

C.E. LANE POOLE MEMORIAL TRUST

LANE POOLE AWARD
STUDY TOUR, 1993/94



A REPORT TO THE TRUSTEES

by

A HORDACRE



C. E. Lane Poole Memorial Trust

*Regional Manager
NARRAGOON*

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LANE POOLE AWARD STUDY TOUR REPORT - A. HORDACRE 1993/94

The Lane Poole Memorial Trust was established to commemorate the work of Charles Edward Lane Poole, and in particular, the connection between the former Conservator of Forests and the late Thomas Cullity. The Trust provides financial assistance to officers of the Department of Conservation and Land Management to participate in courses of study that are relevant to their employment. Since 1981, thirteen CALM staff have received these awards.

Enclosed is a report to the Trustees by Alan Hordacre, relating to his study tour in 1993, which covered aspects of landscape management, including that relating to timber harvesting in Tasmania and Victoria.

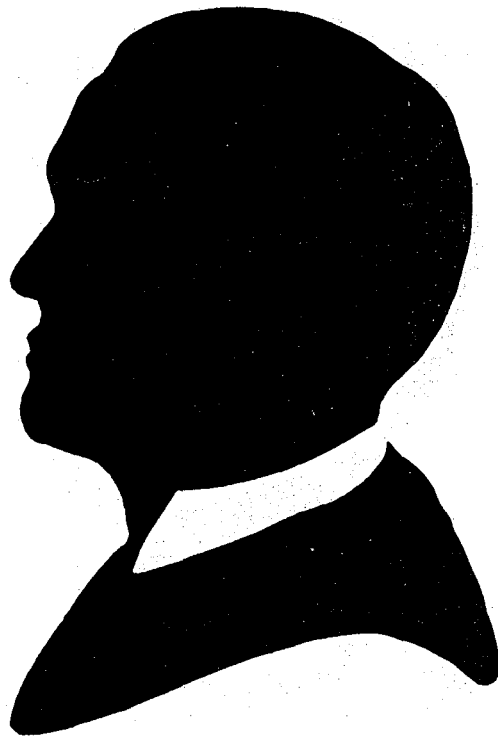
The Trustees would like to see as many of CALM's staff as possible read these reports and would appreciate you circulating the report to any of your staff who may be interested. Further copies of this report and earlier reports are available from the Secretary of the Trust at Crawley.

*Syd Shea per Collette
Secretary*
Syd Shea
CHAIRMAN OF TRUSTEES

16 August 1994.

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The Lane Poole Memorial Trust was established to commemorate the work of Charles Edward Lane Poole, and, in particular, the connection between the former Conservator of Forests and the late Thomas Cullity.

Lane Poole was appointed Inspector-General of the Woods and Forests Department in Western Australia in 1916, and was responsible for establishing the legal framework on which the State's forestry operations have since been carried out.

That legal framework was the 1918 Forests Act. Before the Act was introduced there was no legislation to control the amount of timber cut, the place and manner of cutting, or to regenerate the forest after cutting.

When Thomas Cullity graduated from the University of Western Australia in 1918, Lane Poole offered him the newly created position of Utilisation Officer in the Forests Department, which he held for one year before leaving to start up Millars' new commercial kilns at Yarloop.

Thomas Cullity maintained an interest in forestry and timber for the rest of his life and founded Cullity Timbers in 1928 and Westralian Plywoods in 1943. From these companies WESFI was formed.

The Trust was initiated by Conservator of Forests Bruce Beggs and WESFI Chairman Denis Cullity in 1981, and was developed by a Board of Trustees representing the former Forests Department and WESFI.

The current Chairman of the Board is the Executive Director of the Department of Conservation and Land Management, Dr Syd Shea.

The WESFI connection resulted from a belief held by Lane Poole that forestry needed an interdisciplinary approach to cater for the needs of society.

The Trust provides financial assistance to officers of the Department of Conservation and Land Management to participate in courses of study that are relevant to their employment. The Award, which covers the cost of travel, tuition and accommodation enables the recipient to study anywhere in Australia and New Zealand for up to six weeks.

WINNERS OF THE C.E. LANE POOLE AWARD

1983	Paul Marsh, Ray Fremlin
1984	Graeme Hutchinson
1986	Gerard van Didden, Tony Brandis
1987	Peter Keppel
1989	Greg Voigt
1990	André Rynasewycz
1991	Greg Mair
1992	Mervyn Smith, Derek Winters
1993	Alan Hordacre
1994	Michael Cully

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INTRODUCTION

The award was made for travel to Victoria and Tasmania for a period of six weeks.

The goals of the study tour were:

- To gain "hands on" experience and knowledge in the practical application of computer software programs that facilitate the integration of landscape values with all other values and demands.
- To experience the processes of integration, in designing, planning, implementing, managing and evaluating a specific native forest harvest project.
- To identify inefficiencies experienced by hosts during the introduction of landscape management and computer assisted integrated planning, so as to avoid similar losses occurring to CALM and its customers.
- To make comparison between the practical landscape management techniques used in Tasmania and Victoria with those used in Western Australia. To seek advice on options for adapting relevant systems to suit Western Australian conditions.
- To study methods being used to evaluate community reaction to and public perception of forest management and harvesting operations.

Itinerary

Melbourne	18-19 October 1993
Lake Eildon	20 October 1993
Healesville	21 October 1993
Grampians	22-24 October 1993
Dandenongs	25 October 1993
Melbourne	26-30 October 1993
Hobart	1-3 November 1993
South east and Southern Tasmania	4-10 November 1993
Eastern and Northern Tasmania	11-19 November 1993
Western Tasmania	20-21 November 1993
Hobart and Southern Tasmania	22-26 November 1993

ACKNOWLEDGEMENTS

I would like to thank the Trustees for supporting me to travel to Victoria and Tasmania as the successful applicant for the 1993 Lane-Poole Award. I was able to achieve the objectives of my application and believe that land management in Western Australia has and will continue to benefit from what I was able to learn.

I pay special thanks to Mr Denis Cullity and WESFI for their foresight in creating the Lane Poole Award Trust and for generously supporting it financially.

I also thank the staff of the Victorian Department of Conservation and Natural Resources and the Tasmanian Forest Commission for their efforts to make my visit both informative and enjoyable. John Cleary and Bruce Chetwin were key contacts and went to great lengths to ensure I achieved my objectives.

INTEGRATED LANDSCAPE MANAGEMENT

Victoria

A single staff member is responsible for all landscape management on land managed by the Victorian Department of Conservation and Natural Resources (DCNR). This person is attached to the Architectural Section of the DCNR and works out of the Melbourne headquarters.

The visual management system as used by CALM is also applied as a planning framework for developments and operations likely to impact on landscape values on DCNR lands in Victoria.

The approach to integration of landscape values by the DCNR is similar to that being applied in Western Australia. The greater maturity (over 15 years) of DCNR's management for landscape values when compared with CALM does not appear to have developed any stronger commitment to landscape management at tactical and project level planning by harvest planners and managers.

The success or failure of landscape management seemed to depend on the attitude of regional harvest practitioners regardless of the strategic, policy and project design direction by the specialist landscape staff. Some work was being done to a high standard and other to a mediocre quality.

High quality project level plans are drawn up for large plantations rather than individual harvest units within plantations as has been occurring in CALM.

In addition to the above extensive the Silvicultural Systems Project (SSP) research includes the following objectives related to landscape:

- development of computer procedures to simulate silvicultural options and impacts that predict effects of harvest from various viewer distances and changes over time as regeneration occurs;
- development of a means of quantifying the visual effects of different silvicultural treatments;
- assessment of the influence on viewer preference, of the degree, extent and type of silviculture; and
- investigation of the relationships between preference ratings and silvicultural system, distance from viewer, and change over time.

The work done so far is impressive. An overview is given in section two of this report.

A simple computer program to assist harvest planners integrate landscape values is being developed by DCNR. This will provide a step by step guide to coupe planning however will not accommodate detailed project design which will still require the input of suitable trained and experienced staff.

Tasmania

The Tasmanian Forestry Commission (TFC) has had a specialist staff member based in its Head Office in Hobart working on Landscape Management for over a decade.

The visual management system as used by CALM is also applied as a planning framework for developments and operations likely to impact on landscape values on State forest lands in Tasmania.

A comprehensive 'Manual for Forest Landscape Management' has been written to assist planners and operations managers integrate landscape values into their plans. This manual is being used as a training and awareness tool in CALM. It is an excellent guide for anyone required to develop a landscape plan.

Integration of landscape with other values has occurred at a strategic level through the Forest Practices Unit. Tactical and project level integration is achieved through input to plans by a TFC Landscape Planner in a very similar way to how it is achieved in CALM. Observations were that as in CALM there was good integration at policy and strategic planning levels while varying degree of acceptance of the need to consider landscape values amongst harvest planners and managers was prevalent.

The majority of the landscape management work in Tasmania has applied to mid and background views (panoramic vistas). This is due to the hilly or even mountainous terrain in which harvest is often carried out. Harvest has been concentrated outside foreground viewsheds of high sensitivity in the past. TFC is now confronting the reality that the resource in foreground areas is required for harvest. A concentration of harvest in these areas will pose challenges to landscape planning.

Some excellent strategic or long term projection planning has been done over broadscale sensitive regional viewsheds in areas where there is a visual interface between timber harvest and tourism and recreation. These studies have considered the disturbance absorption capacity of the landscape when viewed from key viewpoints and provided a suggested sequence and scale of harvest that meets the visual management objectives. The resulting plans provide assistance to harvest planners for periods of up to 80 years.

Training of operations, planning and industry staff in landscape planning was being carried out on a project level through coaching on the job.

For planners this involved using the 'New Perspectives' computer program with landscape planning techniques to a particular coupe or series of coupes within a viewing catchment.

More details of equipment and techniques used to develop landscape plans are included later in this report.

Opportunities for CALM

Maintain a liaison with the Victorian Silvicultural Systems Project outcomes and evaluate potential applications in CALM's harvesting operations.

CALM should maintain operational level focus on landscape values by the full or part time dedication of more than one specialist to landscape planning and management.

LANDSCAPE DESIGN SIMULATION

Victoria

To achieve accurate and realistic visual simulation of projects during the planning phase DCNR has developed a highly sophisticated photographically and topographically accurate system based on 'CAD' Image Processing (painting) Program, 'Microsoft DOS' and 'Windows' software.

The Landscape Management section is developing the system which required a high level of computer training and expertise to operate.

The Melbourne University has courses that are focused on training and further developing computer aided visual simulation. Access to the expertise of this program and its graduates has greatly assisted DCNR in the development of the system.

Financial support from the Silvicultural Systems Project provided the initial seed capital for the project.

A capital outlay of in excess of \$30 000 for hardware and software was made to set up the system. Upgrade of facilities as improved equipment has become available and the need to increase memory storage capacity has further increased the capital value of the system.

The images produced are perfect and one could not distinguish them from a real photo. It would not be practical to expect staff with only rudimentary computer skills to operate this system without extensive training. High quality simulations are not generally required for CALM projects.

Tasmania

To predict landscape effects and simulate options for operations and developments during planning TFC has purchased a simple off the shelf program called 'New Perspectives'. It could be operated on any 486 computer.

Forest workmen with brief in-house training were successfully using this program. Images produced were in a graphic form and topographically accurate. Assuming ownership of a computer and digitising table the cost to set up for this program is \$1 200 plus digitising tablet and puck if not already available. Each District office in Tasmania is equipped with a geographic information system (GIS) and while it is mainly being used for data storage and map production at present the development of its analytical ability is well progressed. 'New Perspectives' and other compatible software has been coupled to provide more realistic images for high sensitivity projects. This allows the draping of photographic images over the 3 dimensional model created by 'New Perspectives'.

Melbourne University

The School of Environmental Planning and the Surveying and Land Information at the University of Melbourne have a centre for Geographic Information and Modelling to provide specialist expertise in Geographic Information Systems. This includes applied research into environmental modelling and decision making and visualisation of environmental process, planning and design.

The product of accurate simulations created by the centre include:

- Visual Impact analysis that can be conducted in a wholly objective rather than largely subjective manner.
- Accurate simulations which lead to a greater understanding and better communication of a proposed development.
- Reduced uncertainty and conflicting interpretations of a project design.
- A public perception that is more likely to be positive and trusting.
- Cost effective aid to management.

The centre has customers and sponsors including the Australian Electricity Supply Research Board, Victorian Roads, State Energy Commission of Victoria and the City of Camberwell.

Dr Bob Itami of the School of Environmental Planning demonstrated a new software package 'Vista Pro' which his school is further developing to provide a simple user friendly opportunity for use in landscape design simulation.

The outcome will be a flexible seamless interface with GIS that will produce either graphic (very realistic) or photographic images of Australian forestry scenes and design simulations of proposed operations.

Opportunities for CALM

In the current climate of downsizing it is not feasible to expect that CALM would have a priority to purchase equipment or employ staff with sufficient expertise to establish a project similar to that run by DCNR, unless grant money or income earning capacity were available.

It is possible to contract CALM simulation projects from the private sector on an as needed basis.

The 'New Perspectives' program is now in use in CALM and is proving to be a very useful planning tool. The Southern Forest Region have purchased 'New Perspectives', however additional copies of the program need to be made available in the Central Forest and Swan Regions. The purchase of rollup digitising tablet and 16 button puck to be coupled to existing 486 computers is recommended to make the system portable for training and operational purposes. Ideally district and planning staff would be trained (a simple task) in the use of the program to allow them to develop options for harvesting operations and other developments that will affect the landscape. This could be achieved with minimal financial outlay and using existing staff.

CALM could maintain contact with Bob Itami and evaluate the possible applications of his work in CALM once its development is at a stage where it could be applied at a project level.

TIMBER HARVEST PLANNING

Victoria

Timber harvest planning on State forest in Victoria is directed by the Timber Harvesting Regulations 1989.

The Timber Industry Strategy 1986 provides statewide direction for timber production.

The Code of Forest Practices for Timber Production sets out a consistent statewide set of guidelines for planning and production.

Forest Management Plans for particular forest management areas provide more detailed principals and prescriptions to suit the forest types, land and soil types and climate of the area. These plans are produced after extensive public consultation and apply for ten years.

A Wood Utilisation Plan produced at three year and one year levels provides detailed planning for wood production in terms of type, quantity and distribution to processors.

A Forest Coupe Plan provides a set of detailed prescriptions applicable to a particular harvesting operation.

In essence the planning system applied to timber harvest in Victoria is very similar to that in Western Australia.

The Victorian Timber Industry Strategy 1986 provided the terms of reference for the Silvicultural Systems Project (SSP) to address the following community concerns regarding large scale clearfelling:

- It is seen as damaging to the landscape, water quality and flora and fauna habitats.
- It is condemned as an inefficient method of timber harvesting because it can generate a concentration of waste wood unsuitable for use as sawlogs.
- The residual roundwood produced by clearfelling is cited as a justification for the introduction of export woodchipping.

The SSP was implemented to assess through long term experiments the implications on all forest products and values of alternative silvicultural systems, such as even aged shelter wood and even- aged group selection systems, compared to clearfelling.

The project is much larger in scale (some 1 500 hectares over a wide range of forest types) and proposed duration than any previous Australian silvicultural study of its type.

The project is multi disciplinary and the input of industry, the community, conservationists and scientific specialists from a wide range of professions.

SSP is concerned with the total ecosystem and its conservation in the long term. It also addresses achieving the balance between the primary economic objective (sustainable sawlog production) and the primary environmental objective (long term conservation of the forest ecosystem).

To date considerable progress has been achieved and despite being in its early stages there have already been some important early benefits.

Tasmania

All timber harvest planning on State forest and private property is directed by the Forest Practices Act 1985.

The Act requires that the proponents of timber harvest must produce timber harvest plans. Three year plans are required from companies (including the TFC) harvesting or causing the harvest of in excess of 100 000 tonnes per annum and, with minor exception, all individual harvest coupes on an annual basis.

The Forest Practices Code provides statewide direction and a set of minimum standards that must be met by any Timber Harvest Plan.

The TFC produces strategic level area plans for the longer term management of regional units of the State Forest estate.

Planning for forest management in Tasmania uses as a base, plans called Management Decision Classification Plans (similar to sensitive management plans used in Western Australia). These are maps maintained by a group of six specialists (Fauna, Flora, Archaeology, Geomorphology, Soils, Landscape) known as The Forest Practices Unit - Specialists Group.

The Forestry Commission as a multiple use land manager with a primary focus on sustainable timber supply has a requirement for detailed analytical planning abilities to meet all its social and environmental obligations.

A trial to develop a new method of integrated operational, tactical and strategic planning by using GIS digitised coupes as a basis for all levels of planning has been implemented at Geeseston District. A wide range of attributes for each coupe are added to the database. The advantages provided by the system include more accurate and realistic data, vertical integration of operational, tactical and strategic planning and that a greater appreciation of total effect of any changes to harvest boundaries can be evaluated and quantified by overlaying other attributes. The system also facilitates the easy production of maps of consistent and high quality.

Ultimately coupe plans are produced using the GIS based data for map production.

Opportunities for CALM

CALM timber harvest planning staff could establish communications with their peers in Tasmania to initially review current practice and in the future share developmental improvements for mutual benefit. A set of comprehensive notes known as "Coupe Pack" is available for scrutiny from the author.

TIMBER HARVEST MANAGEMENT IN TASMANIA

One in eight Tasmanians are employed by the timber industry. Some 600 Timber Harvest Plans were approved in 1992/93. The Forest Practices Act which the industry works under contains legislation to ensure that the impact of timber harvesting is at an environmentally and socially acceptable operational level and to ensure the proper reforestation of harvested areas on State forest and private property.

The Forest Commission is the State Government's organisation responsible for the administration and implementation of the Forest Practices Act.

The main aspects of the legislation provide for:

- A periodically and publicly reviewed Forest Practices Code.
- Timber Harvesting Plans, required for most commercial timber harvesting operations on private property and State forest (including roading, logging and reforestation where applicable). Their provisions must follow the Code.
- Three year plans showing location, volumes and transport routes of timber from private property operations of large companies.
- Forest Practices Officers to administer the process.
- Enforcement provisions for making good unacceptable damage or for court action in case of repeated major breaches.
- A Forest Practices Tribunal to hear appeals

A Forest Practices Unit was formed to deal with these forest practices aspects of the legislation.

Forest Practices Specialists (Fauna, Flora, Archaeology, Geomorphology, Soil and Landscape) research forest practices related subjects, compile data bases and manuals and provide decisions related to special values at timber harvest plan level.

District Staff Forest Practices Officers (FPOs) plan, manage and inspect the day to day operations in the field.

A total of 134 FPOs were working in the Forest Commission and Industry in June 1992.

The Forest Practices Unit provides an annual review to the Commission. This review highlights achievements, problems and future direction as well as providing statistics relating to their activities. A copy of the Forest Practices Unit 1992-93 review is held by the author.

MONITORING AND EVALUATION OF TIMBER HARVEST PLANS

Monitoring and evaluation of Tasmanian Forest Commission Timber Harvest Plans is carried out at three levels:

- Day to day supervision and monitoring by District Forest Practices Officers.
- Monitoring by specialist inspectorial enforcement staff.
- Evaluation by senior Regional field staff from outside the region of operation. Approximately 15 per cent of these staff members' time is dedicated to this task.

A comprehensive implementation evaluation form is completed at inspection.

The system of having a senior member of staff with no self-interest in the operation has merit. This unbiased evaluation has the ability to identify needs for training and improvement that a very familiar local officer may not notice.

Opportunities for CALM:

CALM could consider appointing responsibility for cross supply area evaluation of individual operations to experienced multi dimensional staff. A copy of the form used is available from the author.

POTENTIAL SAWLOG RETENTION IN TASMANIA

Many of the *Eucalyptus delegatensis* stands of Tasmania have been subject to a long history of logging and indiscriminate burning. These two factors have generally resulted in well stocked, uneven aged forest which, if managed on a potential sawlog regime, can assist in meeting the short-term sawlog requirements.

In the past harvest of these stands has resulted in the loss of potential sawlog stems as no retention has been enforced.

A joint research project between the Commission and Industry has been completed to investigate opportunities for protection of potential sawlog through a bonus to contractors for containing operation damage to potential sawlog.

Justification for the project was required to achieve the following:

- It had to replace regeneration costs.
- Yields a sawlog harvest in 20 to 40 years as compared with a normal rotation of 80 years.
- Contractors need to be specifically skilled and have the right attitude.
- Harvesting for results achieved are more expensive than clearfelling.
- The Commission is the main beneficiary of the work.
- Contractors look on their bonus payments as part of their normal returns.

Results of the trials indicate that the cost of 'silvicultural bonus' to contractors can be recouped when value adding to final product at harvest occurs. Detailed economic analysis is still required.

Inspection of several *Eucalyptus delegatensis* stands and harvest operations indicated that stand structure is similar to much of the northern and central jarrah forest.

Opportunities for CALM

CALM could consider introduction of a 'silvicultural bonus' system for logging in selected mixed age jarrah and regrowth jarrah and karri stands. This would need to be done in a very conservative manner. The performance of some self-regulated contractors in Tasmania was very poor and considerable loss of potential sawlog was observed. No marking for retention was observed. A copy of a report on the 'Potential Sawlog Retention 1992 Trial' is available for scrutiny from the author.

CABLE THINNING IN TASMANIA

Trials into the thinning of high quality 20 to 30 year old *Eucalyptus regnans* using cable logging systems have been carried out in a cooperative operation between Australian Newsprint Mills and the Forestry Commission of Tasmania.

The trials were considered necessary to:

- promote sawlog growth
- ameliorate environmental problems associated with using conventional logging techniques in regrowth stands
- better manage residual debris
- minimise damage to retained stems

The commercial potential of the trial results have confirmed that from an operational perspective:

- Cable systems can be used to thin silviculturally regenerated forests
- Cable operations can meet, if not exceed, the previously accepted silviculture criteria for ground based operations
- variation in terrain, weather and the level of residual debris are not a constraint with Cable systems
- the cost is higher than the commercially acceptable 'on truck' wood cost

The thinning trial used machinery that was not ideal for the operation. Purpose built machinery had been ordered to implement the next stage of the trials, therefore confidence in the system's ultimate success was strong.

Inspection of the operation indicated:

- a very low level of soil disturbance and no compaction evident
- a low level of stem damage
- a near perfect thinning density and spacing of 250 stems per hectare
- debris resulting from the operation provided no 'fuel ladder' and was very evenly distributed

Opportunities for CALM

CALM could monitor the progress of these thinning trials by establishing a liaison with the relevant staff of the Forest Commission. Potential applications are where steep slope pine/hardwood plantation harvest is impossible, young karri regrowth thinning, karri, jarrah or pine thinning in sensitive areas. Detailed reports on this and other related trials are available from the author.

IN-PLANTATION CHIPPING OF *PINUS RADIATA* IN TASMANIA

In-plantation chipping to thin 18 year old *Pinus radiata* was observed in Fingal District. Seven machines including harvesting and forwarding work in unison to produce 27 tonnes of screen chips in 30 to 40 minutes. Problems were being encountered in debarking logs. 1 000 kilograms of chain worth in excess of \$1 000 was being used daily in the flail debarker. No segregation of products was occurring and a substantial amount of sawlog and case log was being chipped. The operation was highly mechanised and apparently efficient in achieving the single purpose of producing chips. All trees were chipped in tree lengths and debris was returned to and spread over the plantation floor.

Opportunities for CALM

This operation was highly capitalised, expensive to operate and reliant on throughput, however, potential applications in Western Australia include isolated softwood and hardwood plantations, large areas of first thinning or poor performing stands that require removal of industrial timber. The real future of such operations will be when bluegum plantations are available for harvest.

REGROWTH ASSESSMENT SYSTEM IN TASMANIA

'REGASS' is a computer based system developed in Tasmania to facilitate the assessment of native forest regeneration over 15 years of age to assist in determining the commercial thinning resource in a given area. It considers a set of criteria including silvicultural potential, harvesting feasibility, economic viability, social, environmental and operational planning constraints.

Opportunities for CALM

Forest Management staff could evaluate opportunities that may be derived from 'REGASS'. A comprehensive set of notes is available from the author if further scrutiny of the system is desired.

FOREST PRACTICES OFFICER - FORESTRY COMMISSION TASMANIA

A comprehensive guide of the Forest Practices Act 1985 for Forest Practices Officers (FPOs) has been provided by the Commission. This guide provides officers aspiring to gain a position or already appointed as an FPO (Planning or Inspecting) with details of expectations of them, as follows:

- Qualifications and responsibilities including revocation of powers.
- FPO training courses including Forest Practices Act and Code, Values to be considered (Water, Soils, Landscape, Fauna, Flora, Cultural Heritage, Geomorphology).
- Implementation of the Code in relation to Rooding, Landings and Snig Tracks, Silvicultural Systems, Plantations, Logging Equipment and Techniques, Integration, Harvest Plans, Responsibilities under and Implementation of Forest Practices Act and a list of References.
- Timber Harvesting Plans
- Timber Processors including roles and responsibilities
- Landowner roles and responsibilities
- Local Government roles and responsibilities
- Prosecutions
- References providing further detail of all the above subjects.

The FPO Guide provides an excellent reference document for FPOs. It is a practical operative interpretation of the FP Act and Code that gives clear direction.

Opportunities for CALM

A similar guide could be developed for CALM staff employed or wishing to be employed within the Timber Supply Business Unit. Skills, training, responsibilities, roles and expectations would be clear, practical application could be more efficient and less wastage would occur due to misunderstanding and error. A copy of 'A Guide to Forest Practice Officers' is held by the author and is available for more detailed scrutiny.

AUSTRALIAN HERITAGE COMMISSION CONFERENCE

The Australian Heritage Commission (AHC) workshop 'More Than Meets The Eye' was held at Melbourne University while I was in Melbourne. Grant Revell also attended from CALM and was able to gain an invitation for me to attend.

The workshop was planned by the Commission to review and test methodologies for assessing heritage values and to test relatively new methods applied in the Regional assessment projects against professional critique.

The specific aims of the workshop were to:

- develop an outline of current methods employed by experts in determining aesthetic value.
- critically review the method used for Victorian regional assessment projects (DCNR)
- review other methods in use.
- identify issues relating to aesthetic values and develop responses which reflect best practices.
- work towards a consensus on practical method appropriate for the task.

Seven interesting and very diverse speakers presented their understanding of aesthetic values. Subject include aboriginal interpretation, fractals in landscape quality and the AHC approach.

Summary of Working Group Reviews

Regional Assessment Methods

Need to develop wider sampling techniques, community involvement and training programs.

Definitions and Common Practices

Draft Definition: 'Aesthetic and spiritual values are the experiential response derived from a mosaic of elements of the environment. It includes natural and cultural attributes with visual and non-visual aspects such as sound, smell, sense of place, emotional response and all factors having a positive influence on human attitude.'

The Role of Objectivity and Subjectivity in Assessment Processes

Objectivity for duplication and application to large areas, subjectivity to maintain individual and collective community expressions of landscape experience.

Thresholds for Assessing Aesthetic Value

Maintain community input and public consensus measures to define thresholds of aesthetic value significance. Thresholds may have to vary from community to community.

Note: Copies of the papers presented at this workshop are held by the author.

VEHICLE MANAGEMENT

Both the DCNR and the TFC have very similar fleet requirements to CALM. Different management strategies include:

- The city based light fleets' requirements for both the DCNR and the TFC were drawn from central government vehicle pools. Users booked vehicles and charges were paid directly from the user's budget on an as used basis.
- Vehicles are charged for on a half or full day basis.
- Vehicles are owned by a private hire company.
- Rates were competitive with open market car hire rates.
- The same rate per day was paid regardless of kilometres travelled.
- Fuel costs are paid by the hiring agency.
- All fixed charges are incorporated in the hire rate.
- Vehicles in outer areas are owned by the agency, however, lease back arrangements as part of a Work Place Agreement were being negotiated in Tasmania.

While no detail of the cost benefit was procured, it is generally regarded that considerable savings have been made by the DCNR and the TFC by changing from a system similar to that in use in CALM. Vehicles do not incur costs when not in use. Better use of public transport for agency business within the city and for transport to and from work have resulted from the changes. Less capital is carried in an expensive vehicle fleet.

Opportunities for CALM

CALM could investigate options of managing vehicles in a similar way. CALM could investigate the option of having a single vehicle depot or pool for city based staff. CALM could look at the opportunities for incorporating vehicles in salary packages, or lease back arrangements, through a Work Place Agreement.

INNER CITY SHOP FRONT

The DCNR, Victoria and the National Parks Service, Tasmania, both operate high profile shop fronts in inner city areas of Melbourne and Hobart respectively. These shops are both presented to a high standard and operate on a commercial footing. A wide range of in-house production as well as related products from other Government agencies as well as private publications are sold.

They serve multiple functions including:

- public enquiry and advice
- public education
- sale of publications
- assistance to tourists
- high profile public projection of the agency
- interpretive facilities

Opportunities for CALM

CALM could investigate the feasibility of establishing a shop front in Perth city. CALM should seriously consider developing a high quality poster and postcard range. Actual turnover figures by publication for the DCNR for a financial year are available from the author.

SALARIES COSTING REPORT - FORESTRY COMMISSION TASMANIA

The Salaries Costing Report used by staff while achieving similar results to forms used in CALM, operated with some notable advantages:

- A single form is used for ordinary time, leave, flex time and overtime.
- Time is recorded to the nearest hour for ordinary time.
- Individuals input their own records directly into the main computer system, where the service is available.

Opportunities for CALM

The Salaries Costing Report appears to offer efficiencies by way of savings in administration effort and a more accurate record of actual costs when compared with the current CALM system. An example of the Salaries Costing Report can be provided by the author.

MULTI-LINGUAL INTERPRETIVE INFORMATION IN VICTORIA

Many tourist information pamphlets and leaflets provided by the DCNR are presented in languages other than English. Greek and Japanese were observed. This information was provided for high profile tourist destinations and routes.

Opportunities for CALM

Public Affairs could investigate the need for multi-lingual pamphlets by consultation with the Tourism Commission.

CONCLUSIONS

Landscape Management is addressed very thoroughly in the written strategies, codes and prescriptions of the Tasmanian Forest Commission (TFC) and the Victorian Department of Conservation and Natural Resources (DCNR). No policy for landscape has been written by either organisation. Landscape values have been managed for over 15 years by both organisations. A small commitment to staffing has been made by the employment of a single specialist in each organisation.

High quality landscape management results are being achieved where a high level of input from specialist landscape staff is available. The most successful projects observed resulted from a high level of cooperation between specialists, planning and operations management staff.

Overall, landscape protection measures applied on the ground are inconsistent within both the TFC and DCNR and often results appeared to be determined by the attitude of the local operations management. The inability of landscape staff to cover in detail all projects that require attention, the lack of emphasis and lip service to landscape values by some senior staff further contributes to this problem.

This is similar to CALM's performance where programme infancy is also a factor.

Research into simulation modelling and community reaction to effects of harvest operations are projects that could be monitored by CALM through regular, ongoing communication with the TFC and Victorian DCNR.

The TFC and Victorian DCNR have a very similar set of Strategies, Codes and Plans guiding operational planning and management, as does CALM.

Regulation of the timber industry in Tasmania includes private property operations.

Tasmanian National Parks Service and DCNR shops provide for excellent public contact and publications sales. The shops are managed as business units.

Tasmanian innovations in cable logging thinning techniques and in-forest chipping are proving to be economically viable while providing for greater environmental protection than traditional harvesting techniques in native forest regrowth and pine plantations.

A comprehensive collection of literature relating to the contents of this report is available from the author.

REFERENCES

Forestry Commission, Tasmania:

- *Coupe Pack*
- *Great Western Tiers Forest Management Plan*
- *Classification System for Forest Management Decisions*
- *Forest Practices Unit Annual Review 1992/93*
- *Forest Practices Act-A Guide for Forest Practices Officers*
- *A Manual for Forest Landscape Management*
- *Thinning Report November 1991*
- *Annual Report 1991-92*
- *Potential Sawlog Retention 1992*
- *Regrowth Assessment System Field Instructions*

Department of Conservation and Natural Resources, Victoria:

- *Data Used in Analysis of Sustainability of Selected Forest Values in Dandenong FMA*
- *Delatite Plantation Landscape Study*
- *Report on Progress of the Silvicultural Systems Project July 1986 - June 1989*
- *Orbost Region Harvesting and Regeneration Prescriptions*

Australian Heritage Commission:

- Papers from *Landscape More than Meets the Eye* workshop

Melbourne University:

- *Visual Simulation Visual Analysis*