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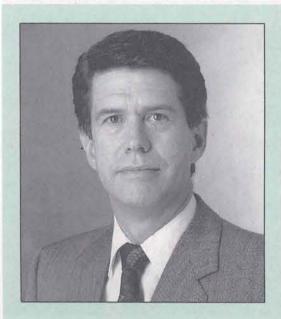
Department of Biodiversity,
Conservation and Attractions

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FACTS ABOUT FORESTS

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

South West forests are protected and secure



The management of Western Australia's native hardwood forests is firmly based on balanced and ecologically sustainable use. This means that the way in which we use our forests for all their values - including wildlife habitat, water, heritage, tourism, recreation and timber production - requires that all the ecological processes that drive the forests remain healthy.

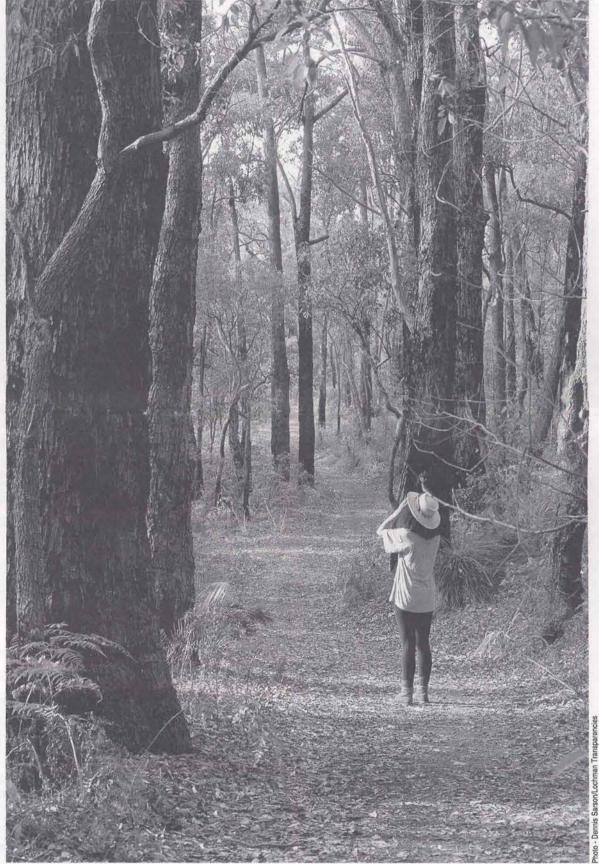
Some interest groups in the community will never be satisfied with the balance of ecologically sustainable uses we reach. It is important, however, that the debate surrounding forest management take into account the full story of how our forests are managed to preserve all their values and processes.

The State Government is firmly com-

- · A forestry industry that is sustain-
- The maintenance of the biodiversity
- An adequate and comprehensive reserve system to maintain the conservation and heritage value of our forests
- A fair and even-handed management of the forest, in the best interests of the State, having regard to all interests and values

This brochure provides the facts about our forests.

Minister for the Environment June, 1996



Bird watching in jarrah forest.

WA's forest areas are set aside by Parliament under the Conservation and Land Management Act. In the forest regions of the South West, CALM manages 2,450,000 hectares of land on behalf of the public. Any changes to this area must be approved by both Houses of Parliament.

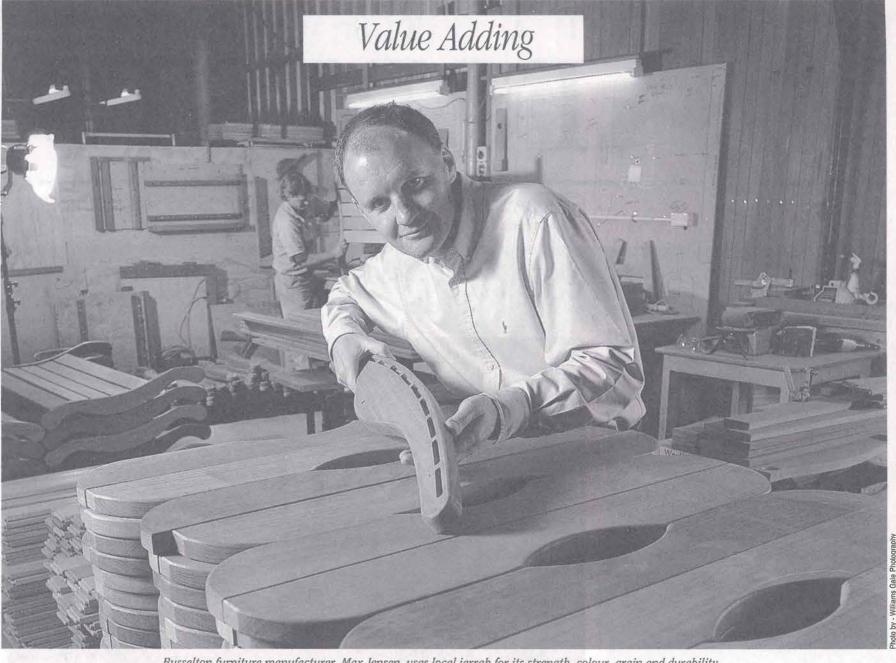
Parliament has legislated to provide a conservation reserve system throughout the forest.

This reserve system includes national parks, nature reserves and conservation parks. The Government's Forest Management Plan for the south west native forests, approved in March 1994, also sets aside other areas of high ecological, cultural and

aesthetic values so that their special values are

Forty-six per cent of the karri forest and 33 per cent of the jarrah forest are in conservation areas, including road, river and stream reserves, which cannot be harvested for timber.

Surrounding the reserve system are forests which are managed on a sustainable basis for different uses including timber and mineral production, tourism and recreation, water catchment protection and wildlife conservation. No more is harvested than is grown, and every hectare of forest harvested for timber is regenerated.



Busselton furniture manufacturer, Max Jensen, uses local jarrah for its strength, colour, grain and durability.

Western Australian timber and timber products are winning admirers and opening up important new markets for value-added products. In fact, they have the capacity to be counted among the most highly valued timbers in the world.

The beauty and diversity of WA's native hardwoods result in a range of high quality products and particularly fine furniture. This, in turn, leads to them replacing imported timbers such as cherry wood and oak, and creating more local jobs in our timber processing industries.

Karri, for example, has always been renowned as a great structural timber, but seasoning, machining and gluing difficulties have led the manufacturing industry to overlook it for use in fine furniture production.

CALM's Wood Utilisation Research Centre at Harvey, however, has overcome those problems with research into kiln drying techniques, adhesives and dressing, sanding and finishing processes.

Marri has also been ignored because of its extensive bloodwood gum veins and imperfections.

However, these are now being recognised as selling points and artistic features, creating highly valued products. The research which has produced marri and karri timber suitable for furniture making represents a significant step towards increasing the value of WA's native hardwoods.

A special karri and marri network is being established with timber and furniture industry input to develop market opportunities. One avenue could be the use of the species in furniture, flooring and profiled mouldings highlighting the beautiful golden tones of marri and the reddish brown hues of karri.

The industry's value adding average is now around 52 per cent for jarrah sawlogs, ahead of the 1997 target to add value to 50 per cent of the jarrah sawlog resource.



A Regional Forest Agreement

Work has begun on a comprehensive Regional Forest Agreement between the Commonwealth and Western Australian governments.

When completed, this 20 year agreement will specify the arrangements for a comprehensive, adequate and representative forest reserve system and forest practices which will ensure a sustainable yield of timber to industry.

In 1995 an interim process, the Deferred Forest Assessment, was carried out to assess the current reserve system and set aside additional areas from timber harvest in case they are required for future reserves.

The Deferred Forest Assessment looked at several specific nature conservation values such as biodiversity, old growth, wilderness and endangered species. The Commonwealth Government set very challenging targets for the States to meet. The results for Western Australia were as follows:

Deferred Forest Assessment 1995

Assessment	Commonwealth target	In WA Reserves	Result
Biodiversity			
Pre 1750 jarrah forest	15%	19%	Exceeds the target
Pre 1750 karri forest	15%	35%	Exceeds the target
Four jarrah forest sub-regions	10%	13-24%	Exceeds the target
Forest community analysis	18-20%	33-44%	Exceeds the target
Old growth			
Karri forest	60%	59%*	*1080 ha deferred from timber harvest
Northern jarrah forest	90%	76%	5760 ha deferred from timber harvest
Southern jarrah forest	60%**	50%*	28, 190 ha deferred from timber harvest
VAPI de la company			

Wilderness

Highest wilderness quality is in reserves

Endangered and Rare species

Management procedures and recovery plans meet Commonwealth requirements for protection of threatened species

- * Old growth forest in some linear reserves has not been included
- ** Western Australia argues that a 50% target should apply in the southern jarrah forest because large areas of old growth are still widespread

National Estate and forest management

In 1991, CALM and the Australian Heritage Commission (AHC) undertook a joint study of National Estate values in the southern forest of WA. The study coincided with a review of the Forest Management Plan. The CALM-AHC study identified 46 separate National Estate values in the southern forest and assessed the extent to which these values were protected in reserves.

In 1992, CALM and the AHC reached an agreement which met the requirements of the Australian Heritage Commission Act by providing a comprehensive listing of National Estate places, while at the same time enabling other legitimate forest uses, such as timber harvesting, to continue.

The essence of the agreement was that, provided

that the particular National Estate value being considered was adequately represented in the reserve system, the impact on that value of other forest activities, such as timber harvesting, was considered acceptable.

CALM was able to use the joint study undertaken with the AHC to ensure that the reserve system was representative. For example, as a consequence of the study, CALM recommended that an additional 124,000 hectares of forest be added to the reserve system to increase the area represented by old growth forest and wilderness.

The CALM-AHC agreement was endorsed by the Prime Minister as a model for other forest areas in Australia.



Spectacular scenery in tall timber country.



Protecting Our Biodiversity

Ecologists throughout the world agree that reservation is a crucial technique for conserving ecosystems. The forest reserve system contains 840,000 hectares in national parks, conservation parks, nature reserves and other reserves.

This system of reserves will protect and maintain the full spectrum of biodiversity - forest communities, individual species and genetic diversity within species. Reserves also protect habitat, evolutionary processes and ecological support systems.

In areas of State forest where activities such as wood production, mineral production and forest recreation are permitted, biodiversity

can be maintained by complementary management outside reserves.

The identification and protection of special zones and corridors along streams and roads and around wetlands, heaths, woodlands, and rock outcrops ensures that multiple use forests can maintain a rich assemblage of plants and animals that

DISTRIBUTION OF ROAD RIVER AND STREAM RESERVES

JANE FOREST BLOCK, PEMBERTON DISTRICT

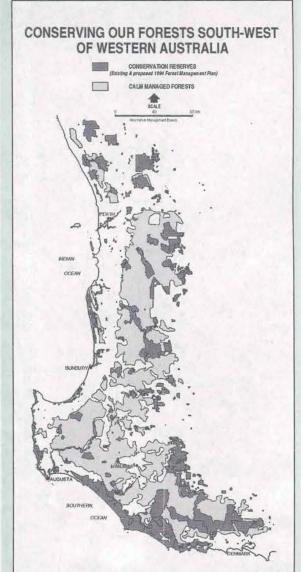
PROPOSED BY 1994 FOREST MANAGEMENT PLAN

LEGEND
Pure Marri
Diverse Ecotype Zones
Road Zones
River and Stream Zones

Produced by Information Management Branch, CALM : April 1996

complements biodiversity conservation in reserves.

There are other means of protecting habitat and thus conserving biodiversity. One of these is the retention of 'habitat trees' with hollows for birds and other animals, 'den logs' for animals such as the numbat and chuditch, and patches of unique understorey within logged areas.



Sustaining the 'old growth' component of the forest

The forest is constantly changing. The cycle of forest growth is dynamic: forests naturally regenerate, mature, die, then regenerate once more.

The 'old growth' or mature forest phase of forest development for jarrah and karri trees begins at about 100-150 years. Contrary to what has often been thought, jarrah and karri trees rarely survive much longer than 300 years, and the majority of the trees in old growth stands are less than 200 years old. If we are to sustain 'old growth' forests, we must have all the other stages of development represented in the forest.

Western Australian forests are managed so that all stages of the forest, including the 'old growth', are represented. This has been achieved by ensuring that the highest quality 'old growth' forests are represented in the reserves and other protection zones, and by varying rotation ages and timber harvesting systems.

For example, under previous management plans, the rotation age for karri was set at 100 years. The 1994 Forest Management Plan, however, provides for 50% of the karri forests regenerated after 1990 to be grown on to maturity. More than 20% of the pre-1940 regrowth and more than 30% of the 1940-1975 regrowth will also be grown on to maturity. This ensures a balanced mix of young, maturing and mature karri trees is sustained for future generations.

There are 187,000 hectares of 'old growth' jarrah forest and 55,000 hectares of 'old growth' karri forest in conservation reserves including road, river and stream reserves which are also excluded from timber harvesting.

In the jarrah forest, the existing structure of age classes will be maintained. In the karri forest, there will always be more than 40 per cent of the forest in the 'old growth' stage of development.



The Treetop Walk takes vistors into the tingle forest canopy.

Forest Icons

of the forest. The Treetop Walk gives visitors a perspective

from the treetops and the ground, incorporating all the

and through the bases of 20 red tingle trees and logs,

with signs and sculptures to explain the forest's rich

heritage. A new information shelter has been installed,

as well as boardwalks to protect the trees from root and

National Park, taking in 44 km of quality old growth

promotes and signposts it for forest visitors.

The southern section of the drive includes two

photos, picnics and walks. It is centred on the old

mill town of Shannon which now boasts a well

Another new feature of the South West is the

The Ancient Empire is a forest discovery walk around

texture, colour and shapes.

The South West is dotted with forest icons that draw visitors like a magnet.

Perhaps the best known are the Gloucester Tree grandeur of the tingle forest - especially its sounds, near Pemberton, and Walpole's Valley of the Giants. However, new icons are being developed all the time, demonstrating how a sensitively managed tourism industry can exist in harmony with the environment and its ecosystems.

Diamond Tree near Manjimup, for example, was recently reopened to serve the dual purpose of a fire soil compaction. lookout tower and tourist attraction. While protecting the rest of the forest and surrounding communities Great Forest Drive, an all-weather gravel road suitable from wildfires, it is giving visitors a bird's eye view of for family cars. It winds through the Shannon sustainable, multiple use forestry.

The Dave Evans Bicentennial Tree in Pemberton karri, marri and jarrah forest. The drive shows off the has provided the last link in a three tree climb quality and extent of old growth forest within the (Gloucester, Diamond and Bicentennial) that is bound conservation estate. Until now, much of this forest to inject further tourism dollars into the local has been hidden away, but the Great Forest Drive community.

Recreation facilities are provided throughout the South West forests, and interpretation boards give 80 metre boardwalks, one at Snake Gully which visitors a greater insight into each region's forest leads to an elevated karri valley lookout, and the heritage. The Treetop Walk and Ancient Empire tingle other at Big Tree Grove which boasts some of the forest discovery trail are two more forest icons. CALM largest known, accessible karri trees. The Great experience, while maintaining the forest's integrity and conservation values.

Important elements in the design of these facilities equipped recreation site with hot water and level were simplicity, practicality and minimal disturbance campsites.

Tourism and recreation in our forests

decade. It is destined to become a major contributor Bicentennial Lookout Trees. to Western Australia's economy, and the forests of the South West will play a significant part. They are already among WA's most popular attractions, with more than 3 million visits estimated each year.

For the tourism industry to thrive, however, it must be based on sustainable development and use of our natural advantages. The ultimate success of nature-

roads and information centres.

The Department's 1995-96 budget for recreation and tourism projects in forest regions is over \$5.5 million and includes new projects such as the Valley of the Giants Treetop Walk and Ancient Empire interpretive trail near Walpole, the Great Forest Trees Drive in century, is now a National Park.

Nature-based tourism world-wide is forecast to Shannon National Park, and the Three Trees Climb rise by between 25 and 30 per cent in the next encompassing the Gloucester, Diamond and

> Each of these new projects has been sensitively designed. They remain in harmony with the environment and its ecosystems, while demonstrating how the forest can be sustainably managed for all its values including timber, tourism and recreation, and conservation of habitat for native plants and animals.

They represent part of the multi-million dollar based tourism depends on the conservation of our infrastructure plan CALM is implementing in the amazing array of native plants, animals and landscapes. southern forests, with the majority of the funds CALM's forests are looked after to ensure that coming from the forest itself, via income generated our natural attractions are sustainably managed and largely by log royalties. Timber harvesting activities that appropriate facilities are provided for visitors in the forest are co-ordinated to minimise the visual including camping areas, picnic sites, walk trails, impact near frequently-visited areas, and facilities originally built for timber harvesting, such as roads, are now being used for forest tourism.

> Many of today's popular recreation sites are regrowth forests which were once cut for timber. The karri forest at Boranup, which was clear-felled at the turn of the





Visitors Go bush! at The Hills Forest.

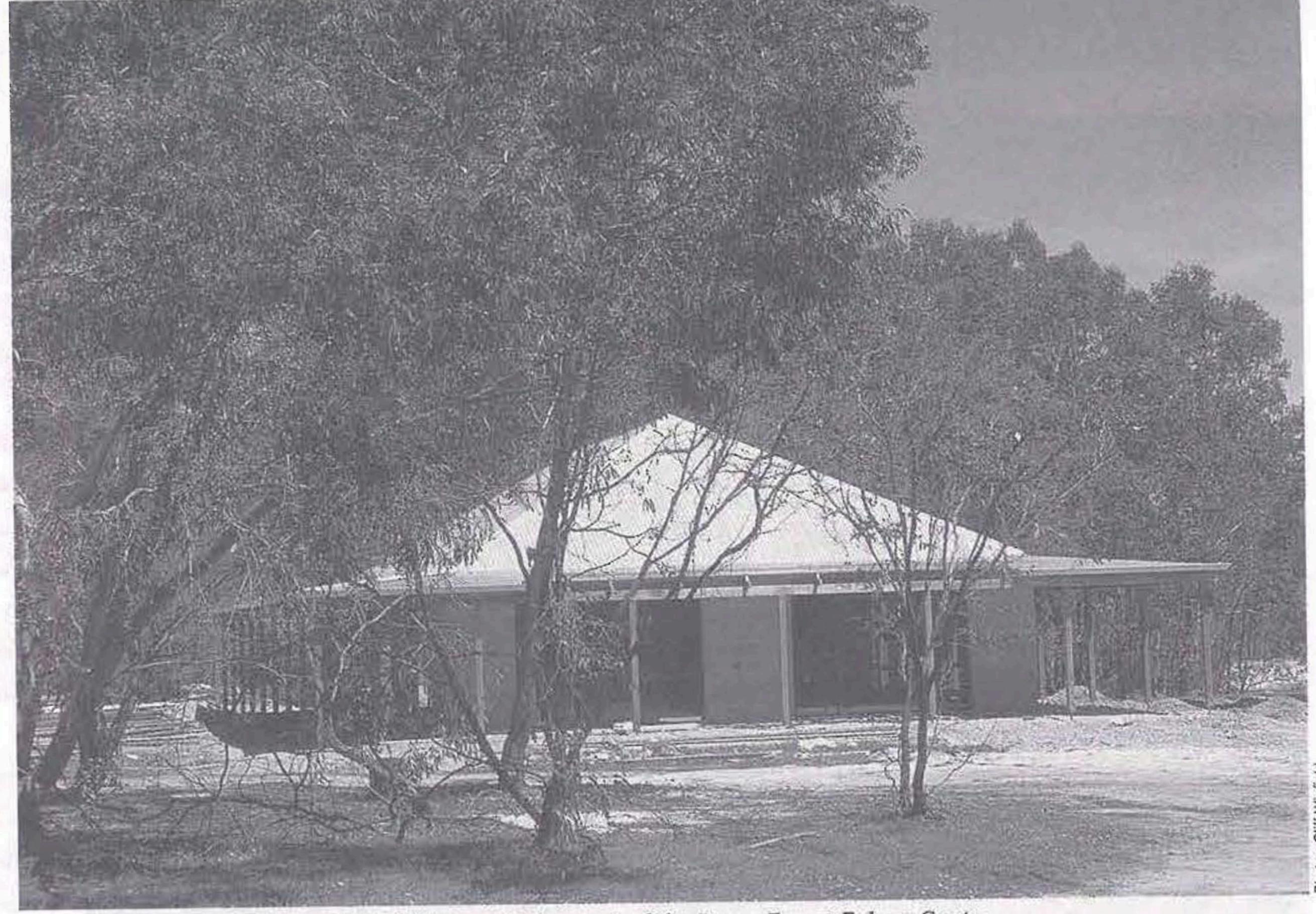
Hills Forest

The Hills Forest is just 30 minutes drive east of the hustle and bustle of downtown Perth and offers a myriad activities and adventures.

Covering 80,000 hectares in the rolling hills of the Darling Ranges between Great Eastern Highway in the north and Brookton Highway in the south, The Hills Forest includes State forest, five national parks, the Mt Dale conservation park and the picturesque Mundaring Weir area.

The area is home to many native animals and plants that delight visitors all year round. Western grey kangaroos can be seen grazing in the early hours of the morning or late afternoon, while reptiles sun themselves on granite has developed them to provide a high quality visitor Forest Drive has a number of roadside stops for outcrops during the heat of the day. At night, small and medium-sized mammals scuttle among the leaves and fallen branches in search of food.

> The Hills Forest Activity Centre (off Mundaring Weir Road) is the focal point for a range of fun outdoor recreation experiences including the popular Go Bush! series. So, whether you are after a wildflower wander or a moonlight mountain bike ride, why not 'phone the forest' on (09) 295 2244.



The Wilderness Lodge, part of the Perup Forest Eclogy Centre.

Perup Forest Ecology Centre

spectacular wilderness experience.

Perup Forest is home to sizeable populations of most of the 27 species of native mammals found in the southern forests.

The Ecology Centre is designed to give visitors a deeper knowledge and understanding of nature conservation and forest management.

The Perup Forest Ecology Centre and Wilderness jarrah forest and wandoo woodland, and offers visitors a Lodge, 50 km east of Manjimup, offers another great chance to see six rare Australian mammals in the

> Resident numbats, chuditch, woylies, tammar wallabies, ringtail possums and southern brown bandicoots make it the best single location in Australia for observing rare wildlife.

The Centre is equipped to cater for school and community education activities, as well as nature-based It is located within a 52,000 ha Nature Reserve of tourism. For more information call (097) 717 988.

Forest Heritage Centre

Dwellingup gives visitors a chance to increase their atmosphere as life-giving oxygen. awareness and understanding of Western Australia's The Forest Heritage Centre is designed to cater forest heritage and how it can be most effectively conserved, managed and utilised.

Set in dense jarrah forest, the leaf-shaped buildings of the centre house a School of Wood - for demonstration and training in the art of fine wood processing and fine furniture production; an administrative centre and exhibition gallery; and been in continuous use since the turn of the century. displays demonstrating forest ecology, forest It provides an excellent working example of the way management and the products of the forest that the forest is managed to meet different needs. It also benefit us all.

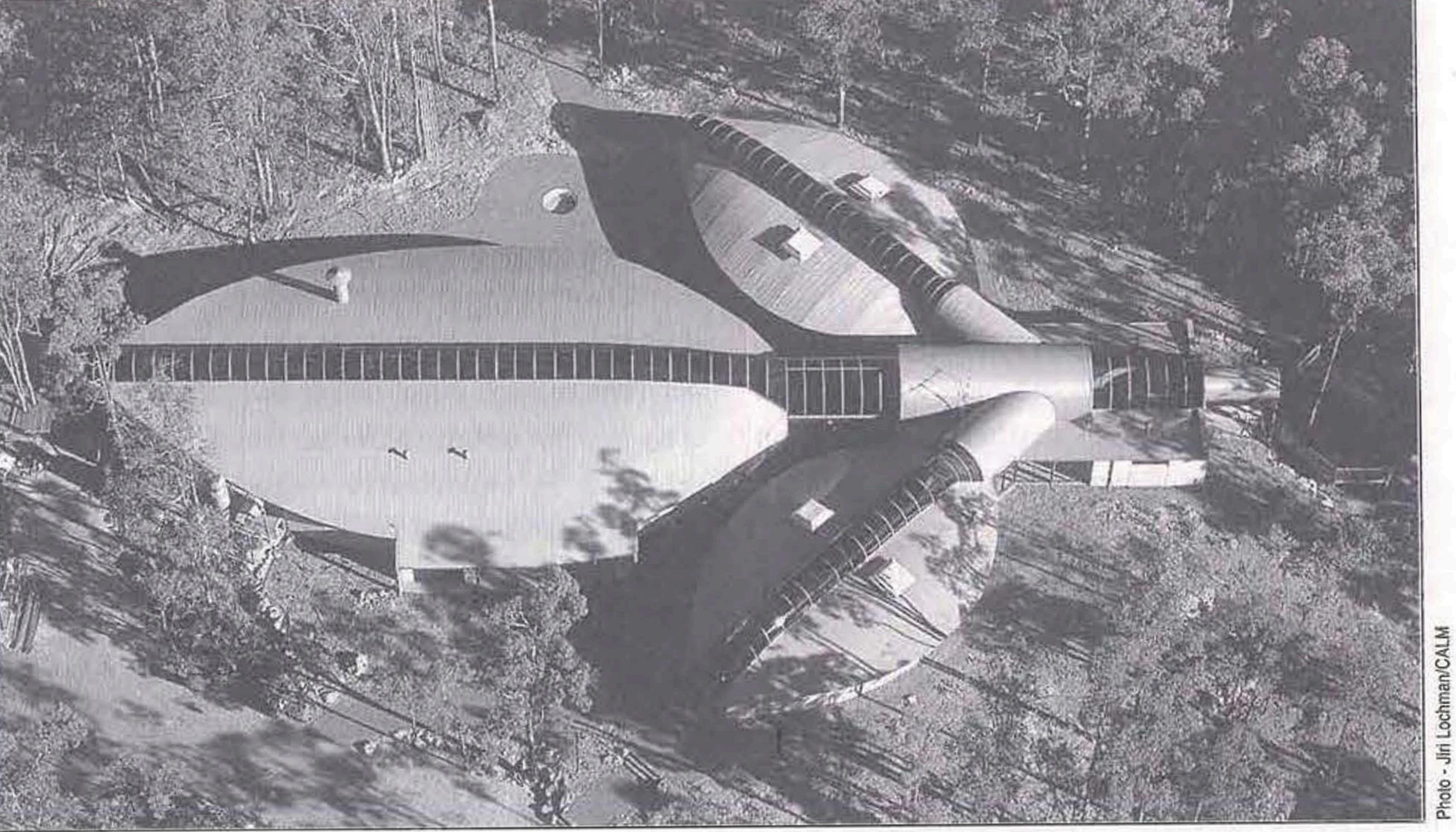
Once you've seen the forest displays, take a self guiding tour that shows just how the forest works, including a walk up to the canopy, where greenhouse

The exciting new Forest Heritage Centre at gases are processed by the trees and returned to the

for environmental and community education, industry training, tourism and recreation, and accommodation. Basic overnight facilities are available at the old forestry cadet school nearby.

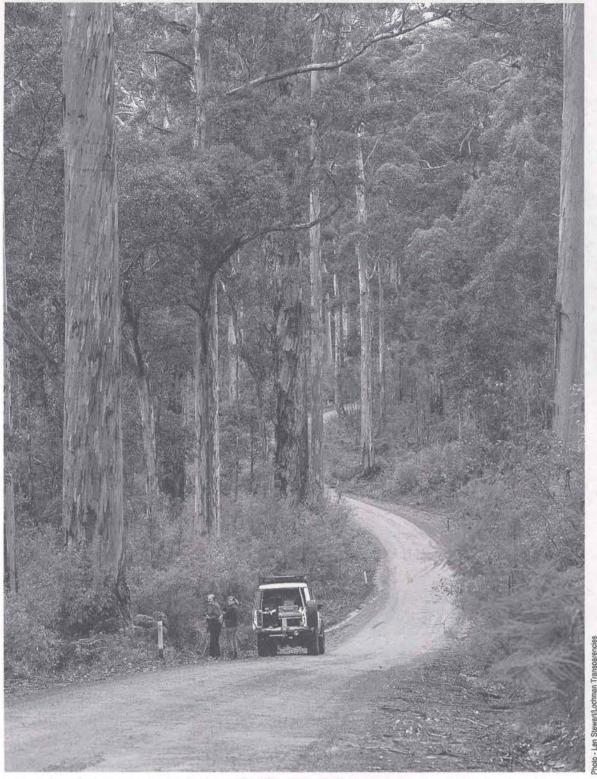
The Centre is 90 minutes from Perth by car, and surrounded by high quality native forest that has represents a major tourism asset for Western Australia, and particularly Dwellingup.

It has been funded by private enterprise, State, Commonwealth and Local Government agencies.



The Forest Heritage Centre.

Public consultation & independent reviews of forest management



Karri forest, Pemberton.



Fire and Forests

Fire is as much a part of the South West forest environment as sunshine, water and soil nutrients. Forest plants and animals have evolved alongside fire. They are adapted to it and many of them depend on fire for regeneration and survival. But the natural situation has changed as we have imposed a fire-vulnerable society into a fire-prone environment.

Forest wildfires - caused naturally by lightning, started by accident, or set deliberately - can pose severe threats to lives and property. They also can have a big impact on forest values such as aesthetics, recreation sites, water catchment protection, wildlife habitat and timber.

Since the disastrous forest fires that devastated Dwellingup in 1961, CALM and its predecessor have successfully implemented a fire management strategy that lessens the threat from wildfires and makes them easier and safer to control when they do occur.

Thirty years of research has shown prescribed

burning - in which low intensity fires are used to reduce the build up of leaves and twigs on the forest floor - to be an effective and environmentally sound way of combating destructive, high intensity wildfires.

Prescribed burns create a mosaic of burned and unburned areas. This patchwork effect ensures a variety of habitat for native animals. The season and frequency in which prescribed burns are carried out is varied between five to 15 years and during spring and autumn months. Only 60 to 80 per cent of each burn area is burned and many areas remain unburned for several decades. This promotes the biological diversity of the forest.

Fire also is used to regenerate habitat for native fauna and to regenerate areas cut for timber.

CALM also maintains an extensive fire detection network using lookout towers, rapid response aircraft and a 400 strong fire-fighting crew and staff throughout the forest areas. These resources are also used to fight fires on private and other Government lands.

WA's forest management plans produced in 1987 and in 1994 both involved extensive public consultation. The draft plans were open for public comment for periods of three months and five months respectively and a total of 5000 submissions on both plans were made.

The 1992 draft plan was reviewed by the Environmental Protection Authority, a Technical Advisory Panel, independent forestry experts, a Scientific and Administrative Panel and an independent Appeals Tribunal. This process resulted in changes to the draft plan, which became the Forest Management Plan (1994 - 2003) adopted by Government.

Since the 1970s, there have been more than 20 inquiries into forest management or forest industries in Australia. One of the most significant of these was the two-year national inquiry by the Resources Assessment Commission which handed down its report in 1992.

Justice Stewart, who was the Chairman of the Resources Assessment Commission, has publicly endorsed the CALM- Australian Heritage Commission model for incorporating national estate values into management, stating that it was a pertinent example of how our forests can be managed in an ecologically sustainable way.

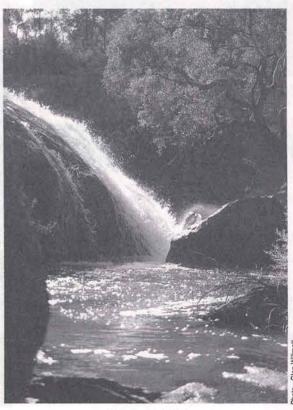
The recently completed Deferred Forest Assessment confirmed that the forest reserves in Western Australia meet the requirements for a comprehensive, adequate and representative system.

How forest management protects water supplies

About 60 per cent of Perth's fresh water is supplied from forested catchments. The forests also supply water to towns and communities in the Wheatbelt, other parts of the South West and as far away as the Goldfields.

Not one stream in a fully forested catchment is saline, even though forests have been used to provide timber for 150 years.

The quality of the water that flows from forested catchment is maintained by ensuring that the forests are regenerated, and by providing reserves along all streams and rivers.



Forest waterfall.

Forests filled with fauna

After 150 years of timber cutting, the South West forests retain one of the most complete suites of fauna of all the major Australian ecosystems. Animals now extinct or under threat in other parts of Australia still thrive in our forests - these include the woylie, tammar wallaby, chuditch, brushtail possum and numbat.

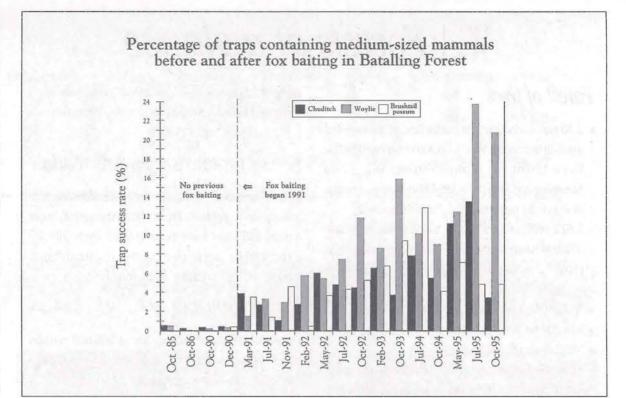
Over the past 25 years, CALM and its predecessor have spent millions of dollars on biological surveys of flora and fauna in the forest.

There have been no recorded extinctions of any plant or animal species as a result of timber harvesting in WA.

What has been established beyond any doubt is that feral animals, such as the fox, have a devastating impact on native fauna.

Research on foxes has demonstrated that when numbers are controlled there is a dramatic increase in native animals such as the numbat, woylie and chuditch. Fox control is one objective of the Forest Management Plan 1994 - 2003.

Operation Foxglove was the name given to a landmark feral animal control program launched in 1994 to reduce fox numbers in 500 000 hectares of native forest between Mundaring and Collie. Following its preliminary success, the area of south



west forests being baited was greatly expanded in April 1996.

Operation Foxglove has now become part of a larger, state-wide feral predator control initiative called Western Shield.

Western Shield aims to control feral cats as well as foxes across more than 4.7 million hectares of

conservation lands. It is the biggest nature conservation initiative ever undertaken in Australia.

Once monitoring shows that predator numbers have been reduced sufficiently, populations of small native mammals such as the woylie, numbat and chuditch will be reintroduced to areas where they once roamed freely.

Farm forestry



Farm forestry in action.

Farm forestry is one of Western Australia's fastest growing primary industries. More and more farmers are discovering the multiple benefits of planting trees to complement their farming operations.

These benefits include lowering water tables to help combat the spread of salinity, increasing protection for soil prone to wind-erosion, sheltering livestock, and improving the appearance of the rural landscape.

Bluegums are now a major commercial tree species, with new plantings of about 10,000 hectares a year in the higher rainfall areas of the south-west and along the south coast. New pine sharefarming arrangements are being developed and there is interest in extending pine plantings.

Farm forestry presents exciting opportunities for farmers and other land owners to tackle the entrenched problems of land degradation while at the same time maintaining farm income.

It is estimated that 1.8 million ha of land in the South West land division are affected by salt, and more than half of the river and stream systems have become saline because of rising water tables. The area affected could rise to more than 4 million ha if remedial action is not taken.

Encouraging the planting of deep rooting

bluegums on farms is one way of ensuring the take-up of surplus groundwater before it has a chance to carry salt to the surface.

Recent figures produced by Agriculture WA show that on one South Coast farm where, over the past five years, 100 hectares have been planted with bluegums by CALM's South Coast Sharefarming unit, acting as an agent for Albany Plantation Forest Company of Australia, the water table level has been lowered by 2.5 metres.

As well as the environmental benefits, the trees will provide a useful income once harvesting begins in five years time. For example, if 20 hectares are harvested each year, the crop will be worth \$125,000 a year.

CALM has set up a Farm Forestry Unit to develop and demonstrate new tree crop species and technologies, and provide high quality, independent advice to farmers. Its vision is to achieve sustainable and productive agriculture through the optimum use of tree crops, and to create major new industries based on farm tree crops.

The Department has also established Pine Sharefarms - a business unit designed to take the pine sharefarm revolution from the concept stage to reality.

Pine, in particular *Pinus pinaster*, is ideally suited to the poor sands and low rainfall areas north of Perth. It offers landcare benefits - lowering water tables and easing salinity problems, as well as providing strategic windbreaks.

Pine Sharefarms works with interested landowners to establish plantations on a 40-year rotation basis, with the first thinning after 14 years, the second at 22 years and the third after 32 years.

We don't log native forests for woodchips

WA's native hardwoods traditionally have been used for structural timber, but in the past 10 years there has been a major change towards the production of high quality wood products.

For example, 10 years ago less than 10 per cent of jarrah timber was converted into high value timber products whereas today the average is just under 52 per cent and some bigger mills are value adding more than 80 per cent of the jarrah timber they produce.

It is now mandatory for sawmillers to maximise the quality of the products they produce from native hardwoods.

But just as a steer doesn't yield 100 per cent

high value cuts of steak, neither do trees and forests yield 100 per cent high quality timber. No matter how sophisticated timber technology is, there will always be a proportion of the log that will not make the grade.

Woodchips are a by-product of timber harvesting operations which are sawlog driven. They are produced from the off-cuts of sawlog production and parts of the tree, such as branches and logs, which are so degraded they cannot be used for sawn timber production. If this material was not sold to the pulp and paper industry, it would be burned. No logs suitable for sawn material are woodchipped.

WA Forests at a glance

Forest of trees

- · 2.45 million hectares of public land in the forested areas of the South West of WA are managed by the Department of Conservation and Land Management. When the 1994 Forest Management plan is fully implemented, this will include:
- · 1.613 million hectares of State forest of which 370,000 ha are in special protection zones such as along roads, rivers and streams, and within diverse
- 387,300 ha of national parks
- 176,200 ha of nature reserves
- 275,100 ha of other reserves
- · 46 per cent of the karri forest and 33 per cent of the jarrah forest are in conservation areas, including road, river and stream reserves, which cannot be harvested for timber.
- 55,000 ha of old growth karri forest and 187,000 ha of old growth jarrah forest are in these conservation areas.
- There are approximately 200,000 hectares of native hardwood forests on private land.

Forests for timber

· More than 20,000 people are employed directly or indirectly by the timber industry. WA's wood, wood products and furniture industry has a turnover of about \$850 million each year.

Forests for fauna

· The jarrah forest is home for about 240 species of native animals including 29 mammals, 45 reptiles, 11 frogs, 4 fish, and about 150 birds.

 About 230 species of native animals live in the karri forest. These include 27 mammals, 32 reptiles, 15 frogs, 12 fish, and 145 birds.

Forests for tourism and recreation

· Each year people make more than 3 million visits to WA's native forests. Throughout the forest, more than 185 sites have been created especially for recreation activities such as picnicking, bushwalking, camping and so on.

Forests for water

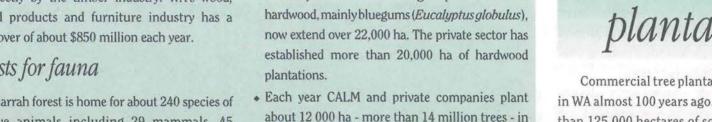
· Forest catchments supply about 200,000 million litres of water a year for domestic and industrial use in the Perth-Bunbury region.

Forests for Mineral Resources

- . More than \$2,500 million a year is earned from bauxite, gold, coal and mineral sands in forest areas.
- Every hectare of forest mined will be rehabilitated.

Planting for the future

- · There are 72,000 ha of publicly owned or managed pine plantations while a further 16,500 ha of pines have been established by the private sector.
- · Publicly owned or managed plantations of hardwood, mainly bluegums (Eucalyptus globulus), now extend over 22,000 ha. The private sector has established more than 20,000 ha of hardwood plantations.
- commercial plantations and in on-farm tree plots.







The chuditch, a forest inhabitant.

Forest Management and Dieback

Dieback, a disease caused by the introduced fungus Phytophthora cinnamomi, was first detected in the forest in the 1920s.

The fungus was identified in the mid 1960s and since then management procedures have been introduced to help combat the disease and minimise its spread.

Dieback is not solely a forest disease and has caused severe damage on the south coastal heathlands. So far, the disease has infected about 14 per cent of the forest and strict hygiene procedures, including tight controls on logging, have been implemented to help prevent the fungus being spread further. It is spread when soil or root material infested with the fungus is moved.

Research into dieback is a high priority. Recent findings have helped identify a fungicide to protect populations of rare and endangered plants, and dieback-resistant strains of jarrah are being developed to help restore the worst affected areas.

Timber from plantations

Commercial tree plantations were first trialed in WA almost 100 years ago. Today there are more than 125,000 hectares of softwood and hardwood plantations, with at least another 50,000 hectares to be established in the next 10 years.

In the past several years, CALM, private companies and farmers have planted more than 10,000 ha of commercial tree plantations each year. CALM has been appointed as the agent for overseas companies who are committed to establishing more than 50,000 hectares of hardwood plantations on cleared agricultural land over the next 10 years.

The softwood plantations are principally Stateowned and cover 72,000 ha. They support a major industry producing a wide range of products, including furniture and structural grade timber, chipboard and medium density fibreboard. The hardwood plantations will mainly produce high quality wood fibre for paper products.

WA's plantation program will help satisfy the increased demand for timber products but it will complement, not replace, the timber industry based on native hardwoods.

Native hardwood timber is increasingly being used for high quality purposes, such as furniture, for which there is an increasing demand. The plantation grown timber currently being produced is not suitable for this end use and the technology is not yet available to produce high quality ornamental wood economically from plantation grown timber.

See for yourself . . . Explore WA's forests

People who want to find out more about sustainable forest management are encouraged to visit and explore the South West native forests. A wide range of books and information leaflets on forest native plants and animals are available from CALM offices.

Organised forest tours, which cover timber harvesting and processing, also are run from several towns in the forest areas. Details are available from local tourist bureaux.

People visiting forest areas are urged to take note of signs where entry is restricted because of the risk of spreading dieback, or where baits have been laid for fox control.

Fires should be restricted to the areas provided, or visitors should bring their own gas barbecue or stove. No open fires are allowed on total fire ban days.