip Mill for WA Plantation Resources
Manjimup-Bridgetown Times	29/09/01	Wilga eyed for new mill
Manjimup-Bridgetown Times	29/09/01	But Donnybrook is still Company's preferred site
Joint Media Statement	23/05/01	Government welcomes new SW job creating plantation project
ABC News Online	23/5/01	Woodchip exporter finds site for $10m chipmill
Bunbury Mail	1/6/01	SW boost expected with new chip mill
Donnybrook-Bridgetown Mail	11/12/01	Kirup Location Is Not On -Company
Donnybrook-Bridgetown Mail	18/12/01	Public Meeting
Donnybrook Bridgetown Mail	12/3/02	Company Unhappy with Chipmill Move

APPENDIX 5b

LISTING OF RECENT RADIO BROADCASTS REGARDING TO THIS PROJECT

APPENDIX 5b
LISTING OF RECENT RADIO BROADCASTS REGARDING THE DONNYBROOK WOODCHIP MILL

DATE	TIME	RADIO STATION	INTERVIEWEES	COMPERE
31/07/01	10:00 News	6WF Perth	Keith Barnes, Gwen Fleming	Newsreader
31/07/01	Morning 10.44	6WF Perth	Public	Liam Bartlett
31/07/01	Morning 10.49	6WF Perth	Public	Liam Bartlett
31/07/01	Morning 10.51	6WF Perth	John Sanders	Liam Bartlett
31/07/01	Morning 10.57	6WF Perth	Public	Liam Bartlett
31/07/01	Morning 9:45	6WF Perth	Public	Liam Bartlett
31/07/01	Morning 9:24	6WF Perth	Keith Barnes, Gwen Fleming	Liam Bartlett
31/07/01	7.45 News	6WF Perth	Keith Barnes, Gwen Fleming	Newsreader
31/07/01	7.30 News	ABC South Coast WA Albany	Keith Barnes	Claire Dobson
31/07/01	6.30 News	ABC South Coast WA Bunbury	Gwen Fleming	Newsreader
31/07/01	6.30 News	ABC South Coast WA Bunbury	Keith Barnes	Newsreader
31/07/01	6.30 News	ABC South Coast WA Albany	Keith Barnes	Newsreader
31/07/01	6.00 News	6WF Perth	Keith Barnes	Newsreader
20/06/01	7.30 News	ABC South Coast WA Albany	Christine Sharp, Greens MLC	Craig Smart
20/06/01	6.30 News	ABC South Coast WA Albany	Christine Sharp, Greens MLC	Craig Smart
20/06/01	6.30 News	ABC South Coast WA Bunbury		Newsreader
20/06/01	6.30 News	ABC South Coast WA Bunbury	Christine Sharp, Greens MLC	Newsreader
20/06/01	6.30 News	ABC South Coast WA Bunbury	A McTiernan, Minister : Planning and Infrastructure	Newsreader
19/06/01	4pm Drivetime	ABC South Coast WA Albany	Christine Sharp, Greens MLC	Susannah Butcher
19/06/01	4pm Drivetime	ABC South Coast WA Albany	A McTiernan, Minister : Planning and Infrastructure	Susannah Butcher
28/05/01	10.41:Morning	6WF Perth		Liam Bartlett
28/5/01	7:30 News	ABC South Coast WA Bunbury	Gary Grearson	Newsreader
28/5/01	7:30 News	ABC South Coast WA Bunbury	Ian Telfer	Newsreader
24/5/01	6:30 News	ABC SW Radio WA		Newsreader
24/5/01	Country Hour 12:43	ABC North West WA Karratha	Ian Telfer	David Cussons

APPENDIX 6

LIST OF LOBBY GROUP SIGNATURES SUPPORTING THE PROPOSAL

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
[illegible] Gill	BM Gill	Donnybrook 97311065	[signature]
[illegible] Moll	"	Donnybrook	[signature]
TH READ	[illegible]	Donny Brook 97311963	[signature]
[illegible] Dawson	Mg. Director	Donnybrook 97311080	B. Dawson
KEVIN GREEN	SELF EMPLOYED	RMB 668 Donnybrook	[signature]
[illegible]n WEPPNER	BFW CONTRACTORS	Allanson 97347059	[signature]
[illegible] Tombleson	KING GIBSON LEWIS	PO BOX 290 BUNBURY 97215522	[signature]
FRANK PATANE	TRANSPORT OPERATOR	LOT 3 SW HIGHWAY. DBK 97311661	[signature]
Weston Gardiner	Logging Contractor Mechanical Contractor	PO Box 239 DBK	[signature]
[illegible]ve DILLEY	PERIVALE ORCHARDS	PO Box 137 DBK	[signature]
[illegible] FREESTONE	WESTCOAST SEAFOODS	6B Seashore mews Bunbury	[signature]
WARREN APLIN	LOUDON RURAL CONTRACTORS	RMB 587 DONNYBROOK	[signature]
NEVILLE TWAN	"	LOT 101 TREVENA RD . DBK	[signature]
[illegible] DAWSON	Dawson Contracting	RMB 601 Donnybrook 97311412	[signature]
[illegible]NE GORGES	APPLE VALLEY CAFE	PO BOX 277 DBK	Gorges
[illegible]RNER GORGES	"	"	[signature]
[illegible] Bunner	SW HIGHWAY		[signature]
MURPHY		8 CASTLE PLACE	[signature]
S HELLEY		32 PALMER ST. DONNYBROOK	[signature]
KEN FORD		3 CASTLE PLACE DONNYBROOK	K Ford
STAN		17 BAXTER ST	[signature]
DAWSON	DAWSON CONTRACTING	DONNYBROOK 97316346	[signature]

SUPPORTERS OF THE DONNYBROOK WOOD CHIP MILL PROPOSAL

NAME	BUSINESS	ADRESS/PHONE	SIGANTU
C. Turner		4 Palmer St DBK	[illegible]
T. Reading		Trigwell St East DBK	[illegible]
R. Jones		Lyalls Mill Road Cardiff	[illegible]
E. Anderson		RMB 511 DBK	[illegible]
W. Meyrick		97310818	W Meyrick
C. Norman		97310818	C. Norman
P. Gardner		97310305	[illegible]
Kevin Scott		97311538	[illegible]
B. Weston		97311511	[illegible]
PHILIP WRIGHT.		97322092.	[illegible]
MARY PATERSON		97761205	[illegible]
Kevin Paterson		97761205	K J Pat
JOHN JENDRZEJSA		97311864	[illegible]
JOHN VALASTRO		97311873	J. Valastro
L. COBLEY		97310090	[illegible]
A. HAMPTON		97546242	[illegible]
J. PARRAVICINI		97523557	J Parravicini
S Bakker		97311673	S Bakker
L Noble		97310632	[illegible]
TED/RHONDA HALL	DBK THERAPEUTIC MASSAGE CLINIC	97311486	Hall

20

23-JUL-01 10:13 DAWSON CONTRACTING 097 312064

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
P McBeauty	Cherry Date Orchard	RMB 601A Donnybrook	
G McBeauty	" "	97310385	
W Barnett	" "	"	
LAMB	4 BRIDGE ST	DONNYBROOK	
M. MARSHALL	18 CASTLE PLACE	DONNYBROOK	
M. Kishin	22 Sullet Place	Donnybrook	
Johnston		29 Smith St	
Smorra	2 Sting rd	Donnybrook	
M. Huff	Murray Court	Donnybrook	
W. Bett	Baxter St	Donnybrook	
Bett	"	"	
RHONDA GIBBS	74 Yelverton St	Donnybrook	
MATT GIBBS	"	"	
EWAN PATERSON	MEROP	PO Box 93 Donnybrook	
STEERE	MEROP		
FORWARD	RMB 552	DONNYBROOK 6239	
D Forward	20 Emerald St	Donnybrook	
[illegible]	RMB 511	Donnybrook	
J Crowley	7 Emerald St	Donnybrook	
FORWARD	20 EMERALD ST	DONNYBROOK	
Clinton Padman	—	RMB 774 Donnybrook	
ALICE HUTCHINSON	RMB 601C DBK		

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
M ASPLIN	FENCING	RMB 557 DBK 6239	[signature]
N Russell	SHOP OWNER	RMB 643 DBK 6239	[signature]
T. BEARD	Orchardist	RMB 683 "	[signature]
C. Turner	Farmer	RMB 551 DBK	[signature]
J Sincock	farming	Box 70 DBK	[signature]
P MORRISON	ORCHARD	BOX 380 DBK	[signature]
S E Forrest	Nursery	RMB 646 DBK	[signature]
I. BARNES	BOILER MAKER	MMB 538 DBK	[signature]
N. McARDLE	"	RMB 671 DBK	[signature]
D MAHONEY	TRANSPORT	PERTH	[signature]
Danny Wright	NURSERY	Boyanup	[signature]
B.T. ATHERTON	FARMER	LOWDEN	[signature]
V. BLACK	WIFE OF TIMBER WORKER	LOWDEN	[signature]
M. Coleman	FARMER	LOWDEN	[signature]
G. Barraclough		Lowden	[signature]
S Hotham	Housewife	Lowden	[signature]
D HOTHAM	LABOURER	LOWDEN	[signature]
J Gerde	FARMER	LOWDEN	[signature]
S LAING	TIMBER WORKER.	LOWDEN	[signature]
J WILDING	TIMBER WORKER	LOWDEN	[signature]
S Marret	FARMER-TRUCKS	LOWDEN	[signature]
E Lidej	Teacher	Lowden	[signature]
T. Edwards	MILKMAN	BUREKUP	[signature]

23

SUPPORTERS OF THE DONNYBROOK WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
Dwayne Moulton	D'BK TAXI	131 008	
[illegible] Marsh	Pines Tearooms	97311812	
P Llarmonti	Retired	Trowbridge Rd Lowden	
[illegible] Gardiner	Donnybrook	R.M.B 681	
Devereaux	Transport Op.	Bunbury 97914802	
W. Manektelow	Hope Estate	Po Box 512 D.B.	
A. Morrison	Sparky	Po Box 380 D.B.	
[illegible] Rose	Farmer	Lowden	
[illegible] Butler	Electrician	Kirup	
L. Milne	Sales Rep	Bunbury	
Atkins	ABK Transport	[illegible]	
P. Barnes	Welder	Lowden	
R Board	Timber Worker	DBK	
[illegible] Mountford	Tree Planting	DBK	
[illegible] Roche	Truck Driver	DBK	
Matt Gibbs	Nursery Worker	DBK	
William [illegible]	Truck Driver	DBK	
Michael Black	Timber worker	Lowden	
Grant Hebiton	Farmer	Lowden	
R Ward	Farmer	Lowden	
[illegible]	Pub	Mumby	
Kerry Newman	Tech	Yabberup	
J Betts	Plant Operator	Donnybrook	
L Ramponi	Farmer	RMB 684 DBK	

TOTAL P.01

34

24/07/01 15:06 0897718834
24/07 '01 TUE 15:16 FAX 0897718834 WA PLANTATION RESOURCES P.03
MON, 23-JUL-01 10:15 DAWSON CONTRACTING 097 312064

NEW

SUPPORTERS OF THE DONNYBROOK WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
D RAMPONI	FARMER	LOWDEN 97321266	[signature]
S. MILLINGTON.	Farmer.	97322202	[signature]
R. Hay	TEACHER	97321214	[signature]
W Lowe	Farmer	97321310	[signature]
L. Forrest	Nursery	97321297	[signature]
T. Taylor	Farmer	97321351	[signature]
D Bridle			[signature]
G. FORWARD		9732020	[signature]
GL. BOYCE	WELDER	97322101	[signature]
S. GARTON	MILLER	318201	[signature]
G. ROTHWELL		318201	[signature]
F. CARTON	COOK	97250600	[signature]
O. Anderson	ORCHARDIST	97321256	[signature]
K. SWEENEY	✓	97322044	[signature]
L SWEENEY	✓	97322044	[signature]
[illegible]	Teacher	Lowden	[signature]
R Murat	FARMER	LOWDEN	[signature]
Laurie Sweeney	A.P.O.	Lowden	[signature]
J. McLaren		Lowden	[signature]
J GIOVANETT.	Giovanett. Transport	PO BOX 246 Bunbury	[signature]
B BIDWELL	TRUCK DRIVER	LAKE GRACE	[signature]
A. BURROWS	mother	Lowden	[signature]
G R JACKSON	FARMER.	RMB 408 TOBA	[signature]
C Rasmussen	Orchardist	97321040	[signature]

SUPPORTERS OF THE DONNYBROOK WOOD CHIP MILL PROPOSAL

NAME	BUSINESS	ADRESS/PHONE	SIGANTURE
[illegible] Marsh	Pines Seasons	Donnybrook	[signature]
[illegible] Gibbs		20 Union St. DBK	[signature]
[illegible]arol King		P.O. Box 52 Donnybrook	[signature]
[illegible]n Allan	—	P.O. Box 301 Donnybrook	[signature]
[illegible] Jendrzejak		PO Box 359 Donnybrook	[signature]
[illegible]	[illegible]		[signature]
[redacted]	[redacted]	[redacted]	[redacted]
[illegible]	Argyle Home Maint.	24 Steere St	[signature]
[illegible] Skipping		Mead St	V.T. [signature]
[illegible] McMaster	Bunbury [illegible] (D'Brook)	48A St Western Hwy	[signature]
[illegible]		RMB 814 Donnybrook 9232 1121	[signature]
[illegible] Marshall	—	Donnybrook	[signature]
[illegible]		Greenbushes	[signature]
[illegible] Rogers	—	Donnybrook	[signature]
[illegible] Boston	—	Collie	R. Boston
M. Wilson	—	Donnybrook	X
[illegible] Cochrane	—	DONNYBROOK	[signature] Cochrane
[illegible]enny	—	DONNYBROOK	[signature]
[illegible]B Marsh	Pines	DBK	[signature]
[illegible] Fleming	Countrywide Emporium	DBK	[signature]

SUPPORTERS OF THE DONNYBROOK WOOD CHIP MILL PROPOSAL

NA	BUSINESS	ADRESS/PHONE	SIGANT
Mary L. Palmer		97310171	[illegible]
A Pelee		97718111	A Pelee
Hatfield		97311204	DH.
P Hudson		97311779	[illegible]
K Varley		97311624	K Varley
Dickie		97316335	[illegible]
J. WILSON		97311861	[illegible]
T. Forward.		97311566	T Forward
T. Moorby		97310632 Forge	Tony Moorby
N GLEDHILL		97310449	[illegible]
D Reed		97312289	DR
B P MARSH		97321309	[illegible]
Kerry Carnaby	milKo.	97311307	[illegible]
Stephen Carnaby	Supply Donnybrook P.O.	97311304	S [illegible]
GEOFF FURZE		97311300	[illegible]
Belinda Jeffreys.		97311824	BJ
Melanie Jewell.	Blue gum grower.	97310729	Melanie
Pauline Duffy	Tasmania	03 64282845	[illegible]
Meghan YOUNG		0409087090	[illegible]
S Baker		97316316.	Baker
B. CRACKNELL	BOTTLE SHOP	97311507	[illegible]

21

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
...E PARKER		26 UNION ST. DBK	[signature]
KEVIN FORWARD	ORCHARD	RMB 687 DBK	[signature]
...N MOUNTFORD	COMMUNICATIONS	45 EMERALD ST DBK	[signature]
Warren Rogers	Construction	42 EMERALD ST.	[signature]
JOHN ROWE	DRIVER	S S W HWY D/BROOK	[signature]
GREG FORAN	JACK OF	28 [illegible] ST	[signature]
[illegible]	WESTERN POWER	17 FLEET ST	[signature]
DICK COBBY		EMERALD ST, DBK	[signature]
...RTIN WALKER	PREMIUM JARRAH FENCING	51 EMERALD ST DBK.	[signature]
KEVIN GARDNER	TRANSPORT + CONTRACTING	RMB 681 DBK	[signature]
ROSS CHAPMAN	FARMER - FITTER	BOX 72 DBK	[signature]
[illegible]	Premium Jarrah Fencing	14 Bridge St Donnybrook	[signature]
FRED [illegible]	ORCHARD	[illegible] Rd Balingup	[signature]
[illegible]	Premium Jarrah Fencing	Balingup	[signature]
PHIL KELLY	NURSERY	P.O. Box [illegible] CAPEL	[signature]
TOM BLACKLEDGE	WOOD MILLER	P.O. Box 381	[signature]
BOB LYON	FARMER SHEARER	Po Box 43	[signature]
A. Cristaldi			[signature]
Peter Caiger		P.O. Box 103	[signature]
[illegible]		Po. Box 424	[signature]
[illegible] PROCTOR	SPRAYING CONTRACTOR	P.O. Box 98	[signature]
[illegible] GIBBS		3 MARMION ST	[signature]

22

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH;	SIGNATURE
Sue Bond		Donnybrook	
K.B. Saunders		Donnybrook	
TAMMI KENT		DONNYBROOK	
Navelle Kenny		DONNYBROOK	
Dick Britton		DONNYBROOK	
NOEL CAMPBELL		Donny Brook	
MICHAEL Bond	FORREST NURSERY	Donnybrook.	
MARGARET SAUNDERS	RETIRED	DONNY BROOK	
NEIL SAUNDERS	RETIRED	DONNYBROOK	
Roberta Meneghi		Donnybrook	
Beryl O'Callaghan		Donnybrook	
[illegible]		Donnybrook	
A Murray		DonnyBROOK	
Melinda Roberts		Donnybrook	
LENA HARTE	ART & CRAFT.	33 UNION ST DBK.	
Moya Armstrong		Donnybrook	
J. Arnold		D'brook	
S. Gregler		D/brook	
Pam Bailey		Boyanup.	
T. TAYLOR		DONNYBROOK	
E. Emberton		Donnybrook	
E. COBBY.		DONNYBROOK	

22

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH;	SIGNATURE
M. LEHMANN	RAILWAY HOTEL.	9731 1013	
. MOY		97310990	
J THOMAS	—	97311 649.	
MORRISON	—	9731 2111	
D. NELSON	D. S. NELSON ASSOCIATES	97211790	
B LEHMANN	RAILWAY HOTEL	9731 1013	
MORRISON	—	9731 2111	
BOWDEN	" "	97310033	
L R BOND	TIMBER WORKER	97310475	
. GIBBS	ELECTRICAL WORKER	97 310236	
F BOND.	RETIRED	97311889	
PATTISON	RAILWAY/H	9731 1013	
C TOOLEY	RAILWAY /H	RAILWAY HOTEL	
N. WALKER	WISE WINES — DBL DIVISION	97316349	
J SOLOMON	" "	"	
IAN BELL	SELF EMP.	0427089045	
BARB NORMAN	—	97310818.	
R BOND	P.L.C	97311351	
ICKBOLTON	—	9731 0108	
T IANYON	—	9731 1160	
M Bond	TIMBER WORKER	97311351	
DENIS PISCIONERI	FARMER.	97311814.	

NEIL

SUPPORTERS OF THE DONNYBROOK

WOODCHIP MILL PROPOSAL

NAME	BUSINESS	ADDRESS / PH:	SIGNATURE
S. BERGERSEN	PINE HARVESTERS	COLLIE	
T. J. GARDINER	FARMER	LOWDEN	
S. GARDNER	WASTE MANAGEMENT	KINROSS	
T. J. CONNELL	ADELONG (WA) P/L	R. LOWDEN	
G. ROBINSON	JUST FARMING	TREVENA RD. LOWDEN	
R. LAMB	EVERY THING	LOWDEN	
S. BOOSE	Skidder Driver	KIRUP	
D. GIARMONTA	—	LOWDEN	
Derrick Thompson	Preston Valley Hwy	Lowden	
CHRIS SHARP	MECHANICAL FITTER	DONNYBROOK	
I BARNES	BOILER MAKER WELDER	LOWDEN	
D FORREST	FARMER	LOWDEN	
N STANGER	PLANT OPERATOR	LOWDEN	
Bill GREGS	LOGGING	DONNYBROOK	
CLAYTON [illegible]	SALES REP	BUNBURY	
Kim JACKSON	FARMER	LOWDEN	
Bill Shepherdson	MILL WORK	Newlands	
Greg McALLISTER	TRUCK DRIVER	AUSTRALIND	
J. Scolari	Turf Guru	Dunsborough	
B DEVEREAUX	TRUCK OPERATOR	BUNBURY	
G K SPENCER	MARKETING	BUNBURY	
R. Bertrand	Ceiling Fixer	AUSTRALIND	
J. GOSSAR	POSSUM GULLY	NOGGERUP	
DEAN KIRK	FARMER	DONNYBROOK	

TOTAL P.01

APPENDIX 7

LIST OF LOBBY GROUP SIGNATURES OPPOSING THIS PROPOSAL

WOODCHIP MILL PROPOSAL ACTION GROUP COMMENTS

Introduction

Donnybrook has a population of 2,260 with the combined Donnybrook/ Balingup Shire population of 4,250. This proposal is addressing the planned WA Plantation Resources to develop a 1.0 million tonnes per annum woodchip mill, 2km south east of Donnybrook off the South Western Highway. The concerns listed below are compiled by the undersigned residents of Brookhampton who live in the vicinity of the proposed development. There are over 100 homes that exist within the Brookhampton area. We cannot comment on the impact on neighbouring areas of Balingup, Kirup and Lowden but our feedback would also address the issues for these residents.

Concerns

- Negative impact on Donnybrook in terms of tourism issues.
- Impact on the proposed passenger line between Manjimup, Donnybrook and Bunbury.
- Length of production (20hrs per day) and no. of days (6 dys per week).
- Light pollution.
- Impact on the quality of life of the local residents.
- Concerns relating to the impact on the tributaries into the Preston River.
- Impact on local wildlife.
- Impact on property values in the area.
- Safety issues relating to the increased volume of heavy vehicles, specifically access to the main roads into Donnybrook.
- Impact on noise levels with additional heavy vehicles and trains throughout the area.
- Deterioration of our roads within the Shire as a result of heavy vehicle damage.
- Visual polution from high voltage power transmission lines.
- Limited consultation to date including lack of consultation from the Shire Council to it's rate payers.
- No obvious benefits to the community at large.

Questions

- How many jobs are actually being recruited from the Donnybrook community?
- What is being done in relation to addressing concerns regarding the waterways?
- What is the feedback from the Aboriginal community in relation to native title and impact on the community?
- Is there a guarantee about not expanding the development in the future?
- What are the proposed benefits to the Donnybrook community?
- Is there going to be road upgrading?

- Is there going to be an increase in heavy vehicles coming through Donnybrook bringing in logs from the sites NW of the town.

Summary

The group are concerned about the close proximity of this planned mill to residential areas. It will effect the quality of life and value of properties within the area. People in the area purchased their properties for the peace, tranquility and the lifestyle which living in a country area provides. The planned Woodchip mill is abhorrent to those of us who care about our environment and lifestyle.

We cannot see that the project will being any benefits to the Donnybrook area in the short term or long term. At a Community Planning Day held in 2000, the people present believed that Donnybrook's future is in Tourism. We believe that Tourism and Industry do not mix in the same area.

Information thus far has been devisive and contradictory to those who attended the two day public information days. We are disappointed that there was only two days allocated for the public (certainly a Sat morning would have reaped a better response). Many people within Donnybrook work outside of the town and this would have limited the response.

We suggest that there are other options that would be suitable albeit more costly for the Corporation. We propose that the WA Plantation review their preferred location, in response the Donnybrook community. Other options that have been mentioned as alternatives have been Collie and Wilga which would appear to be suitable for their culture and isolation.

The Group would also like to suggest a public meeting for the residents of Donnybrook to openly discuss the project from all aspects.

13 June 2001

CONTACT PERSON : CAROLYN NGAN
9731 8001

(1) [signature] CAROLYN NGAN
(2) [signature] DEBORAH BARRETT
(3) [signature]
(4) [signature] GORDON BUCHANAN
(5) [signature]
(6) [signature]
(7) [signature]
(8) Kaye White
(9) [signature] ALEX CASTELLI
(10) [signature]
(11) Chris Salter
(12) P. Wice
(13) [signature] M.L. SAMPSON
(14) [signature] Catherine Beeson
(15) [signature] Michael Beeson.
(16) Bernice Weston
(17) [signature]
(18) Felicity Cowill
(19) Doreen Byrne
(20) P.S. [signature]
(21) [signature]

APPENDIX 8

SOCIAL IMPACT ASSESSMENT: COMMUNITY PERSPECTIVES

Proposed Donnybrook Woodchip Mill

Social Impact Assessment

March 2002

Prepared for:
ATA Environmental
21 Howard St
PERTH WA 6000

Community Perspectives
PO Box 107
MT HAWTHORN WA 6016

CONTENTS

EXECUTIVE SUMMARY

This Social Impact Assessment (SIA) has been undertaken for a proposal to develop a 1.0million tonne per annum capacity woodchip mill in Donnybrook. WA Plantation Resources Pty Ltd (WAPRES) is the proponent for the project, which has the following main components

- the mill, associated log and chip handling facilities, administrative office and access road at the Donnybrook site

- the transport of logs to the mill by truck and of the woodchips by rail to the existing woodchip export facility at the Bunbury Inner Harbour

- The expansion of the existing bluegum export capacity at the Bunbury Inner Harbour

Donnybrook is located on the South Western Highway 35km south east of Bunbury and 210km from Perth. Donnybrook sits on the banks of the Preston River, within the foothills of the southern end of the Darling Scarp. Donnybrook is widely regarded by locals as the first genuine 'rural' township of consequence south of Perth.

The Shire of Donnybrook-Balingup's population is estimated to be 4,489 (ABS 1999) and in comparison with Western Australia has a marginally younger population. According to medium series projections (MFP 2000) the population is expected to grow to 4,997 by 2016, This represents a growth rate of 11% between 2001 and 2016.

The most significant change anticipated is the relatively dramatic increase in the ageing of the population. By 2016 the population of seniors 60+ years will represent 28% of the population of Donnybrook. Concurrently, the number of babies, children and young people is expected to decline relatively significantly.

Donnybrook has a strong sense of place and identity and is very much seen as a rural agricultural working town with working class origins. Farmland, orchards, vineyards, rivers and picturesque landscapes are also key aspects of Donnybrook's character. This rural appeal has lead to the subdivisions of large farm lots and the creation of small scale farms and rural lifestyle blocks.

The wider community prizes this rural character and common values appear to relate to the environment and land, lifestyle, visual and public amenity and creating a positive future for the town.

Diversity in land use, population and interest groups is also characteristic of Donnybrook, however there is a strong sense of community and the are many examples of community initiated and driven projects.

This indicates that the community readily comes together to identify and address common issues or needs. This would also indicate that the community and social structures are relatively well developed and robust.

However, the local economy is subject to decline in relation to commodity prices and this has affected local businesses, job opportunities, and the viability of some services in the past.

Diversification of the local economy and creation of employment opportunities especially for young people is widely supported throughout the district and this proposal is considered to have the potential to achieve these positive impacts.

Viticulture is steadily becoming an important industry with major capital investment evident in the establishment of a number of new vineyards in recent years. Tourism is emerging as an industry and is of growing significance to the local economy.

This proposal exists within this human environment and has the potential to produce both positive and adverse impacts. Following the assessment of the wide range of issues, concerns and perceived social consequences of this proposal on individuals and the wider community the following potential impacts have been identified.

Rural Identity and Expectations

Impact/Issue

- Impact on rural setting
- Defacto industrial estate

Lifestyle

Impact/Issue

- Noise
    - *Mill operation*
    - *Truck/train movements*
- Air quality
- Dust
- Light overspill
- No respite
- Devaluation of land
- Recreation
- Contamination of dams
- Livelihood

Road Safety and Movement

Impact/Issue

- Traffic volumes
- Trucks converging and massing up
    - *Donnybrook – Boyup Book Rd*
    - *Intersection of Donnybrook–Boyup Brook Rd/SW Hwy*
    - *The access point to the site*
    - *South Western Highway*
- Road Safety
    - *School buses*
    - *Safety of children*
    - *Older road users*
- Noise and air quality
- Primary producers – farm operations/practices

Local Economic Capacity

Impact/Issue

- diversification of local economic base
- revitalise the local economy
- increase employment opportunities
- spin off to local business in providing service/maintenance
- encourages other businesses to establish or relocate
- increases tourism to the district
- undermines existing tourism capacity and theme

Community Cohesion

Impact/Issue

- Social cohesion
- community conflict

Community Involvement

Impact/Issue

- Information about the project
- Level of community consultation
- Identification of affected landowners

Alternative Options

Impact/Issue

- Site justification

In developing measures to reduce the adverse affects of these potential impacts, it is apparent that many of the perceived social consequence are directly attributable to potential environmental impacts identified in the EAMP, particularly in respect to noise, dust, light and air quality. Measures to manage these impacts are identified in the Public Environmental Review (PER) document. However, it is further recommended that a formal commitment be given to community involvement in monitoring and reporting via the establishment of a Community Monitoring and Advisory Committee.

Other mitigation measures have been derived from the community consultation process and other similar projects. These proposed mitigation measures have been put forward to the proponent in the context of this report and following consideration and investigation of these, the proponents commitment to mitigation measures is contained in the PER (2002).

It is recognised that notwithstanding the mitigation measures adopted by the proponent, this proposal will produce some change within the human environment and some adverse impacts are likely to occur. The degree to which the potential social impacts eventuate will largely be influenced by the extent of mitigation and management measures implemented by the proponent and other key stakeholders such as the Main Roads Department (MRWA) and the Shire of Donnybrook-Balingup.

1 INTRODUCTION

Community Perspectives has been commissioned to undertake an independent Social Impact Assessment (SIA) by ATA Environmental. The Department of Environmental Protection has requested that this SIA be undertaken in response to community concerns about the possible social impacts of a proposal to develop a woodchip mill approximately 6km south east of Donnybrook. The proposed chip mill will be located on the 18.69ha Preston AA Lot 262 about 600m from the South Western Highway. The main components of the project are:

- the mill, associated log and chip handling facilities, administrative office and access road at the Donnybrook site

- the transport of logs to the mill by truck and of the woodchips by rail to the existing woodchip export facility at the Bunbury Inner Harbour

- The expansion of the existing bluegum export capacity at the Bunbury Inner Harbour

The project is planned to commence export in the first quarter of 2003. Export tonnage will reach the equivalent of 0.75mtpa in the initial year of operation and based on current market projections, continue at 0.75mtpa. The project retains the capability to produce 1 million tpa should market demand require.

The proponents for the project are WA Plantation Resources Pty Ltd (WAPRES). WA Chip and Pulp Pty Ltd. is the subsidiary company developing the project. WAPRES is owned by the Japanese company, Marubeni Corporation. Marubeni is a large international trading house dealing in pulp, paper, woodchips and other global commodities and will be the purchaser of the woodchip product.

1.1 Scope

Social impacts are the consequences to human populations of a development or proposal that affects the ways in which people live, work, play, how they relate to one another and their capacity to meet their needs as individuals and collectively as a community or society. Social impacts include impacts involving changes to the culture, values and sense of identify within the community. The objectives of this SIA are:

- *To predict, anticipate and understand what may occur as a result of the Donnybrook Woodchip Mill that is likely to affect peoples living, working and leisure environments and general quality of life*

- *To identify how the undesirable impacts can be avoided or minimised, while also identifying options for maximising positive outcomes of the project*

The scope of this SIA does not include an assessment of the Bunbury Port aspect of the proposal and primarily relates to the community of Donnybrook and the general vicinity of the proposed site. While a project such as this has many stages from initial planning, site construction, operation and maintenance and in some cases decommissioning, these stages may have varying social impacts. This assessment primarily focuses on the operational phase of the project.

1.2 Methodology

The first phase of the project involved background research to gain an understanding and appreciation about the project. Documents and reports reviewed are referenced at the conclusion of this report and provided the initial scope of social impacts. Key stakeholders and affected interest groups were also identified at this time.

To promote public awareness and involvement in the SIA, a media release and information sheet about the SIA were prepared. A newspaper article appeared on the front page of the Donnybrook-Bridgetown Mail (26th February 2002). This article briefly explained the SIA process and offered interested stakeholders the opportunity for input.

A socio-cultural profile was also prepared to provide an overview of the existing conditions and trends associated with the human environment in which this project is proposed. Interviews, a review of relevant literature, and the Australian Bureau of Statistics (ABS) were the primary sources of data.

Following an initial review of available data, it was apparent that considerable information about the social impacts had already been collected and documented in the Environmental Appraisal and Management Plan (EAMP) Version 1 (Dec 2001). The Department for Planning and Infrastructure also documented social impacts in the South West Woodchip Mill – Strategic Site Assessment Study (Oct 2001).

Therefore, a process of issue/impact verification has been used to both confirm and identify any other potential impacts. This has involved seeking the views of the widest possible range of stakeholders allowable within the project timeline and budget. Seventeen interviews and meetings occurred involving a total of 50 individuals. Written comments were also provided from a further 9 people.

The SIA information sheet prepared for the project also contained a proforma of key questions, which served as the basis for interviews with both groups and individuals. These groups and individuals were also invited to pass this proforma on to anyone they knew who might be interested in the social impacts of the proposal. However, it was noted that given the timeframe for the completion of the SIA, a very short period was allowed for the return of these.

In developing measures to reduce the adverse affects of potential impacts, it is apparent that many of the perceived social consequence are directly attributable to potential environmental impacts identified in the EAMP. Measures to manage these impacts are identified in the Public Environmental Review (PER) document. Other mitigation measures have been derived from the community consultation process and other similar projects. These proposed mitigation measures have been put forward to the proponent in the context of this report and following consideration and investigation of these, the proponents commitment to mitigation measures is contained in the PER (2002).

2 PROJECT DESCRIPTION

In December 2000, the then Department for Resources Development released a report outlining a strategy and action plan to facilitate the development of a plantation based wood processing industry in WA. The 'Wood Processing Industry Development and Infrastructure Strategy Plan for Western Australia' (2000), provided a possible framework in which government, industry, communities and other stakeholders could develop the region into a world class plantation growing and processing area.

In addition, the report reinforced the concept of a 'three mill policy'. This envisages three major woodchip mills being established at Albany, Manjimup and Donnybrook to process bluegums in the region (DPI, 2001).

In 2001 the Department for Planning and Infrastructure undertook the South West Woodchip Mill Strategic Site Assessment Study (DPI, 2001). The localities assessed in this report were Donnybrook, Kirup, Greenbushes, Hester, Wilga, Picton and Bunbury Port.

While the study concluded that there were not big differences between each option, there was a significant variation between options. These were the number of truck kilometres generated, the location and impacts of heavy vehicle concentrations and the extent and cost of road improvements required to make an option feasible.

The study also provided key observations for each option, the observations made in respect to the Donnybrook option were:

- Generates the greatest number of truck kilometres, the lowest number of train kilometres and the lowest transport cost ($21.54 million pa)

- Requires the least amount of public investment in road infrastructure improvements. Including improvements in the Preston Valley, the amount of public funding is in the order of $2.1million

- Imposes the greatest environmental and social cost on the community, although the difference is small. Has the second lowest greenhouse gas emission cost

- Has the second lowest annual total resource cost ($23.04 million pa)

- Generates a significant increase in heavy traffic movements through the Preston Valley and Boyup Brook and a minor increase through Kirup

- Has some potential for land use conflict resulting from the density and diversity of the land use south of Donnybrook

Considerable effort has been given by WAPRES to the identification of an appropriate site for the woodchip mill. The company undertook a site selection study (ATA Environmental, March 2001) which presented a comparative environmental analysis of five potential sites within the South West Region. The initial site considered in the Donnybrook area was Reserve C7859 which lies approximately 2km SE of Donnybrook. An alternative site, Preston AA Lot 262 was later identified. Located about 4km south of the initial Donnybrook site and 6km south east of Donnybrook town, this site was considered to have the advantages of Reserve C7859 but without many of the disadvantages.

2.1 Transport of Logs to the Mill

Woodchips will be produced with logs from bluegum plantations located within a radius of 150km from Donnybrook. The plantations are widely distributed across the South West.

The plantations supplying logs to the proposed Donnybrook mill are primarily located to the north east, east and south east of Donnybrook. Most are located in the Bridgetown (19%) and Manjimup Shires (19%), and somewhat less in the Boyup (15%), Nannup (11%) and Cranbrook Shires(11%). Four percent (4%) of logs will come from within the Shire of Donnybrook-Balingup.

The logs from the plantations will be transported to the chip mill using a variety of legal truck configurations (predominantly configurations with a maximum length of 27.5m and load capacity of 45 tonnes) on private haul roads, local public roads and State funded main roads.

Initially, when the production rate is 0.75mtpa, this will require the transport of about 0.80 million tonnes of logs annually (based on 94% recovery). This equates to 35,554 truck movements annually, including return trips (or 17,777 loaded truck movements), requiring around 9 truck movements per hour (or 4.5 loaded truck movements per hour) based on 230 days per year, 17 trucking hours per day.

When the chip mill reaches full export capacity (1.0 mtpa), 1.06 million tonnes of logs will be transported annually. This equates to 47,281 truck movements, including return trips, requiring 12 truck movements per hour (or 6 loaded truck movements per hour) based on a 230 days per year, 17 trucking hours per day.

Truck transport routes from plantations to the mill will vary throughout the life of the project. The South West TIRES Report (TIRES, 2000) noted that this traffic will be distributed over approximately 1577km of local roads in addition to over 825km of State funded Main Roads.

The South Western Highway, both north and south of the mill site, is a main road with a high existing traffic volume that, based on the current road network, will carry all the logs harvested by this project.

Donnybrook-Boyup Brook Rd, connecting the South Western Highway and Mumballup town is a State Government road with a lower traffic volume where the heavy vehicle load associated with this project will add significantly to existing traffic.

The log trucks will arrive at the chip mill via a new access road from the South Western Highway across Preston AA Lots 351 and 296. The intersection of this road and the South West Highway will be designed to meet the Main Roads WA design criteria.

2.2 Donnybrook Chip Mill

The chip mill will be located on the 18.69ha Preston AA Lot 262 about 600m from the South Western Highway and 6km south east of Donnybrook. The site is situated adjacent to the existing Manjimup-Bunbury railway.

The subject land is zoned 'General Farming Pastoral' under the Shire of Donnybrook - Balingup Town Planning Scheme (TPS) No 4. Within the General Farming Pastoral zone, discretionary land uses include 'Rural Industry'. Rural industry is defined in the TPS as meaning an industry handling, treating, processing or packing primary products, grown, reared or produced in the locality and a workshop servicing plant or equipment used for rural purposes in the locality.

Site facilities will include a single chipper line and associated log handling and noise pollution abatement equipment, debarker, log crane and grab, vibrating screens and associated conveyors, reloading hopper and stockpile, administration office, maintenance and truck weighing facilities.

A railway siding of approximately 0.5km may be required to connect to the Manjimup-Bunbury Railway. The railway siding would be the subject of a separate referral by Westnet. Alternatively overhead hopper bins will load the trains.

During early (low) production, logs will be removed and stacked by a rubber tyred loader. However this function may eventually be done by crane. The log crane and grab will load logs into the chipper, with the chips leaving the chipper via conveyors. The chips are sized on an oscillating screen and stockpiled using conveyors. Hoppers will discharge the chips into rail carriages.

The woodchip mill will be designed for a 24 hours a day, 7 days per week operation. This is to allow for flexibility in the operational components. The likely hours of mill site operation are expected to be:-

Receival of logs	6:00 am to 11:00 pm
Milling operation	6:00 am to 11:00 pm
Maintenance	As required at any time (24 hours a day)
Administration	8:00 am to 6:00 pm Monday to Friday
Rail loading	Predominantly during daylight hours but could occur at any time depending upon scheduling - Rail loading operations will comply with the Noise Regulations (1997)

2.3 Transport of Chips to the Port

Locomotives will haul up to 19 bottom discharge rail wagons of woodchips to the Port. The total capacity of the train will be in the order of 800 tonnes of woodchips. The number of train movements per year could initially be as low as 3-4 new train movements/day (approx. 250dpy) on the Manjimup to Bunbury railway when the production rate is equivalent to 0.75mtpa. At full production (1.0mtpa), there will be 4-5 new train movements/day (280dpy) on a 24hour per day basis.

3 SOCIO-CULTURAL PROFILE

According to the Donnybrook Community Profile (2000) Donnybrook retains the atmosphere of a small country town, the people are friendly and there is a strong sense of community. The surrounding hinterland provides a picturesque landscape, with rolling hills, creeks and rivers, orchards and farmland, scenic views and bushland settings. The area offers a quiet rural lifestyle whilst being conveniently located near the commercial and industrial areas of Bunbury, Capel and Collie for employment and trade.

Agriculture has historically been, and continues to be, an important part of the district's economy. This includes grazing of livestock for beef and wool production, however the intensive production of fresh fruit for local and overseas markets is unique in the immediate region. Viticulture is steadily becoming an important industry with major capital investment in the establishment of a number of new vineyards in recent years. The development of industry to service the agricultural sector has been steady.

Tourism is also rapidly becoming an important industry. According to the Shire of Donnybrook – Balingup Draft Rural Strategy (2001)the Shire hosts around 10,000 tourists annually, however tourism development has generally been on a small scale and this is largely due to the lack of a comprehensive tourism strategy.

3.1 History

Prior to European settlement, the South West was inhabited by small groups of Aboriginal people, who traversed the area, gaining a living through hunting and gathering. The delicate balance created over 40,000 years between the Aborigines and the land was destroyed within a few decades of European settlement.

In 1842, five Irishmen journeyed along the Preston River in search of land to raise horses and cattle. The first venture failed, due to a lack of equipment, labour and expertise in dealing with heavily forested land. These men are credited with calling the area Donnybrook, after a town near Dublin.

A number of settlers continued to arrive in the area after the initial failure, but isolation and a shortage of labour impeded progress. This was somewhat alleviated by the arrival of convicts in 1852, and the gradual improvements in road links to Bunbury.

Settlement was given a further boost with the extension of the railway line from Boyanup to Donnybrook in 1893. The timber industry began to flourish, with many new mills established in the district. Many people came to the area looking for work.

Demand for agricultural land resulted in the huge pastoral leases being broken up. The small properties were more easily managed and brought under the plough. Cattle and horses were raised and various crops were grown. The apple industry made a modest start in 1890, later developing into a major industry with exports from 1909.

Gold was discovered in the area in 1897 but mining only lasted four years, although there have been some attempts to reopen the industry in recent years. Sandstone has been quarried since the turn of the century, with Donnybrook stone being used extensively in many Perth buildings. Properties have continued to be broken up, with the area being popular with hobby farmers. This has led to greater diversity in land use and has brought new people to the district.

The 1980's and 1990's have seen an influx of people into the area. Farmland has been subdivided for small scale farms and rural lifestyle blocks where the primary income of the land holder is not derived from agricultural use of the lot. Demand for such lots has been increasing and some of the more popular areas include Balingup, Irishtown/Argyle and the Preston Valley.

3.2 Culture

To provide a broad overview of the key elements of Donnybrook culture, a number of impressions have been drawn about local identity, way of life and sense of community. These impressions are based on information from interviews and meetings with local residents, the Draft Rural Strategy (2001), Donnybrook Community profile, the Report on Donnybrook's Community Planning Day (2000) and a briefing on the outcome of a cultural planning workshop held on 2nd October 2001 and 20th November 2001. This was provided by the Manager of Cultural Planning from the Community Arts Network who facilitated these workshops.

3.2.1 Local identity

A strong local identity is what gives a place it's character and defining features. Donnybrook is very much seen as a working town with working class origins. Farmland, the orchards, vineyards, rivers and picturesque landscapes all form key aspects of Donnybrook's identity and purpose. Donnybrook has Irish and Italian heritage, although the latter is not often reflected in the local identity.

Being the first genuinely 'rural' township south of Perth is also an important aspect of the local identity and this is a statement often reflected in material about the district. This rural lifestyle appeal and the introduction of new ventures, such as viticulture, olive groves and cottage industries has brought many new people to the district. Donnybrook's identity is therefore a changing one that is likely to reflect greater diversity over time.

With the presence of many orchards in the district, the changing of the seasons is also regarded as unique to Donnybrook's identity. Backpackers arriving in the fruit picking season are considered part of this.

3.2.2 Values

Donnybrooks core values appear to revolve around what is important to the district. However, given the high level of diversity in the population, not all people would place equal worth on these values.

Environment and Land

- Rivers and water catchment
- Sustainable land management
- Protecting the natural environment
- Bushland and forests

Lifestyle

- Peace and quiet
- Beautiful and picturesque
- Small town atmosphere
- Location – proximity to Bunbury and South West region

Visual and Public Amenity

- Scenic views and vistas
- Mainstreet
- Public places and infrastructure
- Parks and gardens

Positive Future

- Creating employment opportunities
- Diversification of the local economy
- Vibrant CBD
- Tourism

3.2.3 Diversity

With the growing diversity in population and land uses, conflicting interests arise. It was often said that there were differing interests between towns' people and farmers and also newcomers and farmers. A public workshop undertaken as part of the Draft Rural Strategy (2001) identified landuse conflicts arising from farming activities located too close to residential areas, farming activities becoming increasingly segregated and threatening the traditional mixture of landuses and the increasing subdivision of rural land as issues.

Managing diversity and balancing competing interests between towns' people, farmers, commuters, hobby farmers, people seeking rural lifestyles, businesses, industry, vineyards, orchardists and market gardeners is something that perplexes the future of the district. At the same time this diversity can present new opportunities, including a wider skill and economic base.

3.2.4 Sense of Community

While Donnybrook has divided on major issues in the past, there is a positive sense of community. Community organisations are active and there are many excellent examples of initiatives that demonstrate Donnybrook's capacity to come together in addressing common issues and goals. The Donnybrook River Improvement Group, the local newspaper and the Mainstreet Project are examples of these. Efforts are also underway to establish a community bank.

Many community driven initiatives are evident in the range of environmental groups such as the Argyle Lake Preservation Group and Ribbons of Blue project.

In the past, Donnybrook has experienced a pattern of 'losing things' such as banks and various industries, businesses closing in the CBD and so on. This is not dissimilar to many rural towns with a predominantly agricultural industry that is susceptible to fluctuations in commodity prices.

However, 'keeping what we have got' is an attitude that is significant to Donnybrook's culture. Promoting the town, attracting new businesses and industry and improving the town's appeal is seen as a way of doing this.

Business groups and associations are also active. The local Chamber of Commerce has a membership of 100 and there is a keen interest to develop the local economy and to develop the tourism potential of the area.

Cultural planning initiatives are growing, reflecting a district that is keen to develop its cultural resources and sense of identity. A wide range of associations, formed mainly around agricultural pursuits further suggests that the community of Donnybrook is relatively active and comes together readily to address common issues.

3.2.5 Community Resources

Donnybrook has a relatively extensive range of community resources with over 23 different sporting clubs and pursuits. These include water polo, tai chi, gym for seniors, golf, bowls, soccer and football.

Service clubs and organisations are also well represented in Donnybrook, particularly fire brigades. There is also a Women's Business and Professional Club, Masonic Lodge, RSL and pensioners league.

Education is provided to Year 10 and those students wishing to complete the TEE must travel to Bunbury. Bunbury offers the South West Regional College of TAFE with Edith Cowan University located on the same site. Within the community there are also students being home schooled.

Health services include general practitioners, a 20-bed hospital with an operating theatre, labour ward and X-ray facilities and a range of allied services. The Donnybrook Community Profile (2000) provides a comprehensive listing of community networks, social infrastructure and services.

3.3 Demographics

With the results for the Australian Bureau of Statistics 2001 Census yet to be released, the 1996 Census has been used as primary source of data for this demographic profile. All tables are provided (Appendix 1) and a summary of key characteristics follows.

3.3.1 Population Projections and Trends

Medium scenario population projections prepared by the Department of Planning and Infrastructure (2000) indicate that the Shire of Donnybrook-Balingup is expected to grow by 11% between 2001 and 2016.

Future projections indicate that the population will continue to age. This trend is indicative of worldwide population trends resulting from longer lifespans, declining birth rates and the ageing of the 'baby boomer' generation. By 2021, seniors (60+) will make up almost a quarter of Western Australia's population.

The population of seniors aged 60+ years in the Shire of Donnybrook-Balingup will increase dramatically to an anticipated 28% in 2016. Those aged 50-59 will also increase, from 11% to 18%. As a result, by 2016 almost half of the population in Donnybrook-Balingup is expected to be over 50 years old. Concurrently the numbers of babies and children is expected to decline from 17% to 11%, young people will decline from 16% to 10%. The number of 20-39 and 40-49 years olds will also decline but to a lesser extent.

3.3.2 Age and Gender

According to the Australian Bureau of Statistics (ABS) 1996 Census the Shire of Donnybrook–Balingup population was 4,003 and the median age 34 years. Most recent population estimates indicate that the Shire of Donnybrook-Balingup's population was 4, 489 in June 1999.

A breakdown by age group and gender reveals that young families and singles aged 20-39 years make up just over a quarter of the population. Babies and children (0-9years), Young people (10-19years) and those aged 40-49years each account for a 17% share of the population. In comparison with WA, the Shire of Donnybrook-Balingup has a marginally younger population.

3.3.3 Household Type

The predominant household type is a couple with children, accounting for 57% of all households. Almost 20% of households consist of a couple without children and 9% are one parent families. Almost 7% of households consist of one person. By comparison with WA the Shire of Donnybrook has more couples with children, fewer lone and group households and about the same proportion of one parent families.

3.3.4 Income

Thirty one percent of the population in the Shire of Donnybrook-Balingup earns less than $159 per week, while 8% earn $800 per week or more. Males are over represented in the higher income brackets in comparison to women, with 13% of males and 3% of females earning $800+ per week. Females are over represented in the lower income levels, 31% of females earn $156 per week or less compared to 23% of males.

Overall weekly incomes are lower in the Shire of Donnybrook-Ballinup in comparison to WA. There are fewer people in the Shire of Donnybrook-Balingup in the higher income brackets particularly for males where 13% of males earn $800+ per week compared to 19% of males in WA.

3.3.5 Occupation

The most predominant occupations in the Shire of Donnybrook-Balingup are Managers and Administrators (22%), Professionals (13%), Labourers and Related Workers (13%), Immediate Production and Transport Workers (12%) and Tradespersons and Related Workers (12%).

By comparison there are significantly fewer Managers and Administrators in WA (9%), while the Shire of Donnybrook-Balingup has more persons employed in occupations related to Intermediate Production and Transport and Labourers and Related Workers'. Elementary Clerical, Sales and Service Workers make up 5% of the workforce compared to 9% for WA.

3.3.6 Industry

According to Table six the most predominant industry in the Shire of Donnybrook-Ballingup is Agriculture Forestry and Fishing, employing 28% of the workforce, followed by Education (10%), Manufacturing (9%), Retail Trade (8%) and Wholesale Trade (6%). Almost half (48%) of those working in Agriculture Forestry and Fishing are 55 years and over.

The most common industry for 25-34 year olds is education with 82% of this age group employed in this sector. Young people aged 15-19years (27%) are most commonly employed in the retail trade sector, followed by Agriculture Forestry and Fishing (15%) and Wholesale Trade (14%).

By comparison WA employs 5% of the workforce in the Agriculture Forestry and Fishing and significantly more people in the Retail Trade and Property and Business Services industry compared to the Shire of Donnybrook-Ballinup.

3.3.7 Labour Force status

Age by labour force status indicates that there are 1705 persons in the labour force in the Shire of Donnybrook-Balingup. Of those unemployed, 27% are aged 25-34years and a further 26% are aged 35-44years. A further 17% are aged 45-54 years. In comparison with WA the Shire has fewer unemployed young people but has considerably more older unemployed people. Unemployment is typically longer term with older age groups.

4 SOCIAL IMPACTS AND MITIGATION

Social impacts can vary, ranging from desirable to adverse, in scale and extent of duration and in intensity or severity. The cumulative effects of impacts and the equity or distribution of impacts across the population are also important considerations.

Where a proposal has become controversial, attitudes and perceptions toward that project becomes an important variable that must be considered in determining the significance of the impact. A paper prepared on guidelines and practices for social impact assessment (1994) by the US Department of Commerce highlights that the 'social construction of reality' or the formation of perceptions and emotions is characteristic of all social groups, including the agencies involved in the project and the communities affected.

During controversies, participants are often tempted to dismiss the concerns of others as being imagined or perceived. The two important reasons not to omit such concerns are firstly, positions taken on all sides are likely to be shaped by perceptions (differing) of the project and the decision to accept one set of the perceptions while excluding another, may not be defensible.

Secondly, if the agencies involved asserts that its critics are 'emotional' or 'misinformed', for example, it is guaranteed to raise the level of hostility between itself and community members and will stand in the way of successful resolution of the issues and impacts. A community's attitudes and perceptions before a proposal is implemented will also tend to predict attitudes and perceptions afterwards.

Key common perceptions considered relevant to this assessment have therefore been included, however this does not imply the entire community shares these perceptions, but rather that these perceptions occur with some frequently or were widely shared by a particular stakeholder or interest group.

In developing measures to reduce the adverse affects of these potential impacts, it is apparent that many of the perceived social consequence are directly attributable to potential environmental impacts identified in the EAMP, particularly in respect to noise, dust, light and air quality. Measures to manage these impacts are identified in the Public Environmental Review (PER) document.

However, it is further recommended that a formal commitment be given to community involvement in the monitoring of environmental impacts via the establishment of a Community Monitoring and Advisory Committee.

Other mitigation measures have been derived from the community consultation process and other similar projects. These proposed mitigation measures have been put forward to the proponent in the context of this report and following consideration and investigation of these, the proponents commitment to mitigation measures is contained in the PER (2002).

4.1 Rural Identity and Expectations

Donnybrook is considered to have an overriding rural identity and character. There is a widely occurring perception that Shire of Donnybrook-Ballingup has long promoted the area as such, and that the Draft Rural Strategy (2000), which is currently before the Western Australian Planning Commission, reinforces this. This Strategy was prepared following consultation with relevant government agencies and the local community. Under this Strategy, the proposed woodchip mill is within the Central Precinct. The general objectives for this precinct are to:

- Maintain the rural character and vistas offered by the precinct
- Encourage the development of appropriate agricultural activities, subject to adequate servicing availability
- Encourage low-density tourism associated with the agricultural activity, e.g. farmstays, bed and breakfasts, etc
- Focus low-key tourism developments around Kirup and along major roads, especially developments in proximity to popular areas of State Forest, and along major roads i.e. Upper Capel Road, Ryalls Road, Thomson Brook Road and South Western Highway

This rural character is further reflected in the increasing subdivision of large land holdings to create rural lifestyle blocks offering peace and tranquility and high lifestyle values. This has been a growing aspect of Donnybrook's real estate market since the 1980's and has resulted in an influx of new residents who expect this rural character to be maintained.

The Brookhampton area, in which the mill is to be sited, is one such area where small rural subdivisions have been created, the Preston Valley is another. In these areas many expressed the view that they would never have purchased their block if they knew there was any possibility of a mill, or any other industry being allowed into the area.

A number of vineyards have also established their ventures based on this rural identity and ambience and have invested significant capital accordingly. This has occurred upon the understanding that the land is zoned 'General Farming Pastoral' under the Shire of Donnybrook - Balingup Town Planning Scheme (TPS), and as such, this would prohibit the possibility of any industrial developments in the area.

While it has been argued that the proposed mill could be considered a 'rural industry' under the TPS, there is a commonly occurring perception that the operation of the mill and the associated transport task is a contradiction and impediment to the rural character and identity of Donnybrook.

Further to this, there is wide concern that while this proposal only relates to a chip mill, this sets the precedent for further industrial expansion on the proposed site, as well as adjoining properties to include other related timber or transport industries. There is further fear that this could potentially spread to the land adjacent to the site in the future, with the end result being the creation of a 'defacto industrial estate'.

Impact/Issue

- Impact on rural setting
- Defacto industrial estate

Suggested Mitigation

I. *Mitigation measures against potential adverse impacts on the rural identity and character should be considered in the detail design and operation of the mill. These measures could involve screening the mill, vegetation buffers, noise, dust and lighting control.*

II. *Pollution impacts should be controlled at source. However where this is not technically or economically feasible, it is recommended that an expanded buffer zone should be secured to reduce adverse impacts further.*

III. *Implementation of the proposal will have the effect of concentrating heavy road transport in the vicinity of the mill site. An increase in heavy vehicle traffic potentially impacts the rural identity and character of the area and this would require measures to minimise traffic volumes, particularly on the Donnybrook-Boyup Brook Rd and South Western Highway.*

IV. *Concerns about the possibility of further industrial development on the mill site in the future should be addressed with an open and direct account by the proponent in regard to any future plans and possibility of further industrial expansions on the site. In respect to industrial development on adjacent land, it is not possible to predict this with any certainty, however with the precedent set by the proposed mill, the approval of similar or related industries could not be ruled out with any certainty.*

V. *It is recommended that potential adverse impacts of the operation of the mill and transport task on rural and agricultural industries, including viticulture be monitored and proactively addressed by the proponent in partnership with these industries*

4.2 Lifestyle

The quality of lifestyle Donnybrook offers is highly valued and largely relates to the relative peace and quiet of the district, picturesque landscape and environmental features such as the air quality, bushland and rivers. The cumulative effect of noise from both the mill operations, truck and rail movements, dust and light overspill, heavy vehicle movements and the sight of the mill itself has the potential to adversely impact on this quality of lifestyle.

In addition to the cumulative effect of these impacts, a potential 24 hour, 7 day a week operation offers little respite. This further exacerbates the effect of these impacts. With a perceived reduction in the lifestyle quality, devaluation of land prices is a potential impact.

Those living in close vicinity to the proposed mill are likely to be most affected and it is evident that this proposal has already created a great deal of stress and anxiety for some people in this area. This is not limited to the immediate vicinity of the mill site and would appear to include those living within a wider radius of the mill (approximately 2kms) who believe they will also be affected by the mill operation, particularly noise.

At a meeting of the Brookhampton Action Group, it was reported that contact had been made with the resident living nearest (2.5kms) to the Albany Woodchip Mill who advised that he could hear the mill and that the light overspill keeps him awake at night.

While this has not been substantiated with the person concerned, it is understood that the Albany Woodchip mill has received no complaints and the lights are switch off at 10pm. However, some concern amongst residents is predictable in light of this information, coupled with their own awareness of at what distances they can hear noise, for example emanating from machinery building a dam 2kms away or traffic on the highway 1km away and its comparative severity.

Regardless of what commitments the proponent makes in relation to the management of environmental impacts, the proponent has a legal responsibility (under the Environmental Protection Act 1996) to manage the projects to within certain criteria (noise or dust emission levels) and to not impact on the health, welfare and amenity of members of the community. Council has some delegated powers (in relation to such matters as noise) under the Environmental Protection Act.

The recreation use and benefits derived from walk and horse trails, including the Old Brookhampton Rd were also considered potentially adversely impacted, particularly for local children.

The contamination of the water catchment and the effects particularly on local dams has a significant potential impact and it was acknowledged that while this might not happen immediately, the lifetime of the mill is indefinite. The potential for accidents at or near the mill site involving trucks rolling over, diesel and chemical spills and the like were a concern.

The impact was heightened for those land owners reliant on their dams for both irrigation and domestic supply. Any potential contamination of dam water would also have an impact on the livelihood of primary producers.

There are also potential impacts on the livelihood of some local cottage industries and artists living in the close vicinity of the mill site who rely on the rural ambience in some way with their work. Other aspirations also relying on this rural ambience and high visual appeal to establish ventures such as an olive grove and tasting, craft studios and bed and breakfast operations were considered potentially effected.

The devaluation in land values and prices was considered a significant potential impact, particularly amongst landowners in the Brookhampton and Preston Valley area. However other landowners may also be affected.

Impacts/issues

- Noise
    - Mill operation
    - Truck/train movements
- Air quality
- Dust
- Light overspill
- No respite
- Devaluation of land
- Recreation
- Contamination of dams
- Livelihood

Suggested Mitigation

VI. *It is recommended that WAPRES identify proposed measures to manage the noise, air quality, dust and light overspill associated with this proposal. A Complaints Register is also suggested.*

VII. *In the event that these measures are unable to achieve satisfactory mitigation for those landowners in closest proximity to the mill, a commitment should be made to further measures to reduce the adverse impacts of the mill. In the event that impacts on surrounding communities cannot be managed, these measures should include house treatments or purchase to form part of the buffer.*

VIII. *With a potential 24hour, seven day a week operation, there is little respite from the potential impacts of noise from the mill operation and truck or train movements. This exacerbates the adverse impact of these factors considerably. It is recommended that the feasibility of reducing proposed operating hours should be considered to avoid impact during sensitive times.*

IX. *With varying perceptions about noise impacts, it is recommended that additional education and 'user friendly' information on noise levels proposed by the operation of the mill, from various distances and with comparative noise levels for other commonly known noise generators be developed.*

X. *With the recent commissioning of an equivalent wood chip mill in Albany, it is recommended that Landowners living in the vicinity of the mill and Council/other interest residents be given an opportunity to visit the mill to gain a practical appreciation of how the mill is likely to impact on their lifestyle.*

XI. *A Community Monitoring and Advisory Committee should be established to allow community issues to be fed back to the proponent during the construction and operation phase. The committee should be presented with regular monitoring reports on noise, dust, air and water quality.*

XII. *As impacts on land value is a major concern in the community, WAPRES may consider the development and implementation of a system for monitoring and quantifying the impact of the proposal on land values as an ongoing measure. This should include compensation methods for the devaluation of land.*

XIII. *Further consultation with the residents in Brookhampton should occur to identify any affected walk and horse trails and where possible these should be preserved or reinstated.*

4.3 Road Safety and Movement

The bluegum plantations from which the woodchips are to be produced are widely distributed in the South West and at full capacity this proposal will involve the transportation of 1.06 million tonnes of logs per annum to the mill site. This will generate 47,281 truck movements, including return trips. The products of these plantations (logs or chips) will be transported on public roads to eventually be delivered to the Port of Bunbury. Implementation of a centralised processing mill will have the effect of concentrating a significant proportion of this traffic at a single location, with resulting increases in heavy road traffic.

Impacts on roads and adjacent residents will vary depending on the locations of plantations being harvested at the time. However, critical feeder routes, such as the Donnybrook - Boyup Brook Rd and the South Western Highway, can be anticipated to carry a disproportionate amount of heavy traffic associated with this project. The South Western Highway, both north and south of the mill site, is a main road with a high existing traffic volume that, based on the current road network, will carry all the logs harvested by this project.

The significant increase in heavy vehicle traffic and the potential impacts on road safety and movement are considered the most significant on:

- Donnybrook – Boyup Book Rd
- Intersection of Donnybrook–Boyup Brook Rd/South Western Highway
- The access point to the site on the South Western Highway
- South Western Highway

Key concerns appear to be traffic volumes, trucks converging and massing up on roads, intersections and the access point to the site, noise and pollution. Those most affected are likely to be residents (400) living in the Preston Valley area, whom are particularly concerned about the safety of children and the impacts on the school bus service. Similar concerns were also identified by residents living on South Western Highway. Road safety is the responsibility of the State Government (Main Roads WA) who will consider additional risks resulting from implementation of this proposal and provide this advice, including recommendation for mitigation (e g road reconstruction, realignment, passing lanes etc) to the EPA.

While designated school bus set down areas have been proposed this would require parents to drive their children to these areas leading to a further increase in traffic. Parents without access to a vehicle would also be disadvantaged.

Pedestrians, cyclists and older people were considered at particular risk in respect to heavy vehicle traffic. People over the age of 60 years are expected to increase significantly to make up 28% of the Shires' population by 2026.

The impact of these factors is exacerbated by a commonly reoccurring view that the existing roads were inadequate in dealing with the current level of traffic, particularly heavy vehicle movements and consequently present a public hazard, without adding further to the traffic. Generally, the road improvements proposed and the Government funding of $2.1 million were considered likely to gain marginal improvements only, while falling significantly short in addressing current needs, without considering the increase in traffic volumes and roads usage generated from this proposal.

Impacts/issues

- Traffic volumes
- Trucks converging and massing up
    - Donnybrook – Boyup Book Rd
    - Intersection of Donnybrook–Boyup Brook Rd/South Western Hwy
    - The access point to the site
    - South Western Highway
- Road Safety
    - School buses
    - Safety of children
    - Older road users
- Noise and air quality
- Primary producers

Mitigation

XIV. Various measures to manage the potential impacts on road safety, noise and air quality are identified in the PER. However the adverse impacts of a significant increase in heavy vehicle traffic remains a major concern. It is recommended that WAPRES consult with MRWA and Council to identify further measures to reduce the volume of traffic, particularly on the Donnybrook-Boyup Brook Road.

XV. The construction of one set of overtaking lanes, partial road realignment and the construction of three slipways is proposed for this road, together with improvements to the South Western Highway intersection. However, this scope of work was commonly considered of limited merit in achieving adequate road improvements to cater for the increase in heavy traffic and public safety on this road. Opportunities to increase the scope of road improvement should be further addressed in conjunction with the MRWA and Council.

XVI. Designated set down areas are proposed for school buses. It is recommended that further consultation with parents, schools and bus operators should occur in determining the most appropriate location for these.

XVII. Road safety and movement is also a potential impact for primary producers in transporting produce off their property. This impact is heightened for those operating on both sides of a road where their operation requires frequent crossing of the road in moving machinery, stock or in attending to irrigation pumps, plant and equipment. It is recommended that affected primary producers should be identified and a proactive approach taken to address these issues.

4.4 Local Economic Capacity

The proposal is considered to have a potential positive impact on business confidence and the diversification and revitalisation of the local economy. From an economic and financial outcome, there are direct benefits to the families employed either directly in growing the trees, producing or transporting the woodchips or indirectly through related support or service areas.

Based on the maximum mill production capacity of 1 million tonnes per annum, it is estimated that the mill will employ directly:

- up to 28 full time permanent employees on site, two shifts of up to 14 people per day (20 full time permanent employees at 0.75 million tonnes per annum); and

- 2-3 full time equivalent contractors to service/maintain the mill.

The lack of employment opportunities confronts many rural communities. In Donnybrook the lack of employment opportunities for young people is a significant issue and often results in the early separation of young people from their families. Few opportunities are perceived to exist for job training, particularly in trade apprenticeships. The demographic profile for Donnybrook also indicates that employment amongst older or long term unemployed people may also be an issue.

The project has an annual requirement in the order of $1.5 million worth of repairs and maintenance on the plant. Local contractors will do the majority of the servicing. Equipment needs, where possible, will be supplied by local business. This project may encourage other supplier and machinery related businesses to relocate to Donnybrook as the town is well placed in terms of access to the plantation resource in the South West.

The impact that this proposal has on tourism is potentially positive and adverse. While the tourism potential of Donnybrook was widely considered in it infancy, a chip mill was considered inconsistent with the emerging theme of Donnybrook's tourism capability which to date generally relates to cottage industries, arts/craft, viticulture, scenic and lifestyle values. At the same time, there was also a reoccurring perception that these tourism capabilities could co-exist with the proposed chip mill and its tourism potential.

The Strategic Site Assessment Study (2000) indicated that while the tourism appeal of the mill itself is recognised, there is a requirement to consider and manage the mixing of tourism traffic with any concentration of heavy vehicle, particularly along the South Western Highway and Preston Valley. The South Western Highway was further recognised as a primary tourism road linking the South West to the Great Southern.

Impacts/Issues

- diversification of local economic base
- revitalise the local economy
- increase employment opportunities
- spin off to local business in providing service/maintenance
- encourages other related businesses to establish or relocate
- increases tourism to the district
- undermines existing tourism capacity and theme

Suggested Mitigation

XVIII. To maximise the potential benefits to the local economy the mill needs to operate as an integral part of the local economy. It is recommended that opportunities for maximising the employment of local people at the mill be considered, together with ways of ensuring local businesses can achieve a high share in providing for the repairs and maintenance, service and equipment needs associated with the mill. The advice of the Community Monitoring and Advisory Committee should be sought in this.

XIX. *Positive tourism benefits primarily relate to attracting people to the district to view the mill in operation. This provides an alternative to traditional tourism opportunities. It is recommended that the potential of this tourism market should be developed further should there be demand. This could include an interpretative centre/ display at the mill site in the wider context of a sustainable timber industry.*

XX. *Adverse impacts generally relate to the increase in heavy traffic movement and the reduction in scenic resources. This does have the potential to undermine the existing tourism capability and development opportunities. It is recommended that WAPRES consult with MRWA and Council to identify further measures to reduce the volume of traffic, particularly on the Donnybrook-Boyup Brook Road.*

XXI. *Without a comprehensive tourism strategy for the district, the impact on the existing tourism capability is difficulty to assess with any certainty. Given that tourism is a growing part of the local economy, the impact this project has on this should be assessed, it is recommended that tourism trends be monitored and managed in conjunction with Council, the Community Monitoring and Advisory Committee and other key tourism operators.*

4.5 Community Cohesion

The community of Donnybrook is polarised about the proposed woodchip mill. Hostility has arisen between individuals and groups, this has affected friendships, relationships between children and participation in various community activities.

On the one hand, there are those who believe the proposal will bring great hope, benefit and future to the district, particularly to the local economy. On the other hand, there are those who believe their lifestyle and livelihood will be seriously affected by the proposal.

During the field visit it became evident that this group was commonly seen as opposed to the woodchip mill and to the progress of the district. However, there was almost universal agreement amongst this group that a mill was needed and would bring potential benefits to the district. However, the proposed location was considered to have too many adverse impacts, particularly in comparison with other sites identified in the Strategic Site Assessment Study (2001).

While these two extremes exist, it is also apparent that others are yet to form a view and others are indifferent to the proposal. However, there appeared widespread agreement on the environmental benefits of developing a sustainable timber industry in protecting soil from water erosion, salinity control and water resource protection.

Impacts/Issues

- Social cohesion
- community conflict

Suggested Mitigation

XXII. Polarised views are a relatively typical occurrence in a community characterised by diversity in land uses and human populations. However, polarised positions within a community have an adverse impact on the social cohesion. A careful and proactive approach should be taken to ensure that the way in which the project proceeds, promotes equanimity between all parties.

4.6 Community Dividend

While there is a reoccurring perception that the proposed mill will generate benefits to the local economy and importantly secure more employment opportunities, some believed the benefits maybe overstated and questionable.

A reoccurring perception acknowledges that while there may be some benefits, the proponent stands to make a significant profit out of the district, at a cost and imposition to the wider community. It was often suggested that the proponent should contribute to the required road improvements and maintenance costs generated from this proposal as mitigation measures in respect to traffic impacts. At the same time, others were concerned that if too many impositions and conditions were placed on the proposal then Donnybrook might lose the mill. It was also noted that the proponent was supporting a number of local initiatives including the Apple Festival and this was often consider a positive benefit to the community.

Impacts/Issues

- Questionable benefits
- Cost to the community

Suggested Mitigation

XXIII. The local economy is anticipated to benefit from this proposal and these benefits should be demonstrated and reported annually, to include the number of local people employed, and the proportion and value of work placed with local businesses.

XXIV. It is recommended that community support brought about by implementation of this proposal be formalised. A Community Development Program is an appropriate mechanism to coordinate interaction, provide financial and 'in kind' support to local community based initiatives such as projects that promote the local identity, road safety initiatives, tourism initiatives, community events, services and organisations. It is recommended that this Community Development Program be developed in conjunction with the Community Monitoring and Advisory Committee and Council and should be established during construction and the first two years of operation

4.7 Community Involvement

Community consultation was initiated in May 2001 by the proponent and has involved stakeholder meetings, newspaper media releases, radio interviews, public information days and displays. Briefings with several groups and discussion with landowners have also occurred. The involvement of the community in developing the proposal led to the modification of several aspects of the project. The Shire of Donnybrook-Ballingup has also engaged in a number of community consultation initiatives and public meetings. Local action groups have also organised public meetings in their own right.

While the level of community consultation could be considered as relatively comprehensive, other reoccurring perceptions indicate that:

- The full discussion of all the issues and impacts has been restricted in some public consultation forums

- The views of those most adversely affected by the proposal have not been adequately considered

- A more comprehensive approach should be taken to community involvement in this proposal, particularly in respect to decisions which are likely to have an impact on peoples lives

The Brookhampton Action Group (49 members) and the Preston Valley Safe Road Group (40 members) have been formed to oppose this proposal. These two groups are particularly aggrieved by the level of community consultation and information about this project. Some mistrust of both the Shire and proponent is also evident.

This is reflected in the view held by both of these groups that the residential density of both areas have been understated by the use of maps for the site location plan that are out of date, in that many subdivisions that have occurred are not drawn on these maps. The suggestion that this site has a lower residential density than the previously proposed site is therefore disputed.

Impacts/Issues

- Information about the project
- Level of community consultation
- Identification of affected landowners

Suggested Mitigation

XXV. It is recommended a Community Register be developed which will detail the individuals and stakeholder groups to be kept informed during the construction and operation of the project and include proposed strategies to do so. This should include the general community, those living in the vicinity of the mill, those on main transport routes, primary producers and business operators. This Community Register should be formulated in consultation with the Community Monitoring and Advisory Committee and should include methods for resolution of issues and complaints.

XXVI. It is further recommended that target communities that may be impacted by this proposal should be clearly defined and any maps used should reflect an accurate perspective of these. A 1km radius was drawn around the proposed site to identify affected land owners for the Shire's notification of this proposal and 22 landowners were identified within this 1km radius. In mapping the location of families who believe they will be impacted, a 2km radius from the site is more likely to define this target community.

XXVII. Ongoing consultation and liaison should occur with the Brookhampton Action Group and the Preston Valley Road Safe group to ensure that key issues identified by these groups are adequately addressed.

4.8 Alternative Options

There is a perception that better sites, with fewer negative impacts exist within the Shire of Donnybrook – Balingup. This is evident particularly from those living in the Preston Valley and Brookhampton areas.

The Strategic Site Assessment Study indicates that the area south of Donnybrook is more likely than other sites to draw objections from neighbouring land users because the area is relatively concentrated in terms of agricultural land uses, particularly viticulture, and lifestyle rural residents. Notwithstanding this observation, any site considered for a considerable change in land use is likely to elicit a negative response from the affected community regardless of the location.

Kirup was the most commonly suggested alternative site option, on the grounds that Kirup was traditionally a mill town, there would be fewer affected landowners and the benefits would still flow to the businesses and local economy in Donnybrook. There was also a view that the main reason the Donnybrook site is favoured is because it is the lowest cost option for the proponent.

While the Kirup site option is outside the scope of this assessment, this site is mentioned because it was consistently put forward as a mitigation measure in terms of reducing the impact of the increase in heavy traffic on the Donnybrook - Boyup Brook Road and the South Western Highway.

Impacts/Issues

- Site justification

Suggested Mitigation

XXVIII. As the Kirup site was consistently put forward as a more appropriate site to locate the chip mill, it is recommended a precise publication will be prepared to explain the rationale for the selection of the Donnybrook site. This will be made available to each household in Donnybrook.

5 CONCLUSION

It is recognised that notwithstanding the mitigation measures adopted by the proponent, this proposal will produce some change within the human environment and some adverse impacts are likely to occur. The degree to which the potential social impacts eventuate will be largely determined by the extent of mitigation and management measures implemented by the proponent and other key stakeholders such as the Main Roads Department (MRWA) and the Shire of Donnybrook-Ballingup.

6 REFERENCES

Environmental Appraisal and Management Plan - Donnybrook Woodchip Mill Project Version 1, ATA Environmental Report, December 2001.

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Western Australia Tomorrow – Medium Series Population Projections, Ministry for Planning, 2000.

Shire of Donnybrook-Balingup: http:// www. donnybrook-balingup.wa.gov.au

APPENDIX 1

DEMOGRAPHIC TABLES

Table 1. Population Projections

Age Distribution	Shire of Donnybrook-Balingup									
	1996		2001		2006		2011		2016	
	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
Babies &Children										
0-9 years old	712	16.8%	587	13.0%	528	11.0%	505	10.5%	533	10.7%
Young People										
10-19 years old	693	16.3%	743	16.5%	678	14.1%	542	11.3%	489	9.8%
Young Families/Singles										
20-39 years old	1,109	26.1%	995	22.1%	1,051	21.9%	1,071	22.3%	1,124	22.5%
Parents with teenagers										
40-49 years old	717	16.9%	847	18.8%	812	16.9%	651	13.6%	575	11.5%
Empty nesters										
50-59 years old	481	11.3%	666	14.8%	841	17.5%	932	19.4%	878	17.6%
Seniors										
60+ years old	537	12.6%	664	14.7%	891	18.6%	1,098	22.9%	1,398	28.0%
Total	4,249	100.0%	4,502	100.0%	4,801	100.0%	4,799	100.0%	4,997	100.0%

Table 2. Age and Gender

Age (Years)	Donnybrook-Balingup				WA
	Male	Female	Persons	%	%
0-4	158	141	299	7.4%	7.1%
5-9	200	190	390	9.7%	7.5%
10-14	211	216	427	10.6%	7.6%
15-19	130	129	259	6.4%	7.3%
20-24	87	75	162	4.0%	7.5%
25-29	111	106	217	5.4%	7.7%
30-34	118	162	280	6.9%	7.9%
35-39	165	210	375	9.3%	8.1%
40-44	204	168	372	9.2%	7.7%
45-49	155	152	307	7.6%	7.2%
50-54	136	123	259	6.4%	5.3%
55-59	98	90	188	4.7%	4.3%
60-64	87	64	151	3.7%	3.6%
65-69	48	58	106	2.6%	3.4%
70-74	48	44	92	2.3%	2.8%
75-79	22	20	42	1.0%	1.9%
80-84	18	33	51	1.3%	1.3%
85-89	10	21	31	0.8%	0.7%
90-94	3	3	6	0.1%	0.2%
95-98	3	0	3	0.1%	0.1%
99 years and over	0	3	3	0.1%	0.0%
Overseas visitor	6	7	13	0.3%	0.8%
Total	**2,018**	**2,015**	**4,033**	**100.0%**	**100.0%**

Table 3. Household Type

Household Type	Donnybrook-Balingup		WA
	Person	*%*	*%*
Couple family with children:			
Husband , Wife Or Partner	1,113		
Child under 15	932		
dependent student(15 - 24)	134		
Non-dependent child	132		
Total children	1,198		
Other related individual	6		
Total	***2,317***	***57.5%***	***50.5%***
Couple family without children:			
Husband , Wife Or Partner	763		
Other related individual	6		
Total	***769***	***19.1%***	***17.6%***
One parent family:			
Lone Parent	143		
Child under 15	156		
dependent student(15 - 24)	18		
Non-dependent child	53		
Total children	227		
Other related individual	0		
Total	***370***	***9.2%***	***9.5%***
Other family	16	0.4%	1.0%
Unrelated individual living in family household	14	0.3%	0.7%
Group household member	50	1.2%	3.3%
Lone person	267	6.6%	8.0%
Visitor (from within Australia)	109	2.7%	3.7%
Not applicable(a)	103	2.6%	4.9%
Overseas visitor	15	0.4%	0.7%
Total	**4,030**	**100.0%**	**100.0%**

Table 4. Income

Weekly Income	Donnybrook-Balingup		WA	Donnybrook-Balingup		WA	Donnybrook-Balingup		WA
	Male	%	%	Female	%	%	Persons	%	%
Negative income	35	2.4%	0.5%	19	1.3%	0.6%	54	1.9%	0.6%
Nil income	62	4.3%	4.3%	123	8.5%	7.8%	185	6.4%	6.1%
$1-$39	18	1.2%	1.2%	62	4.3%	3.7%	80	2.8%	2.4%
$40-$79	20	1.4%	1.7%	81	5.6%	4.9%	101	3.5%	3.3%
$80-$119	34	2.3%	2.3%	85	5.9%	4.5%	119	4.1%	3.4%
$120-$159	161	11.1%	9.4%	187	12.9%	11.4%	348	12.0%	10.4%
$160-$199	99	6.8%	6.6%	142	9.8%	10.4%	241	8.3%	8.5%
$200-$299	144	9.9%	8.2%	240	16.6%	13.9%	384	13.2%	11.1%
$300-$399	158	10.9%	8.0%	166	11.5%	10.4%	324	11.2%	9.2%
$400-$499	148	10.2%	9.8%	84	5.8%	8.4%	232	8.0%	9.1%
$500-$599	118	8.1%	9.1%	64	4.4%	6.4%	182	6.3%	7.7%
$600-$699	102	7.0%	7.1%	28	1.9%	3.9%	130	4.5%	5.5%
$700-$799	81	5.6%	6.2%	27	1.9%	2.7%	108	3.7%	4.4%
$800-$999	105	7.2%	8.0%	34	2.3%	2.3%	139	4.8%	5.1%
$1,000-$1,499	62	4.3%	7.4%	7	0.5%	1.2%	69	2.4%	4.2%
$1,500 or more	24	1.7%	3.5%	6	0.4%	0.5%	30	1.0%	2.0%
Not stated	71	4.9%	5.9%	90	6.2%	6.1%	161	5.6%	6.0%
Overseas visitor	9	0.6%	0.8%	4	0.3%	0.9%	13	0.4%	0.9%
Total	**1,451**	**100.0%**	**100.0%**	**1,449**	**100.0%**	**100.0%**	**2,900**	**100.0%**	**100.0%**

Table 5. Occupation

Occupation	Donnybrook-Balingup		WA
	Persons	%	%
Managers and Administrators	381	22.5	9.0
Professionals	229	13.5	16.0
Associate Professionals	141	8.3	11.0
Tradespersons and Related Workers	196	11.6	14.0
Advanced Clerical and Service Workers	48	2.8	4.0
Intermediate Clerical, Sales and Service Workers	138	8.1	16.0
Intermediate Production and Transport Workers	205	12.1	9.0
Elementary Clerical, Sales and Service Workers	83	4.9	9.0
Labourers and Related Workers	224	13.2	9.0
Inadequately described	16	0.9	1.0
Not stated	33	1.9	2.0
Total	**1,694**	**100.0**	**100.0**

Table 6. Industry

Industry	Donnybrook-Balingup		WA
	Persons	%	%
Agriculture , Forestry and Fishing	481	28.3%	4.9%
Mining	70	4.1%	3.7%
Manufacturing	158	9.3%	10.1%
Electricity, Gas and Water Supply	20	1.2%	0.9%
Construction	73	4.3%	7.2%
Wholesale Trade	108	6.4%	5.7%
Retail Trade	134	7.9%	13.5%
Accommodation , Cafes and Restaurants	37	2.2%	4.3%
Transport and Storage	40	2.4%	4.0%
Communication Services	15	0.9%	1.7%
Finance and Insurance	17	1.0%	3.3%
Property and Business Services	74	4.4%	9.9%
Government Admin. and Defence	50	2.9%	4.1%
Education	162	9.5%	7.3%
Health and Community Services	112	6.6%	9.4%
Cultural and Recreational Services	18	1.1%	2.1%
Personal and Other Services	40	2.4%	4.0%
Non-classifiable economic units	15	0.9%	1.5%
Not stated	73	4.3%	2.4%
Total	**1,697**	**100.0%**	**100.0%**

Table 7. Labour Force Status

Age	Employed		WA	Unemployed		WA
	Persons	%	%	Persons	%	%
15-19 years	109	6.4%	7.4%	11	9.1%	15.1%
20-24 years	108	6.3%	11.4%	17	14.0%	19.1%
25-34 years	308	18.1%	24.7%	33	27.3%	25.4%
35-44 years	558	32.7%	26.5%	31	25.6%	19.2%
45-54 years	415	24.3%	20.9%	20	16.5%	13.0%
55-64 years	153	9.0%	7.7%	9	7.4%	7.6%
65-69 years	30	1.8%	0.8%	0	0.0%	0.3%
70-74 years	17	1.0%	0.3%	0	0.0%	0.1%
75+ years	7	0.4%	0.2%	0	0.0%	0.1%
Total	**1,705**	**100.0%**	**100.0%**	**121**	**100.0%**	**100.0%**

APPENDIX 9

FLORA AND FAUNA ASSESSMENT OF PRESTON AA LOT 262

WA PLANTATION RESOURCES

VEGETATION AND FLORA ASSESSMENT, LOCATION 262, DONNYBROOK

VERSION 1

NOVEMBER 2001

REPORT NO: 2001/148

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Document No: 21013_FL_002_sg_V1

Report No: 2001/148

Checked by: Signed: 

Name: Shaun Grein Date: 30 November, 2001

Approved by: Signed: 

Name: Paul van der Moezel Date: 30 November, 2001

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1. INTRODUCTION

1.1 Purpose of Assessment

WA Plantation Resources propose to develop a 1.0 million tonnes per annum (mtpa) woodchip mill on Location 262, Donnybrook, which is located approximately 6km south-east of the southwest Western Australian town of Donnybrook. Logs for the woodchips will be sourced wholly from Bluegum (*Eucalyptus globulus*) plantations established on private farmland within a radius of about 150km from Donnybrook, and transported by truck to the mill site off the South Western Highway, adjacent to the Manjimup-Bunbury Railway line.

Location 262 is primarily pasture with remnants of native woodland in the southwest and central portions of the site.

This report presents the results of a flora and vegetation survey and fauna habitat assessment of the site for the proposed woodchip mill at Location 262, Donnybrook.

The primary objectives of the vegetation and flora survey were to determine:

- native and introduced flora present at the site;
- principal vegetation types within the site;
- condition of the vegetation at the site; and
- presence of any rare or otherwise significant flora and fauna species that may require special conservation measures.

2. METHODOLOGY

2.1 Vegetation and Flora

The flora and vegetation survey of the proposed woodchip mill site was undertaken on 26 October 2001. The proposed plant site is situated on the largely cleared agricultural Location 262, Donnybrook. The site comprises two stands of remnant native vegetation (approximately 3.2ha and 2.7ha in area), with scattered trees in the cleared farmland. A thin strip of vegetation that follows the boundary of the railway from the NE corner of the block southwards for approximately 400m and a 200m section of the Old Brookhampton Road (Road No. 2506) Reserve, which runs along the western and southern boundary providing access to the rail corridor for service vehicles, were also surveyed. The entire site was traversed on foot to record all vegetation types and plant species.

A search was made of the Department of Conservation and Land Management (CALM) Threatened (Declared Rare) Flora and Priority Species List and the Western Australian Herbarium Specimen databases for the area approximating the study area (CALM, 2001) (Appendix 2). Five significant species were recorded in the area (Table 1).

TABLE 1
PRIORITY FLORA IDENTIFIED IN THE VICINITY OF THE STUDY AREA

Species/Taxon	Cons. Status	Distribution	Vegetation/Soil Types	Flowering Period
Acacia flagelliformis	4	Harvey, Bunbury, Busselton, Donnybrook	Occurs in swamps on the Coastal Plain and near water courses of the Whicher and Darling Ranges.	May - Aug
Acacia semitrullata	3	Yallingup, Donnybrook, Collie	Jarrah, Marri Low Woodland with Christmas trees, Snotty Gobble, Candle and Bull Banksia. White sand over laterite.	May - Sept
Caustis sp. *Boyanup*	1		Woodland, Candle Banksia, Woody Pear, Snotty Gobble, Woolly Bush, Dasypogon. White/grey sand.	
Drosera marchantii ssp. *marchantii*	4	Collie, Stratham, Donnybrook	Woodland/Forest	Aug-Oct
Tetratheca parvifolia	3	Brookhampton	Jarrah/Marri over Hakea lissocarpha, Balga, Buttercups. Gravel over laterite.	

2.2 Fauna

A fauna habitat assessment of the proposed woodchip mill site was undertaken on 26 October 2001 and native vertebrate fauna species from the study area were recorded by way of opportunistic sightings. A search of CALM's Threatened Fauna database in the vicinity of the subject land identified several Schedule and Priority Taxa occurring

in the vicinity of Location 262, Donnybrook (Appendix 3). These included 4 Schedule 1 species (Long billed Black Cockatoo, Short billed Black Cockatoo, Western Ring Tailed Possum, Chuditch), 1 Priority 2 (Barking Owl), 1 Priority 3 (Brush-tailed Phascogale), 7 Priority 4 (Quenda, Black or Black Gloved Wallaby, Rakali or Water Rat, Crested Shrike Tit, Masked Owl, Forest Red Tailed Black Cockatoo, Square tailed Kite) and 2 Schedule 4 (South West Carpet Python, Peregrine Falcon).

Specially Protected Threatened Fauna are defined pursuant to Section 14(2) of the *Wildlife Conservation Act 1950*, and are listed in *Wildlife Conservation (Specially Protected Fauna) Notices* that are published periodically in the Government Gazette. Schedule 1 designates fauna, which are "rare or likely to become extinct", and Schedule 4 designates fauna, which are "otherwise specially protected" but are not considered to be rare or likely to become extinct.

The Priority Fauna list is a working list maintained by CALM and is regularly updated. Species included on the list do not have any special protection afforded them, other than that conferred to all native fauna under the *Wildlife Conservation Act, 1950*. Species included on the list are noted as species in need of monitoring or for which there are insufficient data to justify inclusion in a *Wildlife Conservation (Specially Protected Fauna) Notice*.

3. RESULTS

3.1 Vegetation

3.1.1 Vegetation Complexes

The study area is located in the Darling Botanical District and Menzies Subdistrict of the Southwest Botanical Province. The Menzies Botanical Subdistrict encompasses the southern jarrah forest region and is further divided into nine vegetation systems according to patterns in topography, pedology and/or geology (Beard, 1981).

The study area includes vegetation representative of the Kirup and Balingup Vegetation Complex. The Kirup Complex is concentrated around the Donnybrook and Kirup townsites whereas the Balingup Complex is found throughout the southwest of WA on the eastern side of the Darling Plateau.

According to the Regional Forest Agreement Vegetation Complex mapping (Mattiske *et al.*, 1998), the Kirup Complex is dominated by an Open Forest to Woodland of Jarrah (*Eucalyptus marginata* ssp. *marginata*) with Marri (*Corymbia calophylla*), Candle Banksia (*Banksia attenuata*) and Woody Pear (*Xylomelum occidentale*) on sandy slopes in the humid zone. The Balingup Complex is found in the valley slopes and is dominated by an Open Forest of Jarrah and Marri on the slopes and Woodland of Flooded Gum (*E. rudis*) on the valley floor in the humid zone.

3.1.2 Vegetation Types

The vegetation types occurring over Location 262 are illustrated on Figure 2. Approximately fifty percent of the site has been cleared of native vegetation and replaced with pasture for grazing sheep and cattle.

In general terms, the predominant native vegetation type over Location 262, Donnybrook and the Road No. 2506 road reserve is Marri dominated Open Forest to Open Woodland. Jarrah occurs sporadically in the association within the two larger remnants on the site and in greater densities within the Road No. 2506 road reserve.

Prominent middle stratum understorey species of the Marri Open Forest to Open Woodland association includes the Woody Pear, Honey Bush (Hakea *lissocarpha*), Zamia Palm *(Macrozamia fraseri),* Snotty Gobble (*Persoonia longifolia*), Stinkwood (*Jacksonia sternbergiana*) and Grasstree (*Xanthorrhoea preissii*). Species including Camphor Myrtle (*Baeckea camphorosmae*), Purple and Yellow Flags (*Patersonia occidentalis* and *P. umbrosa* ssp. *xanthina*), Tassels (*Sowerbaea laxiflora*), *Acacia extensa*, *Astroloma pallidum,* Couch Honeypot (*Dryandra lindleyana*), Yellow Buttercups (*Hibbertia hypericoides*) and *Bossiaea ornata* were prominent in the lower stratum. Jarrah and Marri saplings were also in moderately high densities within the fenced remnant. The Jarrah/Marri Open Woodland that fringes the railway line along the eastern boundary of the property is dominated by Bracken Fern (*Pteridium esculentum*), with scattered Honey Bush and Swan River Myrtle (*Hypocalymma robustum*).

Recent fencing off of the larger remnant has resulted in several understorey species being re-established within the remnant. Road No. 2506, which is a sand/gravel track, runs along the western and southern boundary of the site while a rail reserve track lies along the eastern border providing access to the rail corridor for service vehicles.

3.1.3 Vegetation Condition

The vegetation condition at the site is described according to the following rating scale (Government of WA, 2000).

TABLE 2
VEGETATION CONDITION SCALE

Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species. Weeds are non-aggressive species. Indications of disturbance includes; damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.
Very Good	Vegetation structure altered by obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to the vegetation structure caused by very frequent fires, the presence of very aggressive weeds, clearing, dieback and grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora composed of weed or crop species with isolated native trees or shrubs.

Although the vegetation structure within the study area has been modified as a result of activities associated with stock grazing, the two remnants that overlie the site are in good condition with disturbance impacts associated with weed invasion, grazing and logging. Several sizeable areas of the invasive weed Lupin (*Lupinus* sp.) are scattered throughout the cleared pasture area. There was no evidence of Dieback (*Phytophthora* sp.) in the area.

In general, weed invasion is restricted to the pastured portion of the site, where dense patches of Lupin (*Lupinus* sp.), Blowfly Grass (*Briza minor, B. maxima*), Flatweed (*Hypochaeris glabra*) were the most common weeds recorded during the site investigation and were found scattered over parts of the site. In addition, Bracken Fern (*Pteridium esculentum*), although native to WA, forms dense stands along the rail corridor to the exclusion of other native flora.

3.2 Flora

A total of 76 species were recorded from Location 262, Donnybrook. This included 66 native species and 10 introduced species. A complete list of the species recorded is provided in Appendix 1. The majority of these taxa were recorded from the vegetated portion of the Road No. 2506 road reserve, which has been relatively unaffected by grazing pressures and remains largely intact. The floristic diversity within the reserve was significantly greater than that of either the fenced or presently grazed remnants on the site. The road reserve has important local conservation values and functions, including its provision as a vegetated corridor between other areas of remnant vegetation to the north and south and allowing for the movement of fauna between these remnants.

The dominant families were the Proteaceae (Banksia family, 10 species), the Papilionaceae (Pea family, 8 species) and the Orchidaceae (Orchid family, 6 species). Five of the orchid species were recorded from the large remnant of Marri dominated woodland situated in the middle of the site. This comparatively high number can be attributed to the fact that the remnant has been fenced off from stock for the past two years

3.2.1 Significant Flora

No Declared Rare or Priority taxa were recorded from the study area. *Tetratheca hirsuta*, which was recorded from the Marri dominated Forest remnant in the central portion of the site, is similar in appearance to and often mistaken with the Priority 3 taxa *Tetratheca parvifolia*, which has previously been recorded from the vicinity of the study area.

3.3 Fauna

During the course of the habitat survey, 8 species of bird were recorded, including the Common Bronzewing (*Phaps chacoptera*), the Red-capped Parrot *(Purpureicephalus spurius*), Brown Honeyeater (*Lichmera indistincta*), the Australian Magpie (*Gymnorhina tibicens*), the Australian Raven (*Corvus coronoides*) and the Willie Wagtail (*Rhipidura leucophrys*). Species that are commonly recorded from disturbed land including farmland that were observed from cleared areas of the site included the Australian Ringneck (*Barnardius zonarius*) and the Yellow-rumped Thornbill.

Although no other native vertebrate fauna species were recorded during the survey, the Western Grey Kangaroo is likely to pass through the site. Echidnas are likely to occur on the site, with an abundance of termites noted in the fallen timber as well as termite mounds as is the Brush-tailed Possum. Bat species may use tree hollows for roosting or may roost under loose bark.

No evidence of any the threatened fauna species listed previously that are known to occur in the surrounds of the subject land was observed during this assessment.

4. CONCLUSIONS & RECOMMENDATIONS

The native vegetation of the study area is comprised of remnant Marri and Jarrah Open Forest to Woodland in good condition despite the fact that both previous and current land use activities, including grazing by livestock and logging, have affected the structure and condition of the vegetation. Grazing within the two large remnants in particular has resulted in the loss of many of the lower stratum understorey plant species, while the consequence of selective logging has been the loss of taller mature Jarrah trees and dominance of Marri trees at the site. The floristic integrity of the vegetated Road No. 2506 road reserve remains largely intact.

The vegetation and habitat within the Location 262, Donnybrook will not be directly impacted by the proposal. Impacts such as uncontrolled access, weed infestation, fire and rubbish disposal will need to be managed to ensure the integrity of the vegetation and habitat in the surrounding areas is maintained as it is proposed that the woodchip plant and associated infrastructure are to be situated within of the portion of the site already cleared.

The proposal may necessitate the widening of Road No. 2506 and result in the loss of some vegetation through clearing of the road reserve to allow for construction and development of log transport roads, train loading facilities and parallel siding for loading. It is anticipated that important local conservation values and the linkage function of the road reserve corridor can be maintained by restricting any clearing necessary for a log transport road to one side of the road reserve.

None of the flora or fauna species listed as significant by the Department of Conservation and Land Management were recorded from the study area during the survey. Additionally, only a small number of native fauna species were recorded. As the proposed development is on land that has been extensively modified by agricultural activities and as larger areas of native vegetation in better condition exist on reserves within the vicinity of the proposed woodchip mill site, the impact to any fauna is considered negligible.

REFERENCES

Mattiske, E.M. and Havel, J.J. (1998) Regional Forest Agreement Vegetation Complex Mapping – Collie. Department of Conservation and Land Management.

Beard, J.S. (1981) The Vegetation of the Swan Area, Western Australia. 1:1,000,000 Vegetation Series. Vegmap Publications, Perth.

Department of Conservation and Land Management. (2001) Declared Rare and Priority Flora List.

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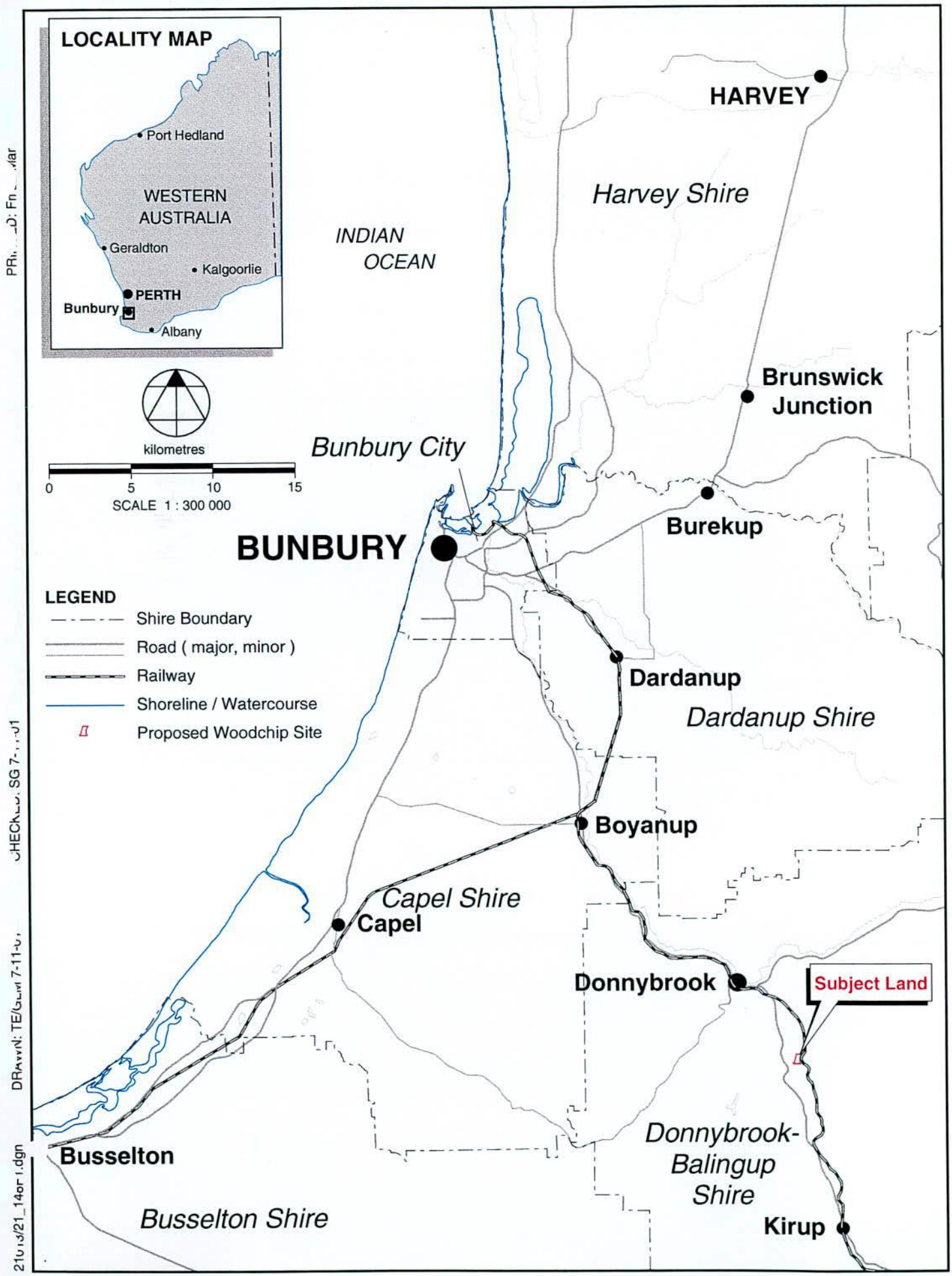
FIGURES



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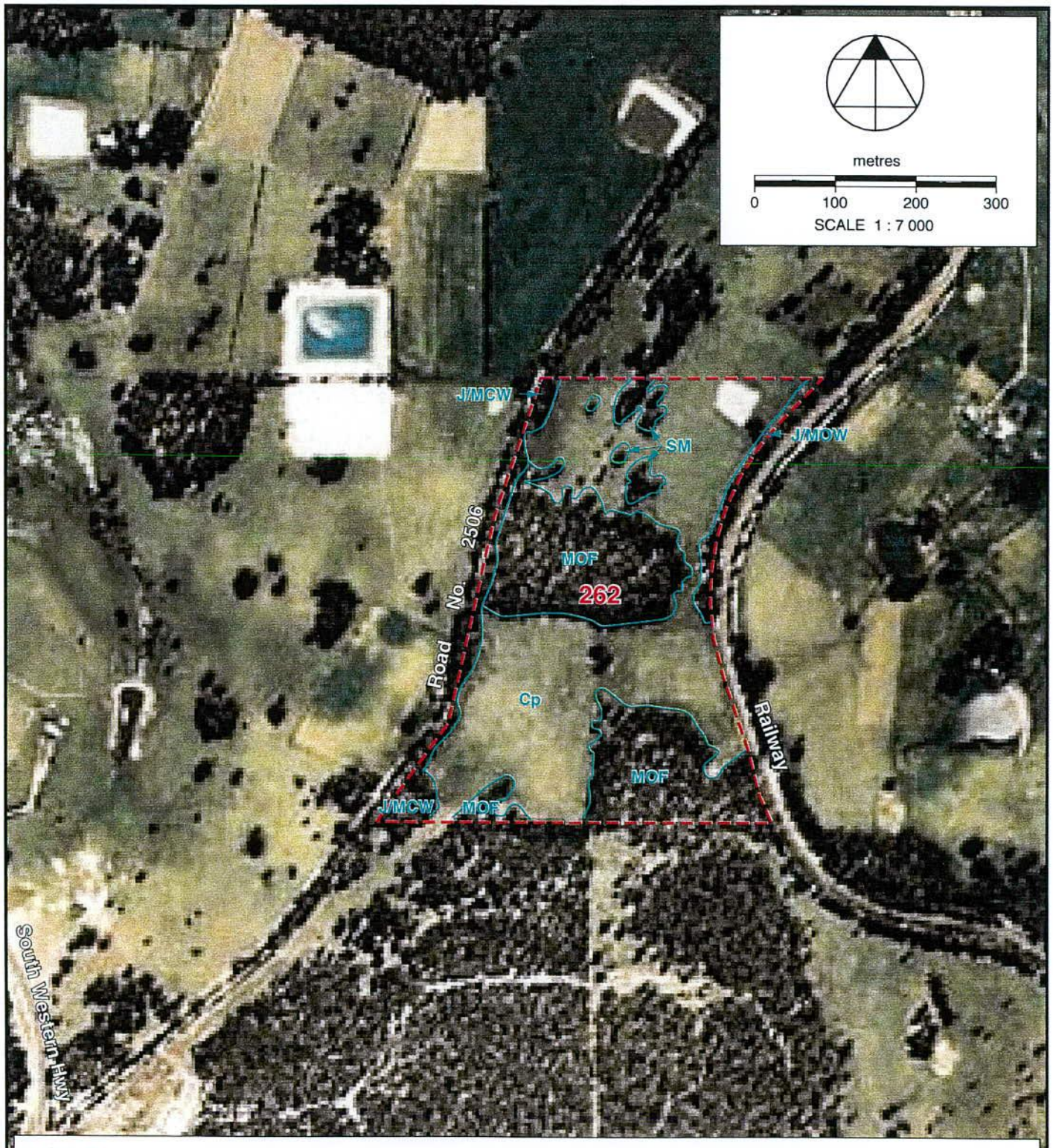
VEGETATION & FLORA ASSESSMENT
LOCATION 262, DONNYBROOK

REGIONAL LOCATION

FIGURE 1



LEGEND

MOF	*Cormbia calophylla* Open Forest with scattered *Eucalyptus marginata* ssp. *marginata*.
J/MCW	*Eucalyptus marginata* ssp. *marginata/Corymbia calophylla* closed woodland.
J/MOW	*Eucalyptus marginata* ssp. *marginata/Corymbia calophylla* Open woodland over Bracken Fern dominated understorey
SM	Scattered *Corymbia calophylla* trees
Cp	Cleared pasture with patches of Lupin

SOURCE: Panairama, 1997

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VEGETATION & FLORA ASSESSMENT
LOCATION 262, DONNYBROOK

VEGETATION TYPES

FIGURE 2

PLATES

Plate 1 Old Brookhampton Road (Road No. 2506) reserve (south-facing view)

Plate 2 Old Brookhampton Road (Road No. 2506) reserve (north-facing view)

Plate 3 View of vegetation fringing rail reserve along eastern boundary of Location 262

Plate 4 North facing view of Location 262 from southern boundary of site

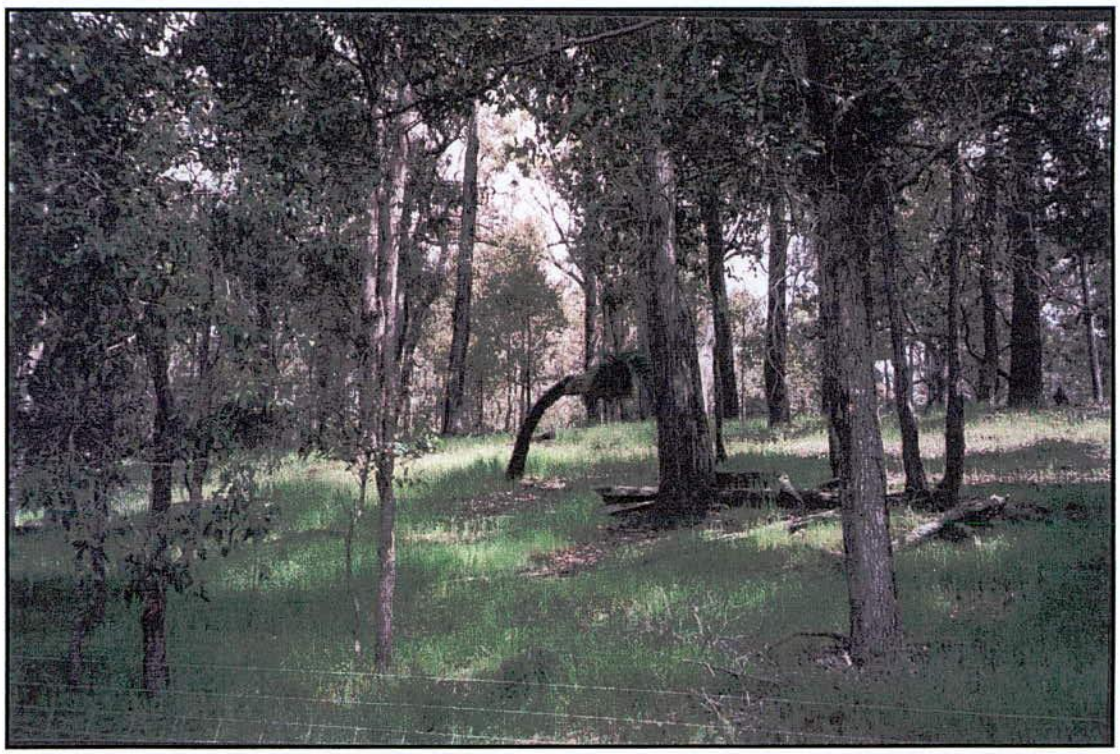


Plate 5 Remnant of Marri dominated Open Forest in central portion of Location 262

Plate 6 Remnant of Marri dominated Open Forest in south-eastern corner of Location 262

APPENDICES

APPENDIX 1

DONNYBROOK - FLORA LIST

APPENDIX 1
DONNYBROOK - FLORA LIST

	Species/Taxon
FILICOPSIDA	
Dennstaedtiaceae	**Pteridium esculentum*
CYCADOPSIDA	
Zamiaceae	*Macrozamia fraseri*
MONOCOTYLEDONAE	
Anthericaceae	*Sowerbaea laxiflora*
	Thysanotus multiflorus
Colchicaceae	*Burchardia umbellata*
Cyperaceae	**Juncus pallidus*
	Lepidosperma squamatum
	Mesomelaena tetragona
Dasypogonaceae	*Dasypogon bromeliifolius*
	Lomandra sp.
Haemodoraceae	*Anigozanthus flavidus*
	Conostylis aculeata
Iridaceae	*Patersonia occidentalis*
	Patersonia umbrosa ssp. xanthina
	**Watsonia bulbiliifera*
Orchidaceae	*Caladenia attingens* ssp. *attingens*
	Caladenia flava
	Diuris longifolia
	Elythranthera marginata
	Monadenia bracteata
	Thelymitra macrophylla
Poaceae	**Aira caryophyllea*
	**Avena fatua*
	**Briza maxima*
	**Briza minor*
	**Paspalum dilatatum*
Restionaceae	*Desmocladus fascicularis*
	Loxocarya striata
	Lyginia barbarta
Xanthorrhoeaceae	*Xanthorrhoea gracilis*
	Xanthorrhoea preissii
DICOTYLEDONAE	
Asteraceae	**Hypochaeris* glabra
	Waitzia sp.
Dilleniaceae	*Hibbertia amplexicaulis*
	Hibbertia hypericoides
Droseraceae	*Drosera erythrorhiza*

	Species/Taxon
Epacridaceae	*Astroloma ciliatum*
	Leucopogon propinquus
Euphorbiaceae	*Phyllanthus calycinus*
Goodeniaceae	*Dampiera linearis*
	Lechenaultia biloba
Lauraceae	*Cassytha racemosa*
Mimosaceae	*Acacia browniana*
	Acacia extensa
	Acacia pulchella
	Acacia stenoptera
Myrtaceae	*Baeckea camphorosmae*
	Corymbia calophylla
	Eucalyptus marginata ssp. *marginata*
	Hypocalymma robustum
	Melaleuca scabra
Orobanchaceae	**Orobanche minor*
Papilionaceae	*Bossiaea ornata*
	Hovea trisperma
	Isotropis sp
	Gompholobium marginata
	Jacksonia sternbergiana
	Kennedia prostrata
	Lupinus sp.
	Trifolium sp.
Polygalaceae	*Comesperma virgatum*
Proteaceae	*Adenanthos obovatus*
	Banksia grandis
	Dryandra lindleyana
	Grevillea quercifolia
	Hakea amplexicaulus
	Hakea lissocarpha
	Hakea ruscifolia
	Persoonia longifolia
	Synaphea petiolaris
	Xylomelum occidentale
Rubiaceae	*Opercularia aff. hispidula*
Stylidiaceae	*Stylidium ciliatum*
Tremendracaeae	*Tetratheca hirsuta*
Thymelaceae	*Pimelea lehmanniana*
TOTAL **Natives** **Introduced**	**76** 66 10

APPENDIX 2

DONNYBROOK – CALM THREATENED AND PRIORITY FLORA LIST

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

Your Ref:
Our Ref: 045443F2001
Enquiries: John Riley
Phone: (08) 9334 0123

REC
21

ATA Environmental
21 Howard Street
PERTH WA 6000

Attention: Kaye Godwin

Dear Ms Godwin

REQUEST FOR RARE FLORA INFORMATION

I refer to your request of 20 February 2001 for information on rare flora in the Dardanup and Donnybrook areas. The search co-ordinates used for Dardanup were 33^0 19' - 33^0 27' & 115^0 39' - 115^0 45' and for Donnybrook were 33^0 32' - 33^0 39' & 115^0 49' - 115^0 55'.

A search was undertaken for these areas of (1) the Department's *Threatened (Declared Rare) Flora* database (for results, if any, see "Summary of Threatened Flora Data"), (2) the Department's *Declared Rare and Priority Flora List* [this list, which may also be used a species target list, contains species that are declared rare (Conservation Code R and/or T, or X for those presumed to be extinct), poorly known (Conservation Codes 1, 2 or 3), or require monitoring (Conservation Code 4) – for results, if any, see "Declared Rare and Priority Flora List"] and (3), the *Western Australian Herbarium Specimen* database for priority species opportunistically collected in the area of interest (for results, if any, see "WAHERB Specimen Database General Enquiry").

Attached also are the conditions under which this information has been supplied. Your attention is specifically drawn to the seventh point which refers to the requirement to undertake field investigations for the accurate determination of rare flora occurrence at a site. *The information supplied should be regarded as an indication only of the rare flora that may be present and maybe used as a target list in any surveys undertaken.*

An invoice for $250 (plus GST), being the standard fee of $200 plus $50 for an additional search to supply this information, will be forwarded.

It would be appreciated if any populations of rare flora encountered by you in the areas could be reported to this Department to ensure their ongoing management.

If you require any further details, or wish to discuss rare flora management, please contact my Principal Botanist, Dr Ken Atkins, on (08) 93340425.

Yours faithfully

J Riley

.....
for Dr Wally Cox
EXECUTIVE DIRECTOR
22 February, 2001
Attached

DECLARED RARE AND PRIORITY FLORA LIST
20 December 1999

SPECIES / TAXON	CONS CODE	CALM REGION	DISTRIBUTION	FLOWER PERIOD
Acacia flagelliformis	4	CF	Harvey, Eaton, Bunbury, Capel, Busselton, Donnybrook	Jul-Sep
Acacia semitrullata	3	CF	Yallingup, Donnybrook, Harvey, Yarloop, Collie	Jun-Aug
Aponogeton hexatepalus	4	CF,SW	Perth, Pinjarra, Capel, Bunbury, Boyanup, Nannup	Aug-Sep
Caladenia longicauda subsp. clivicola ms	2	CF	Harvey, Dardanup, Dunsborough, Pinjarra, Lesmurdie	Sep
Carex tereticaulis	1	CF,SF,SW	Dardanup, Bridgetown, Blackwood River, Guildford, (Harvey)	Nov,Feb
Drosera marchantii subsp. marchantii	4	CF,SF	Waterloo, Collie, Stratham, Donnybrook, Argyle	Aug-Oct
Eucalyptus mundijongensis x	1	SW,CF	Wilbinga, Matilda Bay, Dardanup	
Jacksonia sparsa ms	4	CF	Whicher Range, Bunbury, Capel, Harvey, Pemberton, Boyanup, Dandalup, Nannup, Lake Clifton	Feb
Lambertia multiflora var darlingensis	3	SW,CF	Lower Darling Escarpment, Busselton, Dardanup, Whicher Range, Serpentine NP, Midland	Jul
Nemcia cordata ms	1	CF	Dardanup, Yoongarillup	Oct
Stylidium longitubum	3	SW,WB,CF	Upper Swan, Bullsbrook, Bunbury, Midland, Busselton, Arthur River, Jandakot	Nov
Tetratheca parvifolia	3	CF	Capel, East of Donnybrook	Oct
Verticordia attenuata	3	CF	Ruabon - Tutunup (Busselton), Bunbury, Capel	Jan

n Name	Cons.	Pop	ID	Latitude	Longitude	Purpose	Vesting	
ia semitrullata	3	2		33^33'55.7"	115^52'20.4"	PRI		
n.Boyanup(G.S.McCutcheon 1706) pn		1	3	33^34'34.7"	115^51'34.4"	GVT	NON	

f 2 records were printed.

Dampfrock

WAHERB SPECIMEN DATABASE
GENERAL NQUIRY

DONNYBROOK

Acacia semitrullata
Maslin (Mimosaceae)
CONSERVATION STATUS: P3
Coll.: B. O'Hehir 013 Date: 18 12 1998 (PERTH 05288258)
LOCALITY 200 m N of Sandhills Road, 1 km from Sandhills Road - DBK, Boyup Road i
ntersection, WA
Lat.: 33^ 34' 50" S Long.: 115^ 51' 39" E
Erect .3 m high x .15 m wide. White sand over laterite.
Low Woodland A over Heath B over Low Sedges. Jarrah, Marri, Nuytsia floribunda, Banksia attenuata, Persoonia longifolia, Banksia grandis.
FREQUENCY very uncommon.

Acacia semitrullata
Maslin (Mimosaceae)
CONSERVATION STATUS: P3
Coll.: G.S. McCutcheon GSM 2514 Date: 15 04 1992 (PERTH 05575478)
LOCALITY Donnybrook, For.Ref. FD5302, WA
Lat.: 33^ 34' 35" S Long.: 115^ 51' 30" E

Caustis sp.Boyanup(G.S.McCutcheon 1706)
(Cyperaceae)
CONSERVATION STATUS: P1
Coll.: G.S. McCutcheon 2478 Date: 18 03 1992 (PERTH 2115328)
LOCALITY Shire Reserve 2052, "Sandhills" WA
Lat.: 33^ 34' 41" S Long.: 115^ 51' 27" E
`Rush', rhizomatous 0.75 m high.
Gentle lower slope to upland basin, wh ite/grey sand.
Woodland. Banksia attenuata, Xylomelum occidentale, (Persoonia
longifolia), Melaleuca thymoides, Adenanthos meisneri, Platysace anceps, Dasypog
on bromeliifolius, Phlebocarya ciliata.
Abundance: abundant. Clumps more diffuse than Boyanup populat ion; patch larger. In restricted area.

Caustis sp.Boyanup(G.S.McCutcheon 1706)
(Cyperaceae)
CONSERVATION STATUS: P1
Coll.: G.S. McCutcheon GSM 2478 Date: 17 03 1993 (PERTH 05257085)
LOCALITY Donnybrook, FD 52, WA
Lat.: 33^ 35' 0 " S Long.: 115^ 50' 0 " E
This specimen is housed at Central Forest Region, Bunbury.

Tetratheca parvifolia
Joy Thomps. (Tremandraceae)
CONSERVATION STATUS: P3
Coll.: G.S. McCutcheon GSM 3003 Date: 24 12 1997 (PERTH 04935098)
LOCALITY Brookhampton; Wade Road; Lots 347 and 348, ca 318 m northerly from the
bend in Wade Road, about 850 m northerly from Thompson Brook Road, For. Ref. FF5
382, Kirup 1:50,000 WA
Lat.: 33^ 36' 17" S Long.: 115^ 52' 13" E
On once disturbed surface near gravel quarry, vegetation cover now abo ut 60%.
Moist to dry concretionary gravel/gravel over laterite. W aspect. Slope. Hester Landform.
Scattered saplings of jarrah and marri over Low Heath C/D of Hakea lissocarpha, Xanthorrhoea preissii, Hibbertia hypericoides, Lepidosperma sp., Gompholobium
polymorphum, Xanthorrhoea gracilis, Dryandra nivea, D. bipinnatifida, Acacia pulchella, Synaphea petiolaris, Hypocalymma angustifolium, Lechenaultia biloba,
Daviesia decurrens, Pericalymma elliptica on excavated gravel down slope from pi t.

Tetratheca parvifolia
Joy Thomps. (Tremandraceae)
CONSERVATION STATUS: P3
Coll.: G.S. McCutcheon GSM 2994 Date: 29 11 1997 (PERTH 04935101)
LOCALITY Brookhampton; Wade Road; Lots 347 and 348, ca 318 m northerly from the

bend in Wade Road, about 850 m northerly from Thompson Brook Road, For. Ref. FF5
382, Kirup 1:50,000 WA
Lat.: 33^ 36' 17" S Long.: 115^ 52' 13" E

On once disturbed surface near gravel quarry, vegetation cover now abo ut 60%.
Moist to dry concretionary gravel/gravel over laterite. W aspect. Slope. Hester Landform.
Scattered saplings of jarrah and marri over Low Heath C/D of Hakea lissocarpha, Xanthorrhoea preissii, Hibbertia hypericoides, Lepidosperma sp., Gompholobium polymorphum, Xanthorrhoea gracilis, Dryandra nivea, D. bipinnatifida, Acacia pulchella, Synaphea petiolaris, Hypocalymma angustifolium, Lechenaultia biloba, Daviesia decurrens, Pericalymma elliptica on excavated gravel down slope from pit.

APPENDIX 3

DONNYBROOK – CALM THREATENED FAUNA LIST

044766F2000
Dr. Peter Mawson
08 93340421

Ms Kaye Godwin
ATA Environmental
21 Howard Street
PERTH WA 6000

Dear Ms Godwin

REQUEST FOR THREATENED FAUNA INFORMATION

I refer to your request of 20 February for information on threatened fauna occuring in the a) Dardanup – Picton area, and b) Snadhills Road, Donnybrook areas.

A search was undertaken for this area of the Department's Threatened Fauna database, which includes species which are declared as '*Rare or likely to become extinct* (Schedule 1)', '*Birds protected under an international agreement* (Schedule 3)', and '*Other specially protected fauna* (Schedule 4)'. Attached are print outs from these databases where records were found.

Attached also are the conditions under which this information has been supplied. Your attention is specifically drawn to the sixth point that refers to the requirement to undertake field investigations for the accurate determination of threatened fauna occurrence at a site. The information supplied should be regarded as an indication only of the threatened fauna that may be present.

An invoice for ~~$110.00~~ 165.00 (~~$100.00~~ 150.00 + ~~$10.00~~ 15.00 GST), being the set charge for the supply of this information, will be forwarded.

It would be appreciated if any populations of threatened fauna encountered by you in the area could be reported to this Department to ensure their ongoing management.

If you require any further details, or wish to discuss threatened fauna management, please contact my Senior Zoologist, Dr Peter Mawson on 08 93340421.

Yours faithfully

for Dr Wally Cox
EXECUTIVE DIRECTOR

21 February, 2001.

Attachment

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

THREATENED FAUNA INFORMATION

Conditions In Respect Of Supply Of Information

* All requests for data to be made in writing to the Executive Director, Department of Conservation and Land Management, Attention: Senior Zoologist, Wildlife Branch.

* The data supplied may not be supplied to other organisations, nor be used for any purpose other than for the project for which they have been provided without the prior consent of the Executive Director, Department of Conservation and Land Management.

* Specific locality information for Threatened Fauna is regarded as confidential, and should be treated as such by receiving organisations. Specific locality information for Threatened Fauna may not be used in reports without the written permission of the Executive Director, Department of Conservation and Land Management. Reports may only show generalised locations or, where necessary, show specific locations without identifying species. The Senior Zoologist is to be contacted for guidance on the presentation of Threatened Fauna information.

* Receiving organisations should note that while every effort has been made to prevent errors and omissions in the data, they may be present. The Department of Conservation and land Management accepts no responsibility for this.

* Receiving organisations must also recognise that the database is subject to continual updating and amendment, and such considerations should be taken into account by the user.

* It should be noted that the supplied data do not necessarily represent a comprehensive listing of the Threatened Fauna of the area in question. Its comprehensiveness is dependent of the amount of survey carried out within a specified area. The receiving organisation should employ a biologist/zoologist, if required, to undertake a survey of the area under consideration.

* Acknowledgment of the Department of Conservation and Land Management as the source of data is to be made in any published material. Copies of all such publications are to be forwarded to the Department of Conservation and Land Management, Attention; Senior Zoologist. Wildlife Branch.

Area 'B':- Sandhills, Donnybrook

Schedule 1 (Fauna which is Rare or likely to become Extinct)

Chuditch (*Dasyurus geoffroii*) This species occurs is very likely to occur in the area in question following the advent of control exotic predators.

Carnaby's cockatoo (*Calyptorhynchus latirostris*) This species is a seasonal visitor to the area in question. It feeds extensively on the proteaceous shrublands where they have been retained and on intordcued *Pinus* sp. plantations.

Baudin's cockatoo (*Calyptorhynchus baudinii*) This species is resident in the tall eucalypt forest in the area and also ventures out into commercial pome fruit orchards.

Schedule 4 (Fauna which is Otherwise Specially Protected)

Peregrine Falcon (*Falco peregrinus*) This species may occur as a vagrant in the area in question, either in open woodlands or around farm margins.

Priority Taxa

Brush-tailed Phascogale (*Phascogale tapoatafa*) P3 This species occurs in the area retaining mature eucalypt woodlands, including remnants on farms.

Quenda (*Isoodon obesulus fusciventer*) P4 This species may occur in the area in question in locations with low dense heath vegetation and jarrah and marri woodland and along watercourses that retain native vegetation.

Western Brush Wallaby (*Macropus irma*) P4 This species still occurs in the jarrah-marri woodlands and forest in the area.

Water Rat (*Hydromys chrysogaster*) P4 This species may still occur in rivers and streams which retain natural fringing vegetation and have low salt loads.

Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*) P3 This species occurs in the jarrah and marri forests in the area.

***Westralunio carteri* (a freshwater mussel) P4** This species is still common in freshwater rivers, streams and some lakes in the area in question.

APPENDIX 10a

NOISE MANAGEMENT PLAN FOR THE PORT FACILITIES

APPENDIX 10a
NOISE MANAGEMENT PLAN
WAPRES OPERATIONS-BUNBURY INNER HARBOUR

1. OBJECTIVE

The purpose of this Noise Management Plan is to ensure that noise emissions from the existing and expanded WAPRES Bunbury Port activities comply with the *Environmental Protection (Noise) Regulations* 1997 *(As Amended).*

A further objective is to implement a program of continual improvement such that in the future overall impacts are reduced.

2. INTRODUCTION

2.1 Background

Currently WAPRES exports marri, karri, bluegum and pine woodchips from their existing facilities at the Bunbury Inner Harbour. Current operation noise levels have on occasion caused complaints to the Department of Environment, Catchment and Water Protection (DEWCP) especially in relation to the operation of the bulldozers on top of the woodchip stockpiles at night during ship loading.

WAPRES intend to increase the amount of bluegum woodchips by up to 1mtpa through the construction and operation of a new woodchip mill at Donnybrook and in so doing replace some of the hardwood woodchips currently exported. This will result in an increase in the number of trains and vessels arriving at the facility as shown in Table 1.

TABLE 1
CURRENT AND PROJECTED WOODCHIP EXPORT

WOODCHIP EXPORTS	TRAINS (PER WEEK)		SHIPS (PER YEAR)	
	Low	High	Low	High
0.75-0.99mtpa total (2002)	14	19	17	21
1mtpa gum 0.15 mtpa karri 0.08 mtpa pine (2005)	19	31	25	32

2.2 Location

WAPRES lease the site in the Bunbury Inner Harbour and Berth 3 from the Bunbury Port Authority. The site is about 1.6km from the city CBD, about 500m from the nearest residences along the Leschenault Inlet and about 600m east of the Koombana Resort (Appendix 5a, Figure 1).

Existing facilities and infrastructure within the Inner Berth 4 (ALCOA Alumina and Worsley sites handling alumina and caustic soda), Berth 5 (General Purpose) and Berth 8 (Cable Sands Mineral Sands). A Bunbury Port Authority block of land, a portion of which is currently leased to WAPRES, lies to the south east. Log stocking, processing and chip stockpiles currently occupy this site and the site adjacent to the General Purpose Berth (Appendix 5a, Figure 1).

2.3 Climate

Bunbury has a Mediterranean climate with wet cool winters (17-18°C) and dry warm summers (25-28 °C). The rainy season extends from May to August (average 871mm pa).

Bunbury's wind regime is highly seasonal. In summer mornings, morning winds are dominated by easterlies, with significant southerly components and afternoon sea breezes from the west. Winter winds are primarily from the east in the morning and north and west in the afternoon (Appendix 5a, Figure 2).

2.4 Hours of Operation

Port operations are 24 hrs/day when a vessel is docked. Otherwise, general activities occur about 12-14 hr / day. Train unloading occurs periodically (for around 2hours) following arrival 24 hrs/day.

3. SUMMARY OF ISSUES

3.1 Existing Noise Sources

Key WAPRES facilities that can generate noise include:

- Bulldozers;
- Stacker;
- Front end loaders
- Conveyors (minor); and
- Trucks (minor).

Train unloading does not occur on the premises and therefore has been excluded from the assessment of noise of the port facilities for the purpose of this management strategy. Currently there are up to three trains daily. Equipment associated with train unloading that can cause noise are the stacker and conveyor.

Ship loading activities include the operation of the mobile plant, including bulldozers and front end loaders on or surrounding the stockpile, conveyors and ship loaders. The latter two activities are generally located behind (ie on the northern side) of the stockpile and are therefore screened from the nearest noise sensitive premises.

3.2 Previous Noise Assessments

WAPRES undertook a noise assessment of current noise levels at the existing Port facilities (Appendix 5b, Herring Storer, Dec 2001). Monitors located at strategic locations around the Port area registered the noise levels from the export facilities together with road and rail traffic noise. The monitors were located at the residence on 5 Austral Parade (about 450m south of the site on the Leschenault Inlet) and at the Koombana Resort (about 600m to the west of the site). The monitor on Austral Parade ran from 12 Oct-25 Oct, 2001 and the monitor at the Koombana Resort ran from 19-29 June, 2001. During this period in October two ships were loaded.

Results show background noise from Koombana Drive dominates the noise levels monitored at the nearest residence on Austral Parade. Monitored noise levels at this residence ranged from 42-45 dB(A) under low winds and no significant port activity to 50 dB(A) under strong winds and limited port activity. When ship loading commenced, there was no increase in noise levels and when the wind dropped noise emissions decreased to a base level of 36-41dB(A).

The short term hand held measurements show the traffic tends to mask the noise received from the dozer working the top of the chip stockpile. The only noise audible was the noise emission from the tracks when the dozer was accelerating down the stockpile. Adjusting for background noise, noise from the dozer would be 53dB(A). This noise occurs for less than 10% of the time, and is therefore required to comply with the L_{A1} assigned noise level.

During the most sensitive night period, when background noise levels are lower, the track noise would be considered tonal. Therefore, based on the adjusted noise level, noise received at the residences across Leschenault Inlet from a dozer on top of the stockpile would exceed the assigned night period noise level by up to 12dB(A). During this period, other port activities complied with the *Regulations*.

At the second nearest noise sensitive land use, Koombana Resort, background noise was between 35-40dB(A) under low winds and limited port activity. Under stronger winds and no significant port activity levels background noise levels rose to 45dB(A). There was no change in noise levels when ship loading commenced and ceased. From the data collected at this location, noise at the port facilities complies with the *Regulations*, especially given the noise emissions from traffic along Koombana Drive which dominates the monitored noise levels.

3.3 Modelling Results

Modelling of the sound emission propagation of the proposed change in WAPRES operations was carried out using the computer program "SoundPlan". Both single point and noise contour calculations were used to determine the noise level resulting at the nearest noise sensitive premises. The calculated noise levels results are shown in Table 2.

TABLE 2
CALCULATED NOISE LEVELS AT THE CLOSEST RESIDENCES

Receiver Location	Calculated Noise Level dB(A)		
	Assigned Night Noise Level	Without Noise Control	With Noise Control
Koombana Resort	35	45	29
5 Austral Parade	36	49	31
Oliver Street	39	51	34

The noise contours are attached in the Herring Storer Report (Appendix 5b, Dec 2001). Noise received at the neighbouring residences from the WAPRES Port facilities would exceed the assigned L_{A10} noise levels during the day and night periods by approximately 4 and 14 dB(A) respectively. Noise received at the closest residence is dominated by noise emissions from the dozers, front end loader and stacker.

4. PERFORMANCE STANDARDS

4.1 *Environmental Protection (Noise) Regulations* 1997

Environmental noise is governed by the Environmental Protection (Noise) Regulations, 1997. The regulations stipulate assigned noise levels that are the levels of noise allowed to be received at premises at a particular time of the day or night. The assigned noise levels for noise sensitive premises such as residences vary depending on the time of day. They are lower at night when people are more sensitive to noise. With the port at times operating 24 hours per day, the most stringent regulatory criteria are the night period assigned L_{A10} noise level of 35 dB (A).

Regulation 7 stipulates maximum allowable external noise levels determined by the calculation of an influencing factor, which is then added to the base levels shown in Table 1. The influencing factor is calculated for the usage of land within the two circles around a residence having radius 100 metres and 450 metres from the premises of concern. The influencing factor for residences located around the port ranges from 0 at residences located at more than 450m from the port, to 4 at residences located on Oliver Street (see attached report). Therefore the noise levels listed in Table 3 apply.

TABLE 3
NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Residential	0700 – 1900 hours Monday to Saturday	45-49	55-59	65-69
	0900 – 1900 hours Sunday and Public Holidays	40-44	50-54	65-69
	1900 – 2200 hours all days	40-44	50-54	55-59

		Assigned Level (dB)		
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	35-39	45-49	55-59

The assigned levels are conditional on no annoying characteristics existing in the noise of concern, such as tonality, amplitude modulation or impulsiveness. If such characteristics exist then any measured level is adjusted as follows: Tonality +5 dB(A), Modulation +5 dB(A) and Impulsiveness +10 dB(A). These adjustments are cumulative to a maximum of 15 dB. The most likely characteristic to apply during WAPRES operations is tonality.

Under the regulations, noise emissions from an individual plant, when part of an industrial area, are not considered to be significant if the noise received at a premises is 5 dB(A) below the assigned noise level. In this case there are two industries in the area that would contribute to the level of noise received at the nearest noise sensitive premises. Therefore, for noise emissions from the WAPRES facilities to comply with the regulations at a residence, noise received from these facilities are required to be 3 dB(A) less than the assigned noise level set for that period.

4.2 Relevant DEWCP Licence Conditions

License Number 5774/5 states "Noise emissions from operations on site are required to comply with the *Environmental (Noise) Regulations* 1997. The licensee shall take all reasonable and practicable measures to prevent or minimise the....emission of noise...from the premises".

5. NOISE MANAGEMENT STRATEGY

The Noise Management strategy will consist of the following components. One or any number of the elements will be implemented with a view to meeting the objectives of the Noise Management Plan stated in Section 1.

5.1 Management Practices

Management practices employed to ensure that noise emissions do not result in unacceptable impacts include:

5.1.1 General

- Personnel shall be trained in the operation of equipment that has the potential to generate noise emissions, and in the requirements to minimise noise.

- Equipment maintenance and inspection schedules to be implemented to ensure that all equipment is operating as per the manufacturer's instructions and within regulatory requirements.

- New equipment suppliers will be required, as a condition of their contract, to ensure that the overall sound power emission levels of all civil work operations meet the emissions levels necessary to achieve an L_{A10} of 35dB(A) at the nearest noise sensitive residence.

- Acceptance testing will be undertaken to ensure compliance with noise specifications from new equipment suppliers.

5.1.2 Operations

The following noise controls will be implemented to ensure the noise emissions from the WAPRES facility comply with the *Regulations* at all times:

- Limit movements of bulldozers on top or southern side of the stockpile to the day period or when winds are from 90^0 (easterly) through 180^0 (southerly) to 270^0 (westerly).

- To reduce bulldozer track noise, review the speed of bulldozers working the top of the stockpile particularly when reversing down the stockpile.

- Limit movements of front end loaders to the northern side of the stockpile to the day period or when winds are from 90^0 (easterly) through 180^0 (southerly) to 270^0 (westerly).

- Ensure the shape of the stockpile is maintained to provide an effective barrier between operations and residences.

- Install a barrier to the stacker drive located at the top of the stacker.

- Regular maintenance of all mobile equipment.

To maintain acceptable noise emissions, the following items should be considered:

- Alternative methods of piling (vibrating screens, bucket and chain, scrapers, extended receival hopper etc) and shapes of piles (such as working at a level which creates a minimum 3 metre high barrier between the dozers and the residences) will be reviewed with a view to minimising noise received at nearby residences.

- The stockpile height to be minimised wherever possible within constraints of production and shipping schedules.

- Investigate noise control to the bulldozers including the practicality of:
    1. adding an acoustic louvres to the radiators;
    2. lining the engine compartments with acoustically absorptive material;
    3. the installation of high performance mufflers; and

4. the installation of lined baffles to the sides of the engine compartment.

- Investigate the practicality of and cost of an acoustic barrier over the conveyor and side of the transfer station to the ship loader.

5.2 Monitoring, Performance Indicators and Reporting

5.2.1 Monitoring and Complaint Response

During the first year of the implementation of the Plan, noise compliance spot checks will be conducted every 3 months. An automatic data logger will monitor for a 2 week period, with observations taken at the start, middle and end of the logging period. Tonal characteristics will be assessed. The locations of the monitoring sites will be the same as used in the Herring Storer assessment (Appendix 5b, Herring Storer, Dec 2001) modelling ie. at 5 Austral Parade on the Leschenault Inlet and at the Koombana Resort. Wind data will be sourced from the Bunbury Airport meteorological station.

After the first year of monitoring, the requirements for future on-going monitoring will be determined in conjunction with the DEWCP.

A Complaints Register will be maintained that will record any complaints received, date, nature and resolution action undertaken.

The WAPRES Operations Manager will contact any complainants with concerns related to noise levels, and determine if there has been an exceedance of the noise criteria. If investigations determine that noise levels are below the specified noise criteria, the management procedures described above will continue to be followed. The complaint will be logged for a management response.

If investigations of the complaint determines that there noise levels are above the specified noise criteria and the nuisance is of an ongoing nature, the WAPRES Operations Manager will take steps to ensure that any identified noise source is addressed within 48 hours. If the source of noise is not clear the Manager may initiate additional monitoring or other site evaluation involving a noise specialist. The Manager or Noise Specialist will then ensure that appropriate measures are implemented to remove the nuisance if it caused by the WAPRES facilities.

6. PERFORMANCE INDICATORS

Compliance with the *Environmental Protection (Noise) Regulations* 1997 at all times.

7. REPORTING

WAPRES will report results of initial monitoring to the DEWCP quarterly for the first year of the implementation of the Noise Plan, thereafter as agreed between the DEWCP and WAPRES.

The feasibility of the introduced modifications to the operations procedures will be reported to the DEWCP.

8. RESPONSIBILITY

The WAPRES Port facility managers are ultimately responsible for fulfilling the requirements of this Noise Management Plan.

During operations, the day-to-day responsibility for maintaining operating standards in order to minimise the effect of the project on ambient noise levels will be undertaken by the WAPRES Port Operations Manager.

9. REFERENCES

Herring Storer Acoustics (Dec 2001) Acoustic Assessment SW Plantation Port Facility, City of Bunbury Ref : 10669-1-01082

FIGURES

Figure 1: Monitoring Site Locations and Surrounding Port Facilities.
Figure 2: Wind Roses for Bunbury

ATA Environmental
environmental scientists

MONITORING LOCATIONS & SURROUNDING PORT FACILITIES

DONNYBROOK WOODCHIP PROJECT
PUBLIC ENVIRONMENTAL REPORT - NOISE MANAGEMENT PLAN

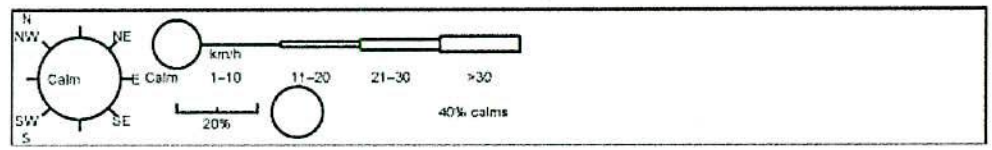
APPENDIX 10a - FIGURE 1

ATA Environmental
environmental scientists

Wind Roses using available data between 1995 and 2001 for Bunbury

Site Number 009965 • Locality: Bunbury • Opened Nov 1995 • Still Open
Latitude 33°21'28"S • Longitude 115°38'36"E • Elevation 5.2m

Only the hours 9 am, 3 pm are included.



9 am Summer	534 observations	9 am Winter	524 observations	3 pm Summer	525 observations	3 pm Winter	537 observations
9 am Autumn	533 observations	9 am Spring	548 observations	3 pm Autumn	533 observations	3 pm Spring	549 observations

SOURCE: Bureau of Meteorology, Perth, 2001

DONNYBROOK WOODCHIP PROJECT
PUBLIC ENVIRONMENTAL REPORT - NOISE MANAGEMENT PLAN

WINDROSES FOR BUNBURY

APPENDIX 10a - FIGURE 2

APPENDIX 10b

HERRING STORER ACOUSTICS ASSESSMENT: PORT FACILITIES

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
HERRING STORER ACOUSTICS
Suite 34, 11 Preston Street, Como, W.A. 6152
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LYNTON STORER M.A.I.E.A., M.A.A.S.
TIM REYNOLDS M.I.E. AUST. M.A.A.S.

ACOUSTIC ASSESSMENT
SW PLANTATION PORT FACILITY
CITY OF BUNBURY

FOR

ATA ENVIRONMENTAL

BY

HERRING STORER ACOUSTICS

DECEMBER 2001

OUR REF: 10669-1-01082

CONTENTS

APPENDICES

NOTE:
APPENDICES D, E, F, G & I PRESENTING TABULAR RECORDED NOISE DATA AND DATA IN GRAPHICAL FORM HAS NOT BEEN INCLUDED.

1.0 INTRODUCTION

Herring Storer Acoustics was commissioned by SW Plantations Resources Pty Ltd (WAPRES) to carry out an acoustical assessment of emissions from their Bunbury Port operations and to predict the level of noise that would be propagated to surrounding noise sensitive premises due to the proposed expanded operations. The objectives of the study were to:

- Carry out noise monitoring of the existing port operations at various location within the City of Bunbury. (Two sets of measurements were carried out; the first in June 2001, the second in October 2001)
- Determine the existing acoustical environment at noise sensitive premises located near the port operations.
- Determine the rate of noise propagation from the proposed expansion of the port facilities.
- Assess the predicted noise levels at noise sensitive premises for compliance with the Environmental Protection (Noise) Regulations 1997 (As Amended) (the Regulations).
- If exceedances are predicted, investigate noise control options in order to reduce noise emissions to achieve compliance with the Regulations.

2.0 CRITERIA

The Environmental Protection (Noise) Regulations 1997 (As Amended) stipulate the allowable noise levels at a premises from another premises. The allowable noise level at a residence or a noise sensitive premises is determined by the calculation of an influencing factor, which is then added to base noise levels (See Appendix K for further information and the base noise levels). In this case, the influencing factor for noise sensitive premises located around the port facility ranges from 0, at residences located at more than 450m from the port, to 4, at residences located on Oliver Street (See Figure A1 in Appendix A).

The range of assigned noise levels for the neighbouring noise sensitive premises are listed in Table 1.

TABLE 1 - ASSIGNED NOISE LEVELS

Time of Day	Type of Assigned Noise Level		
	L_{A10}	L_{A1}	L_{max}
0700 - 1900 hours - Monday to Saturday	45 - 49	55 - 59	65 - 69
0900 - 1900 hours - Sunday & Public Holidays	40 - 44	50 - 54	65 - 69
1900 - 2200 hours - All Days	40 - 44	50 - 54	55 - 59
2200 - 0700 hours - Monday to Saturday	35 - 39	45 - 49	55 - 59
2200 - 0900 hours - Sunday & Public Holidays	35 - 39	45 - 49	55 - 59

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

The assigned noise levels are also conditional on no annoying characteristics existing such as tonal components etc. If such characteristics exist, then any measured level is adjusted accordingly. The adjustments that apply are shown in Table 2.

TABLE 2 - ADJUSTMENTS FOR INTRUSIVE CHARACTERISTICS

Tonality	Modulation	Impulsiveness
+5 dB	+5 dB	+10 dB

Under the Regulations, noise emissions from an industry, when part of an industrial area, are not considered to be significantly contributing to the noise received at another premises if the noise is at least 5 dB(A) below the assigned noise level. However, in this case we believe that there are only two industries in the area that would contribute to the level of noise received at a noise sensitive premises. Therefore, compliance with the Regulations can be achieved by controlling noise emissions to being 3 dB(A) below the assigned noise levels.

3.0 PORT ACTIVITIES

The WAPRES Port premises is a woodchip export facility. Wood chips are delivered to site by road and rail. This chips are stockpiled ready for shipment. Ship loading is carried out by pushing chips into a reclaim hopper, which feeds a ship loading conveyor and on to the ship loader.

When a ship is in port, the facility operates 24 hours per day. Train unloading occurs periodically (for around 2 hours) following arrival of a train. Trains can arrive day or night. Otherwise activities at the port facility are minimal and are limited to 12 / 14 hours per day.

Given that train unloading and ship loading can occur concurrently and during the night period, noise emissions from the WAPRES Port operations are required to comply with the assigned night period noise levels.

Key WAPRES activities that can generate noise include:-

- Bulldozers
- Stacker
- Front End Loaders
- Conveyors (for train unloading and ship loading)

– Ship loading activities. At the current export rate, about 20 ships per annum visit the Bunbury Port to take on woodchips. This will expand to up to 32 ships following full implementation of the Donnybrook Woodchip Mill project.

  Ship loading activities include the operation of mobile plant, including bulldozers and front end loaders on or surrounding the stockpile, conveyors and ship loaders. The latter two activities are generally located beyond (northern side) the stockpile, and are accordingly well screened.

- Train unloading does not occur on the WAPRES premises and occurs intermittently. There are up to three trains daily and operate for periods of up to two hours during the day or night. Equipment associated with train unloading that are of concern are the conveyor and stacker. Implementation of the Donnybrook Woodchip Mill proposal may result in a further 4 - 5 trains daily at full production.

Table 3 summarises the current and proposed shipping and train movement for the WAPRES Port Facility at Bunbury.

TABLE 3 - SUMMARY OF CURRENT & PROJECTED THROUGHPUT OF WOODCHIPS

Woodchip Exports	Trains (per week)		Ships (per year)	
	Low	High	Low	High
750 000 - 990 000 tonnes (2001)	14	19	17	21
1000 000 tpa Gum 150 000 tpa Karri 80 000 tpa Pine (2005)	19	31	25	32

Due to limits to ship scheduling, an increase in throughput at the Port Facility, brought about for example by the implementation of the Donnybrook Wood Chip Mill, will not increase noise levels from the Bunbury Port. Extended receival and ship loading schedules will however extend the length of time these impact on periods otherwise unaffected.

4.0 MONITORING

Monitoring was carried out to determine the level of noise (both ambient and port operations) received at noise sensitive premises, located near the Port of Bunbury from WAPRES Port Facilities.

To quantify the level of noise due to activities taking place at WAPRES port facilities at various locations around the City of Bunbury, automatic noise data loggers were used. Monitors were setup for the following sessions:

Session A (19 - 29 June 2001)

Location A1 - Southern boundary of WAPRES Port Facility.

Location A2/B2 - Koombana Bay Holiday Resort.

Session B (11 - 24 October 2001)

Location B1 - 5 Austral Parade.

Location A2/B2 - Koombana Bay Holiday Resort.

The monitoring locations are shown on Figure A1 in Appendix A.

Monitoring was carried out as outlined in the EPA Draft Guidance for Assessment of Environmental Factors No. 8 - Environmental Noise. The loggers record statistical noise level data of which the L_{A1}, L_{A10}, L_{Aeq} and L_{A90} levels are reported. For both sessions, monitoring was carried out for a period of approximately 2 weeks.

Session A was undertake with an intent to determine any correlation between WAPRES port operations and noise received at the Koombana Bay Holiday Resort. The second session (B) was undertaken during a period when two ships were loaded and therefore provide an indication of whether ship loading is contributing to the noise environment at neighbouring residences.

During session B, two ships were loaded. The two ships loaded during session B were:

A Hokuetsu Ace
Between Monday 15 October 2001 and Wednesday 17 October 2001.

B Tuiho Maru
Between Friday 19 October 2001 and Monday 22 October 2001.

A comparison of monitored noise levels recorded at the south boundary to that at the Koombana Bay Holiday Resort for session A are contained in Appendix D.

The results from the noise data loggers were graphed and are presented in Appendix D. The data is attached in Appendix E in tabular form.

Meteorological data for the relevant periods of session B was obtained from the Bureau of Meteorology. Graphical presentation of the wind speed and direction is given in Appendix F. The Bureau of Meteorology wind speed data is in units of knots and hence these units are used throughout the report.

The microphone height is 1.5 metres above ground floor level.

Photographs were taken at the noise sensitive premises noise monitoring locations, showing the logger location and the general site layout. The photographs are attached in Appendix G.

Activities carried out during the monitoring period were recorded by WAPRES staff and a summary of activities is attached in Appendix H.

A summary of various appended data results is as follows:

Appendix A

Monitoring Locations.

Appendix D

Recorded noise levels in graphical form.

Appendix E

Recorded noise levels in tabular form.

Appendix F

Weather data in graphical form.

Appendix G

Photographs taken at the site.

Appendix H

Summary of Activities.

Appendix I

1/3 Octave Band Data

At the time of equipment collection on October 25 2001, short term noise level measurements were recorded at 5 Austral Parade of a dozer operating on the top of the stock pile. At this time winds were from the north to north west (ie, from dozer to measurement location). The results are summarised below in Table 4, with 1/3 octave band data given as Figure I1 in Appendix I.

TABLE 4 - SHORT TERMS MEASUREMENTS

Item	Noise Level dB(A)
Background (No Truck)	53
Truck along Koombana Drive	60
Dozer	55

5.0 MODELLING

Modelling of the noise emission propagation was carried out using the computer program "SoundPlan". Both single point and noise contour calculations were used to determine the noise level resulting at noise sensitive premises located around the facility. Noise contours show the overall noise level at a location, due to the various activities carried out, where as single point calculations show the influence of individual items on the overall noise resulting at a specific location.

SoundPlan uses the theoretical sound power levels determined from measured sound pressure levels to calculate the noise level at a specific location. For this project the sound power levels were determined from noise level measurements of existing equipment.

The calculations used the following input data:

a) Ground contours, as supplied by ATA Environmental.

b) Sound power levels calculated from measured noise levels of the equipment used on site. (Sound power levels used in the model are listed in Appendix C).

(c) Port facility layouts provided by the client.

Weather conditions for the modelling were as stipulated within the Environmental Protection Authority's *"Draft Guidance for Assessment of Environmental Factors No. 8 - Environmental Noise"* for the night period was as listed in Table 5.

TABLE 5 - WEATHER CONDITIONS

Condition	Night Period
Temperature	15 °C
Relative humidity	50%
Temperature inversion	2°C/100metres
Wind speed	3 m/s*

* Direction is from Port to receivers

The results of the single point calculations are listed in Table 6.

TABLE 6 - CALCULATED NOISE LEVELS AT CLOSEST RESIDENCES

Receiver Location*	Calculated Noise Level dB(A)		
	Assigned Night Noise Level	Without Noise Control	With Noise Control
Koombana Bay Holiday Resort	35	45	29
5 Austral Parade	36	49	31
Oliver Street	39	51	34

* See Figure A1 in Appendix A for locations

Noise contours are attached as Figures B1 and B2 in Appendix B.

6.0 DISCUSSION

6.1 Monitoring

6.1.1 Session A Monitoring

The results of the monitoring indicates little correlation between noise at the noise data logger located at the port and the one located at the Koombana Bay Holiday Resort.

The noise at the Koombana Bay Holiday Resort is dominated by noise emissions from vehicles travelling along Koombana Drive.

6.1.2 Session B Monitoring

Weather conditions during this period of noise monitoring were generally fine, with wind generally from the south. Ship loading occurred between Monday 15 October and Wednesday 17 October 2001 for the Hokuetsu Ace and Friday 19 October and Monday 22 October 2001 for the Tuibo Maru.

5 Austral Parade

Although residences located across the Leschenault Inlet have direct line of sight to WAPRES port facilities, they also have line of site to Koombana Drive, one of Bunbury's busiest roads. The noise environment at this location was, for the majority of time, dominated by noise emissions from vehicles travelling along Koombana Drive.

On the 13 and 14 October, during a period of low winds and limited port activities, the background noise level at this location was between 42 and 45 dB(A). Under stronger winds it is believed that the background noise level increased to around 50 dB(A).

On the 15 October when ship loading commenced, there was no discernable increase in noise level before and after the commencement of ship loading. On the 16 October, as ship loading continued, the noise level recorded decreased as the wind speed dropped. This period had a base noise level of 41 dB(A).

On the 22 October, when winds were from the south, noise levels were generally between 40 and 43 dB(A). However, under these wind conditions, noise from the port would not be influencing the noise environment at residences located across the Leschenault Inlet.

On the 23 October when winds were light and there were limited port activities, noise level dropped to around 36 dB(A).

The short term hand held measurements indicates that road traffic noise tends to mask the noise of the dozer when operating on top of the stock pile. The only noise audible was the noise emission from the tracks when the dozer was accelerating down the stock pile. Adjusting for background noise the dozer noise alone would be 53 dB(A). This track noise occurs for less than 10 percent of the time and therefore, is required to comply with the L_{A1} assigned noise level. During the most sensitive night period when background noise levels are lower, the track noise would also be considered tonal. Therefore, based on the adjusted noise level, noise at the residences located across Leschenault Inlet due to a dozer working on top of the stock pile would exceed the assigned night period noise level by up to 12 dB(A).

Measures to reduce noise emissions from the dozer are briefly described in Section 7.0 - Noise Control.

Koombana Bay Holiday Resort

On the 13 and 14 October 2001, during a period of low winds and no significant port activities, the background noise level at this location was generally between 35 and 40 dB(A). Under stronger winds we believe that the background noise level increased to around 45 dB(A).

On the 15 October when ship loading commenced, there was no discernable increase in noise level between periods prior to and following the commencement of ship loading. On the 17 October 2001, when ship loading continued, the noise level recorded decreased as the wind speed dropped. Night period noise levels were consistent with other days when no ship loading occurred. This period had a base noise level of around 38 dB(A).

From the data collected, we believe that noise at the Koombana Bay Holiday Resort resulting from port activities complies with the Environmental Protection (Noise) Regulations 1997 (As Amended), at all times.

6.2 Modelling

Noise received at the neighbouring residences from the WAPRES port facility would exceed the assigned L_{A10} noise level during the day and night periods by approximately 3 and 13 dB(A) respectively. Noise received at the closest residence is dominated by noise emissions from the dozer, front end loader and stacker.

To comply with the requirements of the Environmental Protection (Noise) Regulations 1997 (As Amended), noise control as outlined in Section 7.0 - Noise Control is required.

Given the calculated noise level, the spectral makeup and differential to ambient noise as monitored, noise received at residential premises would not be tonal. From the monitored data, the background noise level would be approximately 40 dB(A), which would mask the noise from the Port Operations. At lower wind speeds, when background noise levels would be less, the noise received from the Port Operations would also be reduced (i.e. under low wind speeds noise received at residential premises would comply with the Regulations).

7.0 NOISE CONTROL

For noise emissions from the WAPRES port facilities to comply at all times, the following noise controls are required:-

- Limit movement of dozers on top or southern side of stockpile to the day period or when winds are from 90° (easterly) through 180° (southerly) to 270° (westerly).
- To reduce dozer track noise, review the speed of dozers, particularly when reversing down the stockpile.
- Limit operations of front end loaders to northern side of stockpile to the day period or when winds are from 90° (easterly) through 180° (southerly) to 270° (westerly).
- Ensure shape of stockpile is maintained to provide an effective barrier between operations and residences.

- Install a barrier to stacker drive located at top of stacker.

- Regular maintenance of all mobile equipment.

To maintain acceptable noise emissions, the following items should be considered:

- Alternative methods of piling (vibrating screens, bucket and chain, scrapers, reclaimer shovel or excavation, extended receival hopper etc) and shapes of piles (such as working at a level which creates a minimum 3 metre high barrier between the dozers and the residences) will be reviewed with a view to minimising noise received at nearby residences.

- Investigate noise control to the bulldozers including the practicality of:

    1. Adding acoustic louvres to radiators;

    2. Lining the engine compartments with acoustically absorptive material;

    3. The installation of high performance mufflers; and

    4. Installing lined baffles to the sides of the engine compartment.

- Investigate the practicality of and cost of an acoustic barrier over the conveyor and side of the transfer station to the ship loader.

8.0 CONCLUSION

Currently noise emissions from WAPRES port facility exceeds the requirements of the Environmental Protection (Noise) Regulations 1997 (As Amended) at a number of noise sensitive premises located to the south and south east of the port facility. The expansion in the throughput of the port facility will not increase the overall noise level received at neighbouring premises, but will increase the periods of increased noise levels. However, with the implementation of noise control as outlined in Section 7.0 - Noise Control, noise emissions from the port facility can comply with the requirements of the Environmental Protection (Noise) Regulations 1997 (As Amended) at all times.

For: **HERRING STORER ACOUSTICS**

T.C. Reynolds

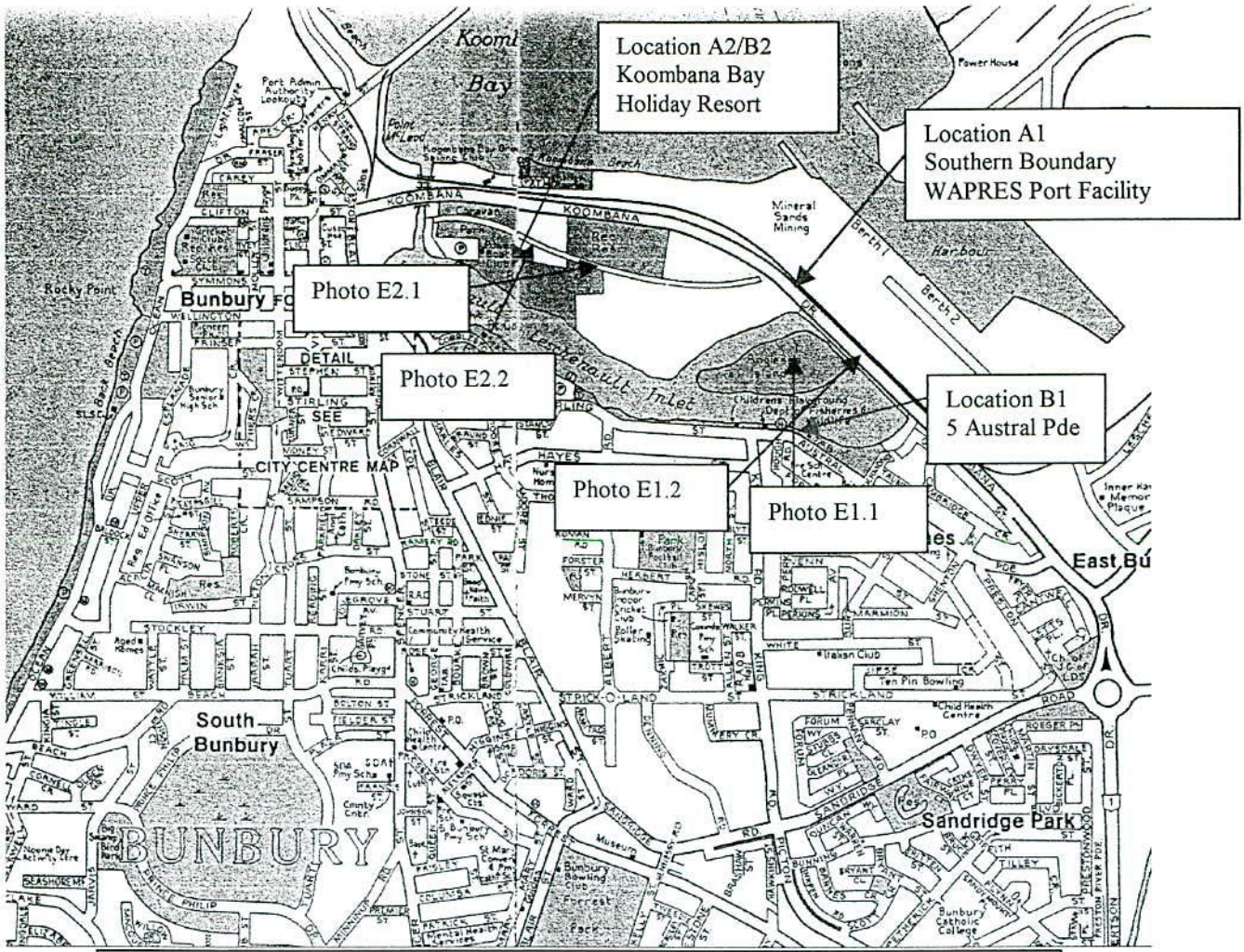
Tim Reynolds

Checked: Lynton Storer

10 December 2001

APPENDIX A

FIGURE A1
GENERAL LOCALITY PLAN / MONITORING LOCATIONS



MONITORING LOCATIONS + DIRECTIONS OF PHOTOS

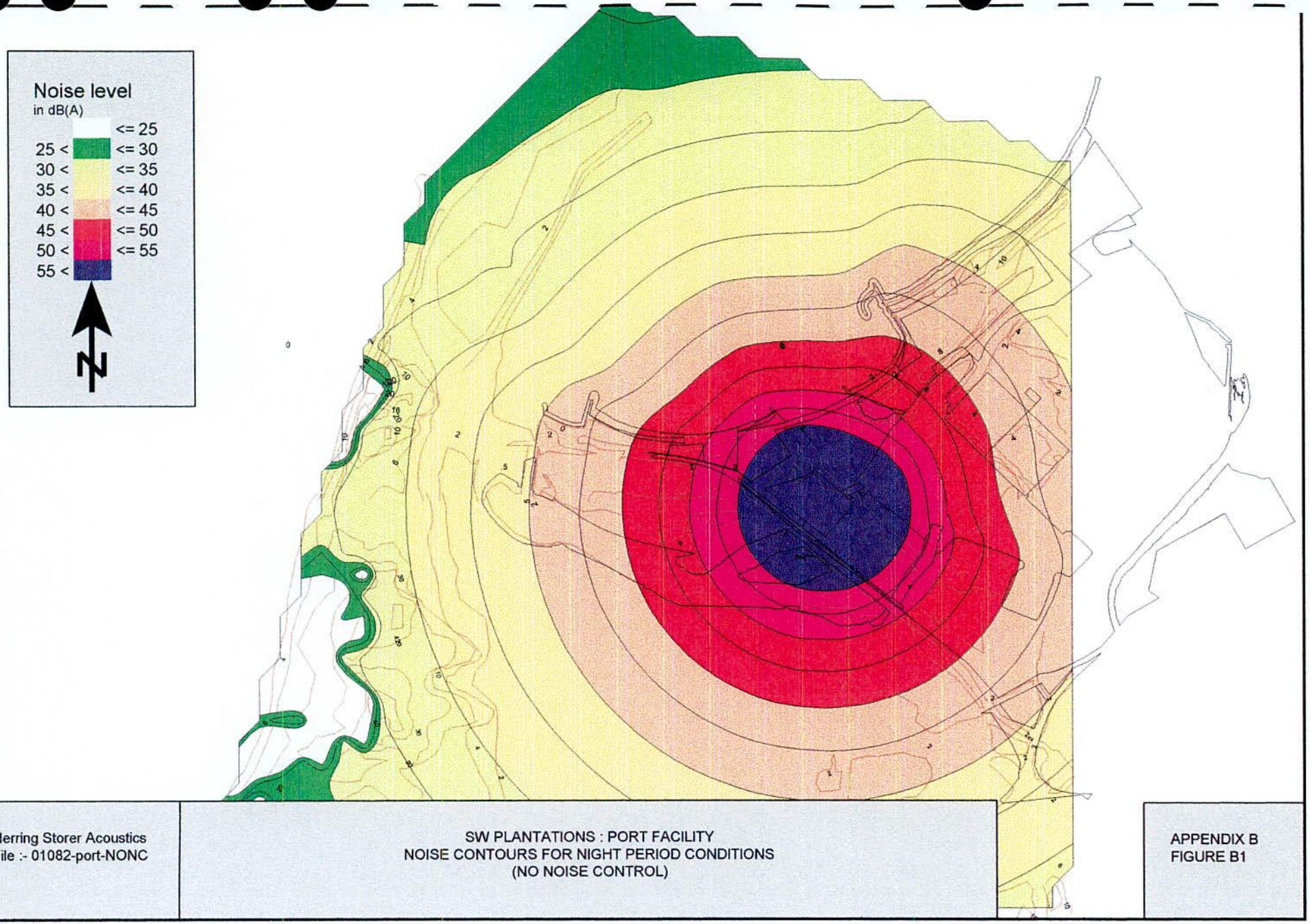
Herring Storer Acoustics
File :- 01082-Mon-FigA1

Figure A1

APPENDIX B

FIGURE B1
NOISE CONTOURS (NO NOISE CONTROL)

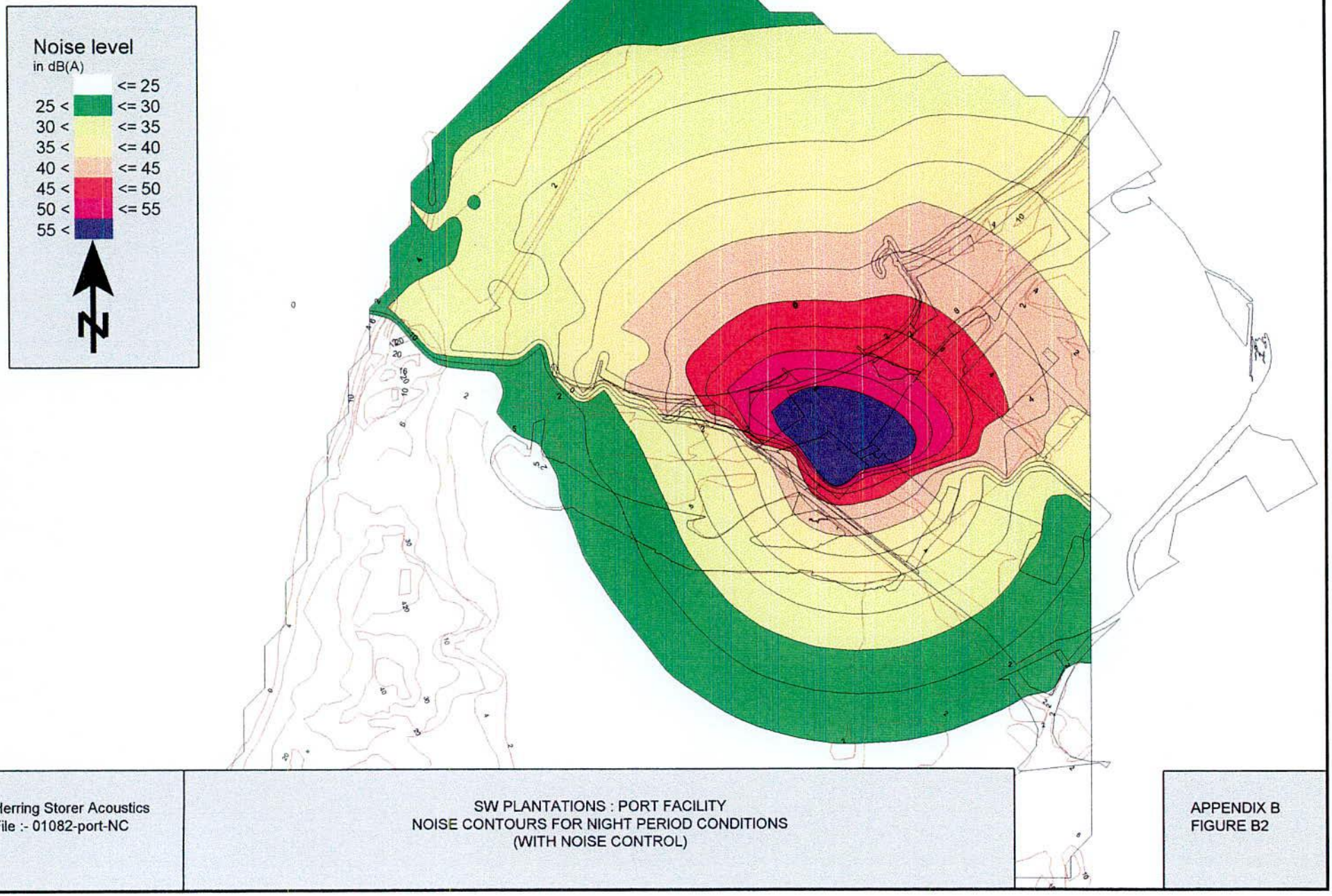
FIGURE B2
NOISE CONTOURS (WITH NOISE CONTROL)



Herring Storer Acoustics
File :- 01082-port-NONC

SW PLANTATIONS : PORT FACILITY
NOISE CONTOURS FOR NIGHT PERIOD CONDITIONS
(NO NOISE CONTROL)

APPENDIX B
FIGURE B1



Herring Storer Acoustics
File :- 01082-port-NC

SW PLANTATIONS : PORT FACILITY
NOISE CONTOURS FOR NIGHT PERIOD CONDITIONS
(WITH NOISE CONTROL)

APPENDIX B
FIGURE B2

APPENDIX C

SOUND POWER LEVELS

APPENDIX C - SOUND POWER LEVEL

The sound power levels used in the SoundPlan model are listed in Table C1.

TABLE C1 - SOUND POWER LEVELS

Items of Equipment	Sound Power Level dB(A)
Ship Loading Conveyor	92
Ship Loader	98
Train Unloading Conveyor	82
Dozer (D8)	115
Stacker	105
Front End Loader	113

Barrier to stacker would reduce sound power level to 94 dB(A).

Sound power levels were determined from measurements recorded of existing equipment used on site.

APPENDIX H

SUMMARY OF ACTIVITIES
DURING OCTOBER 2001 MONITORING

Loading of trains from Thursday 11 October to 25 October 2001

Date	Species	Arrival Time	Departure Time	Duration
11/10/2001	MK	1455	1645	1 hr 55 mins
11/10/2001	Regrowth	2340	0120	1 hr 40 mins
12/10/2001	BG	1945	2125	1 hr 35 mins
13/10/2001	MK	0605	0740	1 hr 35 mins
13/10/2001	MK	1545	1825	2 hr 20 mins
14/10/2001	MK	0950	1150	1 hr 40 mins
14/10/2001	MK	1750	1955	1 hr 35 mins
15/10/2001	MK	0735	0915	1 hr 35 mins
15/10/2001	MK	1720	1910	1 hr 35 mins
16/10/2001	BG	0440	0645	1 hr 50 mins
16/10/2001	MK	1235	1420	1 hr 40 mins
16/10/2001	MK	2205	0000	1 hr 35 mins
17/10/2001	BG	0715	0925	1 hr 55 mins
17/10/2001	Regrowth	1905	2105	1 hr 40 mins
18/10/2001	MK	0725	0955	1 hr 40 mins
18/10/2001	MK	1530	1720	1 hr 45 mins
19/10/2001	BG	0020	0210	1 hr 40 mins
19/10/2001	BG	1045	1250	1 hr 45 mins
19/10/2001	MK	2025	2210	1 hr 40 mins
20/10/2001	MK	1500	1730	1 hr 40 mins
22/10/2001	MK	0810	1005	1 hr 40 mins
22/10/2001	MK	1740	1925	1 hr 40 mins
23/10/2001	BG	0315	0645	1 hr 35 mins
23/10/2001	MK	1300	1400	1 hr 40 mins
23/10/2001	MK	2220	0005	1 hr 35 mins
24/10/2001	BG	1000	1210	1 hr 40 mins
24/10/2001	MK	1910	2055	1 hr 35 mins
25/10/2001	BG	0450	0635	1 hr 40 mins

Thursday 11th October
- Compaction of Sand and Limestone on second section of Stockpile Base upgrade

Friday 12th
- Sand and Limestone Compaction

Saturday 13th
- Limestone Compaction

Monday 15th
- 0800 start loading Hokuetsu Ace Marri-Karri hatch first
-first of footing being poured

Tuesday 16th
- Hokuetsu Ace Blue gum being loaded
-Concrete slabs being poured

Wednesday 17th
- Ship loading completed at 1953
- Scrap steel boat being loaded
- Concrete slabs being poured

Thursday 18th
- Scrap boat being loaded
- Concrete slabs being poured

Friday 19th
- Scrap boat being loaded
- Concrete slabs being poured
- At 1900 started loading Taiho Maru Blue gum from section 'E'

Saturday 20th
- Loading Taiho Maru Blue gum
-Phosphate ship berthed

Sunday 21st
- Loading Tahio Maru Bluegum Section 'E'
- Started unloading Phosphate Ship

Monday 22nd
- Completed loading Taiho Maru at 0901
- Concrete slabs being poured
- Phosphate ship being unloaded

Tuesday 23rd
- Phosphate being unloaded

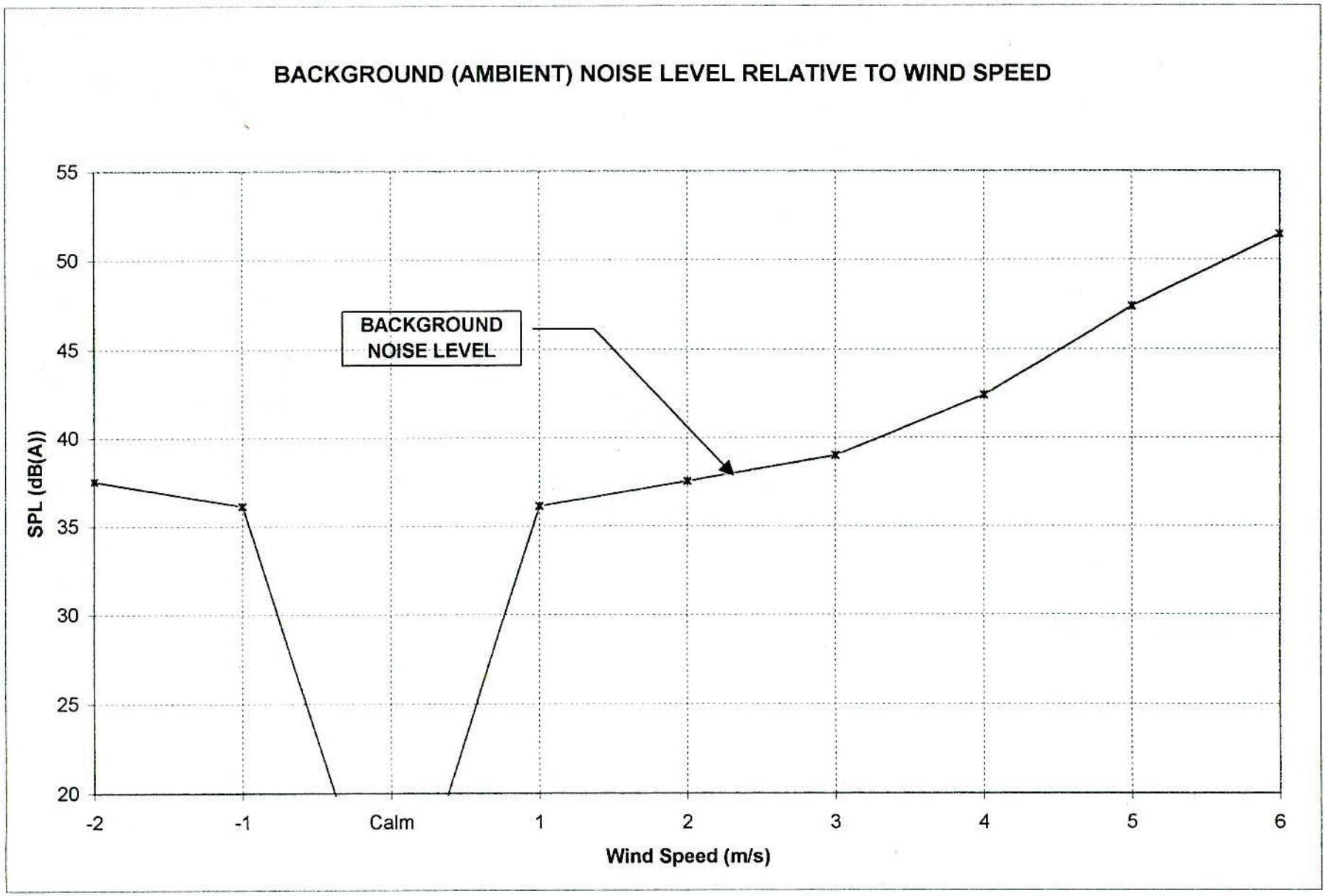
Wednesday 24th
- Phosphate ship unloading Completed and Sailed

Thursday 25th
- Third section of Stockpile base being removed

APPENDIX J

BACKGROUND NOISE LEVELS V'S WIND SPEED

BACKGROUND (AMBIENT) NOISE LEVEL RELATIVE TO WIND SPEED



Herring Storer Acoustics

Appendix J - Figure J1
Job No : 01082

APPENDIX K

REGULATORY REQUIREMENTS

APPENDIX K - REGULATORY REQUIREMENTS

The Environmental Protection (Noise) Regulations 1997 were gazetted on the 31 October 1997.

The Environmental Protection (Noise) Regulations 1997 stipulate the allowable noise levels that can be received at a noise sensitive premises from another premises. Under these regulations the assigned outdoor noise levels for noise received at a Noise Sensitive Premises are determined by the calculation of an influencing factor, which is then added to a base level. The influencing factor is calculated for the usage of the land within two circles, having radii of 100 and 450 metres from the premises of concern. The base noise levels are as listed in Table K1.

TABLE K1 - ASSIGNED NOISE LEVELS (RESIDENTIAL PREMISES)

Time of Day	Type of Assigned Noise Level		
	L_{A10}	L_{A1}	L_{Amax}
0700 - 1900 hours - Monday to Saturday	45	55	65
0900 - 1900 hours - Sunday & Public Holidays	40	50	65
1900 - 2200 hours - All Days	40	50	55
2200 - 0700 hours - Monday to Saturday	35	45	55
2200 - 0900 hours - Sunday & Public Holidays	35	45	55

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{AMax} noise level is the maximum noise level recorded.

The assigned noise levels are also conditional on no annoying characteristics existing such as tonal components etc. If such characteristics exist, then any measured level is adjusted accordingly. The adjustments that apply are shown in Table K2.

TABLE K2 - ADJUSTMENTS

Tonality	Modulation	Impulsiveness
+5 dB	+5 dB	+10 dB

Although the track noise from dozer falls under the L_{A1} criteria, for this study the noise levels of concern are the L_{10} noise levels listed.

APPENDIX 10c

HERRING STORER ACOUSTICS ASSESSMENT: WOODCHIP MILL FACILILTIES

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ACOUSTIC ASSESSMENT
SW PLANTATION RESOURCES PTY LTD
DONNYBROOK CHIP PLANT

FOR

ATA ENVIRONMENTAL

BY

HERRING STORER ACOUSTICS

MARCH 2001

OUR REF: 10899-1-01082

CONTENTS

APPENDICES

1.0 INTRODUCTION

Herring Storer Acoustics was commissioned by SW Plantations Resources Pty Ltd (WAPRES) to carry out an acoustical assessment of emissions from their proposed wood chip plant to be located south of Donnybrook. The objectives of the study were to:

- Determine, by modelling, noise propagation from the proposed plant.
- Assess the predicted noise levels at noise sensitive premises for compliance with the Environmental Protection (Noise) Regulations 1997 (As Amended) (the Regulations).
- If exceedances are predicted, investigate noise control options in order to reduce noise emissions to achieve compliance with the Regulations.

2.0 SUMMARY

The results of the modelling shows that without noise control, noise received at the closest residence from the chip plant would exceed the assigned noise levels for the day and night periods by 9 and 13 dB(A) respectively.

Noise received at the surrounding residences from the proposed wood chip plant will comply with the requirements of the Environmental Protection (Noise) Regulations 1997 (As Amended) at all times (i.e. 24 hours), provided noise amelioration as outlined in the Section 7.0 - Noise Control are implemented.

3.0 CRITERIA

The Environmental Protection (Noise) Regulations 1997 (As Amended) stipulate the allowable noise levels that can be received at a noise sensitive premises from another premises. The allowable noise level when received at a residence is determined by the calculation of an influencing factor. The influencing factor at the closest residence from the chip plant (Donnybrook) would be 0. Therefore, the assigned noise level at the various time of the day would as listed in Table 1.

TABLE 1 - ASSIGNED NOISE LEVELS

Time of Day	Type of Assigned Noise Level		
	L_{A10}	L_{A1}	L_{max}
0700 - 1900 hours - Monday to Saturday	45	55	65
0900 - 1900 hours - Sunday & Public Holidays	40	50	65
1900 - 2200 hours - All Days	40	50	55
2200 - 0700 hours - Monday to Saturday	35	45	55
2200 - 0900 hours - Sunday & Public Holidays	35	45	55

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

The assigned noise levels are also conditional on no annoying characteristics existing such as tonal components etc. If such characteristics exist, then any measured level is adjusted accordingly. The adjustments that apply are shown in Table 2.

TABLE 2 - ADJUSTMENTS

Tonality	Modulation	Impulsiveness
+5 dB	+5 dB	+10 dB

4.0 CHIP PLANT OPERATION

We understand that material will be received and processed 24 hour per day, while train movements will occur during the day period.

Therefore, noise emissions from receivals and the chipping operation require to comply with the assigned L_{A10} night period noise level of 35 dB(A) at the neighbouring residences. Noise emissions from the train loading and the plant will require to comply with the assigned L_{A10} day period noise level of 45 dB(A) at the neighbouring residences.

5.0 MODELLING

Modelling of the noise emission propagation was carried out using "SoundPlan". Both single point and noise contour calculations were used to determine the noise level that would be received at noise sensitive premises located around the proposed facility. Noise contours show the overall noise level that would be received at a location due to the various activities carried out, where as single point calculations show the influence of individual items on the overall noise resulting at a specific location.

SoundPlan uses the theoretical sound power levels determined from measured sound pressure levels to calculate the noise level received at a specific location.

The calculations used the following input data:

a) Ground contours

b) Sound power levels calculated from measured noise levels of the equipment or file data depending on the item. (See attached Table C1 in Appendix C for Sound Power Levels).

c) Chip plant layout as provided by the Client (See Figure A1 in Appendix A).

Weather conditions for the modelling were as stipulated within the Environmental Protection Authority's *"Draft Guidance for Assessment of Environmental Factors No. 8 - Environmental Noise"* for the day and night periods was as listed in Table 3.

TABLE 3 - WEATHER CONDITIONS

Condition	Day Period	Night Period
Temperature	20°C	15 °C
Relative humidity	50%	50%
Temperature inversion	0	2°C/100metres
Wind speed	4m/s*	3 m/s*

* From sources, towards receivers.

The results of the single point calculations are listed in Table 4.

TABLE 4 - CALCULATED NOISE LEVELS AT CLOSEST RESIDENCES

Location	Calculated Noise Level dB(A)			
	Day Period		Night Period	
	No Noise Control	With Noise Control	No Noise Control	With Noise Control
Closest residence from Chip Plant	49 (54)	39	43 (48)	30

( ) Includes a +5 dB(A) penalty for a tonal component

Noise received at the closest residences from the chip plant without noise control would be tonal and a +5 dB(A) penalty would be added to the calculated noise level. With noise control, any annoying characteristics would be eliminated and no penalties would be applied to the predicted noise level.

Noise contours are attached as Figures B1 and B2.

6.0 DISCUSSION

Without any noise control, noise received at the closest residence would exceed the Regulations during the day and night periods by 9 and 13 dB(A) respectively. However, compliance can be achieved with the inclusion of noise control. The noise control required to achieve compliance is outlined in Section 7.0 - Noise Control.

7.0 NOISE CONTROL

To comply with the Regulations the following noise controls will need to be implemented:-

a) Limit train loading operations to day period.

b) Control dozer operations, by limiting dozer movements on the side facing the closet residence during the day period and limiting noise emissions to 87 dB(A) at 7m.

c) Limit noise emissions from Front End Loader to 85 dB(A) at 7m.

d) Enclosing debarker, to limit noise emissions to 85 dB(A) at 1 metre.

e) Enclosing chipper, to limit noise emissions to 82 dB(A) at 1 metre.

f) During the night period, carry out truck unloading activities behind a barrier (log stock pile).

g) Noise emissions from conveyor be limited to 70 dB(A) at 1 metre.

8.0 CONCLUSION

Noise emissions from the chip plant exceed the requirements of the Environmental Protection Noise (Regulations) 1997 (As Amended) during the day and night periods by 9 and 13 dB(A) respectively. To comply with the Regulations, practical noise amelioration as outlined in the section - Noise Control is required.

For: **HERRING STORER ACOUSTICS**

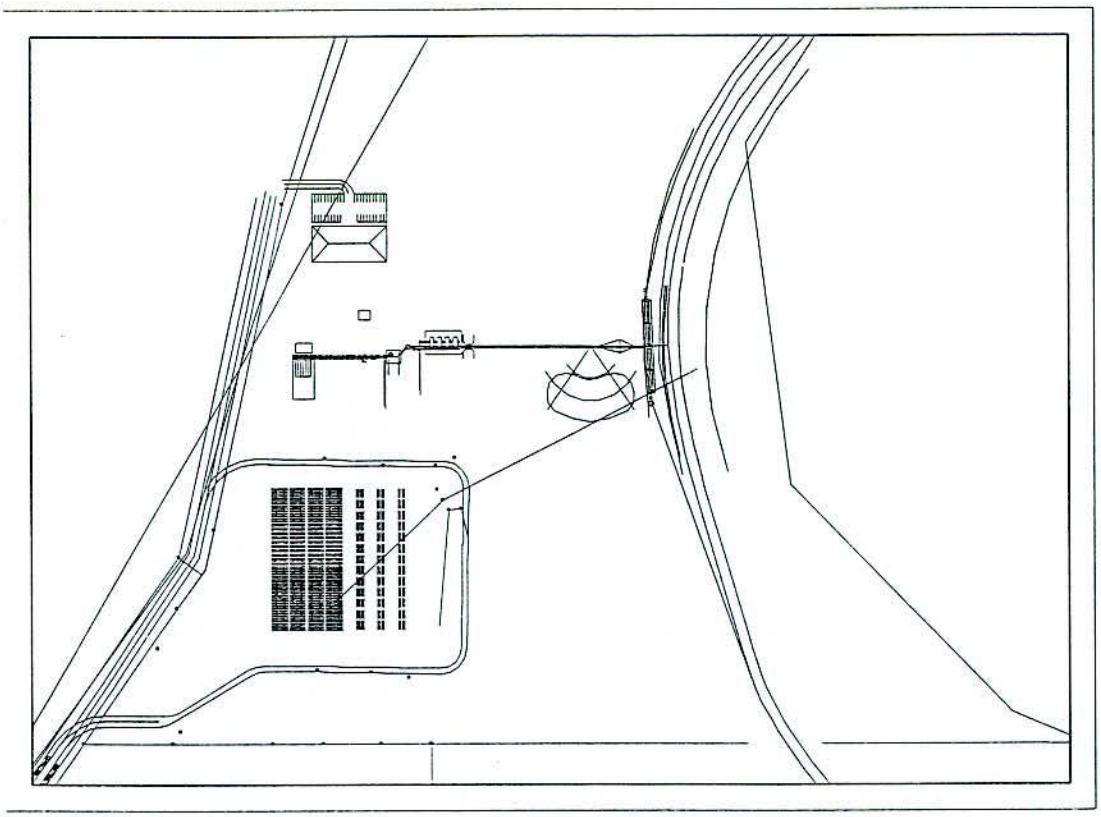
T.C. Reynolds

Tim Reynolds

21 March 2002

APPENDIX A

FIGURE A1 - GENERAL PLANT LAYOUT



SW PLANTATIONS PTY LTD
PROPOSED LAYOUT OF DONNYBROOK CHIP PLANT

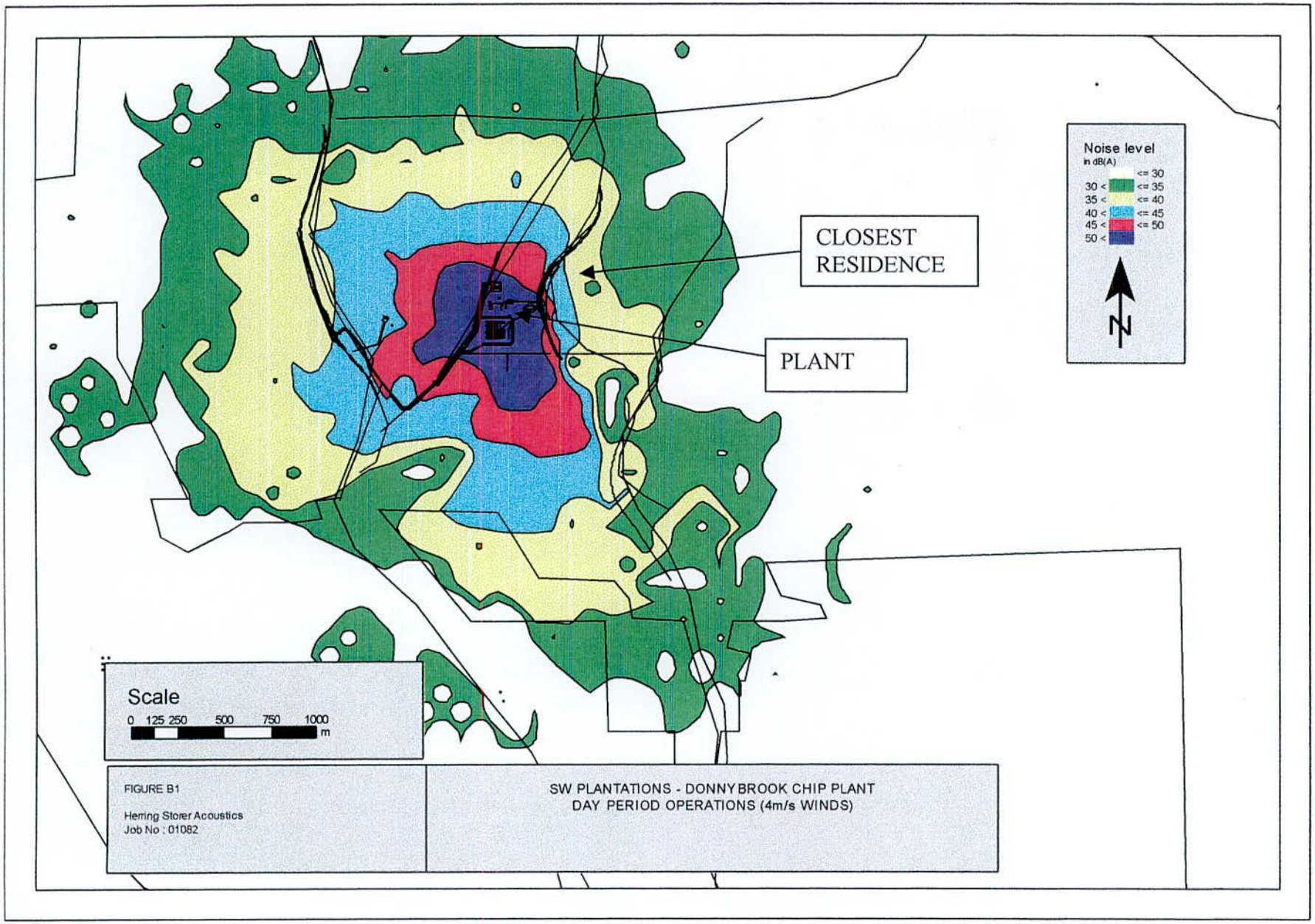
Herring Storer Acoustics
Job No : - 01082
21 March 2002 (File:- Don-Plant)

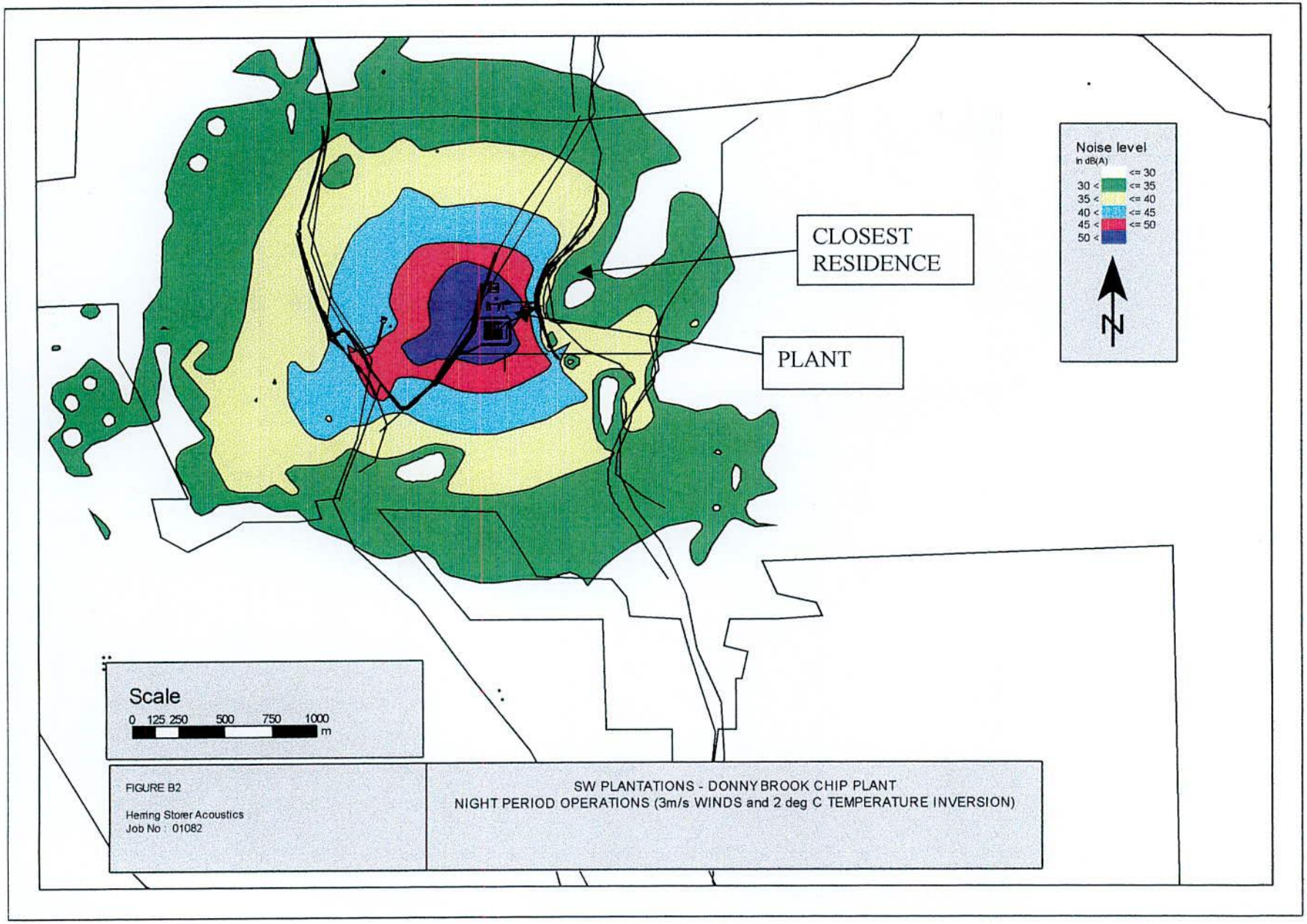
Figure A1

APPENDIX B

FIGURE B1 - DAY PERIOD NOISE CONTOURS
(WITH NOISE CONTROL)

FIGURE B2 - NIGHT PERIOD NOISE CONTOURS
(WITH NOISE CONTROL)


Noise level
in dB(A)
<= 30
30 < <= 35
35 < <= 40
40 < <= 45
45 < <= 50
50 <
N
CLOSEST RESIDENCE
PLANT
Scale
0 125 250 500 750 1000
m
FIGURE B1
Herring Storer Acoustics
Job No : 01082
SW PLANTATIONS - DONNYBROOK CHIP PLANT
DAY PERIOD OPERATIONS (4m/s WINDS)


CLOSEST
RESIDENCE
PLANT
Noise level
In dB(A)
<= 30
30 < <= 35
35 < <= 40
40 < <= 45
45 < <= 50
50 <
N
Scale
0 125 250 500 750 1000
m
FIGURE B2
Herring Storer Acoustics
Job No : 01082
SW PLANTATIONS - DONNYBROOK CHIP PLANT
NIGHT PERIOD OPERATIONS (3m/s WINDS and 2 deg C TEMPERATURE INVERSION)

APPENDIX C

SOUND POWER LEVELS

APPENDIX C - SOUND POWER LEVELS

The sound power levels used in the acoustic model are listed in Table C1.

TABLE C1 - SOUND POWER LEVELS

Item	Sound Power Level dB(A)
Truck Moving	107
Truck at Idle	87
Debarker (enclosed)	93
Chipper (enclosed0	90
Front End Loader	113
Dozer	115
Train at Idle	87
Conveyor	77/m length
Stacker	105
Train Loader	105

Sound power levels calculated from measured noise levels of the equipment or file data depending on the item.

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
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Suite 34, 11 Preston Street, Como, W.A. 6152
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Telephone: (08) 9367 6200
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LYNTON STORER M.A.I.E.A., M.A.A.S.
TIM REYNOLDS M.I.E. AUST. M.A.A.S.

Our ref: 10640-1-01082

23 November 2001

ATA Environmental
21 Howard Street
PERTH WA 6000

Attention: Helen Sivertsen

Dear Sir,

SW PLANTATIONS
BASELINE MONITORING

As requested, noise level monitoring was carried out at the location of the proposed chip plant for the above project. This report presents the results and comments on the levels recorded.

MONITORING

The existing acoustic environment was quantified by the monitoring of noise levels at the proposed chip plant location.

Location are shown on Figure A1, attached in Appendix A.

Monitoring was set-up on Tuesday 30 October 2001 and recorded information for a period of approximately 2 weeks.

An automatic noise data logger was utilised to measure 15 minute intervals in accordance with EPA Draft Guidance for Assessment of Environmental Factors No. 8 - Environmental Noise. The logger records statistical noise level data of which the L_{Amax} L_{A1}, L_{A10}, and L_{A90} levels are reported.

The logger location was at green field sites, being representative of the area. The microphone height is 1.5 metres above ground floor level. Photographs were taken at each site, with the direction shown on Figure A1.

The results of each measurement location are contained in Appendices as follows:

Appendix A

Monitoring Location

Appendix B

Recorded noise levels in graphical form.

Appendix C

Recorded noise levels in tabular form.

Appendix D

Photographs taken at site.

DISCUSSION

Noise levels recorded at the site are consistent with measurements recorded at greenfield sites with no roads or with roads carrying infrequent traffic and minimal other activities.

Noise levels during the night period dropped to around 28 dB(A), which would be representative of the background noise levels during periods of calm or light winds.

The increases in noise levels during certain times is related to weather conditions.

Note: The periods of high noise levels (i.e. L_{Amax} of over 75 dB(A)) would be due to period of 'heavy' rain or movement close to the monitor.

We trust that the above information is sufficient for your immediate needs. Should you have any queries, please do not hesitate to contact this office.

Yours faithfully,
for **HERRING STORER ACOUSTICS**

T.C. Reynolds.

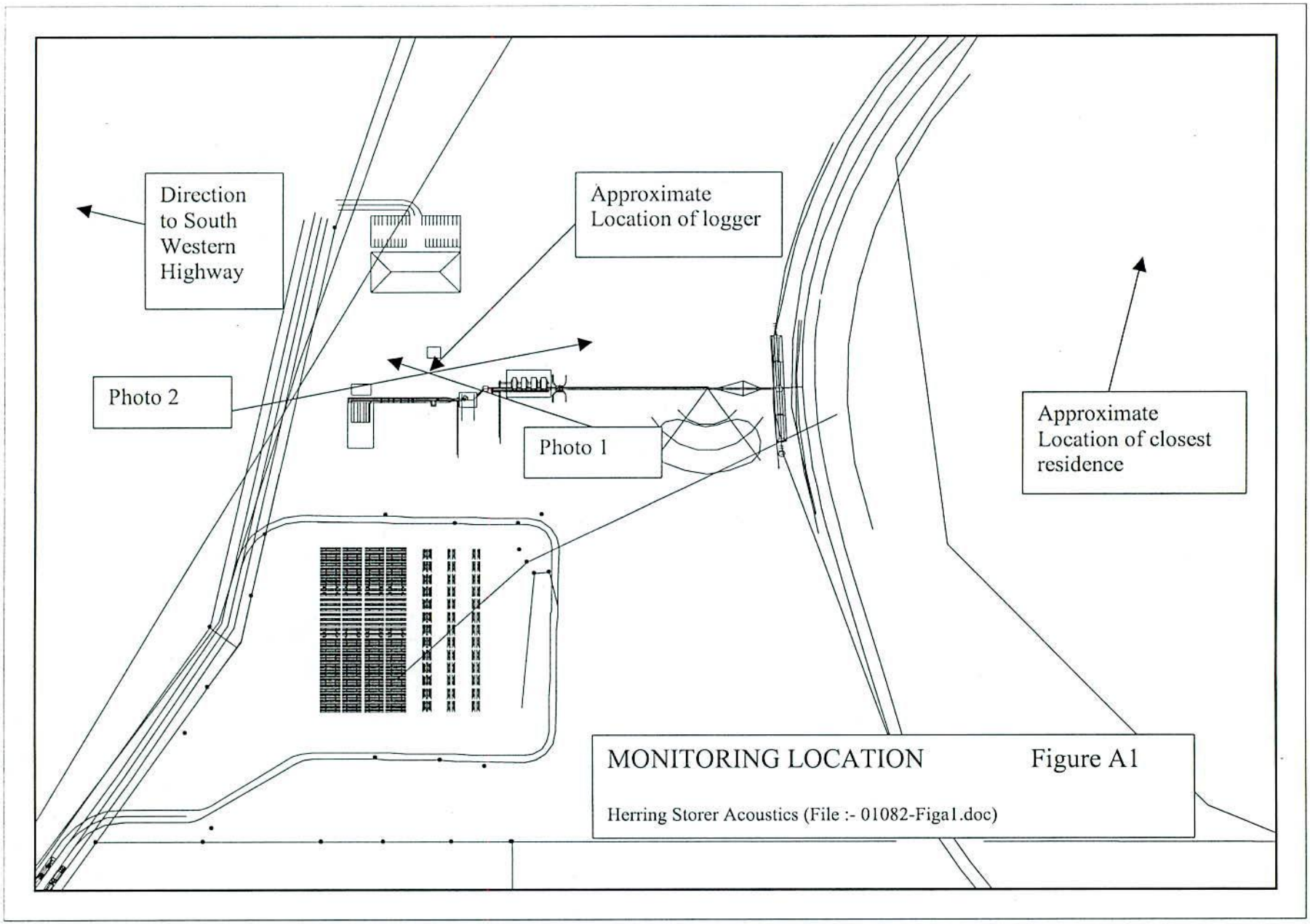
Tim Reynolds

Att.

NOTE:
APPENDICES B, C & D PRESENTING TABULAR RECORDED NOISE DATA AND DATA IN GRAPHICAL FORM HAS NOT BEEN INCLUDED.

APPENDIX A

MONITORING LOCATION


Direction to South Western Highway
Approximate Location of logger
Photo 2
Photo 1
Approximate Location of closest residence
MONITORING LOCATION
Figure A1
Herring Storer Acoustics (File :- 01082-Figa1.doc)

APPENDIX 11

WATER QUALITY RESULTS OF THOMSON BROOK AND PRESTON RIVER

APPENDIX 9
WATER & RIVERS COMMISSION
MONITORING RESULTS OF THE PRESTON RIVER AND THOMSON BROOK

The following water quality snapshot results refer to sample locations described below. The site numbers are the AWRC reference names.

No.611111 Thomson Brook. Taken on Woodperry Homestead upstream of the unnamed tributary that flows east of the mill site.

No. 611049 Preston River near Beelerup Rd. Taken downstream of where Thomson Brook joins the Preston River.

No. 61006 Preston River in Donnybrook Town. Taken near the railway Hotel.

No.	Stream Name	Date Sampled	Colour (true) Hu	Hardness tot mg/L	Turbidity (NTU)	Cl (sol) mg/L	Alkal.CaC O_3 mg/L	Temp (°C)	ECond (uS/m)	pH	Water level M (SLE)
611111	Thomson Brook[1]	2/8/94-9/11/94	7.5-38		0.98-10.23			18[2]	66000-125800	7.8-8.0	10.079-10.794
611111	Thomson Brook	8/9/92	28.0	55.8	9.0	120.07	37.48	12.5	45900	7.35	
611049	Preston River	3/11/76[3]		136.0		273.0	52.0	17.0	120400	7.7	10.164
61006	Preston River	22/5/95[3]						15.5	82500		10.206
61006	Preston River[1]	7/10/92-23/3/94	15.0-38		3.8-9.4			19.4[2]	66400-120400	6.9-7.2	10.215-10.558

Notes:
1. 5 Samples
2. 1 Sample
3. Most recent data

APPENDIX 12

WAPRES CODE OF CONDUCT FOR LOG HAULAGE

CODE OF CONDUCT FOR LOG HAULAGE FROM PLANTATIONS

INTRODUCTION:

WA Plantation Resources as one of the agencies for the organisation and management of Bluegum Plantations recognise the need to demonstrate to the whole public community, that this industry is professional, competent and efficient. WA Plantation Resources also recognise that this same need has to be demonstrated by its contractors. As such, WA Plantation Resources understands that log trucks and their drivers are the major, front line ambassador for our industry. This Code of Conduct for haulage of plantation logs has been formed with the objective of gaining and maintaining confidence in the log delivery aspect of the industry. Truck drivers will be required to conduct themselves and operate haulage trucks in such a manner that Community sentiment and opinion is positive and remains so. WA Plantation Resources is required to ensure that the planning for haulage also, builds this same positive sentiment.

Contractors and operators will be required to be self-regulatory. Adoption and acceptance of this Code of Conduct will be a requirement for employment by WA Plantation Resources.

THE CODE

1.0 PLANNING:

a. WA Plantation Resources will ensure that the Timber Harvest Plan for the operation is complete and communicated to the Contractor in both hard copy and by verbal induction prior to commencement of the operational harvest.

b. The contents of the Timber Harvest Plan are outlined in the "Code of Practice for Plantations".

2.0 THE LOADING POINT:

Truck drivers will:

a. Be responsible for the safe loading of their trucks in regard to weight, height, length and security.

   a.1. Overloading will not be tolerated. The amount of weight delivered above the maximum allowed for any haulage combination will be deducted from the Contractor payments. A tolerance level will be agreed by all.

   a.2. Protruding limbs, loose bark or trailing debris of any kind will not be permitted and must be removed by the driver before leaving the loading point, or immediately when noticed en route.

   a.3. Individual bays of logs shall be bound with a minimum of two suitable straps that conform to the Australian Standards for Road Transport. The serviceability of straps will be checked periodically.

   a.4. The rear bay of logs will have 2 individual binding chains or straps to secure the load.

b. Position themselves to maintain communication with the loader operator and in a safe work environment.

   b.1. This is outside the cab of the truck and at a point away from falling or slipping logs. Radio communications between drivers and loader operators will be encouraged. Eye contact should be maintained during the loading operation.

   b.2. Other persons associated with the harvest operation will position themselves in front of the truck or loading machine during loading if they are remaining on the landing. When passing by a landing, all persons must pass at a safe distance from the truck or wait until loading has stopped. A safe distance may be considered as 20 metres.

c. Wear as a minimum, a high visibility shirt or vest, a safety helmet and steel capped boots at all times whilst outside the truck at the loading point.

   c.1. During night operations, it is recommended that reflective strips be attached to helmets and vests.

d. Inspect the load prior to load binding and hitching up where trailers have been pre-loaded. The driver will not remove any unsafe load from the site.

e. Complete required paperwork prior to leaving the site.

3.0 EN-ROUTE TO PROCESSING CENTRE:

Truck drivers will:

a. Check the load and the security of load at least once while travelling to the destination. Loads will be resecured where required.

b. Switch the lights of the truck on, at all times during haulage operations.

c. Drive in such a manner that is commensurate to the existing road conditions and having due regard to normal road rules.

   c.1. Truck drivers will yield "right of way" in situations where appropriate to ensure safe passage of other road users.

   c.2. Speed limits for trucks will be the same whether loaded or unloaded.

   c.3. Actual speed limits and haul routes will be set out in the unique Timber Harvest Plan. These will reflect road conditions and class of road. The maximum speed on any minor local authority road or plantation road will be 60km/hour, where not otherwise specified.

   c.4. Farm gates will be left as found at all times.

d. Not use engine brakes where the noise is likely to adversely impact upon residents.

e. Decrease truck speeds to minimise the problems associated with dust or noise around private dwellings, road works and or stationery vehicles.

f. Not allow unauthorised passengers to travel in log trucks.

h. Not interfere with any public property, livestock or farm infrastructures in the course of log haulage activities.

4.0 PRESENTATION OF PERSONNEL AND EQUIPMENT:

a. Truck drivers will be encouraged to wear their company uniform during operations. A neat and tidy appearance in public places will be required by all Contractors.

   a.1. Drivers will remain calm and courteous when in contact with other members of the public.

   a.2. Where appropriate drivers will acknowledge the presence of landowners or forest owners when on treefarms or whilst travelling on minor local authority roads.

b. Trucks and trailers will be maintained in a safe working condition according to normal traffic rules. Contractors will be encouraged to clean trailers and trucks at intervals commensurate with conditions to maintain good, neat appearance.

   b.1. Cleaning of trucks and trailers will be required between trips when hauling logs from different properties in order to minimise the spread of weeds and seeds.

c. Fire extinguishers will be carried at all times during operations.

d. Bush Fires Act provisions will be strictly adhered to.

e. Drivers will hold a current appropriate license for the haulage combination used.

f. Drivers will not operate trucks whilst under the influence of drugs and/or alcohol.

   f.1. Transport Contractors shall adopt a "Drug and Alcohol Policy".

g. Drivers will not operate trucks when fatigued. Supervisors/Contractors will monitor all drivers with regard to fatigue as per Company policy.

h. There will be no litter arising from the haulage operation.

i. Trucks will not carry any dangerous article, explosive or firearm.

j. Trucks will not carry any animals.

5.0 ROADS:

a. WA Plantation Resources will control and manage the Contractors use of roads for hauling plantation logs.

a.1. A Timber Harvest Plan for each plantation will be prepared prior to Harvesting. Haul routes, vehicle speed limits and other provisions will be specified in this plan.

a.2. Access may be restricted from time to time by WA Plantation Resources in order to maintain the road or where adverse weather conditions would cause damage.

b. WA Plantation Resources foresters will inspect haul routes with nominated Shire Officers wherever possible, prior to haulage, This will determine the existing standard and pre-emptive works.

c. A Contractor will ensure that all roads as nominated on the Timber Harvest Plan, are left in a trafficable condition at the cessation of each work day.

d. Damage to roads, culverts or bridges will be reported to the Contractor's Supervisor as soon as practical, who in turn will notify the WA Plantation Resources Site Representative.

6.0 SIGNAGE:

a. The plantation sign identifying the operation will be placed at the front entrance of the plantation.

b. "Treefelling" signs will be placed in close proximity to the operation on all entry roads and where necessary within the plantation.

c. "Trucks on Road" signs will be placed on all minor local government roads where appropriate. This will be the responsibility of the Contractor.

d. "Trucks Entering" signs will be placed on access/egress points on haul roads.

e. The Leading Hand/Supervisor will be responsible for the maintenance of sign visibility.

f. All signs will conform to International Symbology or Australian Standards and be in good, readable condition.

7.0 REPORTING:

a. Truck drivers will be encouraged to report to their supervisors any aspect of the operation that has the potential to negatively impact on the safe working environment, the natural environment and/or the public environment.

   a.1. Any road damage and/or road repairs should be reported as soon as practical.

SUMMARY:

The haulage of the logs aspect of Harvesting is the major public witness of our Industry. It will be to everyone's benefit to minimise public complaint and maximise public acceptance and confidence. To this end, all Contractors will be encouraged to accept this Code of Conduct and continually enhance our collective public approval rating.

This Code of Conduct will supplement other Codes of Practice and Safety Codes.

WA Plantation Resources' preferred Contractors are: To be filled out.

These contractors endorse the provisions of this Code