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CALM News

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<p>NORTHERN FOREST REGION</p>  <p>Draft Management Plan April 1987</p>	<p>CENTRAL FOREST REGION</p>  <p>Draft Management Plan April 1987</p>	<p>SOUTHERN FOREST REGION</p>  <p>Draft Management Plan April 1987</p>	<p>TIMBER PRODUCTION IN WESTERN AUSTRALIA (DRAFT)</p>  <p>A Strategy to take WA's Forests into the 21st Century APRIL 1987</p>	<p>NORTHERN, CENTRAL, SOUTHERN FOREST REGIONS</p>  <p>Draft Management Plans Supporting Papers April 1987</p>
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Premier releases new forest plans

DRAFT Management Plans and a Timber Strategy that intend to dramatically increase the size of WA's conservation estate, increase its security and ensure the long-term viability of the timber industry were released by the Premier, Mr Burke, on Monday April 13.

The plans and the strategy were prepared by CALM and cover the Department's Central, Northern and Southern forest regions. They are available for public comment until June 17, 1987. Mr Burke said the Government had the dual commitment of reserving parts of the forest in perpetuity while maintaining the amount of timber needed to meet the industry's needs. He said the Management Plans and the Timber Strategy would meet these commitments to the satisfaction of the Government and the public.

CALM Minister Barry Hodge said the management plans contained a new system of classifying public land to ensure security of purpose and tenure.

Areas of parks, reserves and State forest zoned for conservation and recreation would be gazetted for those purposes and any changes would require approval by both Houses of State Parliament.

Similarly, the Timber Strategy reserves areas set aside for timber production.

If the Draft management plans are adopted more than 500,000ha of State forest will become parks and reserves, an increase of about 300 per cent.

Specific new developments include:

- creation of a new 23,000ha national park in the karri forest;
- introduction of legislation to gazette the Shannon River Basin as a National Park;
- increasing the area of the Yanchep National Park by about 50 per cent and the Avon Valley National Park by about 300 per cent;
- adding 38,000ha to the jarrah conservation estate;
- creating the first tuart forest national park at Ludlow between Bunbury and Busselton.

Mr Hodge said the Timber Strategy indicated that the timber resource could be sustained at current levels indefinitely with every hectare of forest that was harvested being regrown.

He said the cost of regrowing, establishing and maintaining native

forests and plantations would be met by the timber industry.

The Draft Management Plans and Timber Strategy were also launched by Mr Hodge in the Southern Forest Region at Manjimup on Tuesday, April 14, and in the Central Forest Region at Bunbury, on Wednesday April 15.

CALM staff from Como, Crawley and the Northern Forest Region as well as Southern and Central region staff were briefed on the contents of the plans by the Executive Director, Dr Shea, the General Manager, Mr Underwood, and other senior staff.

Dr Shea urged staff to support the concepts contained in the plans and to sell the ideas to the public.

As part of the launch of the documents, a public relations programme was initiated, which included the production of a video, the publication of a colour magazine and a newspaper insert.

The video, which outlines CALM's activities and details contained in the plans and strategy, is available at Regional and District offices to be shown to staff and the public.

The glossy magazine — What Future For Our Forests? — is available to the public, as are the Draft Management Plans and Timber Strategy (these documents at a cost of \$5 for the set).



BARRY HODGE and Syd Shea look at a management plan poster after the Manjimup public meeting. Picture courtesy of Zoran Panzich, Warren-Blackwood Times.

This is your chance to have a say in the future of our forests.

The Department of Conservation and Land Management (CALM) has prepared draft plans aimed at ensuring the future of our South-West forests and of our timber industry.

The objective is to conserve, in perpetuity, important and extensive forest areas and to ensure that the rest of the forests of the South-West will be harvested no faster than they can grow.



A BALANCE OF USES

In order to preserve the public and the Government of Western Australia need to consider:

The preservation and conservation of our forests for recreation, water catchment, protection of flora and fauna, etc; the preservation of a viable timber industry for its value to the State's economy.



THE W.A. TIMBER INDUSTRY

The timber industry in Western Australia employs more than 20,000 people directly and indirectly; has an annual turnover of more than \$300 million; is a major source of rural jobs. Australia currently exports more than \$1 billion of wood products each year and demand is growing.

The timber strategy proposes that it will be possible for Western Australia to supply all its own wood and export high quality hardwoods without depleting our forests.



VITAL CONSERVATION

Our South-West forests are valuable not only for their timber and other products. They are vital to prevent erosion; keep rivers and dams fresh; provide shelter for our kangaroos, animals, wildflowers and other precious living things; provide significant areas for recreational use, camping, picnicking, bushwalking, and scientific study.



A TIMBER STRATEGY

CALM has prepared a draft strategy aimed at ensuring a secure future for the timber industry while setting aside much larger areas than



MANAGEMENT PLANS

CALM has prepared draft management plans for the Northern, Central and Southern forest regions of the South-West (see map). They propose to give the forests a class security of both tenure and purpose, which means they cannot be removed from continuing ownership or used for other than their designated purpose, without the approval of both Houses of State Parliament. This would give security to both conservation areas and production forests.

PARK AREAS TO BE TRIPLED

CALM is responsible for more than 2 million hectares of land in the South-West. If, after public review, the proposals and the plans are accepted by the Government, more than 500,000 hectares could be added to the State's existing parks and reserves and dedicated to conservation and recreation. This would increase the State's total dedicated parks and reserves by

more than 300%. Almost one third of our South-West forests would become parks and reserves. At the same time, forest areas available for production would be secure. Among the proposed new dedicated parks would be a 25,000 hectare National Park containing some of the forest virgin karri forests in the State; The best remaining tuart forest at Ludlow, near Busselton, to become a National Park; Yanchep National Park enlarged by 50%; Avon Valley National Park, near Toodyay, to become almost three times its present size. Also, the Shannon River Basin will be added to D'Entrecasteaux National Park, fulfilling a major Government commitment to reservation in the karri forests.

MORE INFORMATION

A FREE 16-page booklet, "What Future For Our Forests?" will be posted to you by phoning: (091) 3670333 or any CALM Regional Office. The full management plans and timber strategy can be examined at public libraries across the State or at any CALM office. Copies are available at \$5.00 a set by writing to CALM at the address below.

DEADLINE 17 JUNE

Written comments and submissions will be accepted up to 17 June, 1987, and should be sent to:

The Executive Director
Department of Conservation and Land Management
50 Hayman Road
GOSWAM WA 6152

Bungle Bungles a national park

THE Bungle Bungle massif in the Kimberley has been declared a national park.

Conservation and Land Management Minister Barry Hodge said the State Government recognised the need to preserve and protect the unique natural formation which is an acknowledged national asset with enormous tourist potential.

Although the vesting process took time, it was worth the wait to ensure the area was properly protected.

The drafting of the management plan was already underway and will be available by about June this year for at least two months public comment.

Two additional CALM rangers will service the Bungle Bungles this season. In addition to ensuring maximum protection for the fragile environment, they will conduct a visitor survey.

tection for the fragile environment, they will conduct a visitor survey.

Last year, about 2000 people visited the massif and a further 12,000 flew over the area.

Many more visitors are expected this year.

Access is restricted to the rough roads and virtually no existent facilities.

More than 208,000ha of land around the 45,000ha Bungle Bungle massif had been vested in the National Parks and Nature Conservation Authority to be managed as a national park.

A further 110,000ha was declared a reserve for conservation.

Mr Hodge said there had been extensive consultation with tourism groups, local government and Aborigines who have traditional ties with the area, and this would continue during the preparation of the draft management plan.

The West Australian

THE State Government has made a genuine attempt to reconcile competing interest in its plan for the management of WA's forest resources.

Timber companies and conservation groups stand to gain from the blueprint, which sets out a sound strategy to guarantee the survival of the timber industry for at least 50 years while preserving big areas of forest for posterity. Companies will be given assured access to commercial timber reserves and an extra 520,000 hectares will be added to conservation areas.

The proposals strike a realistic balance between two extremes. They should help to remove uncertainty on both sides — by making it clear to potential investors which areas are available for exploitation and by assuring environmentalists that nominated areas will not be touched. Uncertainty and suspicion have been unfortunate by-products of the piecemeal approach that has marked forest management in the past.

No serious cost-benefit analysis could ignore the significance of the timber industry to the State's economic and social well being. The industry has an annual turnover of about \$300 million and at least 20,000 people — most of them living in decentralised areas — depend on forest-based ventures for their livelihoods.

But the forests are more than a simple resource to be exploited ruthlessly for economic gain. They are the heritage of all West Australians and, as the State's population continues to grow, will play an increasingly important role in tourism, recreation, education and scientific study.

The scheme may not receive universal acclaim, but the Government deserves credit for devising a sensible, long-term plan to manage a unique, living asset.

Reprinted from *The West Australian*, Saturday, April 18, 1987.

A WA based company is negotiating with the State Government to develop a multi-million dollar plant to produce domestic fuel briquettes for Japan and Korea.

Biocoal Briquette Co Ltd wants to buy WA coal and forest waste to manufacture 300,000 tonnes of briquettes annually.

Biocoal is looking at

Forest waste plan in SW briquette proposal

sites at Collie, Bunbury and Kwinana to establish a \$25 million plant which will employ up to 50 people.

The company plans to start exporting briquettes in the second half of 1988.

If the proposal goes ahead and the plant is

built at either Collie or Bunbury the briquettes will be exported from Bunbury.

Briquettes are made from a combination of coal and residue wood, using technology developed in Japan.

The products initial

market will be for domestic heating in Korea and Japan.

Biocoal is negotiating to buy about 100,000 tonnes of dry forest residue annually, and most, if not all, would be from existing sawmills and wood

processing plants in the South West.

CALM has been assisting the company with its feasibility study by providing samples of jarrah, marri, karri and pine to test their suitability to manufacture briquettes.

The sale of wood residue will not only improve forest productivity, but will also help the silvicultural treatment of the State forest.

HARVEY HOSTS CHAMPS

CALM's Harvey District is involved in the planning of an international sporting event — the 1988 World Canoe Championships.

The championships will be held on the Harvey River between the Stirling Dam and the Harvey Weir starting on Boxing Day this year and will run for two weeks.

The event is part of the 1988 Bicentennial celebrations and is being funded by the Bicentennial Authority.

Because the site is in State Forest CALM is responsible to provide new and upgrade existing facilities.

A committee comprising representatives of the Harvey Shire Council, Water Authority, WA Canoe Association and CALM has been established to develop facilities.

CALM's representative on the committee, District Forester Peter Keppel said the site was unique in that it was situated between two dams.

Water released from the Stirling Dam to fill the Harvey Weir for irrigation purposes can create winter flood and controlled water conditions throughout summer.

Peter said the organisers were expecting 100 to 120 international competitors to take part in the event, while up to 3000 people could watch the action daily.

The committee is developing 500m and 600m slalom courses and a 6km time trial course.

Existing picnic sites will be redeveloped and a car park and toilets constructed.



PETER KEPPEL looks at a plan of the canoe course.

Diverse training for Cadets

THE LATEST round of cadets have graduated from the Dwellingup Cadet Training School, and with a revised syllabus to cover ever-widening responsibilities, the cadets had an interesting year, as former cadet Michelle Widmer relates:

"The first year of the cadetship takes place at South West College in Bunbury where we were trained in calculation, communication, mapping and cartography and environmental science.

"The second year took on a completely different light, concentrating on practical field work to teach us field operation and to give hands-on experience in an officer's duties.

"These duties included tree marking, permit control, dieback demarcation and fire control, and we had major tasks to complete such as a number of control burns, pine harvesting and a bridge building exercise.

"The pine harvesting course was at Mylup pine plantation in the Harvey District.

"We were required to individually select and mark crop trees and thin the rest.

"An engineering component of the course was the construction of two wooden bridges in the Dwellingup district.

"Before building the bridges, however, we had to draw up plans and make necessary modifications to meet CALM standards.

"During this work, we learned valuable engineering skills and gained an appreciation of high safety standards and good team work.

"A highlight of our social life was the Blackwood Marathon, which involved the majority of the group, either as competitors or support crew.

"We never quite made the first ten, but enjoyed ourselves just the same.

"And the support crew never actually got around to supporting the team, but did support the bar.

"Because there are great differences between Northern and Southern forest operations, we spent some time at Manjimup.

"This included an intensive week on wood technology ranging from entomology to economics.

"We also went to districts with an emphasis on

pine production, where we learned aspects of pine burning and planting.

"As part of the revised syllabus, Chris Haynes gave an introductory talk on national parks.

"Also included was a visit from Landscape Architects Wayne Schmidt and Richard Hammond, who spoke to us about the role of landscaping in recreation.

"We then set about planning and developing the upgrading of the Bluff Knoll picnic site incorporating environmental constraints and public needs.

"This was followed by a trip to the Stirling Ranges where we future CALM officers set about putting our plan to work and, following a fortnight of toil, the result was a tremendous transition from tatty barbeque area to practical, neat picnic site."

Michelle is now based in the Metropolitan Region at Murdoch House.

SAFETY AWARD

A recent safety award presentation at Busselton recognised 12 months without a lost-time accident.

The 12-month period was the first since 1983.

CALM District Safety Officer Dave Rowe attributed the good record to increased awareness of hazards in the environment by workers as well as making sure their equipment was kept in good order.

Ongoing training programmes were part of this awareness as well as regular checks by the district safety officer of first aid boxes and discussions with employees about any problems.



Syd Shea congratulates Allegator Award recipient Paul Newman and Busselton District Manager Dennis Hilder at the safety awards presentation. Picture courtesy of Busselton-Margaret River Times.

JOHN MAINTAINS STANDARDS

WITH his grade hammer and an eye for timber that's taken 18 years to acquire, John Martin does the rounds of Southern Region sawmills to inspect timber that's often bound for faraway places.

John is a full-time inspector employed by CALM. His certification of timber allows sawmill companies to send their timber to a buyer, with assurance that it meets certain standards.

The certificate gives the species, the grade, description, the size of the cross section and the length of section, and the number of pieces that were passed and that were rejected.

There are four structural grades and four appearance grades of sawn timber, plus sleeper grades, crossings and mine guides.

When I caught up with John at Bunnings' Deanmill Mill near Manjimup, he was inspecting a load of sleepers destined for Westrail.

With two men provided by the sawmill to do the stacking and turning so John could view each side, the pile of timber was carefully inspected.

"Before you start off you see where the sun is, and stand with your back to it so you can see the wood better," John said.

He looks for defects, and if the timber is not good enough he marks it with yellow chalk.

He will later go back and mark the timber with his grade hammer, which identifies the inspector and the grade. — Colleen Henry-Hall.



TIMBER inspector John Martin casts an eye over a load of railway sleepers at Bunnings' Deanmill.

Broadbanding determinations

The Broadbanding Determination for CALM officers employed under the provisions of the Public Service Act has now been issued by the Public Service Board.

As part of the broadbanding exercise, the Technical Officers at the Wildlife Research Centre submitted a case for recognition of their technical expertise and skills.

With the assistance of Bob Cooper and Erica Marshall from the Personnel Branch, criteria were developed for evaluating experience and responsibilities at each of the Levels 2, 3 and 4.

The Public Service Board agreed to the arguments put forward, with the result that the Technical Officers now have a promotional structure based on merit.

Seminar explores model uses

By WARWICK BOARDMAN

A WORKSHOP on computer-aided modelling in multi-disciplinary and specialist areas explored possible uses of models in CALM.

Two aims of the workshop were: To decide if resources and attitudes of managers were sufficient to make modelling possible and cost-effective, and to identify areas where modelling could enhance the quality and/or the efficiency of decision making.

In the workshop, managers were seen to be suspicious of models, even if they are greatly involved in their creation, perhaps because models have

ven't been proved to be good enough.

Models need to be set up so management can check the reasons for results.

Managers also need to see the results of extensive testing that show predicted outcomes do occur.

Models that make predictions well in to the future have run into trouble because conditions change from what was considered likely at the time of prediction or because of model construction, making monitoring necessary.

When a model's performance becomes suspect it is time to look for unidentified assumptions and to check if known assumptions are still valid.

Indeed, poor model performance has led to the discovery of aspects of operations which were not previously recognised as crucial or imperfect.

This workshop followed on the heels of two other modelling meetings.

The first was an interstate meeting at Como for the Research Working Group II in "Forest Management Planning Models."

The second focused on a new version of PREPLAN currently being used in NSW, Victoria and South Australia.

A committee will examine the applicability of PREPLAN to WA.

Research seminar MOVE TO ARREST FAUNA DECLINE

By COLLEEN HENRY-HALL

By looking at patterns in the changes of mammal numbers since European settlement, trends in extinction can be predicted and action taken to save those species most threatened.

Dr Andrew Brubidge, senior principal research scientist at the Wildlife Research Centre opened CALM's 1987 season of research seminars at Como with his "Conservation implications of patterns in the recent decline of WA's mammal fauna."

Andrew said, "In the past, we have looked in detail at one animal, an expensive and time-consuming exercise.

"With this work we hope to find patterns, using available data, to determine which groups are in trouble, so we can do something about it."

Seven patterns were chosen to look at.

The first was body weight, and Andrew found that medium sized animals — in the range of 45g to 450g — had a high rate of extinction. He called this "critical weight range".

Another pattern was climate and land use, and they found that the greatest number of mammals have declined or disappeared in the deserts and wheatbelt, and the least in the North Kimberley.

Another important factor was the distribution of feral mammals: the least number are in the North Kimberley and the most in the south-west.

They also looked at habitat and found that if a mammal lived in an inextinguishable habitat such as a rockpile, or was arboreal, it had a good chance of survival.

Using these patterns and others, he developed a list of mammals in danger.

"A mammal likely to decline or become extinct is in the critical weight range of between 45g and 450g, doesn't live in an inextinguishable habitat or a tree, and does not fly," Andrew said.

"This is the basis for making decisions about what is in greatest need of our conservation dollar," he said.

"A lot more experimental data is needed to test these theories, especially in the area of manipulating the environment with fire, and manipulating the presence of predators, two of the most important management considerations."

Unusual nature holidays

TAKE an unusual holiday and learn something about the environment at the same time.

A number of courses are being offered by the Royal Australasian Ornithologists Union this year at the Eyre Bird Observatory in the Nuytsland Nature Reserve.

"Banding Workshop" runs from 24-30 May and costs \$160. Update your knowledge, exchange ideas and band some birds.

If you haven't been to Eyre, this is an ideal opportunity; but book early.

"Wintering with whales" will run from 26 July to 1 August and costs \$160.

"Nests, territories and breeding biology" runs from 16-22 August for \$160.

Bird breeding peaks at Eyre in late August.

Course leader Allan Brubidge (Research Scientist at CALM) will teach you how to find nests and to record useful information that can be analysed to give an insight into the breeding biology of birds.

Further information on all Eyre Observatory courses can be obtained from the WA branch of the Royal Australasian Ornithologists Union on 364 6202.

CALM-FIT FOUNDERS

CALM-FIT, the Department's health and fitness programme, has become a victim of the present severe budget restraints.

The pilot programme, which was funded by a grant of \$7000 from the Commonwealth Department for Sport, Recreation and Tourism in March 1985, has missed out on funding from this year's budget.

An interim report on CALM-FIT in March 1986 gave six recommendations that, unfortunately, required substantial funding.

Requests for funding were made to other departments and rejected, but an application will be resubmitted for money from CALM's 1987-88 budget.

The administration of the programme is being carried out by Kathy Mutch, Personnel Branch, Como.

She has contacted several organisations to provide CALM with any information on seminars, conferences, initiatives, issues, activities and programmes on an ongoing basis.



EDUCATION officer Sue Worley (right) teaches a group of children to sense the world without using their sight.

UWA ENVIRONMENT STUDIES

INSTILLING people with an appreciation of the environment is the aim of CALM's environmental interpretation and education activities programme.

The programmes, developed by Interpretation Officer Gil Field, are being offered through the University of WA's Extension Programme.

One course, "Exploring Perth's Marine Environment," was recently led by CALM's Director of Nature Conservation Dr Barry Wilson.

The same course, led by Marmion Marine Park Manager Greg Pobar, is being offered in the Autumn Extension Programme, along with "Plant Communities of the Swan Coastal Plain", led by Senior Wildlife Clerk Robert Powell.

Gil is looking for more ideas and programme leaders.

"The aim is to develop an appreciation of the environment, as much as an understanding, or knowledge about that environment," Gil said.

Offers for possible courses have included such subjects as land use planning in metropolitan forests, marine interpretation technique, management of small bush areas in the metro area, environment and land use of the Swan Coastal Plain, and ecological principles, geomorphology and map interpretation for the naturalist.

To appeal to a broad range of people, the activities should be one or two-day courses targeting the general community, rather than a series of evening lectures over a number of weeks Gil said.

The activities must have a field component on CALM lands and a certain educational input.

Gil said, "People will then have the opportunity to directly experience nature and therefore be more likely

to develop both positive attitudes and understandings."

Gil, with the help of university student Wanda Berry, will contact prospective course leaders to fine-tune the activities.

He is also available to give advice on presentation and preparation.

"If the extension programme proves successful, then we may consider running our own programmes in the future," Gil said.

The environmental interpretation programme also includes national park-based activities, aimed more at holiday makers.

Programmes have already been held in Leeuwin-Naturaliste and Walpole-Nornalup national parks.

Landing sites rehabilitation

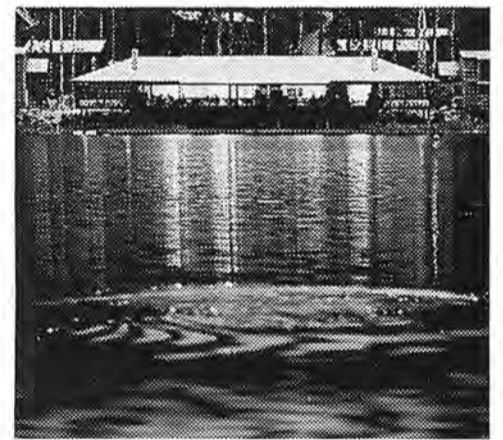
LANDING sites are easily accessible spots near a logging operation where logs are stacked for transport to mills.

With tonnes of heavy machinery moving over these landing sites, the ground becomes compacted and nothing will grow there unless the area is rehabilitated.

Senior District Forest Officer Cameron Schuster said, "In the late 1970's, after studies of compacted areas, the Department adopted a policy of rehabilitating landing sites."

"It's an economic consideration, because the new trees prevent erosion, but it's also aesthetic because the forest looks better."

A landing site at Brookman II, in Pemberton Dis-



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Bob's perfect



BOB SYMANSKI, head mechanic at Ludlow, gives 100 per cent when he does something.

That's obvious from the results of his technician's development course — four exams over one year and Bob scored 100 per cent in each.

The correspondence course, sponsored by GM Holden, trains CALM staff in the maintenance of vehicles.

With CALM's big fleet of Isuzu trucks, it's an important skill to have, said Len Marshall, senior mechanical supervisor at Bunbury.



ANOTHER pumper unit ready to be used to fight a bushfire thanks to (from left) Gary Kravanis, Gary Brown, Michael Baker, Terry Finnell and Salv Mileto from the Collie workshop.

FACELIFT FOR ATTRACTIONS

ONE TREE BRIDGE along with nearby Glenoran Pool is a major recreation site in the Manjimup District.

Manjimup District Recreation Officer Scott Wood said, "Up to 200 visitors on a good weekend will stop, but because the facilities aren't there to cater for that many, they move on."

The site is slated for a number of improvements which will include new picnicking and barbecue areas, an information shelter, parking and toilet facilities.

"The site is too small for the number of visitors it gets, so the information shelter will be used to redirect tourists to other recreation sites in the district," Scott said.

The soil at One Tree Bridge has become very compacted, which is threatening the health of trees and leading to erosion.

It is planned to rehabilitate and redevelop the site to include picnic areas and walkways along the river.

A pathway for use by disabled visitors will be

built under the existing road bridge to link the area with the car park and the information shelter.

"We've had expert advice on how conflicting uses can be reduced by careful design in the site redevelopment," Scott said.

"But some conflicts can only be solved by developments away from the site, such as alternative camping and picnic areas and road alignments."

Suggested changes include a section of Leeuwin Road, after investigating an alternative safe vehicle access route, and the associated development of walk and nature trails between the picnic site and the Four Aces.

Also being considered are future development of a bush camping area at Green's Island and redesigning the Four Aces area into a major stopping site for buses and caravans.

Other Manjimup District recreation projects include

a walk trail at King Jarrah, an information shelter at Diamond Tree and information panels in three former coupes in the district that would explain the after affects of logging to visitors.

Award to Hoo Hoo programme

PERTH'S Hoo Hoo Club has achieved international recognition for its Creative Youth Award.

A manual arts programme designed to encourage disabled students by developing their skills in working with timber, the award won the Perth Club the Outstanding Club Activity Award at a recent convention in New Zealand.

The Hoo Hoo Club is a fraternal association of people working in timber production.

The second annual presentation of the awards was held November 18.

The Governor, Professor Reid, inspected the students' work and presented trophies.

CALM's Wanneroo District Manager Alan Briggs has been involved in getting the programme off the ground, which saw 174 disabled students from nine schools enter items in the Creative Youth Awards.

There are a range of classes with all participants receiving certificates, and special awards for the class winner.

The Perth Club plans to organise this year's awards so disabled students throughout the State can take part.



SECOND-year cadets construct the boardwalk beneath the bridge at One Tree Bridge recreation site.

Zimbabwe NP visit a holiday highlight

CALM Officer Helen Fordham has just returned from a 12-month, round-the-world trek that included visits to South Africa, Zimbabwe, Israel, Egypt and Russia.

She is once again back at Murdoch House, but has changed duties and is now Administrative Officer for the Metropolitan Branch. Here she recounts some of her experiences in Zimbabwe's biggest national park.

"In Zimbabwe we made our way to Hwange National Park, persistently pronounced "wankie" by the locals.

"It is the largest park in Zimbabwe and one of the last elephant sanctuaries in Africa, where herds of up to 100 can still be found.

"The Park is a game reserve and all access is vehicular.

"Because we were on foot, we were at a considerable disadvantage, but after I chatted to one of the rangers, he kindly took us

on a private tour, which also included a visit to the ranger's private menagerie.

"This zoo contained injured and tame animals: a family of ferocious looking wart-hogs cheerfully snuffled at my feet, two baby elephants ambled about and an injured rhino made the extraordinary noises of a bleating lamb while it tried to break out of its enclosure.

Poaching

"The consequences of poaching in Zimbabwe are severe.

"During my visit several poachers were shot for their efforts.

"Although Hwange is a national park, it is still a totally natural environment

full of wild animals, which was dangerously easy to forget.

"The ranger told us between three and five people are taken each year by lions and an average of 100 people by crocodiles.

"And we thought we had a problem!

"We left the Park and tried to hitchhike to Bulawayo.

"Previously we had found it easy to get lifts, but for some reason no one stopped this time.

"We later discovered we had been hitchhiking in the middle of Matebele land, a dissident region.

"A few years ago a tourist bus had been hijacked here and its passengers murdered."

Collie workshop prefabs pumper units

IN the workshop on the left stood a steel welded structure, the frame for a water tank unit for one of CALM's heavy duty fire trucks.

On the right was the finished product: the same type of steel frame, but fitted with a fibreglass tank, water hoses, controls, a pump, and freshly painted.

The Collie Regional Workshop turns out about 30 pumper units each year, the 10 men supply districts and regions from Broome to Kalgoorlie to Cape Arid.

Building such a unit is a matter of putting the different components together.

The tanks themselves come from a Perth manufacturer, the boxes

that hold other equipment from the Bunbury Workshop.

Shop Foreman Gary Kravanis said, "It's done on a production-line basis, with components pre-built and stored until we put it all together."

This method ensures a standardisation of equipment, so the pumper units are easy to repair.

About 200 manhours go into each pumper unit, with the welding of the frame alone taking three days.

When a unit is finished, it goes through testing of all its functions: drafting, pressure testing of various hoses and foam output.

The workshop also is known as the Department's "fire store" — here one can find canvas hoses in abundance (in the winter, that is).

When the fire season is over, each district and region delivers its hoses to Collie where they are washed, tested at high pressure, colour coded and stored in racks with a heater going non-stop to dry them out.

ARSONIST AT WORK

MARRONER'S campfire or arsonist's hand?

The cause of the recent fire at Walpole was unknown at the time, but fire researchers from Manjimup led by Research Scientist Neil Burrows, are almost certain the fire was the work of an arsonist.

They spent some time where the fire started, near Sappers Bridge, to find evidence that would help determine the fire's cause.

The researchers also took note of Park Ranger Chris Hart's observations of the fire's perimeter and its behaviour when he ar-

rived there the morning of January 28.

At the site, line transects and inspections on foot were made in the fire area Chris described.

There, such things as freeze direction, defoliation and scorch heights were measured and recorded.

Using these three measurements, it is possible to ascertain likely fire behaviour and the direction of flame travel, Neil said.

They can also determine areas that were burnt by headfire, backfire or flank fire.

The team came to the conclusion that the fire shape, perimeter, area, freeze direction, scorch height and defoliation height patterns could not have been caused by one source of ignition.

Neil reported, "The most feasible explanation for the start and spread of the fire is that the fire was deliberately lit by multiple ignitions at around 3.30am January 28.

Well done, again

THE recent large fire south of Rocky Gully was yet another example this summer of a rapid, effective and safe fire suppression action carried out by staff of this Department and Bush Fire Brigades.

The fact that no significant losses of property were caused through such an intense fire is of great credit to all concerned.

I believe that all of CALM's wages and salaried staff who were involved in this fire have again performed most creditably, and with distinction, in a dangerous and unstable fire weather pattern.

Would you please ensure these comments are passed onto all of your staff who were involved in the suppression action, with my personal congratulations and thanks for a job well done.

ALAN WALKER
Regional Manager Manjimup

WILDFIRE RESEARCH

MANJIMUP Research staff Bob Smith, John Neal and Lachlan McGaw travelled to the Fitzgerald River National Park recently to investigate the behaviour of a wildfire that had burnt out about 190h of the Park.

The fire had been fanned by strong, dry, north-westerly winds and it travelled 6km in about four hours before being extinguished by a southerly wind change.

The purpose of the visit was to examine the fuel types in which the fire had burnt, and to develop ideas about the influence of roads and topographic features on the fire's behaviour.

The team will be making further field trips this Autumn to be involved in burning in heathlands along the South Coast and on the sandplains north of Perth.

On these trips they will be collating information about the effects of fuel characteristics and weather conditions on fire behaviour.

This information will be used to evaluate the performance of several different systems for predicting fire behaviour — a process that will continue over several years.

