

C.E. LANE POOLE MEMORIAL TRUST

LANE POOLE AWARD
STUDY TOUR, 1983



A REPORT TO THE TRUSTEES

by
PAUL MARSH

C.E. Lane Poole Memorial Trust

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 WESFI Chairman Dennis Cullity in 1983, 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.

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 Lane Poole Study Tour Award enabled me to visit Mount Gambier in South Australia to participate in a normal chainsaw training course held by the Logging Industry Training Team.

The course covered:

- Chainsaw use.
- Chainsaw safety.
- Chainsaw maintenance.
- Chainsaw work techniques in felling operations.
- Supervision of felling operations.

ACKNOWLEDGMENTS

I would like to thank the Trustees of the Lane Poole Memorial Trust for giving me the opportunity to participate in the three-week chainsaw training course in South Australia.

I would also like to thank the staff of the South Australian Logging Industry Training Team and the visiting instructors for their assistance during the course.

Paul Marsh

AIMS OF THE COURSE

These were to:

- Recognise functions of the components of the modern chainsaw.
- Carry out preventative maintenance.
- Recognise and repair simple faults.
- Recognise safety precautions for use of chainsaws.
- Recognise safety precautions for logging operations.
- Improve awareness of logging operations.
- Appreciate the quality of products for utilisation.
- Improve and broaden the skills of participants.

RESPONSIBILITIES

Chainsaw operator responsibilities are to:

- Protect yourself as well as others.
- Use equipment that is well maintained.
- Use correct techniques and operation
- Have a responsible attitude towards your workmates.

Supervisor responsibilities are to:

- Direct personnel in safe working habits.
- Ensure that safe working practices are followed.
- Assist in the investigation of accidents to establish causes.
- Take immediate corrective action when unsafe conditions or methods are observed.
- Maintain the safety of the operation and the environment.

LOGGING INDUSTRY TRAINING TEAM BACKGROUND

The course was opened and introduced by Mr Geoff Banks, Chairman of the Logging Industry Training Team (LITT). Mr Banks is an officer with the South Australian Woods and Forests Department, Harvesting and Marketing Section.

The course content is broad, but covers material to train fallers and supervisors on basic skills required. LITT and supervisors are an essential link for day-to-day work.

The logging industry training team is supported in Mount Gambier by a levy charged on products. The levy is 5.0 cents a cubic metre for sawlogs, 0.12 cents a cubic metre for pulpwood and 45.0 cents a cubic metre for pine rounds. Last year the levy amounted to \$110 000.

The executive officer for LITT is appointed from a committee that comprises government and private enterprise representatives of the logging industry of South Australia. There is an officer-in-charge of day-to-day training and administration, a senior instructor and assistant instructors.

LITT Training Courses

The training centre operates for twelve months of the year and offers the following courses:

- New faller's course.
- Faller retraining.
- Logging supervisor's course.
- Chainsaw maintenance.
- Chainsaw operator's course.
- Chainsaw operator and instructor's course.
- Rehabilitation packages.

There is also on-the-job training covering:

- Work benches.
- Felling and docking techniques.
- Saw chain sharpening.

Other LITT Activities

LITT produces material such as training manuals on felling bench techniques and pine thinning, and video tapes on carburettor tuning, felling bench techniques, and large radiata felling.

LITT is also involved in safety, felling bench, demonstrations, chainsaw testing, protective equipment and a logging newsletter.

In its various operations, LITT liaises with a number of organisations such as the State Timber Training Committee, chainsaw manufacturers, technical colleges, the CSIRO and, of course, the South Australian Woods and Forests Department.

WEEK ONE

With the introductions completed, the group began 'Week One Theory'. The following is a list of the lectures that were held, during the first four-and-a-half days:

- History of chainsaws
- Kickback
- Carburettors
- Tuning chainsaw carburettors
- Sprockets
- Guide bars
- Maintenance of bars
- Chain components
- Manufacturers of chain
- Chain profile
- Starter assembly
- Chain tension
- Starting procedure
- Running in a new chain
- Chain repair
- Chain sharpening
- Cost of setting up as a timber faller
- Features of chainsaws
- Personal safety equipment
- First aid
- Safety policy
- Felling theory
- Specifications

WEEK TWO

Our group travelled to Myora Plantation, approximately 25 kilometres north-east of Mount Gambier. The area selected for our training was also being used by contractors who were producing chipwood.

Specifications for chipwood were 5.0 m length, 4.5 cm small-end diameter, and 30 cm large-end diameter underbark.

The area consisted of unthinned, unpruned, 13-year-old radiata pine (*Pinus radiata*).

Silvicultural practice here is such that unthinned areas have no low or high pruning. The trees to be retained are marked with a yellow paint. Those trees that are to be removed in the thinning are low-pruned to chest height by the contractor with a chainsaw. Every fifth row is an extraction row.

The instructors demonstrated thinning techniques as well as correct procedures for:

- Trimming standing trees to breast height.
- Scarfing.
- Backcutting.
- Felling.
- Trimming felled trees.
- Docking.
- Use of felling bench.
- Stacking techniques.
- Use of safety equipment.

All participants, including instructors, had to wear cut-resistant trousers for leg protection. Within an hour of starting the practical session, the trousers proved their worth. One trainee had a kickback, and a gash, approximately 15 cm long, was cut through the protective layers. Luckily, there was no personal injury. From that moment, everyone was very aware of the dangers involved in using a chainsaw.

WEEK THREE

Our group travelled to Byving Plantation, in Victoria, which is privately owned by Southern Australian Perpetual Forests (SAPFOR). The area selected for training was a fourth thinning area with 40-year-old *Pinus radiata*.

The specifications were 4.9 m and 6.0 m lengths, 15 cm small-end diameter and 60 cm large-end diameter.

The radiata pine was very good quality, with most trees giving five logs or more.

As we began the operation, everyone was aware that although we were still felling softwood and the basic felling techniques were the same, there were different methods to use.

In the 13-year-old radiata, a chainsaw with a small bar could be used without difficulty. However, the situation was completely different using the same saw and bar in the 40-year-old plantation. Different methods were used to scarf back-cut and fell trees with the tree diameter greater than twice cutter-bar length. Felling direction was of utmost importance so as not to damage the end product. With the larger sized trees, hammers and wedges were demonstrated and used most of the time.

TRAINING CENTRE

The layout of the centre was well designed. For example, during the theory section, if a saw was to be taken apart or a certain part identified, the participants had only to move a couple of metres to the adjoining room - a workshop with benches and tools.

As training is a full-time occupation here, the instructors have numerous training aids. These include:

- Video equipment (cameras, porta paks, TV monitor).
- Film projector (assorted films available).
- Slide projector.
- Overhead projector.
- Blackboard.
- Whiteboard.
- Other teaching aids.

With most things close at hand, everyone's interest was kept at a high level.

The films and videos, mainly produced outside Australia, were excellent.

The one real failing was that while there were sufficient films/videos and the like to look at, there was very little hand-out material on the different subjects.

Instructors

The LITT instructors were knowledgeable in their subject, and kept the group's interest for the first week. However, as the course progressed, instructors became quite lax in their handling of the group. For example, correct terminology for chainsaw usage and components is important, but the instructors often used local terms. When asked to explain, the instructors would correct themselves, but would shortly return to using colloquial terms.

One point that dismayed me was that many of the instructors did not dress properly. While in the classroom situation, the instructors wore their bush-stained clothes with holes, etc. By contrast, the participants all dressed neatly. Dress standard is important; it ultimately does separate the instructor from the participants, and proper dress encourages respect and confidence.

In weeks one and two we had three instructors. However, in week three, when they were really required, we had only two. This meant that two instructors were looking after eight trainees (ratio 1:4 in two groups). Participants lost a lot of enthusiasm and motivation by being left on the outer for excessively long periods (one to two hours) with nothing to do.

Instructors first demonstrated to the entire group, then took one person at a time to fell several trees. They then came back and took another trainee away and repeated the process. Week three was very interesting, but the content covered per person was minimal because of poor pre-planning.

Instructors appeared to rush through demonstrations of the finer points, such as scarfing, felling, docking and trimming, and left many trainees bewildered. When asked to demonstrate again, they would repeat the whole procedure, just as quickly as before. I felt that what should have happened was to demonstrate each stage slowly, ensuring the participants understood and had practiced that stage before moving on to the next stage.

LITT used outside instructors to speak on communications, first aid, safety, silviculture and specifications.

COURSE EQUIPMENT

Course equipment included fuel and oil containers. Unfortunately, the containers were inappropriate, being miscellaneous tins or plastic containers. Furthermore, they were very dirty and not labelled. Participants had to check and re-check the containers before refuelling or oiling the chainsaws.

Another piece of equipment was the radio helmet, which I had the chance to see and use. With these helmets, instructors can communicate directly to trainee by radio, transmitting instructions via a belt-mounted receiver to earphones in the earmuffs.

These devices were used in the training centre many years ago, but had not been used for a long time.

I asked the training team supervisor if we could use these in the field over a couple of days, so I could assess them. I felt they worked extremely well. The trainee operator can continue working with the saw while the instructor is talking to him. With the permission of the training centre I brought these back to Western Australia and have used the concept with maximum results in training. The set was inspected by various head office personnel and Communications Section.

CONCLUSIONS

I have participated in many training sessions for the Department of Conservation and Land Management (CALM) personnel. This course gave me a chance to assess another group's training program and material.

The strengths of the course were:

- Training centre and workshop combination: ideal for effective training.
- Use of radio helmets by instructors and trainees.
- Full-time training officers who are able to undertake research, collect data, improve instructional and demonstration techniques, test new products and maintain standards.

The weaknesses of the course were:

- Sub-standard teaching aids.
- Insufficient hand-outs.
- Inconsistent terminology.
- Poor dress standards of some instructors
- Poor demonstrating techniques of some instructors.
- Instructor to trainee ratio too high (1:4).
- Instructors lost enthusiasm after Week 1.
- Poor container identification for fuel and oils.

RECOMMENDATIONS

That CALM selects a minimum of three experienced field staff officers to run a full-time chainsaw and instruction school for CALM employees.

That CALM employees be given initial training and follow-up training.

APPENDIX 1

COURSE SUMMARY

WEEK 1

Day 1

- 0830 Introductions
- 1000 *Morning tea*
- 1015 Film: 'Forests and Wood'
- 1030 History of Chainsaw
- 1130 Kickback
- 1200 *Lunch*
- 1230 Film: 'Saws in Tasmania'
- 1300 Carburettors
- 1345 Tuning chainsaw carburettors video and practical
- 1500 *Afternoon tea*
- 1515 Chainsaw maintenance and procedure practical
- 1630 Close

Day 2

- 0800 Revision
- 0830 Supervisory responsibilities
- 0900 Sprockets
- 1000 *Morning tea*
- 1015 Guide Bars
- 1030 Maintenance of bars
- 1200 *Lunch*
- 1300 Chain components
- 1415 Starter Assembly
- 1500 *Afternoon tea*
- 1515 Chain tension and practical
- 1630 Close

Day 3

0800 Revision

0830 Chain repair and practical

1000 *Morning tea*

1015 Introduction to communications. Film: 'I told 'em exactly how to do it'

1200 *Lunch*

1300 Chain sharpening and practical

1500 *Afternoon tea*

1515 Costs involved in felling

1600 Close

Day 4

0800 Revision

0830 Safety features of a chainsaw

0930 Film: 'Safety in the Forest'

0945 Film: 'A serious look at chainsaw safety'

1000 Safety equipment

1015 *Morning tea*

1030 First Aid: Kits and Boxes

1100 First Aid: Practical session

1200 *Lunch*

1300 Safety Policy. Film: 'The Inner Mind of Milton Whitty'

1500 *Afternoon tea*

1515 Felling theory. Film: 'Snedding'

1630 Close

Day 5

0800 Revision

0830 Specifications

1000 *Morning tea*

1015 Silvicultural aspects

1100 Felling theory

1200 *Lunch*

1300 Felling techniques

1500 *Afternoon tea*

1515 Practical chainsaw maintenance

1630 Close

WEEK 2

Day 1

0800 Revision

0830 Practical demonstration in the field (Myora Plantation)
Use of correct scarfing and felling techniques and use of felling bench.
Proper use of all safety equipment demonstrated

1200 *Lunch*

1230 Course participants divided into four groups. Commence felling
in unthinned 13-year-old radiata pine (*Pinus radiata*)

1500 Chainsaw maintenance

1600 Lecture and film by Japanese machinery company

1630 Close

Day 2

0800 Chain Practical tests

0930 Film: 'Chainsaw safety'

1000 *Morning tea*

1015 Video: 'Pinefelling techniques'

Video: 'Clear felling'

Video: 'Softwood Haulage Methods'

Video: 'Logging into the 80s'

1130 *Lunch*

1200 Practical in field (continued) Myora Plantation

1600 Chainsaw maintenance

1630 Close

Day 3

0800 Practical Myora Plantation

1000 *Morning tea*

1015 Practical continued

1200 *Lunch*

1230 Inspection of first thinning areas

1400 Inspection of mechanical harvesting in windblown areas

1500 Travel into Victoria and inspect felling at Renwick Plantation

1630 Chainsaw maintenance

1700 Close

Day 4

- 0800 Practical Myora Plantation
- 1000 *Morning tea*
- 1015 Practical continued
- 1200 *Lunch*
- 1300 Inspection of mechanical harvesting, i.e., chipwood and pine round operations in Rennick Plantation
- 1400 Inspection of mill log and case log operations in second thinning areas
- 1515 *Afternoon tea*
- 1530 Video: 'Timber harvesting in blowdown areas'
- 1600 Chainsaw maintenance
- 1630 Close

Day 5

- 0800 Visit to APCEL near town of Millicent. APCEL is a pulpmill processing many items (tissues, toilet paper, disposable nappies, paper towels, etc.) and employing more than 700 people with a wages bill (1983) in excess of \$17 million
- 1100 Return to training school, local TV station, SES - 8 films, some action of the course in training situation in the class, then out in the field
- 1200 *Lunch*
- 1300 Specifications
- 1400 Chainsaw maintenance
- 1500 *Afternoon tea*
- 1515 Video: 'It's a Bit Tough'
- 1600 Close

WEEK 3

Day 1

- 0800 Travel to Byving Plantation, Victoria (privately owned by SAPFOR). 40-year-old radiata pine (*P. radiata*) introduction
- 1000 Demonstration of felling. Correct procedure and techniques
- 1100 *Morning tea*
- 1115 Commence practical felling in groups
- 1200 *Lunch*
- 1300 Practical
- 1530 Chainsaw maintenance
- 1700 Close

Day 2

0800 Byving Plantation, Victoria, practical

1000 *Morning tea*

1015 Practical

1200 *Lunch*

1300 Practical

1530 Chainsaw maintenance

1700 Close

Day 3

0800 Byving Plantation, Victoria, practical

1000 *Morning tea*

1015 Practical

1200 *Lunch*

1300 Inspection log salvage area (fire area)

1400 Inspection log salvage operations (fire area)

1500 Inspection Nangwarri Veneer Mill

1630 Close

Day 4

0800 Byving Plantation, Victoria, complete area

1200 *Lunch*

1300 Mill inspection, Woods and Forest State Sawmill

1530 Discussion

1600 Close

Day 5

0800 Chainsaw maintenance

0900 Inspection of log salvage dump at Bonney

1100 Course washup

1130 Questionnaire

1200 *BBQ Lunch*

1330 Presentations

1400 Close

APPENDIX 2

LITT Instructors

Andy Cusack - OIC Training Course

Brian Dowling - Principal Instructor

Chris Brown - Assistant Instructor

Outside Instructors

Russell Taylor - Communications

Sister Barbara Bare - First Aid

Fred Sandeman - First Aid

David Douglas - Safety

Tom (Surname unknown) - Specifications

John Crabb - Silviculture

Course Participants

Bernie Wilson - Stihl Chainsaws, Melbourne

Roy Loundes - Mount Burr Reserve, South Australia

Mark Probert - Harvesting and Marketing, South Australia

Michael Dale - Harvesting and Marketing, South Australia

Paul Tregoweth - Harvesting and Marketing, South Australia

Graham Lamont - Penola Forest Reserve, South Australia

George Czerwanka - Myora Forest Reserve, South Australia

Paul Marsh - Forest Department, Western Australia.