Social Assessment for the WA Regional Forest Agreement

A REGIONAL FOREST AGREEMENT FOR WESTERN AUSTRALIA

Social Assessment for the WA Regional Forest Agreement

Prepared by the

Social Assessment Unit

Western Australian

R F A

Regional Forest Agreement

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Further details about the Regional Forest Agreement are available on the internet at http://www.rfa.gov.au or http://www.calm.wa.gov.au

Contents

GLOSSARY

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
AHC	Australian Heritage Commission
AWU	Australian Workers Union
CALM	Department of Conservation and Land Management
CAR	Comprehensive, Adequate and Representative
CRA	Comprehensive Regional Assessment
CSI	Community Sensitivity Index
DCT	Department of Commerce and Trade
DFA	Deferred Forest Agreement
EBC	Environment and Behaviour Consultants
ESFM	Ecologically Sustainable Forest Management
FISAP	Forestry Industry Structural Adjustment Package
FPU	Forest Products Union
GEHA	Government Employees Housing Authority
JANIS	Standards for establishing a CAR reserve system are known as the Joint Australian and New Zealand Implementation Subcommittee (JANIS) criteria
LCDC	Land Conservation District Committee
ME	Indicative Magnitude of Effect
MPC	Manjimup Processing Centre
NFPS	National Forest Policy Statement
PCP	RFA Public Consultation Paper
Qld DNR	Queensland Department of Natural Resources
RFA	Regional Forest Agreement
SA	Social Assessment
SAP	Structural Adjustment Package
SAU	Social Assessment Unit
SRCU	Social Research Consultancy Unit
TRC	Town Resource Cluster
TSA	Timber Supply Area
WATC	Western Australian Tourism Commission
WSAP	Workers' Special Adjustment Package

EXECUTIVE SUMMARY

This report details the social assessment for the Western Australian Regional Forest Agreement (RFA) and has particular emphasis on communities and groups which have a social and economic dependence on forests. The assessment is consistent with a principal Commonwealth and State Government objective to negotiate an RFA that will:

> (d) identify forest resource use and sustainable industry development options and examine any potential economic and social implications, including on communities, of these options (WA RFA Scoping Agreement, 1996).

Four separate projects were conducted and subsequently integrated to provide an overall assessment. These were:

- Post Impact Studies Analysis - review of previous land use decisions and resulting social impacts in the RFA region, review of previous social impact studies and relevant mitigation programs.
- Regional Social Profile - review of secondary data, a survey of the regional community and analysis of stakeholder issues.
- Forest Industry Assessment - survey of forest-based industry groups.
- Social Case Studies - selection and assessment of eight case study areas: Bridgetown (including Greenbushes), Collie, Manjimup / Deanmill, Nannup, Northcliffe, Pemberton, Walpole and Yarloop.

Numerous changes in the region over the last few decades were evident. Many are ongoing and have the potential to influence the shape and structure of community life. During this period:

- the population in coastal areas has more than doubled while it has not grown substantially or decreased slightly in other areas;
- social demographics in several communities are changing as younger people leave seeking better employment opportunities and/or older people arrive seeking life-style changes;
- increasing numbers of workers reside in areas distant from their employment;
- shifts have occurred in community attitudes towards the environment.

The native hardwood timber industry has also undergone increasing modernisation and centralisation. Consequently, many mill centres have either reduced greatly or ceased to exist. A downward trend in employment been accompanied by consolidation of activities in larger centres.

While the timber industry remains an important employer in the region, many communities have adapted to change by developing more diverse economies. Some towns have a mix of timber and mining industry employment while increasing tourism employment and investment is evident in areas including Pemberton and Denmark.

Other important forest-based industries include apiary, wildflower picking, seed collecting and finewood craft. Apiary, for example, provides considerable benefits to the agricultural sector while native seed collection is integral to the mining industry's revegetation programs.

Important forest management issues for Noongar groups centred on the protection of significant sites and access rights. Similarly, access and/or resource security appear to be predominant concerns of all industries and interests.

For example, secure access to timber resources and a guaranteed, sustainable timber supply are pressing issues for the timber industry. Many involved with the industry claimed that any further reduction in supply would dramatically affect families, communities and the industry's long-term future. (A profile of sawmill worker families is provided in Section 3.3). Prevailing uncertainty had restricted investment opportunities and workers were anxious about their employment. Frequently raised issues included insecurity, despondency and a breakdown in community cohesiveness.

Reviews of the WA timber industry by BIS Shrapnel and Beca Simons concluded that with increased modernisation and improved utilisation of jarrah residues, good potential exists for a world competitive industry in WA. By 2003, for example, direct employment in the hardwood outdoor and natural feature furniture sectors was projected to increase by approximately seventy percent.

A key issue for the mining industry was also security of access (to mineral resources). As such, the formation of blanket exclusion areas is opposed. Comparatively, mining does not utilise extensive areas of land, however, the industry faces numerous social and environmental constraints. These are addressed through community consultation, new technology development and addressing forest rehabilitation and hygiene issues.

For some companies (eg. bauxite mining), any impacts arising from the RFA were likely to be relatively small and well into the future. Others (eg. sand mining) noted that the RFA had the potential to cause widespread industry impacts.

The tourism industry - a major growth industry in the south-west - stated that old growth forest had international tourism significance, however, insufficient areas had gained reserve status. Hence, additional reservation is considered essential in order to meet future needs and to fulfil the State Government's commitment towards nature based tourism. Interests also held that the JANIS reserve criteria do not specifically consider the needs of tourists in terms of locating old growth reserves near areas of high tourism focus (ie. close to towns).

Implications were highlighted for forest user businesses with some reliance on the Jarrah Blackwood Ecosystem - notable as the forest ecosystem with the largest old growth conservation deficits (see Section 5.2).

Following the release of the Public Consultation Paper (PCP) in May 1998, interviews and discussion group meetings were held in eight towns. Case study areas were chosen according to initial assessments of forest resource dependency and community sensitivity to change. A desktop assessment provided a preliminary indication of communities likely to be affected by the three possible approaches to a Comprehensive, Adequate and Representative (CAR) reserve system presented in the PCP (see Sections 6.1, 6.2).

The case studies assessed:

- potential local community impacts arising from the three possible RFA approaches;
- economic diversity and future opportunities;
- community capacity to absorb change (principally in terms of employment);
- ways to optimise outcomes at local levels.

The assessment concluded that communities are likely to respond differently to any changes arising from the RFA. Influential factors include economic diversity and stability, infrastructure and service provision, unemployment rates, population and labour force size, forest dependency (including the proportion of the labour force employed in the timber industry and the presence of alternative local employment opportunities), and distance from other rural centres. Social factors include political efficacy and the degree to which local support networks are inclusive.

Specific areas needing scrutiny when developing the RFA include Nannup, Pemberton and Manjimup. Northcliffe, Yarloop and Greenbushes could also encounter significant community effects, while impacts on individuals, local businesses and organisations could eventuate in all case study areas. Walpole is likely to be least affected, however, the area does have a significant CALM presence and thus could experience indirect flow-on effects.

Nannup stands out as the most vulnerable community. In comparative terms, the area exhibits only marginal growth, high unemployment and limited employment opportunities. It would encounter major difficulties sustaining the loss or significant downturn of a key industry while any decrease in the labour force would be likely to produce flow-on effects to town businesses and services.

Diversity of natural resources and industries, as well as low unemployment are Pemberton's key strengths. This noted, Pemberton appears comparatively sensitive to change. The magnitude of possible job losses would be likely to create social and economic impacts, at least in the short to medium-term. As evidence, local re-employment for any displaced workers would prove difficult.

Manjimup's main attributes include its role as a regional centre, comparatively large and stable population, low unemployment and broad mix of industries. It does, however, have a high reliance on the timber industry and provides limited alternative full-time employment opportunities. It is likely that a significant number of job losses would produce a short-term, yet intense local impact and longer lasting social disruption.

The social assessment considered ways to optimise outcomes for local communities, including the implementation of mitigation strategies to manage effects arising from the RFA (see Sections 7 and 8). Significant issues include the timing and rate of change, the need for change management and support and the instigation of community involvement and development.

A synopsis is provided of research that evaluated mitigation strategies in other regions. For example, in Eden, NSW, a structural adjustment package was implemented to assist businesses and individuals adjust to timber industry changes as a consequence of the NSW Interim Forest Agreement. This assistance, while helpful initially, did not help to improve the well being of people affected in the medium to long-term.

A review of post impact studies conducted in Queensland indicates that the nature and extent of impacts within communities varied according to the number of timber industry workers and degree of economic dependence upon the industry.

The research highlighted the need to ensure mitigation programs:

- are sufficiently resourced by government;
- are sufficiently supported by industry and community;
- involve local councils in implementing the relevant program;
- are transparent, flexible and locally appropriate;
- consist of a number of strategies which link economic, social and psychological factors;
- work towards counteracting direct individual, organisational and community losses through compensation and capacity building;
- develop retraining methods that attempt to provide local re-employment and which suit both affected individuals and the available job market.

The report notes that social impacts arising from imposed change can be extensive and long-term. To date, however, structural adjustment initiatives have tended to lack systematic application and provided largely short-term solutions. Collaboration between stakeholders and all levels of government is therefore essential, as is a clear and well managed communication process. It is suggested that the amelioration of impacts can be greatly assisted by the establishment of intermediary bodies, staffed by local people, to improve communications between local people and the responsible government agencies.

1. INTRODUCTION

1.1 Overview

Community concerns about the use of native forests began to emerge in the 1970s. The emergence of woodchipping in the mid 1970s developed into a political issue and the public debate between logging and conservation was elevated to new levels. The competing demands of forest conservation and use led to the development of the National Forest Policy Statement (NFPS) agreed to by the Commonwealth, State and Territory governments in 1992.

Under the NFPS a framework was developed to conduct comprehensive regional assessments of Australia's forests. These assessments encompassed natural, cultural, economic and social forest values to form the basis of Regional Forest Agreements. A key vision of the NFPS was to ensure ecologically sustainable forest management and to this end, national reserve criteria (referred to as the JANIS criteria) were developed. The Western Australian Regional Forest Agreement (RFA) will draw on the Comprehensive Regional Assessment (CRA) of the many forest values within the RFA boundary and input obtained during the public consultation process.

As part of the process, a Deferred Forest Agreement (DFA) was signed by the Commonwealth and Western Australian governments in July 1996. The DFA provided interim protection for forests potentially required for Comprehensive, Adequate and Representative (CAR) reserve areas for the RFA.

This report details the social assessment for the WA RFA. It carries particular emphasis on communities and groups which have a social and economic dependence on resources from forest areas. This is reflected in a principal Commonwealth and State objective to negotiate an RFA that will:

> (d) identify forest resource use and sustainable industry development options and examine any potential economic and social implications, including on communities, of these options (WA RFA Scoping Agreement, 1996).

In addition, "for communities dependent on access to resources from forested land, specific social and economic objectives of the RFA are to:

- maintain or enhance employment opportunities in forest-based industry sectors;
- maintain or enhance quality of life by increasing certainty for employment and access to social and physical infrastructure;
- ensure community viability; and
- maximise the benefits of the RFA on communities" (Public Consultation Paper - PCP, 13, 1998).

The WA RFA Steering Committee approved four separate projects which comprised the social assessment. The projects were:

1. Post Impact Studies Analysis:
- A review of previous land use decisions within the region and social impacts resulting from these decisions.
- Review of previous social impact assessment studies.
- Review of mitigation programs undertaken within the region and more broadly.

2. Regional Social Profile:
- A review of secondary data (eg. demographic, employment and labour force characteristics).
- Survey of the regional community (a random telephone survey).
- Identification of stakeholders and analysis of stakeholder issues.

3. Forest Industry Assessment:
- Survey of industry groups which have an economic dependence on the forests. Private sector timber industry employees were also surveyed.

4. Social Case Studies:
- Selection of case study areas for detailed assessment.

Further details about project scope and methodologies for the social assessment are contained in Section 2 of this report.

A significant component of the social assessment process was to conduct a detailed assessment of selected case study communities located within the RFA boundary (Project 3). Areas were chosen on the basis of population, infrastructure, varying levels of economic diversity, assessed community sensitivity to change and community dependency upon forest use. Input regarding selection of areas was also sought from the RFA Economic Technical Committee.

The case study areas chosen were Bridgetown (including Greenbushes), Collie, Manjimup / Deanmill, Nannup, Northcliffe, Pemberton, Walpole and Yarloop. These have varying levels of dependency on employment in the native hardwood timber industry.

Assessment efforts intensified during the public consultation period between 25th May - 31st July 1998.

The purpose was to assess:
- potential local community impacts arising from the three possible approaches to a CAR reserve system presented in the PCP;
- economic diversity and future opportunities;
- community capacity to absorb change;
- community views about how changes could be managed to optimise desired outcomes.

Information was gathered from numerous sources including Australian Bureau of Statistics (ABS), detailed interviews, local discussion group meetings, industry surveys, stakeholder comments and reviews of published reports. The methodology used within the National RFA process (explained in more detail in Section 2) follows well established national and international practice (see Coakes, 1997; 1998).

A detailed analysis and synthesis of data from all sources was used to form an assessment of each area's capacity to respond to employment loss.

Due primarily to the restricted time frame available, the social assessment did not focus specifically on issues relevant to Noongar communities. This noted, efforts were made to consult with appropriate organisations and individuals as occurred for all stakeholder groups. The decision was taken in the knowledge that a consultative project with Noongar communities, commissioned by Environment Australia, was a significant component of the RFA.

The main objective of the Aboriginal consultation project was "To conduct an effective consultation process with Noongar communities in or associated with the WA South-West Forest RFA region which informs communities about:

- the CRA/RFA process and expected outcomes;
- opportunities for Noongar participation and contribution to RFA process and outcomes; and
- the national estate identification process.

The project report identifies the main concerns of Noongar communities in relation to the development of the RFA (Edith Cowan University, 1997a, 2).

The report also outlines the focus on social value, recounted as "... collective attachment to places that embody meanings important to a community" (Edith Cowan University, 1997b, 72).

It was reported that those consulted "... called for on-going consultation and involvement in forest management in general and the protection of Aboriginal heritage places in particular" (Edith Cowan University, 1997a, 51).

1.2 Assumptions used in Case Studies

Findings from case study areas cannot be generalised to other areas within the RFA region and, as such, individual analysis is necessary. Assessment of potential impacts incorporated the following assumptions drawn from previous findings.

- The smaller the community, the greater the potential impact.
- The impact of employment loss within a community will be greater where:
  (a) the existing pool of job opportunities is smaller;
  (b) displaced workers are less equipped to seek or create employment for themselves.
- People who have lost employment cannot necessarily move into vacancies that appear, particularly if these are in different industry sectors.

- The longer a person works in an industry, the more difficult it is to change industries. Change will be less difficult if the person has previous experience in other industries.
- Employment loss does not automatically signify a corresponding loss in local population.
- A community that can competently deal with any adverse effects is one in which the constituents are able to: accommodate conflict; collaborate in identifying relevant problems; achieve a working consensus on goals, objectives and ways to implement them, and; collaborate in required action. It also needs to have very few socially isolated community members (Armour, 1993; Bowles, 1981).
- Employment multipliers used in the PCP (eg. to determine indirect employment impacts) were developed regionally. Multipliers were not used in the case studies as the magnitude of error increases substantially when applied at local levels.

1.3 Timber Industry Impact

Much of the focus in this assessment is on the native hardwood timber industry as this industry sector is likely to experience any impacts arising from the RFA more directly and immediately. Impacts frequently relate to employment loss and related effects.

Noted in more detail in Section 3.3, a survey of mill workers undertaken for the Social Assessment Unit (SAU) showed that on average, workers were aged 39 years, had worked in the industry for 14 years and lived in the area for 19 years (Environment and Behaviour Consultants - EBC, 1998).

Other recent studies examining impacts arising from changes to native forest resource access revealed that timber workers, particularly those with no other vocational experience, felt the highest costs of social change (eg. see Queensland Department of Natural Resources - Qld DNR, 1998; Rush, 1997). In addition, timber industry workers were identified as generally being less occupationally flexible, with a dependency on the industry that increased with age. Timber workers also encounter greater difficulty in adjusting to change. Sections 6 and 8 contain further details.

1.4 Report Layout

Section 2 describes the methods used to obtain information and the consultation process with a wide range of interest groups.

Section 3 provides a profile of the RFA region.

Section 4 outlines interest group concerns.

Section 5 identifies the most frequently raised issues and implications regarding the approaches to a CAR reserve system in the PCP.

Section 6 outlines the assessment of the case study communities.

Section 7 presents views on ways to optimise outcomes for local communities.

Section 8 presents a synopsis of mitigation findings from other regions.

Section 9 consolidates the report into a summary and conclusion.

2. SOCIAL ASSESSMENT METHODS

2.1 Assessment Defined

Forest management involves the pursuit of a wide range of objectives. The State and Commonwealth governments recognise that conflicts may arise in seeking to meet a number of these objectives concurrently.

In resource dependent communities such as those in the RFA region, changes in local environments are increasingly occurring due to resource development or conservation initiatives. The most substantial social impacts are experienced by people who live in rural areas, but are not necessarily actively involved in decision making.

Social impacts are changes that can occur in:
- people's way of life (how they live, work and interact on a day-to day basis);
- their culture (shared beliefs, customs and values);
- their community (its cohesion, character, stability, economic base, services and facilities) (Armour, 1990).

Recognising the importance of such changes, Social Assessment (SA) is defined as the systematic effort to identify, analyse and evaluate social impacts in advance in order that information obtained can influence the relevant decision making process (Burdge & Robertson, 1990; Burdge & Vanclay, 1995; Dale & Lane, 1994; Taylor, Bryan & Goodrich, 1990). The essence of SA is to achieve better decisions in matters of public policy and public good by:
- understanding and seeking to resolve the distribution of costs and benefits of imposed changes;
- ensuring that the likely social outcomes of particular courses of action (for particular communities) are considered before decisions are finalised and during the implementation of change processes;
- providing communities in which social impacts are likely to be felt with the opportunity to participate in decision making - such people are in the best position to say how such events are experienced (Manidis Roberts, 1996).

Core principles and broad functions of SA include the following.
- involvement of people in the collection of social information relating to their area (using consultation techniques including workshops and interviews);
- identification of data sources (eg. literature, primary and secondary data);
- description of the existing social environment affected by the decision;
- focus on concerns of the highest consequence;
- provision of feedback on social impacts to decision makers.

An additional important role for SA is to work with communities to develop mitigation strategies that act to ameliorate negative, and enhance positive, social and economic changes.

The aim of mitigation is to ensure that major developments can be implemented and responded to in such a way that a community's social vitality, local economic viability and capacity to adapt to change are maintained (Bowles, 1981).

Capacity is an important factor influencing community responses to change. Communities with a lower capacity for change are those that are small, isolated, lack robust economic diversity, are dependent on a single industry and have limited (or fragmented) support networks. The resulting high levels of uncertainty may further constrain a community's ability to adapt to change.

Discussed in Section 1.2, the capacity to competently deal with any impacts requires that community members are able to accommodate conflict and collaborate in identifying relevant problems and undertaking required action.

SA generally holds that well functioning communities are intrinsically important because they ensure quality of life for their members. Additionally, a viable local economy is necessary for any adjustment of individuals and families in communities.

2.2 Assessment Components

Data triangulation - a key component of SA - integrates data collected through different methods and sources to gain a more comprehensive understanding of the domain under investigation. Utilising both qualitative and quantitative methods, triangulation enhances data validity (North East Victoria CRA, 1998).

The assessment process was conducted over two phases. Phase 1 involved scoping and profiling the broad range of native forest resource issues. The projects - including assessment of stakeholder issues, post impact studies analysis, forest industry assessment and a regional community survey - had an emphasis on south-west communities, and also sought participation from the wider community and all peak bodies and groups with resource use interests in the region.

Phase 2 coincided with the release of the Public Consultation Paper. During the public consultation period, 25th May - 31st July 1998, the social assessment obtained information regarding:

- regional and local community feedback about the PCP approaches;
- the nature of effects and responses anticipated by businesses, service providers and government agencies;
- the implications of these actions.

Four assessment areas were used, utilising information obtained from:

i. industry and community surveys, stakeholder interviews and ABS census data;
ii. detailed interviews with key stakeholders from industry, service providers and local, state and commonwealth government agencies;
iii. local discussion group meetings in eight towns throughout the region;
iv. follow-up contacts with community members, industry, service providers and government agencies to clarify information collected.

2.2.1 *Phase 1 - Surveys, Interviews and ABS Data*

Surveys and interviews were used to profile local and regional issues relating to forest use. ABS data were used to extract demographic details including population, employment and labour force characteristics. Information was also obtained from government agencies regarding community infrastructure and services.

2.2.2 *Phase 2 - Interviews with Key Stakeholders*

To reflect implications for local areas, almost 100 detailed personal interviews were held with key informants from local and regional businesses and organisations. Interviewees were selected on the basis that they could provide information about the most probable effects of decisions (arising from an RFA) on their organisation, community and region.

2.2.3 *Phase 2 - Local Discussion Group Meetings*

A multi-method analysis was undertaken to define communities sensitive to changes in public forest policy within the RFA region. Based on community profile, sensitivity and magnitude of effect data (see Sections 6.1, 6.2), local discussion group meetings were held in the eight case study areas, namely Bridgetown (including Greenbushes), Collie, Manjimup / Deanmill, Nannup, Northcliffe, Pemberton, Walpole and Yarloop.[1]

The meetings were organised to assess possible local impacts and flow-on effects across all areas of the community (including timber, tourism, small business, health, education, volunteer groups, and other service industries). More specifically, this process was used to gain greater knowledge of possible local impacts, including likelihood, scale and duration; and, explain the rationale leading to the development of the RFA approaches.

The agenda was designed to obtain information regarding:

- PCP feedback;
- implications for local businesses/services arising from the PCP approaches;
- community implications and capacity to accommodate change;
- ways to optimise outcomes at local levels.

Case study areas included the nominated town and surrounding area or 'social catchment'. After some deliberation and community comment, postal areas were used to extract the profile statistics used in this report.[2]

Discussion group composition is outlined in Section 2.3.

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[1] Explanations of the method used to assess community sensitivity are provided in Coakes (1997) and the RFA Comprehensive Regional Assessment (1998) and Public Consultation Paper (1998).

[2] ABS data pertaining to Statistical Local Areas, Census Collection Districts and Urban Centres were all considered inappropriate for case study area assessment. These statistical areas tended to over or under-represent case study communities.

2.2.4 *Phase 2 - Follow-up Contacts*

After completing interviews and local discussion group meetings, follow-up contacts were made on a town by town basis with key informants from communities, industry and government agencies. To ensure the best possible input, contacts were sought from:

- meeting attendees and non-attendees;
- other community members (eg. business proprietors, service providers);
- regional level service providers and government agencies (eg. local government authorities, Regional Health Services, District Education Offices, CALM, Agriculture WA, Homeswest, South West Development Commission, Department of Employment Education Training & Youth Affairs, Department of Commerce & Trade, WA Tourism Commission).

This process was essential for clarifying and substantiating information gathered. A key line of investigation was to examine sensitivity to change in existing community facilities (eg. assessment of influences on an organisation's staffing/resourcing levels brought about by factors including employment and population loss).

2.3 Local Discussion Group Composition

When determining the composition of each discussion group, it was required that potential attendees (a) lived locally, and either (b) owned or managed a local business or service, or (c) were involved in a local community group.

To help identify key informants, local councils and/or telecentres were contacted to provide community directories for each area. These were used in conjunction with the stakeholder contact list (consisting of people who had expressed interest in the RFA) and information from previous interviews and field trips.

From these networks, a representative was invited to each meeting from the following groups (where they existed within a town).

- Hospitals or nursing posts
- Other services including Silver Chain and Red Cross
- Schools
- Local Government (Shire Councillors + Shire CEO)
- Timber industry representatives (including sawmillers and contractors)
- Mining companies
- Country Women's Association (CWA)
- Bushfire / Fire brigade
- Local businesses (including tourist operators)
- Chambers of Commerce / Business Enterprise Agencies
- Police
- Telecentres
- Tourist Bureaux
- CALM Office
- Post Office
- Accommodation / Hospitality
- Supermarkets / Shops
- Members of Parliament - all south-west MLCs and MLAs, and federal politicians were given the opportunity for briefing and meeting attendance

Due to the nature of the meetings a maximum of 20 people were invited to attend. For this reason, preference was given to people who were able to provide more than one perspective (eg. a local business proprietor with tourism interests, a CWA representative involved with the Forest Protection Society).

Once preliminary lists had been developed, all parties were contacted by phone and asked if they would be interested in attending and/or if they knew someone who should attend. In this way, the invitation list was expanded to incorporate a wide range of interests and experiences.

Before the lists were finalised, each shire CEO was asked to comment on the interest groups invited for each town (in the applicable Shire). This was to ensure an equitable mix of people and opinions were represented. Once completed, a letter of confirmation was sent to advise attendees that an information pack would be sent prior to the meeting. This contained a summary of the PCP, details of the RFA, a community profile, a summary of interest group issues and meeting agenda.

Invitees were contacted a minimum of four times prior to the meeting, including:
- initial phone contact to establish interest in attending;
- a confirmation letter to reiterate the details discussed by phone;
- a letter acknowledging the delay due to the later release of the PCP;
- a meeting invitation and information pack.

A copy of discussion meeting outcomes was forwarded to all attendees.

2.4 Expert Panel Review of Methods

A reference group of social assessment experts was established nationally to assist with the development of methodology and public involvement strategies throughout the social assessment process. Membership included representatives from Curtin University, CSIRO and the Department of Land and Water Conservation, NSW.

The Expert Panel provided specific feedback on meeting design and agenda and interview structure and process. Input from the panel, individual members and other social research experts was obtained on an as needs basis.

3. REGIONAL PROFILE

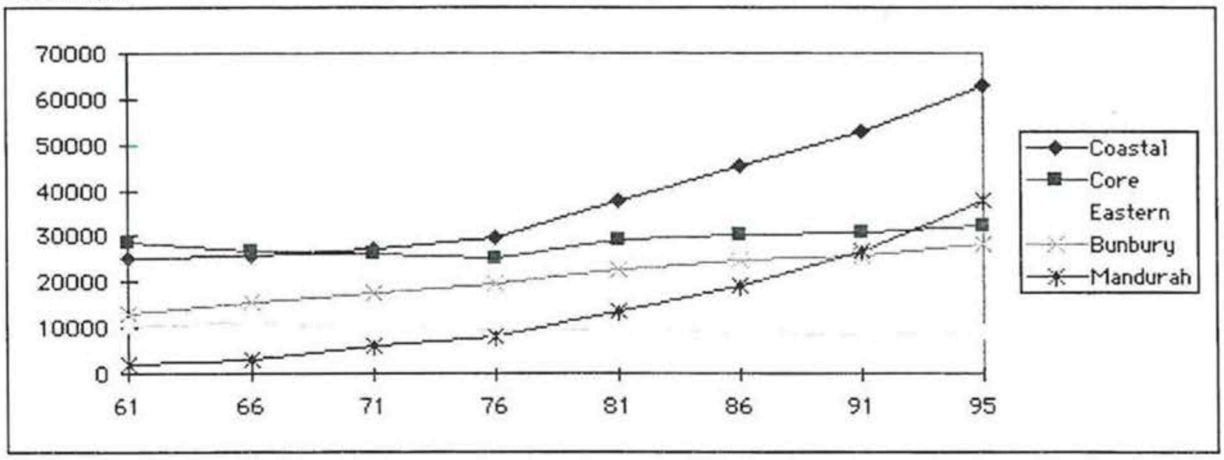
3.1 Regional Snapshot

Covering 4.25 million hectares and more than 30 shire areas (either totally or partially), the South-West Forest Region extends from near Gingin in the north-west to Denmark in the south-east. The population is approximately 160,000 (ABS, 1996), including more than 40,000 families and 70,000 (full and part-time) employees. The unemployment rate in the south-west region is 7.8%, which is slightly below the state average of 8.1%.[3]

The RFA boundary excludes Perth city and the coastal centres of Busselton, Bunbury and Albany (see Figure 1). While there are no cities in the region (excluding outer metropolitan centres including Mundaring, Greenmount, Kalamunda and Armadale), several major centres act as focal points for economic and employment activity, including Collie, Manjimup, Bridgetown and Waroona. Numerous small towns of less than 1000 people include Yarloop, Nannup, Greenbushes, Northcliffe, Balingup, Pemberton, Deanmill and Dwellingup.

In the past 30 years, the population on the coast has more than doubled while the core RFA shires (eg. Manjimup, Bridgetown-Greenbushes, Nannup) have remained constant or not grown substantially. Slight decreases have been registered in the eastern shires (eg. Cranbrook, Boyup Brook, West Arthur).

Coastal RFA	Core RFA	Eastern RFA	Major Towns
Capel	Collie	Cranbrook	Bunbury
Dardanup	Donnybrook	Plantagenet	Mandurah
Harvey	Boyup Brook	Brookton	
Augusta-Margaret River	Bridgetown-Greenbushes	West Arthur	
Busselton	Manjimup	Williams	
Murray	Nannup	Wandering	
Waroona	Boddington		
Denmark			



[3] The 'south-west region' was based on an approximation of the Central and Southern Forest regions, including the Shires of - Murray, Waroona, Boddington, Harvey, Collie, Dardanup, Capel, Donnybrook, Busselton, Boyup Brook, Bridgetown-Greenbushes, Augusta-Margaret River, Nannup, and Manjimup.

Map 1

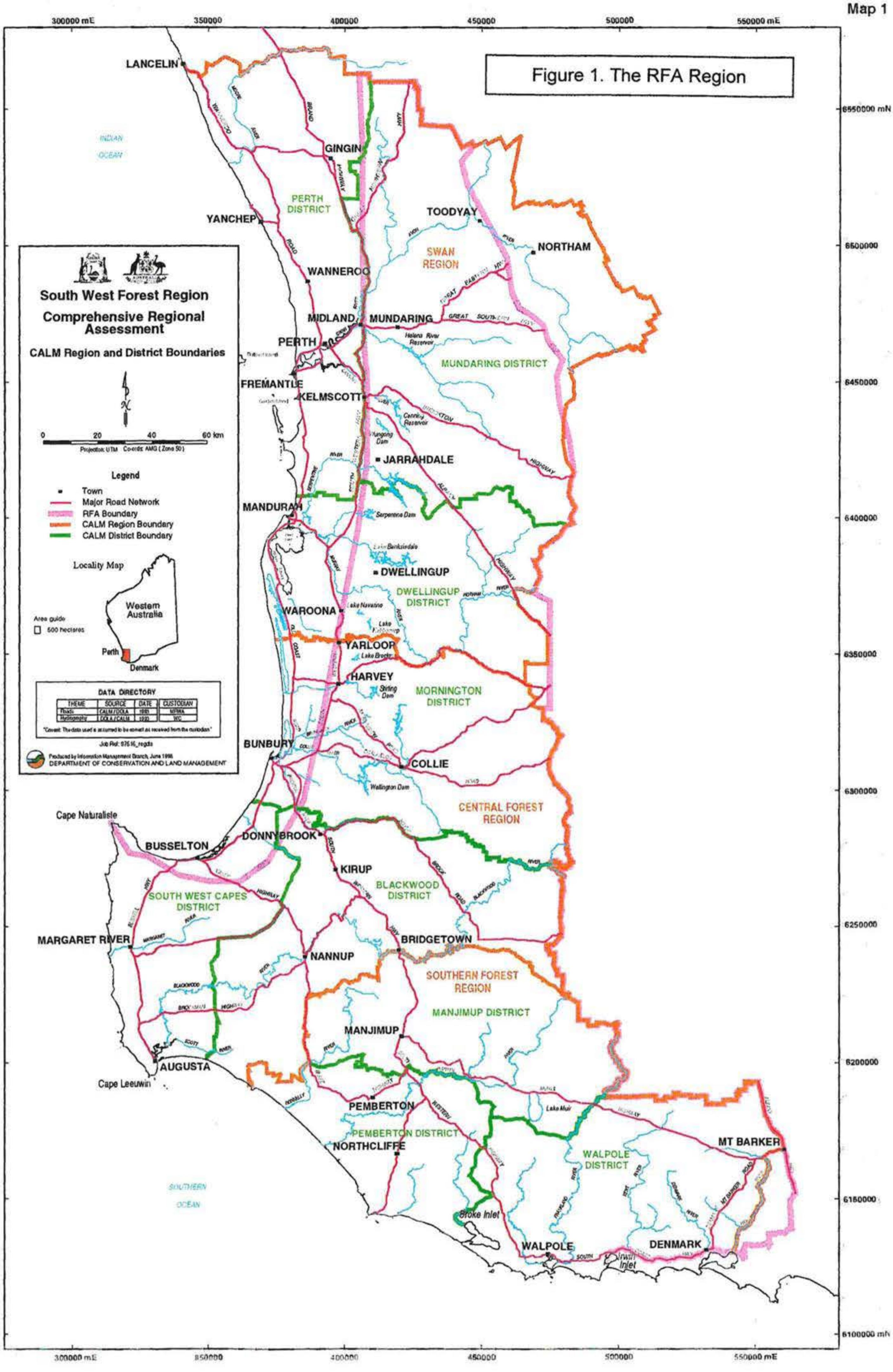


Figure 1. The RFA Region
South West Forest Region
Comprehensive Regional Assessment
CALM Region and District Boundaries
Legend
Town
Major Road Network
RFA Boundary
CALM Region Boundary
CALM District Boundary
Locality Map
Western Australia
Perth
Denmark
DATA DIRECTORY
DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
0
20
40
60 km
300000 mE
350000
400000
450000
500000
550000 mE
6550000 mN
6500000
6450000
6400000
6350000
6300000
6250000
6200000
6150000
6100000 mN
LANCELIN
GINGIN
YANCHEP
WANNEROO
MIDLAND
MUNDARING
PERTH
FREMANTLE
KELMSCOTT
JARRAHDALE
MANDURAH
DWELLINGUP
WAROONA
YARLOOP
HARVEY
BUNBURY
COLLIE
TOODYAY
NORTHAM
PERTH DISTRICT
SWAN REGION
MUNDARING DISTRICT
DWELLINGUP DISTRICT
MORNINGTON DISTRICT
CENTRAL FOREST REGION
Cape Naturaliste
BUSSELTON
DONNYBROOK
KIRUP
BLACKWOOD DISTRICT
SOUTH WEST CAPES DISTRICT
MARGARET RIVER
NANNUP
BRIDGETOWN
SOUTHERN FOREST REGION
MANJIMUP DISTRICT
MANJIMUP
AUGUSTA
Cape Leeuwin
PEMBERTON
PEMBERTON DISTRICT
NORTHCLIFFE
WALPOLE DISTRICT
MT BARKER
Broke Inlet
WALPOLE
DENMARK
Irwin Inlet
Lake Muir
Serpentine Dam
Wellington Dam
INDIAN OCEAN
SOUTHERN OCEAN

The relatively small population fluctuation of the core RFA towns can be mainly attributed to two aspects. Firstly, economic pressures affecting primary industries has led to a contraction of employment in many rural centres, shrinking business activity and a migration of younger residents seeking better educational and work opportunities. At the same time, immigration of new residents in several towns is offsetting population losses to some extent. In addition, social demographics in communities such as Bridgetown, Nannup and Pemberton are changing as older, more financially secure people arrive seeking life-style changes. Often not at retiring age, many newcomers are self-employed and contribute different skills and interests.

This pattern is evident across the south-west as well as nationally. Initially, young settlers often with children, arrive and purchase land inexpensively. The shift in population mix creates a demand for schools, services and community facilities. With improved infrastructure, land prices rise. The second wave of older and financially secure settlers then begins to arrive.

This phenomenon is widespread, however, what often differs is a community's response towards the new arrivals. Communities experience varying degrees of social change as this process unfolds.

Additionally, greater mobility and improved access to services and facilities means that increasing numbers of workers (eg. in Collie, and Greenbushes) are choosing to reside in areas remote from their employment. This can act to affect community cohesion.

3.2 Regional Assessment

The four projects conducted were previously outlined in Sections 1 and 2. The social assessment is based on the findings contained in these projects and supplemented with additional information obtained by the Forest Community Coordinators.

The Post Impact Analysis study (Chambers & Galloway, 1998) formed an overview of changing land use throughout the region, reviewed the impacts of changes and how these were managed. It was suggested that towns adjacent to a major regional centre were likely to grow with that centre, while the future of other towns was less certain. Discussions with the Department of Commerce and Trade (DCT) indicated that a community should experience a minimum growth rate of 2% per annum to ensure it was not economically disadvantaged relative to the State's growth. Communities facing less growth encountered negative effects such as a lower likelihood of attracting business investment.

Annual community events (eg. Manjimup Chestnut Festival, Boyup Brook Music Festival, Blackwood Marathon, Nannup Music Festival, Donnybrook Apple Festival) have advantages in terms of fostering community vitality and encouraging tourism and investment. In a similar vein, the Mainstreet Programs conducted through DCT serve as a barometer of local community pride and encourage tourists (eg. Bridgetown and Collie).

3.3 Economic Base

From an historical perspective, many existing towns - Denmark, Balingup, Bridgetown and Northcliffe to name a few - have all suffered economic and social hardships over the course of this century. The ability to diversify and broaden economic bases has been pivotal in accommodating and adapting to change.

Today, the region supports a wide range of industries including agriculture, mining and mineral processing, hardwood and plantation timber milling, tourism and recreation, manufacturing, beekeeping, viticulture, aquaculture, water supply, seed collecting, wildflower picking, finewood craft and firewood collection.

Coupled with increasing economic diversity and timber industry adjustment, many local and regional economies have become less dependent on the timber industry. This noted, towns such as Yarloop, Pemberton, Northcliffe, Nannup and Manjimup continue to have a high proportion of workers employed in the timber industry. Others including Collie and Greenbushes have an historical mix of timber and mining industry employment. A trend of increasing tourism employment is particularly evident in areas such as Pemberton, Denmark and Margaret River.

Mining

Mining activities make significant contributions in terms of revenue and employment to the regional, state and national economies. While mining activity is limited in geographic extent, its effects are widely distributed. As the major economic contributor in the region, the industry generated revenue of $2.68 billion and directly employed over 8,000 people in 1995-96 (CRA, 1998).

The presence of major mines and processing works has rejuvenated or greatly enhanced the economic stability of towns including Collie, Greenbushes, Waroona, Yarloop, Dwellingup and Boddington. It has also helped to foster other development in the region.

Mining activities in the region include bauxite, gold, coal, mineral sands and tantalum, lithium and tin.

Access to present and future resources is a major industry concern. Any decisions to exclude mining and exploration are considered to have major implications for the State and local economies.

Timber

Public land comprises 56% of the RFA region and is covered mostly by native forest and some tree plantations. Around 50% of public land - or more than 1.2 million hectares - is available for timber production, with the major native hardwoods including jarrah, karri and marri. The Conservation and Land Management Act (1984) is used to control forestry operations on public land.

The Act is overseen by CALM and includes consideration of environmental impacts, harvesting practices, log specifications and safety standards. CALM also regulates the supply of native forest logs to sawmills by offering (ten-year) contracts of sale (Connell, Johnson, Rayner & Jones, 1998).

In the past 40 years, the native hardwood timber industry has undergone considerable modernisation, increasing centralisation and, consequently, has changed in size and structure. Logging operations, mills and support communities have changed from localised to more integrated, consolidated and efficient operations. One outcome has been the creation of more stable employment opportunities in fewer locations.

In this period, numerous mill centres either reduced greatly in size or ceased to exist. Since 1961, the Northcliffe town population diminished from more than 500 to 239 currently. Nannup had nearly 400 more residents in 1961 than the 1996 population of 521 while Yarloop has sustained a decrease of about 150 (ABS, 1961; 1996).

In noting these trends, the timber industry remains a significant employer in the region and currently accounts for the direct employment of more than 2,400 people.[4] Towns such as Nannup, Northcliffe, Yarloop and other traditional timber centres have experienced modest population growth or minimal decline over the last fifteen years[5], The downward trend in employment has occurred over a reasonably long period and been accompanied by consolidation of activities in larger centres such as Manjimup, where new investment in timber processing has occurred (CRA, 1998). Most manufacturing is conducted in larger centres outside the RFA region.

While fewer in number, hardwood sawmills remain widely distributed throughout the region. In 1995-96, there were more than 110 mills in operation, of which the twelve largest mills (with allocations in excess of 15,000 m^3 per annum) purchased around 70% of all hardwood logs, accounted for 70% of the total gross value of production and employed 65% of all mill labour. In the same financial year, the mills employed more than 1300 people, of whom 88% worked full-time (Connell et al, 1998).

Production is currently oriented towards a wide range of products such as sawlogs and value-added components including veneer, dry sawn timber and residues such as export woodchips and industrial firewood.

Reviews of the WA native hardwood industry by Beca Simons (1997) and BIS Shrapnel (1997) noted that the industry must continue progressive modernisation to increase the level of value adding and improve utilisation of residues particularly from jarrah.

BIS Shrapnel assessed the potential development of a world competitive hardwood industry in Western Australia.

[4] Direct employment was specified by the RFA Economic Technical Committee to include all public and private sector employment up to the point of first sale.
[5] Due, in part, to factors including urban-rural migration and investment in other industries.

Good market potential for WA resources was identified, particularly in Asia where hardwoods are highly valued and demands cannot be met internally. Opportunities exist to substitute jarrah and karri for a range of overseas tropical and temperate hardwoods in short supply - particularly in the appearance grade end use market.

To this end, considerably greater investment in drying and milling technology is required to enable the WA industry to become cost-effective compared with Malaysia and USA. This would result in a "rationalisation of sawmills and staffing levels" (BIS Shrapnel, 1997, 24). While sawmill employment levels would continue to decline, employment potential exists in value adding. For example, a veneer-based industry was predicted to create approximately 360 jobs by 2010 (BIS Shrapnel, 1997). Direct employment in the hardwood outdoor and natural feature furniture sectors is expected to increase from 535 in 1998 to almost 900 over the next five years (BIS Shrapnel, 1998).

Sawmill Industry Employees Regional Profile

Conducted as part of the Forest Industry Assessment (EBC, 1998), an analysis of sawmill worker regional survey data indicates that families in this group tend to consist of young to middle-age couples who are likely to have primary school aged children. Reliance on community infrastructure and services such as education, health and recreation is therefore evident. Consequently, changes in a town's population or employment levels have the potential to affect - to varying degrees - the level of provision of these and other services.

Selected characteristics of sawmill industry workers within the region are shown in Table 1. Full details are available in the report titled "Forest Industry Expenditure, Catchment Analysis and Employee profiles" (EBC, 1998).

Table 1. Sawmill Industry Employees Profile - Indicator Results

Average age	39 years
Gender	86% male
Marital status	59% married
Family size	Average of 2.9 persons
Home ownership	31% owned, 34% rented, 35% paying off a mortgage
Length of employment in current business	Average of 10.5 years
Length of employment in the industry	Average of 14 years
Length of residence in the area	Average of 19 years

Results including the length of employment and residence in a particular community demonstrate the strength of workers' attachment to communities and type of work. It was concluded that these attachments are influential in the decision to remain in a community as is the perception of greater opportunity for re-employment (PCP, 1998).

Agriculture

Almost 44% of the RFA area is comprised of private land, most of which is cleared and used for agricultural activities including dairying, beef cattle and sheep grazing, horticulture, orcharding, viticulture and tree plantations.

Agriculture has caused a great deal of land clearing in parts of the region. Since its heyday in the 1960s, the challenges of increasing international competition have been met by increasing economic efficiencies and the size of operations. This has precipitated rural population decline, particularly in the eastern part of the region. At the same time, environmental degradation attributable to land clearing has been widely acknowledged (Chambers & Galloway, 1998; Farm Forestry Task Force, 1995).

The dairying industry is facing the possibility of deregulation in the near future. The ramifications of this create concern and uncertainty for individual farming families. At the same time, the beef industry is in decline due to poor market conditions and many farmers are seeking diversification. Horticulture is particularly strong in Manjimup Shire where the industry proactively seeks new markets and value adding opportunities. Viticulture has become a major growth industry over the last decade with south-west vineyards becoming renowned for producing wines of exceptional quality. Expansion of the wine industry in areas including Margaret River, Pemberton, Manjimup and the Great Southern Region has led to a substantial rises in land prices.

In recent times, the establishment of tree plantations has emerged as another attractive commercial land use which also assists to combat degrading processes such as soil erosion and salinity.

The 1995 Farm Forestry Task Force identified a global shortfall of 533 million cubic metres annually of industrial wood. WA was considered in an excellent position to take commercial advantage of this opportunity with the potential to "plant some 350,000 hectares of commercial trees on cleared farmland" (1995, iii). This is based on the assumption that up to 20% of farmland could be converted to tree production without a loss of agricultural production. Given required levels of investment, it was estimated that commercial tree production on farmland could provide 2,600 new jobs, predominantly in regional areas.

These trends noted, agriculture remains an important industry and is a major economic contributor to towns including Northcliffe, Nannup, Yarloop, Bridgetown, Manjimup, Pemberton and Walpole.

Tourism

Tourism is an important contributor to the national, state, regional and local economies. The World Travel and Tourism Council estimated that "tourism directly and indirectly accounts for about 11.5% of jobs, more than 14% of investment, 13% of exports, 12% of wages and about 10.5% of GDP in Australia making it of major economic significance" (RFA Tourism Report, 1998, 12). It was estimated that 13 jobs are created for every additional $1 million spent by tourists in WA.

The south-west, with its diversity of forest, coastal scenery and other natural attractions and land uses, is a valuable tourism resource. There has been a high level of public and private investment in tourism, including a wide range and growing number of tourism operators (currently more than 120) licensed by CALM to operate in State forests, National Parks and other conservation areas.

While a relative newcomer to the region's industrial base, tourism is already a significant economic contributor and employer with further potential for growth. It is predicted to become the State's fastest growing industry sector (Western Australian Tourism Commission, 1997).

The industry has an increasing focus on nature-based tourism. Having released a Nature-Based Tourism Strategy in 1997, the Western Australian government is taking a lead role in the management and promotion of this sector. The strategy, which directly applies to forest-based tourism, incorporates five principles:

- conserving the natural environment;
- involving and benefiting local communities;
- improving knowledge;
- providing quality products and services, and;
- ensuring an efficient and effective industry (RFA Tourism Report, 1998).

Apiary

Beekeeping is a unique primary industry with 80% of its resources coming from native flora - much of which is on public land (Gibbs & Muirhead, 1998).

The south-west provides favourable conditions for apiary. In 1995-96 there were 1,025 registered beekeepers in WA, using approximately 2,500 apiary sites. Of these, approximately 226 were commercial beekeepers, including 39 full-time operators. The many skills required for beekeeping are acquired through experience and are often passed from generation to generation.

The benefits of crop pollination accrue to the agricultural sector and flow on to the entire Australian community (Gibbs & Muirhead, 1998). CALM registers all apiary sites on public land and coordinates site selection. Beekeeping is permitted in National Parks and nature reserves under existing licences, however, a moratorium currently exists preventing the establishment of any new apiary sites in these areas (CRA, 1998; PCP, 1998).

The industry is under pressure from many sources including reduced forest access, exotic pests and predators, competition from agriculture and agricultural chemicals, and uncertainty over the impact of beekeeping on nature conservation reserves (Gibbs & Muirhead, 1998; Manning, 1992).

Floriculture

The south-west forest region is an important source of wildflowers for the floriculture industry, particularly the area between Mount Barker and Nannup. Approximately 700 registered pickers operate in public native forest. Bush picked produce accounts for around one third of the total Western Australian wildflower market.

CALM regulates the industry and issues licences. As a general rule, wildflower picking is not permitted in National Parks, conservation parks and nature reserves. Less than 10% of registered pickers harvested wildflowers for more than half the year during 1993, indicating that most operate part-time (CRA, 1998).

While an important component of total production comes from native vegetation, it has been reported that the industry is presently evolving predominantly towards cultivated wildflowers. The total production from bush harvesting has remained stagnant over recent years (CRA, 1998).

Native Seed Collection

Native vegetation continues to be an important seed source for the native seed collection industry. The industry mainly services land rehabilitation programs, particularly for mining, Landcare (and related community-based initiatives in agricultural areas) and local government projects. In responding directly to variable wholesaler demands, access to a wide geographic range of resources is required.

Seed collection in native forests is a vital component of the mining industry's revegetation programs.

The industry comprises five main traders and a number of small operators based in the south-west. The administration and regulation of seed collection is the same as for floriculture (CRA, 1998).

3.4 Attitudes towards the environment

Another important factor to consider in providing a profile of the RFA region is the shifts in community attitudes towards the environment that have occurred over the past 30 years. New legislation and public policy, increasing awareness of the value of forest for non-timber values and community-based action have resulted in greater areas of the forest being allocated as conservation reserves.

In response, timber industry workers and communities also began to organise into grass-roots action groups in the 1990s. They considered that employment was threatened by inadequate security of the timber resource and less of the resource being available for use (Chambers & Galloway, 1998).

3.4.1 Social and Forest Values of the Regional Population - Findings

Social values associated with forested land within the population of the RFA region were identified (EBC, 1997). Structured telephone interviews based on a random sample of 1,100 respondents from across five regional sectors were used.
The regions included (i) Urban (eg. Kalamunda, Lesmurdie) (ii) Central (eg. Jarrahdale, Collie), (iii) Southern (eg. Bridgetown, Manjimup, Denmark), (iv) Margaret River (eg. Yallingup, Margaret River, Augusta) and (v) Eastern (the eastern portion of the RFA region from Talbot Brook to Mt Barker).

Eighty percent of respondents were concerned about the management of forests in Western Australia. When comparisons were made across the five regions, higher concern was expressed in the Urban and Margaret River regions when compared to the Southern region.

An item referring to a possible value conflict between employment and the conservation of native forests, showed that 58% of the population held such conflicting values. This was particularly high in the Central and Eastern regions when compared with Margaret River.

Two core issues were the conservation of forest areas for future generations and the need to regenerate areas through planting of appropriate tree species.

Fifty-three percent indicated they were concerned about specific places where changes to native forests had occurred from human use. Areas of most concern were forests in the Pemberton area and in the south-west generally.

Respondents were asked to identify what they considered would be the main industries in their area within the next 20 years. An estimated 55% of the population indicated that tourism would become the main industry. In contrast, 6% indicated processing native timbers and 15% plantation timbers. Significant regional variations were evident, for example, 84% in the Margaret River region indicated tourism, while 60% in the Central region perceived mining would be the main industry. Twenty percent and 60% in the Southern region thought processing native timbers and plantation timbers would become the main industries respectively.

In general, the findings highlight that forest use issues are of foremost concern to many people in rural communities, particularly in the Southern and Central areas. There was, for example, a widespread perception that a reduction in forest use could adversely impact communities. Such change could result in increased unemployment, associated financial difficulties and related effects including population drift, service reduction, diminished investment and loss of community vitality.

4. OVERVIEW OF INTEREST GROUP CONCERNS

This section identifies the main groups and associations with an interest in the use and management of native forests in the south-west of WA.

During Phase 1 of the social assessment, the Forest Community Coordinators approached people to obtain a broad range of views about forest use and management. Those contacted were asked to identify the interest group with which they most closely identified. Individual comments were subsequently summarised to provide an overview of the key issues for each interest group.

The interest groups were identified as:

- Timber Industry
- Mining Industry
- Conservation
- Noongar Groups
- Tourism / Recreation
- Apiarists
- Wildflower Pickers
- Seed Collectors
- Regional Development
- Farming / Landcare

During Phase 2, feedback was sought about the approaches presented in the Public Consultation Paper. This section also contains additional interest group responses to the PCP, where applicable. Further comment is located in Sections 5 and 7.

The following summaries are provided to illustrate the diversity of opinion about forest use and some areas of common ground.

Timber Industry Overview

Secure access to timber resources is a key issue for the timber industry. A reliable and sustainable timber supply must exist for industry capital investment, product development and international competitiveness. The RFA must provide an acceptable, long-term agreement which will form the basis for continuing employment and new investment, particularly in value adding. Related outcomes will include enhanced community services and greater community stability.

Harvesting in native forests is presently sustainable and, given resource security, can continue to make a significant economic contribution. Timber companies and employees are accustomed to industry change, such as adapting to an increasingly variable log resource. Sawmillers are adapting to the use of more regrowth, smaller log diameters and are working to improve the use of timber resources, including by-products and native forest residues.

Native forest areas are in sound condition and well managed by CALM. Consideration of forest management issues is clouded by emotion, politics and insufficient public knowledge. For example, the Australian Heritage Commission's (AHC) approach regarding National Estate issues concerns the industry. Resource security cannot be achieved unless the AHC endorses RFA outcomes.

There is a need for improved public information, education and dialogue between stakeholders that is informed by quality science. Management decisions should be based more on this science than responses to political pressures. These changes would lead to greater self-worth and acknowledgment for people associated with the timber industry.

Additional Comments

- A world class reserve system is supported and is possible by the flexible application of the JANIS criteria to cause minimal or no job loss. Areas of informal reserves must be counted in the final CAR reserve system.
- Further reduction of the forest resource base would dramatically affect individual families, communities and the long-term future of the industry.
- The timber industry has been subjected to more scrutiny than any other resource-based industry in Australia.
- Instability and uncertainty have restricted investment and growth opportunities. A minimum 20 year time block is required to realise investment returns.
- Potential timber industry job losses have been grossly understated in the PCP to minimise the face value of impacts.
- Failure to consider the manufacturing component of the industry presents a major flaw of the PCP impact analysis, particularly as value adding is mandatory in WA.
- There is an overemphasis on conservation/biodiversity issues compared with economic and social issues.
- The decline in timber industry jobs is consistent with the decline in other industries undergoing technological change and restructuring, such as printing and banking.

Mining Industry Overview

The key issue for the mining industry is security of access to mineral resources. As such, the industry opposes the formation of blanket exclusion areas, particularly as new technology increasingly allows previously inaccessible resources to be extracted and new mineral deposits to be discovered. To achieve and maintain access, a mechanism is needed to provide ongoing consultation and negotiation opportunities with government (rather than being forced to comply with what are seen as politically expedient decisions).

Comparatively, the mining industry does not utilise extensive areas of land. Further, the industry acknowledges the importance of other forest uses and users of the native forest. Pressure to conserve the remaining native forest, however, has created a negative public perception towards mining. This has occurred despite the fact that the industry acts responsibly in addressing forest hygiene and residue issues and returns disturbed land to its premining condition. In this respect, seed collection of native species is an important activity in rehabilitating mined areas.

The industry faces numerous social and environmental constraints which it endeavours to meet through mechanisms including community consultation and new technology development. It considers that it has made substantial contributions to regional communities, particularly in counteracting rural population drift.

The RFA needs to develop a comprehensive, impartial and multiple land use strategy that will not disadvantage the mining industry, particularly small interests such as prospectors. This strategy should carry a minimum of red tape and avoid additional costs for all parties.

Additional Comments

- The industry supports a balanced and flexible CAR reserve system. However, to minimise impacts, the JANIS criteria should be applied as guidelines only.
- The industry seeks a multiple use reserve system - including access for mineral exploration - where it is an ecologically sustainable part of that system.
- Areas designated in RFA reports as having "low" mineral potential would limit or deny future mining industry access. Low potential should be used solely as a guide for further consultation and investigation rather than an absolute criterion that prevents mining.
- Lack of current mineral application does not mean an area is not prospective. At the very least, consultation should occur with the Department of Minerals and Energy and industry bodies before excluding or restricting mining and exploration.
- The state and commonwealth legislative and regulatory regimes applying to the mining industry should be acknowledged.
- "Setting aside" reserves would make mining access very difficult and would inevitably have extensive consequences for the State, community and mining/exploration companies.

Tourism / Recreation Overview

Tourism is a major growth industry for the south-west region. The industry is an important user of the forest and seeks equal partnership with the timber industry in the development of forest policy. Employment, including nature-based tourism, will continue to grow and the industry is therefore obligated to ensure that important areas of forest are preserved.

The primary issue is resource security, with a number of tourism operators stating that insufficient areas of old growth forest are placed in reserves. Old growth forests are considered to have international tourism significance and additional forest resources need to be preserved for tourism values (eg. scenery and biodiversity) and future expansion. Old growth forests are also important for local recreation.

Many tourist and recreational activities have been affected by forest ecosystem structural changes that hinder user friendly access. For example, the growth of impenetrable mid storey species is seen to occur through existing fire management regimes.

The industry questions whether the forests are managed on a sustainable yield basis. To this end some consider that current resource problems facing the timber industry may stem more from forest management practices and royalty structures than pressures to extend conservation reserves.

On a more positive note, it is believed that the timber and tourism industries can co-exist provided improved public communication and consultation occur before forest use decisions are made. It is beneficial for local communities to have a mix of industries that add value and diversity to regions and towns. Forest management should therefore incorporate the resource security needs of all industries.

Additional Comments

- The RFA undervalues the importance of the tourism industry. For example, no comparable economic research was undertaken to identify jobs located in forest-based industries other than timber nor potential job creation through tourism developments.
- The implication that most tourism is corridor-based and additional conservation reserves are not required is erroneous. The growing nature-based tourism market clearly requires access to extensive, contiguous areas of old growth forest.
- The tourism industry requires resource security so that, as projected growth is achieved over the 20 year RFA period, an adequate amount of high quality old growth forest will exist to satisfy market needs.
- The JANIS criteria do not specifically consider the needs of tourists in terms of strategic reserve location near areas of high tourism focus.
- Current visitor rates are nearing or exceeding capacity during peak times in some parks, such as Warren and Beedelup.

Conservation Overview

Conservationists believe there is discrepancy between the objectives of forest management and what occurs in practice. Timber industry practices affect resource security and employment opportunities for non timber industries and also reduce broader environmental values. Common views are that biodiversity is being compromised, old growth values are diminishing, regeneration processes are inadequate and there appears to be little awareness of the extent of impacts before management decisions are made.

Native forest timbers are significantly undervalued. Further, woodchipping is a lucrative business that "drives" the timber industry. It is the industry's methods and outlook, not conservation pressures, which cause related resource security and employment problems.

Conservationists do not agree with the view that closing timber mills destroys local towns. Walpole, Jarrahdale and Denmark continue to develop in new directions despite local mill closures.

Many people who hold conservation views do not see themselves arguing for timber industry closures. They are, however, arguing for the industry to place higher dollar and preservation values on native timbers and explore alternative harvesting and processing methods.

It was hoped the RFA would address conflict issues, however this is not the case. There is considerable dissatisfaction that unlike some other states, conservation representation on WA's Steering Committee has been disallowed. This has created doubts over the sincerity of the RFA process.

Additional Comments

- Forest areas of high social, cultural and ecological value are being lost for future generations. They are irreplaceable.
- Forests are managed for timber production rather than ecological sustainability.
- Clearfelling and woodchipping native hardwoods are opposed, as are logging and mining in National Parks, and the use of jarrah for manufacturing silicon.
- The definitions for terms used in the RFA such as "old growth", "dieback" and "reserved" are not generally agreed with and this adds to the mistrust about the RFA.
- The public need to know and understand how the information collected for the RFA is incorporated in the decision making process.
- To comprehensively assess forest management, the RFA should have included analyses of the plantation industry and pricing structures. At present, non-competitive pricing structures between native forest timbers and softwoods discourage plantation industry expansion.
- An independent body established to review and regulate forest management would foster greater public confidence.

Noongar Groups' Overview

Views concerning forest use and management centre on the protection of significant Noongar sites and access rights for hunting and other cultural activities. Further opportunities for Aboriginal access to forests will emerge with expected growth in cultural tourism. It is also important to bear in mind that association with "country" often relates to large areas of land rather than specific, well-defined places.

Current forest management practices (eg. burning regimes) are seen to affect issues relating to forest protection, access and use. Some consider that CALM does not deal adequately with these issues and would like to see co-management agreements developed between CALM and relevant/appropriate Noongar people. In particular, control of cultural information - which may have both general and economic application - is a recurring issue.

To preserve Noongar values, it is considered that all native forests should be maintained as close as possible to their natural state. Formal recording, management and protection of significant sites is needed.

Ideally, joint management and responsibility for significant forest areas should be established between CALM and Noongar interests.

Additional Comments

- Noongar people require unrestricted assess to all areas of the forest, including National Parks and nature reserves, for spiritual, cultural, recreational and hunting purposes.
- Access to places of heritage value is a matter of cultural survival.
- Heritage places must be protected from destruction or damage. Compensation for any damage must be available.
- People's traditional knowledge of the natural environment can contribute greatly to forest management - it is their right to contribute under either Native Title Legislation or the principles of natural justice.
- Government and industry need to provide funding and employment and training opportunities for Noongar people to be actively involved in culturally appropriate land management and interpretation.
- Cross cultural training programs should be initiated with CALM personnel to increase awareness of issues relating to Noongar identity and culture.
- Mechanisms should be developed to share with Noongar communities the economic gains from forest-based industries.

Apiarist's Overview

Apiarists are very concerned about the survival of their industry. This can only be assured if access is maintained to the traditional forest areas needed to consistently produce high quality end products. Reduced access to these areas of old growth jarrah and karri forest - due to a number of factors - has left many with the view that continuation of current CALM management practices could lead to apiary industry instability. However, some consider that the industry can survive provided existing access to CALM land is at least maintained.

Secure access is required for honey and pollen production and bee breeding purposes. The industry is heavily reliant upon native forests as other food sources, such as clover pastures, are limited in WA.

Clearfelling, heavy timber cutting, prescribed burning and other forest management practices are seen to have a significant effect on industry productivity. Apiarists stress the need for the forest and understorey to be maintained as much as possible in natural condition since both contribute to overall production.

While the industry is comparatively small, it has a substantial multiplier effect on agriculture and, as such, its importance must not be overlooked. The value to Western Australia of apiary products and pollination would at least equal the value of timber production over the life of a hardwood forest (120 years plus).

Additional Comments

- The apiary industry is largely dependent upon public lands in the south-west for an estimated three-quarters of its production.
- Beekeeping is labour intensive with 240 families directly dependent on the industry.
- Due to plant flowering cycles, most beekeepers require 10 - 20 sites per load of bees and approximately 40 - 50 sites to remain viable.
- Mature aged forest provides the best honey source.
- Apiarists provide the main pollination source in Australia. The economic value of crops and orchard pollination is approximately $8 million with a significant contribution towards canola production soon to be achieved. The industry has been undervalued in the RFA.
- The industry is experiencing a great deal of uncertainty, which has arisen primarily since the 1990 moratorium on access to the conservation estate.
- The industry would be severely impacted if access to resources was restricted or denied.
- Heavy harvesting prescriptions and prescribed burning methods are detrimental to the industry.

Wildflower Pickers' Overview

A small yet significant industry, wildflower picking holds resource security as its major concern. Picking areas are getting smaller and restrictions have been placed on various species. Many are uncertain about their livelihoods and large numbers have left the industry in the last decade. Even in areas with significant industry presence such as Denmark, pickers are not a visible segment of the local population and are generally unable to garner wider community support (eg. it was reported that pickers do not spend a lot of money in communities).

Pickers residing in Denmark and Albany remarked they were "getting crowded in" and that the closest access areas were now beyond Walpole. Consequently, travelling time and costs have increased substantially. A common concern is the increasing difficultly to make a living and, because of this, "we think we are not wanted in the forest". For example, no new licences have been issued by CALM for approximately three years and, if people leave the industry, licences are revoked (ie. are not transferable).

It was considered that the bush picking industry was being "squeezed out" in preference for cultivated wildflowers. However, the industry was unaware of any research that identified bush picking as being environmentally detrimental.

In summary, it was considered that:
- any further reduction in access would force many pickers out of the industry and on to social security,
- those displaced would strive to remain in their communities for reasons including lifestyle and attachment,
- other employment opportunities were negligible.

Additional Comments

- Many wildflower pickers feel implicated in the spread of dieback.
- other adverse experiences had occurred when wildflower pickers were denied access to forest areas due to penalties imposed on firewood collectors.
- The above developments were perplexing as the industry considered its actions generated little impact. Most produce collected was from relatively low value "greens", including tea tree, emu grass and snottygobble. It was held that these products were both difficult to propagate in cultivated form and able to re-establish full capacity as most flowers (more than 95%) came from lignotubers.
- The information contained in the Comprehensive Regional Assessment report was questioned, specifically with regards to the amount of old growth jarrah forest in the Mount Lindesay area. "There is more on the map than there should be".

Seed Collectors' Overview

Access and maintaining biodiversity are the two main concerns of seed collectors. It was reported that some sections of the industry have an interest in the preservation of large areas of old growth forests as species diversity is not present in regrowth areas immediately after logging.

Another view is that additional native forest reserve areas would dramatically affect the industry if access restrictions were imposed. Access is a significant issue and has become even more pressing with the introduction of the provenance system.[6] Access should be increased for an industry that has a low impact yet provides important environmental and social benefits.

Seed collectors tend to work in, and have built up detailed knowledge of, particular areas. Any reservation of these areas could cause problems for both individuals and the industry.

Seed collection in native forests is an integral part of the mining industry's revegetation programs. The seeds industry - particularly in relation to mining rehabilitation - is expanding and demand for seed is increasing to the point that "we already can't supply our client".

Seed orcharding on private land is generally not considered viable and, at best, can only assume a limited place in the industry (eg. difficulty in maintaining genetic diversity).

Additional Comments

- There are five major seed merchants in WA who are supplied by many small collectors.
- The industry is small but growing and "everyone wants revegetation" using locally indigenous species.
- Seed collectors provide a "public service" by facilitating the return of natural biodiversity following clearing operations.
- Seed collectors are currently excluded from all reserves including National Parks. Seed can only be acquired from state forest, private land and - under special circumstances - road reserves.
- Seeds are regenerative and collection has a lower impact than wildflower harvesting.
- Any further reserves in the Darling Plateau area would have a substantial impact on seed collection activities for Alcoa, including placing more pressure onto smaller areas.

[6] As part of seed collecting contracts, the provenance system underscores the importance of reseeding areas with species from the same area. Provenance means a better growing result and removes the likelihood that the genetic integrity of an area could be changed using non-provenance species.

Regional Development Overview

Regional development aims to foster diverse and sustainable economies. To this end, a consolidated effort to promote business development and innovative uses of forest products needs to be demonstrated (eg. via a government seeding policy).

Many communities have experienced the difficulties of transition due to shifts in the timber industry. Today, industry restructuring presents major training, skilling and value adding opportunities. While acknowledging the economic contribution of woodchipping and the existence of flourishing niche markets, greater encouragement is needed to optimise resource use.

A major challenge for regional planning is meeting different community expectations and incorporating the needs of multiple interest groups. It is felt that this can be achieved by balancing sustainable economic development and forest conservation. Cooperation between competing users will also be needed to develop a viable, multi-user forest system.

As nature-based tourism is of growing interest in the south-west the forest resource and tourism amenity must be protected to ensure maximum development of this industry. Not all communities, however, wish to become tourism-based.

The advent of tree farming has produced a range of views about economic and social benefits. On the positive side, integrated farm forestry provides environmental gains and potential exists for wider interest given a more suitable royalty structure. A pulp mill is also sought for regional development and employment opportunities.

Additional Comments

- A community has to grow at least 2% per annum to ensure it remains neutral and not disadvantaged relative to the whole state.
- There would be concerns if the RFA delivered job losses.
- The overall RFA debate should be less about forest management and more about regional planning (via an integrated, holistic planning approach).
- The impact of timber industry retrenchments may be offset in the future to some extent by the potential employment in the plantation industry, providing the industry receives the support it should.
- New types of value adding and processing (eg. furniture making) will not necessarily provide jobs for existing timber industry workers.
- Business uncertainty is a central issue in Manjimup.

Farming - Landcare Overview

The forest debate is considered to be ill-informed and narrowly focussed. It is difficult, yet necessary, to balance economic imperatives with conservation, amenity, recreation and tourism needs. As such, the community is seeking accurate information and greater participation in forest management decisions.

Other concerns include maintenance of river water quality, controlled burning for hazard reduction, the sustainability of harvesting regimes, and increasing recreational pressures. All give rise to the need for careful forest management.

It is an ethical issue for some if logging ceased in native forests and yet timber was imported from unsustainably managed forests overseas. Another view is that remaining old growth forest should be retained and that harvesting native forests should be replaced by, or supplemented with, integrated tree farming. To many, native forests on private land are now perceived as assets, both in economic and environmental terms. This being noted, farmers require increased knowledge relating to the selection and management of appropriate tree species.

As a cautionary note, a policy limiting total farm plantations to no more than 40 percent of the total farm area was advocated because of the detrimental social consequences foreseen (eg. population decline and downgrading of local services).

Finally, there are many opportunities for value adding activities to boost local economies. The construction of a local pulp mill is widely supported. Communities need assistance to develop other activities.

Additional comments were diverse and reflected the nature of the respondent's local community. Further feedback regarding the PCP has been synthesised within Sections 5 and 7.

4.1 Summary of Interest Group Views

The incompatibility of some positions highlights reasons for the often highly emotive nature of forest management issues. In particular, opinions about the future use of individual forest blocks highlight different beliefs about the inherent value of forested areas. According to many, interest-based assumptions are influencing the debate more than scientific data.

However, apart from extreme positions, many were not opposed to logging per se and would like the timber industry to continue. Many of those consulted, including people with conservation interests, empathised with timber industry employment and restructuring concerns. This was again reflected in the social values survey where over half expressed concern between the need for conservation versus employment.

This notwithstanding, there was considerable dissatisfaction with the native hardwood timber industry. Major areas of concern were stated to be unsustainable harvesting prescriptions, loss of biodiversity (often "forever") and low levels of industry investment. Mistrust of the RFA process was often expressed.

Others noted that companies had to invest large amounts of money in order to add value to wood products. While many companies were poised for increased development, "no one is going to spend the money without security of supply". It was proposed that government policy is needed to support increased value adding and the potential for further timber processing.

The need to reach a decision on the RFA and remove continued uncertainty was also a frequently expressed view.

A key conclusion is that an effort to move the debate away from its polarities and towards common ground is desirable. A process could be facilitated to include stakeholder input and develop balance and partnership. To this end, potentially impacted communities require some sense of control of change, meaningful involvement in the change process, trust in government agencies, and a belief that decision-making processes have been fair. This is consistent with the mitigation approaches discussed in Section 8.

5. IMPLICATIONS

5.1 Overview

People contacted during the public consultation period were asked to comment on implications that could arise from the RFA. These were forthcoming as were concerns regarding the ability to make informed judgements based on information provided in the Public Consultation Paper and the Comprehensive Regional Assessment report.

Section 5.2 highlights implications for forest user businesses with some reliance on the Jarrah Blackwood Ecosystem - notable as the ecosystem with the largest deficits (in terms of JANIS old growth targets) in the region.

Specific references to implications for the Northern Forest Region, including proximity to the Perth metropolitan area are presented in Section 5.3

A list of recurring issues is provided below. For ease of reading they have been grouped under sub-headings. Specific implications for some interest groups are noted (see also Section 4) and those for communities are detailed in Section 6. Clarification of Approaches A, B and C are provided in Section 6.2.2.

5.1.1 Providing Informed Comment

- Without the delineation and classification of possible new reserves it was difficult to determine community implications and the consultation exercise could only be hypothetical.
- While loss of services could be mooted, it was not possible to predict specific effects as this depended largely on whether individuals and families moved out of the area. To determine this, investigation would be required on a case-by-case basis.
- Where timber industry impacts were estimated it was emphasised that each sawmilling company will have its own way of handling implications. Therefore, impacts should not be expected to be evenly distributed.

5.1.2 Employment Figures

- Timber industry figures were determined only to the point of first sale - a gross underestimation.
- Tourism numbers were general and considerably overestimated.
- As well as potential timber job losses, possible gains in other industries should have been detailed.
- The focus was very much on worst case scenarios rather than new opportunities.
- Employment impacts were highly speculative.
- If the jarrah cut is not sustainable then jobs will be lost regardless of the RFA. The planned harvest reduction in 2004 was often mentioned.

5.1.3 Rate of Change

- Assessment of impacts was impossible without some understanding of the rate at which any changes would be implemented.
- The timing of any changes is of key importance.
- Impacts on small communities may occur gradually, making it difficult to isolate causes and effects.
- Any negative impacts were likely to occur more rapidly than positive opportunities.
- The change to whole bole logging and industry driven changes generally are potentially more dramatic than those arising from the RFA.

5.1.4 Timber Industry Issues

- The timber industry had historical importance in providing a reliable and steady income source to south-west families.
- Workers were anxious about their jobs, fewer employment opportunities and long-term security (including being able to plan for marriage, children, house etc.).
- Frequently raised issues included constant insecurity, despondency and a breakdown in community cohesiveness.
- The loss of even a few jobs in country towns could cause local impacts. A loss of many (eg. 100) jobs in one town would therefore be "catastrophic".
- Any impact would be felt most by older people in the workforce.
- The reservation of additional karri forest areas could create huge impacts due to the loss of a quality resource. The impact would be lessened if the availability of sustained yield remained the same.
- Any direction that involved reservation beyond the JANIS criteria would produce lost opportunities in terms of employment and timber production.
- Approach A could affect the "non-dollar" value of the timber industry, particularly its capacity to fight bushfires. All local organisations were reliant on volunteers and larger companies provided the best source of membership.
- Approach A did not represent the worst case scenario if some icon blocks were subsequently added in the final RFA design.
- Approach A would be more acceptable if combined with national funding to compensate those affected.
- Approach C, while adding additional reserves, was basically the status quo and therefore a more tenable position. It allowed for timber industry employment and investment to be maintained and possibly increased.
- There was considerable concern regarding the Jarrah Blackwood area. Reservation of jarrah old growth would threaten Nannup, Deanmill and other operations (eg. in Busselton and Bunbury).
- Busselton sawmillers agreed that "there's no doubt there will be some pain" arising from the RFA. For small mills, the reduction of even one employee could result in operations becoming unviable.
- Bunnings indicated that reduction in resource quality and access in the Northern Forest region would directly affect Collie and Yarloop mills and create flow-on consequences for its Perth operations.

5.1.5 Mining Industry Issues

- For some companies (eg. Alcoa), any impacts were likely to be in the future (towards the end of the mine life) and relatively small.
- For Alcoa, the maximum likely impact of the RFA is approximately 100 million tonnes or about 5% of the company's ore reserves. However, while this loss was relatively small, cumulative impacts related to past relinquishment of lease areas may eventuate.
- An increase in the reserve criteria beyond 15% for pre 1750 distribution of ecosystems would have detrimental consequences for Worsley operations.
- Other companies (eg. Westralian Sands) noted that the RFA had the potential to cause widespread industry impacts. It was affirmed that unimpeded access to land in the region was essential.
- The need for resource security is integral to decision making. Simcoa, for example, will not proceed with expansion plans until jarrah supplies can be secured and guaranteed through legislation.
- For every one person employed in the mining industry it was claimed that an additional 2.5 to 3 people are impacted.

5.1.6 Tourism Industry Issues

- Difficulty in dealing with tourism's status as a secondary/service industry was frequently mentioned. This included comment that the industry had begun to gain legitimacy as something more than "fly by night" only in the past few years.
- As stated in the Industry Commission's report on Tourism, Accommodation and Training (1996), "Industries are typically thought of in terms of output... and assessing them involves aggregating activities ... However, tourism does not conform to this model". Essentially, tourism is defined in terms of consumption rather than production.
- A lack of old growth reserves close to case study towns was considered detrimental to tourism opportunities and future expansion.
- Approach A was "basically the status quo" and was not seen to offer any great benefit. It was also not acceptable as no icons would be protected.
- On the other hand, Approach C and the "motherhood feeling" generated (in that environmental values and the timber industry are enhanced) was opposed. As stated, it could cause a loss of tourism jobs or continued stagnation of tourism development (eg. in Bridgetown).

5.1.7 *Beekeeping Industry Issues*

- The extent of allowable apiary access was considered the most critical issue. Approach A was initially favoured because of larger increases in reservation of old growth forest. However, this type of approach would not be supported if access was denied or restricted.
- Approach C was not supported as it continued the "status quo" which was considered detrimental for the industry.
- The PCP stated that "Future access for beekeeping in conservation reserves will depend in part on the results of on-going research into the impact of the European honeybee on native flora and fauna" (1998, 53).[7] A moratorium restricting access has existed since 1990 yet without research progress. The industry wanted the moratorium lifted.
- If apiarists were denied access to the conservation reserves proposed in the PCP, most would rapidly become unviable.

5.1.8 *Other Concerns*

- Definition of old growth - eg. whether it refers to virgin, disease free forest, or forest older than 60 years.
- The non-inclusion of all informal reserves in the reserve criteria (when they were unavailable for harvesting).
- The ability for CALM to adequately manage additional conservation reserves given the possibility for reduced net appropriation.
- The need for a comprehensive plantation analysis to determine industry potential and opportunities.
- The need to undertake a local consultative process to comment on the final reserve design before the RFA is completed.
- No approach will be able to resolve conflict in the community.

[7] Research into the effects of the European honeybee commenced in July 1998 and was expected to be completed in early 2002.

5.2 Jarrah Blackwood Dependencies

The Jarrah Blackwood Ecosystem comprises the forest area with the largest JANIS old growth deficit in the RFA region. Nannup lies on its eastern boundary.

As stated previously, changes in resource access are likely to have implications throughout interdependent communities. While Nannup has the potential for greatest impacts (see Section 6), an intention of the social assessment was to gain a more comprehensive overview of resource dependency on the Jarrah Blackwood area. Forest user businesses with reliance on the area were identified and for each business:

- employee numbers;
- the amount of timber processed, harvested, transported or collected annually (in this respect, businesses included sawmills, contractors, firewood collectors and furniture makers) - with amounts expressed in tonnes;
- the degree of reliance on access to the area (stated as a percentage).[8]

The following table indicates that:

- numerous businesses have some reliance on the Jarrah Blackwood;
- dependencies are extensive and include locations adjacent to the area and as far away as Perth;
- many reliances are high.

Information is presented to protect the confidentiality of individual businesses.

High dependencies in terms of the amount of timber processed, harvested and/or transported (etc) include Bunnings' harvesting operations, Diamond Mill, Bunbury Port, central administration and distribution, Nannup and Deanmill sawmills and the Manjimup Processing Centre. For example, the Nannup mill employs 49 staff, utilises approximately 50,000 tonnes of sawlog annually and has 100% reliance upon the Jarrah Blackwood. Bunnings' Manjimup operations obtain between 10% - 35% of the required resource from the area and involve more than 300 staff in processing, harvesting, manufacturing and sawmill activities. Similarly, its Perth office has around a 20% dependency upon timber sourced from the area with a several hundred staff involved in processing and distributing activities. Both Diamond Mill and Bunbury Port currently have a reliance in the order of 12%.

A number of businesses in Busselton including mills, transport contractors and firewood collectors currently have 100% reliance. Other total reliances include roading contractors based in Bunbury and Augusta, a small mill in Yallingup, and firewood collectors in Vasse and Cowaramup. A Perth mill also draws one third of its resource requirements directly from the area.

[8] Reliance estimates were obtained from social assessment surveys with input from CALM and timber industry representatives. The figures are considered to accurately represent the situation.

There are several metropolitan-based timber businesses involved in secondary processing activities which depend significantly upon Blackwood resources. Most have overseas contracts for timber sales.

As a final example, the East Witchcliffe mill has high (90%) reliance and, given its significant timber input and location on the western side of the area, would be likely to encounter major difficulties gaining timber from an economically viable alternative source. Industry feedback indicates economic limits lie within 80 -100 kilometres.

Table 2. Forest Users by Location - Jarrah Blackwood Ecosystem

Number of Businesses	Type of Business	Employees	Timber processed, harvested, transported etc (in tonnes)	% of Business reliant on access
Nannup				
1 (Bunnings)	see text			
3	Mill / furniture	4	50 - 150	75%
1	Firewood / fencing	2	250	75%
1 (CALM)	Tree marking and roading	9	N/A	20%
Manjimup				
5 (Bunnings)	see text			
1	Harvesting Transport	3	5,000	75%
1	Roading	10	N/A	80%
Bunbury				
1 (Bunnings)	Bunbury Port	See text		
4	Mill	65	1,050 - 70,000	10% - 80%
2	Roading	29	N/A	10% - 100%
Busselton				
4	Mill	41	400 - 19,000	50% - 100%
2	Transport	9	11,500 - 45,000	100%
2	Firewood	4	500 - 1,000	100%

Businesses at various locations: East Witchcliffe, Yallingup, Karridale, Vasse, Cowaramup, Augusta, Yarloop & Perth

Number of Businesses	Type of Business	Employees	Timber processed etc	Reliance
1 (Bunnings)	see text			
5	Mill	62	500 - 25,000	33.3% - 100%
2	Firewood	5	600 - 1,200	100%
1	Roading	4	N/A	100%

Additional businesses with direct but lesser reliance at: Mundijong, Donnybrook, Bridgetown and Boyanup.

Number of Businesses	Type of Business	Employees	Timber processed etc	Reliance
5	Mill	40	200 - 60,000	5% - 10%
1	Transport	31	N/A	5%
1	Processing	76	21,500	5%

Business with a high degree of indirect reliance on the Jarrah Blackwood forest area, including those involved in secondary timber processing:

- Mills / secondary timber processing - eg. several businesses in Perth, Busselton.
- Sawn timber cartage - eg. Bunbury, Busselton.
- Mill contractors eg. fitters, machinists - Bunbury, Busselton, Manjimup
- Sawn timber - on-users eg. Bunbury, Busselton, Rockingham.
- Hardware stores eg. Busselton, Dunsborough.
- Seeds Industry eg. South West Native Seed Supply - Donnybrook, individual pickers.
- Apiarists - approximately 40 licensed apiarists in the Blackwood District.
- Wildflower pickers - at least 7 families in the Blackwood District.

5.3 Northern Forest Region

Based upon community sensitivity data (see Section 6), feedback from stakeholder groups and the local knowledge acquired by the Forest Community Coordinators, selected case study areas were all located in the Central and Southern Forest Regions. This in no way implies, however, that the Northern (or Swan) Forest Region is exempt from issues relating to forest use and management.

For example, the area sustains significant timber processing in centres including Perth, Dwellingup, Mundijong and Pickering Brook.

In addition, the proximity of the Perth metropolitan area creates significant social pressures. Faced with increasing demands for conservation and access for various uses, forests in the Northern region have a higher utility value than in the Central and Southern regions. Consequently, more intensive forest management is required.

In this regard, CALM Northern Region managers noted that increased pressure was being placed on the conservation estate to the point where "reservation and recreation can become incompatible".

Features of the Northern Region include the following.

- The region contains most of the State's bauxite mining areas.
- There are divergent community aspirations about appropriate uses of forests, with many urban and hills residents (eg. Glen Forrest, Darlington, Kalamunda) expressing clear conservation values.
- An increasing number of users are day trippers wanting to "escape" to the forest. There is a high demand for activities including recreation around dams, rogaining, organised walks, mountain bike and horse riding, and car rallies.
- There is a high demand for firewood - to the point where human impacts are becoming evident.
- There are usually many fires on the Darling Scarp during summer, and the trend is increasing. In addition, conservation areas generally require specific fire management approaches to accommodate recreational uses and protect nearby urban developments.
- For these reasons, CALM managers noted that the CALM fire fighting resource (particularly in off-road areas) provided a critical form of community protection.
- Forest management has a strong relationship with the Water Corporation and water catchment issues.

In addition, CALM managers noted that reductions in timber volumes in the north would have repercussions throughout their organisation. For example, more than 120 people are directly employed in hardwood forest management in the region. Western Shield and other nature conservation/tourism programs funded by hardwood timber royalties could also be placed at risk as, "making an area into a nature conservation reserve does incur a cost".

6. ASSESSMENT OF CASE STUDY AREAS

6.1 Community Sensitivity

As a general assessment, changes related to the timber industry and traditional timber towns are indicative of a host of changes being experienced by rural communities across Australia. Business closures, loss of social infrastructure, comparatively high youth and average unemployment and uncertainty are common elements of such change. Such changes clearly have the potential to influence community direction.

To explore these issues further, the social assessment investigated the resources a community has at its disposal and its degree of sensitivity to change. From previous research, more than 20 indicators were combined to form a Community Sensitivity Index (CSI) for 44 south-west towns (see CRA & PCP, 1998). Using ABS and other data, indicators included: distance from major centres; ratio of dependents; occupancy rates; median age; median family income; percentage of a town's population employed in agriculture/timber production; bought homes and housing authority rentals. This information was used only to guide the selection of case study areas.

Manjimup, Deanmill, Greenbushes, Northcliffe, Pemberton and Yarloop appear as towns with relatively high sensitivity to change. Although comparatively large, Manjimup has strong historical links with the timber industry and continues to be identified as a timber and service town. It is the centre for a number of timber-related industries, including a major timber processing centre, woodchip mill, sawmills, harvesting and haulage contractors and engineering services. Most Manjimup businesses rely on the timber industry sector.

To add clarification, Bridgetown is identified as less sensitive. It has been in a state of growth since the 1970s and has a diverse industry base. Timber industry employment - including those who commute to Greenbushes - accounts for approximately 5% of the workforce (which is comparatively low).

Busselton has comparatively low sensitivity due to - among other things - its size, proximity to Bunbury, rapidly increasing population, high occupancy rates and diverse and strong economic base.

6.2 Resource Clusters and Indicative Magnitude of Effect

In order to assess the implications for local communities as a consequence of the three approaches presented in the Public Consultation Paper, projections were made of the possible effects upon resource dependent areas.

6.2.1 Resource Dependency

The relationship between the location of the timber processing industry and the percentage of hardwood resource drawn from the three Timber Supply Areas/Wood Supply Zones (TSAs - namely Northern, Central and Southern Forest) indicates a clear geographic relationship exists between industry location and supply areas.[9]

Table 3 indicates towns that draw timber from the specific TSAs as well as the percentage of resource drawn by the timber industry from each area. To highlight the relationship mentioned, 68% of the resource drawn from the Northern TSA is processed at mills in the Perth urban area or at mills at, or in close proximity to, Mundijong and Pickering Brook. The cluster of mill towns that draw their resource from this TSA was identified as the Perth Town Resource Cluster (TRC).

Similarly, 53% of the resource from the Central TSA is processed at mills located within the Central TRC, while 97% from the Southern TSA is processed by mills within the Southern TRC (see Figure 2 - n.b. 'WSZ' denotes the three Wood Supply Zones/TSAs).

Table 3 may also be interpreted in terms of the probability of the likely effect of changed resource availability on specific towns or TRCs. A change in resource availability within the Southern TSA, for example, is likely to affect towns within the Southern TRC and in particular Manjimup which draws 79% of its resource, and processes 66% of the total resource, from the Southern TSA.[10]

[9] This relationship also applies for many timber contracting businesses.

[10] While it is recognised that the information in Table 3 provides only a general description of the relationship between specific towns and resource location, the lack of additional data at the (more specific) forest block level precludes more detailed analyses.

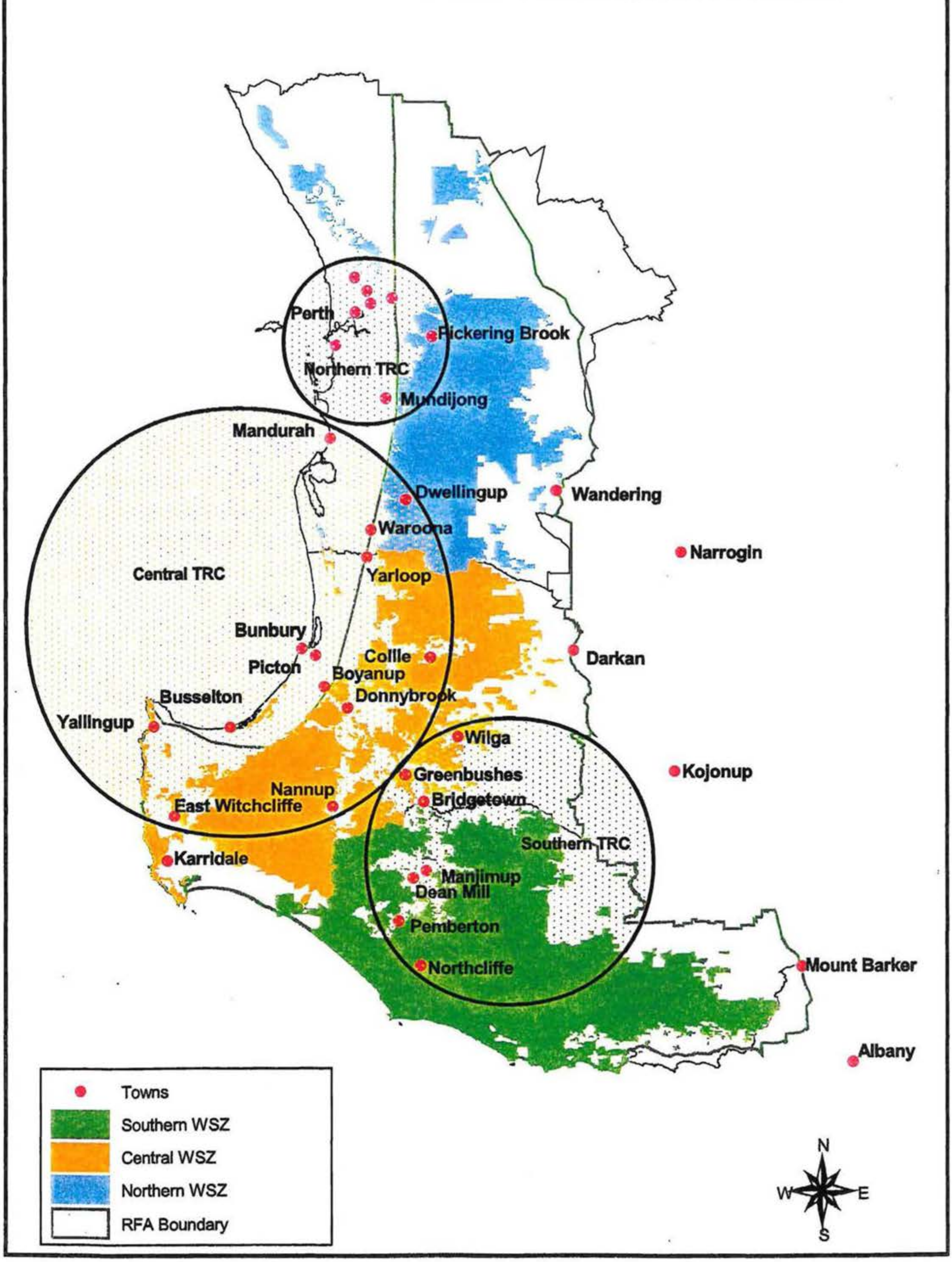
Table 3. Resource Dependency and Town Location of the Timber Processing Industry

Nearest Town	Percent from Area			Percent of Total Volume		
Location	Northern	Central	Southern	Northern	Central	Southern
PERTH TRC						
Mundijong	100.00	0.00	0.00	0.40	0.00	0.00
Pickering Brook	68.51	23.26	8.22	2.78	0.28	0.06
Perth Urban Area	60.40	34.80	4.80	65.15	11.29	0.98
Total	**76.30**	**19.35**	**4.34**	**68.34**	**11.58**	**1.04**
CENTRAL TRC						
Nannup	0.00	100.00	0.00	0.00	10.22	0.00
East Witchcliffe	0.00	100.00	0.00	0.00	2.37	0.00
Yallingup	0.00	100.00	0.00	0.00	0.18	0.00
Donnybrook	0.00	100.00	0.00	0.00	0.17	0.00
Karridale	0.00	100.00	0.00	0.00	0.12	0.00
Margaret River	0.00	100.00	0.00	0.00	0.05	0.00
Collie	0.00	99.87	0.13	0.00	9.92	0.01
Busselton	0.00	97.86	2.14	0.00	4.11	0.06
Bunbury	12.26	87.39	0.35	7.68	16.47	0.04
Mandurah	0.00	78.09	21.91	0.00	0.94	0.17
Boyanup	0.00	74.41	25.59	0.00	1.35	0.29
Harvey	27.19	72.81	0.00	0.38	0.30	0.00
Yarloop	40.52	59.48	0.00	14.96	6.61	0.00
Dwellingup	80.34	19.66	0.00	8.65	0.64	0.00
Witchcliffe	0.00	0.00	100.00	0.00	0.00	0.96
Total	**10.69**	**79.31**	**10.01**	**31.66**	**53.43**	**1.52**
SOUTHERN TRC						
Walpole	0.00	0.00	100.00	0.00	0.00	1.01
Northcliffe	0.00	0.00	100.00	0.00	0.00	0.76
Albany	0.00	0.00	100.00	0.00	0.00	0.60
Wilga	0.00	0.00	100.00	0.00	0.00	0.39
Pemberton	0.00	1.89	98.11	0.00	0.44	14.22
Deanmill	0.00	6.27	93.73	0.00	0.88	8.24
Bridgetown	0.00	17.61	82.39	0.00	0.01	0.03
Manjimup	0.00	21.28	78.72	0.00	28.38	65.91
Greenbushes	0.00	34.61	65.39	0.00	5.28	6.26
Total	**0.00**	**9.07**	**90.93**	**0.00**	**34.99**	**97.43**

Note: *Towns are the nearest town location to the hardwood mill.*
Totals for the percent from area are average percentages.

Source: *Adapted by EBC (1998) from ABARE (1997). Includes only hardwood resource.*

Figure 2. Mill Towns with TRCs and Location of Resource



6.2.2 *Indicative Magnitude of Effect*

In association with CSI results, to assist identification of communities with the potential to be impacted, an assessment was undertaken to examine whether specific communities were likely to be affected by the three possible approaches to a Comprehensive, Adequate and Representative reserve system.

In brief:

- Approach A aims to meet JANIS (eg. old growth and biodiversity) targets while minimising resource impacts;
- Approach B explores the flexibility provisions in the application of the JANIS criteria with lower levels of reservation than Approach A;
- Approach C aims to enhance social and economic values by increasing sustained timber yield whilst also seeking to enhance protection of environment and heritage values (PCP, 1998).

The analysis formed two indicators, namely *Probability of Effect* and, when combined with the proportion of a community's workforce employed in the timber industry, *Indicative Magnitude of Effect.*

As follows, data for Manjimup and Pemberton are used to demonstrate how these indicators were derived.

Table 4. Probability of Effect - Approach A

Town	**TSA**	**1. Percent of Total Volume (ABARE 1997)**	**2. Percent from Area (ABARE 1997)**	**3. Percent of Resource Change (PCP 1998)**	**4. Probability of Effect Score** *(1 x 2 x 3)*	**5. Standardised Probability of Effect** *4 / Highest Effect Score*
Manjimup	N	0.00	0.00	2.2	0.00	
	C	28.38	21.28	8.1	4891.80	
	S	65.91	78.72	6.9	35800.20	
TOTAL					**40692.00**	**1**
Pemberton	N	0.00	0.00	2.2	0.00	
	C	0.44	1.89	8.1	6.74	
	S	14.22	98.11	6.9	9626.36	
TOTAL					**9633.10**	**0.24**

Table 5. Indicative Magnitude of Effect - Approach A, B & C

Town	**6. Proportion of workforce employed in Timber Industry (%) (ABS 1996)**	**7. Magnitude of Effect** *(5 x 6)*	**Standardised Magnitude of Effect - Approaches A, B and C**		
			A	**B**	**C**
Manjimup	12	12	**1**	**0.55**	**-0.35**
Pemberton	26	6.24	**0.52**	**0.26**	**-0.22**

The following formula was used to determine Indicative Magnitude of Effect.

$$ME = PW * (((NP.NA.NR) + (CP.CA.CR)+(SP.SA.SR)) / H)$$

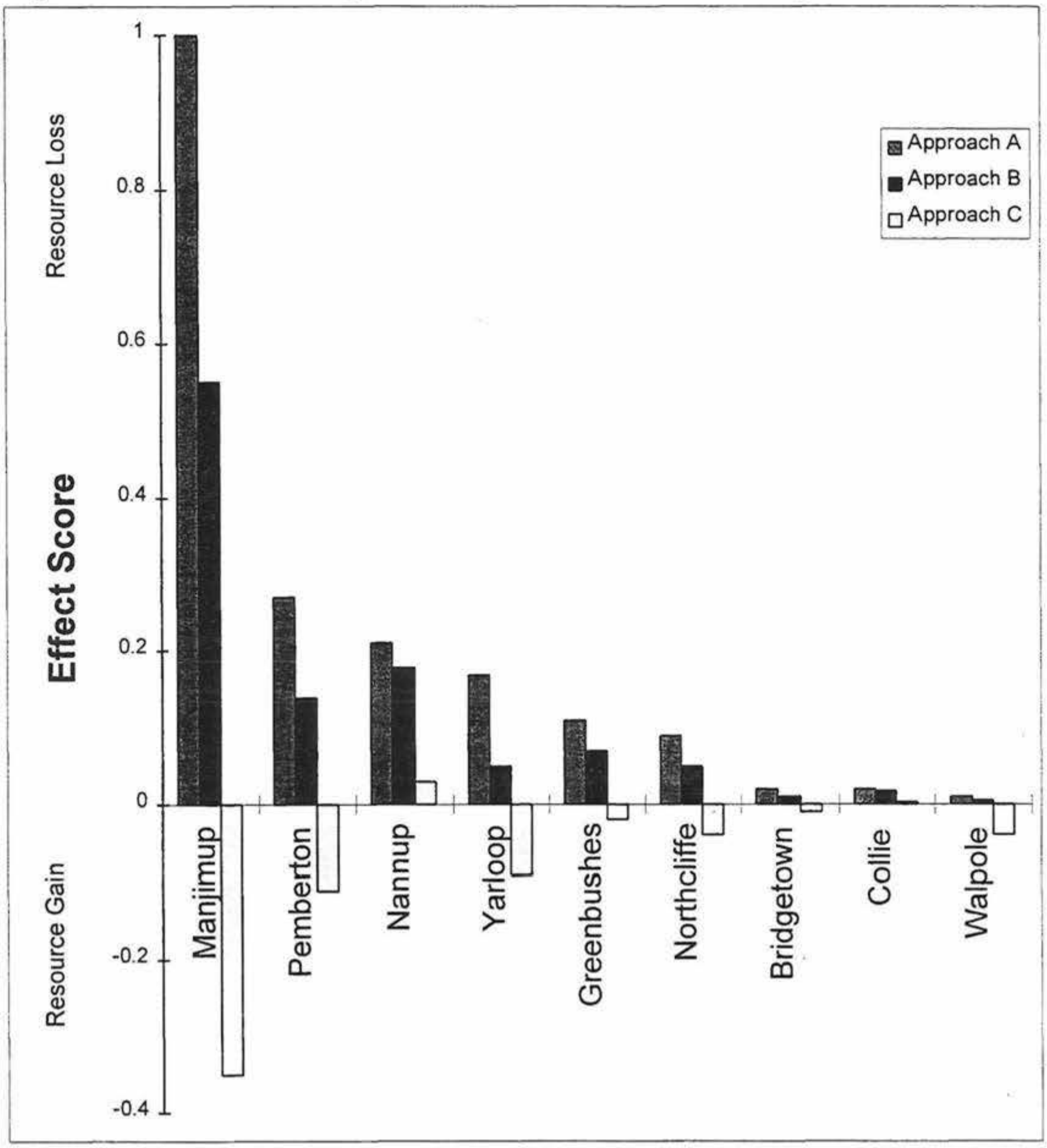
Where:
ME = Indicative Magnitude of Effect
PW = The proportion of a town's workforce employed in the timber industry
N = Northern TSA, C = Central TSA, S = Southern TSA
P = *Percent of Total Volume* - the proportion of the total resource volume from each TSA drawn by a particular town
A = *Percent from Area* - the dependence a particular town has on each TSA
R = Percent of resource change relating to each RFA Approach
H = Highest Probability of Effect score

In deriving this formula, some points to note are that:

- Probability and ME scores are indicative only. For example, any impact originating from change in resource availability could be mediated by responses from both government and industry. Other sensitivity indicators including size and levels of infrastructure provision are not included in this assessment. As such, communities may or may not be affected.
- Probability and ME scores are comparative rather than absolute.
- ME results are highly related to the volume of timber resource processed at each town. As a consequence, Manjimup returns a high magnitude compared with other areas (eg. receives 66% of all timber from the Southern TSA);
- Probability of Effect scores for Approaches B and C were derived in the same manner as for Approach A;
- Standardised ME scores for Approach A were derived by dividing the magnitude total for each town by the highest magnitude total. For Approaches B and C, ME scores were derived by multiplying the difference in Probability of Effect Score (between B and A, and C and A) by the ME score for Approach A;
- Figures pertaining to percent of resource change relating to each RFA Approach were extracted from the Public Consultation Paper (1998). They denote the maximum percentage of hardwood resource loss or gain in each TSA (ie. the upper end of the ranges provided);
- For both Bridgetown and Northcliffe, significant numbers of employees work in Greenbushes and Pemberton respectively. As such, analysis used appropriate employment breakdowns when determining ME.

Indicative Magnitude of Effect Scores for the selected case study areas appear in Figure 3.

Figure 3. Indicative Magnitude of Effect for Case Study Areas



As stated, ME scores are comparative rather than absolute. Consequently, this analysis cannot presuppose that impacts emanating from Approach A would be high in Manjimup. What is shown, however, is that effects - based solely on resource dependency and numbers employed in the timber industry - are potentially higher in Manjimup than all other case study areas. As an additional example, for each Approach, ME in Greenbushes is potentially higher than for Collie but less than for Nannup.

Compared with Approaches A and B, Approach C could provide resource increases to most of the case study areas. The resulting magnitude of effect contrasts with the direction for A and B and, certainly from a timber industry perspective, would be regarded as positive.

CASE STUDY AREAS

6.3 Population and Employment Characteristics

Table 6. Population Characteristics*

Town	Population (Total Persons)	Population Growth Rate 1991 - 1996	Unemployment Rate
Bridgetown	3,125	6.6%	7.8%
Greenbushes	779	0.0%	5.6%
Collie	8,636	-4.7%	9.4%
Manjimup	7,367	-2.0%	4.7%
Nannup	1,099	-0.5%	12.7%
Northcliffe	801	3.8%	15.1%
Pemberton	1,798	6.5%	3.3%
Walpole	517	N/A Ψ	10.5%
Yarloop	619	6.2%	8.2%
South-West∇	95,739	10.5%	7.8%
Western Australia	1,726,095	8.8%	8.1%

* Based on ABS postcode area data (1996).

Ψ Unable to compare due to change in postcode area.

∇ Based on an approximation of the Central and Southern Forest regions of the RFA, including the Shires of - Murray, Waroona, Boddington, Harvey, Collie, Dardanup, Capel, Donnybrook, Busselton, Boyup Brook, Bridgetown-Greenbushes, Augusta-Margaret River, Nannup, Manjimup and Denmark.

Table 7. Estimated Direct Hardwood Timber Employment•

Town	Approximate industry employment		Other CALM royalty dependent employment
	Total within town	Resident within town	
Bridgetown / Greenbushes	210∇		10
Collie	75	60	10
Manjimup / Deanmill	600	560	30
Nannup	110	80	5
Northcliffe	25	50	6
Pemberton	190	165	15
Walpole	15	15	30
Yarloop	105	60	-

• Provided by the RFA Economic Technical Committee.

∇This figure was later amended to 235 by the SAU.

6.4 Assessment of Bridgetown / Greenbushes Community

Community Snapshot

The district around Bridgetown was first settled in the 1850s. By the turn of the century, the district had become one of the state's most successful areas for mixed farming activities including orcharding and dairying. By the 1950s, however, farming suffered an overall slump.

Today, livestock grazing has largely replaced these industries. Other important industries include timber, tree farming, tourism and local arts & crafts. Viticulture is expanding and, at present, the area has one commercial winery.

Tourists - and a recent influx of retirees and lifestylers - are attracted to Bridgetown's ambience and physical surroundings. There are a number of new subdivisions and many people employed in Greenbushes and Manjimup have chosen to reside in Bridgetown because of its appeal.

Sixteen kilometres north of Bridgetown and approximately one-fifth its size, Greenbushes has long had an historical mix of timber and mining industry employment. The town was settled in the 1880s after tin was discovered in the area. While tin is still produced as a byproduct, tantalum is the major mineral produced. Farming, tourism and in particular, the Whittakers timber mill also contribute to the economy.

Since experiencing population decline in the 1960s, both towns (particularly Bridgetown) have undergone a period of growth over the last 10 years. Further growth at a small steady rate is expected.

Area Profile

Demographics (postcode 6254, 6255)

Together, the two postal areas under consideration conform to the boundaries of the Shire of Bridgetown-Greenbushes. The profile of both areas and the Shire as a whole are noted below.

	Greenbushes	Bridgetown	Shire
Area Population	779	3125	3904
Total Labour Force	356	1425	1781
Unemployment	5.6%	7.8%	7.4%
Median Age (years)	32	35	34

Greenbushes and Bridgetown have urban centre populations of 403 and 2123 respectively (ABS, 1996). Consequently, any loss of jobs is likely to have greater implications for Greenbushes.

The Shire holds a diverse population and changing community. Alongside its traditional economic base, Bridgetown is increasingly acknowledged as a cultural centre. This diversity has brought conflicting pressures in terms of how community members view forest management issues.

Employment Sectors

Industries include the Sons of Gwalia Mine and Whittakers Mill in Greenbushes, other timber milling, farming and tourism. Selected employment estimates (in percentages) for the following sectors are:

	Greenbushes	Bridgetown	Shire
Agriculture	13	12	12
Mining	29	6	11
Timber industry*	17	5	11
Education	6	10	9
Retail Trade	4	10	9
Health & Community Services	3	9	8
Construction	2	7	6
Accommodation, Cafes & Restaurants	5	6	5
Property & Business Services	3	4	4

* *RFA Economic Technical Committee estimate.*

The Shire has a broad mix of industries and a reasonably stable local economy. More employment opportunities are required, particularly for young people. Many acknowledged that youth unemployment was a major concern. In 1996, unemployment for people under 25 was approximately 20% (ABS, 1996).

Mining

Sons of Gwalia currently employ around 250 people. Approximately 100 people, or 40% of the workforce live in Greenbushes and close surrounds. The company has lease areas of approximately 100 km^2.

According to mine management, the RFA is unlikely to have any implications in the short to medium-term. Longer term concerns could eventuate if any additional reserves are placed over existing mining leases or exploration licences, or preclude exploration/prospecting. As pegmatite deposits are sub-surface and hence difficult to locate, Gwalia's basic position is that the RFA needs to ensure forest areas can be valued for their mineral potential.

Timber

Hardwood timber milling is a significant contributor to the local economy. Approximately one in every nine local employees in the Shire works in the industry. Direct private and public sector employment in the industry accounts for approximately 235 jobs. Of these, more than 180 reside in the Shire.

Around 65% and 35% of the timber milled in Greenbushes is supplied from the southern and central forest regions respectively. Whittakers receive approximately 6% and 5% of the total volume from these regions (ABARE, 1997). The company processes karri and jarrah and also has a pine mill.

Whittakers currently employ 207 people, of whom 175 work over two shifts in native hardwood areas. Of these, 57 and 65 reside in Greenbushes and Bridgetown respectively. The remaining 53 workers travel to the mill from Donnybrook (22), Balingup (11), Bunbury (10), Collie (5), Boyup Brook (3) and Manjimup (2).

A notable issue at Whittakers is the relatively high turnover in some types of work (eg. jobs such as stacking and bundling). While many key operators have been employed at the mill for more than 10 years, workers noted that their industry was "volatile" and had "natural wastage".

Current mill operations stem from a period of downturn and restructuring which culminated in 40 job losses in late 1995. The mill has since gained a strong focus on value adding and integrated operations. To this end, when the pine mill suspended operations in April 1997 around half of those displaced were subsequently re-employed, mostly in hardwood areas.

Around 82% and 18% of timber supplied to Bridgetown comes from the southern and central forest regions respectively. Only approximately 0.03% and 0.01% of the total volume from these regions is milled in the area (ABARE, 1997).

In addition to those who commute to Greenbushes, there are approximately 60 other timber industry employees who reside in the Bridgetown area (including Hester and Yornup). The harvesting contractor and four small sawmills in the area employ more than 30 people. Many of the remainder commute to Manjimup.

While there is no CALM office in the Shire, approximately fourteen employees commute from the Bridgetown area to CALM's Manjimup office. Of these, four are directly involved in hardwood forest management, while the remainder are employed on a timber royalty-dependent basis.

Tourism

While the local tourism industry is fairly low key relative to coastal areas such as Margaret River, there is potential for expansion (Thompson, Taylor & Burrell, 1994).

There are 29 accommodation facilities in the Shire. A current estimate for the total number of people employed in tourism is in the order of 80 (no attempt has been made to determine full-time equivalency). No tour operators reside in the area. Like other south-west areas, the market is primarily driven by people from Perth.

According to the Tourist Association, there is unlikely to be any significant increase in tourism-based employment until the industry gains greater resource security and necessary infrastructure. Given this, one aim is to encourage people to stay longer in the Bridgetown area (rather than acting as a stop off on the way further south).

The Tourist Association and the Blackwood River Ecomuseum Group are seeking to achieve these objectives. One aim is to promote the Dalgarup and Hester Forest areas as part of the "On the Blackwood" module of the Living Windows project. The module has three nodes - Winnejup Reserve, Blackwood River Park and Maranup Ford.

Nature-based tourism (or 'ecotourism') is seen as a significant option for the future. Interests therefore consider the potential for an industry based on biodiversity and the conservation estate - particularly in proximity to the Blackwood River Valley - needs to be safe guarded. In this regard, it has been argued that:

- the Shire has insufficient forest protected in reserves (stated as 3%);
- the Bibbulmun track provides the only major nature-based tourism infrastructure;
- there is no National Park within 40 kilometres of Bridgetown.

Other Businesses

Bridgetown has a range of retail and commercial businesses including two hotels, a tavern, a motel, three service stations, three banks, more than ten restaurants, real estate agents, business centres, supermarkets and a chamber of commerce.

Important businesses in Greenbushes include two hotels and a road house. Since the closure of the general store in late 1997, the road house provides a range of goods and services including postal and banking facilities. The town also has a laundromat and second hand shop. The town's coffee shop was sold in late 1998 and there are a number of vacated business premises on the main street. Locally owned businesses include plumbing, electrical, earth moving, roofing and brick paving.

With the mine acting as a major employer, the roadhouse has not previously been affected by any job losses at the Whittakers Mill (stated by roadhouse management).

Existing Infrastructure

Bridgetown has three schools. In 1997, the two pre primary schools had a combined enrolment of 55 students. At the same time, 406 and 174 students were enrolled at the two primary schools and one high school respectively.

School numbers were considered steady, for example, it was reported that high school numbers had ranged between 165 and 185 since 1970 and that no flow-on effects from job losses in the Shire had been experienced. Compared with other country high schools, this school may be less susceptible to significant fluctuations in numbers as its students come from three primary schools - Greenbushes, and Bridgetown's state primary school and St Brigid's Catholic School.

Both the primary and high school have maintained their current rating levels. The latter is also one of the few district high schools in the south-west to enjoy a level 6 classification. Staffing and other benefits are equivalent to that received by a large senior high school.

A trend of falling numbers at the primary school was considered to have leveled out. One influence on falling numbers was stated to be the downturn at Whittakers in 1995. While hard to provide an exact figure, a number of children left the school as their parents relocated. In the main, however, the trend was not considered significant and - given the area's current population remained stable - the school's viability was certainly not in jeopardy.

St Brigid's Catholic School has grown steadily over the last eleven years. In particular, school numbers have risen substantially since the completion of a rebuilding program and inclusion of a pre primary in 1994. It was affirmed that any downturn in the timber industry could affect the school, but not to a great extent.

Greenbushes has one primary school catering for pre primary and primary students. Student numbers in 1997 were 28 and 62 respectively. While student numbers have undergone a slight decline in recent times, the current situation - including staffing levels - was considered stable.

While this was the case, some concern was evident about the school closing as a result of the Education Department's Local Area Planning process. As part of a suite of options recently put forward for community consultation, local opposition to closure was very strong. Beyond the fact that children could continue to walk/ride to and from school, the school acts as an important focal point for the community. Fund raising events for the running and upkeep of the school are common.

Current teacher and resources to student ratios were also considered excellent. As quoted in the Donnybrook Bridgetown Mail, the President of the Greenbushes Ratepayers Association maintained that the school's quality "encourages families to live in Greenbushes". Gwalia's mine manager confirmed "a good relationship existed between industry, the school and the community ... But if we don't have the infrastructure in the town, we won't attract the people to work or stay here".[11]

Other Services - Bridgetown

Services in Bridgetown are comprehensive, including a 24 bed district hospital, Silver Chain, Meals on Wheels, Home and Community Care, palliative care, counselling, child and family support, community health education, Red Cross, and an employment service (for people with disabilities).[12] Volunteer-based services include St John Ambulance, Fire and Rescue and the Bushfire Brigade. Emergency services are overseen by a local emergency advisory committee. Volunteers are also involved with running Meals on Wheels, Red Cross and the tourist centre.

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[11] "Keep school open pleads Greenbushes" - Donnybrook Bridgetown Mail, Vol 9 - No. 547, October 27, 1998. Front page.

[12] This service covers the Shires of Bridgetown-Greenbushes, Boyup Brook, Manjimup and Nannup

The town also has a social club and a telecentre. Community-based resource management groups include the Bridgetown LCDC and the Blackwood Catchment Coordinating Group. Environment groups include Friends of the Forest and the Blackwood Environment Society. Other groups include a Mainstreet Committee, Blackwood Artisans Guild, Water's Edge Committee and Bridgedale Committee.

The biggest single influence on hospital viability is population.[13] As stated by the Warren-Blackwood Health Service, a significant population drop would need to occur before any effect became evident, for example, on bed numbers. A figure in the order of 25-30% was suggested as a broad rule of thumb.

As is the case for other hospitals in the region, patients arrive from many areas and a general mix of services - including surgery, general care for inpatients and outpatients, and aged care - is provided. An indicator of resilience to changes that might occur associated with the timber industry is that, of the 80 hospital staff, a low number have partners employed in the timber industry.

Other Services - Greenbushes

While Greenbushes has substantially fewer services, there are many community groups including the Pensioners League, Aged Community Group, Townscape Committee, Sport and Recreation Committee, Ratepayers Association, RSL and CWA. The town also has a telecentre, two aged units and a community bus for taking residents to services in Bridgetown and other centres. Visiting services include a doctor (every Tuesday), Silver Chain and Home and Community Care.

A community group also oversees the Greenbushes Eco-Culture Discovery Centre, which is a module of the South West Ecomuseum Association. The centre displays important elements of the town's heritage and is an important tourist attraction.

Volunteer-based services include St Johns Ambulance and the Bushfire Brigade. Whittakers has a fire crew and Gwalia has a specially trained search and rescue team for dealing with any emergency situations in the area.

RFA Implications Specific to Bridgetown - Greenbushes

Eleven local residents attended the RFA local discussion group meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Bridgetown local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Bridgetown and Greenbushes are listed below.

[13] Age profile and endemic health issues are also key criteria . Notably, across the south-west, the timber industry has good health and safety standards and does contribute significantly to patient numbers.

Comprising a key component of the meeting, participants assessed the possible implications of Approaches A and C for the local community.

- First, difficulty in quantifying impacts throughout the community was raised as an important issue. It was suggested that some impacts could be insidious and relatively diffuse while others could be immediate. For the latter, one example was given where the Bridgetown Roadhouse lost turnover of around $500 a week directly after the Whittakers pine mill closed temporarily in April 1997. This was primarily related to the decision of retrenched workers to discontinue purchasing takeaway food. The impact was short-term as many workers were able to regain employment at the mill.
- Whittakers management claimed some localised implications were likely under the most extensive reservation scenario, including possible job losses. The most direct implication would be an increase in cost structure and, therefore, any effects will be managed by keeping costs down. Examples of possible actions include: adding a two week mill closure in July to the existing two week closure over Christmas, thus removing the rostering of staggered annual leave for workers; without staggered annual leave, casual workers (around 6 to 12 "floaters" who fill in for absent workers) may be the first to lose employment, and; workers could lose productivity-related financial bonuses.
- Another issue is that karri is likely to be more affected than jarrah by any resulting changes in cost structure. Around three-quarters of Whittakers' karri volume is currently sold to the very competitive local structural market (which achieves lower profit margins). Under Approach A, the viability threshold for running the second shift would need to be assessed. It was considered a possibility that a 5% reduction in intake could translate into a forced move to reduce timber allocation by up to 50%. In effect, the mill could remain more competitive by reducing overall throughput, closing the shift and concentrating on higher value products.
- Jarrah operations would be less affected as the mill currently has a large stockpile and could keep milling existing dry jarrah for the next two years. However, the 35 to 40 workers in the green mill may be affected.
- It was claimed that any decreased employment was likely to affect the whole spectrum of community assistance. It was also felt that the most extensive reservation scenario could heighten the current changing community demographics, particularly the ageing population. Examples included a continued increase in families with a breadwinner who works elsewhere, and a potential loss of commercial facilities in Bridgetown as more people were attracted to better facilities in Manjimup.
- A number of those consulted were also dubious whether the most extensive reservation scenario would improve local tourism potential, and certainly not to the extent that this industry could compensate for any jobs lost in the timber industry. In contrast, the core position held by tourism interests was that this approach would greatly assist the local industry if more assistance could be gained from CALM.

- It was also claimed that tourism businesses had a limited market and did not provide many local jobs. Some maintained these limitations stemmed from a lack of tourism infrastructure and that more infrastructure within easy reach of Bridgetown would provide the basis to gain added confidence and employment in this sector.

Future Directions

In terms of industry development opportunities, it was emphasised that the area needed additional, long-term value adding employment on a full-time basis. To ensure people continue to live in the area, more opportunities for young people and blue collar workers are required.

At least two major industry development proposals are currently being considered in the Shire. Both focus on timber value adding. One is a specialised mill currently being investigated for Jensen Jarrah. Linked to the Finewood Industry Project, the second proposal is exploring the development of an enclave of craftwood workshops near to Bridgetown. Both may offer employment opportunities in the medium-term.

According to many residents, the community is currently surviving on mining and timber and "city people who come and buy land". Others noted that tourism is also an important industry with potential for increased growth. To attract more tourists to the area, proponents have sought the reservation of more forest areas around Bridgetown. As is being canvassed in Nannup, it was also stated that upgrading Mowen Road would also provide a major tourism boost for Bridgetown.

In late 1998, the Bridgetown-Greenbushes Shire developed an Accord involving participants with diverse beliefs and attitudes towards forest use. Its success illustrates that a cooperative partnership approach can assist in conflict mediation and achieve outcomes which satisfy multiple needs.

Assessment Summary

The Shire of Bridgetown-Greenbushes holds a diverse population and changing community. The broad mix of local industries include the Sons of Gwalia Mine and Whittakers mill in Greenbushes, other timber milling, farming, horticulture, tourism and craft galleries. This diversity has brought conflicting pressures in terms of how community members view the forest.

The Shire has a stable local economy and unemployment not above the state average. However, youth unemployment and out-migration are major issues and, like many rural areas, additional employment opportunities would benefit the area.

Tourism is a significant although, it appears, static industry. An estimated 80 people are employed. According to the local tourist association, a substantial increase in this figure is unlikely until necessary infrastructure and greater resource security can be achieved by way of a more extensive and accessible reservation system.
A key issue for tourism development appears to be the location of any new reserves - the closer to Bridgetown the more perceived likelihood of positive outcomes arising.

The timber industry provides a major contribution to the local economy. More than 180 residents are employed - approximately 17% and 5% of the Greenbushes and Bridgetown workforce respectively. Whittakers currently employ 175 people, of whom 57 reside in Greenbushes and 65 reside in Bridgetown.

A possible loss in the order of 35% of local timber industry jobs would equate to an approximate decline of 4% in the Shire's workforce.

While a broad mix of industries is evident, limited alternatives currently exist to absorb any reduction in timber industry employment. Mill workers already express concerns including fewer employment opportunities and the lack of job security. For example, it is reasonable to conclude that tourism could not compensate for jobs lost in the timber industry. It is therefore likely that if the RFA resulted in job losses in the timber industry, at least some displaced workers would relocate. Those who elected to remain may have difficulty in finding work.

Whittakers management confirmed that localised implications from the RFA were possible, including impacts on leave arrangements, bonuses and possible job losses. Karri operations would be the most affected and the viability of a second shift would need to be assessed. A related implication was the concern that the RFA could foreclose many options for investment in value adding.

Additional reductions in karri sawlog yield would further affect mill production. Hence, impacts on Greenbushes and Bridgetown could be greater than discussed.

While any impact affecting Greenbushes is also likely to have implications for Bridgetown, because of its relative size and concentration of industry, implications are likely to be greater for Greenbushes. This noted, the close proximity and relationship between the towns may help to moderate any impacts.

Short-term effects from previous timber industry job loss were reported for at least one Bridgetown business. In the main, however, the size of the total labour force, and comparatively small proportion employed in this industry (5% of workers) suggest that businesses and services in Bridgetown would not be affected to a significant degree. Possible exceptions include the two primary schools and some volunteer services, however, any effects are likely to be minor and/or short-term.

Because of its size, some implications may exist for the primary school and local businesses in Greenbushes. These, however, are unclear. For example, the mine provides almost one third of all local employment, and this has served to offset (and absorb) any previous job losses at the mill.[14] In recent times (eg. 1995 and 1997), while some displaced workers left the area, many more chose to remain and eventually gained other employment (including at the mine) or re-employment at the mill as the business situation improved. ABS statistics show that the town's population has been stable and slowly growing since the 1970s.

Generally, the town population would have to diminish substantially for flow-on impacts to occur. Decline solely in the mill workforce, however, could impact some volunteer services, including fire response capability.

[14] Mine management consider the RFA is unlikely to have any implications in the short to medium-term.

6.5 Assessment of Collie Community

Community Snapshot

Coal mining in Western Australia occurs almost entirely in the Shire of Collie. The shire's history is intertwined with the development of the Western Australian coal industry. Coal deposits are extensive and the industry has brought wealth into the town. The South West Development Commission estimated that approximately 60% of the total mining revenue for the south-west region is derived from coal production.

The Worsley Alumina refinery, employing about 800 people, is located mid-way between Collie and Bunbury. The company processes bauxite that is obtained from leases located in areas of predominantly Wandoo forest on the eastern Darling Plateau.

Power generation is also a significant industry and provides almost 60% of Western Power's total power generation requirements. It is estimated that approximately 500 are employed at the power station.

Commencing late 1993, the closure of the underground coal mines and the industry restructuring which followed led to large job losses which impacted heavily on the community in terms of unemployment, population decline and economic instability.

Other important local industries include agriculture (incorporating tree farming), commercial and retail services, timber milling, water storage, briquette manufacturing and recreation.

Area profile

Demographics (Postcode 6225)

Area Population	8,636
Total Labour Force	3,839
Unemployment	9.4%
Median Age (years)	32

The Collie area is the largest within the RFA study region with a population of approximately 8,600 and a median age of 32 years. The town population is 7194 with 3,839 people in the labour force. The unemployment rate is 9.4% - higher than the south-west and state averages of 7.8% and 8.1% respectively (ABS, 1996).

Collie offers inexpensive land and property prices and is described as having good retail facilities, comprehensive community services, attractive physical surroundings and a low cost of living.

The market forces associated with the dominant coal and alumina industries mean that Collie has dealt with a succession of impacts associated with "boom or bust" cycles.

A 1995 study by ERM Mitchell McCotter reported that the loss of 340 mining jobs and the industry restructuring which followed, created considerable social and economic impact on the town. Collie was described as a "big, small town" and it was stated that "any (further) loss of population would have significant ramifications on the morale of the town..." (ERM Mitchell McCotter, 5.6, 1995).

In the first quarter of 1998, feedback from local residents, business organisations and service providers indicated that Collie community was demonstrating a lift in business and community confidence. However, investigations during the last quarter of 1998 revealed a sense of "watchful anticipation" had returned to the community. This arose over the possibility of further retrenchments at Wesfarmers Coal; decisions by Griffin Coal to again not offer apprenticeships and make use of contract services outside Collie, and; the continuing insecurity of Western Power workers anxious about government privatisation plans.

Employment Sectors

Selected employment estimates for the following sectors are:

Property and business services	14%
Retail trade	11%
Mining [Note]	11%
Electricity, gas and water supply	10%
Construction	8%
Health & Community Services	8%
Timber industry *	2%

** RFA Economic Technical Committee estimate.*

Note : According to mining industry feedback, these figures appear to underestimate industry employment. For example, mining companies Worsley Alumina, Griffin Coal and Wesfarmers Coal employ approximately 1500 people. Apart from Worsley Alumina where it was estimated that a maximum of 12% of its employees reside in the Collie Shire, (85% of workers live in Greater Bunbury and the remainder in other regional towns), Wesfarmers and Griffin Coal estimate 95% of their workforce live in the town. ABS, however, conducts a census survey and the employment figures reflect the industry category identified by Collie residents. The apparent disparity may be best explained by noting that collectively, the mining, construction, electricity, gas and water supply industries account for 28% of the workforce.

Mining and Construction

Worsley Alumina is undertaking an $800 million expansion program at its alumina operations approximately 20 kilometres north-west of Collie that will double the refinery's capacity by the year 2000. It is anticipated that over 600 people will be employed during the construction phase and add 100-150 jobs to the permanent work force of 800. This represents the largest resource development project in the south-west region for more than a decade. There remains some doubt, however, about the extent of positive flow-on effects that will be experienced in Collie.

Another large project that has almost concluded is the construction of a second 300 MW coal-fired power station at Collie, due for commissioning in early 1999. Approximately 650 people were employed in the construction phase which provided a large boost to the local economy. At the time of writing, most of the construction workforce had left Collie and this has had a dampening effect upon the community. The permanent power station workforce will be boosted by an additional 50 -70 people who are expected to be recruited locally.

Retail, Property and Business Services

Generally the retail industry has experienced steady performance, particularly for long established businesses. However, a large retailer reported declining retail sales for six months in 1998, primarily as a consequence of the reduced construction workforce. The Business Enterprise Centre described the business community as being "jittery" anticipating more retrenchments.

Timber

Historically, the timber industry has played a large part in Collie's development. At present, the industry represents a small proportion of local economic activity. Timber is drawn predominantly from the Central Forest Region (Mornington forest area).

In an area that once supported 40 sawmills, Bunnings, Saunders and Tilbrook are the only ones that exist today. Eighty-five people are directly employed in Collie throughout public and private sectors of the native hardwood timber industry. Bunnings is the largest employer with 48 workers while Saunders and Tilbrook mills together employ 13 people. The local CALM office employs 13 people in native hardwood management and approximately 10 others are dependent upon hardwood timber royalties.

The two smaller sawmills reported varying circumstances. One recently lost a large government contract and reduced staffing by two people while the other proprietor described business as "steady" with no plans to expand or update. It was reported that tough market conditions made it a challenging time for the timber industry.

Existing Infrastructure

Collie has six pre primary schools, five primary schools and two secondary schools. Education Department statistics indicate an increase of 70 pre primary enrolments between 1993-1997. Primary and secondary school enrolments decreased by almost 200 and 50 students respectively over the same period. The state secondary school principal reported that enrolment numbers were expected to decline by a further 25 students in 1999.

The District Education Office advised that the Department's Local Area Planning initiatives were unlikely to involve secondary school amalgamation between Collie and Bunbury high schools in the medium-term.

Collie has six medical practitioners, is serviced by a 43 bed hospital and has a comprehensive level of community services, especially for seniors.

Collie was described as having a good community of volunteers. The town also has numerous sporting teams which are well supported.

Community Capacity and Strengths

Collie is the largest town located in the RFA region. During the mining and power industries' restructuring between 1991 and 1996, the population declined 4.7%. The community has often experienced a "boom and bust" local economy.

Business groups reported that Collie was somewhat an economically insular community due to the presence of the power and mining industries. They suggested that Collie was generally less affected by external economic conditions than other rural towns. Collie was often described as generally having a stable business environment, with many businesses being established over a long period. The workforce fluctuations tended to occur in hospitality businesses such as hotels, motels, cafes etc which mainly derived business from the construction sector.

The RFA Economic Technical Committee anticipated few Collie job losses even under the most extensive conservation scenario outlined in the Public Discussion Paper.

Despite the activity in the mining and power generation industries, feedback indicated that retrenched timber workers did not generally find these industries offered good employment prospects. It would appear that people with tickets or trade certificates had improved chances of obtaining work elsewhere.

The government high school principal advised that the underground mine closures and the retrenchments which followed had slight impact upon the high school. This was primarily due to the fact most workers who lost their jobs did not have children at high school. From survey data collected for the RFA on timber industry workers, less than 10% of Collie timber families had high school aged children with almost 12% having primary school aged children (EBC, 1998).

An additional comment referring to the strength of the Collie community relates to the reported increasing number of people who choose to live on the coast and commute to Collie to work. It was suggested that, if this trend continued, it could lead to a breakdown in the sense of community continuity and cohesiveness.

Local residents described one of Collie's strengths as being a "very supportive and friendly community". While others suggested people were more aligned on the basis of the industry in which they worked, most agreed that during periods of adversity (eg. fighting bushfires), a strong sense of togetherness was evident.

RFA Implications Specific to Collie

Seventeen local residents attended the social assessment meeting to discuss the Public Consultation paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Collie local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Collie are listed below.

- Stability was important to the Collie community which had recently experienced widespread workforce retrenchments. With improved resource security, there was a greater likelihood that the timber industry would increase investment in value adding and downstream processing.

- The Collie community had already suffered reductions in other industry sectors and an RFA which had positive outcomes for the timber industry would boost confidence. An opposing view was that such confidence would be short lived as it was inevitable that increased mechanisation would bring further job losses.

- Timber industry workers reported that the combination of the industry's lessening economic importance in Collie, logging protests by conservation groups and the ongoing forest investigations (eg. DFA, RFA) made people anxious about their future. "Every time a government backs down to green extremists it causes fear for long-term employment". Industry insecurity was further compounded by the steel industry's inroads into the construction market and pressure from conservation groups to replace native hardwoods with plantation timbers.

- A reduction in timber volumes would also directly affect both Collie and Yarloop as between 30% -50% of the local cut goes to Yarloop for additional processing.

- The implication of harvesting activities in Lowden block had important implications for many in the local community because it was considered "the last remaining real bush for future generations".

- The cost of managing additional conservation reserves had implications for Collie residents who were already dissatisfied with motorbike riders, firearm users and people dumping rubbish who breached regulations. With less native hardwood timber royalties available there was increased likelihood of creating degraded conservation estates.

- The possibility that beekeeping and firewood collection would be denied forest access caused concern for many people. Firewood collecting in particular, was an important social activity in Collie.

Future Directions

Most people agreed that a diverse economic base was desirable for community stability. The presence of the mining, power and timber industries gave the town its uniqueness and offered tourism potential. Although Collie had many natural attractions, infrastructure investment was required before tourism could develop.

In this vein, the Shire recently developed a tourism strategy and is investing in a marketing campaign to promote tourism. It is expected that the proposed $12 million, 120 unit resort complex planned on the bank of the Wellington Weir will enable the business community to capture many tourism opportunities. Two further accommodation developments in the town should also capitalise on expected growth in visitor numbers.

The proximity to Bunbury was sometimes construed negatively as Collie could be perceived as a "suburb of Bunbury" and fail to attract visitors in its own right. Better regional cooperation could improve opportunities.

Following the last wave of mining and power generation industry reductions concluding in 1994, the Collie community began to regain confidence for the future. However, industrial unrest during the last quarter of 1998 has caused a resurgence in business uncertainty. Smaller scale redundancies are continuing to occur and this has reinforced workforce insecurity. With the loss of large numbers of construction workers coupled with indications that the new privately owned power station management has a preference to use contract staff in some of its operations, a sense of cautiousness has returned to the community.

Three sawmills are located in Collie, however, in comparison with mining and power generation, the timber industry is no longer a significant contributor to the local economy. All mill managers reported market difficulties and "tough times ahead". With increased mechanisation it was plausible that the timber industry would continue to shed jobs.

Despite its changed role in the community, the timber industry continues to be recognised as an important part of Collie's social fabric because of its historical links and the economic diversity provided.

Business opinions were that while the timber industry required resource security, it needed to devote more resources to tertiary level processing. A view was that the present level of value adding was a start, however, the industry should aim to produce a very refined product from tertiary production.

Assessment Summary

Collie's inland waterways, recreational opportunities, wildflowers and proximity to Perth form part of its natural attractions. With a population approaching 8,600 Collie has the largest population located in the RFA region. The population declined 4.7% between 1991 and 1996 as a result of restructuring associated with the mining and power generation industries.

The mining and power generation industries are presently undergoing expansion and already comprehensively overshadow the timber industry. It is widely acknowledged that the former go through fluctuating cycles. Due to their predominance, workforce fluctuations in these industries have direct, large-scale consequences throughout the Collie economy. This is considerably greater than any flow-on effects expected from timber industry retrenchments.

During the first quarter of 1998, it was widely considered that the mining industry had completed all planned workforce reductions through technological advances and that further large-scale retrenchments were not expected for some years. In late 1998, however, industrial action over the threat of retrenchments at one mining company implies this may not be the case.

A proposed 30,000 hectare Wellington National Park suggested by the Preston Environment Group has received a range of community support. The proponents claim there is no National Park in the central jarrah forest and other popular recreational areas nearby lack protected status. With 10,000 hectares of privately owned forest recently becoming available for sale, the Park's proponents are hopeful of an addition to the conservation estate.

With the development of accommodation facilities within the town and the proposed Wellington Weir resort complex, an increase in visitor numbers is expected. As confirmation of these expectations, the Shire recently developed a tourism strategy and is investing in a marketing campaign. These initiatives indicate that while tourism is in its infancy, the business community recognises future potential.

During 1997, 20 Bunnings' workers were retrenched as a result of a shift closure. The mill manager estimated that the majority stayed in Collie and sought jobs elsewhere, including within the mining industry. Around one third remained unemployed. Most retrenched timber workers did not leave the industry. Although expansion was occurring in the power and mining industries, it did not necessarily translate into job opportunities for timber workers. These workers have industry specific skills which reduces their ability for skill transfer (ERM Mitchell McCotter 1995).

The RFA Economic Technical Committee estimated that few, if any, jobs were likely to be lost in Collie as a result of an RFA outcome.

When considering service provider and stakeholder feedback in conjunction with the large population, economic diversity and business growth patterns, it appears that Collie will be less vulnerable to timber industry changes than most other case study towns. For example, a senior high school principal anticipated that the low timber industry job losses foreshadowed in the RFA would have negligible impact upon the school. Given the job losses projected, it can be anticipated that overall the community will experience minimal impacts.

It is noteworthy that an interdependency exists between Bunnings' Collie and Yarloop mills as 30%-50% of Collie's resource is transferred to Yarloop for drying and processing. Hence while impacts may be minimal in Collie, larger effects may be manifested in Yarloop.

From a social perspective, timber industry employees reported feeling anxious and insecure for several years regarding their future employment prospects. This has primarily arisen through external pressures (anti logging protests, DFA, RFA investigations) and additionally, Bunnings' employees are anxious about the company's long-term plans for its mill. Although Collie has a large population and a diverse economy, opportunities for some displaced timber workers appear restricted.

6.6 Assessment of Manjimup Community

Community Snapshot

Manjimup is an important commercial centre for the lower south-west, serving the Warren and Blackwood regions. Known as the "gateway" to the tall timber country, Manjimup has been associated with the timber industry since it was established in 1912 as the railhead to send timber to Bunbury port. The town has grown on the original nucleus of the railway terminus.

Along with the timber industry, horticulture (eg. potatoes, cauliflowers, orchards), viticulture, sheep, beef and dairy farming as well as retail and commerce, provide the basis for Manjimup's economy.

Almost 85% of the Shire consists of uncleared areas of jarrah, marri and karri forest. Most of these areas are State Forest and conservation areas managed by CALM.

Manjimup has a "timber town identity" and the confidence and success of most local businesses is tied to timber industry success.

Deanmill was established in 1912 and was the first of three mills built by the State Government. It was originally known as the Manjimup Number One State Sawmill. A school and a small community developed around it. When the mill burnt down a decade later, a new mill was built and renamed Deanmill.

Bunnings took control of Deanmill in 1970. The present sawmill cuts jarrah and occasionally blackbutt.

Area profile

Demographics (Postcode 6258)

Area Population	7,367
Total Labour Force	3,674
Unemployment	4.7%
Median Age (years)	31

The population of the Manjimup area is approaching 7,500 and has a median age of 31 years. There are 3,674 Manjimup residents in the labour force with an unemployment rate of 4.7%. This is considerably below state and south-west levels of 8.1% and 7.8% respectively.

Deanmill is a key timber community located around seven kilometres west of Manjimup. It has population of approximately 180, not all of whom are Bunnings" employees (and their families).

Manjimup Shire also contains the towns of Pemberton, Northcliffe, Walpole and Windy Harbour[15]. Approximately 15% of the Shire is rateable land with the remainder held in crown land comprising state forests, National Parks and other reserves.

Manjimup residents described a strong attachment to the surrounding forest which was frequently described as "theirs". Strong community opposition was expressed over forest protests and many repeatedly referred to depression and "loss of heart" that the contribution of the timber industry was being continually devalued.

Manjimup's business community stated that a viable and secure timber industry instilled business and community confidence.

Employment Sectors

Selected employment estimates for the following sectors are:

Agriculture (includes horticulture)	19%
Timber industry *	17%
Retail Trade	12%
Health & Community Services	7%
Wholesale trade	7%
Education	6%

* *RFA Economic Technical Committee estimate.*

Timber

Manjimup's history is intertwined with the timber industry which commenced with the introduction of railways to the region in 1910 and the opening of Jardee and Deanmill sawmills between 1911 - 1913. Today, twelve saw mills remain within the area with an estimated 600 people employed in the public and private sectors of the industry. Bunnings is the largest timber company with its Manjimup Processing Centre (MPC) forming the hub of the company's south-west operations. The Processing Centre obtains much of its jarrah resource through Deanmill. Some of MPC's operations include kiln drying, planing, dressing, finger jointing and product manufacture. The company has also invested more than $6 million installing two state-of-the-art timber pre dryers at Deanmill.

The development of the woodchip industry in the mid 1970s and the establishment of Bunnings' Diamond Mill operations has continued the historic forestry-based contributions to the Shire's economy. Around 36 people are employed at Diamond mill which produces woodchip for export to overseas pulp mills.

Farm forestry is developing throughout the district with *Eucalyptus globulus* (blue gum) being the dominant species.

[15] Pemberton, Northcliffe and Walpole are reported on separately in this report. This section focuses on Manjimup and Deanmill

Agriculture WA suggested that up to 20% of farmland could be planted to trees without loss of agricultural production. Most of the hardwoods are being grown to produce high quality pulpwood. It was reported that to develop hardwood plantations for sawlog production would incur a 20 year lead time for research, development and cultivation (CRA, 1998).

A timber cooperative to coordinate, manage and market farm forestry timber for private landholders was recently established in Bridgetown. While in its infancy, the cooperative involves around 80 south-west farmers with an approximate total of 1,000 hectares of pine and 4,000 - 5,000 hectares of blue gum.

CALM has a district and regional operations presence in Manjimup with 100 employees in the hardwood sectors resident in the area. In addition, approximately 30 people are directly employed under programs funded through hardwood royalties.

Agriculture

Manjimup is the south-west's most significant agricultural district. It is also the state's largest producer of vegetables (Thompson et al, 1994). Approximately 60% of WA's potato requirements and over 85% of Australia's cauliflowers are consistently produced within Manjimup Shire. Other vegetables include onions, cabbage, peas, beans and pumpkins.

Viticulture is an accelerating new development with over 600 hectares in the district under cultivation. Manjimup is second to Donnybrook/Balingup in fruit production with apple and peach orchards being prominent. Export markets to Asia are currently under pressure due to the Asian financial crisis, however, European markets continue to perform well.

The horticulture industry mainly comprises small family businesses. A high proportion of seasonal workers are a feature of this industry, especially involving local women. The previous Edgell-Birdseye cannery was purchased by Simplot around 1995 to establish a potato processing plant. Seasonal production difficulties have constrained development and, until production levels can be increased, employment opportunities are limited. Agriculture WA suggests there are no large scale processing activities proposed in the short to medium-term and therefore, few full-time employment opportunities throughout the horticultural industry are perceived.

The sheep, beef and dairying industries are also important contributors to the District's economy.

Other

As a regional centre, Manjimup provides a range of retail and commercial services and good engineering and machinery skills which ensure that the requirements of most south-west towns can be met.

Existing Infrastructure

Education Department statistics (1997) indicated Manjimup has four pre primary, five primary and three secondary schools. Pre primary and primary school enrolments between 1993 - 1997 increased by over 54 and 85 respectively. Student numbers in secondary schools deceased slightly. Deanmill is serviced by one pre-primary/primary school.

During 1998, a review was undertaken of secondary schools within the Manjimup Education District in response to the Education Department's Local Area Planning initiatives. The Manjimup District Education Office subsequently advised that no state secondary schools in the district would be amalgamated. On the other hand, Deanmill parents voted for school closure as 1999 pre-primary/primary student numbers (thirteen in total) would fall below viable levels. The amalgamation between Manjimup TAFE and the Senior High School to create a multi-purpose campus offering expanded courses and facilities is proceeding.

Manjimup Hospital's Administrator reported that the 30 bed hospital employed 80 full-time equivalent staff and primarily provided aged care and obstetric services. It recently underwent a $5.6 million upgrading program and there are plans for expansion to cater for community needs in cancer support, palliative care and chemotherapy treatment. The Administrator did not anticipate a resulting increase in staffing levels. The hospital also had the potential to increase its surgery activity given a favourable contract response from the Health Department.

It was perceived unlikely that hospital services would be impacted by timber industry retrenchments. On the contrary, it was suggested that hospital business could actually increase as a consequence of the reported relationship between unemployment and ill health.

The town offers a wide range of sporting facilities including football, soccer, hockey, athletics, motorcycle and golf.

The support of local volunteers enables the provision of community services including St John Ambulance, Meals on Wheels, fire brigade, Red Cross and Silver Chain.

Community Capacity and Strengths

Using a range of nationally agreed social indicators, the Social Assessment Unit assessed and analysed the resources Manjimup had at its disposal and its degree of sensitivity to respond to change. The indicators were combined to form a community sensitivity index where each town was compared with other RFA towns. Mainly due to the strong presence of the timber industry, Manjimup was identified as having a high sensitivity to change.

In noting this, one of Manjimup's strengths is its low unemployment rate which is well below south-west and state levels, and a population which has remained relatively steady for over five years.

The agricultural industry makes a significant economic contribution to the shire. The horticultural industry was known to be well organised, proactive and had established a number of production and marketing improvement groups to sure up their position domestically and internationally. Although some components of the industry were affected by the unstable financial situation in Asia, overall the industry was expected to perform well.

Manjimup has a distinct "timber town feel" and several business owners reported that the town's viability was influenced by events surrounding the timber industry. When the timber industry was successful, business and community confidence was buoyed. It was frequently mentioned that local businesses and the community were in the "doldrums" awaiting the RFA outcome.

Timber workers reported feeling insecure about their future. Some now worked shorter hours with reduced incomes, some delayed purchasing homes and some had left the district. People resisted spending money, which in turn, affected local businesses.

The 1997 conservation protest action at Giblett block raised the ire of many local people. Manjimup community felt powerless over this event which heightened sensitivity about being "imposed upon" by outsiders. An oft repeated comment was that "The greenies should not interfere with the jobs and livelihoods of people in the timber industry".

It was reported that as an industry, timber workers formed strong community networks. In particular, they supported local sporting teams, service clubs and volunteered for St John Ambulance and fire brigade services.

RFA Implications specific to Manjimup

Twelve local residents attended the social assessment meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Manjimup local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Manjimup are listed below.

Firstly, many Manjimup people expressed high levels of frustration and anger regarding "yet another investigation" into forest policy and management. The community had believed that the 1987 and 1994 Forest Management Plans were intended to resolve forest use issues, however, the 1996 Deferred Forest Agreement and now the Regional Forest Agreement have exacerbated community uncertainty. Much frustration stems from the fact that many business decisions were postponed pending outcomes of the forest investigations which in turn, made people feel uneasy about their future.

Many perceived "no scientific reason why the RFA was needed" - the surrounding forest was healthy, regeneration was effective and the timber industry successful. People were cynical, yet concerned, that the RFA would produce a political rather than scientific outcome which would be detrimental to the community.

- Most noted that the Manjimup community relied upon the presence of a viable native hardwood timber industry. The interrelationships in the community meant that job losses reverberated throughout the town. Impacts would occur on all facets of community life including health and education services, retail, public service and sporting clubs.

- Timber industry employment and its economic value was considerably underestimated in the PCP. This meant that potential impacts in Manjimup were significantly misrepresented.

- Community morale was low because some companies were unwilling to proceed with development plans. This made people nervous about their future.

- In reality most 'tourism" in Manjimup was business oriented. It was stated that less than 100 people were directly employed in the tourism industry. Of these, fewer than 25 were full-time equivalent positions.

- An RFA outcome which delivered a large increase in the conservation estate would cause a considerable loss of business and community confidence in Manjimup with long-term consequences.

- Loss of capital investment would curtail profitable value adding opportunities. The effects of this would very likely flow onto building and manufacturing businesses in the Shire.

- Many Manjimup retailers were reportedly on the margins of economic viability. Hence timber industry retrenchments in the order of 50 jobs would culminate in the closure of 5-10 shops in the main street.

- Manjimup has one of the lowest unemployment rates of RFA towns. Any increase would be detrimental to community morale - especially youth.

Future Directions

In 1992, the South West Development Commission conducted a workshop as part of the Mainstreet program and a range of local residents were involved.
The participant's vision for Manjimup's central business district in the year 2000 was for the town to be identified as a significant service centre for the south-west. Manjimup continues to be regarded in this way by local residents as well as many other south-west communities.

In attempts to diversify the Shire's economic base, the Manjimup Chamber of Commerce recently initiated the development of a business strategy to attract large manufacturing industries into the Shire.

Initiatives are also underway to promote native hardwood tertiary processing opportunities for finewood processing. Industry bodies including Bunnings, the Finewood Furniture Guild and the Furnishing Industry Association of Australia are establishing linkages and cooperative marketing arrangements to enhance growth in the finewood furniture industry. There is a desire to establish an enclave similar to that proposed for Bridgetown. Success would provide numerous flow-on effects in Manjimup and other south-west communities.

On the other hand, others perceive the timber industry will continue to reduce sawmill staffing levels due to the diminishing resource quality and introduction of new technologies. A view is that large production mills will be replaced by smaller, more efficient and more competitive mills.

The horticulture industry is expected to continue diversifying and expanding domestic and international markets. There are, however, limited opportunities for overall industry expansion due to the restricted supply of cleared land in the shire. The accelerating interest in viticulture may open up processing opportunities and possibly tourism. Overall, agriculture was not expected to create many more full-time jobs in the foreseeable future.

Many anticipated the tourism industry will not feature prominently in Manjimup, at least in the near future. Opposing views are that consistent with experiences in Margaret River and Pemberton, tourism will increase, especially in conjunction with viticulture industry development. It was argued that old growth forest was integral for the growth of tourism, especially the developing nature-based tourism sector.

Assessment Summary

With an area population approaching 7,500, (4,390 town population) Manjimup is the second largest RFA case study area (ABS, 1996). Manjimup residents consider the town's main strength is its role as a regional centre supplying goods and services for south-west communities. This was consistent with the view of residents in nearby towns. Manjimup has a stable population, a diverse industry mix and comprehensive health care facilities. Tourism is not a significant feature of Manjimup's economy, nor is expected to be in the foreseeable future.

Notwithstanding current economic concerns in Asian markets, Manjimup has a successful and well-established agricultural/horticultural industry that continues to diversify - strong interest currently exists in viticulture. It is not unreasonable to expect the wine grape industry will follow patterns established in other south-west towns and create processing opportunities which attract tourism interest. There are, however, limited opportunities for overall industry expansion due to the restricted supply of cleared land within the Manjimup Shire. Overall, the horticultural industry has a large seasonal workforce but offers limited full-time employment opportunities.

Progress is underway to establish a multipurpose campus, initially involving TAFE and the Senior High School. This is expected to offer an expanded range of courses and facilities and be a drawcard throughout the south-west.

The Hospital Manager anticipated that due to the nature of the hospital's core business, it was unlikely that hospital services would be impacted by any timber industry retrenchments. It was suggested, however, that hospital business could actually increase due to the relationship between unemployment and ill health.

In summary, health and education service providers do not consider their respective services at risk of impact as a result of timber industry retrenchments. It should be noted, however, that disposable income would reduce and consequences must inevitably flow into other areas of the community. This would be especially true if CALM displaced or relocated many employees who were identified by service providers as being generally higher paid than other timber industry counterparts.

Homeswest indicates that CALM has 33 houses under the Government Employees Housing Authority (GEHA) program available for rental by its employees. Displaced employees would be required to vacate their premises, unless a decision was taken to return the property into the general Homeswest housing market. The Homeswest Area Manager indicated that in practice, this could be likely due to reduced demand for Homeswest housing in Manjimup which has existed for some time.

Today, there are twelve saw mills within the Manjimup area and an estimated 600 people are employed in the public and private sectors of the timber industry.

Due to Manjimup's size and industry mix, a significant number of timber industry job losses in Manjimup/Deanmill would have short-term (ie. 12 - 18 months), yet intense, impact on the town. For example, a possible loss in the order of 20% of local timber industry jobs would equate to more than a 3% decline in Manjimup's total workforce. It is very likely though that industry retrenchments would create social disruption which would be longer lasting.

Reported further in Section 8.1, this opinion is supported by a recent analysis of retrenched timber workers in Eden NSW. The study showed that workers were disinclined to leave town particularly if they were older, had a long association with the industry and strong local family ties (Rush, 1997). Their inability to obtain re-employment had negative social and economic consequences for the individuals, their families and community.

Manjimup is primarily a traditional community which has confronted the prospect of timber industry job losses from the RFA for more than two years. There is a sense of unease and stress throughout the town and this has increased in intensity as the RFA draws to its conclusion. In addition, the low 4.7% unemployment rate suggests that displaced workers could feel stigmatised and become further stressed. There appears to be few other employment opportunities available in Manjimup in the short to medium-term.

The Manjimup community would find it difficult to adjust to change because of these factors. If job losses occur in response to the RFA, maximum support in the short and medium-term should be provided to minimise economic and social impacts on the affected individuals and the community.

6.7 Assessment of Nannup Community

Community Snapshot

The Nannup townsite was officially declared in 1890. Today, Nannup is renowned for its seasonal wildflowers, jarrah and pine forests, and the Blackwood River. Known historically as a timber milling town, local industries include timber, farming, viticulture, fruit growing, floriculture, aquaculture and arts & crafts. Tourism and the purchase of holiday/hobby farming blocks are also becoming increasingly popular.

Area Profile

Demographics (Postcode 6275)

Area Population	1099
Total labour Force	503
Unemployment	12.7%
Median Age (years)	32

The population of the Nannup area stands at 1099. Related to timber industry restructuring, Nannup had nearly 400 more residents in 1961 than the current town population of 521 (ABS, 1996). The population has remained quite stable since this decline (eg. the area population in 1991 was 1105). More than 500 people make up the labour force and the unemployment rate is comparatively high at 12.7%.

Recent times have seen an influx of retirees to the area and the sale of many special rural subdivisions with more planned. The benefits for Nannup appear positive but are not yet known as a significant portion of the population is now semi-permanent (Community Futures Workshop Committee, 1997). In addition, compared with faster growing shires including Manjimup and Bridgetown-Greenbushes, Nannup has sustained only marginal growth, declined in certain age groups, and has a smaller population base. Consequently, it has been defined as a marginal rural growth shire (Ministry for Planning Research Branch, 1995). In particular, the loss of people aged 19-24 is a matter of some concern.

Employment Sectors

Selected employment estimates for the following sectors are:

Agriculture	22%
Timber Industry*	18%
Education	12%
Accommodation, Cafes & Restaurants	8%
Retail Trade	8%
Construction	7%
Mining	4%
Property & Business Services	3%

* *RFA Economic Technical Committee estimate.*

Timber Industry

Approximately one in every five local employees works in the native hardwood timber industry. Direct private and public sector employment accounts for 110 jobs. Of these, 80 reside in the immediate vicinity. Five other CALM personnel are employed on a hardwood timber royalty-dependent basis.

All of the timber supplied to Nannup comes from the central forest region. Approximately 10% of the total volume from this region is milled in the area.

The Bunnings sawmill is the major employer in the town and plays an important role in sustaining social and economic viability. Forty-nine full-time employees currently work one shift. According to Bunnings management, the flatness of current markets has produced a situation where the Nannup mill is currently running close to a sub-economical position. This applies for all Bunnings' jarrah operations.

Three other spot mills employing four people operate in the area. Other timber industry employment is comprised of contractor employees and CALM staff.

Due most recently to the closure of the Bunnings night shift in August 1997, the town is undergoing a period of adjustment and some uncertainty. Seventeen workers were made redundant after the shift closure. While some older workers retired and others relocated, to Busselton for example, it was reported that some still live in the town and receive unemployment benefits. Some initially elected to commute to similar work (eg. Greenbushes) but experienced difficulties because of strong social and historical ties to the Nannup area. Mill workers were generally second or third generation and had begun employment in their mid to late teens.

While the town has a strong work ethic, this was considered to have been affected by the "turmoil" of the last few decades. Contributing factors were stated to include pressure from the conservation movement, industry restructuring and specific events such as changing mill ownership (from Millars to Bunnings). As a mill town, and coupled with other changes such as loss of services, the above events had left some with the feeling that the community has been "whittled down".

This noted, some claimed the town could regain a greater labour pool of skilled workers producing a wide range of products through various ventures, incentives and confidence in investment. At present, however, there was a widespread view that ex-mill workers did not have many (if any) local employment options until the "town hopefully grows and can better support its residents".

The sustainability of Bunnings' mill is a concern for many residents. Beyond concerns about the viability of the local economy, mill workers are important for the social fabric of the town. Many are highly involved in public voluntary services including the ambulance, bushfire brigade and church groups, and also form the core membership of local sporting clubs.

Compared with retirees or "part-time" residents, mill and other local workers were more likely to spend money in the town, have children in school and so on. Also, "many businesses depend on the mill and would not survive without the basic working community - we can't expect tourists to keep us going". As further support, it was stated that Bunnings pay $1.7 million per annum in wages, spend approximately $50,000 per year in local businesses, and also help to sponsor local groups and events including the Nannup Music Festival. Hence, mill closure would mean the loss of permanent, year round support for town businesses, services and activities.

A number of mill workers stated they had been affected by past or present forest management policies. Personal effects included retrenchment, stress, lost income and inability to plan in the long-term. Community effects included lack of employment, people leaving the area and, more generally, an uncertain future. There was a widespread feeling of inevitability that the mill would eventually close.

Relating to this uncertainty, several people commented of their unease at seeing timber going from "our shire to Manjimup Shire", "our mill to Deanmill" or from the "Central area to the Southern area". Finally, it was suggested that timber companies should be made to continue equal investment in communities like Nannup and Deanmill to guarantee the survival of both communities.

Bunnings issued a news release in mid 1998 in an effort to end speculation about the mill's future. The company declared a commitment to Nannup and noted that the only unresolved issue was whether the RFA would affect the mill's viability. This assured, the mill had a number of advantages including its strategic location (eg. low haulage costs), technology and equipment, and committed workforce. The mill is well known for its excellent skill base and high efficiency levels.

A final point relating to timber or other industry development was noted by the proprietor of Jensen Jarrah in Busselton. As an ex-resident of the town, it was considered difficult to run a business of this size (ie. upwards of 50 employees) in a location as small as Nannup. For example, concerns regarding the level of services, small labour pool and ability to fill managerial positions influence a lending institution's assessment of asset value.

Agriculture

Agriculture has a significant presence in the area. Beef cattle and sheep grazing are prominent activities with dairying, orcharding and horticulture (particularly potatoes) also important. Floriculture and viticulture are developing industries with good potential. In particular, the rise and continued expansion of viticulture may provide some broad, long-term employment opportunities ranging from labouring to building to wine making. A number of younger residents are currently undertaking viticulture courses at TAFE.

Consistent with the trend throughout the rural sector, farm numbers have decreased considerably over recent years. Values of production, however, show only a small decrease indicating heightened efficiency and consolidation of the rural sector during adverse economic conditions (Thompson et al, 1994).

With approximately 80% of the Shire occupied by CALM managed lands, much of the available farming land in the area is situated well to the south-west of the town on the Scott Coastal Plain. According to Agriculture WA, this is the predominant area in the Shire where any future large-scale development will occur.

Tourism

There are approximately 30 accommodation businesses and 60 people employed in tourism in the shire. The latter figure includes work that is part-time and carried out in other areas (eg. two resorts in Busselton and one near Pemberton).

Many residents believed that tourism was just developing. It was considered, for example, more fledgling than Pemberton but slowly building. There has been substantial investment and owners are now seeking gains on their investment. Tourism growth appears evident in the fact that the majority of accommodation businesses have commenced within the last ten years.

Other existing tourism-related businesses include two wineries (with another winery to open shortly), three craft shops and an antique shop. One $2 million, 40 unit resort is currently at the concept stage.

Many agreed that tourism helps to sustain local businesses and that the income and employment generated was hard to measure but may be higher than commonly thought. For example, a tourist may visit a local craft shop but also spend money at the butchers, supermarket and so on. Certainly if tourism diminished, some part-time employment in local businesses may be in jeopardy.

In contrast, the real contribution made by tourism was also questioned. At present, tourism was considered to only supplement money spent locally by residents. Most employment was part-time and seasonal. Rather than expanding, these businesses were adopting a "holding pattern" to the point where some employees were leaving in search of more stable, year-round opportunities.

A number of tourism and town businesses commented that uncertainty had been compounded by the opening up of the Stewart Highway (and, to a lesser extent, Sues Road). This had diverted many tourists travelling between Pemberton and the south-west capes area away from Nannup. Loss of business was evident to the point where one service station withstood a 28% decrease in fuel sales.

While this impact has been readily apparent, tourism is still generally regarded as a significant contributor to the local economy. The current push to seal Mowen Road - and make Nannup part of the link between the Wheatbelt and Margaret River - is predicted to help offset some of the impact noted above. However, some expressed concern that any positive consequences appear some years away.

Finally, some tourism business proprietors commented that lack of accessible old growth jarrah forest and overcutting of jarrah were important issues. In their view, a prime tourism resource had been wasted, and longer term conservation and tourism values outweighed short-term timber returns.

Other businesses

The town has a range of businesses and services including a post office, butcher, supermarket, bakery, two service stations, hairdresser, real estate agent, two restaurants, hotel and bowling club. Some banking facilities are available at the post office and real estate agents.

While acknowledging the effects of the Stewart Highway and the fact that turnover can fall in the order of 40% during winter, business in town (certainly those with primarily local customers) was considered fairly steady. This noted, it was considered that any decrease in labour force numbers would affect this stability.

Apart from the Bunnings' mill, a number of crafts people and small industries, the manufacturing sector does not have much prominence in the area's economy and is unlikely to play a key role in the near future (Thompson et al, 1994).

It was also noted that many new ventures did not endure for long and, at any given time, several businesses on the main street were for sale. One view was that "businesses have to keep a finger in more than one pie - you make your own luck".

According to several proprietors, the proximity to Busselton means that many residents generally choose to travel to the bigger stores. Whether long time residents or recent arrivals, many preferred the wider range of goods available, and this also served as a "day out". One comment was that, "there would be no guarantee that these people would shop more in Nannup if the mill closed".

Existing Infrastructure

Nannup has two schools. The Nannup Pre School had 37 students in 1997. At the same time, enrolments at the Nannup District High School were 156 in the primary and 49 in the high school. School numbers were considered fairly stable and there have been no recent changes to teacher numbers.

For the high school, 50 students is a key number for retaining resources such as a deputy principal. While the 1997 figure was below this, current enrolments stand at 56 and the school has averaged 53 enrolments over the last five years. Therefore, a drop in any one year does not automatically signal resource losses.

Across the district high school, 36 students come from CALM and mill families (12 and 24 respectively). If the mill were to close, and assuming the majority of retrenched workers were forced to leave the community, the school would be directly impacted at the beginning of the next school year (ie. when yearly staffing and funding levels had been finalised). A secondary issue is that impacts would be less likely if the loss of students was distributed across the primary and high school according to the groupings of years 1 to 3, 4 to 7, and 8 to 10.

As discussed with the Education Department Head Office, the formula for determining staff numbers is no longer based purely on a direct relationship with student numbers. Further, after staffing levels for the forthcoming year have been finalised, the school is responsible for allocating staff to classes. As only a rough guide, at least 20 students across the whole school would have to leave to effect a corresponding loss of one teacher.

It was also stated that the high school would continue to operate if it incurred a significant drop in numbers. In noting this, implications would exist for future funding and full-time teaching positions. As examples, (a) the loss of ten or more students could result in the loss of the deputy principal, (b) if the total number of students reduced to 30, up to three or four of the current seven teaching positions could be at risk. High schools such as Northcliffe and Dumbleyung, however, continue to operate with similar numbers. Another positive factor for the continued presence of the school is its distance from other centres (at least 50 kilometres).

In sum, as a worse case scenario, while the closure of the Nannup mill does hold significant implications for the district school (years 1 to 10), it is unlikely that the school would be forced to close.

Other Services

Services include a 17 bed district hospital, Silver Chain, community care, visiting doctors, Meals on Wheels, and volunteer ambulance, fire brigade and fire and rescue services. Other volunteer groups include Riding for the Disabled and Friends of the Nannup Hospital. The hospital also provides a respite service, with transport provided by Nannup Community Care. In addition, the town has a police station staffed by two sworn officers, a tourist information centre and a telecentre.

After the mill, the hospital is the second biggest employer in the town with 32 staff (including 20 nurses), most of whom work on a part-time basis.

The hospital's psycho-geriatric unit is the main contributor to cost-effectiveness as casualty numbers cannot sustain the hospital's existence. Unlike many other country hospitals, patients come from a large catchment area including Boyup Brook, Waroona and Bunbury. Government funding is currently being sought to carry out necessary renovations and achieve "multi-purpose status". As a result, bed numbers will drop to seven, although staff numbers are expected to remain stable.

While the hospital would be likely be downgraded to a nursing post if based solely on casualty numbers, it still holds a number of key functions in the community. Without a resident doctor, for example, the hospital provides a primary health care service.

Nursing staff were considered hard to replace at the best of times and even harder if the mill closed (thus affecting the town's viability and potential to attract other employees).

Finally, Nannup accommodates a relatively high number of government employees. There are presently 33 GEHA homes, of which 15 house CALM employees. As Nannup generally experiences a high demand for housing (there are few homes available for rent and limited land available for private development), it is unlikely that any displaced workers would be able to remain in government accommodation.

RFA Implications Specific to Nannup

Fourteen local residents attended the RFA local discussion group meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Nannup local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Nannup are listed below.

- Generally considered highly likely, loss of employment was the main effect of any change to the reserve system. Widespread flow-on effects were stated as lost or diminished infrastructure and services (eg. clubs, shops, the school, fire protection).
- Most felt that adoption of an option similar to the most extensive reservation scenario would in all likelihood lead to closure of the Bunnings' mill. This in turn could result in the loss of other direct and indirect employment to the point where "the timber industry in Nannup would disappear".
- As clarification, it was stated that the most and second most extensive reservation scenarios specified reductions of 15,000 and 8,000 cubic metres of logs from the Jarrah Blackwood area. Both would most likely render the mill unviable and, therefore, all timber industry employment could be at risk (ie. 110 jobs). The end result is a "high risk area" town.

In summary, many felt that under the most extensive reservation scenario:

- Bunnings would be likely to close the mill in preference for Manjimup/Deanmill which had a larger investment and labour pool.
- All other timber industry employment (including CALM) would be in jeopardy.
- There would be significant flow-on effects. With reduced permanent residents, services would reduce and influence the decision for others to leave.
- Three or four businesses would become unviable if the mill closed. Other effects would be more "subtle", for example, the hotel might lose one or two bar staff.
- The future for local children would be affected.
- People's attitudes towards moving to Nannup to live may be affected. The town may attract less expertise and, as such, the resale value of land could diminish.

- Some contended that, while any closure would cause major flow-on effects, the town would recover over the short to medium-term. Nannup was seen to have already survived a long-term decrease in the number of timber industry jobs. It was also noted that Denmark and Walpole are thriving towns no longer reliant on the timber industry.
- Others regarded any closure as the "final straw" (the last of a succession of impacts) or that the period for recovery would span at least 10 to 15 years. Effects would last until the town had another comparable industry to supply regular basic employment.
- Considering previous loss of mill employment, it was maintained that the town could not accommodate most of those who lost jobs. Given that the mill workforce holds a good deal of respect throughout the timber industry, it is likely that some could gain similar work elsewhere, however, this may take time.
- Arguing for flexibility, one person believed that decision makers should initially opt for the least extensive reservation scenario to minimise local impacts but gradually move towards a more extensive reservation system. While the latter was considered preferable, "the resource can't be curtailed now".

Nannup's Community Capacity and Strengths

The community sensitivity assessment, indicated that Nannup was quite sensitive to change, but less so than towns including Greenbushes, Deanmill, Yarloop, Pemberton and Northcliffe.

Subsequent investigation (including assessment of the mill's viability and resource supply) indicates Nannup is likely to have higher sensitivity to change than these towns. Purely in terms of the indicators initially used, however, compared with one or more of these towns, Nannup had a lower number of dependents (those under 14 and over 65 years) and a higher number of industries, businesses, shire councillors and community groups. It also compared favourably in terms of median family income, household expenditure and proximity to major settlements (on the coast).

In noting this, many residents could relate a succession of impacts the town had endured over the last few decades. Impacts included loss of services, construction of Stewart Highway, the downturn in agriculture, the population loss in the 1960s, an increasing lack of employment opportunities, loss of the mill night shift, and people leaving the area. A hidden impact was the possibility that many younger families had not moved to Nannup because of poor employment opportunities. As a result, "a community like ours doesn't have much leeway".

The town also has many positive aspects. Comments included:

- there are a lot of established families, the community is very close knit, everybody knows everybody and people (including businesses) help each other;
- the economy has become more diversified over the last ten years;
- the number of high school students has been stable in recent years and (given no decrease in population) should remain so over the next few years;
- Nannup is slowly attracting more tourists.

Others noted how the flavour of the community had changed in recent years. The influx of self-funded retirees and people seeking alternative lifestyles also meant some divisive elements were present in the community. One person - who claimed "I'm a greenie who wants the mill to stay" - said many could also see both sides of the forest management debate but chose not to speak out either way.

Future Directions

In brief:

- Bunnings recently declared a commitment to Nannup mill;
- tourism is a growing industry;
- continued expansion in viticulture appears to be providing some broad, long-term employment opportunities;
- because of its small labour pool, relative isolation, and level of services the area may continue to have difficulty attracting some forms of investment (eg. tertiary processing opportunities) and young families;
- upgrading Mowen Road is planned (to offset the economic impact caused by the construction of Stewart Highway) which is anticipated to increase tourism between Nannup and the south-west capes area.

Assessment Summary

The Nannup timber industry contributes substantially to a local economy that sustains a small population. Agriculture and tourism are also important industries while viticulture is an emerging enterprise. However, the area currently has limited diversity in terms of full-time employment opportunities and would encounter major difficulties sustaining the loss or significant downturn of a main industry.

It was concluded that the Nannup area is highly sensitive to change and possibly the most sensitive in the RFA region. For example, a possible loss in the order of 50% of local timber industry jobs would equate to more than a 9% decline in Nannup's total workforce. In comparative terms, the area has only marginal growth, high unemployment, limited local employment opportunities and a small labour pool. Loss of young people to larger settlements has also been a consistent trend that carries significant implications. In addition, a succession of recent impacts underpin a period of community uncertainty and adjustment and associated personal effects including high levels of insecurity and stress.

As the Nannup mill is currently operating close to viable levels, many community members were concerned that all timber industry jobs were at risk from the RFA.[16]

From these conclusions, an RFA outcome that diminishes timber supply holds consequences both at an individual and community level. For example, any decrease in the size of the labour force can potentially affect community stability.

Flow-on effects to town businesses and services would be likely from any number of job losses (assuming many displaced workers relocated). For example, while the high school would continue to operate if it incurred a significant drop in numbers, implications would exist for the school's future classification, funding and teaching positions. Volunteer services would also be impacted. As stated, if a particular facility was lost, there would be no guarantee it would be replaced in the future.

The hospital would be less likely to be directly affected as its primary function is to care for inpatients from a broad area of the south-west. However, the ability to attract additional human resources and investment potential could diminish.

On a positive note, Bunnings' mill workers have gained considerable respect for their skills and commitment, often built up over many years of employment. While this suggests many could find work elsewhere (as has occurred after previous loss of employment) a number of factors act to inhibit relocation (eg. see Rush, 1997).

[16] As stated by the RFA Economic Technical Committee, if the mill was to abandon operations, job loss could be far higher than specified.

Many workers are long standing residents, have strong social and psychological ties with the community and would show a strong preference to remain in the area. Under the current climate of instability (eg. relating to unemployment, growth and investor confidence), others seeking to relocate may be unable to realise the market value of their property. To some, unemployment benefits and hope for regaining local employment may therefore be a preferred option. Other issues such as a need for retraining may also become evident.

Compared with less isolated RFA towns such as Yarloop and Northcliffe, commuting to other locations is also a more demanding proposition. For those forced to work elsewhere, relocation may therefore be the most realistic option.

Further issues for the RFA to consider are the growing importance of tourism to the local economy and the fact that many residents have conservation-oriented views. For any industry with increasing potential, it is important not to foreclose opportunities that can add to local economic diversity. In this regard, the importance of establishing locally accessible conservation areas was also a common concern.

As recommended by local discussion groups in other RFA towns, attempts should be made to phase in any changes over a suitable timeframe to help minimise impacts at individual and community levels. Given concerns regarding the timber industry's current viability, this may clearly prove difficult. It could be argued that the only equitable option would be to delay the introduction of any resource losses until workers and their families had some opportunity to re-skill or relocate. Community-level impacts would also need to be considered.

6.8 Assessment of Northcliffe Community

Community Snapshot

The town of Northcliffe emerged from the group settlement scheme in 1924. The hardships faced by the first settlers - the "Groupies"- and the spirit of endurance needed to clear land by hand, survive the Great Depression and overcome crop and pasture failure, makes Northcliffe a modern pioneering saga.

In 1946, the Karri Timber Company sawmill was established close to the town. Also after World War II, an influx of ex-service personnel arrived to take up dairy farming and, later, tobacco. Today the area has a mix of industries based around dairying, sheep and beef farming, timber, horticulture, aquaculture and tourism.

Area profile

Demographics (Postcode 6262)

Area Population	801
Total Labour Force	344
Unemployment	15.1%
Median Age (years)	34

The population of the Northcliffe area has been slowly increasing over the last thirty years and recently exceeded 800, with a town population of 239 (ABS, 1996). The population increased by almost 4% between 1991 and 1996. The median age of residents is 34 years. There are 344 Northcliffe residents in the labour force with 292 people actually employed in full-time or part-time work (ABS, 1996). With unemployment around 15%, it is almost double the south-west and state averages of 7.8% and 8.1% respectively.

The nature of the Northcliffe community is noticeably changing as newcomers arrive with different skills and interests. Manjimup's Shire Planner noted that new arrivals, including retirees, have increased during the last five years following the release of special rural lots. In addition, tenants have been attracted into town with the availability of inexpensive housing at the former Bunnings' mill site. Newcomers described the area's attractiveness and the opportunity for lifestyle changes as key reasons for their move to Northcliffe.

Some thought that Northcliffe possessed a sense of energy as it proceeded in other directions in addition to its traditional timber and agriculture base. Others though were concerned about the change in community stability and were uncertain about the future. In particular, many locals raised concerns over the erosion of shared community values and changed social demographics. Further, crime and anti social behaviour were issues of increasing concern.

Residents who supported continuation of the timber industry reported they were increasingly feeling confronted and not respected by other groups in the Northcliffe community. At the same time, some locals with pro-conservation views stated they had been confronted by timber industry supporters.

It was suggested that differences between the timber industry and conservationists had exacerbated following the introduction of clearfelling and especially since the increased numbers of new arrivals with differing environmental beliefs.

There have been particular difficulties in presenting this social assessment for Northcliffe. Forthright supporters representing timber industry and conservation positions hold diametrically opposed views regarding Northcliffe community and its future directions. Both groups claim to have majority community support for their positions. On occasions, people declined to be interviewed over concern at possible "retaliation" and sometimes because of dissatisfaction and mistrust with the RFA process. While divergent opinions also exist in other south-west communities, Northcliffe differs in the strength and incompatibility of views. Efforts were made to clarify and confirm aspects of the current situation and Northcliffe's future prospects with external government agencies, not always with success.

Employment Sectors

Selected employment estimates for the following sectors are:

Agriculture	31%
Timber industry *	17%
Education	13%
Retail Trade	7%
Accommodation, cafes & restaurants	5%
Construction	3%

** RFA Economic Technical Committee estimate.*

Many people were self-employed in a range of activities including aquaculture, carpentry, cleaning, word processing, honey production, accountancy and music.

Agriculture

The Group Settlement Scheme resulted in large-scale clearing of land to prepare it for dairying. Dairying became the most prominent industry in the area in the 1950s and Northcliffe is still considered the dairying heart of the Manjimup Shire (Thompson et al, 1994).

The agricultural industry continues to be the mainstay of the town however, the dairying industry is currently facing uncertainly with the possibility of deregulation in the near future. Beef grazing is declining economically and many farmers are diversifying into activities such as tree cropping, farm-stays, horticulture, fat lambs and timber milling.

Horticulture and aquaculture (eg. marron farming) are presently small scale activities. The latter in particular, was described by the Pemberton Aquaculture Producers as a fledgling industry with good growth potential. Northcliffe residents have shown a high level of interest in marron farming with 10 purpose-built farms being established to date.

Agriculture WA and the South West Development Commission do not predict significant horticultural developments in Northcliffe in the foreseeable future. Horticulture provides the best employment opportunities, although work tends to be casual and seasonal.

Timber

It was considered that the introduction of woodchipping in the 1970s (although processed at Diamond Mill), led to expansion of the timber industry in Northcliffe. Industrial development in Northcliffe has been primarily related to the timber industry (Thompson et al, 1994).

After a period of restructuring, Bunnings' Northcliffe mill finally ceased operations in May 1995. At that time, fifteen people were employed. Most workers elected to commute to Bunnings' Pemberton Mill while a small number accepted redundancies. The few job losses that occurred probably meant the town experienced negligible direct impacts as a result.

Today, five spot mills remain in the area and approximately 50 Northcliffe residents are employed in the native hardwood timber industry with around 25 people working outside the Northcliffe area. This means approximately one in six local residents work in the hardwood industry. CALM's Northcliffe office employs seven people, six of whom are directly dependent upon hardwood timber industry royalties.

Given the contractual requirements for value adding, the local industry considers it is poised to improve processing opportunities and sustain a viable, long-term future. For example, one small sawmiller expected to employ three additional staff - a 50% increase - by December 1998, given continued resource access.

Tourism

There is evidence of increasing business confidence in tourism with several plans approved to develop a range accommodation facilities in Northcliffe. In mid 1998, an 11 unit holiday accommodation development was completed. The shire council has also approved an additional three developments estimated to cost approximately $1 million in total and offering a range of accommodation facilities. Shire planning regulations require construction to be undertaken within two years of building approval.

In November 1997, the Department of Commerce and Trade conducted a Small Town Economic Planning Program (STEP) workshop in Northcliffe. A prominent community objective arising from the workshop was to "maintain, preserve and enhance the natural environment of Northcliffe ie. its forests, water and soils" (DCT, 1997).

The facilitator reported that the Northcliffe community generally agreed that sustainability of the local environment was important, but could not reach unanimous agreement how this should be achieved.

Northcliffe recently received a promotion grant under the STEP program. The grant centred around producing a tourism package which incorporated an international story telling convention, mapping walk, ride and drive trails, mapping historical sites and developing an internet web site.

Existing Infrastructure

Northcliffe has one pre primary, primary and district high school. Education Department statistics indicated an increase of 16 pre primary enrolments between 1993 - 1997 and six extra high school students over the same period. Primary school enrolments decreased by 15 students. The District Education Department office estimated that over 110 students commuted to school daily by bus and as at July 1997, the school employed 30 people in total (22 full-time equivalents).

Northcliffe does not have a hospital or resident doctor, however doctors visit the town thrice weekly. Medical facilities are provided by the Nursing Post. Pharmaceutical needs are met through the Pemberton chemist who sends goods to the Northcliffe Post Office for collection.

By early 1997 the bank and butcher shop had closed. Apart from EFTPOS transactions no banking facilities are available.

Community services include St John Ambulance, Fire and Rescue, Bush Fire Brigade, Telecentre, play group, Youth Voice, aged accommodation, home help and the Northcliffe Family Centre.

Cultural and recreational activities are provided through the Northcliffe Workers Club, the library, pioneer museum, and various sporting groups. Northcliffe also hosts a segment of the annual WA Mountain Bike Championship series, reportedly the largest event of its kind in Western Australia. An interpretative and cultural centre is currently being designed. It is expected to fulfil numerous functions and have a pivotal position in Northcliffe community. The centre will incorporate a range of themes relating to indigenous people, history of settlement, environment and conservation, tourist services, communication and may include a coffee shop.

Future Directions

Northcliffe's traditional values are being challenged with the influx of new arrivals who seek different opportunities from people with traditional farming, business and timber backgrounds. Split community ideals, particularly in relation to forest use, are clearly evident in some sectors of Northcliffe community which has created dissension and discomfort for many. The polarity means there are strong and opposing opinions about the importance that timber and tourism will have in Northcliffe's future.

A clear delineation exists between those with strong conservation views and those firmly orientated more traditionally. A predominant dissenting issue is the desire to increase old growth forest reservation around Northcliffe versus the desire for secure timber industry access to the same areas of high timber values. Timber production is part of Northcliffe's culture and history and given resource security, the industry believes it has a sound future.

On the other hand, tourism is an emerging industry and seen by some groups as the key to Northcliffe's future. The annual mountain bike race is an example of tourism developed around Northcliffe's natural environment. In 1997, the event was estimated by the WATC to have contributed approximately $20,000 to the area.

While there is divergent opinion about tourism employment opportunities, in the short-term, full-time permanent jobs are likely to be limited.

RFA Implications specific to Northcliffe

Fifteen local residents attended the social assessment meeting to discuss the Public Consultation paper and provide feedback about the local implications of the three approaches. Interview and survey data have been incorporated with information obtained at the Northcliffe local discussion group meeting to obtain comprehensive community feedback.

The discussion group agenda as outlined at the commencement of the meeting was not followed as some participants preferred to make wide ranging comments about the RFA.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Northcliffe are listed below.

- In general, the continued operation of spot mills in Northcliffe is supported. Some with conservation oriented views felt the industry was the "meat in the sandwich" in the broader conflict which, from a conservation point of view, was directed towards current forestry practices rather than the timber industry per se.

- The community would be strongly impacted if the timber industry's historical importance in providing a reliable and steady income to Northcliffe families was lost.

- The diversity of timber, tourism and agriculture makes for a "perfect match" in Northcliffe's economy.

- Jane and Dombakup forest blocks were Northcliffe's greatest assets and their conservation was central to its future.

- Flora and fauna surveys have not been completed for Northcliffe, therefore the science is questionable. Similar criticism applies for social assessment.

- There was criticism that the RFA did not evaluate the consequences that clearfelling activities has upon tourism in Northcliffe.

- Under the three approaches presented in the PCP, Northcliffe only gains a few extra hectares in reserves. This was unacceptable as the lack of nearby reserves was detrimental for tourism.

- Northcliffe has demonstrated that it does not rely on the timber industry to survive. The closure of Bunnings' mill did not cause a population decline - rather it has increased.

- It is not scientific that a tourist count for Northcliffe was not undertaken.

Community capacity and strengths

There were conflicting opinions about Northcliffe's long-term future and capacity to adapt to change. Some local discussion meeting participants were critical of the social assessment in the RFA Comprehensive Regional Assessment report, arguing the town had a high capacity to respond positively to change. Others though, considered Northcliffe was facing economic and social instability.

One comment was that, "Northcliffe is a success story. We survive everything". The area's economic diversity was said to be one of its strengths. This view however, was contradicted by some others who thought Northcliffe's changing social structure and uncertain economic viability was not conducive to a positive future.

Another view was that Northcliffe was experiencing the same degree of change and uncertainty as many other rural Australian communities. Moreover, the town had the capacity to successfully manage change because it possessed a diverse skill base.

The Department of Local Government confirmed that between 1994 - 1997 Northcliffe voters recorded a response rate of between 41% - 67% in local elections. Many people agreed there was a sense of responsibility and high level of family involvement in Northcliffe's numerous community committees.

Assessment Summary

The population of the Northcliffe area has been slowly increasing over the last 30 years and recently exceeded 800. Between 1991 and 1996 the population increased by almost 4%. The 15% unemployment rate is the highest of the eight case study areas and is close to double the south-west and state averages.

The nature of the Northcliffe community is changing as newcomers are arriving with different skills and interests. These differences are being manifested in many ways, most notably in changing social values and how the forest is viewed. There is polarity of opinion between long standing residents and newer arrivals who hold pro-conservation views.

Further feedback about community differences reported that new business ventures were not always supported by all community sectors. If such actions continued, the town's capacity to maximise its potential for economic diversity - an important indicator of small town survival - may be restricted.

Agriculture is a significant contributor to the local economy with ABS identifying this industry as the largest employing sector (31%) followed by the timber industry (17%), and education (13%).

More local people are currently employed in the timber industry than when the Bunnings' mill closed, although fifteen workers commute to Bunnings'' Pemberton operations. The fact that this occurred may well have negated impacts that would have otherwise arisen. One in six locals continue to work in the native hardwood industry.

Recent accommodation construction and building approvals totalling almost $1 million indicate a confidence in tourism potential. In addition, as an outcome of the STEP workshop, Northcliffe recently received a grant to support tourism promotion.

Approximately 25 local people have formed the West Northcliffe Tourism Group to enhance tourism opportunities. If the current demonstrated business confidence in tourism continues, some of Northcliffe's long-term future may lie in this emerging industry.

Northcliffe District High School is in receipt of Commonwealth Literacy Program funding in recognition of the school being in a socially and economically disadvantaged catchment area. The District Education Office stated that the high school has been steadily growing. As part of the Education Department's Local Area Planning process Northcliffe parents strongly supported the high school's retention, arguing that negative impacts would occur for students and the small community if the high school was amalgamated with Manjimup Senior High. In late 1998 it was announced that an amalgamation would not proceed.

There are conflicting community opinions about Northcliffe's long-term future and its capacity to adapt to change. Despite the existence of numerous community committees, Northcliffe community as an entity does not exhibit cohesiveness and vitality. Timber industry supporters and pro conservation people both claim to represent majority community opinion.

Timber workers considered their industry has been treated disparagingly, yet for decades it had provided Northcliffe families and businesses with employment and support. Similarly, some people with pro conservation views reported unpleasant incidents involving timber industry supporters. Given this rift, timber industry supporters considered that insufficient community support networks would be available to assist any timber workers displaced by the RFA.

An assessment has been made of Northcliffe's small but increasing population, limited infrastructure, conflicting community ideals, an agricultural industry facing change, a high existing unemployment rate and minimal full-time employment alternatives. The conclusion is that a possible loss of half the timber industry jobs based in Northcliffe would be detrimental to the community.

From all accounts Northcliffe is a community in transition. Both timber industry supporters and conservationists requested a more detailed social and economic assessment to comprehensively determine positive and negative impacts.

In summary, a community with expansive support systems and an economic base that is both strong and diverse is more robust in the face of change. Therefore changes must be carefully managed to minimise detrimental impacts on the timber, agriculture and tourism industries and the Northcliffe community as a whole.

6.9 Assessment of Pemberton Community

Community Snapshot

Originally known as `Big Brook', following the establishment of the first timber mills, the settlement was renamed `Pemberton' after one of the first pioneer settlers. The village was founded in 1911. Noongars had visited the Pemberton area long before the first settlers arrived in the 1860s.

Since experiencing a significant population decline in the 1960s, the town has remained fairly stable and experienced steady growth over the last decade. Today, Pemberton remains the major centre for processing karri and is also experiencing the benefits of a flourishing tourism industry. Other important industries include agriculture, viticulture and craft products.

Area Profile

Demographics (Postcode 6260)

Area Population	1798
Total labour Force	877
Unemployment	3.3%
Median Age (years)	32

The population of the Pemberton area has slowly been increasing over the last 10 years and currently stands at 1,798. The town population is 994 (ABS 1996). The labour force comprises 877 people with a low unemployment rate of 3.3%.

A feature of Pemberton is its mix of forest use activities and widespread agreement that the timber and tourism industries can and should coexist. This noted, some polarity in opinion about the importance of both industries does exist.

Employment Sectors

Selected employment estimates for the following sectors are:

Timber Industry*	19%
Agriculture	19%
Accommodation, Cafes & Restaurants	12%
Health & Community Services	8%
Retail Trade	7%
Education	6%
Cultural & Recreational Services	4%

** RFA Economic Technical Committee estimate.*

Note: ABS industry categorisation does not include tourism. Initiated as part of the RFA, a tourism case study of Pemberton estimated that, in 1997, 233 full-time equivalent employees worked in the industry (including 87 owner/operators, 83 full-time and 148 part-time/casual employees) (RFA Tourism Report, 1998). It is not clear how many of those employed live in the Pemberton area.

Timber

Approximately one in every five local employees works in the hardwood timber industry. Direct private and public sector employment in the industry accounts for 190 jobs. Of these, 165 reside in the immediate vicinity. Approximately 15 other CALM personnel are employed on a timber royalty-dependent basis.

More than 98% of timber supplied to Pemberton comes from the southern forest region. Approximately 14% of the total volume from this region is milled in the area.

The main timber industry presence is the Bunnings' karri mill. A major employer in the area, around 113 full-time employees currently work in the mill over two shifts. The workforce was currently considered stable.

South West Timber Supplies also operate a karri mill and currently employ seven people. A further small mill has one owner-operator. CALM employs 20 salaried office staff, six of whom are employed in hardwood forest management. A further 30-35 people are employed as wages staff, of which around two-thirds work in production forest areas as crew members.

Bunnings' mill is quite modern and - subject to the RFA outcome - there are plans to continue a major process of upgrade and change from structural cutting towards value added markets. This entails changing milling procedures and installing additional components, such as pre-dryers, in the processing system. In the longer term, additional handling may provide more local employment. Tremendous scope is considered to exist in value adding karri and in developing a line of manufacturing similar to that for jarrah.

According to management, any change in timber supply (both in terms of quantity and log size) will affect viability. Further investment in value adding technologies would be unlikely.

The Bunnings submission to the RFA (July, 1998) noted that a gradual transition to smaller logs from thinning regrowth was already occurring regardless of the RFA and was expected to continue over the next 20-30 years. In addition, "The future economic viability of karri sawmills is dependent on the ability of companies to successfully manage this transition ... by changing both sawmill technology and marketing strategies" (1998, p.12).

It was also stated that "Any reservation of additional old growth karri forest [including the Karri Main Belt and Karri Yellow Tingle ecosystems] will force changes to occur before any strategies are developed. The resultant change in log mix will seriously impact the overall viability of BFP's [Bunnings Forest Products] Pemberton operation and both social and economic consequences will be well beyond the impacts reported in the Public Consultation Paper" (RFA, 1998, 12).

To deal with transitional issues, the mill is instituting a gradual educational process regarding the assessment of timber quality. Many of the mill workers surveyed were eager to participate in more effective and efficient timber processing operations.

At times of local uncertainty, it was stated that some (often more skilled) employees tended to move on to a better future elsewhere. With value adding and further processing, however, markets gained a higher degree of stability. The changes forecast could therefore prove advantageous for planning and workforce stability.

Stable employment was a big issue; any workforce needs some form of direction and certainty. To employees, year-round work was essential; mill work meant a full-time job and the ability to provide for one's family.

Many will workers considered that the maintenance of a strong and prosperous town required the maintenance of a sustainable timber industry. However, uncertainty stemming from resource security issues and split community ideals has contributed to low worker morale. Most felt they had been affected by forest management decisions and gave examples of temporary layoffs, lost hours and pay reductions due to timber shortages brought about by forest protests.

In responding to forest protests in Lane and Wattle blocks in October-November 1998, the Bunnings' mill manager noted "Pemberton has been on a knife edge for some weeks because of the uncertainty of ongoing log supply" (Manjimup Bridgetown Times, 4 November, 1998).

Tourism

Tourism has experienced major growth in recent times. Initiated as part of the RFA, a case study of Pemberton estimated that full-time employment (owner/operators and employees) had grown by more than 400% between 1986 and 1997, equating to a rise of 12.9% per annum over the same period (RFA Tourism Report, 1998).

The Pemberton area currently has more than thirty accommodation businesses (with approximately 1200 beds), thirteen activities and tours businesses and six craft centres.

In the last survey completed in 1994, demonstrated investment in tourism exceeded $46 million. Further investment is expected to exceed $15 million over the next five years (RFA Tourism Report, 1998). As of June 1998, two tourism projects had recently been completed and eleven were at the planning or concept stage (WATC, 1998).

In the case study, tourism to the area was seen as dependent on the forest as a scenic, recreational and educational resource. Some regarded constraints to their business as (a) the use of local forest sites at or near capacity during high volume periods, (b) the threat of logging next to or near existing businesses.

Similar views were held by a number of local tourism businesses surveyed as part of the social assessment. Retention of the "base product" of contiguous areas of old growth for future needs was a key issue. Over the next twenty years, the industry was considered to need at least two more "decent size" forest blocks close to Pemberton and surrounding existing conservation areas.

Comments included "secure reserves of old growth are totally inadequate", "Warren, Beedelup and Gloucester National Parks are overused", "old growth is one thing, locality is another", and "walkers aren't interested in regrowth areas". One operator commented seeing phenomenal growth in use of the Warren National Park in the last five years and believed the situation would become unsustainable within five years.

Concern areas included heritage or interim listed forests, particularly Hawke, Beavis and Giblett which could extend Warren and Beedelup National Parks. These were regarded as "the only resource base left to provide nature-based tourism in the future". Compared with the level of employment and tourism investment, the total area of the two National Parks was considered totally inadequate

Conversely, the Shannon National Park held little economic value for local tourism operators. Tourists who chose to travel to the Shannon were likely to keep heading south to Walpole. Shannon was also not "attractive" or "unique" and most tourists currently held preference for Pemberton's old growth areas. A number of operators said they would be willing to trade a portion of Shannon for two or more blocks around Pemberton as this would create more certainty and future employment.

While the Gloucester Tree is the biggest single attraction in Pemberton, some operators argued that a "different type of tourist" goes to Warren, Beedelup and other areas. It was maintained that the majority (about 80%) were currently site-based "spot" tourists, however, the nature-based tourism market was developing rapidly.

As stated in the submission to the RFA by the Pemberton Tourist Operators Association, while the future potential for nature-based tourism growth is exponential, the remaining old growth karri - the "cornerstone of SW tourism" and a key component of the south-west tourist route - may already be inadequate for future tourism growth (based on Tourism South West Assessment) (July, 1998, 1,2).

While operators had seen a shift in the asset value of the forest, the industry suffered from a lack of planning and organisation. This was clearly tied to the issue of investor confidence. As a result, many wanted a consolidated research effort to be undertaken on their industry. "It's too broad to say `we've got to save the forests because of tourism' - we've got to have hard data and break absolute numbers down into trends and so on".

Some tourism businesses saw better access to the forest as the key issue and were quite satisfied with current forest management practices. It was commented that people need know that "regrowth forest is a good place to go too".

A major challenge for the next twenty years was seen as gaining a balance between logging, environment and lifestyle values. Ensuring the "user pays" principle became an acceptable social norm was also viewed as a major undertaking.

Agriculture and Viticulture

Along with the timber and tourism industries, agriculture is an important industry in the area (19% of the labour force). Major enterprises include potato, cauliflower and deciduous fruit production, often in conjunction with beef cattle.

Viticulture is the single biggest growth industry in the area and has, according to its proponents, provided substantial social and economic benefits. In existence for only ten years, the Pemberton Wine Region currently sustains 32 growers, 12 labels and a workforce claimed to be in the order of 200 permanent jobs (not including seasonal workers). In terms of production it was claimed to be larger than the Swan Valley and marginally behind Margaret River, although the growing environment was more optimal. The industry is increasingly attracting tourists based on "a total experience of wineries, coastal areas and forests".

Existing Infrastructure

Pemberton has two schools. Pemberton District High School caters for pre primary, primary and high school students and St Joseph's School for pre primary and primary students. In 1997, school numbers were 251 and 79 respectively. The district high school had 48 high school, 156 primary and 47 pre primary students. A major local employer, the school employs 19 teaching and 11 support staff.

While primary and high school numbers have dropped in recent times, this was regarded largely as a cyclical occurrence and broader stability was not in jeopardy. In addition, staffing numbers have not changed and a slight increase in student enrolments is expected.

The town is serviced by three doctors, a 14 bed hospital, Silver Chain and police station staffed by three sworn officers. There is also a post office, chemist, Bankwest branch (open weekdays) and other businesses including a butcher, two supermarkets, a bakery, two hairdressers, a real estate agent, restaurants and cafes, a hotel and a workers club.
Volunteer services include the fire brigade and ambulance.

The town has a community centre. Its construction required substantial volunteer time and labour and was coordinated by the community. CALM and Bunnings' workers contribute a small pay deduction for the running costs of the centre.

The Pemberton District High School maintained that a significant job loss in the timber, tourism or other large industry had major implications for school functioning. For example, highlighting that a significant portion of timber industry employment involves families with school-aged children, 64 students come from Bunnings and CALM families (38 and 26 respectively).

As stated in the high school's submission to the RFA, if a significant number of families (in the order of 50) left the community, implications in terms of service provision would include the following.

- Immediate concerns for the school's level 5 classification and related staffing and resource allocation levels.
- Given a level 4 reclassification, secondary education provision would cease with affected children having to travel to Manjimup. There would also be a loss of future students whose educational needs could no longer be met.
- Loss of employment for teaching staff. It was reported that reclassification would require the loss of the level 5 Principal and level 3 Deputy Principal and replacement by a level 4 Principal. Up to six secondary and three primary teachers would also need to be relocated. Support staff would also be affected.

It was also claimed that the effects of these changes would be far reaching. In terms of loss of human resources, most teachers chose to shop locally and many had assumed prominent roles in the community. According to the school, "the danger of setting up a decline and loss of community identity is a real one".

Approximately fourteen children from timber industry families attend St Joseph's School. According to the Principal, any downturn in the timber industry would raise some implications. While immediate and direct effects would not be highly significant, more insidious effects included a possible decline in future enrolments. Issues such as the RFA were regarded as important as any catholic school under 100 enrolments has a fine equilibrium and is significantly subsidised. The closest alternative for catholic students is Kearnan College in Manjimup.

In contrast, Pemberton District Hospital is unlikely to be significantly affected by any loss of timber industry employment. This assertion is based in part on the fact that previous industry downturns have not prompted any change in hospital activity. Moreover:

- in dealing with inpatients, outpatients and accident emergency, the hospital has an increasing custom based on tourism activity, whereas the attendance of timber industry workers is minimal;
- after recently receiving $4 million in capital works funding to construct a multi-purpose services facility, the hospital's viability is assured.

RFA Implications Specific to Pemberton

Seven local residents attended the RFA local discussion group meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Pemberton local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Pemberton are listed below.

- Negative implications stemming from the most extensive reservation scenario included the possibility of closure of one or both shifts at the Bunnings' mill.
- South West Timber Supplies was considered likely to become unviable if supply diminished by more than 5 to 10%.
- While difficult to assess any impact, the tourism industry considered it could be negatively affected if the issue of insufficient reservation of karri old growth in the Pemberton area was not resolved. It was stated that, with no new karri forest reserves, the conservation movement would be highly likely to mobilise an extensive campaign. This would produce a high level of ongoing conflict in the community.

Pemberton's Community Capacity and Strengths

Diversity in terms of natural resources and a mix of industries are key community strengths. It was noted that Pemberton had become more stable in the last twenty years with more school leavers staying on due to better opportunities. The town also has many large, close knit families which creates a stable and supportive environment.

On the other hand, many considered that the community had become very polarised. It was felt there was little interaction between timber and tourism or conservation groups and that town residents had difficulty coming together to work towards a common cause. These issues were exacerbated when activists arrived from outside the community.

Others were more conciliatory in noting that, "we might have differences but we still relate and we look after each other". It was also affirmed that timber and tourism should work together. In brief, Pemberton provided a sense of "going back in time" - was a "natural" town and not too commercial. Many held the view that being a "timber town" was a big part of their history and identity. At the same time, tourism was good for the town and "here to stay". It was also commented that many tourists liked to see the timber industry activities (eg. mill tours).

Finally, a number of people believed the town is growing and other development investment - not necessarily related to timber or tourism - is anticipated. At present, any industrial development in Pemberton is primarily associated with the timber industry (Thompson et al, 1994). To assist with possible gains in all industries, it was stated that Shire support was needed to zone a light industrial area in the town.

Assessment Summary

Pemberton is a major centre for the timber and tourism industries and there is widespread agreement that both industries can coexist. Local businesses need the presence of both to remain viable. Having acknowledged this, many in the community hold strong and opposing views about the importance and future directions of both industries. In addition, low worker morale relating to split community ideals and resource security issues is a current concern for the timber industry.

Having experienced major growth in recent times, tourism has gained legitimacy as an economic engine in one of the state's premier tourism destinations. In 1997, an estimated 233 full-time equivalent employees worked in the industry. Substantial further investment is planned.

According to the Pemberton Tourist Operators Association, while the potential for expansion in tourism and nature-based tourism is exponential, constraints include overuse of local forest sites and an area of proximal old growth that is inadequate for future needs. Therefore, retention of additional, contiguous areas of old growth was considered essential.

Viticulture is the single biggest growth industry in the area. In existence for only ten years, the Pemberton Wine Region currently sustains more than thirty growers and a sizeable workforce.

The timber industry provides employment for 165 residents (190 jobs in total), or approximately one in five local employees. The main industry presence is the Bunnings' karri mill, which currently provides full-time employment for 113 people.

Subject to the outcome of the RFA, a major mill upgrade and further value adding investment is planned. In the longer term, increased handling and processing may create more local employment opportunities. Management claim, however, that any additional reservation of old growth karri or karri yellow tingle will significantly affect current viability. As stated, reduction in timber supply could effect foreclosure in investment and the cessation of one or both shifts at the mill.

Local re-employment for any displaced, particularly unskilled, workers would prove difficult. For example, while further tourism growth is likely over the medium to long-term, limited full-time opportunities could be provided in the short to medium-term for former timber industry workers.

While other opportunities exist, many tend to be part-time or seasonal (eg. viticulture). Job loss may therefore prompt an outflow of some people.

Any decrease in net appropriation could result in CALM staff reductions. At the local level, the ability to deliver services including adequate fire protection may diminish.

The potential for reduced student numbers does hold implications for Pemberton District High School and St Joseph's School. If impacts including diminished staffing/resourcing levels occurred (particularly for the high school), flow-on effects to social and economic spheres would also be likely.

Other possible effects include the viability of volunteer services including the fire brigade and ambulance, and local businesses and sporting clubs. The hospital, however, is unlikely to be impacted.

Finally, any impact on Pemberton also needs to take into account possible implications for Northcliffe as approximately fifteen Northcliffe residents commute to the Bunnings' mill.

In conclusion, based on the size of the timber industry and comments from businesses and service providers, Pemberton appears comparatively sensitive to change. For example, a possible loss in the order of 30% of local timber industry jobs would affect around 6% of residents in Pemberton's workforce - which is a high proportion in comparison to other case study towns. The magnitude of job losses would be likely to create social and economic impacts, at least in the short to medium-term.

Additional reductions in karri sawlog yield would further affect mill production. As a consequence, impacts on Pemberton could be greater than discussed.

This noted, a key strength of the community is diversity in terms of natural resources and industry mix. Pemberton also has an increasing population, low unemployment, many large and close knit families and has gained increased stability in recent years. Consequently, the capacity to accommodate change is likely to be greater than is the case for Nannup. The economy is also finely balanced with tourism and viticulture poised for further growth. While forecasting is difficult, many would argue that the area will continue to prosper through growth in these industries.

Because of the significance of, and plans for growth in, both the timber and tourism industries, the tenure of local forest areas under the RFA requires close attention. Both industries claim to be at a point where significant impacts will become evident if there is additional, or no additional, reservation of conservation areas.

6.10 Assessment of Walpole Community

Community Snapshot

The Walpole community was settled by pioneering families in the early 1900s. Further development took place in the 1930s' depression when unemployed men and their families were sent to the area to establish farms out of the virgin bushland.

Long known as a timber and farming town, the area's appealing natural assets and significant retirement and tourism values - including access to karri and tingle forests and recreational water environments - are attracting increased interest. At the same time, the presence of the timber industry has diminished.

Despite a population decrease of approximately 50% in the 1960s (connected to timber industry restructuring), the town rallied and has since shown a small increase in growth.

Area Profile

Demographics (Postcode 6398)

Area Population	517
Total labour Force	219
Unemployment	10.5%
Median Age (years)	34

The population of Walpole and surrounding area recently reached 517 (ABS 1996), with a town population of 337. Approximately 219 people make up the labour force in the area, with an unemployment rate of 10.5%.

One of the area's most popular attractions is the Tree Top Walk in the Valley of the Giants. Since opening in August 1996, visitor numbers to the area have increased dramatically to the point where many other communities are seeking to establish a similar or equally high profile attraction.

Latest figures indicate that more than 250,000 people visit the area annually and, as a result, the local Tourist Information Centre is now staffed on a full-time basis. At the height of the summer tourist season it was estimated that around 740 vehicles passed through the town each day. At this time, shortages of staples such as bread and milk are common.

A 35 unit motel (Tree Top Walk Motel) opened in mid 1998 to accommodate increased tourist numbers. A rise in the number of "B&B" establishments and the refurbishment of a budget accommodation motel (Tingle all Over Motel) are also noteworthy.

Related to these developments, Walpole has become less of the "timber and cows" community it once was. This being the case, many would argue that the timber industry and agriculture remain central to the community's identity.

Notwithstanding recent developments and the fact that many hold an optimistic outlook, some regard population growth in the area as quite modest. This could be construed as a matter of concern, particularly when noting the growth of other settlements on the south coast (eg. Denmark and Albany) and coastal areas generally (eg. Busselton and Margaret River).

Employment Sectors

Local industries include beef, sheep and dairy farming, nature-based tourism and timber cutting. Selected employment estimates for the following sectors are:

Agriculture	18%
Accommodation, Cafes & Restaurants	15%
Retail Trade	9%
Property & Business Services	9%
Timber Industry *	8%
Education	8%
Construction	7%

* *RFA Economic Technical Committee estimate.*

At present, there are few other industries in and around the town. In line with increasing growth, however, a number of relatively new business ventures have become established (eg. cottage industries, craft and second hand shops). While some businesses were quite profitable, others felt that trade was not at an economically sustainable level. As stated, "things are not quite ready yet but will happen".

While it may be part of a natural economic cycle, a number of businesses have recently been put on the market or changed hands. In general, however, it would appear that the town has begun an upward curve of economic development and has further potential. According to some, the tourism industry has only just got underway. Having said this, many residents and holiday makers would contend that peace and tranquillity are the real attractions. Therefore, sensitive development is required.

Compared with the situation prior to the growth in tourism, direct employment in tourism has not increased greatly - the industry accounts for approximately 32 jobs (or around 15% of the labour force). It was suggested that tourists need to be encouraged to stay in the area and for longer periods.

The timber industry in Walpole is fairly low key, with all timber supplied from the southern forest region. Two small sawmills currently employ six people, with one of these likely to close shortly. Compared with the heyday of the timber industry, total employment in the industry currently accounts for fifteen jobs (In 1982, for example, 54 residents were directly employed).

CALM is the major employer, and only government office, in the area. It currently employs more than 60 people and, as such, is a big contributor to the community. Of the 60 employees, nine are employed in the area of hardwood forest management (two of whom are directly employed by the Business unit in Manjimup). In addition, 30 other staff are employed on a timber royalty-dependent basis.

Thurlby Herb Farm, the next biggest employer, provides an important source of part-time employment for women (and some men).

In terms of agriculture, dairying appears financially sound at present. The long-term outlook, however, is more uncertain. Young people are not readily attracted to the work. In addition, two dairies have recently closed, leaving nine still operating in the area.

Beef farming has been in a depressed state for some time. Given the outlay required and the poor return on investment, no new beef farming ventures have begun in recent times.

With two large properties being planted entirely to trees, the future contributions made by agriculture to the social make-up of the community has been questioned. Some argued that the strength of the community had already decreased due to factors such as farm amalgamations and a greatly reduced timber industry presence.

Others commented that closure of the Bunnings' sawmill in 1995 did not affect Walpole. This may well be the case given that mill operations tapered off over a long period. The mill had also closed and reopened after a fire in the 1980s. When it finally closed, the mill only employed 8-10 people. Of these, some chose to retire while others accepted work elsewhere.

The view was expressed that Walpole needs more industry, whether seen from the point of view of tourism, more traditional or other industries. Some consider there is still a place for the timber industry to encourage growth.

Finally, across the region, possible impacts on the wildflower picking industry require consideration. More than 100 licensed pickers operate in the Southern Forest Region and many in areas close to Walpole.[17]

[17] Of these, most travel from areas east of Walpole including Denmark and Albany.

Existing Infrastructure

Walpole has two schools - one pre primary and one primary (28 and 119 students in 1997 respectively) - and one medical agency/service (Silver Chain Nursing Post). There is no resident doctor. The town lacks several key services including a hospital, police station, chemist and Meals on Wheels.

Volunteer services include the fire brigade, ambulance and sea search and rescue.

Notwithstanding that services could improve, many of the permanent population are satisfied with current levels of service; for example, "people come here to get away from mobile phones". Other residents argue that, because of its isolation (more than 100 kilometres from Manjimup or Albany), Walpole needs to grow in order to become more self-sufficient. For example, better basic services may encourage more people to relocate and invest in the community which could help to arrest the cycle of holiday makers electing to retire in Walpole but leaving again if their health declined.

While community spirit is clearly evident in the capacity to build the new recreation centre, one noted social change has been the decline in the support for social and sporting clubs over the last decade. For example:

- the once vibrant yacht club may be forced to close (began in 1958);
- the country club used to open three nights a week but now only opens for organised events attended mainly by retirees and farmers (opened in 1975);
- the junior badminton club no longer exists and the seniors club is also about to close (began in 1958);
- the community centre was once used on a daily basis but is now only used once a week for bootscooting (opened in 1972).

While taking into account the highs and lows of all sporting clubs, this clear decline may stem from the older residents feeling that they have "done their bit" on the social and sporting scene. Conversely, many younger residents could "take it or leave it". This trend is apparent in many rural communities.

RFA Implications specific to Walpole

Nine local residents attended the RFA local discussion group meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Walpole local discussion group meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Walpole are listed below.

The approach response exercise was abandoned after attempting to discuss implications of the most extensive reservation scenario. Participants unanimously agreed that the lack of specificity in the approaches (including the absence of "lines on maps") precluded meaningful discussion of local implications.

In general terms, implications arising from the most extensive reservation scenario included the following.

- Tourism opportunities, including promotion of the tingle environment.
- Employment gain.
- Employment loss (eg. it was noted that up to six CALM employees could lose their jobs). If any CALM permanent staff were made redundant they would be likely to leave the community which, in turn, would prompt flow-on effects.
- There will not be a lot of impacts - if any - in the town provided CALM staffing levels remain at the current level. For example, in order for CALM to adequately run its existing fire model in the Walpole district, staffing levels should not change. Fire control was likely to become more important as tourism increased.
- Ordinance block (and much of the Deep River environment including Deep and Sharpe blocks), "the tingle areas the town wants protected", or other "high wilderness value" blocks such as Peak and Rocky will not be reserved.
- Potentially less community disruption.
- Decline of the wildflower industry.

Comments about the approaches included the following.

- Preserving tingle for its tourism value is most important. Therefore an approach which provides the most opportunity to promote the tingle environment and ensures the most protection - particularly for yellow tingle - is favoured.
- Walpole is losing its resource. There is little to be gained locally by having the timber cut down, but a lot to gain by keeping it.
- While Walpole may not generally see a direct benefit of the timber industry, the process of net appropriation means other areas of CALM - including recreation and tourism - receive some benefit. Benefits include establishing tourism and recreation sites (eg. the Tree Top Walk), a large permanent workforce in the town and related gains such as an improved fire response capability.
- The Deep River area is important to protect - it is close to town and should be regarded as a community asset. Rather than locking it up, it is suitable for wildflower picking and other low impact industries. It could be moved into a National Park at a later date.
- Strategies for coping with increased tourism need to be developed.

Walpole's Community Capacity and Strengths

For reasons including population size and distance from major centres, Walpole can be viewed as having moderate to high sensitivity to change. It is, however, less sensitive than larger communities with much greater timber industry presence including Manjimup, Greenbushes and Pemberton.

Community capacity issues included the following.

- A healthy growing population.
- Everybody knows everybody.
- Denmark has undergone a lot of expansion while Walpole is just starting to grow - the influx of younger people to Denmark should flow on to Walpole.
- Young families are moving to Walpole (eg tradesmen), whereas it used to be an ageing population. The growth pattern is changing and the lifestyle is becoming more diverse.
- A unique forest area.

A repeatedly mentioned point was the need for the RFA decision makers to note that the area is potentially vulnerable to forest conflict. While this cannot be quantified, lack of conflict and acceptance that others often have different views and values is vital to the town's well being.

It was noted that, while differences do exist, "everyone here is clean cut and wholesome". While this point was made in good humour, it does show that similarity in one or more areas can foster acceptance of difference in others. Moreover, as many in the community hold similar values, division brought about by differences in forest values is not as significant as occurs in other areas. Residents appear quite proud this is the case and are committed to ensuring the "happy balance" is not disturbed. Therefore, an option that has potentially less community disruption would be favoured by the majority of the community.[18]

[18] While this can be regarded as a statement of principle applicable to all contexts, it was given strong emphasis in Walpole.

Assessment Summary

As one of the smaller and most isolated communities in the RFA region, Walpole cannot retain the level of services provided in other centres. On the other hand, the area is supporting a steadily increasing population and increased economic development and diversity. Since the construction of the Tree Top Walk, Walpole has witnessed a dramatic increase in tourist numbers and can claim the highest profile tourist attraction in the region.

The timber industry is no longer a large contributor to the local economy. The area sustains only two small sawmills and a total of fifteen timber industry jobs, including those employed in CALM's hardwood forest management program.

While Walpole does not receive substantial direct benefits from the timber industry, other areas of CALM receive indirect benefits through net appropriation, which then flow into the community. Examples include the establishment of recreation sites and improved fire response capability.

As the major employer in the area with a staff of 60, CALM forms an integral component of the community.

None of the RFA approaches have significant direct implications for Walpole; potential timber industry employment impacts were not evident in the assessment undertaken by the RFA Economic Technical Committee.

In the event that some CALM staff were displaced indirectly (through any reduction in net appropriation) they would be likely to leave the community. This could prompt flow-on effects, for example, in terms of local expenditure, school staffing numbers, and membership of community groups.

From a regional perspective, potential impacts on the wildflower picking industry require consideration. Any additional reservation of state forest areas carries major implications for pickers residing on the south coast between Walpole and Albany. There are scant alternative employment opportunities evident for this group, particularly in the short-term.

Lack of conflict and acceptance that others often have different views and values appears vital to the community's well being and, unlike some other towns in the region, residents do not want this balance disturbed. Therefore, emphasis needs to be placed on achieving an outcome that minimises community disruption.

For many in the community, the ultimate option regarding the management of old growth forest areas is not to foreclose further opportunities for tourism, recreation and other values. In this respect, prominent areas of concern include all tingle areas and the Deep River environment. As many would attest, it is considered that common ground can be achieved regarding the management of these areas.

6.11 Assessment of Yarloop Community

Community Snapshot

Yarloop has always been a small town since it was first settled in the mid 1890s. In the early 1900s, Yarloop was the centre of the State's timber industry which continues to remain central to the local economy and culture. The town consequently exhibits a strong "timber town" identity.

Yarloop's population declined by almost 50% between 1954 - 1961 as a result of timber industry reductions at the then Millars sawmill. Since that period, growth has remained relatively stable.

The development of Alcoa's bauxite operations at nearby Wagerup in the 1980s has provided an important source of employment for Yarloop residents. Other important economic contributors are the dairying and beef cattle industries.

Much of Yarloop's original buildings have become heritage listed. This includes the war memorial, workers' cottages, Yarloop hall, the old school, the masonic building and steam engineering workshops.

Area profile

Demographics (Postcode 6218)

Area Population	619
Total Labour Force	244
Unemployment	8.2%
Median Age (years)	34

The population of the Yarloop area has been slowly increasing since the mid 1980s and now stands at almost 620 (ABS, 1996). Two hundred and forty-four residents are in the labour force and the unemployment rate is 8.2%, which is slightly higher than the south-west average of 7.8% and on par with the State average. The median age of Yarloop residents is 34 years.

Numerous employees from Alcoa's Wagerup and Willowdale operations reside in the town. Residents reported that employees from different industries interacted through community activities and became involved in the same community organisations, such as the Forest Protection Society, the Fire Brigade and the Rotary Club.

Many reported the community felt insecure regarding the timber mill's future. It was said that approximately 100 families were dependent in some way upon the mill's presence therefore, "without the mill, the town dies".

Locals frequently mentioned that Bunnings proposed to expand the mill which, if proceeded, would enhance community confidence.

In the mid 1980s, Alcoa purchased approximately 50 diary farms in the district to secure a mine site buffer area. This acquisition had social consequences on surrounding communities as families moved off the farm.

A release of special rural lots in Yarloop occurred five years ago but generally, residential development in the townsite was restricted by the lack of reticulated sewerage. The Harvey Shire expected this situation would remain unchanged for some time. No major developments were planned for Yarloop.

Employment Sectors

Selected employment estimates for the following sectors are:

Manufacturing	34%
Timber industry *	27%
Mining	15%
Health & Community Services	6%
Retail trade	5%
Agriculture [note]	4%
Wholesale trade	4%

* *RFA Economic Technical Committee estimate.*

Note: While agriculture is an important industry in Yarloop, ABS census data (1996) identifies only 16 Yarloop residents employed in this sector. The proximity of Waroona, Hamel and Harvey obscures agriculture's real importance in the assessment of Yarloop at postcode level. Agriculture WA was unable to provide specific numbers but confirmed the importance of the industry, particularly dairying, to the economic contributions to the town.

Timber

The RFA Economic Technical Committee estimated there were approximately 105 timber industry related jobs in Yarloop, involving 60 residents or one in four locals.

The timber industry is the primary source of local employment with around 60 people working at the Bunnings' sawmill, the only mill in town and the single largest employer. Since 1993 Bunnings has invested more than $6 million installing pre-drying equipment and a wood veneer plant. The mill manager advised that a feasibility study had been completed to construct a new mill and additional drying facilities. Investment plans for the $18 million upgrade were deferred pending the RFA outcome.

There is an interdependency between Bunnings' Collie and Yarloop mills where 30%- 50% of Collie's resource is transferred to Yarloop for drying and further processing.

Mining

The nearby Alcoa operations at Willowdale mine site and Wagerup refinery provide economic diversity to Yarloop. The personnel manager confirmed that as at March 1997, 6% (48 people) of its workforce resided in Yarloop.

Alcoa's personnel officer indicated that timber industry employees had opportunities to secure work equal to any other job applicants. They were not disadvantaged due to lack of mining industry experience as Alcoa provided in-house training. Furthermore, Alcoa had a preference to employ local residents. This was contrary to private contractors who preferred workers with direct industry experience.

Agriculture/horticulture

Agriculture, and more recently horticulture, tends to be family owned businesses offering limited, mainly seasonal, employment opportunities. Dairying continues to be an important activity. Viticulture is an emerging industry within the shire and citrus orchards are also increasing.

Agriculture WA anticipated that few additional full-time employment opportunities were available in the agriculture/horticulture sectors in the foreseeable future.

Engineering

A local engineering company has been operating successfully in Yarloop for over a decade and has well-established local (especially Alcoa) and international clients. It employs 21 people in its two town-based businesses.

Other

Other Yarloop businesses include a butcher, two service stations, a milk vendor, two retail shops, a restaurant and a machinery repair business. Most were said to depend significantly upon business generated from the Bunnings' mill and its employees.

Existing Infrastructure

Yarloop has one school providing pre primary and primary facilities. Education Department statistics show the school has maintained a stable student population for several years, with a slight increase in primary enrolments in 1997. The school receives additional funding under the Commonwealth Literacy program, which is based on an index of social disadvantage determined from ABS data.

Yarloop Health Service provides geriatric and general nursing care and has an accident and emergency department. There are no resident doctors, however, general practitioners from Waroona and Harvey provide a daily surgery clinic at the hospital.

Other available health facilities include Silver Chain, an immunisation clinic, child health and physiotherapy. Yarloop Hospital has 26 full-time equivalent employees.

Community groups include CWA and Rotary, Lions and Apex service clubs. The Yarloop volunteer fire brigade has a strong membership and is an important focus in the community. Brigade members proudly built their own clubrooms which also double as a community meeting venue.

Yarloop has a "magnificent sports hall" which often serves as a meeting place for community groups. The town has tennis and basketball courts and a strong bowling club. As currently evident in many other rural communities, Yarloop's sporting clubs were generally struggling for membership. Some thought that shift work interfered with people's ability to play team sports and volunteer for community groups. The tennis club closed through lack of interest but has since been revitalised by the new school principal.

The town recently restored its steam driven engineering workshops which are said to be unique in the southern hemisphere. The workshops are part of Yarloop's heritage tourism attractions.

Capacity and Strengths

Yarloop has a small population and a culture and history bound up with the timber industry. The presence of nearby Alcoa and the dairying industry, among other things, provide economic diversity.

One of Yarloop's strengths is its proximity to the Perth metropolitan area and the nearby regional centres of Mandurah and Bunbury. This accessibility could also be construed as a downside as it encouraged locals to shop out of town.

From a social perspective, the school principal reported that Yarloop primary school was designated as being located within a socially disadvantaged area under Education Department resourcing criteria. As a result, approximately 15% ($10,500) of the school's 1998 budget was allocated priority funding under the Commonwealth Literacy program.

Some commented that Yarloop lacked the presence of a community leader to drive projects. "There are not many organisers in the community – it's a generational thing". Several agreed that lack of leadership created general community apathy and possibly accounted for the lack of involvement in community groups and activities.

There appears to be few community resources available to support individuals during times of substantial change.

RFA Implications Specific to Yarloop

Nine local residents attended the social assessment meeting to discuss the Public Consultation Paper and provide feedback about the local implications of the RFA approaches. Interview and survey data have been incorporated with information obtained at the Yarloop local discussion meeting to ensure comprehensive community feedback.

General implications arising from the three approaches are presented in Section 5.1. Specific implications for Yarloop are listed below.

- Due to the historical dependence on the timber industry and its continued significance to Yarloop's culture, business and community confidence would be eroded if the industry went into decline.
- The interrelationship between the timber mill, local businesses and the small Yarloop community meant impacts would be widely felt and long lasting.
- Approximately 30% of primary school students came from families involved in the mill and processing industries.
- An RFA detrimental to the timber industry would severely jeopardise Bunnings future investment plans for Yarloop mill. The mill was in need of refurbishing and, without which, would become increasingly inefficient and unviable.
- If the industry was forced to extract logs eastwards from Collie the poorer log grades would restrict value adding opportunities. Poor log quality coupled with increased haulage distances and inefficient mill operations would inevitably lead to mill closure.
- Little opportunity was seen for job creation in other areas. Tourism opportunities were described as low or negligible as the surrounding forest was "nothing special". The mill itself was a tourist drawcard.
- The loss of ten people in the mill would cause a shift closure. In addition it was inevitable that the veneer plant would become unviable as around three to four of the nine employees would be affected.
- The strong family ties meant that retrenched workers were unlikely to leave Yarloop. Most had long industry experience and specific skills that limited their ability to obtain work in alternative industries.

Future Directions

Yarloop is identified as a timber town with most of the local economy dependent upon the timber industry. Using ABS data, the Education Department considers Yarloop is an economically disadvantaged area.

The Yarloop community feels vulnerable to timber industry changes, especially as alternative employment opportunities are not readily apparent. Some local employers described the Yarloop workforce as lacking a high skill base in comparison with other nearby towns because people lacked opportunities to broaden their experience.

In support of this comment a 1995 study by ERM Mitchell McCotter reported that the proportion of skilled vocational workers was 9.1% as compared with the south-west and state levels of 11.7% and 11.1% respectively. Approximately 84% of Yarloop workers were unqualified, as compared with around 77% in the south-west and 72% in the state.

Alcoa is presently undertaking a 440,000 tonne expansion of its Wagerup refinery, due for completion in mid 1999. The addition of 25 full-time staff is planned. Approximately 650 workers will be required at the peak of the construction phase. Initial discussions with on-site contractors revealed requirements for specific skills such as pipe fitters and boilermaker/welders. The impression gained is that employment opportunities for former timber workers would be limited.

Alcoa itself has numerous employees located in Yarloop. This company conducts its own training programs and appears to represent the best employment prospects outside the timber industry.

The Harvey Shire recognises the forests as an important recreational and tourism resource (ERM Mitchell McCotter, 1995) and was keen to ensure that harvesting activities were kept away from tourist routes. Some Yarloop residents, however, thought that "becoming a tourism destination is beyond our capability".

The shire indicated that no new developments or business projects were planned for Yarloop in the medium-term.

There was a widely held community perception that the continuation of Yarloop hospital depended upon the sawmill's presence, although this was not confirmed by the hospital manager. However, it is noteworthy that the engineering business proprietor reported that due to workplace health and safety "duty of care" responsibilities, the company's continuation in Yarloop was contingent upon the hospital's presence.

Assessment Summary

The population of Yarloop increased over 6% between 1991 and 1996 and now stands at almost 620, making it one of the smaller case study areas.

Yarloop is directly reliant on the timber industry and consequently the town exhibits a strong timber town identity. Many timber workers reported working in the same industry a large proportion of their lives.

The nearby Alcoa operations at Willowdale mine site and Wagerup refinery are important employment sources. The company personnel officer indicated that timber industry employees had opportunities to secure work equal to any other job applicants. They were not disadvantaged as the company provided in-house training and, furthermore, preferred its workforce to reside in Yarloop, Harvey or Waroona.

This was not the case for the contractor workforce where companies sought specific skills and industry experience.

Agriculture WA confirmed the successful family run dairying and beef enterprises in Yarloop offered limited scope for full-time future employment.

The local engineering company mainly derived its workforce outside Yarloop because of the skills required. Of the 21 employees, only two resided in Yarloop with others commuting from nearby Waroona, Harvey, Bunbury and Brunswick Junction.

The school principal reported that Yarloop Primary School was in a socially and economically disadvantaged catchment area. With almost a third of students from timber industry families, the school was at risk of impacts if industry retrenchments occurred. The principal considered that a decrease in five students could result in the loss of almost one full-time teaching position.

The hospital manager confirmed there was a community held perception that the hospital's future depended upon the sawmill presence. In reality, however, this was not the case as the hospital mainly provides nursing home facilities as well as general nursing care. Consequently, it was unlikely to be impacted by timber industry retrenchments. In addition, fewer than five hospital staff have partners working in the timber industry.

Compared with other case study towns, Yarloop's proximity to the metropolitan area and other main centres suggests there are likely to be improved job opportunities available without the need to relocate. For example, Alcoa's activities potentially offer job prospects not available in other areas. Local businesses, however, would be impacted by a reduction in mill employment.

Due to the small, slowly growing population, absence of strong community support networks and timber industry dependence, it is assessed that Yarloop community would have considerable vulnerability to timber industry retrenchments. For example, a possible loss in the order of 30% of local timber industry jobs would affect around 8% of residents in Yarloop's workforce. Overall, because of its location, impacts are less than would be expected to occur at Nannup and Northcliffe.

7. OPTIMISING OUTCOMES FOR LOCAL COMMUNITIES

Interviewees and local discussion group participants were invited to comment on ways to implement an RFA which optimised outcomes for local communities. Wide ranging views and suggestions were received. To assist with ease of reading, feedback has been subsequently grouped under the headings below. Industry specific comments are reported separately.

Recurring issues included the following.

7.1 Timing

- The lag time between the RFA outcome and its implementation must be made explicit.
- Impacts will be exacerbated if change is rapid and the community is already in a stage of decline. Both individuals and communities have an improved chance of adjusting when change is gradual.
- The timing of the RFA is important. If the plan is delayed, areas proposed for conservation will continue to be logged.

7.2 Change Management and Support

- An important part of any change process is giving people the confidence that there is a future.
- The RFA should be designed to minimise job loss in local communities.
- The flexibility provisions in meeting the JANIS criteria must be applied to minimise social and economic impacts.
- The RFA should be couched in terms of an employment strategy for the region. This would help unite rather than divide different stakeholders.
- When developing change management strategies, assess specific impacts on each affected community, including the skills base.
- A consensus-based and inclusive process is necessary for effective implementation, including the achievement of broad acceptance of outcomes and minimising conflict. This should be government sponsored but facilitated at local community levels.
- Responsibilities for managing social changes stemming from the RFA should identify roles for the local community, industry and government.
- Conduct a thorough assessment of the companies and individuals directly and indirectly affected. In the past, the greatest difficulty was that those impacted did not know what to do and community support facilities were non-existent or limited.
- Ensure funding programs are applicable to the affected community. Previously, funding guidelines and criteria restricted access to allocated funding programs (eg. as occurred with mining industry retrenchments in Collie).
- Ensure government funding is provided to facilitate industry restructuring and manage outcomes for regional communities, including projects with job creation and skill upgrade opportunities. Funding should acknowledge the time lag before impacts are felt.

- Provide mechanisms and an ethos of small business support for innovative uses of forest products (including timber residue) eg. via a "seeding policy".
- Export markets must be developed. Government assistance for overseas study tours would be valuable.
- Provide or facilitate infrastructure development for other industries (eg. tourism, information centres, Western Power infrastructure, gas pipeline to Albany).
- Establish community resource facilities such as Technology Information Centres (eg. via Lotteries Commission, DCT).
- Shire employment could be offered as a transition arrangement. For example:
  - any economic activity provides confidence,
  - local government employment tends to be stable,
  - the provision/expansion of local roads could be accelerated.

7.3 Community Involvement and Development

- Minimise community disruption.
- Local level consultation and involvement is critical to optimise outcomes.
- The environmental, economic and social science underpinning the final decision must be communicated. To ensure community acceptance, share information widely and ensure that communities are encouraged to have a say.
- Credibility is the key to ensuring an acceptable RFA outcome eg. the RFA needs to be transparent and amenable to independent scrutiny.
- Community opinion must be listened to and the "RFA must be right the first time".
- Provide comprehensive and accurate information early and simultaneously to all stakeholders affected by the outcome.
- Provide those impacted with information about opportunities and entitlements. The Government's role is to provide advice, over an extended period, to individuals and families about opportunities for gaining employment.
- Ensure mitigation incorporates retraining opportunities, financial assistance (eg. for mortgages) and adequate compensation.
- Provide details regarding the availability of restructuring funds.
- The RFA should incorporate suggestions of how to progress development in local shires.
- The community should locally drive and manage the RFA outcome. The RFA should also provide more leeway on how forests are managed locally.
- Inform the community about consequences of the RFA, including any effect of the jarrah reduction in sustainable yield in 2004.

7.4 General

- Address the widespread community dissatisfaction with the perceived rate of logging activities and harvesting prescriptions.
- Make the hard decisions now rather than having to revisit them in five years time (at the first RFA report on performance). Therefore, implement the best long-term, rather than the best initial, solution.

- The RFA should encourage the expansion of plantations and associated economic development.
- Ensure an adequate description of the final reserve design is publicly available.
- Some reserves should be general purpose to enable access for minor low impact industries (eg. wildflower picking and seed collecting).
- At the end of the day the RFA will be a compromise. Decisions should allow for (or not foreclose) future opportunities, such as growth in wine-based tourism.
- The RFA outcome should remain irrespective of any change in government.
- The inequities between native forest and plantation royalties need addressing to encourage an increased focus on farm forestry.

Many of the above points were also raised by the industry groups listed below. The following additional suggestions for optimising outcomes are industry specific.

7.5 Timber

- Delivering resource security for the timber industry is the key for optimisation.
- To achieve the RFA objective "to enhance and maintain the timber industry", efforts should be directed into maximising positive outcomes.
- The best outcome for the industry can occur within the national criteria established for the reserve system. Industry development must not be foreclosed.
- The Commonwealth and State governments should fully recognise the conservation value of 147,600 hectares of informal reserves by either including them in the CAR targets or permitting harvesting access.
- The true employment impacts must be gauged.
- An analysis of the production values of the forest compared with heritage and social values should be provided.
- The best outcome is one which supports the timber industry in perpetuity and allows timber families to get on with their lives.
- If timber industry jobs are lost, then structural adjustment funding will be required. In addition to individual support, business exit assistance should be offered.
- Consider broader issues eg. viability thresholds for exports - don't assume pine and native timbers are substitutable.
- Involve the AWU and FPU as key stakeholders in negotiation of the final RFA.
- Analyse changes to timber volumes (as well as forest areas).
- To prevent the concentration of impacts on one community, any additional reserves should be dispersed throughout the region.
- Re-examine the establishment of a south-west kraft pulp mill using natural gas to reduce energy costs.
- Draft complementary State and Federal legislation to provide certainty to the RFA outcome. This will ensure continued investment in value adding.
- To create a "smart" industry, the RFA must be used as an opportunity to implement the value adding recommendations outlined in the BIS Shrapnel report.

- The timber industry should become more competitive by placing more focus on a higher level of value adding such as finewood products and become an exporter of finished product.
- There needs to be further gains in the international marketing and export of jarrah and to set a jarrah price using $US.
- An international certification standard (ESFM) could be applied to demonstrate that WA forest management is beyond reproach.
- The government should set a minimum buyable price for jarrah and then permit a competitive pricing environment. The most efficient processors and highest market values will win out.
- If the RFA immediately delivers a reduction in the area available for harvesting on top of the proposed reduction in jarrah cut in 2004, there will be catastrophic consequences for industry and individuals.
- Implement immediately a coordinated transition program towards sustainable yield (to help the industry manage resource reductions as an adaptive process).
- Do not jeopardise existing contracts and established markets.
- Do not make political decisions with timber industry implications without industry consultation (such as the Sunkland and Shannon areas).
- A concerted and impartial education program about the timber industry is necessary to counteract myths and untruths.

7.6 Mining

- Commonwealth and State governments should ensure the RFA is consistent with WA government statutes whereby all land, subject to the appropriate assessments and approvals, is accessible for exploration and mining.
- To maintain the current high level of mining industry investment, the industry needs evidence that current legislative provisions will be preserved.
- The RFA should avoid creating impediments to the exploration approval process or making it cost prohibitive for all but the largest mining companies.
- The industry seeks close collaboration and detailed input into the final RFA decision to ensure its resource base is protected.
- At this time, discussions should be held with all mining and exploration leaseholders (including those pending approval) to assess individual implications.
- A better result will be achieved if a cooperative process is developed between the mining industry and government.
- It should be widely publicised that environmental controls require rehabilitation programs that ensure the return of previously existing ecosystems.
- To ensure mine sites continued to be rehabilitated with locally indigenous species, seed collection contractors required access to nearby forest areas.

7.7 Tourism

- Outcomes will be optimised if stakeholders, including the WA Tourism Commission, have a role in decision making.
- Investment and promotion of additional reserve areas as a tourism resource is necessary to ensure returns to the local economy and to ease any difficulties in adjusting to change.
- More rigorous methods for capturing tourism data need to be developed and implemented (eg. ABS data were seen to be deficient).

7.8 Beekeepers

- There are three critical points to optimise outcomes for the beekeeping industry:
    1. maintain at least the present level of access,
    2. lift the restricted access to the conservation estate,
    3. retain as much old growth as possible.
- Reduce the current clearfelling regimes and rate of timber harvesting which are accelerating the demise of the beekeeping industry.
- A scheme - similar to Agriculture WA's Rural Adjustment and Finance Corporation (RAFCOR) program - which enables beekeepers to exit with dignity, may assist to achieve industry restructuring.
- Adjust fire control methods because they impact negatively on the industry.
- Beekeepers should be closely involved with any research of their industry.

7.9 Seed Collectors

- Seed collection is a regenerative, low impact industry which is integral in wide ranging revegetation programs. Continued access to locally forested areas is essential if rehabilitation with locally indigenous species can continue to occur.
- The industry would prefer to have its own Act, or the current Wildlife Conservation Act amended, to create different licensing arrangements to wildflower pickers and better account for industry requirements.
- More research on the actual effects of seed collecting is required.

7.10 Wildflower Pickers

- Failure to designate future reserves as multi-purpose to allow access for "low impact" industries including wildflower picking, seed collecting and beekeeping will result in severe hardships for these industries.
- The industry contends it is sustainable and there is no logical reason to stop picking wildflowers from public lands.
- The industry wants involvement in CALM's fire regime planning.
- The industry wants involvement in research on their industry and, in particular, the opportunity for input before critical decisions are taken.

8. KEY STRUCTURAL AND MITIGATION FINDINGS FROM OTHER REGIONS

Due to the potential impacts on case study communities as described in this report, the Social Assessment Unit supports the implementation of a planned mitigation program to manage any impacts arising from the RFA. In further support of such an initiative, Objective 4, of the 1996 WA RFA Scoping Agreement states:

> The Commonwealth and Western Australian Governments agree to negotiate an RFA that will identify forest resource use and sustainable industry development options and examine any potential economic and social implications, including on communities, of these options;

Further, for communities dependent on access to forest-based resources, specific social and economic objectives of the RFA are to: maintain or enhance employment opportunities; maintain or enhance quality of life by increasing certainty for employment and access to social and physical infrastructure; ensure community viability; and maximise the benefits of the RFA on communities (PCP, 1998).

Examination of post impact studies conducted elsewhere demonstrated that the implementation of change management strategies was strongly recommended; specifically mitigation and monitoring. Mitigation involves the management of both the positive and negative effects of an imposed change on a local community, including the individuals impacted. Monitoring is an ongoing process to evaluate and review the effectiveness of mitigation strategies and make adjustments accordingly. Identifying ways to manage implications is consistent with the RFA Scoping Agreement's Key Assessments and Outcomes, that is:

> The Governments agree to prepare the necessary documents outlining the process to achieve ESFM [Ecologically Sustainable Forest Management], including performance indicators as an integral part of the RFA.

The SAU contends that performance indicators should include monitoring of social consequences emerging from the RFA.

To assist the WA RFA Steering Committee, the RFA social assessment has aimed to identify the nature of impacts perceived for native hardwood dependent communities. The essence of the assessment was to identify the implications of impacts on individuals and communities, and provide indications of each community's capacity to accommodate change.

The authors of the Queensland Post-Impact Studies Analysis (Qld DNR, 1998) noted that "Large-scale planned change can effect the entire fabric of a community including its economic base, the social interaction patterns of its members, and its land use practices" (p.9). Further, a single change can cause a "ripple effect" throughout communities thereby creating many other changes.

This section summarises social impact assessment, mitigation and monitoring principles, strategies and programs arising from resource changes to dependent communities. Key findings and recommendations relating to structural adjustment and resulting mitigation programs are included.

First, findings from the Eden Region in New South Wales are discussed. A study was undertaken to investigate the experiences of timber workers who were retrenched following the NSW Interim Forest Agreement (Rush, 1997). Next, the findings of the Post Impact Studies Analysis report produced for the south-east Queensland RFA (Qld DNR, 1998) are presented. Finally, examples are provided of community mitigation initiatives emerging from industry restructuring in the Burnie timber industry (Chambers and Galloway, 1998).

8.1 Eden Comprehensive Regional Assessment (CRA) Region

The 1992 National Forest Policy Statement and the development of Regional Forest Agreements have, together with industry restructuring, led to widespread structural adjustments in the native hardwood timber industry.

One area impacted by changes in access to native hardwood resources was the Eden Comprehensive Regional Assessment area (Eden CRA). As a result of the joint Commonwealth-NSW Deferred Forest Areas report of December 1995, a 40% reduction in sawlog supply was introduced in 1996 and a 90,000 hectare National Park was created in 1997 (including 30,000 hectares which had already been protected). Between December 1995 and June 1997, approximately 120-130 full-time timber industry jobs were lost (Rush, 1997).

It was estimated that these retrenchments were "distributed approximately as follows: 60-65 persons involved in timber harvesting and haulage, 50-55 mill workers and about 10 employees of NSW Forests" (Rush, 1997, 13).

The NSW and Commonwealth governments committed $120 million over five years to a Forestry Industry Structural Adjustment Package (FISAP) aimed at assisting businesses and individuals to adjust to timber industry changes. The three components of FISAP included:

1. a worker assistance component directed towards:
   - helping displaced workers gain new employment through retraining and/or assisting with the costs of relocation within NSW for those who found employment; or,
   - providing a special redundancy payment as a last resort.
2. an industry development assistance component for businesses to establish or improve operations; and
3. a business exit assistance component for businesses which closed due to the implementation of government forest policy.

Commonwealth and State agencies involved with the structural adjustment process in New South Wales subsequently sought an assessment of structural adjustment and mitigation processes in the Eden CRA.

In 1997, a study was undertaken to examine the experiences of, and mitigation measures available to, timber industry workers (including contractors) retrenched during the above mentioned period (Rush, 1997). At that time the region's unemployment rate was 11% which was slightly above the NSW average of 10.5%.

The 32 people interviewed for the study received the following types of FISAP assistance[19]:

Workers interviewed		**Contractors Interviewed**	
Redundancy	22	Business Exit Assistance	7
Retraining	0	Industry Development Assistance	1
Relocation	0		

The average age of interviewees was 46 years, with people working an average 22 years in the timber industry. All were previously employed full-time.

Interviewees criticised a number of aspects of the structural adjustment program including the application process, delays in receiving payment, being paid less than considered due, inequities in payouts and the (poor) quality of contacts with advisory people. They often commented that they had to "fight" for their redundancy payments.

Redundancy monies were primarily used to reduce debt, particularly on homes, vehicles and equipment; save and invest where possible; assure vehicles (either by upgrade or repair) or purchase or pay off significant household items.

In addition to FISAP assistance, the main Commonwealth Employment Service (now Centrelink) programs were modified to enable retrenched workers to directly access services including:

- Jobsearch assistance;
- Jobstart (wage subsidy program);
- Relocation assistance;
- Vocational and pre-vocational training.

[19]Of the 32 interviewed, 30 were potentially eligible for FISAP assistance; the two State Forestry employees interviewed received standard public service redundancy packages.

8.1.1 Findings

For most interviewees, no positive benefits of redundancy were reported. All but one of the interviewees assessed their current financial position as deteriorating. The value to recipients of FISAP and other assistance was not doubted, but alone FISAP could not address the magnitude of the impacts that occurred. The study found that the mitigation measures provided did not significantly alter the negative experiences - economic, personal and social - of redundancy, nor assisted many to secure a productive future.

The study identified significant barriers to timber worker relocation. These included:

- removal of family support networks;
- identification with a region in which families have lived for many years;
- responsibility of care for aged relatives living close by;
- inability to sell homes at a realistic price;
- inability to gain a home and livelihood in a new area where the cost of a home may be far in excess of their present house value;
- lack of funds to finance trips to another region to seek employment;
- scepticism at being able to get a job anywhere, particularly if aged over 50 or with little schooling.

It was reported that "Almost without exception all respondents were very attached to the area, saw their roots as being there and were distressed at the idea of leaving" (Rush, 1997, 32).

8.1.2 Summary of Eden Findings

- Mitigation processes need to be transparent. Those affected need a clear understanding of process and outcomes.
- Access to financial advice, personal counselling and job search activities is of varied benefit.
- Retraining must suit both individuals and the available job market.
- Community provision of mitigation activities needs to be supported (ie. health and community care, educational facilities, community clubs and associations, community support services such as family and personal counselling).

8.2 Case Study Findings from Queensland RFA Post Impact Analysis Report

A Post Impact Studies Analyses report was undertaken for the south-east Queensland RFA (Qld DNR, 1998). The work was designed to review relevant social impact studies which assessed the positive and negative impacts of changes in the use of native forests and comparable resources on individuals and communities.

The report reviewed previous social research conducted on three case study areas where imposed changes in forest use had a marked effect on the local communities. The case studies were Fraser Island, the Wet Tropics World Heritage area in North Queensland and the Northwest Forest in Oregon, USA. All are relevant to the WA RFA.

The authors discussed the case studies in detail and then developed principles and recommendations for change management. A key aim of the report was to develop a "conceptual framework for the development of an effective and appropriate mitigation and monitoring programme for the South East Queensland Regional Forest Agreement (SEQ RFA) process" (p. vii). Only the Wet Tropics and Fraser Island case studies will be referred to in this document.

8.2.1 Wet Tropics World Heritage Area

As a result of the Wet Tropics World Heritage Listing, between 1987 and 1991, ten of the twelve timber mills operating in the Atherton and Ingham Forestry Districts closed with a consequent loss of 427 timber related jobs (Lynch-Blosse, Turrell & Western, 1991; see also Gibson, Lynch-Blosse, Rickson, Turrell & Western, 1987). It was revealed that the nature and extent of impacts varied between communities according to the number of timber industry workers in the area and the degree of economic dependency upon the timber industry. The town of Ravenshoe experienced the greatest negative impact as timber production was its primary economic base. Areas with few timber industry workers and more mixed economies experienced minimal negative impacts.

The State and Commonwealth governments developed and implemented a $75.3 million mitigation program which incorporated:
- a Business Compensation Program - 2.4 million budget;
- a Labour Adjustment Assistance Program;
- Alternative Employment Creation Strategies - combined budget of $50.9 million.

Lynch-Blosse et al (1991) undertook post impact evaluation work in the Wet Tropics area. As reported, towards the end of the World Heritage Listing decision-making process, people began to lose hope and subsequently became disorganised and alienated, making it difficult for implementation or evaluation agents to contact individuals or groups. It was also stated that impacts could have been reduced if locally run intermediary bodies were created to work with the affected people and the implementing government agencies.

Key recommendations for future mitigation programs included:
- the way in which government intervention strategies are established and operated is very important;
- the Structural Adjustment Package (SAP) rationale should link economic, social and psychological factors;
- the SAP requires sufficient resourcing to enable proper implementation;
- commitment is needed to achieve locally appropriate implementation procedures;
- flexible administrative guidelines are needed in order to respond effectively to changing needs.

8.2.2 Fraser Island

The cessation of logging on Fraser island in 1991 impacted directly and indirectly upon the communities of the Great Sandy Bay Region which included Fraser Island itself, Maryborough and to a lesser extent, Hervey Bay. At that time, the region was experiencing a recession and had high unemployment levels.

It was estimated that 78 individuals and businesses were directly affected by the Fraser Island decision. Two privately owned large timber mills were primarily impacted as were public sector forestry workers.

In 1993, the Social Research Consultancy Unit (SRCU) from the University of Queensland was engaged to conduct a social impact assessment after the decision was taken to stop logging. The SRCU found that the decision had an intense impact on the community of Maryborough in particular. "An increased level of stress was recorded throughout the community, with many more people accessing social services, cutting spending and facing the loss of not only their jobs, but their home, the family car, and their social networks (Qld DNR, 1998, 15)". This situation was exacerbated by the ongoing conflict between logging and conservation groups and interests.

A $38 million Growth and Development mitigation package for the Great Sandy Bay Region was developed by a joint Queensland Government taskforce in recognition of the nature and extent of impacts expected.

The package incorporated a number of initiatives including a Workers' Special Adjustment Package (WSAP) which provided direct compensation to affected workers and businesses and also offered counselling and support services.

An evaluation, primarily involving the timber workers who accessed the WSAP, was later conducted by the SRCU.

Key recommendations provided by the SRCU regarding future Structural Adjustment Packages included:

- alternative employment has to be local as most displaced workers are either unwilling or unable to travel very far from their homes and families;
- equitable treatment is required for both private and public sectors workers;
- assessors involved with business compensation claims require a social science background to adequately support people during times of stress;
- mitigation has to address the common issues of at-risk groups including those with low education or skill levels, older people who only have specific skills gained from one job, people with limiting physical impairments arising from industrial experiences and those with few networks beyond their local area;
- retraining and re-employment has to be appropriate to the affected individual;
- structural Adjustments are reliant upon government funding, are largely short-term solutions and relatively "hit and miss" in terms of who is compensated;
- management strategies are required to ensure that "independent, autonomous timber workers" are not overlooked in mitigation and compensation.

8.2.3 Summary of Key findings from the Queensland Studies

- Timber workers, particularly those with no other vocational experience, felt the highest costs of social change.
- Mitigation strategies did not address the occupational characteristics of timber workers who are occupationally inflexible, and exhibit a dependency on the industry that increased with age, as does difficulty in adjusting to any change.
- Collaboration between government, stakeholders and local people is essential.
- Impacts on and within communities would not have been as severe if intermediary bodies, staffed by local people, had been established to improve communications between local people and the implementing agencies.
- Local employment is vital.
- Structural Adjustment Packages need to be locally specific and long-term.
- Social scientists need to be engaged for the development, implementation and evaluation of plans to help manage imposed structural change.
- Financial compensation is a short-term "fix" which never captures all those impacted. It is high in resourcing requirements and divisive in communities.

8.2.4 Summary of Key Implementation Recommendations

- Mitigation programs should consist of a number of strategies which work towards compensating direct individual, organisational, and community losses through compensation and capacity building.
- Implementation teams for each area are necessary, and should comprise multi-disciplinary workers and as many local people as possible.
- The implementation team should work at local levels to engage and support all people affected.
- Impact equity must be ensured during the implementation of mitigation programs.
- Government should work with local councils and communities to assist with strategic planning and provide adequate resources to encourage capacity-building, including local economic development.
- Local councils should be an integral stakeholder in the implementation of the mitigation and monitoring program.
- Education in the form of community development has proven to be one of the more effective methods in bringing about long-term changes.

8.3 Community Mitigation in the Burnie Timber Industry

Approximately 60 years ago, North Broken Hill Pty Ltd. (NBH) owned the forest, timber and pulp mill in the vicinity of Burnie, Tasmania. The association of land use, employment and company operation made Burnie a quintessential company town. While Burnie gradually developed a more diverse economic base, the reliance upon the timber industry continued.

In the late 1980s to early 1990s, NBH began to investigate opportunities for industry restructuring. Following a long period of community uncertainty, North Forest Products, a subsidiary of NBH, sold the Burnie pulp mill to Australian Paper (now AMCOR) in 1993. North Forest retained ownership of the timber mill. Both companies then instituted a large restructuring program and introduced new technology. North Forest built a chipping mill which reduced employment from 84 to 4. Australian Paper closed a pulp mill shift which retrenched 150 workers. In addition, the company contracted out their maintenance division which affected a further 300 people. The displacement of more than 500 people had severe social and economic consequences throughout the community.

In 1994, a consultation and mitigation project was initiated by a number of groups including North Forest, the Greens political party, the Forest Protection Society, unions and individual community members. The project was funded by Australian Paper and North Forest. The aim was to develop a process that:

- enabled community input into identifying issues of concern;
- determined services and facilities required to resolve these issues;
- facilitated discussions between opposing groups to meet and work on shared issues;
- developed mitigation strategies;
- identified performance indicators and instituted performance measurements.

In 1995, a number of strategies to assist with developing community well being were proposed and acted upon. They included:

An Enterprise Centre
North Forest funded an enterprise centre to help people to re-skill for other work or develop their own businesses. It also sought to enhance the opportunities for local workers to be re-employed in maintenance and other contracting services. By 1997, 90% of redundant workers had regained employment with the company in contract positions or had developed other enterprises.

Forest Access
An expressed community concern was that as the forest was company owned, residents could be denied access for recreation, fishing and wood collection. The company responded positively by instituting changes to improve recreation and fishing access and contracted firewood businesses to deliver firewood to residents at a reasonable cost. This action provided small business and recreational opportunities.

Community Health
Mill workers in Burnie traditionally had a high incidence of heart disease. The reasons were identified as a lack of exercise due to shift work, environmental factors (such as stress and noise) and attitudes to nutrition.

In conjunction with the University of Tasmania the community consultation group developed the Burnie Health Program which linked study of community health to programs introduced into the community.

Civic Pride and Appearance
North Forest and the Port Authority rehabilitated and landscaped the port authority lands. This heightened the community's pride and identification with their town.

The Future
The outcomes were deemed successful as a consequence of:

- providing opportunities for business and the community to input into the consultation process;
- the commitment by all parties to enter into a mitigation and planning process;
- shared agreement to use the situation as a means to create future opportunities.

While the major activity of the community consultation and mitigation process has passed, the consultation group is looking to the future and developing a strategic plan for Burnie called Vision 2020.

8.4 Summary of Structural and Mitigation Findings

In summary, research findings from NSW, Queensland and Tasmania have shown that social impacts arising from imposed change can have long-term and far-reaching consequences. Impacts are often cumulative with effects being presented socially (loss of community networks, family breakdowns), economically (financial insecurity, personal debt) and psychologically (low self-esteem, stress and anxiety, loss of identity). Impacts can manifest at individual, family, organisational and community levels.

From these studies it is apparent that without comprehensive change management and support strategies, impacts can prolong and accumulate. In rural areas, many changes initiated for example, as a consequence of conservation requirements or development proposals can affect the entire region in which the change occurs. Large-scale change can affect the entire fabric of a community including its economic base, land use practices and the social interaction patterns of its members. It was widely reported that flow-on effects can occur whereby a single change can lead to many others.

It is therefore imperative that an assessment is undertaken of all those likely to be affected by the proposed decision before it is made. Further, collaboration between stakeholders and all levels of government is essential to achieve satisfactory outcomes, as is the requirement for a clear and well managed communication process. Implementation teams working at local levels with community representatives are deemed very necessary and mitigation measures must be locally specific and long-term if they are to be successful.

The development and implementation of mitigation measures should be strongly guided by the varying ability of communities to accommodate change.

9. CONCLUSION

A key component of the social assessment process was to assess economic diversity and further resource opportunities at regional and local community levels. Community capacity to absorb change was a major area of interest.

At the outset it was evident that many national and global trends are causing a contraction in rural communities throughout Australia and are contributing to social and cultural change. In Western Australia rural communities are, among other things, encountering bank closures, school amalgamations, loss of medical practitioners, reduced retail services, falling community group membership, declining terms of trade for farmers, employment contraction in primary industries, diminishing job security and full-time employment opportunities.

Further, many shires report the loss of their brightest young people who seek improved education and employment opportunities in larger centres. At the same time, they discuss the immigration of older people seeking lifestyle changes. Recent arrivals frequently come with different knowledge and experiences and often pursue new opportunities.

Communities traditionally dependent upon the timber industry have also been dealing for many years with the consequences of industry restructuring. Market pressures are an added concern. For example, traditional structural markets now face heightened competition from softwoods and steel (BIS Shrapnel, 1997).

Most of the eight case study communities were evidencing shifts into new directions from their traditional agricultural and timber industry base. Viticulture, tourism and aquaculture were some areas of increasing attention and investment. At the same time, assessments of value adding potential reinforce the assertion that the timber industry will continue to play a part in the economies of many south-west towns.

The survival of rural communities depends upon many factors including geographic location, community vitality and economic strength and diversity. The case study areas vary in their capacity to accommodate imposed change. As a rule of thumb, those with comparatively less timber industry reliance, larger populations, closer proximity to a regional centre and stronger local economies are less vulnerable. Irrespective of the location, the costs (social, economic, psychological) borne by individuals who experience forced change are likely to be significant.

The following assumptions were used to assess a community's capacity to accommodate change.

- The smaller the community, the greater the potential impact.
- The impact of employment loss within a community will be greater where:
  (a) the existing pool of job opportunities is smaller;
  (b) displaced workers are less equipped to seek employment opportunities.
- People who have lost employment cannot necessarily move into vacancies that appear, particularly if these are in different industry sectors.

- The longer a person works in an industry, the more difficult it is to change industries. Change will be less difficult if the person has previous experience in other industries.
- Employment loss does not automatically signify a corresponding loss in local population.
- A community that can competently deal with any adverse effects is one in which the constituents are able to: accommodate conflict; collaborate in identifying relevant problems; achieve a working consensus on goals, objectives and ways to implement them, and; collaborate in required action. It also needs to have few socially isolated community members (Armour, 1993; Bowles, 1981).

Specific areas needing scrutiny when developing the RFA include Nannup, Pemberton and Manjimup. Nannup stands out as the most vulnerable community. Northcliffe, Yarloop and Greenbushes could also encounter significant community effects, while impacts on individuals, local businesses and organisations could eventuate in all case study areas. Walpole is likely to be least affected, however, the area does have a significant CALM presence and thus could experience indirect flow-on effects.

Opportunities for WA timber workers displaced through the RFA appear limited, particularly when considered in conjunction with the present rural decline. This finding is consistent with post impact studies conducted in other states. The independent studies showed that timber workers, particularly those with no other vocational experience, felt the highest costs of social change. Local, alternative employment is vital as most displaced workers were either disinclined or unable to travel very far from their homes and families. In most cases, affected individuals and communities experienced considerable social and economic impacts (Qld DNR, 1998; Rush, 1997).

While structural adjustment packages were helpful initially, they did not assist in improving the well being of individuals in the medium to long-term. Evidence suggested that mitigation programs should implement a number of strategies, which work towards compensating losses experienced at the individual, organisational and community levels. An imperative was for each area to have its own implementation team comprising local people and representatives from a number of disciplines.

In summary, job losses arising from the RFA have the potential to cause widespread and long-term implications for a number of local communities. The nature of life in small rural communities and the economic interrelationships between clusters of towns makes it probable that flow-on effects will occur. As evident in Nannup, impacts will potentially be strongest in smaller communities with a high reliance upon the timber industry to sustain community life and local economies. At the same time, timber industry restructuring has the potential to deliver a conducive environment for industry investment and thus industry employment and growth.

In order to gauge the specific nature of impacts and flow-on effects arising from the final reserve design, further assessment (including monitoring and evaluation) would be required.

Other research conducted for the RFA revealed that the wider community holds strong beliefs about native forests. For example, a social survey on forest values indicated that four out of every five people were concerned about native forest management in the region (EBC, 1997). More than 50% also held conflicting values between employment and the reservation of native forests.

Approximately half believed their communities would be affected (mainly through employment loss) if the timber, mining or tourism industries experienced a change in access to the forest resource. At the same time, a majority indicated that tourism would become the main industry in their area within the next twenty years.

Reviews of the native hardwood timber industry highlighted that WA sawmills require progressive modernisation if the industry is to become cost competitive with countries including the USA and Malaysia. Investment in technology is regarded as inevitably leading to industry rationalisation, further reducing sawmill and employment numbers (Beca Simons, 1997).

A key challenge is to proceed towards increased international market share. Significant employment potential exists in value adding and opportunities are considerable in having a resource that is widely regarded as sustainably managed. A veneer-based industry was predicted to create approximately 360 jobs by 2010 (BIS Shrapnel, 1997).

BIS Shrapnel (1997) reported that the trend towards softwood usage was likely to increase as compared with hardwood timbers. Projects with significant export potential - including pulp, paper and reconstituted wood products - could also develop from expanding softwood and blue gum plantations (Beca Simons, 1997). The Farm Forestry Taskforce identified 2,600 new jobs arising from farm forestry, mostly located in regional areas (1995).

In conclusion, this report has identified the needs and concerns of forest dependent communities. Any change in forest use or management arising from the RFA requires, as much as possible, the development of agreed management strategies at local community levels. For example, the Bridgetown-Greenbushes Shire Accord involved stakeholders with strong and diverse attitudes towards forest use. The development of an Accord illustrates the positive achievements which can occur through a community managed process.

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