

PEOPLE AND TREES

A THEMATIC HISTORY OF SOUTH EAST
QUEENSLAND WITH PARTICULAR REFERENCE
TO FORESTED AREAS, 1823-1997

JUDITH POWELL



QUEENSLAND CRA/RFA STEERING
COMMITTEE

PEOPLE AND TREES

**A THEMATIC HISTORY OF SOUTH EAST
QUEENSLAND WITH PARTICULAR REFERENCE
TO FORESTED AREAS 1823-1997**

JUDITH POWELL

QUEENSLAND CRA/RFA STEERING COMMITTEE

For more information contact:**Regional Forest Assessments, Department of Natural Resources**

Block C, 80 Meiers Road
INDOOROPILLY QLD 4068

phone: 07 3896 9836

fax: 07 3896 9858

Forests Taskforce, Department of Prime Minister and Cabinet

3-5 National Circuit
BARTON ACT 2600

phone: 02 6271 5181

fax: 02 6271 5511

© Queensland Government 1998

© Commonwealth of Australia 1998

Forests Taskforce Department of Prime Minister and Cabinet

This work is copyright. Apart from fair dealing for the purpose of private study, research, criticism or review as permitted under the Copyright Act 1968, no part of this document may be reproduced by any means without the joint permission from the Joint Commonwealth and Queensland RFA Steering Committee.

This project has been jointly funded by the Queensland and Commonwealth Governments. The work undertaken within this project has been managed by the joint Queensland / Commonwealth CRA RFA Steering Committee and overseen by the Environment and Heritage Technical Committee.

ISBN xxxxx]

Cover photo: Gatton logging (John Oxley Library and DPI Forestry Library H4949)

Disclaimer

The views and opinions expressed in this report are those of the author and do not necessarily reflect the views of the Queensland and Commonwealth governments. The Queensland and Commonwealth governments do not accept responsibility for any advice or information in relation to this material.

ACKNOWLEDGEMENTS

I would like to thank the members of the Department of Environment's Forest Assessment Team (Cultural Heritage), Dr Margaret Kowald, Annabelle Stewart-Zerba, Fiona Botham, Cheryl Woodman, John Schiavo and Sarah Lewis, for their discussions, suggestions and encouragement during the course of this work.

I would also like to acknowledge the support provided by the Commonwealth through the Forests Taskforce, Environment Australia. In particular, the team thanks Sandy Blair and Marilyn Truscott for their guidance during this project.

An important feature of the cultural heritage work of the Forest Assessment Unit has been the peer-review process offered by the Cultural Heritage Focus group. I would like to thank all members of this group, as listed below.

Dr Thom Blake (Historian)

Jackie Bettington (Consultant)

Eric Glassop (Department of Natural Resources)

Ross Hamwood (Department of Primary Industries - Forestry)

Associate Professor Ross Johnston (Department of History, The University of Queensland)

John Kerr (Consultant)

Jane Lennon (Consultant)

Howard Pearce (Department of Environment)

Neil Gourley Department of Primary Industries (Forestry)

Margaret Pullar (Historian)

Other colleagues who have read this work and whose suggestions and comments I am grateful for include Dr John Dargavel (Forest History Association), John Huth (DPI Forestry), H.S. (Syd) Curtis (retired National Parks officer), and Peter Holzworth (Forester and historian).

CONTENTS

ACKNOWLEDGEMENTS	v
CONTENTS	vi
SUMMARY	xi
1. INTRODUCTION AND METHODOLOGY	1
1.1 INTRODUCTION	1
1.2 RELATED PROJECTS	1
1.3 METHODOLOGY	2
2. 1823-1842	5
2.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES	5
Exploring and Surveying	5
2.2 GOVERNING	7
Incarcerating the accused and convicted	7
2.3 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES AND	7
2.4 PEOPLING THE CONTINENT	7
Exploiting the forest and Displacing Aboriginal people	7
3. 1843-1859	11
3.1 PEOPLING THE CONTINENT	11
Displacing Aboriginal people	11
3.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES	12
Exploiting the forest	13
Engaging in Primary Production	14
Moving goods and people	15
4. 1860s - 1870s	17
4.1 PEOPLING THE CONTINENT	17
Promoting settlement on the land	17
4.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES	18
Exploiting natural resources; making forests into a saleable resource.	18
4.3 PEOPLING THE CONTINENT	22
Promoting settlement on the land through selection and group settlement	22
4.4 TRACING THE EVOLUTION OF A CONTINENT'S SPECIAL ENVIRONMENTS	23
Assessing scientifically diverse environments	23

4.5 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES-----	24
Managing the forests - administering the forest and protecting the forest -----	24
5. 1880s -----	29
5.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES-----	29
Exploiting the forest -----	29
Managing the forests-----	30
5.2 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE-----	32
Conserving the environment-----	32
6. 1890s -----	35
6.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES-----	35
Exploiting the forest -----	35
6.2 PEOPLING THE CONTINENT -----	37
Promoting settlement on the land-----	37
6.3 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE-----	38
Developing public parks and gardens-----	38
7. 1900-1910 -----	41
7.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES-----	41
Exploiting the forest -----	41
Administering the forest-----	42
7.2 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE-----	45
Developing public parks and gardens-----	45
7.3 PEOPLING THE CONTINENT -----	46
Promoting settlement on the land-----	46
8. 1911-1918 -----	49
8.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES-----	49
Managing the forests-----	49
Exploiting the forest - processing timber-----	52
9. INTER-WAR PERIOD -----	55
9.1 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE-----	55
Commemorating significant people -----	55
E.H.F. Swain (1918-1932)-----	55
9.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES - MAKING THE FORESTS INTO A SALEABLE RESOURCE-----	57
Understanding the forests -----	57
Managing the forests and establishing plantations-----	58
Marketing timber -----	62
9.3 EDUCATION - TRAINING PEOPLE FOR WORKPLACE SKILLS -----	63
Training foresters-----	63

9.4 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES	64
Administering Forestry	64
9.5 PEOPLEING THE CONTINENT	65
Settling the Land - Conflict in the North	65
9.6 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE	67
Organising recreation - developing public parks and gardens	67
9.7 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES	68
Exploiting the forests, sawmilling and marketing timber	68
10. 1940s-1950s	70
10.1 UTILISING THE FORESTS IN TIME OF WAR	70
10.2 POST-WAR RECONSTRUCTION	72
10.3 SAWMILLING AND BUILDING	73
10.4 ADMINISTERING THE FORESTS	75
10.5 SETTLING THE LAND	76
10.6 DUBOISIA	76
11. 1960S-1997	78
11.1 ADMINISTERING THE FORESTS - PLANTATIONS AND NATIVE FORESTS	78
11.2 ORGANISING RECREATION - MULTIPLE USE OF FORESTS	79
11.3 BUILDING AND SAWMILLING	81
11.4 SETTLING THE LAND	81
11.5 PROTECTING THE FOREST	82
11.6 THE CONONDALE RANGES	83
11.7 FRASER ISLAND	84
13. CONCLUSIONS	89
14.RECOMMENDATIONS FOR FURTHER RESEARCH	93
APPENDIX 1: PROJECT TERMS OF REFERENCE	95
APPENDIX 2: EUROPEAN EXPLORATION OF MORETON BAY AND DISTRICT, 1823-1840	97
APPENDIX 3: COLONIAL USES OF TIMBER - BRISBANE AND SUNSHINE COAST AREAS	98
APPENDIX 4: TIMBER INDUSTRY ERAS	102
APPENDIX 5: STAGES IN GOVERNMENT INVOLVEMENT IN FORESTRY IN QUEENSLAND	103
APPENDIX 6: STAGES IN THE DEVELOPMENT OF FORESTRY PLANTATIONS IN QUEENSLAND	104

APPENDIX 7: A HISTORY OF SILVICULTURAL OPERATIONS IN FORESTRY, QUEENSLAND ----	105
APPENDIX 8: FIRE MANAGEMENT (FORESTRY) -----	106
Policy of fire exclusion 1900-1950s -----	106
Experimental work 1950s and 1960s -----	106
Fire prevention and prescribed burning 1970s-1990s -----	107
Fire, Salvage and recovery -----	108
Evidence of fire management procedures -----	108
APPENDIX 9: FORESTRY LIVING CONDITIONS -----	109
Key Points -----	111
APPENDIX 10: NOTES ON TIMBER AND BUILDING PRACTICES IN QUEENSLAND -----	115
APPENDIX 11: ANNUAL REPORTS OF THE DEPARTMENT OF FORESTRY -----	117
APPENDIX 12: FORESTRY STAFF NUMBERS (FIGURES FROM ANNUAL REPORTS) -----	122
APPENDIX 13: NUMBER OF SAWMILL LICENCES (FIGURES FROM ANNUAL REPORTS) -----	122
APPENDIX 14: VOLUME OF LOGS MILLED FROM QUEENSLAND FORESTS FROM 1936/7 TO 1968/9 - BY SPECIES (MILLION CUBIC FEET TRUE NET) -----	123
REFERENCES -----	125
UNPUBLISHED MATERIAL -----	125
PUBLISHED MATERIAL -----	128
GLOSSARY -----	132
ABBREVIATIONS -----	135
CONVERSIONS -----	135
SOUTH EAST QUEENSLAND FORESTS - A PICTORIAL HISTORY -----	136

LIST OF TABLES

TABLE 1: A COMPARISON OF THE VALUE OF TIMBER AND SHEEPSKINS, 1848/9. -----	15
TABLE 2: LICENCE FEES AND ROYALTIES COMPARED - 1885 & 1888 -----	30
TABLE 3: AREA UNDER CROPS 1860-1901. -----	38
TABLE 4: NUMBER OF TIMBER CONTRACTS (BY LAND AGENT'S DISTRICT), 1906. -----	47
TABLE 5: SURVEYS FROM 1921-1941 BY TYPE AND AREA -----	58
TABLE 6 - AREA OF PLANTATIONS (IN ACRES) IN QUEENSLAND TO 1932 -----	61
TABLE 7 - ALIENATED CROWN LAND - TIMBER VALUES COMPARED TO SALE PRICE. -----	67
TABLE 8 - CUT OF SOFTWOODS 1938 -----	69
TABLE 9: SAWMILL LICENCES AND MILL CUT 1937-1954. -----	75
TABLE 10: STRIP ASSESSMENTS (AVERAGE FOR YEAR) 1950s TO 1970s. : -----	81

LIST OF FIGURES

FIGURE 1: LAND TENURE, 1907 -----	44
FIGURE 2: STATE FORESTS, SAWMILLS AND FOREST STATIONS, 1926 -----	53
FIGURE 3: PLAN OF 6 MAN BARRACKS GALLEY -----	Error! Bookmark not defined.
FIGURE 4: BARRACKS, GALLEY AND BATHROOM CONSIDERATIONS --	Error! Bookmark not defined.
FIGURE 5: CAMP RULES -----	Error! Bookmark not defined.

LIST OF ILLUSTRATIONS

Red Cedar -----	136
Bunya Pine -----	136
Rafting timber, unknown location -----	137
Pitsawing, unknown location -----	137
Clearing for settlement and dairying -----	138
Logging on Fraser Island, 1908 -----	139
Log raft, Fraser Island, no date -----	139
Fred and Dick Caplick, Eumundi, 1915 -----	140
Australian Forestry Conference delegates, 1922 -----	141
1922 Visitors' Plantation, Imbil (photo taken 1939) -----	141
E.H.F. Swain, Director of Forests (1918-1932) -----	142
V. Grenning, Director of Forests (1932-1963) -----	142
Butter boxes made from veneers, Hancock and Gore Ltd., South Brisbane, 1922 -----	143
Taungya lease with bananas, Compartment 1, Zachariah Creek, State Forest Reserve 435, 1928 -----	143
Piles (Syncarpia spp.) at Brisbane wharf for shipment to U.K. for rebuilding of the Falmouth Docks, 1931 -----	144
Ironbark for telegraph poles, R434, Conondale, 1939 -----	144
Unemployed relief gang, Brooloo, 1932 -----	145
Firewood mill, Strathpine, 1939 -----	145
Display of fancy veneers, Brisbane Royal Agricultural Show, 1935 -----	146
Queensland Forest Showroom, George St., Brisbane, 1939 -----	146
Apiary on treated area R108, Bribie, 1939 -----	147
Grazing on State Forest, Derrier Logging Area, Brooloo, 1939 -----	147
Sleeper cutter, Cooyar Valley, 1939 -----	148
Rail yards at Goomeri, 1940 -----	148
Charcoal display, Brisbane Exhibition, 1940 -----	149
Producer gas apparatus attached to Departmental car, 1941 -----	149
First milling of plantation pine in Queensland, Lawson's Mill, Beerwah, no date -----	150
Hut of plantation thinnings, R589 Beerwah, 1946 -----	150
Stirling's Crossing camp, Derrier Logging Area, Imbil, 29 June 1949 -----	151
Balts camp, Derrier Logging Area, Imbil, 29 June 1949 -----	151
Standard married man's rig, Beerburrum, 23 September 1960 -----	152
Residence (Epps' House), Fraser Island, 1940 -----	152
Married quarters, Jimna, 1959 -----	153
Hot and cold shower system -----	153
Old fire lookout - blackbutt tree, Fraser Island (photo taken 1960) -----	154
Wild Horse Mountain lookout, R64 Beerwah, 1952 -----	154
Official opening of 'Smokey Bear' fire hazard indicator board, Yarraman, Hon H. Richter, M.L.A., 1970 -----	155
Radio protection, Yarraman, no date -----	155
Official opening of the Bunya Mountains camping area by Premier J. Bjelke-Petersen, 1971 -----	156
Forestry carpenter preparing forest signs, May 1972 -----	156

SUMMARY

This report has been prepared for the joint Commonwealth/State Steering Committee which oversees the Comprehensive Regional Assessment (CRA) of forests in the South East Queensland CRA region.

The Comprehensive Regional Assessment provided the scientific basis on which the State and Commonwealth governments will sign a Regional Forest Agreement (RFA) for the forests of the South East Queensland CRA region. This agreement will determine the future of the region's forests and will define those areas needed to form a comprehensive, adequate and representative (CAR) reserve system and those available for ecologically sustainable commercial use.

This report provides a contextual overview history of the South East Queensland biogeographic region (refer to map in frontispiece) with particular reference to forested areas. Local and regional histories, archival research and a limited amount of oral history research provide the historical framework from which a number of key historic themes emerge. The Principal Australian Historic Themes, as developed by the Australian Heritage Commission in consultation with all state heritage agencies were employed in describing the themes that emerged from this study. A complete list of these themes and examples of specific events in the history of South East Queensland as they represent these themes is presented in the Conclusion.

Forested areas historically provided exploitable resources and studies of such areas highlight the aspects of life connected with the exploitation and transportation of that resource. Transportation of timber began by sea and river; ports and harbours developed in part in connection with this transportation while later road and rail networks provided ready access both to timber resources and markets. Small settlements and towns often grew up in places associated with one aspect of this exploitation, whether it be logging, milling or transportation. The historic exploitation of timber resources is visible in ringbarked landscapes, cleared areas used for dairying and pastoral activity, and in the preponderance, until recently, of timber housing throughout the study area.

From the 1880s until the middle of the twentieth century, one of the principal themes in the history of South East Queensland is the promotion of settlement on the land. Moves for closer settlement in the 1860s and 1870s were followed by pressure to further alienate forest land, and continuing pressure for the freeholding of forested leasehold land is an on-going theme until the 1950s, 1960s and 1970s.

The development of government Forestry in the early part of the twentieth century led to the development of silvicultural experiments with both native and exotic species. Fire management regimes developed from policies of fire exclusion to those concerned with controlled burning. Governments were involved in the development of State Forests and National Parks, and in the management of these areas. Specialised government involvement in forested areas involved the use of forests for military training areas and for penal settlements.

Alongside the extractive industries that developed in forested areas of South East Queensland were moves for preservation or conservation of forest environments. From the Acclimatisation Society of the late nineteenth century to the conservation movements of the last three decades, groups and individuals have periodically lobbied on behalf of the forests.

Identified themes and their contextual background provide the background for the identification and assessment of places of significance. This work was undertaken as part of the National Estate Historic Cultural Heritage Places study.

Further research will always need to be undertaken. Specific recommendations for future research are given in Chapter 14. In particular, regional and intensive local studies are needed. The South East Biogeographic region is a large and diverse area and specific features of local areas can easily become dissipated in general work such as this. Only by targeting key forested areas such as the Mary Valley, the Bunya Mountains, Fraser Island or the Scenic Rim and subjecting these areas to detailed primary archival and field research will the interconnections and specifics of the historic themes highlighted in this report be understood.

1. INTRODUCTION AND METHODOLOGY

1.1 INTRODUCTION

Forests are, and have always been, an integral part of the story of South East Queensland. The state contains 512 species of native timbers, compared with 146 in Victoria and 385 in New South Wales.¹ Aborigines lived in and with the forest for millennia and their management practices are responsible for many of the distinctive features of South East Queensland forests. In particular, Aboriginal fire-stick farming created the juxtaposition of softwood ‘scrubs’ with eucalypt, pyrophyte open forests. This study is concerned only with the period since European settlement and does not attempt to outline traditional, pre-contact Aboriginal impacts on the forests.

Environmental history is “the investigation and description of previous states of the biophysical environment, and the study of the history of human impacts on and relationships with the non-human setting.”² The nature and extent of the forests of South East Queensland influenced a range of human activities including land settlement, building practices, the form of the timber industry, and the transport networks that developed in part to service and support this industry. In turn, these human activities impacted on the forests and altered the landscapes either temporarily or permanently. This interaction continues today.

As part of the Commonwealth/State Regional Forest Agreement (RFA) process, comprehensive surveys of the forests of the South East Queensland biogeographic zone have been undertaken. This report provides a thematic history for the non-indigenous cultural heritage component of this work.

1.2 RELATED PROJECTS

It is important to stress that this report is only one of a series of historic cultural heritage reports prepared for the joint Commonwealth/State Steering Committee overseeing the Comprehensive Regional Assessment (CRA) of forests in South East Queensland. All reports need to be read concurrently.

¹Rod Fisher, & W. Ross Johnston, Historical heritage essay, in South east Queensland 2001 region. Cultural heritage places study: A study commissioned by the Queensland Department of Environment and Heritage, Uniquist, The University of Queensland, 1995, p.22.

²Stephen Dovers, 'Australian environmental history: introduction, review and principles', in *Australian Environmental History*, ed. Stephen Dovers, Oxford University Press, Oxford, 1994, p. 4.

National Estate Historic Values

This report outlines the field work conducted in forested regions in the course of the regional assessment of the South East Queensland Biogeographic Region. Places for consideration for inclusion in the Register of the National Estate are listed when considered to be above threshold. Detailed documentation relating to places of potential National Estate value, as well as those considered significant but falling below threshold, is provided in a separate report.

Travel Routes, Forest Towns and Settlements

This project identifies forest towns and settlements associated with forestry and timber industries in SEQ, and discusses travel routes associated with these industries in the SEQ Biogeographic Region.

Sawmills and Tramways

This project provides a historical overview of sawmilling, an inventory of sawmills and tramways and field documentation of selected sawmills and tramways in the SEQ Biogeographic Region.

National Estate: Social values

Thirteen workshops were held throughout the SEQ Biogeographic Region to identify places considered by local communities to have value for historic, social and aesthetic reasons. Following processes used in other states, and based on quantitative information obtained during the workshops, assessments were undertaken to determine those places which were above threshold for National Estate social significance.

Integration of National Estate Aesthetic Values Studies

A series of projects focussing on art, photography and film, literature and music, tourism publications, and incorporating data from 13 community workshops identified places of aesthetic value.

Management Guidelines

A comprehensive overview of the legislative framework for the conservation of cultural heritage places and values (Indigenous and non-Indigenous) in forested areas of the SEQ Biogeographic Region was undertaken. A set of conservation principles and guidelines was developed for the protection and management of non-Indigenous cultural heritage places and values in forests in the Region.

1.3 METHODOLOGY

This report is based largely on secondary source material. General sources on Queensland history provided a background. More specialised works include general books on Australian forest history, a PhD thesis on the Queensland situation with particular reference to North Queensland, and a popular book on the development of forestry in Queensland. Use was made of Forestry Department Annual Reports and Management Plans for specific State Forests. Unpublished material in the

library of DPI (Forestry) was consulted, including a number of papers delivered by forestry staff to interstate conferences. National Parks Management Plans were consulted where they exist. A complete list of references is included.

No attempt was made to consult old State Forest maps, although these could prove an interesting source of information on experimental plots, early forestry structures and so on. Only a small amount of archival research was undertaken at the archives of the Forestry Department and at the Queensland State Archives. A thorough investigation of these archives would have taken more time than was available for the present report, but such an undertaking would be invaluable for a thorough understanding of the history of Queensland forestry and of the history of notable timber firms.

The area covered by this study is the South East Queensland biogeographic region, an area defined by regional ecosystems which are determined by vegetation, geological and ecological considerations. The area in no way reflects any historical patterns. Indeed some of the areas within the region are intimately linked to areas outside. For example Dalby, a town outside the study area, has always had close connections with the Bunya Mountains, within the study area. No simple solutions to the problems raised by this geographic requirement were found.

One of the features of this report and a requirement of the Terms of Reference (Appendix 1) was that the history be written from a thematic point of view. The Principal Historic Themes developed by the Australian Heritage Commission form the basis of this approach. Thematic histories are not uncommon but there are inherent difficulties in employing a purely thematic approach. Human activity, which forms the background to historic events, is rarely the result of single factors. Attempting to order events thematically runs the risk of creating artificial distinctions between actions that are inherently related; it also may unduly simplify what are in fact complex and interrelated processes. With this in mind, a chronological framework provides the background to the identification of key themes and these themes are identified as they relate to a study of forested areas of South East Queensland.

No attempt is made to cover all aspects of Queensland's history; this is neither a part of the brief, nor a feasible proposition given the time constraints. Only limited research could be undertaken and it is important to recognise the deficiencies in the research base for contextual work in Queensland. No bibliographic databases of forest history exist, as they do in some other states. More importantly, large gaps exist in our knowledge of particular periods and events. The early relations between convicts, soldiers and Aborigines at the time of the Moreton Bay penal settlement is a case in point.

The history of forests on private land is one that requires further work. The tendency to write the history of forests in terms of government forestry is a common feature of forest history throughout Australia and one that is in part the result of our sources. Governments keep records. Private individuals do, but their records are generally more difficult and time-consuming to access. Even more to the point, when the use of timber is, as it was for many areas of Australia, simply a by-product of agricultural clearing, private records are unlikely to give us much information. A close and alert reading of private papers, journals and diaries seems the only way in which we will capture the changing land and forest scapes of much of Australia. Literary and artistic surveys may add to our understanding and in this regard it is significant that one of the the cultural heritage reports as part of the RFA process involves a study of Aesthetics.

2. 1823-1842

SIGNPOSTS

1823	Oxley enters the Brisbane River
1826	Brisbane's first school opened
1828	Brisbane's first industry established - a maize treadmill on Wickham Terrace
1838	German missionaries settled at Nundah
1840	Patrick Leslie led squatters and livestock from New England to the Darling Downs illegally

2.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploring and Surveying

Timber has been a part of the European history of the South east Queensland biogeographic region from the beginning. In 1779, Matthew Flinders entered Moreton Bay (Glass House Bay as it was called) on the *Norfolk* and noted the general features of the area during his two week stay. He climbed Mt Beerburum and cut a Bribie Island pine to be sent to Sydney for assessment.³ Four years earlier, in 1775, the first cargo of cedar had left the Hawkesbury River for England, and timber was already being seen as a commodity that the colony might exploit for the benefit of the British Empire. The effects of land clearers and cedar cutters were such that as early as 1803, Governor King had issued a proclamation forbidding the felling of trees along rivers and water courses, but to little effect.⁴

Surveyor-General John Oxley's brief in 1823 was to search for a suitable site for a new penal settlement. He set out from Sydney in the *Mermaid* and, following investigations of areas as far north as Port Curtis, returned to the Moreton Bay area. On Bribie Island he discovered three castaway cedar cutters, Parsons, Finnegan and Pamphlett. They had left Sydney with the aim of collecting cedar from the Illawarra region but had been blown off course and been stranded on

³Fisher & Johnston, SEQ2001, p. 2.

⁴Geoffrey Bolton, *Spoils and spoilers. A history of Australians shaping their environment*, Allen & Unwin, Sydney, 1992, p.37.

Moreton Island when their open boat had wrecked in April of that year.⁵ The castaways reported stands of cedar around Moreton Bay. Further recordings of red cedar were made by John Uniacke, a member of the crew that sailed with Oxley. He named the Tweed after the river in his native Scotland of the same name.⁶ In addition to this known and highly-prized timber, Oxley described the vegetation lining the banks of a river, later named the Brisbane, shown to him by the castaways:

timber of great magnitude [including] a magnificent species of pine...in great abundance [which] if it should prove of good quality were of a scantling sufficient for the topmasts of large ships.⁷

The following year, Oxley returned with a party of twenty-nine volunteer convicts, overseer Lieutenant Henry Miller and the botanist, Alan Cunningham. Cunningham's diary on entering the Brisbane River on 16 September records the timber stands along the river banks. On the 21 September he noted that:

Hitherto in our examination of this River, we have been only gratified with a distant view of the Pine; immediately we approached one of magnificent stature, the Monarch of these woods. It was a healthy well-grown Tree, exceeding 120 feet in height with a trunk 3'6" diam., clear of branches exceeding 80 feet. It was totally impossible not to halt a few moments to admire this noble tree which had all the habits of ramification of the *Araucaria braziliensis*.⁸

This was Moreton Bay pine or hoop pine (*Araucaria cunninghamii*), named after its first European recorder; it was found in abundance. Oxley's suggestion that it might be possible to use the timber for masts was followed up and hoop pine spars were collected from the Pine River area and sent to Sydney.⁹ When the Governor, Sir Thomas Brisbane, visited the new penal colony of Moreton Bay in 1824, the top masts of the brig *Amity* were of this Moreton Bay pine.¹⁰

Noteworthy in this early period are Cunningham's observations concerning the relationship between timber stands and soil quality. In the week preceding their entry of the Brisbane River, the party had been on the north shore of the Pumicestone Passage and on 11 September 1824 Cunningham noted:

I passed the immediate beach (which was lined by robust trees of *Pandanus pedunculatus* bearing full-grown fruit), and alone penetrated a somewhat shaded forest of stately timber trees, whose vast growth and present luxuriance indicated a depth of rich subsoil, not withstanding that the surface was little other than a loose sand. This forest was formed of a robust species of *Callistris* 3 feet in diameter, a *Tristania* remarkable for its ornamental foliage and agreeable shade, a species of Eucalyptus like *E. robusta* with a red bark, together with a second of this genus of equally gigantic growth and bark of bluish hue (emphasis added)¹¹

This association between stands of large timber and the lure of rich agricultural soil was to have a powerful effect on the future settlement of South East Queensland. Large trees suggested fertile soils and pressure from pastoralists and farmers for access to this soil through land clearing is a

⁵Bill Thorpe, *Colonial Queensland: perspectives on a frontier society*, University of Qld Press, St Lucia, 1996, p.95.

⁶John Vader, *Red Cedar. The tree of Australia's history*, Reed Books, Frenchs Forrest, N.S.W., 1987, p.122.

⁷Quoted in L.T. Carron, *A history of forestry in Australia*, Australian National University Press, Canberra, 1985, pp. 95-6.

⁸Quoted in Pat & Sim Symons, *Bush heritage: an introduction to the history of plant and animal use by Aboriginal people and colonists in the Brisbane and Sunshine Coast areas*, 2nd edn, Nambour, 1996, p. 7.

⁹Fisher & Johnston, SEQ2001, p.9.

¹⁰Don Watson, 'Clearing the scrubs of South east Queensland', in, *Australia's ever changing forests*, eds K.J. Frawley & N. Semple, Department of Geography and Oceanography, Defence Force Academy, Canberra, 1988, p.368.

¹¹Quoted in Symons, *Bush Heritage*, p.5.

constant theme during the nineteenth century and the first half of the twentieth century. Yet the timbers of South East Queensland were often, as for example on Fraser Island, a poor indication of soil quality as farmers were to discover.

2.2 GOVERNING

Incarcerating the accused and convicted

Between 1824 and 1842, Moreton Bay was a closed penal settlement and no free settlers were allowed within a fifty mile (eighty kms) radius. Early attempts to set up a settlement at Redcliffe were abandoned after six months and in February 1825, Lieutenant Miller moved his fourteen garrison troops and thirty convicts and established the settlement at the present site of the Brisbane central business district. Convicts were also sent to Limestone (Ipswich) and Stradbroke Island. From 1826 until his murder in 1830, the commander of the garrison was Captain Patrick Logan whose reputation for tyranny is recorded in song and legend. He was followed by James Clunie (1830-35), Foster Fyans (1835-7) and Sydney Cotton (1835-42). By 1831, a peak population of 1,131 convicts had been reached but thereafter declined.¹² By 1837 only 150 male and 70 female convicts remained.¹³ In 1839 Moreton Bay was abandoned as a penal colony and free settlement began in 1842.

2.3 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES AND

2.4 PEOPLING THE CONTINENT

Exploiting the forest and Displacing Aboriginal people

Timber was required for the immediate needs of building and firewood, but it also had a punitive function. As elsewhere in the colony, cutting timber had become part of the punishment regime for convicts and 'punishment stations' existed at Norfolk Island, Newcastle, Macquarie Harbour, Port Arthur and Moreton Bay. A sawpit measuring fifteen by seven metres was built on the edge of the Brisbane River and logs of hoop pine were floated downstream from the upper reaches of the river and sawn there.¹⁴ In this period most logs were transported by watercourses or with bullocks and throughout the nineteenth century, timber was hauled to sawmills, which themselves were able to be moved to the most convenient location.¹⁵

The convict settlement established industries in the town area to provide for the needs of the population and land was cleared for farming. Timber cutters operated in the immediate area of the

¹²*Queensland Year Book*, Queensland Government Statistician's Office, Brisbane, 1985, p. 3.

¹³Dimity Dornan & Denis Cryle, *The Petrie family: building colonial Brisbane*, University of Queensland Press, St Lucia, 1992, p.27.

¹⁴John Dargavel, 'Convicts and commercial cutters' in *Sawing, selling and sons*, ed. John Dargavel, Centre for Resource & Environmental Studies, Australian National University, Canberra, 1988. pp. 5-6. A convict period lumber yard, situated opposite the Treasury Casino in Queen Street, was excavated by Wallin and Associates in 1996.

¹⁵Kevin J. Frawley, 'Logging technology and forest cutting practices', in *Australia's ever-changing forests II*, eds John Dargavel & Sue Feary, Centre For Resource and Environmental Studies, The Australian National University, Canberra, 1993, p. 143.

penal settlement. One of the first recorded killings of Aborigines by Europeans occurred as a result of timber when convicts cutting bloodwood on the Pine River shot an Aborigine there in 1824.¹⁶ Land clearing and timber cutters became such an essential operation that by 1838 female convicts were involved in cultivation in order to release male convicts for these activities.¹⁷

Although many of the early uses of timber were purely local, the potential for export was never far from official minds and the reports of early explorers and of the government botanist, Charles Fraser took special care to note the presence of timber in areas they investigated.¹⁸ In 1824, cedar was the second most important export from New South Wales after wool and in 1826 Logan was instructed to send a cargo of pine logs from Brisbane to Sydney. During the 1830s, the timber trade increased rapidly and official correspondence between Sydney and Brisbane regularly included requests for timber. Shipments are indicated by the following statistics:

1836: request from the Royal Engineers: 'a very large supply of timber would be required, and of large scantling'

1836: three manifests of cargo for 144, 148 and 371 logs and pieces of blue gum scantling

1837: Moreton Bay exported 400 felloes for cart and dray wheels and 60 hardwood oars

1839: 75 cedar logs, 120 cedar flitches and 11,000 hardwood scantlings shipped from Dunwich to Sydney in March and 301 pieces of hardwood in May.¹⁹

One of the significant figures in the early exploration of timber areas around the penal colony was Andrew Petrie who arrived in 1837 as Foreman of Works. One of his earliest tasks was to supervise the loading of timber at Dunwich for shipment to Sydney.²⁰ As a friend of Commandant Major Cotton, Petrie was able to circumvent official controls on his movements and engage in exploration of areas around the penal settlement. His first visit to Bribie Island in 1838 was the cause of an official reprimand from Governor George Gipps, but his excursions continued. As was always the case with European explorers, he was highly dependent on Aboriginal guides.²¹ The reign of Logan had generated a number of escapees, many of whom had lived with Aboriginal groups and were able to act as important informants. Such escapees include Derrington (who had lived with Aborigines for 11 years and could speak the Bribie Island language), James Davis (known by his Aboriginal name Duramboi) and Bracewell (Aboriginal name Wandj) who claimed to have been involved in the rescue of Eliza Fraser.

From 1839-42, Andrew Petrie engaged in extensive travels in the Glasshouse, Maroochy and Wide Bay areas in order to locate and identify timber resources in the area.²² Alerted by Derrington to the

¹⁶Fisher & Johnston, SEQ2001, p.9.

¹⁷Thorpe, *Colonial Queensland*, p. 97.

¹⁸See Appendix 2 for a list of such explorations.

¹⁹Thorpe, *Colonial Queensland*, pp. 95-7.

²⁰Dornan & Cryle, *The Petrie family*, p.22. The following relies on Chapters 3 and 4 of this book.

²¹This cooperation was sorely tested following events at Kilcoy in 1842 when as many as 50 Aborigines were killed after swallowing arsenic. The escaped convict Bracewell reported that 12 tribes had met (although it was not the Bunya season) to re-enact the massacre and that they had sworn to kill any whites who moved into their territory. For details of this, see John Mackenzie-Smith, *Brisbane's forgotten founder: Sir Evan Mackenzie of Kilcoy, 1816-1883*, Brisbane History Group Studies No 1, 1992.

²²Dornan & Cryle, *The Petrie family*, p. 39ff.

existence of a wonderful and valuable tree, Petrie searched north and found the bunya, naming it *Araucaria petriani*.²³ In a letter to Reverend Dr J.D. Lang in 1842 he described the tree in glowing terms:

I have measured some ordinary sized trees, 150 feet high, and about four feet diameter. They are as straight and round as a gun barrel. The timber grows in a spiral form, and would answer admirably for ships' masts of any size. This Pine bears a great strain transversely, one of its superior qualities; also there is no sap-wood nor knots in the barrel, the lateral branches being never above two or three inches in diameter and growing from the outer rind of the tree.²⁴

Although concerned with the bunya's timber potential, Petrie also recognised the special value the tree had to Aborigines. Triennial bunya festivals attracted Aboriginal groups from hundreds of miles away and were significant gatherings with religious, political and social purposes. In the mid-1840s, Andrew Petrie's son Tom was the first white person to attend such a festival and he described the special relationship Aborigines had with the trees:

He [Tom] travelled from Brisbane with a party of about one hundred (Aborigines), counting the women and children.... The tribes were all assembling from every part of the country, some hailing from the Burnett, Wide Bay, Bundaberg, Mount Perry, Gympie, Bribie and Frazer Island, Gayndah, Kilcoy, Mount Brisbane and Brisbane. When all turned up there numbered between 600 and 700 blacks.²⁵

Each blackfellow belonging to the district had two or three trees which he considered his own property, and no one else was allowed to climb these trees and gather the cones....The trees were handed down from father to son, as it were, and everyone knew who were the owners.²⁶

By 1839 the value of timber resources had been recognised, and with it came the need for regulation. In that year, licences had to be obtained and payment made for red cedar cut from Crown Lands.²⁷ Further regulations were passed in 1842, when Governor Gipps, perhaps influenced in part by Andrew Petrie's description of the significance of the tree to Aborigines, declared a protectorate over the bunya lands north of Moreton Bay. The declaration failed to protect these

²³Tom Petrie was almost certainly the first European to see the tree, but Henry Stuart Russell, who had been with Petrie on his 1842 visit to Wide Bay, claimed that the tree had been shown to him previously by a botanist at Kilcoy Station, John Carne Bidwill. Despite the evidence of authorities such as Thomas Archer that Petrie had prior claim to the identification, the tree is called *Araucaria bidwilli* (Dornan & Cryle, *The Petrie family*, pp. 67-8).

²⁴Quoted in Dornan & Cryle, p.40.

²⁵Constance Campbell Petrie, *Tom Petrie's reminiscences of early Queensland*, University of Queensland Press, St Lucia, 1992 (first published 1904), pp. 12,16.

²⁶Constance Campbell Petrie, *Tom Petrie's reminiscences*, p. 16.

²⁷Crown Log Timber Marketing Procedure in Queensland, a paper prepared for the 1952 E.S.T.I.S. Conference - Forestry Archives, (93/38).

special trees. In the same year as the proclamation forbidding the granting of licences to occupy or cut timber in the bunya areas north of Brisbane, Brisbane became a free settlement, the fifty mile prohibition on settlement ended, and the timber resources of South East Queensland became the target of timber getters and pastoralists alike.

3. 1843-1859

SIGNPOSTS

1845	Non-indigenous population of Moreton Bay and Darling Downs is 1599
1846	First Queensland newspaper, the <i>Moreton Bay Courier</i> published
1848	Native Mounted Police Force established
1849	Gayndah gazetted as a town; technical education begun at the Brisbane School of Arts
1850	First bank opened in Queensland
1853	Town of Gladstone founded
1858	Discovery of gold at Canoona; first trade union (the Stonemasons Union) established in Queensland
1859	Queensland became a separate colony and the municipality of Brisbane was proclaimed

3.1 PEOPLING THE CONTINENT

Displacing Aboriginal people

When European settlers first arrived in South East Queensland, they described a landscape created by Aborigines. Settlers described the two distinctive vegetations: hardwood (mostly eucalypt) 'forests' and softwood (pine) 'scrubs'. The differences between the two are well described by Charles Archer, writing from Durundur near Woodford in 1844.

The face of the country is covered with trees. The most common is the gum tree; there are several varieties such as the white, red, spotted gum etc.... the Scrubs have quite a different vegetation from the open forest country and the trees found in them do not grow in the open land. The variety is immense.

A German botanist, who lived with us for nearly eight months [Ludwig Leichhardt] discovered in the scrubs in this neighbourhood nearly 100 different kinds of wood... Such country is of course utterly impracticable for a horseman, and not to be rashly ventured upon even by foot...until a road is cut, neither sheep, cattle, nor horses

can pass through them. The finest scrub tree as far as utility is concerned, is the pine (Moreton Bay Pine - *Araucaria*).²⁸

This pattern of vegetation was, in part, created by Aborigines who had lived in and around the forests for millennia and had managed them by fire. The extent of firing is not clearly known and perhaps never will be, but that fire management was a constant in Aboriginal management of Australia for thousands of years is clear from the reports of early explorers and settlers. Near Laidley in 1829, Cunningham reported:

Portions of the country around us were either in flames or smoking, and the natives, who had fired the dry grasses, which had spread far and wide among the hills, we heard in the confined vale, where we had encamped.²⁹

Writing to Lieutenant Lynd from Mount Brisbane in 1843, Leichhardt commented on the use of fire:

The blackfellow seems aware of its usefulness. He burns early in the year, whenever time is favourable, small patches, which afterwards attract the kangaroo by the sweetness of the young grass.³⁰

No doubt use of fire varied from district to district and not everywhere was open eucalypt forest (the 'pyrophyte' forest described by Pyne³¹) the norm. There can be little doubt, however, that the European settlers' interest in trees was grossly at odds with traditional Aboriginal attitudes and management practices.

Cooperation between the two groups of people certainly occurred. During the 1840s and 1850s Tom Petrie was reliant on Aboriginal knowledge of the vegetations and pathways of South East Queensland and he employed large numbers of Aborigines as timber getters in the 1860s. Without Aboriginal expertise, the timber industry would have taken longer to develop. Not only did Aborigines know the types of trees, their location and use, but they showed settlers ways of stripping bark to make the ubiquitous bark huts known by the Aboriginal name 'humpy'. Of eighty-six Aboriginal and Torres Strait Islander people recorded as in paid employment in Queensland between 1841 and 1897, eleven (12.7%) worked in the timber industry and sixteen (18.6%) worked as guides.³²

But conflict was inevitable as pastoralists and timber getters invaded Aboriginal lands. Sporadic attacks on settlers led to retaliation by Europeans, and the Kilcoy massacre of 1842 is a depressing sign of the deteriorating situation. On the Downs, a 'virtual guerilla war' ensued. Pastoralists in remote areas were vulnerable as were isolated timber getters. In the Albert area during 1845, 200 members of the Tul-gi-gin group killed two timber getters which in turn culminated in the shooting of an Aboriginal man and woman.³³

3.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

²⁸Quoted in Symons, *Bush Heritage*, pp. 21-2.

²⁹Quoted in Symons, *Bush Heritage*, p. 2.

³⁰Quoted in Symons, *Bush Heritage*, p. 26.

³¹Stephen Pyne, *Burning bush: a fire history of Australia*, Allen & Unwin, Sydney, 1991.

³²Thorpe, *Colonial Queensland*, pp. 70ff.

³³Fisher & Johnston, SEQ2001, p. 5.

Exploiting the forest

Surveyors had been sent to Moreton Bay in 1839 and the first sale of land at Moreton Bay took place in Sydney in 1841. Very quickly land became available for expanded settlement. Surveying, measuring and delineating the land was not simply a practical necessity but also a symbolic act of political control, and the position of Surveyor General was one of the most senior posts in the new colony.³⁴ With control of the land came control of the land's resources, and timber - whether for use or for removal - constituted one of the early resources new settlers had to contend with.

Timber was needed by the growing colony for a range of uses. Houses were predominantly built of timber and slab huts of hardwood or pit sawn timber were common. Only a few residences and official buildings were constructed of stone or masonry, in areas designated as 'first class'.³⁵ The combination of hardwood forests and softwood scrubs produced a distinctive timber building tradition involving hardwood framing and softwood cladding. Building regulations were non-existent, although after fires in sections of North Brisbane during the early 1850s, areas of the settlement were designated as first class. In these areas, more substantial building was required although the regulations proved ineffective in that corrugated sheeting over timber was considered to comply with the regulations.³⁶ Not until 1856 did alternatives to wood or masonry become available in the building industry. In that year, the first galvanised iron arrived in Brisbane and progressively replaced ironbark shingles as roofing.³⁷

Timber was also an important export commodity and the prevailing view was that supplies of timber were virtually limitless. Timber cutters, as opposed to timber clearers, expanded their field of operations. The Pine Rivers area produced hoop pine, red and white cedar, black bean and beech along with some hardwoods. Cedar was cut on the Gold Coast, and the Albert-Logan area produced beech, crows ash, bean, pine and other specialist timbers.³⁸ Southern entrepreneurs and businessmen financed cedar getting along the north coast of New South Wales and on the Tweed where the Boyd brothers were prominent cedar cutters. They appear to have had good relations with the local Aborigines, the Du-rung-bil, and members of this tribe assisted in building sawpits and clearing undergrowth. Timber cutters moved from the Tweed into the Nerang area and by 1846 boats were transporting timber along the Logan and Coomera Rivers.³⁹ The 1840s and early 1850s saw a rapid expansion in timber exploitation, but by the end of the decade there was a downturn caused by competition from the Richmond area of northern New South Wales and declining timber values in general. By 1859, timber accounted for only 0.9% of the value of Queensland's exports, compared to 78.8% for wool and 10.5% for livestock.⁴⁰

Private timber millers began processing logs in the early 1840s and 1850s. William Pettigrew arrived on the *Fortitude* in 1849 and was employed by the Commissioner for Crown Lands, Dr Stephen Simpson, to survey and map the Moreton Bay district. He left Simpson in 1851 and in 1853

³⁴ Thom Blake, Queensland cultural heritage context study - draft, Cultural Heritage Branch, Dept of Environment, 1996, p.12.

³⁵ Watson, 'Clearing the scrubs', p. 365 and Catherine Hawthorne, Queensland timbers; a report on the specific types of Queensland timbers and a history of their influence on the architecture of Queensland, B.Architecture, University of Queensland, 1984.

³⁶ Watson, 'Clearing the scrubs', p. 383.

³⁷ Bolton, *Spoils and spoilers*, p. 107.

³⁸ Fisher & Johnston, SEQ2001, p. 3.

³⁹ Vader, *Red Cedar*, pp. 120-1.

⁴⁰ Thorpe, *Colonial Queensland*, pp. 109,110 & 115.

built a sawmill in Brisbane, employing steam-driven machinery. Timber was acquired from the Wacol-Goodna, Moggill area and as far as Wivenhoe.⁴¹ Cox, Birley and Robert established a mill at Kangaroo Point in 1857 and Joseph Flemming built a complex at Bundamba in the mid-1850s including a steam sawmill, flour mill and cottages for 300 workers.⁴² William Duncan's sawmill at Little Tallebudgera Creek produced rough sawn timber for transport south by boat.⁴³ A steam sawmill opened in Toowoomba in 1857.⁴⁴ Not all people associated with the timber industry welcomed these developments; two years after it was opened, Pettigrew's sawmill was burned down by pit sawyers who saw their livelihoods under threat.⁴⁵

In other parts of Australia, other uses of eucalyptus trees included the medicinal use of eucalyptus oil. Joseph Bosisto had begun to distil the oil in 1852 and exhibited it at 17 medical exhibitions between 1854 and 1891.⁴⁶ No such attempts at distilling eucalyptus oil are reported for Queensland.

Engaging in Primary Production

In addition to these direct uses of timber, settlers and pastoralists moving in ever greater numbers into South East Queensland were intent on clearing land for grazing.

The Darling Downs and Brisbane Valley were settled by pastoralists during the 1840s and well-known names include the McConnells of Cressbrook, the Archers at Durundur and the Mackenzies at Kilcoy. Pastoral runs were taken up in the Fassifern, Logan, Albert and Currumbin regions in the 1840s and further north towards Yandina, Gympie and the Wide Bay area in the 1850s.⁴⁷ The first census for the Moreton Bay and Darling Downs districts in 1845 registered 1,599 non-indigenous persons; by 1859 the figure for South East Queensland was around 25,000.⁴⁸ Despite a volatile market, sheep, although requiring a greater capital investment, provided far greater returns than timber production for significantly less effort, as Table 1 shows. Combined with transportation difficulties, this meant that much timber cleared from land intended for pastoral purposes was wasted or squandered with little thought for its value.

⁴¹Elaine Brown, William Pettigrew 1825-1906, a Pamphlett prepared for the Timber Information Centre, n.d. The site of Pettigrew's mill in William Street, Brisbane was excavated by Wallin and Associates in 1997.

⁴²John Kerr, Forest industry heritage places study: sawmills and tramways, South East Queensland, Queensland Department of Environment, 1998, pp. 8-9.

⁴³Vader, *Red Cedar*, p.120.

⁴⁴Margaret Kowald, Historical overview of the South East Queensland biogeographic region with particular reference to forested area, Cultural Heritage Branch, Department of Environment, Brisbane, 1996, p. 9

⁴⁵Brown, William Pettigrew 1825-1906.

⁴⁶Bolton, *Spoils and spoilers*, p. 41.

⁴⁷Kowald, Historical overview, p. 9.

⁴⁸*Queensland Year Book*, 1985, p.3.

TABLE 1: A COMPARISON OF THE VALUE OF TIMBER AND SHEEPSKINS, 1848/9.⁴⁹

DATE	FEET OF TIMBER AND VALUE	SHEEPSKINS AND VALUE
1848-9	67,350 FT. = £134	79,798 SHEEPSKINS = £947
1849	24,000 FT. OF CEDAR = £84	326 SHEEPSKINS = £105

Moving goods and people

An interesting feature of this period of timber exploitation is the connection between the timber industry and early forms of transportation.

Settlers arrived in Brisbane by sea, and sea and river transport were important features of early settlement patterns. Most explorer routes were land routes, and these developed into roads, but river and sea routes were important for moving logs from forested to milling areas. This was especially the case given that the timbers first exploited by cutters were the softwoods which were capable of being rafted and floated along waterways. Timber territory repeatedly is expressed in terms of rivers - the Tweed, the Nerang, the Pine, the Maroochy. Not until the advent of improved steam shipping services in the 1850s were hardwoods readily transported by water.⁵⁰ Until then, movement of logs was by watercourse and/or bullock. Such practices had unfortunate consequences. Often logs were dragged to river banks where they awaited flood rains and sufficient river height for floating to appropriate rafting points downstream. Similarly they would await removal at the coast. During the 1850s, J.D. Lang lamented the loss of large quantities of cedar logs from the Brisbane River which were left rotting on the beach at Dunwich.⁵¹ Similar scenes were repeated along riverbanks and coasts throughout the south east.

Timber was not always, of course, situated in country close to rivers and coasts or in terrain suitable for bullocks.⁵² In a small number of rich timber areas, tramways were built to facilitate the removal of logs from the timber stands. From 1840 onwards, tramways using wooden rails and sleepers and employing narrow gauges were operating in Tasmania, West Gippslands and Victoria.⁵³ In Queensland tramways did not appear until the 1870s, when their impact was less than in southern states, but significant in terms of the relationship with railway development in general.

⁴⁹Table constructed from information in Thorpe, *Colonial Queensland*, p. 109.

⁵⁰Bolton, *Spoils and spoilers*, p. 40.

⁵¹Fisher & Johnston, SEQ2001, p. 23.

⁵² Although bullocks were invaluable in timber transportation, not only could they operate in a limited range of terrains, but - and perhaps more importantly - they often required fodder that was simply not available. Elaine Brown (PhD student, History Department, University of Queensland) - personal communication, 1997.

⁵³Frawley, 'Logging technology and forest cutting practices', p.155.

4. 1860s - 1870s

SIGNPOSTS

1861	The Supreme Court of Queensland established
1862	Copper discovered at Peak Downs; telegraph link between Brisbane, Ipswich, Toowoomba and Sydney opened
1863	First Melanesians brought to work on sugar plantations in Queensland
1865	First bridge across the Brisbane River built
1867	Gold discovered at Gympie; railway line from Ipswich to Toowoomba constructed
1869	Free education introduced in Queensland
1872	Gold discovered at Charters Towers; adult male suffrage introduced for state elections
1875	Railway line from Roma Street to Ipswich opened

4.1 PEOPLING THE CONTINENT

Promoting settlement on the land

On 6 June 1859, Queensland was proclaimed a separate colony from New South Wales, and in September of that year Brisbane was declared a municipality, with a population of 5,000. The first Governor was Sir George Ferguson Bowen. The 1861 census gives an idea of the occupants of the colony: concentrated in the south east were the non-indigenous occupants (18,121 males and 11,938 females), 42.9% of whom were unable to write.⁵⁴ There were 1,358 hectares under cultivation and 3,449,350 sheep, 432,890 cattle and 23,504 horses. By contrast, only a small number of manufacturing industries (four steam mills, a soap factory, a candle factory, saltworks, a pottery and two coal mines) existed, mostly for the production of goods for local consumption.⁵⁵

⁵⁴No accurate figures exist for the Aboriginal population of the colony, but estimates, probably conservative, vary from 10,000 - 15,000 for South East Queensland.

⁵⁵*Queensland Year Book*, 1985, p. 4.

The first priority of the new colonial administration was to encourage and expand areas of settlement, and in the year after separation the *Unoccupied Crown Lands Occupation Act of 1860* was passed.⁵⁶ In the absence of income tax, sale of Crown Land was a lucrative source of revenue for the colonial government⁵⁷ and revenue from land alienation soared from £2,442 in 1860 to £30,000 in 1869.⁵⁸ The 1860 Act allowed for the creation of agricultural reserves, with the condition that the occupant undertake basic improvements, which included housing, fencing and clearing. Ringbarking first developed in North America as a quick and cheap method of clearing pastures of timber without the costs of cutting and removing timber. It was thought to improve pastures; the pastoralist William Archer reported that after clearing 2,000 acres (809 hectares) at Gracemere, near Rockhampton, the quantity of grass increased threefold.⁵⁹ Few settlers understood that the particular conditions of Australian eucalypt forests meant that removal of timber often encouraged the growth of useless woody weeds.⁶⁰ Nor did the government consider that the waste of valuable timber resources on alienated Crown Land might have adverse consequences in the future. Trees were seen as an impediment to pastoral development and when considered as timber, the resource was thought of as virtually inexhaustible. It is hardly surprising that in such a climate, the early bunya protectorate decreed by Governor Gipps was revoked. As Frawley noted:

From the beginning, the role of government was that of a disposer rather than a manager of public lands.⁶¹

4.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploiting natural resources; making forests into a saleable resource.

Pastoralists and settlers were not the only people concerned with timber and its removal. By the 1860s, timber getters were operating further afield as better transport networks made greater areas of land accessible. By 1861, 125 cutters were licensed in South East Queensland under the *1860 Timber Licensing Act*.⁶² The Act applied to vacant Crown Land and pastoral lease, but not to freehold land, and provided for two different types of licences:

- A licence for the cutting of cedar, pine and hardwood at £4per annum; and
- A licence for the cutting of hardwood only at £2per annum;

⁵⁶ John Dargavel, Jane Goddard and Sonia Caton, 'Allocating forest resources in Queensland: guide to legislation, regulation and administrative practice', Centre for Resource and Environmental Studies Working Paper 1987/1, Australian National University, p. 2.

⁵⁷ Kevin J. Frawley, 1983, A history of forest and land management in Queensland, with particular reference to the North Queensland rainforest. A report to the Rainforest Conservation Society of Queensland. Geography Department of the University of N.S.W., Duntroon, A.C.T., p.76.

⁵⁸ Kowald, Historical overview, p. 12.

⁵⁹ Frawley, A history of forest and land management in Queensland, p.100.

⁶⁰ Bolton, *Spoils and spoilers*, pp. 42-3.

⁶¹ Frawley, A history of forest and land management in Queensland, p 76.

⁶² Kowald, Historical overview, p. 11.

Government failure to regulate the felling of timber on freehold land, whether for grazing or for timber exploitation, combined with the progressive alienation of crown land to freehold is a constant theme in any history of forest use during the nineteenth and twentieth century in South East Queensland.⁶³

The two categories of licence recognised a very rudimentary difference between pine softwoods and eucalypt hardwoods, but poorly reflected either their relative value or availability. Timber exports to New South Wales in 1860 were worth £2,442 and were the eighth most important export.⁶⁴ The Queensland government actively encouraged the timber trade, in an attempt to redress the trade imbalance caused by the importing of timber both from New South Wales and overseas.⁶⁵ Cedar (*Toona australis*), hoop pine (*Araucaria cunninghamii*) and bunya pine (*Araucaria bidwillii*) were the most valuable of the softwoods, being more readily worked by known technology. Softwoods in general were more familiar to the early European settlers and were preferred to hardwoods, although by 1860 it was recognised that hardwood stumps either treated with creosote or capped with metal were necessary to protect pine flooring from termite infestation.⁶⁶ Very little was known of the timber resources of Queensland, although in 1867 Amalie Dietrich won a gold medal at the Paris International Exhibition with her display of 50 timber specimens.⁶⁷ The approach to timber was similar to that adopted by pastoralists and graziers to land. Both land and timber were there to be exploited, often with little understanding of the resources themselves or the impact such exploitation would have on them.

Timber getters and sawyers were a breed apart. A newspaper report of the 1860s refers to the sawyer as:

‘the roughest of rough fellows, muscular as a working bullock, hairy as a chimpanzee, obstinate as a mule, simple as a child, generous as a slave of Alladin's lamp...’ They had, the writer adds, a fondness for rum and a weakness for fighting, and concludes that ‘there is a good deal of rude honour about these fellows. Thus, if one chances to light upon a ‘fall’ of cedar, none of the others will attempt to cut even a tree out of the group.’⁶⁸

There is no disputing the rigours faced by timber getters. Roads were rudimentary, exploitable forest stands became more remote from ready forms of transport, and the work involved in felling and transporting logs was arduous. Where logs could not be removed by bullock, they were dragged to rivers, tied together with chains or vines, rafted together with spikes and iron dogs and floated downstream.⁶⁹ Wastage was rife, whether from inaccessibility, lack of flood water to transport logs, or floods carrying timber out to sea. The 1860 flood on the Pine River, for example, took logs to where it did not pay to get them out.⁷⁰

By the 1860s, timber stands were beginning to be exploited outside the immediate reach of Brisbane. In the Samford Valley, a pit sawmill was established at Dayboro in 1866 with timber

⁶³Frawley, A history of forest and land management in Queensland, p.79.

⁶⁴Peter Taylor, *Growing up: forestry in Queensland*, Allen & Unwin, Brisbane, 1994, p.43.

⁶⁵W. Ross Johnston, ‘Hyne & Sons’, in *Sawing, selling and sons*, ed. John Dargavel, Centre For Resource and Environmental Studies, Australian National University, Canberra, 1988, p.139.

⁶⁶Hawthorne, ‘Queensland timbers’, pp. 49,54.

⁶⁷Judith McKay, (comp.), *Brilliant careers; women collectors and illustrators in Queensland*, Queensland Museum, Brisbane, 1997, p.7.

⁶⁸Quoted in A.R. Trist, *The Romance of Red Cedar*, Forestry Archives 1/33.

⁶⁹Frawley, A history of forest and land management in Queensland, p. 79.

⁷⁰Thorpe, *Colonial Queensland*, p.90.

from Mount Pleasant and Dayboro hauled to rafting grounds on the North Pine River then towed by steamer to sawmills in Brisbane. River transport was also the norm in the Logan and Albert areas, where hoop pine was the predominant species logged.⁷¹

In 1862, Tom Petrie began cutting timber in the Maroochy area with a team of 30 Aboriginal timber cutters and in the same year he and William Pettigrew investigated Fraser Island and the area around Tin Can Bay, in search of kauri pine and beech.⁷² In 1863, Pettigrew built Dundathu Sawmill in Maryborough to process kauri, and he acquired timber holdings in the Buderim and Maroochy areas. On Fraser Island, logging began in 1869 when kauri logs were cut by Seary and Bristow and rafted to Maryborough.⁷³

Pettigrew and Sim operated in the Cooloola area during the 1860s and 1870s. In 1872 they began to survey the route of a railway that would transport timber from the scrubs of Cooloola to the coast for shipping to Maryborough. This was Queensland's first private railway and a testament both to Pettigrew's determination and to the value of the timber resources that could warrant such capital investment.⁷⁴ As a contemporary report by Ebenezer Thorne noted:

The pine timber in these scrubs and all over the Wide Bay District is of superior quality and has a high character in the Sydney and Melbourne markets. Some of the trees are of vast proportions. We have measured them in the scrubs of Kin Kin Creek as much as 36 feet in circumference... For many years this business must continue to be of great importance and very lucrative. It offers many openings to men with moderate capital to erect mills, and to those in more modest circumstance to purchase a team of bullocks or horses, a timber-dray, and a boat to procure timber for the mills.⁷⁵

We know little about the timber getters and their families, the men of 'modest circumstance', but that they existed in large numbers is clear, the 1871 census figures for Tin Can Bay showing a population of 'lumberers' including twenty-three men and twelve women.⁷⁶ However confidence in the lasting nature of timber resources and the future of the industry was misplaced. By the 1870s most of the valuable timber was gone from the Maroochy area and the rivers were suffering the effects of erosion, namely silting and navigational problems.⁷⁷

From as early as 1862, it was recognised that uncontrolled exploitation could not continue. New regulations aimed at avoiding undue wastage threatened seizure of logs if not removed; pine after three months and twelve months for other species. Regulation without enforcement was, however, ineffective and in most areas there were no officials to control or check the operations of timber getters. Even when timber was seized, often the only person interested in buying the logs was the original cutter.⁷⁸ According to William Pettigrew the licence system was part of the problem. In a

⁷¹Thorpe, *Colonial Queensland*, p. 90.

⁷²Fisher & Johnston, SEQ2001, p. 42.

⁷³Working Plan for SF3 Fraser Island (1925/6-1929/30); Brown, William Pettigrew 1825-1906.

⁷⁴The complete story of the Cooloola timber industry is told in Elaine Brown, *Nineteenth century Cooloola: a history of human contact and environmental change*, M.A. thesis, The University of Queensland, 1995, Chapter 2. For details of the Cooloola tramway see p. 321 ff. For details of the Cooloola tramway system, see John Kerr, 'The Calooli Creek and Thannae railway; Queensland's first private railway and first Queensland-built locomotive', *Queensland Heritage*, Vol. 2, No. 3, November 1970, pp. 14-20.

⁷⁵Quoted in Brown, *Nineteenth century Cooloola*, pp. 309-10.

⁷⁶Brown, *Nineteenth century Cooloola*, p.321.

⁷⁷Fisher & Johnston, SEQ2001, pp. 42-4.

⁷⁸Frawley, *A history of forest and land management in Queensland*, p. 80.

letter written in April 1864 to the Secretary for Lands and Works, Arthur Macalister, he outlined some of the key issues. Despite the romantic view expressed in the 1860s newspaper article (see above), Pettigrew stated baldly: “As a rule timber getters *all hate one another* (italics original).”⁷⁹

One of the reasons for this, he argued, was that the costs of accessing timber varied from district to district and often involved the provision of roads and other facilities. Licences were personal, not geographic, and so the costs incurred by one party in gaining access to timber resources were then, at no cost, enjoyed by all. The answer, he argued, was to establish boundaries and dispose of areas, preferably by auction and with the money paid up front.

Whenever a district was proclaimed, no licence to cut pine and cedar in that district should be granted, but any person wishing to cut timber should be required to lease the ground.⁸⁰

At last some recognition was being made of the connection between land ownership (or leaseholding) and timber resources on that land. It was being made, of course, because the large timber millers such as William Pettigrew and later William Hyne in Maryborough, required some form of certainty for the capital investment they were making.

The letter by Pettigrew was endorsed by Macalister, Secretary for Lands and Works, and in 1864, special timber licences were introduced. Under these provisions, a purchaser had exclusive rights to cut and remove timber from specified areas for £12 per square mile, on areas where ordinary timber licences did not apply. The letters of the cutter's name were to be marked on the log, and failure to do so could lead to forfeiture. Misunderstandings were common. Timber was owned once felled, but many confused the branding of the tree with ownership. Trees along the route of the Brisbane-Toowoomba rail line (completed in 1867) were branded in this way in the belief that this would denote ownership.⁸¹

The bunya pine, overcut during the 1840s and 1850s, was excluded from both the general and special timber licences in 1865 as was timber two miles on either side of a surveyed railway line.⁸² In 1870 the first timber reserves were gazetted with the purpose of protecting selected timber resources for future railway use.⁸³

Timber exploitation accelerated during the 1870s. Sawmills were established north of Toowoomba in the 1860s and in the Fassifern area sawmills produced cabinet timbers. Pettigrew extended his operations to the Blackall Ranges and the Conondale area from where logs were transported to sawmills at either Brisbane or Maryborough. Mill Point on Lake Cootharaba processed logs from the southern part of Cooloola.⁸⁴ The mines at Gympie, where gold was discovered in 1867, used large amounts of timber for mine props and fuel.

Labour for much of the timbergetting in the Wide Bay, Mooloolah/Maroochy and Albert/Logan/Tweed area came from Aborigines and in 1875 the editor of *The Queenslander*, Angus Mackay, reported that it was “common practice” to send Aborigines to cut timber. Aborginal

⁷⁹“The introduction of special timber licences in Queensland”, *Queensland Heritage*, Vol 1, No 10, 1969, pp. 24-6.

⁸⁰ The introduction of special timber licences in Queensland’, *Queensland Heritage*, Vol 1, No 10, 1969, pp. 24-6.

⁸¹Frawley, A history of forest and land management in Queensland, pp. 81-2

⁸²Frawley, A history of forest and land management in Queensland., p.83.

⁸³Kowald, Historical overview, pp. 13-14.

⁸⁴Fisher & Johnston, SEQ2001, pp 42-4.

guides were also critical. It is likely that Aboriginal guides originally intended to monitor European access to their country, but as occupation intensified and became irreversible, Aboriginal guides and timber workers worked more and more at the behest of European timber interests.⁸⁵

By 1876 timber production at Maryborough had reached 27,700,000 super feet of mostly sawn pine for local housing and by 1877, the “impenetrable and apparently interminable scrub” around Maryborough had “all gone, except one small patch”.⁸⁶ Improved transportation networks were important for timber merchants and it is hardly surprising that R. M. Hyne, of the timber firm Hyne & Sons in Maryborough, was a staunch supporter of rail networks radiating from Maryborough.⁸⁷

4.3 PEOPLING THE CONTINENT

Promoting settlement on the land through selection and group settlement

Despite the tentative steps being taken, with the introduction of the special timber licences, to limit the wasteful exploitation of timber, no real efforts were made in the direction of conservation. One of the main reasons for this was the conflict - a constant theme - between the demands of the individual and the future requirements of the community; between the demands of settlers and the future needs of the colony. Land in Crown ownership could, when the need was realised, be controlled. Freehold land was outside government control. Concurrent with the 1860s' attempts at regulating and licensing the exploitation of forests on Crown Lands was the continual promotion of settlement and the alienation of Crown Lands. Roads, railways and other transportation improvements made it easier for settlers to spread out in their quest for land; the discovery of gold at Gympie accelerated the trend. By 1868, there were rail and coach links to Toowoomba, coach routes went north via Caboolture and Woombye to the Gympie goldfields, while the ports of Maryborough and Tewantin serviced sawmills and other industries in their vicinity.⁸⁸

Pressure for increased settlement led to the *Crown Lands Alienation Act of 1868*. The Act allowed for the alienation of vacant crown land and the selection of areas through the resumption and breaking up of pastoral leases.⁸⁹ Improvements such as clearing and fencing were specified and the act was, of course, a revenue-raising exercise. But it is far too simplistic to see it simply as that. The idea of encouraging an increased population, settled in idealised rural and agrarian lifestyles, is a constant one during the nineteenth and early twentieth century and perhaps lingers in the commuter society gradually developing in the southern areas of the South east Queensland biogeographic region.

It is true that for much of Australia's history, “the land was a commodity to be exploited, something with economic potential whether it be growing crops, grazing sheep or extracting minerals”⁹⁰, but other factors are involved. For one thing, a constant fear of foreign people to the north of Australia encouraged the idea that only a larger population could protect us from overseas interests and

⁸⁵Thorpe, *Colonial Queensland*, p. 72.

⁸⁶Thorpe, *Colonial Queensland*, pp. 89,92.

⁸⁷Johnston, 'Hyne & Sons', p. 140.

⁸⁸Kowald, Historical overview, p. 13.

⁸⁹Kowald, Historical overview., p.12.

⁹⁰Blake, Queensland cultural heritage context study - draft, p.11.

pressures. The rural, agrarian lifestyle was also promoted for its moral values. These ideals, however, were often shattered by the realities of the Australian landscape. Oliver catalogues the disasters that were a continual feature of Queensland life - droughts, cyclones, floods.⁹¹ A lack of understanding of the environment in which settlers lived caused leaders repeatedly to underestimate the effect of human settlement and to make decisions based on short-term political expediency and to the detriment of long-term management. Queensland was not, of course, alone in this. As Frawley has commented:

numerous Australian landscapes...still bear witness to the long supremacy of the agrarian vision - derelict butter factories, declining small towns, and cleared hills now covered in lantana or camphor laurel trees.⁹²

With the transfer of much forested land into private hands, private supplies of pine and hardwood became a major source of saw logs for the ever-expanding timber needs of the colony.⁹³ Given the inability of governments to regulate this cut, however, it was inevitable that such supplies would be depleted in time, and that the crown cut would then have to make up the difference.

4.4 TRACING THE EVOLUTION OF A CONTINENT'S SPECIAL ENVIRONMENTS

Assessing scientifically diverse environments

It would be wrong to suggest that there were no alternative views of the needs of the colony. A number of often quite disparate individuals and groups recognised that current practices threatened the future, and lobbied for alternative approaches. Many of these views were attempts to come to terms with an environment and ecology whose complexity was little appreciated by the general public and only gradually being understood by the scientific community.

Although ringbarking was a widespread practice in the 1860s, some people argued that it would have a detrimental effect on climate and rainfall.⁹⁴ Environmental concerns were also expressed in articles in the weekly *Queenslander*, and the impact of the US writer Marsh's *Man and Nature* (1864) was significant, as were the lectures of the Austrian botanist Ferdinand von Mueller and the debate on forest conservation occurring in the 1860s in New Zealand. Influential in lobbying government was the *Acclimatisation Society of Queensland*, whose secretary from 1860 to 1908 was L.A. Bernays, clerk of the Legislative Assembly.⁹⁵ The society was an organisation devoted, in part, to promoting the importation of exotic species of plants and animals, and they were concerned at the possible effects of deforestation on the climate. In 1870 they called for the collection of data on forest cover and land clearing and for such information to be included in meteorological reports. No such data existed, of course; indeed the extent of forest cover was largely a matter of guesswork.

⁹¹ John Oliver, 'The role of natural hazards and other environmental challenges in the development of Queensland', in *Queensland through history: a collection of papers presented at a Queensland Day symposium*, 6 June, ed. Peter Griggs, 1988, *Queensland Geographical Journal*, 4th Series, Volume 3, 1988.

⁹² Kevin J. Frawley, 'Evolving visions: environmental management and nature conservation in Australia', in Dovers, *Australian environmental history*, p.69.

⁹³ For example the railway building boom of the late 1860s led to a demand for hardwood sleepers and bridge girders, and the discovery of gold at Gympie led to a demand for timber props, in addition to the on-going demands for timber for housing. Wooden dwellings continued to be the norm.

⁹⁴ Bolton, *Spoils and spoilers*, p.43.

⁹⁵ Frawley, *A history of forest and land management in Queensland*, pp. 85-7.

In 1873 the Acclimatisation Society convened a conference “to bring home to the Government of the day the all-urgent question of forest conservancy”.⁹⁶ Two papers, by John Jardine, the Gold Fields Commissioner at Rockhampton, and L.A. Bernays, by then President of the Society, were presented and argued the case for conservancy.

Jardine began by making the general point:

all over the world, colonists have laid it down that 'clearing' is the first step towards civilisation and improvement. Experience has, however, shown in the older countries, that this system may be carried on to too great an extent, and that instead of opening up a country by judicious clearing, a process of extermination has been adopted, alike destructive of the beauty and comfort of the umbrageous landscape, the fertility of the soil, and the natural source of wealth wherewith Queensland has been so largely favored.⁹⁷

In other countries, he argued, replanting had improved climates and he suggested that similar plantings might counter the effects of drought. He proposed not only conservation measures, but the planting of indigenous species and forest management along the lines of those employed by forestry in the Indian Conservancy Department. Whilst advocating conservancy of the environment, his paper betrays a general attitude toward nature not entirely at odds with the 'colonial', exploitative one of the authorities. His vision of the future was an exotic, European one:

the freshness, verdure and cool-shade of forest clumps would break, enliven and ameliorate our viewless Downs, and shadeless flats, and give to the present uninteresting landscape the chase-like and sylvan-beauty of our old country.⁹⁸

Bernays' 'Rough jottings re forest conservancy' addressed the issues of licensing, reserves, planting and administration. South Australia, he argued, provided the best model, where the *1873 Forest Trees Act* had established forest reservations and where the state was soon to experiment with plantings of *Pinus radiata*. In New Zealand, government encouragement was being given to forest planting.⁹⁹

In 1874, the Secretary of State for the Colonies had sent a questionnaire on forest issues to Walter Hill, then head of the Botanic Gardens in Brisbane. Hill outlined the abuses that were widespread, including uncontrolled ringbarking, wastage from poor logging practices and the lack of timber reserves. His advocacy encouraged John Douglas, the Parliamentary member for Maryborough and therefore the representative of a timber constituency, to propose a select committee to “consider and report upon the best means to be adopted in order to preserve and promote the growth of Timber Trees, and to conserve Forests for useful purposes”.¹⁰⁰

4.5 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Managing the forests - administering the forest and protecting the forest

The Select Committee on Forest Conservancy received submissions from fifteen witnesses in 1875. A number of related issues were canvassed.

⁹⁶Quoted in Carron, *A history of forestry in Australia*, p. 96.

⁹⁷Quoted in Frawley, *A history of forest and land management in Queensland*, p. 88.

⁹⁸Frawley, *A history of forest and land management in Queensland*, p.91.

⁹⁹Frawley, *A history of forest and land management in Queensland*, p 95.

¹⁰⁰Frawley, *A history of forest and land management in Queensland*, p.97.

First were issues relating to the system of licensing cutters on Crown Land. Robert Hart, from Maryborough, argued that the special timber licences operated for too short a period. After twelve months others could apply to cut in the same area and benefit from improvements such as roads that the earlier timber licensee had built at his expense.¹⁰¹ Many cutters avoided licences altogether and even when they were licensed, there were few if any regulations. As Henry Massie, Crown Bailiff, reported:

There is no restriction; they take a licence and go out and cut, and what suits them they take away.¹⁰²

Transportation problems created wastage. The system of ‘freshing down’ involved waiting for flood waters to carry logs downstream. According to Massie, it was responsible for losses of up to 50% between 1867 and 1875. Pettigrew complained that timber cut in the late 1850s was ruined by the time the 1869/70 flood arrived to transport the logs, and William Archer commented:

You cannot take up the glass from the deck of a steamer without seeing the coast lined with timber.¹⁰³

Perhaps more importantly, it was clear from the evidence that “liberal land alienation policy facilitated forest exploitation, with no return to the state nor any form of control over cutting”.¹⁰⁴ The provisions of the *1868 Land Act* did not require assessment of the timber stands on the land, and many selectors obtained land cheaply, removed the timber (one selector valued the timber stands at £100,000), and then forfeited the selection.¹⁰⁵ The government obtained no revenue, the forests were depleted, and land was cleared to no useful purpose. Genuine selectors were encouraged to clear their land as this constituted an ‘improvement’, but transportation and marketing problems meant that the timber was seldom utilised. In the Rosewood scrub near Ipswich, for example, millions of feet of pine were burnt out to make way for maize and pumpkins.¹⁰⁶ As demands for timber increased, such wastage could not be tolerated.

Hill saw the need to separate “agricultural, botanical and kindred subjects from that of the Administration of Lands” and recommended the establishment of a separate forest service, headed by a qualified conservator. This organisation should be responsible for areas of state forests, for areas set aside for reforestation and should engage in scientific research into forest trees.¹⁰⁷ The call for a separation of powers between forest and land interests forms another of those recurrent themes that a history of forestry highlights. The battle for forestry to control its own constituency was not only a feature of forestry in Queensland, but was repeated throughout Australia.¹⁰⁸

The Committee reported to the House in August 1875 and made seven recommendations. These were that:

- special forest legislation was necessary;

¹⁰¹Frawley, *A history of forest and land management in Queensland*, p.99.

¹⁰²Frawley, *A history of forest and land management in Queensland*, p.80.

¹⁰³Thorpe, *Colonial Queensland*, p. 90.

¹⁰⁴Frawley, *A history of forest and land management in Queensland*, p.97.

¹⁰⁵Frawley, *A history of forest and land management in Queensland*, pp. 97-8.

¹⁰⁶Thorpe, *Colonial Queensland*, p.92.

¹⁰⁷Frawley, *A history of forest and land management in Queensland*, p.101.

¹⁰⁸J.M. Powell, *An historical geography of modern Australia: the restive fringe*, Cambridge University Press, Cambridge, 1988, pp. 36-37 - see Table 3, p. 37 on Forestry in the Victorian Public Service.

- revenue should be obtained from log timber export;
- the principle of forest reserves should be extended and forests managed in perpetuity;
- timber cutting conditions in the proposed 'State Forests' be defined by legislation and limits to the right to selection be established;
- forest rangers should be appointed to supervise cutting and that the tenure of Special Timber Licences be more secure;
- cutting girth limits should be imposed; and,
- a Forest Conservancy Board should be appointed.¹⁰⁹

Some recommendations were heeded. *The Crown Lands Act of 1876* prohibited the cutting of bunya pine, Queensland nut (*Macadamia integrifolia*), turpentine (*Syncarpia hillii*) and pea bean (*Syncarpia laurifolia*) on either vacant Crown Land or pastoral leases, and imposed a girth limit of 2 ft. diameter on red cedar. Girth limits of eighteen inches were imposed on pine in 1878 and those for cedar increased to 7 ft. 6 ins in 1879.¹¹⁰ Licence fees were increased to £5 for pine and £3 for hardwood. Following overcutting of red cedar, particularly in North Queensland, the *Duty on Cedar Act* of 1880 required ships' captains to declare their intention to load cedar and an export duty was imposed. Some reservation of timber was made on Crown Lands - 55,680 acres (22,533 hectares) near Gympie, 5,340 acres (2,161 hectares) near Warwick, 18,650 acres (7,547 hectares) near Port Curtis and in 1879 32,684 acres (13,227 hectares) at Numinbah, 32,684 acres (13,227 hectares) on Fraser Island and a further 55,680 acres (22,533 hectares) near Gympie.¹¹¹ In 1877, William Pettigrew's publication *The habit and peculiarities of some of our timbers* is evidence of an increased awareness of the diversity of the forests.¹¹² His early attempt to establish bunya and cedar nurseries indicates a more forward-thinking approach to resource use.¹¹³

Nonetheless, the pressures on the forests continued due to poor regulation and increased pressure for selection. The timber industry had little political clout compared with grazing and pastoral interests, and the concept of public interest was weak. Premier Macalister favoured railway development and closer settlement. The *Crown Lands Amendment Act of 1875* eased conditions of selection in order to attract increasing numbers of settlers.¹¹⁴ By the end of the 1879, when revenue from land alienation reached £74,007,¹¹⁵ the Acclimatisation Society had lost its government grant,

¹⁰⁹Frawley, A history of forest and land management in Queensland, p.101.

¹¹⁰The important point to note about girth limits is that they were purely arbitrary and based on no reliable data concerning growth rates. Frawley, A history of forest and land management in Queensland, p.143.

¹¹¹Frawley, A history of forest and land management in Queensland., pp. 104, 107 and Fisher & Johnston, *SEQ2001*, p.44.

¹¹²W. Pettigrew, *The habit and peculiarities of some of our timbers*, Government Printer, Brisbane, 1878.

¹¹³Kowald, Historical overview, p.12.

¹¹⁴Symons, *Bush Heritage*, p.103.

¹¹⁵Kowald, Historical overview, p.12.

Henry Massie had been dismissed, and in 1881, the Director of the Botanic Gardens, Walter Hill, was forced to retire.¹¹⁶ Land had won over forests and the present over the future.

¹¹⁶Watson, 'Clearing the scrubs', p.376.

5. 1880s

SIGNPOSTS

1880	Tin discovered at Herberton, North Queensland
1880	Ned Kelly captured in Victoria
1882	Gold discovered at Mount Morgan near Rockhampton
1884	Southern portion of New Guinea annexed by Great Britain, administered by Queensland
1885	Queensland had the largest number of cattle of any of the colonies
1887	The Queensland Department of Agriculture was established
1888	Electricity supply linked to the G.P.O., Brisbane
1889	The Australian Labour Federation formed

5.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploiting the forest

The 1880s were boom years for the colonies and boom years for timber exploitation in Queensland. Timber demands continued to grow. Land speculation in Brisbane in the 1880s had led to the passage of the *Undue Subdivision of Land Prevention Act (1885)* which stipulated that individual houses within a terrace could not be sold. Speculators therefore turned to detached housing on 16 perch blocks, thus ensuring that timber continued to be the dominant building material.¹¹⁷ Outside Brisbane, the increasing population of the colony also required housing, and railway expansion led to increased demands for timber for sleepers and bridges. Timber poles were needed to provide for the new telephone services. Timber exports also rose, cashing in on the increased demand for timber associated with imperial expansion. Hardwoods were in demand for railways, wharves, docks and mines. Every kilometre of railway line used 1,300 sleepers and eucalypt hardwood was ideal.¹¹⁸

The boom in timber created new settlement patterns as distinctive timber villages emerged in rural areas, as for example around Caboolture.¹¹⁹ In 1882, Hyne went as far as to visit England in an

¹¹⁷Watson, 'Clearing the scrubs' and Blake, Queensland cultural heritage context study - draft, p. 68.

¹¹⁸John Dargavel, 'Constructing Australia's forests in the image of capital', in Dovers, *Australian Environmental History*, p. 83.

¹¹⁹Fisher & Johnston, SEQ2001, p.65.

attempt to attract migrants to Maryborough.¹²⁰ The Lahey brothers established a sawmill at Waterford and expanded into Canungra (1884) and Beaudesert (1888). At Tamborine, the Curtis brothers built a water-powered sawmill on Cedar Creek in 1888 and sawmills opened at Harrisville (1879) and Dugandan (1883).¹²¹ By 1877 sawmills were producing 44,000,000 super feet of softwood and sawn timber for export to Sydney; by 1899, sawmills in Queensland produced 90,520,076 super feet, including 1,989,868 of red cedar, most of which was exported.¹²² This was despite competition during the 1880s from cheap imports of kauri pine from New Zealand and oregon from America.¹²³

Thorpe claims that “between 1887 and 1907, one billion super feet of pine was cut out of Queensland, roughly one third of the entire estimated stands of this species in this period.”¹²⁴ But estimates are notoriously unreliable given the lack of data for the period. Losses and wastage through ‘freshing’ continued. For example, in 1864 a crown ranger at Bundaberg reported seeing “a great many trees lying on the ground barked and cross cut into lengths for removal” but “left to lie and rot”. In 1889 George Mason of Maryborough had 1,000,000 super feet of cedar logs lying on the banks of the Mary River waiting to be freshed downstream to Tiaro, but they were lost “in floating up back waters and stranding and later being burnt by bushfires and by being washed out to sea”.¹²⁵ Little had been learned in decades between these two events.

As changes occurred in the make up of the timber industry, conflicts between cutters and sawmillers intensified. The Colonial Treasurer, Archibald Archer, proposed in 1882 an increased duty on exports of cedar in log form (12/- per 100 super feet) and on sawn cedar over 4 inches thick. Pettigrew, now an M.L.A., supported the move in order to preserve future supplies. Timber getters saw this as an attempt by the millers to monopolise the trade, and meetings were held at Nerang and elsewhere. The motion was finally withdrawn. If the debate showed anything it was that little was really known about either the extent of timber reserves, their future potential, or either the current or future consumption levels for cedar.¹²⁶

Managing the forests

Between 1884 and 1888, a different system of licensing timber getters operating on Crown Lands came into force as a result of the election of the Griffiths Liberal government in 1884. Under this system, besides a licence fee of five shillings, a royalty was paid on beech, hardwood, pine and cedar. A comparison of the two systems is outlined in Table 2.

TABLE 2: LICENCE FEES AND ROYALTIES COMPARED - 1885 & 1888¹²⁷

¹²⁰Johnston, 'Hyne & Sons', p. 140.

¹²¹Fisher & Johnston, SEQ2001, pp 65-6.

¹²²A.H. Crane, The hoop and bunya pine resources of Queensland. Regulation and its history, n.d.

¹²³Johnston, 'Hyne & Sons', pp. 140-1.

¹²⁴Thorpe, *Colonial Queensland*, p. 89.

¹²⁵Thorpe, *Colonial Queensland*, pp. 90-1.

¹²⁶For discussion of the debate, see Frawley, A history of forest and land management in Queensland, pp. 144-7.

¹²⁷Adapted from Frawley, A history of forest and land management in Queensland, pp. 152,173.

TYPE OF LICENCE	1885	1888
ORDINARY (PERSONAL AND EMPLOYERS)	5/- P.A.	£5P.A.
SPECIAL (RENEWABLE EXCEPT WHERE ROYALTY FROM EACH SPECIAL TIMBER LICENCE WAS LESS THAN £50 P.A.)	£5 PER SQUARE MILE P.A.	£8 P.A. (160 ACRES OR 64.75 HECTARES))
SLABS, FENCES AND SHINGLES	£3 P.A.	£3 P.A.
FIREWOOD, WATTLE BARK STRIPPING, CHARCOAL	£2 P.A.	£2 P.A.
RENEWAL OF SPECIAL TIMBER LICENCES	N/A	£25
CEDAR	ROYALTIES APPLIED CEDAR 2/- PER 100 S.F.	£10
PINE, BEECH, OR ANY TIMBER THE COMMISSIONER MAY DEFINE	ROYALTIES APPLIED: PINE 6D PER 100 S.F. BEECH 1/- PER 100 S.F. HARDWOOD 3D PER 100 S.F.	£7

These timber regulations were part of the provisions of the *1884 Crown Lands Act*, forestry then being under the control of the Department of Public Lands. This Act established the system of perpetual leasehold and was the product of the philosophy of the new liberal government of Griffiths that the state should get a return from the private use of public resources. The new Minister for Lands, Dutton, saw the royalty as the timber equivalent of a pastoral rent. Opposition was intense, especially since the royalty was seen to give an unfair advantage to imports. The royalty was halved on hardwoods and pines, Richard Hyne railed against the ‘espionage and persecution’ of Crown Land rangers, and the royalty system was overturned by the conservative government re-elected in 1888.¹²⁸

The timber provisions of the Land Acts were invariably inadequate. They seldom reflected a genuine understanding of forestry matters, they were almost never adequately enforced and they were subordinate to political interests and to the development interests of the Lands Departments. Attempts to reduce timber speculation on selections in 1886 under the *Crown Lands Act Amendment Act of 1886*, which provided for the introduction of village settlement schemes, were only partially successful. The Act limited timber cutting within the first five years without permission of the Land Commission, but numerous genuine selectors simply destroyed timber and speculative ones waited five years before extracting the valuable timber.¹²⁹ Pressure from selection also had a detrimental effect on the timber reserves that did exist; between 1885 and 1889, the area reserved actually fell.¹³⁰

¹²⁸Discussion of the Dutton *Land Act of 1884* in Frawley, A history of forest and land management in Queensland., pp.149-155.

¹²⁹Carron, *A history of forestry in Australia*, p. 97; Frawley, A history of forest and land management in Queensland, p. 165.

¹³⁰Frawley, A history of forest and land management in Queensland, p. 184.

5.2 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE

Conserving the environment

Concerns continued to be expressed, nonetheless, for the fate of the forests and the future viability of the timber industry. By 1880, there were more native born non-indigenous Australians than immigrants, and consequently a less 'colonial' approach to, for one thing, resource development.

From 1880 onwards the reports to Parliament by the Under Secretary of the Lands Department regularly included a section on forestry. In 1880, the report noted:

The question of Forest Conservancy is occasionally brought under the notice of the public, but no result follows further than a general acknowledgment that the most valuable timbers of the colony are fast disappearing and that something must be done to stop the waste that is going on. I had anticipated that long ere this the subject would have been dealt with by Parliament, but other matters of greater interest for the moment have occupied attention and forest conservancy is left for some more convenient season. At present the only thing which has been done in the direction of forest conservancy is to set apart some areas of land as timber reserves, which it is presumed will ultimately become State forests. This is, however, by no means certain, as efforts are continuously being made to have these areas declared open for selection by persons desirous of acquiring land, and sometimes these requests are backed by Parliamentary influence.¹³¹

Reserves continued to be declared, in particular in the south east. By 1885 there were 161 Timber Reserves covering 1,572,752 acres (636,484 hectares) and sixteen State Forests totalling 202,575 acres (81,980 hectares).¹³² The largest reserves were in the Land Agents' Districts of Maryborough, Gympie and Dalby, but enforcement of timber regulations was only one of the many responsibilities of the Crown Lands rangers.¹³³ In 1880, Mt Coot-tha was "placed in the charge of trustees as a reserve for public recreation" and, in doing so, the Under Secretary for Public Lands made reference to:

a general acknowledgment that the most valuable timbers in the colony are gradually disappearing and that something must be done to stop the waste that is going on.¹³⁴

From 1881 onwards forest conservancy was also included in the reports of the Director of the Botanical Gardens,¹³⁵ although the forced retirement of Walter Hill in that year bode ill for scientific approaches to conservation. Hill had been an outspoken public servant and had pursued policies aimed at expanding the botanical knowledge of Queensland. For example he was responsible for raising 15,000 red cedar plants at Oxley, even though no public agency for replantings existed. His scientific and utilitarian approach did not, however, accord with popular aesthetics. *The Queenslander* commented in February of 1881 that:

¹³¹Cited in Taylor, *Growing up: forestry in Queensland*, p. 50.

¹³²Frawley, *A history of forest and land management in Queensland*, p. 170.

¹³³Frawley, *A history of forest and land management in Queensland*, p. 170.

¹³⁴Quoted in Symons, *Bush Heritage*, pp. 2-3.

¹³⁵Watson, 'Clearing the scrubs', p. 373.

*Mr Hill is no landscape gardener, and it is time a more modern man took charge of the gardens.*¹³⁶

It was not only scientific voices that were raised in the forest conservancy debates. William Richard Hyne, M.L.A. for Maryborough and an important timber miller addressed the Legislative Assembly in 1889:

Anyone who understands the subject must come to the conclusion that before long the scrubs containing our most valuable timbers will soon become exhausted... I am not one of those who say there is plenty of timber for our time, and that the future can take care of itself... I would also draw attention to the very small area of the colony that contains valuable timber.¹³⁷

He called for replanting measures and the creation of a separate forestry department. His motion to the Legislative Assembly was passed, but no action ensued. Funds set aside for forestry matters in that year were £65.¹³⁸

¹³⁶Frawley, A history of forest and land management in Queensland, p 136 and general discussion on Hill, pp. 135-7.

¹³⁷Quoted in Frawley, A history of forest and land management in Queensland, p.175.

¹³⁸Taylor, *Growing up: forestry in Queensland*, 1994, p. 52.

6. 1890s

SIGNPOSTS

1891	Shearers' strike
1893	Electricity connected to 91 consumers near the G.P.O., Brisbane
1893	Eight out of eleven banks failed; Brisbane floods
1895	Queensland Native Mounted Police Force disbanded
1897	Policy of Archibald Meston to remove Aborigines to reserves
1897	Gatton Agricultural College established
1899	Cyclone <i>Bathurst Bay</i> led to the loss of 300 lives and the destruction of the pearling fleet
1899	First Australian contingent sent to Boer War in South Africa

6.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploiting the forest

Timber exploitation with little regulation continued. Royalties were abandoned and licences reintroduced with the re-election of the conservatives under Thomas McIlwraith in 1888. The quantities of timber required for building continued to grow. Not only was timber the most popular material for vernacular buildings, but it was becoming more widely recognised in architectural circles and the architect Robin Dods, who practised between 1894 and 1918, used Queensland timbers exclusively.¹³⁹ Timber was also an important source of fuel; a firewood mill in the Logan area was sending 15 to 20 tons of wood to Brisbane every week for use in bakers' ovens. Suitable timber was becoming scarce except for the less accessible range country and in the upper reaches of major rivers. Haulage over longer distances became the norm. Rail connection became essential if timber was to be removed to sawmills and markets and rail expansion required timber for sleepers and bridges.¹⁴⁰ The railway boom of the 1880s both required and facilitated further timber exploitation. Steamers, also, provided essential transport for sawn timber milled at Maryborough. In 1884 Hyne had bought a schooner of 78 tonnes and in 1900 he had one built in Scotland. Such a

¹³⁹ Hawthorne, *Queensland timbers*, p. 55.

¹⁴⁰ Fisher & Johnston, *SEQ2001*, pp. 91-4.

large capital investment is a good indication of the sorts of returns on timber that were possible, particularly to large sawmilling concerns.¹⁴¹

During the 1890s concerns were finally being raised about the revenue foregone by the state as a consequence of unregulated timber exploitation. For example as a result of land alienation in the south east, most of the logs for milling were coming from freehold land. In the Brisbane area the percentage from freehold land was 75%; in Ipswich, Toowoomba, Dalby and Warwick it was 90%. Land, and therefore the value of timber on that land, had been lost to the state.¹⁴²

A number of reports concerning forests were requested in 1890, in part as a result of the conservation policies being espoused by Hyne. The commissioners included P. McLean, Under-Secretary for Agriculture, P. MacMahon, Curator of the Botanic Gardens, A. McDowall, Inspector of Surveys and former District Surveyor at Maryborough, F. Byerley, Mining Surveyor, Rockhampton, C.H. Barton, school teacher of Maryborough and L. G. Board, Land Commissioner at Gympie and Maryborough. They took a utilitarian view of forests, best articulated by MacMahon:

The basis of conservancy in Queensland for some years to come, and indeed its backbone for all time, must be the management of sufficient portions of her natural forests in such a way as, while allowing them to be used for the purposes of life, will secure a perpetual succession of mature, healthy and marketable timber.... It cannot be too clearly known that over-reservation is in its effects nearly as bad as no reservation at all. When a tree reaches a certain stage good forestry requires that it be cut; so that the idea is not to lock these forests up.¹⁴³

The three main areas of concern were conservancy, regeneration and extension of forests, although a range of issues was canvassed including climate, aesthetics, river catchments and wildlife conservation. The reports advocated the creation of five types of reserves, namely:

- State Forests - dedicated to silviculture and inalienable;
- Timber Reserves - held temporally or permanently;
- Township or firewood reserves;
- Mining timber reserves; and
- Plantation reserves - held for future plantings.¹⁴⁴

¹⁴¹Johnston, 'Hyne & Sons', p. 140.

¹⁴²Frawley, A history of forest and land management in Queensland, p. 215.

¹⁴³Quoted in Frawley, A history of forest and land management in Queensland., p. 181.

¹⁴⁴Frawley, A history of forest and land management in Queensland, pp. 180-2; Kowald, Historical overview, p. 20.

6.2 PEOPLING THE CONTINENT

Promoting settlement on the land

At the same time, however, land policy was at odds with the ideals of forestry expressed in these reports. Throughout Australia there was bipartisan political interest in state-assisted group settlement plans. Conservatives had traditionally supported closer settlement and liberals and radicals also favoured a form of radical agrarianism. The 1893 depression led to widespread unemployment, and governments looked to land settlement programmes for economic development.¹⁴⁵ Land Nationalisation Leagues were established in Brisbane, Gympie and Charters Towers and the idea of cooperation was espoused by William Lane in the *Boomerang* and the *Worker*.¹⁴⁶ Land was promoted as a means of moral improvement. As John Leahy (M.L.A., Bulloo) articulated it in discussion of the *Cooperative Communities Act of 1893*, settlement on the land:

would remove a great many of those who are becoming larrikins and larikinesses in the outskirts of the city, and make them good and useful citizens in the future.¹⁴⁷

As was to be repeated during the Soldier Settlement Schemes of the 1920s and 1930s, rural ideals articulated by urban leaders with little real understanding of rural life caused money to be spent to little purpose. In the process, land and timber resources were squandered.¹⁴⁸

The *Agricultural Lands Purchase Act of 1894* aimed at closer settlement through the acquisition of large freehold estates and the division of this land among selectors. It was responsible, over the next twenty years, for the repurchase of twenty-nine estates totalling 785,310 acres (31,781 hectares) at a cost of £2 million.¹⁴⁹ The land tenures in Queensland were in a confused state by the 1890s, and a Royal Commission to investigate matters concerned with land settlement was convened. Finally, the *Crown Lands Act of 1897* repealed all former land acts and established the conditions for various forms of tenure.¹⁵⁰ The Act reviewed timber regulations. Licences remained for specified areas of land, special licences were abolished, and rights to cut timber on Crown Land could be sold at auction (prices to be no lower than 6d per 100 s.f. for pine, and 4d for 100 s.f. for hardwood) Section 190 allowed for the declaration of State Forests.¹⁵¹

An indication of the extension of settlement is seen in the following figures:

¹⁴⁵Kowald, Historical overview, p. 18.

¹⁴⁶Frawley, A history of forest and land management in Queensland, p. 194.

¹⁴⁷Quoted in Frawley, A history of forest and land management in Queensland, p. 204.

¹⁴⁸Frawley, A history of forest and land management in Queensland, p. 207 - £13,589 was spent to place only 445 acres under cultivation and at the expense of timber destruction.

¹⁴⁹Kowald, Historical overview, p. 19.

¹⁵⁰Kowald, Historical overview, p. 19.

¹⁵¹Kowald, Historical overview, p. 19 and see Table 2 above.

TABLE 3: AREA UNDER CROPS 1860-1901.¹⁵²

YEAR	AREA IN '000 HECTARES
1860/61	1.6
1870/71	21.0
1880/81	45.7
1890/91	91.0
1900/01	185.3

The effects of closer settlement, alienation of land, ringbarking and forest depletion were depressingly recorded by Flora Shaw, who travelled from Victoria to Queensland during the 1890s. She observed:

In the wood clearings on either side of the train where the practice of 'ring-barking' to kill the trees is in extensive use, there stand patches of timber from which the bark and leaves have dropped, and of which the dead white trunks and branches are waiting only to be felled. Sometimes an entire hill-side will be white with such a ghostly forest.¹⁵³

In the annual report of the Lands Department in 1889, District Surveyor Archibald McDowall had articulated his concerns with greater asperity:

It can hardly be questioned that the time is approaching when the wholesale destruction of timber in many parts of the Colony - much of it of a wantonly wasted nature - will be severely felt. Suddenly, when the depredations of a careless population have produced the inevitable result, the subject of forest conservancy will assume a prominence not yet accorded to it, and it will be a matter of general wonder that our shortsightedness did not allow us to realise that destruction without replenishment must lead to scarcity.¹⁵⁴

6.3 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE

Developing public parks and gardens

During the 1870s, American influences on conservation groups and individuals had led to calls for the declaration of recreation reserves. In 1879 the Royal National Park of Sydney was declared, to be followed by similar reservations in South Australia (1891), West Australia (1895) and Victoria (1898).¹⁵⁵ In Queensland the pioneer in this field was Robert M. Collins who had visited the United States in 1878 and was elected to the seat of Albert in 1896. His influence is seen in the 1899 report of Surveyor-General McDowall which suggested the establishment of state forests, national parks

¹⁵²Frawley, A history of forest and land management in Queensland, p. 203.

¹⁵³Quoted in Thorpe, *Colonial Queensland*, p. 84.

¹⁵⁴Quoted in Thorpe, *Colonial Queensland*, pp 51-52.

¹⁵⁵Frawley, A history of forest and land management in Queensland, p.187.

and recreation reserves. He supported the proposal by Surveyor Maguire that a 'National Park' or 'sanitorium' be created in the McPherson Ranges and took a keen interest in issues of forest management and conservancy. McDowall had been a District Surveyor at Maryborough in the 1880s and was involved in experimental plantings of kauri pine on Fraser Island.¹⁵⁶ Not for the first time, the role of a single, strong individual stands out.

¹⁵⁶Frawley, A history of forest and land management in Queensland, pp. 225-6.

7. 1900-1910

SIGNPOSTS

1901	Queensland became a State within the Commonwealth of Australia
1902	Right to vote granted to women in Federal elections
1903	Conservative Government replaced by Labour and other opposition groups in Qld
1905	Female suffrage in state elections
1910	State Act to control water introduced
1910	First Commonwealth banknotes issued

7.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploiting the forest

Timber production in the early 1900s became more specialised, and larger companies survived where smaller ones struggled. Specialised sawmills, often using complicated ancillary machinery such as tramways, developed. The Brisbane Valley mill of Brown and Broad produced material for the prefabricated housing market. Alexander and Duncan Munro built a tramway from Hampton railway station on the Crows Nest line down the Perseverance Valley to the Palm Tree Mill in the late 1890s.¹⁵⁷ Wilson and Hyne built a tramway on Fraser Island in 1905,¹⁵⁸ the Laheys operation at Canungra relied on tramways as a means of expanding into the Coomera Valley¹⁵⁹ and Lars Andersen built a tramway at Kipper Creek and Blackbutt in 1906, using flying foxes and traction engines. Andersen is also credited with inventing the wooden butter box.¹⁶⁰

¹⁵⁷Fisher & Johnston, SEQ2001, pp. 92-4.

¹⁵⁸Working Plan for State Forest Reserve 3, Fraser Island, for the period 1925/6 - 1929/30 and Wilson Hart to the Minister for Lands, 24 March, 1905 LAN/AK 23(Batch 36) QSA.

¹⁵⁹Frawley, 'Logging technology and forest cutting practices', p. 33.

¹⁶⁰Fisher & Johnston, SEQ2001, p. 92.

The butter box gave an important boost to the timber industry: by the 1930s, one million were being produced.¹⁶¹ Dairying was actively promoted by the government in the first decade of the twentieth century. Railways provided ready access to markets and dairy farmers were given rail concessions. Technical advice was given by the Department of Agriculture, and the *Dairy Produce Act* of 1904 assisted with marketing. The Lands Department promoted the availability of land for settlement through advertisements and employed thirty-one agents in Queensland and interstate to encourage migration.¹⁶²

Administering the forest

In 1900, a Forestry Branch was created within the Department of Public Lands and L.G. Board, formerly a Land Commissioner, was appointed an Inspector of Forests with a staff of two forest rangers. At last forestry was recognised as a semi-independent jurisdiction, but it was still under the auspices of the Department of Public Lands which had disparate and often contradictory aims. In 1900, there were 1,600,000 acres (647,511 hectares) of temporary timber reserves, and cedar (by now largely taken from North Queensland rainforests) accounted for 72% of the value of Queensland's exports.¹⁶³ Three people was scarcely adequate, but a beginning had been made.

In 1901 cedar licences were replaced by a royalty system of sales, in recognition that supplies were almost exhausted. Indeed by 1906, cedar had been virtually cut to commercial extinction and only 3,000,000 super feet of known supplies remained on Crown Land and these were in north Queensland. In 1905 the royalty system was extended to other timbers, and girth limits were prescribed. For the first time these girth limits also applied to hardwoods, although timber for mining, pile or girder timbers was exempt. Timber could only be removed once measured by a Land Ranger.¹⁶⁴

Land Rangers were not foresters, however, and had little understanding of the need for forest conservation. Ringbarking practices had not changed and examples abound of large-scale clearing and consequent destruction of valuable timbers on leasehold land. In 1901 the District Commissioner at Nanango approved the ringbarking of all of the Barambah leases, totalling 36,000 acres (14,569 hectares). The Crown Lands Ranger at Bundaberg advocated increased ringbarking on New Cannindah and at Degilbo the District Surveyor was happy to allow the ringbarking of 14,800 acres (5,989 hectares). The attitude of many Crown Rangers was that expressed by the Cairns Land Commissioner, A.P. Cameron, in 1907 that: "thriving settlers...[were] a much more valuable asset to the state than timber".¹⁶⁵

The land policy of Queensland remained the most lax of the states. The Queensland Agricultural Bank provided capital to selectors and Lands officials were lenient with rent in arrears. As a consequence selection of Crown Lands was often preferred to the costs of freeholding.¹⁶⁶ This put pressure on timber reserves and when Philip MacMahon became Director of Forests in 1905, he commented that:

¹⁶¹Fisher & Johnston, SEQ2001, p. 116.

¹⁶²Frawley, A history of forest and land management in Queensland, pp. 236-40.

¹⁶³Kowald, Historical overview, p. 20.

¹⁶⁴Kowald, Historical overview, p. 20.

¹⁶⁵Thorpe, *Colonial Queensland*, p. 93.

¹⁶⁶Frawley, A history of forest and land management in Queensland, p. 236.

the work of the forest rangers has been almost wholly confined during the year to the work of excising from the timber reserves areas suitable for settlement, in reality working in the interests of land selection rather than in that of forestry.¹⁶⁷

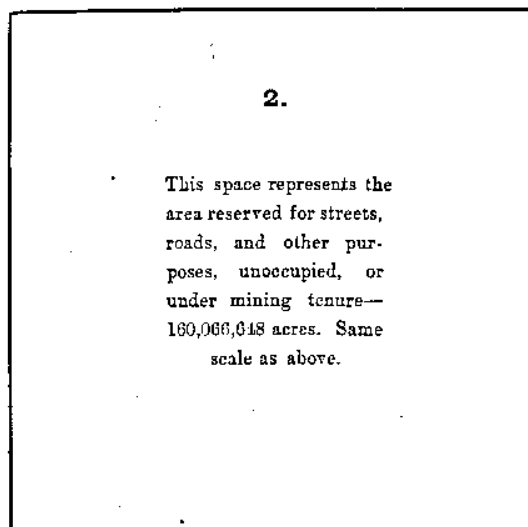
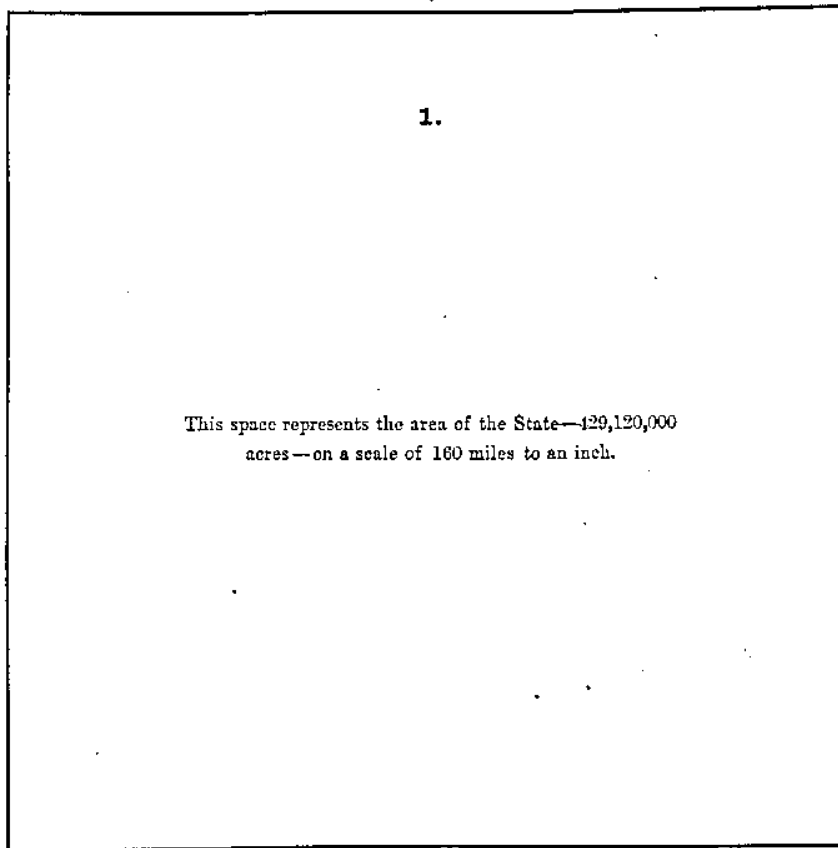
MacMahon

Philip MacMahon was Director of Forests from 1905 until 1910 and his appointment marks the beginning of professional forestry in Queensland. In one of his earliest Annual Reports (1907) (Figure 1) he highlighted the small area of land reserved for State Forest and spent his period in office fighting for forestry issues to be given higher priority.¹⁶⁸

¹⁶⁷Quoted in Carron, *A history of forestry in Australia*, p. 98.

¹⁶⁸Annual Report of the Director of Forests, 20th June, 1907, p. 3.

The following diagram shows clearly the relative areas of the State, reserves for streets, roads, &c., and unoccupied lands, and the timber reserves:—



This space represents the area reserved for timber—3,551,111 acres. Same scale as above.

FIGURE 1: LAND TENURE, 1907

(Annual Report of the Director of Forests, 20 June 1907, p. 3.)

During his term of office, MacMahon was responsible for a doubling of staff and a doubling of the timber reserves of the state.¹⁶⁹ Board and his two rangers had begun the task of assessing the timber reserves of the state and MacMahon continued to see this as a priority.¹⁷⁰ During his period of office, he was in the field for 145 days and at the time of his death in 1911 was working on an inventory of the 1.5 million hectares of state forests and timber reserves.¹⁷¹ Between 1900 and 1909, inspections of forests were carried out at five or six yearly intervals; between 1909 and 1917 there was only one survey camp in the field.¹⁷² Timber lands were classified as accessible, difficult and non-accessible, reflecting the essentially utilitarian philosophy of forestry. The first of these areas was being cut out at a rate faster than it could be replenished by natural means; the second-class lands were waiting their turn.¹⁷³ The terminology and approach was one of managing forests, rather than locking them away, and owed much to the ‘wise use’ conservation policy advocated by American conservationists such as Gifford Pinchot.¹⁷⁴

7.2 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE

Developing public parks and gardens

MacMahon was fortunate in his Lands Minister. Joshua Bell was unusual in having travelled overseas and having a tertiary education. He introduced the State Forests and National Parks Bill in November 1906, “an act to provide for the Reservation, Management and Protection of State Forests and National Parks” and which gave power to reserve Crown Land as State Forest or National Parks. Alienation of land within a State Forest or National Park was prohibited, although special purpose and occupation licenses limited the effectiveness of this. This Act provided a situation unique in Australia, whereby National Parks were administered by Forestry, and it remained in force until 1975. Forestry’s role in National Park development is often overlooked. As early as 1903, G.L. Board had called for the proclamation of a National Park at the Bunya Mountains in spite of the fact that the area contained valuable timber resources. Almost from its inception, Forestry was conscious of the need to protect significant areas of forest estate, even when this meant losing valuable timber supplies.¹⁷⁵

Demands for such legislation did not come solely from Forestry officials. Improved public transport had led to demands by the urban middle class for recreation areas and reserves. The lobbying of individuals such as R.M. Collins was important, but such pressures were not exclusive to Queensland. Elsewhere in Australia, there were demands for areas of natural beauty to be preserved. Many of these areas were forested, implying a changing approach by non-indigenous ‘native born’ Australians to their landscapes. Most of these preserved areas were called ‘National Parks’, although they were not under Federal control. The implication is, therefore, that the preservation of

¹⁶⁹Taylor, *Growing up: forestry in Queensland*, p.53.

¹⁷⁰Frawley, *A history of forest and land management in Queensland*, p. 262.

¹⁷¹Carron, *A history of forestry in Australia*, p. 99.

¹⁷²History of Surveying, Department of Forestry, 1900-1966, 14/4/1967 - Forestry Archives (156/4).

¹⁷³Carron, *A history of forestry in Australia*, pp 98-9.

¹⁷⁴Frawley, *A history of forest and land management in Queensland*, pp. 330-1.

¹⁷⁵ I thank H.S. (Syd) Curtis for this observation, personal communication, 1998.

areas of beauty was of more than local interest and had “democratic and even moralistic connotations”.¹⁷⁶

In 1908, the first National Parks had been declared in Queensland. These were Witches Falls on Tamborine Mountain (131 hectares) and the Bunya National Park (9,000 hectares). In 1915 a further declaration was Lamington National Park (20,000 hectares).¹⁷⁷ By 1910, 832,000 acres (336,705 hectares) of Queensland’s Crown Land were State Forest, with a further 3,022,098 acres (1,223,026 hectares) as timber reserves.¹⁷⁸

7.3 PEOPLING THE CONTINENT

Promoting settlement on the land

The comments by the Under Secretary of the Department of Lands in his annual report following MacMahon’s death in 1911 reflect the realistic but gloomy sentiments of the former Director of Forests:

It is an unfortunate circumstance, from the standpoint of forestry, that the State’s best soft woods are found on its best soils. The maintenance of the rich volcanic coastal scrubs as permanent reservations for forestry purposes cannot be regarded as a subject for serious consideration. The demand for such land for close settlement became more pressing and each year sees additional areas of such land as the timber becomes cut out, excised from the reservations and opened for settlement. How far the excellent indigenous pines of this State can be reproduced on soils inferior in quality to that on which they are now found to be naturally produced is a question yet to be determined. It seems not improbable that in the not distant future the needs of the inhabitants of Queensland, so far as regards pine timber, will have to be met by exotic varieties of inferior quality, secured by importation in a manufactured state, or from local plantations on land not capable of producing the indigenous varieties.¹⁷⁹

These realistic forecasts were already being realised. From 1900, with the decline in softwoods (notably cedar and pine), changes in house design occurred and rough sawn feather-edged hardwood boards replaced earlier dressed, rebated and weathered softwood cladding.¹⁸⁰ *The Workers Dwelling Act of 1909* aimed at encouraging home purchase and standardised wooden housing, designed by the State Advances Corporation, entailed timber frames and weatherboard houses with corrugated galvanised roofs. These consumed increasing amounts of timber.¹⁸¹ By 1906 one third of the state’s pine had been cut out.¹⁸² By 1909 there were 186 sawmills operating in the state¹⁸³ and the number of timber contracts in South East Queensland is given in Table 4. The geographic distribution is significant, indicating the important role of the Mary Valley timber resources, the main source for Gympie timber contractors.

¹⁷⁶Powell, *An historical geography of modern Australia*, pp.34-5.

¹⁷⁷Carron, *A history of forestry in Australia*, pp.120-1.

¹⁷⁸Kowald, Historical overview, p.25.

¹⁷⁹Quoted in Carron, *A history of forestry in Australia*, p.99.

¹⁸⁰Watson, 'Clearing the scrubs', p.387.

¹⁸¹Blake, Queensland cultural heritage context study - draft , pp.68,9.

¹⁸²Kowald, Historical overview, p.52.

¹⁸³Crane, The hoop and bunya pine resources of Queensland. Regulation and its history.

TABLE 4: NUMBER OF TIMBER CONTRACTS (BY LAND AGENT'S DISTRICT), 1906.¹⁸⁴

LAND AGENT AREA	TOTAL NUMBER OF TIMBER CONTRACTS (PINE, HARDWOOD, CEDAR AND FIREWOOD)
GYMPIE	100
BRISBANE	54
MARYBOROUGH	19
NANANGO	19
GLADSTONE	13
BUNDABERG	11
RAVENSWOOD	11
IPSWICH	12
TOOWOOMBA	3

Attempts to grow native softwoods were only in the very early stages but results did not bode well. Early experiments with red cedar nurseries at Cairns and Imbil were unsuccessful and by 1913 it was recognised that the twig borer had devastating effects on artificially grown cedar.¹⁸⁵ Depletion of forest resources through alienation of Crown Land continued. The *Tuchekoi State Forest Amendment of Boundaries Act of 1909*, for example, excised 4,190 acres (1,695 hectares) for close settlement from 6,570 acres (2,658 hectares) of state forest near Cooroy despite the fact that thousands of acres in the area were lying idle. The *Closer Settlement Act of 1906* continued the policy of repurchase of pastoral leases for selection, and between 1906 and 1918 around 11 million acres (44,516,390 hectares) was opened for closer settlement.¹⁸⁶ By 1917, 73% of the state's log cut was from alienated forest lands, over which the authorities had no management or other control.¹⁸⁷

¹⁸⁴Annual Report of the Director of Forests for 1906, 20th June, 1907, pp. 10-11.

¹⁸⁵Taylor, *Growing up: forestry in Queensland*, p. 113.

¹⁸⁶Kowald, Historical overview, p. 26.

¹⁸⁷Frawley, A history of forest and land management in Queensland, p. 333.

8. 1911-1918

SIGNPOSTS

1911	Queensland University opened in George Street, Brisbane
1911	Mawson leads Australian expedition to Antarctic
1912	Electricity began to be provided to provincial Queensland towns
1912	First State High School established in Brisbane
1913	First Commonwealth postage stamps issued
1914	First World War declared - 20,000 troops embark for overseas
1915	T.J.Ryan Labor government elected in Queensland
1916	Workers' Compensation Act passed and eight hour day introduced in Queensland

8.1 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Managing the forests

N.M. Jolly

On the death of MacMahon, N.M. Jolly was appointed Director of Forests in Queensland. For the first time a qualified forester was in charge of the State's forests: Jolly had studied forestry at Oxford under Sir William Schlich who had established the practice of modern forestry, based on two principles:

- the need to establish an annual cut on the basis of the size of the forest, the population of tree species, their size and growth rate; and
- the need for regeneration.¹⁸⁸

¹⁸⁸Taylor, *Growing up: forestry in Queensland*, p. 55.

In other words, Schlich had set down the principles of sustained yield and of the ordered progression of age classes and had recognised the need to establish plantations. Jolly was to follow these principles by setting girth limits for cutting that would allow for natural forest re-growth and by encouraging forest regeneration.¹⁸⁹

Throughout Australia, forestry matters were becoming more professional and arousing increased interest. Forestry Commissions were set up in all States (except Queensland) between 1907 and 1920 and a series of influential forestry meetings began in Sydney (1911) and Melbourne (1912).¹⁹⁰ These argued the case for sustained yields and other modern forest management measures, and were “attuned to public perceptions of progress and efficiency”.¹⁹¹ The visit of the writer Sir Ryder Haggard in 1913 brought overseas focus onto events with his comment that:

It seems to me that one of the greatest evils which is going on in Australia today is the destruction of magnificent timber. In Queensland, hundreds of acres of magnificent timber, sufficient to supply the world with furniture for years to come, have been ruthlessly hacked down and fired in order that a crop may be grown.¹⁹²

It is worth noting that even this argument was about wise use and not about conservation for purposes other than use. Whilst there was some recognition by scientists like Von Mueller as early as the 1880s and 1890s of issues such as wildlife preservation, few foresters took a broader ecological view of forest communities.¹⁹³ They were not alone in this. Wildflower protection, for example, had to take much longer and not until farmers and their wives reported changes as a result of pastoral and grazing activities was protective legislation enacted, first in New South Wales (1926).¹⁹⁴

In 1911 there were 218 sawmills operating and by 1912 that number had risen to 258. The number of sawmills was increasing, as Jolly noted, “out of all proportion to the extent of the available supplies”. Much of this cut was from private land; only about one third of the pine industry in 1913 was dependent on Crown pine supplies.¹⁹⁵ In his 1913 annual report, Jolly commented:

At the present rate of cutting of hoop and bunya pine, the quantity of overgirth timber of these species standing on timber reserves and State forests will not last longer than from twenty to twenty-five years.¹⁹⁶

Development of silvicultural methods

There were a number of answers that forestry could provide. One was to adhere to the principle of sustained yield. This meant improved collection of data on growth rates, and survey teams were involved in this process. Two survey camps and one forestry camp were engaged in this work and forestry inspectors were now employed at Brisbane, Ipswich, Gympie and Nanango to do the work

¹⁸⁹Frawley, *A history of forest and land management in Queensland*, pp. 337-8.

¹⁹⁰Bolton, *Spoils and spoilers*, p. 105.

¹⁹¹Powell, *An historical geography of modern Australia*, pp. 40-1.

¹⁹²Quoted in Vader, *Red Cedar*, p. 131.

¹⁹³Frawley, *A history of forest and land management in Queensland*, pp 187-8.

¹⁹⁴Bolton, *Spoils and spoilers*, p. 107.

¹⁹⁵Crane, *The hoop and bunya pine resources of Queensland*.

¹⁹⁶Annual Report of the Director of Forests for 1913, 14 April 1914, p.4.

previously done by Land Commissioners.¹⁹⁷ Forest survey teams covered large areas of land, running strip lines twenty chains apart across an area and measuring and assessing trees one chain on either side of the line.¹⁹⁸ By 1914, data collected allowed Jolly to make a number of conclusions:

- that at the present rate of cutting, native pine supplies of mature trees would last only another 25 years;
- that most high quality eucalypt forest had been alienated for land settlement;
- that pine and eucalypt forests were understocked and seedling growth was patchy; and
- that reserves were restricted to poor country not suited to agriculture.¹⁹⁹

Jolly recognised the urgent need for regeneration of native forests and plantings of native and exotic timbers to maintain and increase dwindling supplies from native forests. He set up silvicultural experiments and nurseries at Atherton, while on Fraser Island he experimented with plantings of kauri pine, hoop pine, blackbutt, native cypress pine and exotics. Experiments with ‘improvement felling’ took place on Fraser Island, where the first forestry camp was established at Bogimbah Creek in 1913. In the same year an experimental station was set up at Brooloo in the Mary Valley and in 1916, Imbil forest station, complete with nursery and arboretum, was established.²⁰⁰ The following year, experiments were conducted at Imbil to compare natural and artificial regeneration of hoop, bunya, cedar and exotics.²⁰¹ He also promoted the exploitation of ‘tops’ - i.e. the knotty logs cut from the tops of felled pine trees. ‘Tops’ were being marketed at Yarraman in 1914 and Benarkin in 1916²⁰² and in later years became a significant element of the timber cut.²⁰³

Besides silvicultural experiments, Jolly pointed to the paucity of forest reserves in Queensland, citing the European tradition of retaining between 18% and 32% of land as forest, whereas in Queensland the figure was nearer 1% of the state. In addition, he recommended that forest rangers replace land rangers and this was achieved by 1913. Concern for the quality of such rangers is clear in his support for the idea of a forestry school, a resolution to this effect being passed at the 1911 Forestry Conference. No national school was to exist for another decade, but Jolly got permission to open a local training school at Imbil in 1916. The Inspector, unfortunately, was on the Western Front and the scheme did not eventuate.²⁰⁴

Jolly was frustrated by the continuing contradictions between land and forest policy; between the needs of trees and of agriculture. In 1914, the Colonial Forester, D.E. Hutchins had examined the forest situation in every state and concluded the necessity for:

¹⁹⁷Annual Report of the Director of Forests for 1913, 14 April 1914, p.3.

¹⁹⁸History of Surveying, Department of Forestry, 1900-1966, 14 April 1967 - Forestry Archives (156/4).

¹⁹⁹Frawley, A history of forest and land management in Queensland, p. 338.

²⁰⁰Annual Report of the Director of Forests for 1913, 14 April 1914, p.5.

²⁰¹Annual Report of the Director of Forests for 1916, p. 5.

²⁰²Annual Report of the Director of Forests for 1914, p. 5 and Annual Report for 1916, p.1.

²⁰³Crane, The hoop and bunya pine resources of Queensland.

²⁰⁴Frawley, A history of forest and land management in Queensland, pp 343-6.

forest survey of the country by forest experts and the picking out from the general forest area of the country those parts which are best fitted to be kept in perpetuity as the national forest estates of the country.²⁰⁵

In 1915, Jolly outlined the conflict between short and long-term gain; between agriculture and forestry:

It is by no means self-evident that land settlement should take precedence over Forestry, for timber is an extremely important national necessity and should not be treated as a product of minor value...Also the prevailing idea that timber reserves should be relegated to the back blocks requires to be reviewed, for Forestry is a business that should not be foredoomed to failure.²⁰⁶

By 1917, Queensland forestry staff numbers had increased to thirty-five, including twenty-four salaried and eleven wages staff.²⁰⁷ At the time of his retirement, the forest service had greatly expanded, with a nursery at Imbil, residential officers at Imbil, Yarraman, Yandina, Benarkin and Goodnight Scrub, and a boat had been purchased to serve officers on Fraser Island.²⁰⁸ Such a large number of forestry roads had been constructed that it justified the creation of a specialised forestry road staff at Glastonbury, Amamoor and Brooloo.²⁰⁹ Nonetheless, government forest revenue between 1904 and 1918 was £685,000 yet expenditure was only £88,000.²¹⁰ Ample evidence of the importance placed on forest issues within the administration generally!

Exploiting the forest - processing timber

As the government became more involved in forest management, so too did the timber industry become more organised. The Timber Merchants Association represented the interests of the large south eastern millers and merchants such as Hyne and Son, Lahey's Ltd., Hancock and Gore Ltd., Queensland Pine Company Ltd and Brown and Broad Ltd. Between 1906 and 1912 the number of sawmills grew swiftly as small mills worked in remote reserves. Jolly argued that the number of sawmills should reflect the available timber resources; the millers argued that the supplies of timber should suit the number of sawmills in operation.²¹¹

In 1915, the new Labor government acquired a number of sawmills to operate under state control as part of a general policy of state ownership aimed at preventing monopolistic exploitation. The state sawmills included Hossack's (formerly Raymond and Co) sawmills in Fortitude Valley, Brisbane and at Taromeo near Benarkin in the upper Brisbane Valley. Later a state sawmill was built at Imbil and a fourth sawmill was in operation in 1919 at Liverpool Creek south of Innisfail.²¹² In 1920, these sawmills were acquired by the Queensland Forest Service.²¹³

²⁰⁵Quoted in Frawley, A history of forest and land management in Queensland., p. 327.

²⁰⁶Annual Report of the Director of Forests for 1915, p. 5.

²⁰⁷History of the Department of Forestry, Forestry Archives 1/33.

²⁰⁸Taylor, *Growing up: forestry in Queensland*, p. 57.

²⁰⁹Annual Report of the Director of Forests for 1917, p. 4.

²¹⁰Athol Meyer, *The foresters*, Institute of Foresters of Australia Inc., n.p., 1985, p. 19.

²¹¹Frawley, A history of forest and land management in Queensland, pp. 346ff.

²¹²Kerr, *Sawmills and tramways*, p. 16.

²¹³Annual Report of the Queensland Forest Service, 1920/1921, p. 5.

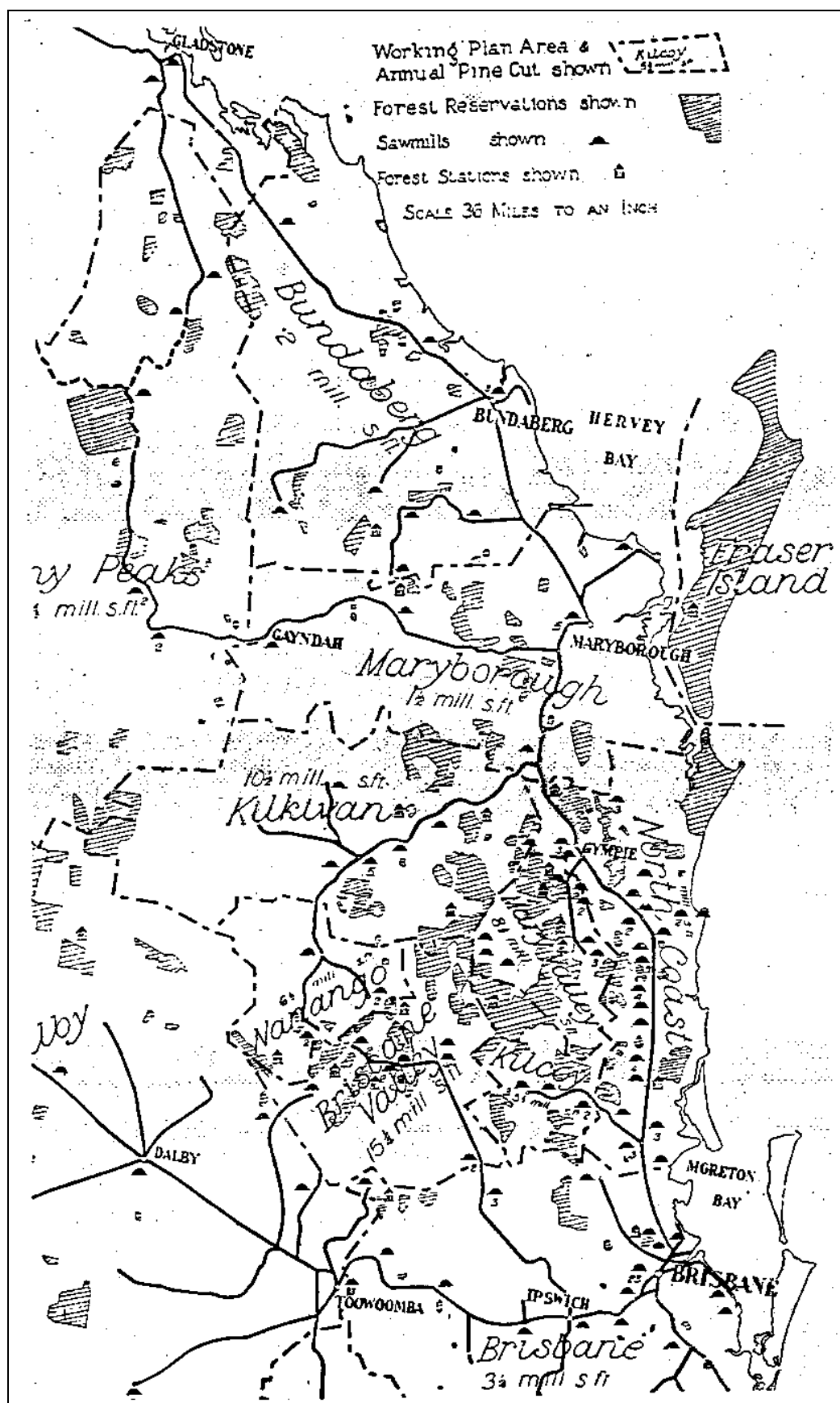


FIGURE 2: STATE FORESTS, SAWMILLS AND FOREST STATIONS, 1926

(Report of the
Provisional
Forestry Board for
the year ending
30th June, 1926)

9. INTER-WAR PERIOD

SIGNPOSTS

1918	First World War ends
1920	Qld Main Roads Board instituted, Qantas formed with headquarters in Winton
1922	Legislative Council abolished in Queensland
1926	<i>Cactoblastis cactorum</i> introduced to tackle prickly pear problem
1928	Sir Charles Kingsford Smith flies from America to Australia in the <i>Southern Cross</i>
1929	Beginning of the Great Depression
1938	Queensland's population exceeds one million
1938	Coca Cola first made in Australia
1939	World War Two begins

9.1 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE

Commemorating significant people

E.H.F. Swain (1918-1932)

The terms used by various writers to describe this period are enlightening. Taylor calls the interwar period The Swain Era,²¹⁴ highlighting the almost mythical hold he clearly had on the imagination of many foresters of the period. Frawley subtitles his chapter 'Conflict, Crisis, Establishment'²¹⁵ and it is both the 'establishment' of professional forestry and the 'establishment' with which he clashed that one thinks of. Carron speaks of "Firm foundations in a turbulent period"²¹⁶ while on his retirement from the New South Wales Forest Service, it was "purged of Swainiana" according to R. M. Black and B.U. Byles who helped his daughter, Nancy Foote, collate some of his writings.²¹⁷

²¹⁴Taylor, *Growing up: forestry in Queensland*, Chapter 5.

²¹⁵Taylor, *Growing up: forestry in Queensland*., Chapter 8.

²¹⁶Carron, *A history of forestry in Australia*, p. 101.

This study cannot begin to do justice either to the complexity of the man or the complexity of his life and works; that such a study cries out to be written is clear.

After school and a brief spell studying art with Julian Ashton, Swain sat for the University Matriculation exam and for exams with the Chamber of Commerce and as a Cadet Forester. Second in the matriculation exam, and first in the others, he opted for forestry. “I chose the romantic. And here I was in a Civil Service slum on £50 a year.”²¹⁸ He never lost his love of trees and the profession of forestry, nor did he ever become entirely at ease in the Public Service which he served all his life.

He sent for an Oxford forestry syllabus, and studied this along with a variety of subjects as diverse as economics, business management, politics and psychology and wood technology.²¹⁹ After a year at the National Herbarium with Government Botanist, J.H. Maiden where “I learned my trees! Which is the first lesson in forestry”, he was sent to a number of forestry offices, where he languished, contemplating abandoning the job in favour of a literary career and bewailing his fate. His diary during 1907-1909 records:

The Public Service is bad for ambitious men. It's asphyxiating. I am fallen into a groove I used to wonder at - I'd like to strike something to enable me to leave it.²²⁰

After a range of work in New South Wales and Queensland, tours of New Zealand to study forestry and a stint at Montana University in the United States to study American forestry, Swain was appointed Director of Forestry in Queensland in 1918 ahead of a number of overseas applicants. With his background in economics, he was committed to increasing revenue from state forests.²²¹

Forestry in Queensland in 1918 was at a rudimentary stage. The South African forester, Sir David Hutchins had described it as “consisting of six men and a girl, a man for each day of the week and a girl for Sundays” and Swain himself commented:

for silviculture in South Queensland in 1917, there was an old age pensioner at Imbil in the Mary Valley, commissioned to transplant suppressed Hoop Pine striplings open root into an open area of destined plantation plots.²²²

Swain proceeded to develop a professional service, “improvised out of returned soldiers - in the years 1919-20”,²²³ on whose wages the Federal government offered a 25% subsidy.²²⁴ As the Minister for Lands J.H. Coyne noted in an address to the 1920 Forestry Conference, out of 200 personnel, 140 were returned soldiers and it was hoped that:

²¹⁷E.H.F.S. February, 1971, Being a selection from the papers left by E.H.F. Swain on his death on 3rd July, 1970 arranged and edited by his daughter Mrs Nancy Foote assisted by an officer and a retired officer of the N.S.W. Forestry Commission, Introduction.

²¹⁸E.H.F.S., p.11.

²¹⁹E.H.F.S, p.13.

²²⁰E.H.F.S., p.15.

²²¹Frawley, A history of forest and land management in Queensland, p. 361.

²²²E.H.F.S., pp. 42,44.

²²³E.H.F. Swain, N.S.W. Commissioner for Forests, Forestry and the conservation imperative in Australian reconstruction, 2.9.1943.

²²⁴Taylor *Growing up: forestry in Queensland*, p. 65.

the spirit which conquered at Amiens can win the long-drawn-out but lesser struggle between the forces of conservation and materialistic exploitation.²²⁵

9.2 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES - MAKING THE FORESTS INTO A SALEABLE RESOURCE

Understanding the forests

Swain needed accurate data if he was to manage, preserve, utilise and expand forests in Queensland. State Forests were divided into areas named, until the mid 1920s, 'working areas' and from then on called 'logging areas'.²²⁶ Retired cartographer Jack Craig calls the period from 1919 the 'Golden Age of Forestry', with four survey camps at Amamoor, Imbil, Mary's Creek and Kalpowar and another at Chinchilla State Forest. By 1941, when all survey camps (apart from one in north Queensland) were closed, there were 10 in operation.²²⁷ Three classes of surveys were undertaken, from preliminary investigation of timber on timber reserves and vacant crown lands to more elaborate topographical surveys involving contour surveying in addition to vegetation surveys. The area covered is indicated in Table 5.

²²⁵ J.H Coyne, M.L.A., Minister for Lands, Queensland, Forestry in Queensland, paper read before the Interstate Forestry Conference, Hobart, 21 April 1920. It is interesting to speculate on the degree to which this background explains the somewhat 'military' nature of much of forestry language. Of course the officers are uniformed, but it is noteworthy that foresters often use expressions like 'the last line of defence' (against fire), 'takeovers' (by National Parks) and so on. For example, the History of Surveying, Department of Forestry, 1900-1966 (156/4) speaks of Ken Twine, a Boer war veteran as "a typical example of the 'Old School' - a fine bushman, hard and conscientious worker [who] cared for his instruments and camp gear with a thoroughness which is somewhat lacking in many officers today".

²²⁶ Personal communication, John Huth, Forest Technician Nurseries/Plantation Silviculture, Forest Research Institute, Gympie. The term 'coup', used in southern states, is not used in Queensland.

²²⁷ History of Surveying, Department of Forestry, 1900-1966, 14 April 1967 (156/4).

²²⁷ Coyne, Forestry in Queensland.

TABLE 5: SURVEYS FROM 1921-1941 BY TYPE AND AREA²²⁸

	CLASS I SURVEY	CLASS II SURVEY	CLASS III SURVEY	
PURPOSE	EXPLORE AND INVESTIGATE	FEATURE AND ASSESSMENT SURVEYS	VALUATION AND ORGANISATION SURVEYS	COMPARTMENT AND PLANTATION SURVEYS
LAND TENURE	VACANT CROWN LAND (VCL)	TIMBER RESERVES AND VCL	STATE FORESTS	STATE FORESTS
METHOD	LINE INSPECTION	STRIP SURVEY, MAP FEATURES	STRIP SURVEY, MAP FEATURES	BOUNDARY AND CONTOUR SURVEYS
1921	268,838 HA	37,272 HA	23,976 HA	-
1926	208,876 HA	2388 HA	23,949 HA	22,044 HA
1930	136,469 HA	47,556 HA	11,398 HA	60,015 HA
1935/6	4160 HA	23,621 HA	23,006 HA	60,015 HA
1940/1	28,388 HA	241,933 HA. (NORTH QLD WAR EFFORT)	92,506 HA. (TYPE AND SOIL SURVEYS)	-

This was a massive undertaking, but essential for planning and management decisions. In 1920 Swain set up a Forest Products showroom in Brisbane, the Forests Products Laboratory was established to investigate the suitability of a wide range of timbers for different uses, and 1923 saw the development of the Universal Wood Index by the Wood Technology Branch. In 1928, Swain was able to publish the standard work on timber, *The timber and forest products of Queensland*, which described 200 species.²²⁹

Managing the forests and establishing plantations

Swain continued the earlier forest philosophy of wise use. He took a commercial as well as a forester's view as is clear from his 1920 address to the Hobart Forestry Conference:

Governments are the guardians of the interests of the future community and Governments are in the timber supply business to stay. Wood is as necessary to our existence as air, and whatever the cost it must be procured.²³⁰

Australian forestry has arrived at bankruptcy partly because it adopted the Gilbertian sale method of opening its forests to all-comers upon payment of a nominal entrance fee. Wild cutting and fearful waste have ensued, bush fires have followed and the forestry fool and his money have been parted.²³¹

He favoured a policy of forest management which followed the American model of forests as a form of agriculture which had to pay its way and show returns on investment. As Minister Coyne expressed it:

²²⁸ After John Dargavel & Damien Moloney, 'Assessing Queensland's forests', *The coming of age. Forest age and heritage values*, ed. John Dargavel, Commonwealth of Australia, 1997.

²²⁹ Frawley, A history of forest and land management in Queensland, pp 390-1.

²³⁰ E.H.F. Swain, Financing of forestry, a paper read before the Interstate Forestry Conference at Hobart on 22 April 1920.

²³¹ E.H.F.S., p. 63.

the State forests were essentially Governmental timber farms and ...forestry was to be practised thereon as a form of land settlement.²³²

This contrasted to the European model favoured, Swain believed, by the Australian forester C.E. Lane Poole. The Europeans took a more biological, less commercial approach to forestry and the conflict between the two forestry models led to 'The Great Australian Dogfight' as it was called by delegates to the 1928 Empire Forestry Conference where the conflict occurred. Personal differences and strong personalities played a part, but it was also a dispute between:

whether to perpetuate and manage a forest in the way that nature had done it in the past, or to grow trees as the raw material for an industry on the smallest area of land, in the shortest possible time and in the most economical way or, in other words, to develop and manage forests as an economic primary industry.²³³

Whatever the causes of this argument, there is no doubt that Swain was correct in determining the need to grow timber. Without further declarations of State Forests, and unless land alienation was ended, it was clear that timber demands could not continue to be met. In 1920 nine-tenths of hardwood logs and two-thirds of softwood came from alienated land where there were no regulations on cutting.²³⁴ By the late 1920s, Queensland was a net importer of softwoods - from the US, Canada, New Zealand, Japan and Sweden.²³⁵ Swain would have preferred to wait for natural regeneration, but it was clear that this would not be possible. Timber demand was not likely to diminish and unless the state were to become dependent on imports, State forests would be needed to provide the logs.

A year after Swain had assumed responsibility for forestry, there were five nurseries (occupying 3 acres - 1.21 hectares), twenty-seven plantations (319 acres - 129 hectares) and twenty-three regeneration areas (1,963 acres - 794 hectares).²³⁶ Experimental plots were established in arboreta at Atherton, Dalby, Imbil, Benarkin, Rockhampton, Mackay and Warwick. From 1924 these were under the control of Vic Grenning who also trialed hoop and kauri pine plantations in the Mary Valley.²³⁷ Early experiments with germination of hoop pine seedlings included brushing lines through the scrub, transplanting seedling dug from the scrub at Noosa and on Fraser Island into nurseries at Imbil and Oakview. The early experiments involved open root plantings which failed.²³⁸ The first commercial plantings showed the success of hoop pine in particular. In 1922 an improved method of preparing seedlings for planting was developed by Deputy Forester Weatherhead.²³⁹ Swain's aim was for a yearly programme of 2,000 acres (809 hectares) of coniferous plantations and 6,000 acres (2,428 hectares) of natural regeneration.²⁴⁰ In his 1922 Annual Report, Swain notes that

²³²Quoted in Carron, *A history of forestry in Australia*, p. 102.

²³³comment by editors, E.H.F.S., p. 48.

²³⁴Coyne, *Forestry in Queensland*.

²³⁵Thorpe, *Colonial Queensland*, p. 92.

²³⁶Coyne, *Forestry in Queensland*.

²³⁷Frawley, *A history of forest and land management in Queensland*, pp. 385-7.

²³⁸Personal communication, John Huth, Forest Technician, Gympie. For details of the development of hoop pine plantings and nursery work, see J.R. Huth, 'Raising hoop pine (*Araucaria cunninghamii*) seedling stock in containers - a historical overview', Forest Research Station, Gympie, n.d.

²³⁹Kowald, *Historical overview*, p. 52. Note, however, that Rollo Petrie claims that his father, Walter, experimented with tube planting on Fraser Island as early as 1918. Rollo Petrie, *Early Days on Fraser Island 1913-1922*, Go Bush Safaris, Gladesville, N.S.W., 1995, pp. 69,70. Petrie's system involved pushing a piece of down pipe over the seedling which was later dug up for planting in the field. Weatherhead's tube involved using a tube filled with peat moss, into which a seed or germinated seedling was placed and left to grow during its early stages.

²⁴⁰Carron, *A history of forestry in Australia*, p.104.

47% of all reforestation costs were in the Gympie district, 14% were at Benarkin, and 24% on Fraser Island.²⁴¹ The Taungya system of interspersing bananas and other crops such as maize with hoop pine seedlings was developed in 1922/3 and by 1926, 78 acres at Amamoor were leased out for banana growing in association with plantations. The system meant that income could be generated while the young hoop pine seedlings were offered some protection by way of shade from adjacent crops.²⁴²

At first, Swain favoured the planting of native timbers and he stressed that it was “the responsibility of the Forest Service... to make the best possible use of the native species”.²⁴³ In time, his attitude moderated. Although hoop and bunya pine grew well in plantation conditions, kauri did not, and exotic pines came to dominate the plantation regimes on the poorer coastal soils. Slash pine (*Pinus elliottii*) and loblolly pine (*Pinus taeda*) did well on the poorer coastal soils and an experimental station to investigate exotic plantings was established at Beerwah where the Forestry Board had acquired 6,000 hectares of wallum ‘waste land’.²⁴⁴ The soils were unsuitable for hoop pine, and *Pinus radiata* would not tolerate the humidity and heat. The Southern Yellow Pines of south east USA were found suitable. Plantings progressed (as seen in Table 6) and later Swain boasted that:

The Glass House Mountain now pokes itself above a panorama of Southern Yellow Pines enhanced by tree-breeding and assured of profitable disposal.²⁴⁵

It is interesting to reflect on the aesthetic perceptions implicit in this ‘utilitarian’ view of an artificial forest and compare them with those current in the ‘old growth’ and ‘wilderness’ debates of today.

²⁴¹ Annual Report of the Director of Forests for 1922, p.5.

²⁴² Annual Report of the Provisional Forestry Board for 1926, p.5.

²⁴³ Carron, *A history of forestry in Australia*, p.115.

²⁴⁴ Carron, *A history of forestry in Australia*, p.118.

²⁴⁵ E.H.F.S. p. 44.

TABLE 6 - AREA OF PLANTATIONS (IN ACRES) IN QUEENSLAND TO 1932 ²⁴⁶

WORKING PLAN AREA	EUCALYPTS	OTHER SPECIES	SOFTWOODS	TOTAL
MARY VALLEY	-	-	2,551	2,551
BRISBANE VALLEY AND NANANGO	114	-	2,185	2,229
WARWICK	-	19	394	413
ROCKHAMPTON	-	-	94	94
BRISBANE	-	-	361	361
NORTH COAST	5	5	478	488
ATHERTON	162	292	231	685
FRASER ISLAND	161	-	749	910
KILKIVAN	-	-	274	274
MACKAY	-	-	20	20
MARYBOROUGH	-	-	35	35
EXPERIMENTAL (IMBIL, WALLUM PLOTS, DALBY)	4	9	49	61
TOTAL	446	325	7421	8192

Much of the work of planting was undertaken by unemployed workers as part of the Unemployment Relief System of the Depression years. By 1932, 8,200 acres (3,318 hectares) of experimental exotic plantations had been planted and small eucalypt and cabinet wood plots were established in the Brisbane Valley, on Fraser Island and at Atherton. In addition, 80,000 acres (32,375 hectares) of native forests had been treated with natural regeneration techniques aimed at increasing and improving natural regenerative processes.²⁴⁷ These measures involved ringbarking non commercial species, clearing and burning the undergrowth and logged trees in order to provide a clean seed bed, and ringbarking selected seed trees in order for them to release seed capsules into the ground. Young seedlings were thinned and gaps in the eucalypt forest were planted.²⁴⁸ Regeneration burning was restricted to Fraser Island, where the blackbutt trees required it.²⁴⁹ By 1932, 82,518 acres (33,394 hectares) of forest had been treated in this way throughout Queensland.²⁵⁰ As part of forest policy, the *Rural Fires Act of 1927* created a management board (on which forestry was represented) to work on bushfire control measures.²⁵¹

²⁴⁶after Frawley, A history of forest and land management in Queensland, p. 388.

²⁴⁷Frawley, A history of forest and land management in Queensland, p. 387.

²⁴⁸Kowald, Historical overview, p. 53.

²⁴⁹Taylor, *Growing up: forestry in Queensland*, p. 114.

²⁵⁰Frawley, A history of forest and land management in Queensland, p. 389. See Table 8.2.

²⁵¹Frawley, A history of forest and land management in Queensland, p. 396.

Marketing timber

Timber demands grew as development expanded: timber for railway sleepers, electricity poles, butter boxes, formwork for large constructions like the Grey Street Bridge in Brisbane and firewood. In 1930 around 350-400 tons of firewood a month was coming to Brisbane from the Pine Rivers area.²⁵²

The timber industry was “fragmented and individualistic with an outlook dominated by short term interest”.²⁵³ Since 1905 Queensland had a policy of sales based on auction of timber at stump. Sales by tender also occurred. In 1918 Key Market log price lists were issued and changed, updated, and from 1924 published in the Government Gazette. In 1919 a direct sales system of marketing timber was introduced. The Forest Service arranged for cutting under contract; buyers arranged their own cutting and haulage and timber was sold by tender or by auction ‘on trucks’ or at railway yards. Established railside sawmills located near private and Crown supplies were happy with the system, but bush sawmills were disadvantaged as transportation costs were borne by them but not reflected in the price obtained at auction.²⁵⁴ As Crown Lands’ pine came to dominate sales, prices at auction skyrocketed.²⁵⁵ Swain attempted to stabilise retail prices by a system of stumpage appraisal. Such a system involved using a pre-determined ‘key market’ price and subtracting from that the costs incurred in transportation. Key market prices were set for urban centres where logs were milled.²⁵⁶

Forestry was itself involved in sawmilling. As noted above, the Ryan Labor government had bought four sawmills in 1915. They were operated by the Trade Department as part of a policy of promoting state enterprise. In 1920 these were transferred to the control of Forestry; two further sawmills were state owned, one bought from the railway department and another built at Injune.²⁵⁷ In 1925 McKenzie’s tramway and sawmill on Fraser Island were purchased. None of these state sawmills continued in state ownership beyond the mid-1930s despite the fact that between 1915 and 1932, there had only been five years when they had not made a profit.²⁵⁸ Three of these years were 1929/30-1931/2, during the Depression.²⁵⁹ The pressure to close came from private millers.

In 1926 reductions in the cut of native pine were imposed but supplies continued to decline on freehold land. Not until 1929/30 did the Crown cut of hoop and bunya pine equal that from alienated forests.²⁶⁰ Plantation pine would not be available, it was calculated, until the 1950s.²⁶¹ By 1930 a Parliamentary Party sub-committee on Forestry was established. It recommended royalty reductions on kauri pine, hoop pine and maple, a preference for stump sales and increased protection from imports. A Timber Industry Advisory Committee, set up in 1931 with twenty-two

²⁵²Fisher & Johnston, SEQ2001, p. 117. In Victoria in 1925, when both gas and electricity were available, the state consumed a million tons of firewood each year. Bolton, *Spoils and spoilers*, p. 45.

²⁵³Frawley, A history of forest and land management in Queensland, p. 396.

²⁵⁴Frawley, A history of forest and land management in Queensland, p. 398.

²⁵⁵Crown Log Timber Marketing Procedure in Queensland, paper prepared for the 1952 E.S.T.I.S. Conference. - Forestry Archives 93/38.

²⁵⁶Frawley, A history of forest and land management in Queensland, p. 671.

²⁵⁷Taylor, *Growing up: forestry in Queensland*, p. 62.

²⁵⁸Kerr, Sawmills and tramways, p. 17.

²⁵⁹Frawley, A history of forest and land management in Queensland, p. 408 gives figures.

²⁶⁰Crane, The hoop and bunya pine resources of Queensland.

²⁶¹Taylor, *Growing up: forestry in Queensland*, 1994, p. 64.

members, recommended reductions in the Key Market Price List and in stumpage rates.²⁶² One response to reduced supply was to adapt new technologies. By peeling logs rather than sawing them, plywood could be added to the timber products available. The earliest plywood mills had been established during World War I and by 1929-1930 eight of the eleven ply and veneer factories in Australia were in Queensland.²⁶³ The Queensland Plywood Board regulated the industry under the *Primary Producers Marketing Acts*.²⁶⁴ All these moves reflect the difficult times experienced by the industry during the Depression.

Swain always believed that forestry was a commercial enterprise and that trees had to be grown in order to make a profit. He believed that the 'European' model of forestry took no account of the costs incurred in growing forests and that it avoided market decisions. Not all foresters, however, believed that marketing was a business they should be in. In a series of letters in 1922 between the forester at Imbil, W.R. Petrie (grandson of Andrew and son of Tom), and the District Forester at Gympie, J.M. Fraser, the dispute between commercial and conservation decisions is clearly expressed. Fraser saw commercial interest as paramount:

the commercial side of forestry is the very armor of its existence and without it the Silviculturalist would be as helpless as a crab without its shell.²⁶⁵

Petrie replied:

I suppose I am wrong but I cannot help seeing past our little fringe of Queensland trees and coming to the conclusion that for the next fifty years although we work as hard as can the growing of the future crop will be more important than selling of the present.²⁶⁶

9.3 EDUCATION - TRAINING PEOPLE FOR WORKPLACE SKILLS

Training foresters

At the first Interstate Forestry Conference in 1911 a resolution had been passed in support of the establishment of a forestry school. The first such school operated in Adelaide from 1911 to 1925 and in 1927 the Australian Forestry School was set up in Canberra under the guidance of C.E. Lane-Poole who was Inspector-General of Forests and Principal of the School.²⁶⁷ Swain disapproved of what he saw as Lane Poole's 'European' approach to forestry and had lobbied against a national school, preferring instead to support the idea of separate state institutions. However he could hardly fail to incorporate the national school in his training programme, although he hoped to counter the 'European' approach by diluting it with local experience.

A forestry cadetship, begun in 1924, came to include five parts, reflecting the diversity of theoretical and practical experience that Swain believed foresters should possess. Following

²⁶²Frawley, A history of forest and land management in Queensland, pp. 403-5.

²⁶³S.N. Stocks, *Cradled in the ranges: a history of Blackbutt, Benarkin, Taromeo and surrounding districts*, Blackbutt-Benarkin Bicentenary Committee, Cranbrook Press, Toowoomba, 1988, p. 49.

²⁶⁴Ruth S. Kerr, *Confidence and tradition: a history of Esk Shire*, Council of the Shire of Esk, 1988, p.67.

²⁶⁵District Forester J.M. Fraser, Memo, 15 September 1922 (Forestry Archives 70 GEN, Forest classification, 1919.)

²⁶⁶Deputy Forester W.R. Petrie, Memo, 21 September 1922. (Forestry Archives 70 GEN, Forest classification, 1919.)

²⁶⁷Meyer, *The foresters*, p. 12.

cadetship with the Department, students studied at The University of Queensland for two years with vacation work in nurseries. They then worked for one year in a Forest Valuation Survey camp and went on to spend two years at the Australian Forestry School.²⁶⁸

By the mid-1920s, Swain had collected a group of professionally qualified staff, including Vic Grenning (a Queensland Rhodes scholar and graduate of the Oxford forestry course) and Alan Trist (who completed the Australian course and went on to obtain a Masters in Forestry from Yale University). Frawley argues that these experts were viewed with some apprehension by the less trained officers of the Lands Department, and that:

in the anti-intellectual Queensland atmosphere these 'forestry experts' became the subject of criticism, even ridicule by the 'practical businessmen' whose basis concern was only short term profits for themselves.²⁶⁹

This criticism found a focus in the 1931 Royal Commission which, apart from many other recommendations, observed that:

American training unfits an officer for practical forestry administration.²⁷⁰

9.4 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Administering Forestry

Ever since 1900 forestry affairs had been under the umbrella of the Lands Department. As Minister for Lands, Coyne, acknowledged in his paper to the 1920 forestry conference, this caused considerable conflict:

As an advocate of conservation he [the forester] became an outcast, threatened and abused on all sides, and his only place of refuge was beneath the wing of the Department whose function it was to distribute the Crown Lands among the opposing interests.²⁷¹

In his first annual report, Swain had noted the challenges ahead:

Suffice it to say that the most arduous task of the Forest Service is not that of securing added reservations, but of restricting persistent and pressing aggression by private and public bodies and citizens upon the remnant timber lands which the Forest Service so far has succeeded in retaining for the future benefit of the wood-working and wood-using industries of the State.²⁷²

In 1922 Queensland hosted the sixth Interstate forestry conference. Besides Brisbane, one session was held at Imbil and delegates visited the Brooloo State Forest and Gympie. Swain obtained delegates' support for recommendations that the Queensland Minister consider a Forestry Bill similar to that in other states. Recommendations were also made that 2.5 million hectares of forest be permanently reserved, that 50% of forest revenue be reinvested, that funds from consolidated revenue be used for administration and that loan money be allocated for afforestation programmes. Swain's 1923 report recommended that the new service should be divided into two sections, one to

²⁶⁸Carron, *A history of forestry in Australia*, p. 104.

²⁶⁹Frawley, *A history of forest and land management in Queensland*, pp. 365-6.

²⁷⁰Quoted in Frawley, *A history of forest and land management in Queensland*, p.366.

²⁷¹Coyne, *Forestry in Queensland*.

²⁷²Annual Report of the Director of Forests, 1918, p. 12.

be revenue producing (concerned with the sale of timber, harvesting, marketing) and the other to be involved in producing (silviculture and reforestation measures). In October 1924, the Forest Service ended its life as a junior member of the Lands Department and a new authority was established. This was a Provisional Board responsible directly to the Minister for Lands. Three branches were established: Harvesting and Marketing; Administration and Secretarial; Accounts, Working Plans, Silviculture and Surveys.²⁷³

9.5 PEOPLING THE CONTINENT

Settling the Land - Conflict in the North

Although the conflict of interest within the Lands Department was solved by the creation of a separate Forestry Board, the conflict between forest and land interests did not go away. As elsewhere in Australia, moves to intensify settlement on the land increased and settlement meant land clearing:

Land settlement programmes took precedence, and the locking up of vast wooded tracts was made to seem perniciously un-Australian - in short, it was placed in the same league as the earlier infamous locking up of the lands by big squatters in the eastern states.²⁷⁴

The pressure to open new areas for land settlement had, everywhere, political ramifications as Lane Poole noted somewhat cynically in 1926:

The Minister of Lands...is, as a rule, the type that is driven frantic by the sight of an un-subdivided region on the departmental maps.²⁷⁵

Or to put it more bluntly, as an observer of the time noted:

McCormack who was Premier of Queensland...he said - look Swain when your bloody trees a' got votes, he said, you'll get all the money you want for them.²⁷⁶

In such a situation conflict between an outspoken and often abrasive Swain, who took a public advocacy role, was inevitable. Not only political, but bureaucratic interests were at stake. The Public Service Commission, under J.D. Story, had recommended that the forestry administration should be abolished in the interests of 'uniformity' and various inspections of the service were undertaken. Attempts to draft a Forestry Bill based on the West Australian legislation failed, due in part to opposition from the Lands Department.²⁷⁷ Conflicts came to a head with calls for the opening of forest lands in the north for further settlement. Issues became confused - the personal antagonism between Swain and Story; the bureaucratic jealousy between the Lands Department and Forestry; the 1932 elections in which the Moore Liberal government's hold on power was dependent on holding the northern seats. The full story cannot be told here.

²⁷³Carron, *A history of forestry in Australia*, p. 103.

²⁷⁴Powell, *An historical geography of modern Australia*, p. 166.

²⁷⁵Quoted in Ann R. M. Young, *Environmental change in Australia since 1788*, Oxford University Press, Oxford, 1996, p. 74.

²⁷⁶Jules Tardent in Frawley, *A history of forest and land management in Queensland*, p. 356.

²⁷⁷Frawley, *A history of forest and land management in Queensland*, pp. 376ff., for the full details of the Royal Commission and its findings.

A Royal Commission was established in 1931 to investigate forest boundaries in the north and to determine areas for settlement, for reservation and for temporary reservation. The Commission was widely believed to have been ‘stacked’ against forestry interests and it was felt that its main concern was to encourage closer settlement. Of the 248 witnesses who gave evidence to the Commission, only twelve were forestry officials, compared to 114 farmers, twenty-one Commission agents (interested in land opening), sixteen timber industry representatives and ten Lands Department officials.²⁷⁸ The Commission’s recommendations were as expected. They called for a reduction in expenditure on forestry administration, an increase in the area of forest reserves and National Parks to about 1.25 million hectares, and recommended that 30,000 hectares be made available for settlement in the near future.²⁷⁹ Swain’s evidence to the Commission was dismissed and disputed and he himself was widely criticised.

Swain had no doubt aided the work of the Commission by his antagonism and manipulation. As he says himself:

I preceded it [the commission] to the North and organised witnesses against it....I coached my District Forester for his evidence....I had decided to write an alternative Royal Commission report on the development of North Queensland.²⁸⁰

In his report to the Commission entitled ‘Timbergetting and Settlement’, Swain stated his belief that:

the natural timber resources have been massacred.... [and that] with a population of less than that of the city of Sydney, Queensland has placed almost its entire estate under some form of occupancy.²⁸¹

He argued for forestry control of the remnant timberlands of the state in order that they could be classified, managed and marketed. He gave details of the way in which Crown Land was alienated for values considerably below the value of timber on the land, with substantial loss to the state both in terms of revenue and resources, as shown in Table 7.

²⁷⁸Frawley, A history of forest and land management in Queensland, p. 429. Table 8.4 gives a breakdown of witnesses by occupation.

²⁷⁹Taylor, *Growing up: forestry in Queensland*, pp. 68-72.

²⁸⁰E.H.F.S., p.50.

²⁸¹Swain, *Timbergetting and settlement*, 1931.

TABLE 7 - ALIENATED CROWN LAND - TIMBER VALUES COMPARED TO SALE PRICE²⁸².

AREA	CROWN PRICE - LAND AND TIMBER	SUBSEQUENT VALUATION (TIMBER ONLY)
CANUNGRA	£3,223	£100,886
BEAUDESERT	£2,042	£50,209
SAMFORD	£300	£34,724
BLACKBUTT	£899	£60,010
KILLARNEY	£2,929	£95,684
TOTAL	£9,393	£341,513

This report was attached to the dissenting minority report to the Minister.²⁸³

Swain was dismissed by the Labor government that won the 1932 elections, highlighting the bipartisan support for the policies of closer settlement and the opening up of forested lands. Both the senior conservative barrister, Sir Edward Macartney and the Communist lawyer, Fred Paterson, offered free assistance should he decide to fight the dismissal.²⁸⁴

Swain was replaced by Vic Grenning whose term lasted until 1964. His period of office returned the Department to stability and predictability. One of his measures was to institute the practice of issuing circulars, a procedure that had both advantages and disadvantages.

Research was centrally located and directed, and duplication of research avoided ...[but] the procedure tended to discourage any creative thinking on the part of the field staff and decreased their professional motivation.²⁸⁵

9.6 DEVELOPING CULTURAL INSTITUTIONS AND WAYS OF LIFE

Organising recreation - developing public parks and gardens

A decline in manufacturing and economic downturn during the 1920s and 1930s had a detrimental effect on manufacturing throughout Australia, which flowed on to the building industry and therefore the timber industry. A depletion of native hardwood forests led to an increase in softwood plantations and a decline in the allocation of hardwood logs from state forests by between 40% and 60%. At the same time, increased leisure and the beginnings of organised environmental movements led to demands for increases in the numbers of National Parks.²⁸⁶ During the 1930s, mountain resorts such as Buderim, Springbrook, North Tamborine and Mapleton became popular for holidays, and increased private transportation allowed people to travel further from Brisbane. Roads were built using unemployed workers during the Depression, and in 1934 the first section of the Bruce Highway was opened from Rothwell, near Redcliffe, to Beerwah.²⁸⁷

²⁸²After Swain, Timbergetting and settlement.

²⁸³Minister's Minority Report on the Parliamentary subcommittee on Forestry, n.d.

²⁸⁴E.H.F.S., p.53.

²⁸⁵Carron, *A history of forestry in Australia*, p. 110.

²⁸⁶John Dargavel & Annie Boutland, 'Timber firms in the twentieth century', in *Sawing, selling and sons*, ed. John Dargavel, Centre For Resource and Environmental Studies, Canberra, 1988, p. 72.

²⁸⁷Kowald, Historical overview, p. 25.

In 1930 the National Parks Association of Queensland was formed, with Romeo Lahey (of the renowned timber family) as its first President. In 1935 there were 330,000 acres (133,549 hectares) of National Parks, where the only management was fire protection and the provision of walking tracks.²⁸⁸ In 1936, the Director of Forestry commented that “recreation will be one of the main uses of the State Forests of the future” and beauty spots, picnic areas and scenic drives were slowly being created.²⁸⁹ The idea of ‘multiple-use’ of state forests was becoming a tenet of forestry throughout Australia, as seen in the NSW *1935 Forestry (Amendment) Act* that established a similar principle in NSW state forests.²⁹⁰

9.7 DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

Exploiting the forests, sawmilling and marketing timber

The State had relinquished control over state sawmills in 1933. During the interwar period the trend was for sawmills to become larger. Small family-owned sawmills continued to operate in the forests but the larger sawmills, generally in towns and cities, were able to install drying kilns to kiln-dry the more difficult eucalypts, and planing machines to produce better quality sawn timbers.²⁹¹ Crawler tractors, motor transport and electricity were becoming common and only large operations could afford many of the new technologies such as the vertical steel band saws and Canadian circular twin saws. The engine power of sawmills rose markedly.²⁹² Large sawmilling concerns were advantaged from 1936, when amalgamation of sawmills within, but not across, thirty-three defined localities was allowed.²⁹³

The exception to this trend toward larger operations was the proliferation of case sawmills, such as Knacks Mill at Mudgeeraba, involved in the production of packing cases for agricultural produce such as bananas. By 1938 there were 586 registered sawmills and fourteen ply and veneer mills operating in Queensland.²⁹⁴ Much of the eucalypt hardwood brought to sawmills in the south east of Queensland was from range country, as more accessible forests had been cut out. Sawmills such as the Neranwood Mill or those in the Samford and Samsonvale area continued to produce building timbers, boosted for a time by the post war building boom.²⁹⁵ The *Building Revival Act* provided loans on reasonable terms in an attempt to encourage the building trade and stimulate industry in general.²⁹⁶ The War Services Commission obtained the timber rights to Mount Glorious and hauled timber to the mill at Cedar Creek. Timber settlements developed close to timber cutting areas, and

²⁸⁸ Statement prepared by the Director of Forests, Queensland for the Empire Forestry Conference, South Africa, 1935. State Forests occupied 2,400,000 acres and Timber Reserves 3,383,000 acres.

²⁸⁹ Annual Report of the Director of Forests for 1936, p.5.

²⁹⁰ Young, *Environmental change in Australia since 1788*, p.75.

²⁹¹ John Dargavel, & Annie Boutland, 'Establishing Australian sawmilling', in *Sawing, selling and sons*, ed. John Dargavel, p. 71.

²⁹² Frawley, Historical survey of Australian logging technology and forest cutting practices, consultant report to the Australian Heritage Commission, June, 1990, pp 13-15.

²⁹³ J.J. Kelly, Queensland Forest Service and Industry Policies, AUSTIS, 1985.

²⁹⁴ Annual Report of the Director of Forests for 1938, p. 3.

²⁹⁵ J.J. Kelly, Queensland Forest Service and Industry Policies, AUSTIS, 1985.

²⁹⁶ V. Grenning, 'The co-operation of the state with the timber industry', *Australian Timber Journal*, 4 ii, 1938, pp. 579-81.

rural schools were established to service the towns and villages. Forestry promoted the development of school forest plots and by 1935, there were 40 such plots in operation.²⁹⁷

Changes in sawmilling and marketing were accompanied by changes in architectural and building styles. The 1930s saw a fashion for veneers and the Forestry Research Branch was able to encourage an expanded use of timber types throughout the state. Improved methods of veneer cutting and laying went hand in hand with changes in fashion and shortages of timbers such as cedar and maple. Silky oak, stained to resemble these rare and expensive woods, became popular for furniture.²⁹⁸

Depletion of timber resources on private land had progressed at such a rate that by 1935 Crown forests supplied 90% of the raw material for the pine industry.²⁹⁹ Figures for 1938 are shown in Table 8:

TABLE 8 - CUT OF SOFTWOODS 1938³⁰⁰

SPECIES	% OF TOTAL SOFTWOOD CUT	% OF TOTAL SOFTWOOD CUT FROM CROWN LANDS
HOOP, BUNYA PINE	84	95
CYPRESS PINE	8	45
KAURI PINE	8	90

Two forms of sale continued: sales at stump where the timber was sold standing and the purchaser arranged for logging, and direct sales where logging was done at Departmental cost and logs were then sold at sawmill yards or on railway trucks.³⁰¹ Competition led to skyrocketing prices of timber sold at auction and the report of the Timber Advisory Committee in 1932 recommended that non-competitive sales of hoop and bunya pine to established bush ('off rail') sawmills be allowed. Later, pine sales were restricted to existing customers. In 1936, the *Sawmillers Licensing Act* restricted sales of timber from Crown lands to licensed millers and in 1938 a pine quota system was introduced.³⁰² This limited sales of pine under direct sales to the miller's maximum yearly cut of pine for the previous three years.³⁰³ In 1937/8, a system of economic tree marking was begun. This was a combination of silviculture and management, in that trees marked for cutting were done so by foresters, whether the reason was commercial or management (e.g. removal of trees deemed necessary for natural regeneration purposes). The cutter was paid a minimum even for defective trees.³⁰⁴

On the declaration of war in 1939, all restrictions were abandoned and pine resources were freely made available to the Commonwealth for defence purposes.

²⁹⁷Statement prepared by the Director of Forests, Queensland for the Empire Forestry Conference, South Africa, 1935.

²⁹⁸ Hawthorne, 'Queensland timbers', p. 69.

²⁹⁹A Chronology of the important events in the history of Queensland's Forests and Timber Resources.

³⁰⁰Statement prepared for the Queensland Forest Service for the Empire Forestry Conference, England, 1947: Empire Forests and the War.

³⁰¹Annual Report of the Director of Forests for 1937, p. 11 notes that in the coastal areas between Brisbane and Maryborough, 499 contractors were engaged by the Department. Approximately fifty carriers carted timber supplied by these men.

³⁰²Frawley, A history of forest and land management in Queensland, p. 474 states that government statistics put the number of sawmills in 1936 at 268, but that 400 is a more likely number.

³⁰³Crown Log Timber Marketing Procedure in Queensland.

³⁰⁴Taylor, *Growing up: forestry in Queensland*, p. 114.

10. 1940s-1950s

SIGNPOSTS

1940	20,000 Australian troops embark for service abroad
1942	Darwin and Katherine bombed; fall of Singapore
1944	Pay-as-you-earn taxation introduced
1947	Commonwealth Arbitration Commission established; 'displaced persons' begin arriving in Australia
1948	Forty hour week; first Holden produced by G.M.H.
1950	Petrol rationing ends
1956	Olympic Games in Melbourne

10.1 UTILISING THE FORESTS IN TIME OF WAR

World War II led to increased demand for timber, with State forests providing 68% of the entire cut in Queensland during the war, and 94% of all pine.³⁰⁵ Increased demand for hardwoods included in particular round logs for wharf construction. Over 95% of timber sawn was used in defence works and exports to southern states ended. Reductions in imports led to experiments with alternative uses for known timbers and the expanded use of timber in non-traditional areas. In North Queensland, timber roads were constructed.³⁰⁶ As petrol supplies became limited, charcoal was used to manufacture producer gas, used by motor vehicles, trucks and tractors. The timber research section of Forestry was seconded to The University of Queensland in order to develop the use of producer gas further. Wooden army 'igloos', covered with tin were built in various parts of the state and specialised timbers were used in aircraft construction. Propellers were made almost exclusively of Queensland maple. A bizarre use was the creation of decoy wooden anti-aircraft guns in north Queensland.³⁰⁷ A greater range of eucalypt hardwoods was used and cypress pine was substituted in

³⁰⁵Taylor, *Growing up: forestry in Queensland*, p. 79. Pressure was also exerted on Forestry to allow the logging of National Parks., but Grenning successfully resisted it. A fascinating story concerning this period is told by Syd Curtis (personal communication, 7 April 1998). Under continuing pressure to allow logging in National Parks, Grenning reluctantly allowed a survey of the pine resources of Lamington National Park to be undertaken. When the National Park Ranger had completed the survey, he was alarmed at the quantity of pine in the Park. 'He reckoned that for Grenning to know that the Park contained so much pine would have been an intolerable burden and one that he shouldn't have to bear. So he told me that he tore up his calculations and taking fresh paper did them all over again...and somewhat in the midst of them 'accidentally' dropped a zero. Thus the estimate he passed on to Grenning was one-tenth of that of his first calculation.'

³⁰⁶Empire, Forests and the War.

³⁰⁷Tyrone Noonan, 'Forestry remembers', *Between The Leaves*, Spring, 1995.

some building practices. In particular cypress pine became popular as flooring in the 1940s as its resistance to termites was understood.³⁰⁸ Caneite and masonite replaced timber in ceilings and counter-tops. Hoop pine was pulped to provide paper supplies and all of Australia's butter exports were packed in Queensland hoop pine.

War had a number of immediate administrative consequences. Timber resources were to be controlled by the Commonwealth within the Department of Supply. In 1941 control was transferred to the Munitions Department and in 1942 an independent organisation to control timber was set up under the Deputy Controller of Timber, with offices in Brisbane and Cairns. From 1943, this body was the purchasing authority for the United States Defence Services and timber became a charge against reverse-lend-lease.³⁰⁹ The timber industry was the first to be protected, in 1942.³¹⁰

Staff numbers in the department were cut from 2,000 in 1938/9 to 719 in 1942 as men entered the armed forces.³¹¹ In 1941 all survey camps were closed, by which time most State Forests and Timber Reserves had been covered by a Class III or Class II survey. Survey camps were re-opened in 1946 (there were six by the end of the year) and grew in number until there were 35 camps in 1966.³¹²

No commercial plantings of timbers were undertaken by the Forestry department between 1 July 1942 and 30 June 1946. As the post-war report notes:

It has long been appreciated that a gap must exist between the cutting out of the natural hoop and bunya stands and any major replacement of this supply from plantations. Probably the most serious effect of the war has been the widening of this gap.³¹³

One of the more specific uses of forests during the war was as military training camps. Land adjoining MacKenzie's jetty on Fraser Island was the site of an army commando training camp, the island's forests deemed most similar to the dense jungles of Papua New Guinea. Other camps were established at Samsonvale, Strathpine, Woodford and Caboolture, with private land also used at Clear Mountain and airfields in the Esk region. Mt Mee remained in use as a training area following the war.³¹⁴ Canungra, where the Land Headquarters Training Centre (Jungle Warfare) was established in 1942 was reopened as a Jungle Training Centre in 1954 and is currently the Land Warfare Centre.³¹⁵

³⁰⁸Carron, *A history of forestry in Australia*, p. 113.

³⁰⁹Empire, *Forests and the War*.

³¹⁰Fisher & Johnston, SEQ2001, p. 138.

³¹¹Taylor, *Growing up: forestry in Queensland*, p. 79.

³¹²History of Surveying, Department of Forestry, 1900-1966, 14 April 1967 (156/4).

³¹³Empire, *Forests and the War*.

³¹⁴Kowald, *Historical overview*, p. 65.

³¹⁵Land Warfare Centre, Kokoda Barracks, Canungra, Unit Brief, n.d.

10.2 POST-WAR RECONSTRUCTION

After World War II, as after World War I, forestry benefited from an increase in staff. A letter from the Minister for Lands to the Eastern States Timber Industry Stabilisation (ESTIS) conference noted that forestry work would:

provide a means for rural employment and rehabilitation of returned soldiers.³¹⁶

Employment rose steadily during the late 1940s and 1950s. In 1948, Director of Forestry V. Grenning requested that 250 European refugees work in the silviculture operations in South East Queensland.³¹⁷ The refugees, many from the Baltic countries and known as 'Balts' became an essential part of forestry reconstruction in Queensland. By 1949, 446 'displaced people' were employed on reforestation work. Many of these people worked in forestry and then moved on to other jobs, but some stayed. Victor Fedorniak, from Ukraine, arrived in Australia in 1950 as a refugee. After interviews in Newcastle, he was sent to work in the State Forest at Kenilworth. He and fellow refugees lived in tents and worked planting, cutting timber and clearing undergrowth and weeds. They had little mechanised equipment and used axes, cross cut saws and brush hooks, but as Victor Fedorniak remarked, "The war was hell and after that you could accept anything."³¹⁸

Forestry barracks were initially under canvas, but from 1947/8 more substantial timber quarters were being built: nineteen in that year, and twelve more under construction the following year.³¹⁹ By 1950, eighty-five barracks had been constructed. They were timber buildings, consisting of four single rooms with a communal eating room and outside cooking and shower facilities.³²⁰ By 1951/2, 1,200 men were accommodated in such barracks.³²¹

In general throughout Australia the 1950s saw changes to living conditions of forest workers. No longer were foresters' families content to live isolated and remote lives; families demanded access for their children to schooling and better living conditions in general. Improved transportation reduced isolation.³²²

The need for planting of exotic and native timbers was urgent, given the discontinuation of planting schemes and the demands placed on timber resources during the war. These demands increased directly after the war. The government actively pursued a policy of reforestation with the aim of creating 200,000 acres (80,938 hectares) of softwood plantations and encouraging natural regeneration in areas reserved for timber production. Such work involved:

surveys, soil survey work, establishment of forest stations, barracks, nurseries, water supplies, fire lookouts, extensive firebreak construction, access road construction and constant maintenance work in plantations such as tending and pruning, and the clearing and preparation in areas for planting. [The government was also]

³¹⁶Letter from the Minister for Lands to M.H. Simon, President of the Conference, Eastern States Timber Industry Stabilisation Conference, 24th October, 1945. (Forestry Archives, 70 GEN).

³¹⁷Taylor, *Growing up: forestry in Queensland*, p. 80.

³¹⁸Cited in Taylor, *Growing up: forestry in Queensland*., p. 86.

³¹⁹Annual Report of the Director of Forests, 31 June 1949 shows photos of a displaced persons' camp in the Mary Valley and of new barracks built in 1947/8.

³²⁰Taylor, *Growing up: forestry in Queensland*, p. 81.

³²¹Annual Report of the Director of Forests for 1951/2, p. 10.

³²²Dargavel, 'Constructing Australia's forests in the image of capital', p. 94.

encouraging private land owners to produce timber for their own requirements by making trees available at a low cost. During 1948/9, 194,000 trees were so supplied to private individuals or schools.³²³

Hoop pine plantations were situated in the Mary Valley and in the Benarkin district. Hoop pine grows best on rainforest soils and enormous areas of scrub were felled in order to develop plantations. During the 1930s such work had relied on teams of scrub fellers whose skills allowed up to 1 acre of land to be felled in a single 'drive'. Felling occurred during the winter months and the resulting burns of felled timber in September could be seen for miles all along the Mary Valley.³²⁴ By the 1950s, mechanised equipment allowed for much larger areas to be clear felled with relative ease. The Annual Report of 1958/9 mentions that 642.8 acres (260 hectares) and two years later a further 547 acres of rainforest and 1118 acres of eucalypt forest were cleared for plantations.³²⁵ Seed for hoop pine (the native pine species most commonly grown) was collected from native trees until 1953, when collection from plantation trees began. Not until 1963/4 did the cut of plantation hoop pine exceed that of native hoop pine.³²⁶

Exotic pine plantations had begun in wallum areas at Beerwah close to Brisbane, but in 1948 plantings began in coastal areas from Maryborough to Gympie and later in the Yeppoon area. In the 1930s and 1940s, exotic pines suffered from 'fused needle disease', thought to be fungal in origin, but later found to be the result of phosphate soil deficiencies.³²⁷

During the 1950s industrial forestry looked to develop large integrated forestry complexes rather than numerous small plantation areas. The wallum area to the west of the Noosa River, along with Tuan State Forest (where slash pine planting had occurred during the 1940s) was reserved as Toolara State Forest 1004 and large-scale planting progressed.³²⁸ Not until 1949/50 was the goal of planting a total of 5,000 acres (2,023 hectares) of conifers annually reached.³²⁹

10.3 SAWMILLING AND BUILDING

The post-war building boom led to increasing demands for timber and its by-products, although much of this building began to rely on alternatives to sawn timber, such as fibreboard, asbestos cement and plaster.³³⁰ The consumer society that developed during the 1950s needed packaging and paper; the consumption of these went from 52 kilograms per person in 1950 to 120 kilograms by 1970. Developments in the 1930s had made it possible to pulp eucalypts³³¹ and in 1955 Australia Paper Manufacturers Pty Ltd established a number of softwood plantations of slash pine near their mill at Petrie.³³² As demand increased, methods aimed at increasing supply developed. Chainsaws (two-man and then one-man saws) allowed speedier felling and numerous war-surplus engines were

³²³The government policy of reforestation, 26 July 1949 (Forestry Archives 244 GEN).

³²⁴Stan Tutt O.A.M., interview 31 July 1997 - Department of Environment.

³²⁵Annual Report of the Director of Forests for 1958/9, p.10 & Annual Report of the Director of Forests for 1960/1, p. 7.

³²⁶Annual Report of the Director of Forests for 1963/4, p. 5.

³²⁷Carron, *A history of forestry in Australia*, pp. 114-8.

³²⁸Carron, *A history of forestry in Australia*, pp. 114-8.

³²⁹Frawley, *A history of forest and land management in Queensland*, p. 461.

³³⁰Watson, 'Clearing the scrubs', p. 387.

³³¹Dargavel, 'Constructing Australia's forests in the image of capital', pp. 89-91.

³³²Fisher & Johnston, SEQ2001, p. 9.

rigged up as small saw benches for sawing timber for framing or timber boxes.³³³ In the 1940s the portable drag saw and mobile circular saw were developed.³³⁴ Returned soldiers were well able to turn their mechanical skills to such devices. Improving wood technology allowed for the use of a greater range of timbers: kiln drying was now applied to satinay and brush box. Satinay, unique to Fraser Island and Cooloola, is resistant to marine borer and was used in the rebuilding of the Tilbury Docks in London.³³⁵

The smaller bush sawmills were better serviced by improved transport. Crawler tracks had developed during World War I and had become well established for use with tractors in the 1920s and 1930s. The American Caterpillar Company was well known as a result of its activities during the war, and after the war machines were often fitted with dozer blades for use in clearing and road making. Logging roads could easily be built in this way, and bulldozers with winches allowed logs to be removed from deep gullies. Ex-army trucks, mostly four-wheel drive, were in common use. Jinkers used for snagging logs along the ground were soon replaced with more sophisticated logging arches with crawler tracks and raised landings or ramps were used to load logs onto trucks. The period from 1945 has been described as the “heyday of sawmilling”, with few government regulations, improved technologies and better infrastructure such as railways and roads. Most timbered areas were now accessible, and selective logging of individual species led to alterations in forest structure, old or badly formed trees of less desirable species coming to dominate many forests throughout eastern Australia.³³⁶

In part as a result of increased demand for timber, the government relaxed the licensing provisions for sawmillers in 1946. Between 1946 and 1951/2, persons with access to private supplies of timber were granted sawmilling licences, without investigation. Although the licences applied to timber from private land, it was inevitable that as these supplies were exhausted, there would be pressure on State Forests.³³⁷ In 1952, the policy was reversed:

and applications [were] decided after considering available log supply and whether the establishment of a new mill [would] be in the public interest.³³⁸

The increase in sawmills during this period and the increasing cut is clear from Table 9:

³³³Dargavel, 'Constructing Australia's forests in the image of capital', p.90

³³⁴Frawley, 'Logging technology and forest cutting practices', p. 149ff.

³³⁵Taylor, *Growing up: forestry in Queensland*, p.165.

³³⁶Taylor, *Growing up: forestry in Queensland*, pp. 149-57.

³³⁷Fisher & Johnston, SEQ2001, p. 139.

³³⁸Some notes on forestry in Queensland with particulars as to work achieved during the five year period 1949/50 to 1953/4 prepared for the Minister for Lands and Irrigation, the Hon T.A. Foley, M.L.A., 17 August 1954.

TABLE 9: SAWMILL LICENCES AND MILL CUT 1937-1954.³³⁹

AS AT 30TH JUNE	LICENCES IN FORCE	MILL CUT FOR PRECEDING YEAR (IN SUPER FEET)
1937	600	273991000
1946	549	299006000
1947	674	348810000
1948	846	378008000
1949	979	409858000
1950	1063	416159000
1951	1163	413539000
1952	1284	487240000
1953	1231	470144000
1954	1161	460000000

Sales of timber from State Forests operated in a number of ways. These included both non-competitive and competitive sales at stump and competitive and non-competitive direct sales. A number of Key Markets (e.g. Brisbane, Maryborough) were declared, and the Key Market Log Price was determined by subtracting freight costs in the log from the appropriate key market.³⁴⁰

The building boom and increased demands for timber led to a number of unscrupulous practices and complaints by the public against elements within the building industry. One of these concerned the sale of timbers susceptible to attack by *Lyctus* spp., the powder post borer. In an attempt to curb such practices, the government passed the *Timber Users' Protection Act* in 1949 to protect against the sale of untreated timbers.³⁴¹ In 1958 a Timber Inquiry Committee was appointed to investigate timber sales and sawmill licensing. Its recommendations led to the establishment of a Sawmills Licensing Board in 1959, with the purpose of considering all aspects of licensing and making recommendations to the Director of Forests.³⁴²

10.4 ADMINISTERING THE FORESTS

Important legislation concerning forestry was passed in the 1950s. A new Country-Liberal coalition was elected in 1957 and one of their first bills was the *Forestry Act of 1957* which officially separated Forestry from the Lands Department. Two years later the Forestry Act of 1959 gave full legislative authority to Forestry Department functions. The position of Director was renamed Conservator and the department came under the Agriculture portfolio. The concentration on the utilitarian, timber-producing functions of forestry is clear in the definition of the principles in the administration of State Forests as:

the permanent reservation of such areas for the purpose of producing timber and associated products in perpetuity.³⁴³

³³⁹Some notes on forestry in Queensland with particulars as to work achieved during the five year period 1949/50 to 1953/4 prepared for the Minister for Lands and Irrigation, the Hon T.A. Foley, M.L.A., 17 August 1954.

³⁴⁰Crown Log Timber Marketing Procedure in Queensland.

³⁴¹Carron, *A history of forestry in Australia*, p. 120.

³⁴²Carron, *A history of forestry in Australia*, p. 120.

³⁴³*Forestry Act of 1959*, ss33 in *The Queensland Statutes 1959-60* in Frawley, *A history of forest and land management in Queensland*, p. 495. Previous details, p. 494.

This was a recognition that timber supplies were much depleted and that reservation and plantation were urgently needed. The area of State Forests increased from 3,316,476 acres (1,342,159 hectares) in 1945 to 5,104,923 acres (2,065,934 hectares) in 1959. There was a corresponding decrease in the number of Timber Reserves.³⁴⁴

National Parks continued under forestry control and the principle of conservation was espoused, although at the discretion of the Conservator. Management was to involve:

the permanent preservation, to the greatest possible extent, of their natural condition and the Conservator of Forests shall exercise his powers... in such manner as appears to him most appropriate to achieve this objective.³⁴⁵

Most National Parks were small in area and centred on a particular beauty spot or scenic attraction. Most were also residual lands, left to become National Parks after other productive users had made their claims. The Lamington National Park was a notable exception.³⁴⁶

10.5 SETTLING THE LAND

At the same time that forestry was obtaining independence and a formalised administrative structure in recognition of the growing and continuing demands for timber, other legislation was working counter to forest interests. *The Land Acts and Other Acts Amendment Act of 1957* reintroduced rural freehold tenure.³⁴⁷ Unless the Forestry Department could claim that the 'public need' was jeopardised, conversion of grazing leasehold to freehold tenure occurred after payment of land and forest valuations over an interest-free period. Conversion to freehold took the forests out of Departmental control. Despite concerns expressed that cypress and eucalypt forests would be destroyed as a consequence of this policy, the Forestry Department was required to undertake valuations of timber on lands being converted to freehold.³⁴⁸ The work came to occupy more and more of Forestry's time:

Within ten years the total area of applications was more than 8 million hectares, and twenty years after the commencement of the scheme, the Department had processed between three and four thousand applications covering a total of 12 million hectares, something in the order of 40,000 hectares of state forests reservation having been negotiated with lessees over that period.³⁴⁹

10.6 DUBOISIA

During the 1940s and 1950s, a specialised industry developed in parts of South East Queensland. The industry, principally carried out between Gympie and Yandina, but also as far afield as Coolabunia near Kingaroy, involved the growing and harvesting of leaves from the plant *Duboisia myoporoides* (also known as corkwood). There are three species of *Duboisia* in Australia, and all have played a part in Aboriginal medicine. During World War II it was discovered that the plant contained a chemical that could alleviate sea sickness. In fact the plant contains Atropine and Hyacine. Atropine is used in ophthalmology to dilate the pupil and Hyacine has antiemetic

³⁴⁴Fisher & Johnston, SEQ2001, p. 139.

³⁴⁵Cited in Carron, *A history of forestry in Australia*, p. 122.

³⁴⁶Frawley, *A history of forest and land management in Queensland*, p. 492.

³⁴⁷Frawley, *A history of forest and land management in Queensland*, p. 494.

³⁴⁸Carron, *A history of forestry in Australia*, p. 114.

³⁴⁹Carron, *A history of forestry in Australia*, p. 114.

properties and is used in the treatment of travel sickness. By 1975 the export value of *Duboisia* from Queensland was almost \$1,000,000 per annum.³⁵⁰ In the Coolabunia area *Duboisia* is still grown commercially by families involved in its production for the last 50 years.³⁵¹

³⁵⁰Annual Report of the Department of Forestry for the year 1974/5, p.28.

³⁵¹Stan Tutt, 'The days of the scent mills', *Sunshine Coast Sunday*, 29 September 1996, p. 37 & Stan Tutt, 'Memories of Corkwood days', *Sunshine Coast Sunday*, 20 October 1996, p. 28 & D.W. Etherington, 'Duboisia', in Coolabunia Centenary Committee, *Coolabunia from the beginning 1883-1983*, n.d.

11. 1960S-1997

SIGNPOSTS

1965	Australian infantry battalion sent to Vietnam; Qld Institute of Technology opened
1966	Decimal currency introduced
1968	J. Bjelke-Petersen, longest serving Premier of Qld, took office
1969	Queensland Conservation Council established
1972	Election of A.L.P. Federal government, the first since 1949
1973	18 year olds granted the right to vote
1981	Severe drought in large parts of Australia
1984	Control of Uluru (Ayers Rock) given to Aboriginal owners
1986	Landcare organisation begins throughout Australia
1988	Opening of new Parliament House in Canberra

11.1 ADMINISTERING THE FORESTS - PLANTATIONS AND NATIVE FORESTS

The *Forestry Act of 1959* became operative in August 1960. In 1959, only 2.6% of Queensland in 1959 was designated as a 'forest area'; in other words, the state was scarcely well endowed with native forests. By 1963, 9,039,959 acres (3,661,183.1 hectares) of this area were controlled by Forestry. A decline in native hoop and bunya pine production since the early 1940s was accompanied by a corresponding rise in the use of plantation pine, native cypress and hardwoods. It was recognised that mill log supplies from native forests would decline over the next decades, although improved technology did allow both for the utilisation of denser hardwoods such as spotted gum and ironbark. Pulping of hardwoods also became possible. Forestry continued to 'treat' native forests and it was recognised that they played a part not only in nature conservation, but also in water catchment management:

The hardwood forests and the tropical rainforest are managed under a system of natural regeneration, supplemented or accompanied by enrichment plantings in some forest types. A group selection system is envisaged in the management of the cypress pine forests.³⁵²

³⁵² A.R. Trist, & J.J Reilly, Forest resources, Queensland, Company Management Conference, 10-12 November 1969. Submission to the Senate Inquiry into all aspects of Australia's Forestry and forest product industries n.d.

Forest surveys continued during the 1960s. Strip surveys indicated vegetation types according to four utilisation classes - mill logs and girders; round timbers for poles, piles and house stumps; sleeper trees; and split posts. Other 'useless trees' were not recorded. Aerial surveys allowed for better assessments of forest structure, and computer analysis extended the possibilities of modelling timber yields. Fauna surveys began in the 1960s, partly in order to develop rodent management measures for hoop pine plantations.³⁵³

In 1967 the *Softwood Forestry Agreement Act* provided Commonwealth loans to the States for plantation work. As a result, over 3,000 hectares was planted.³⁵⁴ In order to establish large-scale softwood plantations, clear felling was necessary. As noted above, hoop pine, the preferred softwood for plantations, grows on rainforest soils and large tracts of rainforest were felled so that quick-growing hoop pine plantations could be established. Many of these plantations were being established in areas clearly visible from roads, and as the forest landscape was transformed popular opposition to such practices grew. By 1980, the plantation estate incorporated 125,337 hectares of softwoods and 2,074 hectares of broadleaved natives.³⁵⁵ Much of this estate was grown, however, at the expense of rainforests which were felled and burned in order to create space for plantations. By the 1980s, it has been estimated that up to 80% of rainforests in the Yarraman, Murgon and Gympie districts (i.e. over 30,000 hectares) may have been destroyed in order to establish plantations.³⁵⁶

In addition to regeneration schedules in native forests, and maintenance of plantations, forestry became more involved in prescribed burning schedules. Prior to 1927, there had been no control on any rural fires in Queensland, but the drought of 1926 and subsequent bushfires led to a policy of fire exclusion in areas under forestry control. After major bushfires in 1951 and 1957, a policy of prescribed burning was slowly introduced and subsequent fires in 1968 showed the success of the policy in that areas where controlled burning had been undertaken suffered less damage.³⁵⁷

11.2 ORGANISING RECREATION - MULTIPLE USE OF FORESTS

Forestry had become an accepted form of land use, with principles enunciated concerning native forests, plantations and National Parks. These principles were, however, essentially utilitarian and the 1960s saw the development of a range of non-utilitarian concerns. Aesthetic, ecological and scientific values of landscapes were now coming to the fore, both in specialist and popular fora.³⁵⁸

As early as 1936, the Director of Forestry had flagged the idea of 'multiple use' of forests. In his Annual Report, Grenning spoke of the 'indirect values' of forests, and noted the importance of recreational and other features of forests that were difficult to assess in monetary terms. Beauty spots, picnic areas and scenic drives were established alongside the more traditional areas associated with timber production.³⁵⁹ Nonetheless, most foresters were trained in wood production.³⁶⁰ To adopt a less utilitarian view of the forests was not always easy given this background.

³⁵³Dargavel & Moloney, 'Assessing Queensland's forests', p. 37.

³⁵⁴Fisher & Johnston, SEQ2001, p. 139.

³⁵⁵Fisher & Johnston, SEQ2001, p. 153.

³⁵⁶Ross Fitzgerald, *A history of Queensland from 1915 to the 1980s*, University of Queensland Press, St Lucia, 1984, p.621.

³⁵⁷Taylor, *Growing up: forestry in Queensland*, pp. 143-7.

³⁵⁸Frawley, *A history of forest and land management in Queensland*, p. 598.

³⁵⁹Carron, *A history of forestry in Australia*, p. 123.

³⁶⁰Frawley, *A history of forest and land management in Queensland*, p. 605.

Nonetheless, changes in approach occurred. By 1964 there were 250 National Parks totalling over 400,000 hectares under Forestry control. Scenic beauty was no longer the only criteria for declaration of a National Park, and scientific and conservation values played a greater role. The 1963/4 Annual Report stressed that:

An important object of national park administration must ... be to reserve permanently, typical examples of all the main environments, including the less scenic.³⁶¹

The declaration of the Simpson Desert National Park in 1967 and later the declaration of marine parks at Green Island and Heron Island in 1974 are examples of this trend. From 1971 onwards, the Forestry Department also received funds for the development of recreation areas in State Forests, to relieve pressure on National Parks.

In 1975, after 67 years of Forestry control, legislation established the National Parks and Wildlife Service and transferred control of National Parks to the Department of Lands. At that time, there were 300 terrestrial parks and two marine parks with a total area in excess of one million hectares.³⁶² In 1989 the National Parks and Wildlife Service was incorporated in the newly formed Department of the Environment and Heritage. This move indicated a change from the early days when National Parks were residual lands and isolated scenic spots and reflected the view that such parks needed to be treated as an integral part of the environmental issues/ policies of the day. In 1996 the Department's name was changed to the Department of Environment.

As a consequence of the loss of National Parks in 1975, the Forestry Department undertook an internal reorganisation, in part as a result of changing attitudes and environmental concerns. The Department clearly saw itself as reacting to fair and unfair criticism concerning its broader environmental and ecological credentials. Conservator W. Bryan outlined the measures:

Greater public interest in environmental matters dictates that the Department increase and co-ordinate its activities in these areas. While it has followed for very many years a responsible policy of environmental concern with regard to its field of activities, it now faces a need to secure factual data to justify its management decisions in the face of often poorly informed and narrowly based criticism. ...a separate unit has been established to provide and co-ordinate the necessary technical expertise in the many disciplines concerned. Environmental impact studies are being carried out with respect to significant departmental activities with initial emphasis on the major exotic planting programme. A range of environmental guidelines is also being prepared to assist staff in field operations, and guidelines were produced during the year for the retention of native vegetation within exotic pine planting areas to ensure continued provision of floral and faunal habitat for species indigenous to the locality.³⁶³

Multiple use was encouraged and included long-established practices such as, beekeeping, quarrying, grazing and recreation.³⁶⁴ It was estimated that by 1978/9, 350,000 people were using forest parks for recreation purposes annually. Grazing was encouraged in open forest areas³⁶⁵ and currently 70% of State Forests are under grazing leases.³⁶⁶ Beekeepers also made use of State Forests for honey production purposes. The Forestry Act of 1976 required the Conservator of

³⁶¹ Annual Report of the Director of Forests for 1963/4, p. 15. I thank H.S. (Syd) Curtis for alerting me to this passage.

³⁶² Carron, *A history of forestry in Australia*, pp. 122-3.

³⁶³ Annual Report of the Conservator of Forests for 1975/6, p. 4.

³⁶⁴ Carron, *A history of forestry in Australia*, p.92.

³⁶⁵ Carron, *A history of forestry in Australia*, p.124.

³⁶⁶ Hilary Smith, Queensland Department of Natural Resources, personal communication, 1997.

Forests to consider issues of water and soil conservation and environmental protection, in addition to grazing and recreation.³⁶⁷

11.3 BUILDING AND SAWMILLING

By the 1980s, 40% of sawn timber was from plantation pine, and increasing use of concrete and metal for housing was having an impact of timber use in the building trades. The 1960s saw increasing use of cypress pine, and in the 1970s imported Western Red Cedar became popular.³⁶⁸ New technologies such as structural plywoods, laminates and particle board developed and progressively replaced traditional timbers.³⁶⁹ Throughout Australia small hardwood sawmills closed, employment in the timber industry fell, and there was an increase in centralisation of production as large-scale sawmilling operations relied more and more on pine milling of plantation timbers.³⁷⁰

11.4 SETTling THE LAND

The *Land Act of 1962* had allowed for the conversion of public land to freehold after valuation of both land and timber value. Strip assessments, involving assessments of the timber resources on selected transects of land were conducted by forestry staff. An indication of the increasing trend to conversion to freehold is indicated in Table 10.

TABLE 10: STRIP ASSESSMENTS (AVERAGE FOR YEAR) 1950s TO 1970s.³⁷¹

AVERAGE FOR YEAR	DISTANCE COVERED BY STRIP ASSESSMENT (AVERAGE FOR YEAR)
1950S	1800 KILOMETRES
1960S	7400 KILOMETRES
1965 & 1967	OVER 10,000 KILOMETRES PER YEAR
1970S	5600 KILOMETRES

Over 9% of the Department's workforce was involved in survey work, with 180 people employed and working from camps during peak periods.³⁷² This alienation of crown land facilitated deforestation, in part because assessments by Forestry indicated the value of timber on the land. Section 250 of the *Land Act of 1962* had determined that a permit from the Land Commissioner was needed before trees could be destroyed. This section applied to lessees of a pastoral, grazing, homestead, perpetual or special lease and to holders of an occupation lease at any time, and to lessees of an agricultural selection or perpetual country lease for two years. Such permits excluded commercial species that were under the control of the Conservator of Forests, who could arrange for such timber to be sold. Leaseholders had the right to object. These provisions, however, did not apply when a grazing perpetual lease was converted to grazing homestead freehold.³⁷³ The survey work of the Department of Forestry unwittingly worked against the interests of retaining control

³⁶⁷Fisher & Johnston, SEQ2001, pp.153-4 and Carron, *A history of forestry in Australia*, p. 124.

³⁶⁸ Hawthorne, 'Queensland timbers', pp. 70-1.

³⁶⁹ Taylor, *Growing up forestry in Queensland*, p. 198 ff.

³⁷⁰Dargavel & Boutland, 'Timber firms in the twentieth century', p. 73.

³⁷¹Dargavel & Moloney, 'Assessing Queensland's forests'.

³⁷²Dargavel & Moloney, 'Assessing Queensland's forests'.

³⁷³Forest and Timber Inquiry, 1992, pp. 67-8.

over forests. As elsewhere in Australia, forestry became “a facilitator and regulator of private interest”.³⁷⁴ The danger of the regulator serving the interests of the regulated is well known.³⁷⁵ Similarly, the relationship, common throughout Australia, between the ‘Crown’ sawmillers operating within public forests and the government forest services that renewed their licences could prove problematic.³⁷⁶

As the 1992 Forest and Timber Inquiry noted:

there is little regulation of freehold land and what there is is confined to specific areas or fulfils narrow purposes. The State has a rural nature conservation programme, but it is based on voluntary cooperation and no financial assistance is given....In practice the emphasis is on education of landholders by their peers and extension work. [The submission by the Queensland government to the inquiry pointed out that] much of the private timber cut has resulted from capitalisation of timber stands following conversion of Crown leases to freehold, partly to offset freeholding costs incurred by landholders.³⁷⁷

Submissions from both the Queensland Timber Board and a group of Queensland sawmills recommended regulation of clearing of both commercial and non-commercial native forests on freehold land.³⁷⁸

During the 1980s many farmers came to recognise that soil conservation issues were critical to their survival and from 1986, Landcare groups began to form in rural areas of Australia in order to sponsor soil conservation measures. Such measures included protection of native forest remnants and reforestation. In 1989, the Prime Minister, Bob Hawke, declared the 1990s the “decade of Landcare”, giving political support to small grass-roots organisations working toward the promotion of sustainable farming methods.

Despite these trends on the small scale, land clearing continues unabated on both leasehold and freehold land. Lands Department data shows that in 1994 the government issued 768 permits to clear 1,079,297 hectares of leasehold land, including 684,967 hectares of virgin bush and 391,730 hectares of regrowth and woody weeds. Information for previous years was unavailable, but a survey of clearing contractors suggested that around 500,000 hectares of bush (including 100,000 of virgin bush) were cleared statewide in 1989. This figure included freehold, where permits were not required. In other words, between 1990 and 1995, the rate of clearing increased by 700%. Of Queensland’s area of 150 million hectares, 78% is leasehold, 17% freehold and the remainder is Crown Land. Estimates suggest that about one-half of freehold land has been cleared.³⁷⁹

11.5 PROTECTING THE FOREST

The 1960s saw the development of a number of environmental groups that aimed at pushing their environmental concerns onto the political agenda. The Australian Conservation Foundation, founded in 1967, went from an early membership of 1,017 to 21,400 in 1991; the membership of

³⁷⁴Frawley, A history of forest and land management in Queensland, p. 606.

³⁷⁵Frawley, A history of forest and land management in Queensland, p. 606.

³⁷⁶Dargavel, ‘Constructing Australia’s forests in the image of capital’, p. 90.

³⁷⁷Forest and Timber Inquiry. Legislation affecting public and private forests. Resource Assessment Commission. Consultancy series No FTC92/20. Canberra, Australian Capital Territory, 1992, p. 67.

³⁷⁸Forest and Timber Inquiry. Legislation affecting public and private forests, p. 73.

³⁷⁹Greg Roberts, ‘Trees policy pruned back’, *The Bulletin*, 9 May 1995, pp. 26-7. The term ‘virgin bush’ is not defined.

the Wilderness Society went from 7,332 in 1983 to 16,377 in 1991.³⁸⁰ The Queensland Conservation Council was formed in 1969.³⁸¹ As lobbying brought a range of conservation issues into the broader political arena, Federal government grants to such groups began. Grants to the Australian Conservation Foundation began in 1964/5, to the World Wide Fund for Nature in 1978/9, to the Friends of the Earth in 1983/4.³⁸² Queenslanders were slow to develop a conservation approach to forests.³⁸³ At a 1967 conservation symposium, for example, only one paper was delivered with any reference to forests, and this was purely in terms of recreation with no concern for broader ecological matters.³⁸⁴ Two issues, however, brought forest concerns to the notice of conservation groups. These were the fate of the gastric-breeding frog in the Conondale State Forest and the question of logging on Fraser Island.

11.6 THE CONONDALE RANGES

During the 1970s, concerns began to be raised about the impact of selective logging in native forests on particular faunal species within the forest. In the Conondale area, logging was found to have had an impact both on freshwater crayfish and on micro-bat populations. The area is home to a range of fauna, in particular a number of rare frogs. In 1976, the Save the Conondale Range Committee was formed to press for the declaration of a National Park and an end to logging.³⁸⁵ They argued that:

the greatest threat to the Conondale Range exists in the form of intensive forestry practices.³⁸⁶

In addition to problems of selective logging of native forests, the group highlighted the practice of clearfelling rainforest in order to establish hoop pine plantations and noted that little research had been carried out into the effect of such practice on native wildlife. They argued that monocultural plantations produced a loss of species diversity and abundance.

In 1977 National Park 1100 was declared, but calls for extension of the area under National Park control continue.³⁸⁷ Forestry responded in the early 1980s by initiating a fauna study, in cooperation with the Queensland Museum and the Queensland National Parks and Wildlife Service. It aimed to:

measure the impact of logging on stream water quality, arboreal mammals, birds and stream fauna - particularly the gastric breeding frog, the southern day frog and the giant spiny lobster.³⁸⁸

³⁸⁰Elim Papadakis, *Politics and the environment: the Australian experience*, Allen & Unwin, Sydney, 1993, pp 150,152.

³⁸¹Queensland Conservation Council - information pamphlet, n.d.

³⁸²Papadakis, *Politics and the environment*, p. 118.

³⁸³ H.S. (Syd) Curtis notes (personal communication, 1998) that Forestry had for many years prior to the 1960s taken a conservation approach to forests both in terms of its management of National Parks and in its determination to include representative examples of forest types within these Parks. This is undoubtedly true, although I believe that such policies and actions were poorly understood or recognised by the wider public.

³⁸⁴H.S. Curtis, Reserves and recreation, in *Caring for Queensland*, papers presented at a symposium organised by The Australian Conservation Foundation, held at The University of Queensland, St Lucia, Brisbane, 14-15 October, 1967.

³⁸⁵G.J. Roberts ed., *The Conondale Range: the case for a National Park*, a Queensland Conservation Council Publication, 1977.

³⁸⁶Roberts ed., *The Conondale Range*, p.26.

³⁸⁷G.T. Johnson & P.V. Holzworth, *Conondale Range Management Plan*, n.d., p.5.

³⁸⁸ Annual Report of the Director of Forests, 1982/3, p. 14.

11.7 FRASER ISLAND

Fraser Island is the world's largest sand island with an area of around 163,000 square kilometres.³⁸⁹ As early as 1893 there had been calls, by the Australian Association for the Advancement of Science, for the declaration of the whole island as a National Park.³⁹⁰ Since 1925, virtually the whole of Fraser Island was State Forest although excisions of around 10,000 hectares occurred in the 1960s for township development.³⁹¹ In 1971, Forestry gazetted 25,000 hectares of the northern part of the island as a National Park and two years later a further 9,000 hectares were added. At the same time, active sandmining for heavy minerals was underway in the south of the island. When the Queensland government decided against sandmining in nearby Cooloola, Fraser Island became the focus of environmental and conservation groups. In 1974 the Commonwealth Government passed the *Environmental Protection (Impact of Proposals) Act* in order to:

make provision for the protection of the environment in relation to projects and decisions of, or under the control of, the Australian Government, and for related purposes.³⁹²

In 1975 an environmental inquiry into sandmining on Fraser Island recommended that export of minerals from the island be prohibited and in 1976 the newly elected Coalition Federal government accepted the inquiry's recommendations and refused to grant export licences for minerals from the island. The inquiry had drawn public attention to the area and although sandmining ended, conservation groups now looked to the timber industry.

The Fraser Island Defenders Organisation (FIDO) had been established in 1971 to campaign against sand mining. It continued campaigning for the conservation of Fraser Island and the end to sand mining and logging.³⁹³ In 1975 FIDO commissioned a management study of the island and in 1984 FIDO and the Australian Conservation Foundation prepared a World Heritage nomination for the whole of the Great Sandy region.³⁹⁴

During the 1970s, Maryborough sawmills were taking 40% of their logs from Fraser Island.³⁹⁵ In its report, the environmental inquiry noted the "harmonious working relationship" between the Forestry Department and the Maryborough sawmillers, but commented that the "visual integrity" of the island seemed not to be affected by the "carefully controlled logging operations" operating on the island. Most logging was selective, although some clear-felling, thinning and burning procedures were criticised, not from a forestry or conservation, but from an aesthetic perspective.³⁹⁶ On the election of a Labor Government in Queensland in 1989, pressure mounted to end logging and declare the island a National Park. In 1990 a Commission of Inquiry was established, and required to:

make recommendations (including recommendations for any necessary legislation) with respect to the conservation, management and use of Fraser Island and the Great Sandy Region generally, and with respect to

³⁸⁹Commission of Inquiry into the conservation, management and use of Fraser Island and the Great Sandy Region, Initial discussion paper, June 1990, p. 1.

³⁹⁰John Sinclair, *Fraser Island and Cooloola*, Weldon Publishing, 1990, p. 227.

³⁹¹Carron, *A history of forestry in Australia*, p. 132ff for what follows.

³⁹²Cited in Carron, *A history of forestry in Australia*, p. 132.

³⁹³Sinclair, *Fraser Island and Cooloola*, p. 219.

³⁹⁴Sinclair, *Fraser Island and Cooloola*, pp. 227,246.

³⁹⁵Taylor, *Growing up: forestry in Queensland*, p. 165.

³⁹⁶Carron, *A history of forestry in Australia*, p. 132ff.

the establishment of principles, systems and procedures for the orderly development and implementation of policies and the resolution of issues or disputes concerning areas of Queensland in relation to which particular regulation may be needed for environmental, cultural or other special reasons.³⁹⁷

Five hundred and forty-four submission were received, including several volumes from the Forestry Department. Commissioner Fitzgerald's report was released in May 1991 and recommended an end to all but the logging of blackbutt in areas where it had already been logged, and the revoking of all state forest reserves. Sawmillers rejected the blackbutt proposal as uneconomic and on 31st December, 1991, all logging ceased. The island obtained World Heritage listing and is now managed as a National Park.³⁹⁸

³⁹⁷Commission of Inquiry into the conservation, management and use of Fraser Island and the Great Sandy Region, Initial discussion paper, June 1990, p. 2.

³⁹⁸Taylor, *Growing up: forestry in Queensland*, pp. 168-9.

12. CULTURAL HERITAGE EXEMPLARS

Listed below are cultural heritage exemplars for the chronological periods outlined in the body of the report. Those places identified by an asterisk (*) are those known places that have thresholded as places of potential National Estate significance. These places are described in more details in other CRA Cultural Heritage reports. General, non-specific features are marked by a hash (#)

PERIOD	EXEMPLARS
1823-1842	Convict lumber yard, Queen St., Brisbane Rafting grounds and log dumps along water courses (#)
1842-1859	Pettigrew's mill, William St., Brisbane Rafting ground, Brookfield, Brisbane River Sawpits, bullocks trails (#) Spicer's Gap road and complex (*)
1860s-1870s	Pettigrew and Sims Dundathu sawmill site, Maryborough (*) Cooloola Tramway (*) Mill Point, Lake Cootharaba (*) Roberts Tree - survey mark (*) KCB Tree (*) Ringbarked landscapes (#)
1880s	Mitchell 1882 experimental plot - Fraser Island (*) Timber-milling towns - Campbellville 1880 (*) and Canungra 1884 Timber architecture (#) Ringbarked landscapes (#) Bullock tracks (#)
1890s	Timber architecture (#) Ringbarked landscapes (#) Bullock tracks (#)
1900-1910	Pechey Complex (including sawmill sites and A & D Munro's tramway) (*) Bunya Mountains complex (sawmill sites, timber chutes) (*) Lahey's Canungra tramway (*) Lars Andersen's tramway, Cressbrook (*) Mt Mee bullock trail (*) National Parks at Witches Falls, Lamington, Bunya Mountains

1911-1918	<p>Forestry offices and residential quarters on Fraser Island (*)</p> <p>Yarraman tramway complex (*)</p> <p>Bunya Mountains recreation complex (Mt Mowbullán Guest House, Cedarvale, old timber signage, Soldiers' Road) (*)</p> <p>Imbil nursery (*)</p>
Interwar period	<p>Hornibrook Highway 1935 - timber from Conondale Range</p> <p>Binna Burra Cultural Landscape - Binna Burra Mountain Lodge, Arthur Groom Memorial (*)</p> <p>O'Reilly Cultural Landscape - Lamington National Park Walking Tracks, old track signage, Queensland Naturalist Club Cairn, Romeo Lahey Memorial (*)</p> <p>Beerburum Soldier Settlement complex (including site of hospital, farms and cemetery) (*)</p> <p>Jimna township (*)</p> <p>Mt Mee banana settlement site (*)</p> <p>Mt Cougal sawmill site (*)</p> <p>State sawmills</p>
1940s-1950s	<p>Foreign legion camp, Stirling's Crossing (*)</p> <p>Beerwah/Beerburum Forestry Complex (including Beerwah Forest Station, Beerburum Forestry Office, nurseries) (*)</p> <p>Log dumps, logging contractors camps, forestry camps, Fraser Island (*)</p> <p>Elgin Vale sawmill (*)</p> <p>Mary Cairncross Park (*)</p>
1960s-1997	<p>Sandmining sites, Fraser Island (*)</p> <p>Protest sites, Fraser Island</p> <p>Jimna Fire Tower (*)</p>

13. CONCLUSIONS

This report has provided an overview of historical events associated with forested areas in South East Queensland from 1823 to 1997. In particular, the report has identified the key themes that emerge from this historic overview. These themes are identified below, and events and developments in South East Queensland that clearly represent each theme are listed in italics. The numbers used are those employed by the Australian Heritage Commission in their list of Principal Australian Historic Themes.

1. Tracing the evolution of a continent's special environment

1.3 Assessing scientifically diverse environments - *early conservationists, the Acclimatisation Society of Queensland, early National Parks movement, conservation movement of 1960s-1990s*

2. Peopling the continent

2.4 Migrating to seek opportunity - *early settlers in Queensland; Displaced persons, post-WW2, working in forestry camps*

2.5 Promoting settlement on the land - *Moves toward closer settlement (1860s, 1870s), pressure to alienate forest land (up to 1930s), pressure for the freeholding of leasehold lands (1950s, 1960s, 1970s)*

2.6.6 Displacing Aboriginal people - *early explorers, pastoralists and timber getters in conflict with Aboriginal people (e.g. the Wide Bay area and Fraser Island)*

3. Developing local, regional and national economies

3.2 Surveying the continent and assessing its potential - *early European explorers; cedar cutters along coastal river systems*

3.3.4 Making the forests into a saleable resource - *forestry, timber products, beekeeping, duboisia*

- *Understanding the forests - studying timber types and uses, experiments with planting systems*
- *Exploiting the forests - extracting timber, processing and transporting timber, sawmilling*
- *Managing the forests - fire regimes, silvicultural operations, plantations, forestry administration*

3.4 Developing sheep and cattle industries - *dairying, pastoralism and land clearing associated with both activities*

3.7 Moving goods and people -

- **3.7.1 Shipping to and from Australian ports** - *use of ships for transport of timber exports, development of major ports (e.g. Maryborough)*
- **3.7.2 Making economic use of inland waterways** - *use of coastal streams for rafting and punting of timber (e.g. the Nerang, the Maroochy, the Great Sandy Straits)*
- **3.7.3 Moving good and people on land** - *railway development (including private railways and tramways) and the opening up of timber lands, motorised transport during the early part of the twentieth century. Impact of improved transport networks on access to timber resources*

3.10 Altering the environment for economic development

- **3.10.4 Clearing Vegetation** - *ringbarking, clear-felling*

3.13 Developing an Australian engineering and construction industry

- **3.13.2 Using Australian materials in construction** - *timber housing*

4. Building settlements, towns and cities

4.1.4 Selecting township sites - *mill townships, forestry townships*

5. Working

5.1 Working in harsh conditions - *bullock drivers, timber cutters, log rafters*

6. Educating

6.3 Training people for workplace skills - *development of forestry schools, research and experimental centres, environmental education centres*

7. Governing

7.5.2 Providing for the common defence - *impact of WW2 on timber industry, use of forests as military training areas (Canungra, Fraser Island)*

7.5.6 Incarcerating the accused and convicted - *early penal settlement of Moreton Bay, prison farms of late twentieth century*

7.5.10 Conserving Australia's resources -

- **7.5.10.1 Conserving fragile environments** - *National Park movement*
- **7.5.10.2 Conserving economically valuable resources** - *timber reserves, State Forests*

8. Developing cultural institutions and ways of life

8.1.3 Organising recreation - *development of public parks and gardens, recreation in State Forests (multiple-use)*

8.9 Commemorating significant events and people - *notable figures in the timber industry*

14.RECOMMENDATIONS FOR FURTHER RESEARCH

Besides the themes identified, it is useful to highlight areas suitable for future research. In some instances, the current study was unable to investigate these areas for lack of time. In the case of other topics it may well prove difficult to unravel past practices for lack of written information. The possibilities for oral history research are great, although much is already gone.

Areas suitable for future research include:

- significant figures in forestry, in particular the life of E.H.F. Swain (holdings at the Mitchell Library and in the possession of Swain's son-in-law would provide additional information);
- company histories of notable timber firms in order to analyse the inter-locking and overlapping commercial and political networks that affected forest use. Particular firms include Hyne and Sons, Laheys Ltd, Hancock & Gore and others (Queensland State Archives has numerous records including correspondence between timber firms and the Queensland Forest Service; Shirley Lahey is currently writing a history of her family; other sources of information in company archives would prove useful);
- the changing nature of National Park management, including changing attitudes towards nature conservation. Research could focus on the changes in National Park management during the time of Forestry management (1906-1975) and since the creation of the Queensland National Parks and Wildlife Service;
- oral histories of retired and serving foresters in order better to understand issues such as: living conditions, changing silvicultural practices, and changing attitudes to the forest;
- oral histories of retired timber getters, contractors and haulers in order better to understand issues such as living conditions, working conditions, safety issues and the relationship between forest workers and sawmills and the Queensland Forest Service;
- a history of the role of displaced persons in Forestry after World War II;
- the history of school forestry plots;
- the story of wood chopping at country shows and the famous axemen who are widely mentioned by timber workers;
- the history of the use of forests for festivals, in particular the modern festivals at Amamoor State Forest (Country Music Muster) and Woodford/ Maleny (the Woodford Folk Festival);

- the relationship between timber supply and building and architectural practices, using sources such as the technical papers produced by the Forest Products Research Bureau and oral histories of specialists in carpentry and joinery.

An area of timber and forest history which is difficult to analyse is the role of timber exploitation on private lands. Much of this is hard to document given that the timber used from private lands was often extracted more or less as a by-product of other activities, such as grazing or dairying. A detailed examination of sawmilling licences would be invaluable, as these documents list the quantities of timber, both crown and private, allocated to individual sawmilling concerns.

A final area where future research could prove important is our historical ability at 'reading the landscape'. Much history of the changes in forests and forest use can be read by a systematic scientific investigation of changes in landscape. Combined with archival and oral history research, studies of vegetation patterns, of signs of settlement (lemon and mango trees are characteristic of South East Queensland), of areas of clear-felling, ringbarking and of re-growth could provide important insights into human interactions with the environment. Detailed and in-depth studies of small and clearly defined geographical areas are most likely to provide accurate data. Such studies could provide the basis for a broader regional examination.

APPENDIX 1: PROJECT TERMS OF REFERENCE



QUEENSLAND DEPARTMENT OF ENVIRONMENT & ENVIRONMENT AUSTRALIA

TERMS OF REFERENCE

OVERVIEW THEMATIC HISTORY OF SOUTH EAST QUEENSLAND WITH PARTICULAR REFERENCE TO FORESTED AREAS, 1823-1997

1. PURPOSE OF CONSULTANCY

The purpose of this study is to

- provide a contextual overview thematic history of forested areas of the South East Queensland biogeographic region based on all land tenures; and
- identify key themes associated with forested areas in South East Queensland.

1.1 Context of Study

The overview thematic history forms part of the cultural heritage component of the Comprehensive Regional Assessment (CRA) work being undertaken prior to the formulation of a Regional Forest Agreement (RFA) to be signed by the State and Commonwealth Governments in 1998. The RFA will aim to:

- protect environmental values (fauna, flora and cultural heritage) in a world class reserve system;
- give forest industries the certainty they need to create jobs and opportunities; and,
- ensure that the whole forest estate is managed sustainably for future generations.

Other cultural heritage projects are being undertaken in the RFA to identify cultural heritage places against other significance criteria.

2. STUDY AREA

The study area for this project is the forested area of the South East Queensland biogeographic region, including both public and private land (see attached map) with emphasis on public land.

3. TASKS

- undertake research, involving archival and secondary sources, into the history of South East Queensland forested areas;
- identify key themes in the history of the study area, employing the Principal Australian Historic Themes as developed by the Australian Heritage Commission in consultation with all state heritage agencies; and
- make recommendations for further research.

3.1 Methodology

Research

Written records:

- - local and regional published and unpublished history sources in University, government and local libraries
- - archival files and maps at Department of Natural Resources (DNR), Department of Environment (DoE), Department of Primary Industries (DPI) (Forestry) and Queensland State Archives

Photographs:

- photographic collections at John Oxley Library, DPI (Forestry) Library, DoE Photographic Library
- private photographic collections

4. REPORTING

The written final report is to be prepared following the format required by the joint Commonwealth/State steering committee.

5. WORK SCHEDULE

- A draft report is to be submitted by 23 January 1998
- The final written report is to be completed by 25 March 1998

6. PROJECT MANAGEMENT

The project will be managed by the Department of Environment and overseen by the Environment and Heritage Technical Committee.

7. PERFORMANCE INDICATORS

- Project outcomes useable for heritage management and listing
- Improvement in the extent and quality of existing information
- Completion of the project on time

8. EVALUATION PROCESS

- Methods subject to review by relevant experts
- Progress and final report subject to peer review

Project Officer

Dr Margaret Kowald
 Forest Assessment Unit (Cultural Heritage)
 Department of Environment
 9th floor, 160 Ann Street, Brisbane, Qld
 PO Box 155, Brisbane Albert Street, Qld, 4002
 Ph: (07) 3227 8988: Fax: (07) 3227 7803
 E-mail: margaret.kowald@env.qld.gov.au

APPENDIX 2: EUROPEAN EXPLORATION OF MORETON BAY AND DISTRICT, 1823-1840

(after Margaret Kowald, Historical overview of the South East Queensland biogeographic region with particular reference to forested areas, Department of Environment, Brisbane, 1996.)

- 1823 Oxley's first journey up the Brisbane River
- 1824 Oxley, Cunningham and Butler upstream to Colleges Crossing and environs
- 1825 Major Edmund Lockyer travels along the river to the junction with the Stanley River and the foothills of Mt Brisbane
- 1826 Captain Patrick Logan to the Logan River and sighting of the bar of Southport, followed by exploration of the Coomera and Bremer Rivers to Limestone Hills (later Ipswich)
- 1827 Cunningham led expedition to explore the western side of the Great Dividing Range. Discovered and named Darling Downs. Patrick Logan through the Fassifern Valley and east to Mt Barney
- 1828 Cunningham found Cunningham's Gap giving access from the coast to the southern Darling Downs
- 1828 Logan locates limestone deposits while exploring the Bremer River. Lime manufactured for building Brisbane. Logan wanted to mine coal in the vicinity of the Bremer River
- 1828 Logan, Cunningham and Colonial Botanist Charles Fraser travel from Logan River to beyond Mt Barney
- 1828 Cunningham explores from Ipswich through the Gap to the Darling Downs
- 1829 Cunningham around the Esk-Lockyer basin and upper Brisbane Valley
- 1830 Logan travels through Collins Gap to the Richmond River
- 1830 Logan dies while exploring between Ipswich and Esk
- 1838 Andrew Petrie explores areas around Brisbane and north to Maroochy River
- 1840 Andrew Petrie visits Mary River and bunya gathering areas in Bunya Mountains

APPENDIX 3: COLONIAL USES OF TIMBER - BRISBANE AND SUNSHINE COAST AREAS

(after Pat & Sim Symons, *Bush heritage, an introduction to the history of plant and animal use by Aboriginal people and colonists in the Brisbane and Sunshine Coast areas*, 2nd edn, Nambour, 1996.)

Symons record 212 plant species used by Aborigines at the time of colonial contact. Of these, 62 were used by colonists. The area covered is from the Tweed River to Tin Can Bay. Surprisingly they do not list Red Cedar (*Toona australis*), probably the most favoured of timbers sought by early timber getters, or Brush Box (*L.confertus*) which was also widely used. Although brush box requires kiln drying if it is to be used for flooring, its was extensively used for wharf and bridge decking: the Jubilee Bridge that once connected Southport and Surfer's Paradise was decked with Brush Boc cut on Tamborine Mountain.³⁹⁹

Botanical name	Common name	Colonial Use
Acacia species	wattle	Wood - shelters, houses, fences; bark - tanning, medicine (gastrointestinal); gum for sore throats
<i>Acacia aulacocarpa</i>	broad-leaved wattle, hickory wattle	Cabinet making wood; good firewood
<i>Acacia bakeri</i>	marblewood	Cabinet wood
<i>Acacia harpophylla</i>	rosewood, brigalow	Fencing timber, fishing rods, cabinet and ornamental wood
<i>Acacia melanoxylon</i>	blackwood	Cabinet making, ornamental interior work, panelling in railway carriages, coach and boat building, beer barrels, whale oil casks, walking sticks, tennis racquet frames, gum stocks, piano sounding boards
<i>Acmena smithii</i>	lillypilly	Jam, wood for scantling, flooring and cabinet making
<i>Aegiceras corniculatum</i>	river mangrove	Oyster stakes
<i>Alocasia brisbanensis</i>	cunjevoi	Antidote for stings from stinging trees (cut surface of leaf stalk)
<i>Alphitonia excelsa</i>	foambark, red ash, soap tree	Wood for dyeing, cabinetwork, fencing, house stumps; leaves a substitute soap and good for removing ink stains
<i>Araucaria bidwillii</i>	bunya-bunya pine	Floors, walls, roof framing, furniture; nuts eaten in 30s Depression
<i>Araucaria</i>	hoop pine	Cabinet work, floorings, mouldings and

³⁹⁹ I thank H.S. (Syd) Curtis for this information.

<i>cunninghamii</i>		linings, panelling in railway carriages, boat building, match manufacture, plywood, wooden butter boxes
<i>Arytera lautereriana</i>	corduroy tamarind	Drinks, jams, jellies
<i>Austromyrtus dulcis</i>	midyim	Eaten and in jam
<i>Avicenna marina</i>	grey mangrove	Mallets, wheel hubs, boat construction; leaves used as fodder and alkaline ash for soap making (convicts burned mangrove trees at Brisbane River mouth for ash for soap)
<i>Banksia</i> species	banksia	Cabinet work, bullock yokes; flower soaked in water to make syrup for sore throats
<i>Banksia aemula</i>	wallum banksia, dungle nut	Flower soaked - syrup for sore throats
<i>Banksia integrifolia</i>	coastal banksia	Wood for boat construction, flowers for honey; flower cones as base for candles made of fat
<i>Blechnum indicum</i>	swamp fern, Bungwall fern	Fodder for pigs (in wallum country)
<i>Bruguiera gymnorhiza</i>	red (or orange) rib-fruited mangrove	Bark for tanning fishing nets and firewood
<i>Calamus muelleri</i>	large lawyer-cane; wait-a-while	Fibrous stems or rattans for furniture and baskets, cane lengths used as chain measures in surveying (they are up to 20 metres long)
<i>Callistemon viminalis</i>	weeping or creek bottlebrush	Cut flowers, ornamental and street trees
<i>Callistris columellaris</i>	native pine, Bribie Island pine, white cypress pine	Wood in building; resin once exported to Europe (sandarc or cypress pine resin), used in spirit varnishes and parchment preparation, incense manufacture and to coat pills; ointments and plasters
<i>Castanospermum australe</i>	black-bean, Moreton Bay chestnut	Ate prepared seeds - cakes made by Aboriginal people and sold to early settlers in Moreton Bay. Timber in cabinet making, carving and fancy work, used for electrical switchboards before plastic
<i>Casuarina glauca</i>	swamp she-oak	Axe handles, grubs eaten by early settlers and explorers; flowers for honey
<i>Cissus hypoglauca</i>	wild grapes, water vine	A water source
<i>Cythea</i> species	tree fern	Garden ornamental
<i>Cymbidium canaliculatum</i>	Queensland black orchid, paperbark	Pseudobulbs used for diarrhoea and dysentery - arrowroot substitute

	orchid, wild arrowroot	
<i>Dianella caerulea</i>	blueberry lily, flax lily	Berries used for permanent dye
<i>Dysloxyllum fraserianum</i>	rosewood	Indoor woodwork, cabinet work, house stumps
<i>Elaeocarpus grandis</i>	blue quandong, silver quandong	Wood for racing sculls and oars, interior construction and cabinetwork
<i>Eucalyptus</i> species	gum trees	Timber, Kino (a cure for ringworm), Blossom (honey), Oil (medicine, perfume, industrial use) first produced commercially in 1852 and until 1950 Australia the largest supplier in the world
<i>Eucalyptus acmenoides</i>	yellow stringy bark, white mahogany	Railway sleepers and weatherboards
<i>Eucalyptus fibrosa</i>	broad-leaved red ironbark	Timber and blossom for honey
<i>Eucalyptus gummifera</i>	red bloodwood	House stumps, Kino, a preserving material, manna collected by colonists
<i>Eucalyptus maculata</i>	spotted gum	House construction, railway sleepers, bridge decking, dance floors, boatbuilding, fishing rods
<i>Eucalyptus tereticornis</i>	forest red gum	Oil and timber used
<i>Exocarpus cupressiformis</i>	cherry ballarat	Fruits raw or cooked, twigs provide a bitter tonic and astringent
<i>Ficus</i> species	native fig	Wood for packing cases and toys
<i>Ficus coronata</i>	creek sandpaper fig	Sandpaper substitute
<i>Ficus fraseri</i>	sandpaper fig	Sandpaper substitute
<i>Ficus macrophylla</i>	Moreton Bay fig	Latex used
<i>Flagellaria indica</i>	supplejack	Vine used in basket weaving
<i>Grevillea robusta</i>	silky oak	Tallow casks, butter kegs, milk buckets, cabinet making, joinery and panelling, windows, doors, furniture - very common
<i>Hardenbergia violacea</i>	false sarsaparilla vine	Flowers for dye when mordanted with alum
<i>Hibiscus heterophyllus</i>	hibiscus, native rosella, native sorrel, Queensland sorrel, green kurrajong	Buds cooked and made into jam - domestic and commercial
<i>Livistona australis</i>	cabbage tree palm	Unexpanded fronds immersed in boiling water and dried - used to make durable hats
<i>Lophostemon suaveolens</i>	swamp box, swamp mahogany	Timber for fences, bridges - anything with ground contact

<i>Macadamia integrifolia</i>	macadamia nut, Queensland nut	Interest began in commercial use in 1920s; mostly home use
<i>Macrozamia miquellii</i>	wild pineapple, zamia palm, zamid	Hairs for stuffing (from the bases of young leaves)
<i>Melaleuca quinquinerva</i>	coastal tea-tree, narrow leaved paperbark, paper barked tea-tree	Bark for shelter, insulation in cold stores, packing material and caulking for boats. Blossom for honey
<i>Olea paniculata</i>	native olive	Manna and lerp collected by colonists
<i>Passiflora herbertiana</i>	native passionfruit	Fruit eaten by explorers
<i>Piper novaehollandiae</i>	native pepper	Seed a pepper substitute
<i>Planchonella australis</i>	black plum, black apple, wild plum	Fruit for jam
<i>Podocarpus elatus</i>	brown pine, plum pine	Cabinet making, general indoor work, boat planking and wharf piles
<i>Portulaca oleracea</i>	pigweed	Eaten cooked or raw by explorers
<i>Rubus species</i>	native raspberry	Fruit eaten raw or cooked
<i>Smilax glyciphylla</i>	sarsaparilla vine, native sarsaparilla, sweet sarsaparilla	Leaf used as a tonic and antiscorbutic
<i>Syzygium australe</i>	scrub cherry, bush cherry	Fruit eaten and made into jam
<i>Syzygium francisii</i>	rose satin ash, giant water gum	Fruit eaten; wood for making heavy wheelbarrows for concrete work
<i>Syzygium luehmannii</i>	water gum, small leaved lillypilly, cherry satin ash	Fruit eaten
<i>Tetragonia tetragonioides</i>	New Zealand spinach, warrigal greens	Leaves used as a green vegetable by settlers and explorers

APPENDIX 4: TIMBER INDUSTRY ERAS

(after Kevin J. Frawley, 'Logging technology and forest cutting practices', in, *Australia's ever-changing forests II*, eds John Dargavel & Sue Feary, Centre For Resource and Environmental Studies, The Australian National University, Canberra, 1993.)

Timber production era	Felling	Snigging - to landing or direct to mill	Hauling to mill
1788-1849 Manual production and first sawmills	Axes, broad axes, mauls, wedges, springboards, pitsaws, crosscut saws.	Manually (flitches, logs) by convicts, bullocks, horses, gravity chutes.	Floating, rafting, coastal shipping.
1850-1945 Steam power and large sawmills	As above, but with improved axes and crosscut saws.	As above, but also jinkers, logging arches, steam winches, crawler tractors, crawler tractors with winches.	As above, but also tramways (horse, bullock), gravity fed tramways, barges, light rail (steam), motor trucks.
1946-1990 Electrification, woodchipping, pulp and paper	Mobile powered circular saw, two man chain saw, portable drag saws, lightweight chainsaws, harvesters, feller bunchers.	Crawler tractors with blades, rubber tyred skidders, skidding machines, forest tractor or forwarder.	Trucks with dual axle, improved trucks (better brakes, diesel engines, increased power), flat topped semi-trailers, chip bins.

APPENDIX 5: STAGES IN GOVERNMENT INVOLVEMENT IN FORESTRY IN QUEENSLAND

pre 1900	Lands Department controlled Forestry
1900	1 August, Forestry Branch established within the Department of Public Lands and an Inspector (L.G. Board) was appointed with two forest rangers
1905	Philip MacMahon became Inspector of Forests
1905-9	The number of timber reserves in the state doubled
1911-1918	N.S. Jolly served as Director of Forests. <ul style="list-style-type: none"> • silviculture experiments in native forests on Fraser Island • experimental plantings of hoop pine and other natives • appointed officers at Imbil, Yarraman, Benarkin, Goodnight Scrub
1918-32	E.H.F. Swain served as Director of Forests. <ul style="list-style-type: none"> • emphasised silvicultural methods • established first commercial plantations in 1921 • established a system of classifying timbers • assumed a public advocacy role in forestry matters • established offices in six regions - Gympie, Atherton, Maryborough, Brisbane, Bundaberg-Rockhampton, Dalby • three branches dealt with harvesting and marketing; administration and accounts; working plans, silviculture and surveys
1924-1932	Provisional Forestry Board (with three members) in operation, answerable directly to the Minister for Lands
1932	Forestry a sub-department of the Department of Lands
1930s	The period of plantation forestry
1932-1964	V. Grenning Director of Forests
1957	Department of Forestry replaced the Sub-Department of Forestry. Department reported to the Minister for Agriculture and Forestry
1959	<i>The Forestry Act of 1959</i> conferred the title of Conservator on the former Director
1964	A.R. Trist appointed Conservator
1967	<i>Softwood Forestry Agreement Act of 1967</i> provided Commonwealth loans for plantation establishment and maintenance
1989	Queensland Forest Service, with the Department of Primary Industries established to replace the Department of Forestry.
1992	The Primary Industries Corporation Act removed the title of Conservator of Forests from the Forestry Act. All statutory responsibility passed to the Director-General of Primary Industries
1995	The Queensland Department of Primary Industries (Forest Service) divided into <ul style="list-style-type: none"> • a commercial forestry unit (plantation and native forests) • Resource Management Business Group (RMBG) to consolidate policy making functions • Resource Management Institute to focus on ecologically sustainable use of Queensland's natural resources
1996	Department of Primary Industries changes to the Department of Primary Industries, Fisheries and Forestry. Commercial forestry incorporated into this department and Resource Management moved to the Department of Natural Resources (formerly the Department of Lands)

APPENDIX 6: STAGES IN THE DEVELOPMENT OF FORESTRY PLANTATIONS IN QUEENSLAND

(after Margaret Kowald, Historical overview of the South East Queensland biogeographic region with particular reference to forested areas, Department of Environment, Brisbane, 1996.)

1880s	Experiments on Fraser Island with nursery stock to plant in native forest - disappointing results
1900s	North Queensland experiments with nursery stock for enrichment planting in forests
1911	Experimental station on Fraser Island compared growth rates of native hoop, bunya, cypress and exotic pine species and assisted natural regeneration in eucalypt forests
1913	Experimental station at Brooloo, Mary Valley
1916	Forest station established at Imbil with a nursery and arboretum
1916	Hoop pine planted at Atherton
1917	Hoop pine experimental plantings at Brooloo in order to study natural and artificial regeneration
1919	Two hectares at Imbil planted with native hoop, bunya and cedar and other exotic species
1920/1	Swain established commercial plantations in Mary Valley (26 hectares), Atherton (12 hectares) and Fraser Island (10 hectares)
1920/1	Nursery established at Benarkin
1922	Weatherhead tube invented and used to raise seedlings in nurseries
1924	Experimental station established at Beerwah. 2,500 hectares of wallum country to be planted with American slash pine
1926	Swain set an annual target of 2,000 hectares of planting
1929	Shaded nurseries found not to be necessary for exotics (<i>P. elliottii</i> var. <i>elliottii</i>) and plants did not need to be tubed
1930s	Introduction of cold storage for hoop pine seed to extend period of viability from 12 months to 4 years
1930s	Kauri pine plantings declined because of infestation by thrips
1935	Pruning of young trees introduced.
1938	Fused needle disease (first discovered in 1934) found to be the result of phosphate deficiency
1947	Caribbean pine introduced from Honduras and trial plantings began at Beerwah and Tuan Creek near Maryborough
1948	C.S.I.R.O. began experimental work near Beerwah on converting wallum to pasture to allow for grazing to coincide with forestry
1950s	Tuan and Toolara State Forests planted with slash pine
1955	Australian Paper Manufacturers Forests Pty Ltd established private plantations of slash pine near their Petrie mill. Further plantations established on Bribie Island
1976	Methods developed for the improvements in the commercial planting of Caribbean pine, which produce 20-40% greater volume than slash pine
1980s	Creeks, wildlife corridors and other special areas to be excluded from clearing

APPENDIX 7: A HISTORY OF SILVICULTURAL OPERATIONS IN FORESTRY, QUEENSLAND

(after Forest Management in Queensland, September, Government Printer, Queensland, 1984)

Native forest silviculture

- 1876-1898 Experiments at Fraser Island with kauri pine. Failed due to “poor soil and neglect”
- 1902-1916 Red cedar raised in nurseries in north Queensland - affected by red cedar twig borer
- 1913 Improvement felling (thinning) of hoop pine on Fraser Island. At Yandina, hardwood forests logged of best timber, non-commercial species ringbarked and debris burnt, area left to regenerate with hand sowing if needed
- 1923 Regeneration technique involved ringbarking of “useless forest veterans of undesirable species”, logging of marketable timber (no girth restriction), clearing and burning of undergrowth to prepare seed bed. Seedlings at 5.5 metre spacing
- 1930s Eucalypt and cypress pine forests treated - logged, destruction of useless stems and thinning
- 1937 Tree marking rules for logging hardwood forests introduced, allowing for removal of marginal trees
- 1980s Concentration on native forests and cypress pine forests - selective logging (harvesting of mature trees, thinning, retention of selected seed trees etc), trees marked for removal. Unrestricted logging of native hoop pine stands because of the difficulty of regeneration procedures.

Softwood plantation silviculture

- 1911 Experimental plantation (native pines) on Fraser Island
- 1913 Experimental plantation (native pines) at Brooloo
- 1914 Experiments with exotic pines on Fraser Island
- 1916 Permanent forest station at Imbil; plantings at Atherton
- 1917 Exotic trials at Imbil - most (especially *Pinus radiata*) found unsuitable for summer rainfall conditions)
- 1920/1 26 hectares planted with native pines in Mary Valley, 10 hectares on Fraser Island and 12 hectares at Atherton - mostly hoop and bunya pine. Nursery at Benarkin
- 1922 Development of Weatherhead tube for planting of seedlings
- 1924 Exotics planted at experimental station established at Beerwah. Success with slash pine (*Pinus elliottii*) and loblolly pine (*Pinus taeda*)
- 1930s Beerwah and Stanthorpe the main exotic planting areas
- 1934 Discovery of fused needle disease in exotic plantations at Beerwah - found to be a phosphorus deficiency
- 1935 Beerwah and Stanthorpe account for one-third of total State planting of softwood
- 1935 Pruning of native pines began to provide knot-free timber and increase production of clearwood
- 1960s/70s Kauri pine plantations hit by coccid scale and clearfelling and replanting with hoop pine occurred

APPENDIX 8: FIRE MANAGEMENT (FORESTRY)

Policy of fire exclusion 1900-1950s

A number of serious fires occurred during the 1920s (1922, 1923 and 1926). The 1926 fires destroyed parts of the new plantations at Benarkin and Imbil, and Yarraman was also affected. Most of the fires originated from outside State Forests, and therefore it is not surprising that the Department was concerned to exclude fire, by the use of fire breaks, patrols and other precautionary measures. As a result of the 1926 drought and fires, and the failure of such measures, a review was ordered. Its conclusions noted that fires began, generally, on land outside the State Forest reserve, but noted that rural fires were covered only by flimsy clauses, promulgated in 1865 and incorporated in the *Careless Use of Fires* legislation. As a consequence of the review, the *Rural Fires Act of 1927* was passed. The Act was intended to enable safeguards to be put in place against bush fires and allowed for penalties for the misuse of fire.⁴⁰⁰

In 1937 there were 241 outbreaks of fire in the Maryborough and North Coast regions, and six lookout stations were established during the year.⁴⁰¹ Eight new fire towers were built in 1939 and 11 fire-fighting trucks were bought.⁴⁰² By 1941, over 1,800 miles (2,896 kilometers) of fire breaks were being maintained annually, with a further 200 miles (321 kilometers) built each year. There were 25.3 miles (40.7 kilometers) of plantation fencing, four fire towers were under construction (two of which were over 70 ft or 21.3 metres tall) and 85 ½ miles (137.5 kilometers) of phone lines had been installed.⁴⁰³ *The Rural Fires Act of 1946* was gazetted during 1948/9 and a Board was established to administer it.⁴⁰⁴

Experimental work 1950s and 1960s

Maintenance work continued during the 1950s, and increased use of vehicles and two-way radios and improved road networks were important. The costs of such preventive measures were, however, becoming exorbitant. Two experiments in prescribed burning were undertaken in the Maryborough district and in Gundiah R 958.⁴⁰⁵ In the following year, a conference of all District Officers was held to discuss fire management, and for the first time a full-time Fire Protection Officer was appointed.⁴⁰⁶ There were extensive fires during 1957/8 and in the following year the Department was reporting that in addition to firebreaks and fire roads:

⁴⁰⁰ Report of the Provisional Forestry Board for the year ended 30th June, 1927, p.5 and Taylor, *Growing up: forestry in Queensland*, p. 144.

⁴⁰¹ Report of the Director of Forests for the year ending 30th June, 1937, p. 33.

⁴⁰² Report of the Director of Forests for the year ending 30th June, 1939, p. 3.

⁴⁰³ Report of the Director of Forests for the year ending 30th June, 1941, p. 3.

⁴⁰⁴ Report of the Director of Forests for the year 1948-1949, p. 9.

⁴⁰⁵ Report of the Director of Forests for the year 1956-1957, p. 14.

⁴⁰⁶ Annual Report of the Department of Forestry for the year 1957-1958, p. 19.

prescribed burns under specified conditions on selected hardwood forests has been implemented in a number of Districts and the results of this hazard reduction measure are being examined closely.⁴⁰⁷

Fire prevention and prescribed burning 1970s-1990s

Valuable plantations were the centrepiece of forestry operations, and costly infrastructure was needed to protect them from fire. In particular hoop pine, which is extremely fire sensitive, had to be protected by total fire exclusion. In 1963/4, construction of the Barakula fire tower was begun, and fire-spotting aircraft were employed for the first time. Drought the following year led to a number of bad fires in the Dalby District, and more fire towers were under construction (Sunday Creek, Murgon District; Brooyar, Gympie District; another near Inglewood, Warwick District). Improved communication systems also played a part in fire prevention.⁴⁰⁸

The first of the three-legged fire towers was constructed in 1967/8 at Mt Binga. Its construction costs were greatly below that for the previous four-legged structures, but it also proved to be a better design. These three-legged towers were designed by Arthur Leis, who built twelve three-legged, eight four-legged and three steel towers between 1957 and 1991.⁴⁰⁹

The three-legged towers...were exceptionally sturdy, and because of their three legs they did not suffer from the rotational movement that four-legged towers had.⁴¹⁰

The second three-legged tower was built at Gallangowan. Further fire towers were opened at Pechey (1971/2),⁴¹¹ Jimna (1976/7)⁴¹² and Benarkin.⁴¹³ Secondary towers consisted of simple steel tankstands with fenced platforms and without cabins; “on days of bad visibility they will help fill in critical gaps in the detection system”.⁴¹⁴ In all, forty-nine fire towers remain throughout Queensland.

Prescribed burning in native hardwood forests became more widespread during the 1960s, and in the early 1970s experimental burning in slash pine plantations was trialed. The first trials of aerial ignition for prescribed burning occurred in 1970/1 in the Kullogum/Cordalba area.⁴¹⁵ This continued during the 1970s in an attempt to lower fuel concentrations in forests. Detailed studies of fire ecology were a part of this work.⁴¹⁶ In 1975/6 the burning of buffer

⁴⁰⁷ Annual Report of the Department of Forestry for the year 1958-1959, p. 27.

⁴⁰⁸ Annual Report of the Department of Forestry for the year 1964-1965, p. 7.

⁴⁰⁹ Kieran Lewis, ‘Silent sentinels’, *Between the Leaves*, Summer, 1997, p. 3.

⁴¹⁰ Lewis, ‘Silent sentinels’, p. 3.

⁴¹¹ Annual Report of the Department of Forestry for the year 1971-1972, p. 6 - this is the year construction of the tower was begun.

⁴¹² Annual Report of the Department of Forestry for the year 1976-1977, p. 9.

⁴¹³ Annual Report of the Queensland Department of Forestry for the year 1979-1980, p. 20.

⁴¹⁴ Annual Report of the Department of Forestry for the year 1967-1968, p. 7.

⁴¹⁵ Annual Report of the Department of Forestry for the year 1970-1971, p. 5.

⁴¹⁶ Annual Report of the Department of Forestry for the year 1974-1975, p. 4.

strips was introduced into cypress pine forests.⁴¹⁷ By that year the fire management policy of the Department was described as:

a programme of protective (hazard reduction) burning ...in plantations and hardwood forests [and]...prescribed burning to a pattern within exotic plantations⁴¹⁸

When the worst fire season in nine years struck in 1977/8, the fact that there were fewer outbreaks of fire was attributed to the policy of prescribed burning undertaken during that time.⁴¹⁹

Fire, Salvage and recovery

Two drastic fires occurred in forestry plantations during the 1990s. The first, in 1991, was in Toolara State Forest. Nearly a thousand hectares of plantation were lost, and the costs of fighting the fire exceeded \$67,000.⁴²⁰

In 1994, the worst wildfire season on record ravaged Beerburrum State Forest plantations. Around 1,200 hectares of exotic pine was burnt in September and a further 3,500 hectares in November. Salvaging logs became a major operation. A wet storage facility was built off Donnybrook Road and complicated water pumping systems were set in place. Run off was caught, and water from surrounding saltwater creeks was recycled. No wet storage facility in Australia had ever before used saltwater. Timber was harvested as quickly as possible, although 30% of the plantation was lost.⁴²¹

Evidence of fire management procedures

Fire breaks

Fire roads

Fire towers - forty-nine towers remain throughout Queensland

Communication networks - phone, VHF radio etc

Salvage log dump - Beerburrum

⁴¹⁷ Taylor, *Growing up: forestry in Queensland*, p. 144.

⁴¹⁸ Annual Report of the Department of Forestry for the year 1975-1976, p. 12.

⁴¹⁹ Annual Report of the Department of Forestry for the year 1976-1977, p. 5.

⁴²⁰ Taylor, *Growing up: forestry in Queensland*, pp.153-6.

⁴²¹ DPI Forest Service, 94-95 Yearbook, p. 20.

APPENDIX 9: FORESTRY LIVING CONDITIONS

(SUMMARY from ANNUAL REPORTS OF THE DEPARTMENT OF FORESTRY)

From 1900, the reports were written by the Director of Forests. Between 1926 and 1930 the report was written by the Provisional Forestry Board. From 1960, the reports were written by the Conservator of Forests. Since 1989, the reports have been written by the Director of the Queensland Forest Service (DPI).

YEAR	LIVING CONDITIONS/ ACCOMMODATION
1914	2 survey camps and 1 forestry camp engaged in feature surveys and inspecting timber
1916	1 survey camp and 1 forestry camp House built for W. Petrie on Fraser Island and the horse paddock there was fenced
1920/1	20 houses and huts erected - 'the capital expenditure in this direction was conserved by letting on a rental basis'
1924	Amendment to the Forest Employees' Award (in effect 1st October) abolished the probationer grade, removed the reference to contract timber-getters and included a preference clause for unionists. Forestry employees engaged in road building were to be paid according to Local Authorities and Main Roads Board Award
1926	Teamsters' Unions formed, (in favour of bullockies) - "on the grounds that motor trucks were not made in the Commonwealth and bullock wagons were" (p.18) - but the Board rejected the move, arguing that they were contractors and not employees
1936	5 survey camps
1939	In 1938, 632 men were transferred from the cities and settled in work in the forests and National Parks. An additional 200 men were allotted to forest work and 100 youths placed in special youth camps
1941	Construction of 6 tool sheds, 14 fire huts, 2 garages, 1 office, 4 wells, 2 bunkhuts, 8 field sheds
1948/9	19 barracks were built in 1947/8 and 12 more were under construction. 446 immigrants employed in forestry work. There were 11 survey camps in operation
1950/1	"As during the last few years, considerable attention was paid to provision of improved accommodation for the field workers" (p. 8)- over 700 employees now accommodated
1951/2	13 survey camps operating
1952/3	Labour turnover has dropped from 140% two years ago to 58% It had still not been possible to embark on a housing scheme for married men with families, but "by the end of the year nearly all other employees were housed in the 194 barracks which have been completed" - building programme tapering off
1954/5	9 barracks built but "unfortunately, it was not possible to commence the provision of a higher standard of housing for married men living on the job with their families"
1956/7	The year saw a reduction in funds and therefore a reduction in hardwood treatment. This, in combination with an increasing use of 245T (trials of aerial spraying) led to fewer employees living in the forest 15 married quarters built
1957/8	"a start was made on improvement of accommodation for married men living on the job with their families. It is to be regretted that, because of the attractiveness of camping allowance, the majority of married men prefer to live under camping conditions rather

	<p>than forfeit the camping allowance in return for modern cottages to house their families.” (p. 19)</p> <p>14 married quarters built</p>
1959/60	15 permanent and 18 portable married quarters built in addition to 3 cottages
1962/3	Forest Employees’ Award granted three weeks annual leave
1965/6	Photo (p.19) of the forestry residence at Beerburum under construction (use of slash pine and scribbly gum)
1969/70	<p>“Treatment work in native forests involving hormone injection and some cut stump hormone spray treatment can be done at any time of the year....Where natural stands suitable for treatment are close to plantation areas, the trend now is to integrate the work on natural stands with plantation operations under group management to provide continuous employment for more of the staff. This...will allow the department to plan for the establishment of forestry control centres in towns. This will assist with the retention of better staff due to the more attractive living conditions in towns....During the year, the headquarters for a large number of reserves around Pomona was established in Pomona township with the construction of a new office, building, store rooms and garages. Staff will be transported to work from Pomona each day. Similar action is to be taken in regard to other main forestry areas and should assist in building up the community spirit in the small towns affected.” (p.8)</p>
1973/4	<p>“Labour difficulties were experienced throughout the year particularly in the more remote Hoop Pine centres.”</p> <p>Turnover of labour was high</p> <p>“Field employees receive a disability allowance of \$4.50 to compensate for conditions under which much of the work has to be performed but it is becoming increasingly difficult to enlist the younger generation to the serve particularly in the remote Hoop Pine centres. This, together with the increased labour costs has made it necessary to extend the use of machines wherever possible.” (p. 7)</p>
1975/6	<p>Expanding plantation road construction underway</p> <p>Discussions between Department of the Public Service Board, Forestry and AWU - to update award “particularly in regard to accommodation and work classification”</p>
1976/7	<p>New provisions in the industrial award have led to a review of worker accommodation. “More than 100 barracks are being improved. Facilities being provided include refrigerators, gas or electric stoves, hot water systems, septic toilets, floor coverings and insect screens.” (p. 11)</p>
1977/8	<p>Continuing upgrading of accommodation as a result of a variation to the Forestry Employees’ Award - State Government: “worker accommodations facilities throughout the State have been or are being upgraded to comply with the amended Award conditions”; “this Award was also varied by consent of the parties to provide for improved remuneration and conditions for employees engaged on week-end fire detention and fire-overtime duty.”</p>
1978/9	<p>“Due to the need to improve the conditions under which men are transported to and from work, particularly on dusty roads, a demountable cab was designed to fit a standard truck body.” (p. 15)</p> <p>Preparations for a major new workshop at Gympie for repair of heavy equipment and motor vehicles.</p>
1979/80	<p>Single men’s quarters to accommodate six men built at Imbil and Stirling’s Crossing out-camp closed.</p> <p>Electricity was connected to Jimna township and the Forest Station, enabling the</p>

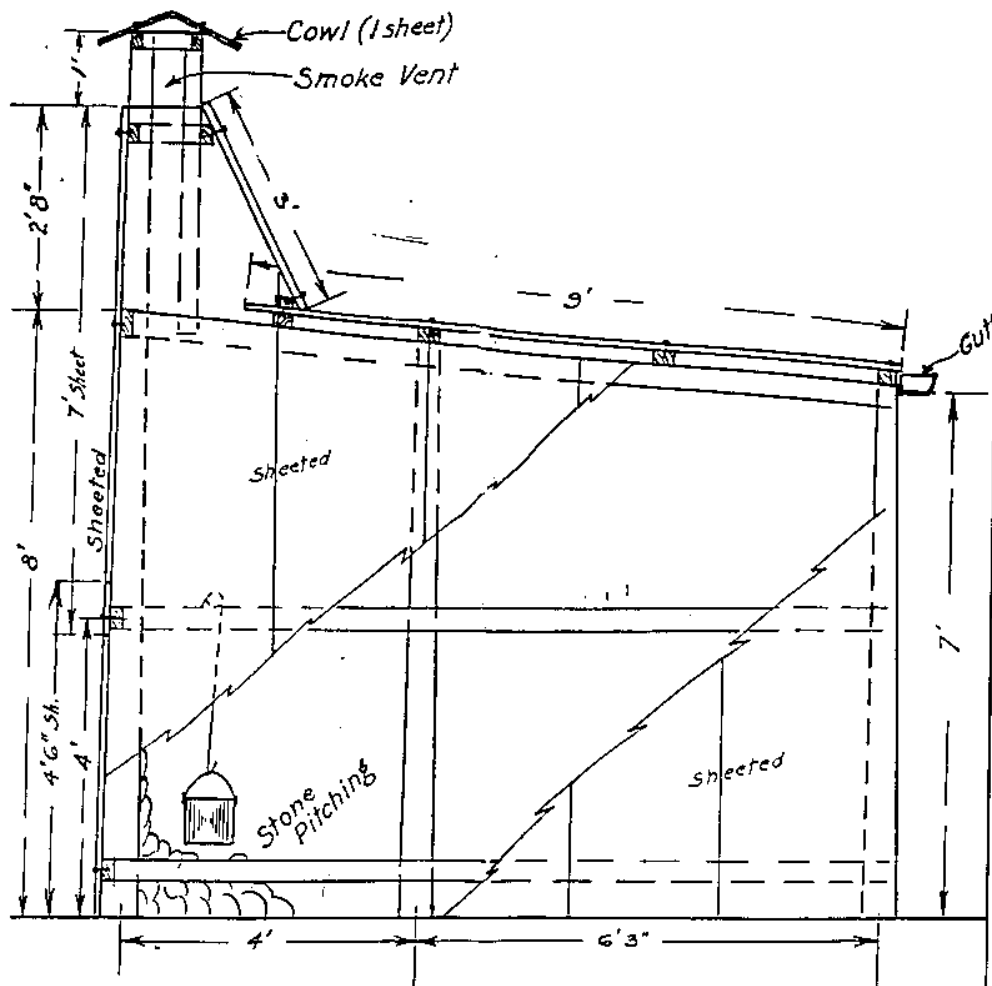
	Department to end electricity generating there
1980/1	New store and workshop buildings built at Tuan and Imbil Forest Stations
1982/3	Imbil Forest Station was upgraded as the first in a series of planned upgradings
1983/4	Woodworks Museum opened at Gympie Forestry Centre New office opened at Jimna
1986/7	Forest Office at Eurong, Fraser Island, was established including a residence, barracks, workshop and temporary office

Key Points

- The highpoint for the construction of forestry employee accommodation was in the late 1940s and early 1950s. This coincides with a period of labour intensive work both in the establishment and maintenance of hoop pine and exotic pine plantations and in the natural regeneration treatment of native hardwood forests. During this period, large numbers of employees were living in forested areas throughout the South East Queensland bioregion.
- A decline in number of employees living in forestry accommodation occurs during the 1960s. A number of factors were involved in this change: improved road networks and transportation allowed workers to travel to the forests from nearby settlements and increasing use of pesticides and hormone treatment decreased the labour intensive nature of silvicultural practices in native hardwood forests. Other technical advances had an impact on the numbers of workers operating and living in the forests: the first use of machines for scrub felling occurred in 1959/60 and aerial surveying for the assessment of timber reserves on leasehold land began in 1967/8.
- During the 1970s demands for improvements in living conditions led to labour unrest and high turnover rates. Award provisions changed in 1977/8. Upgrading of barracks meant that instead of an allowance being paid to workers in forestry barracks, they could in fact be charged a rental. Both employees and employers saw it in their interest to move from residence in the forest to a system whereby workers commuted to work from nearby settlements.
- One of the important features of forestry accommodation was their impermanence. 'Portable' married quarters were built in as great a number as were 'permanent' quarters. Buildings were commonly moved from area to area as required.
- Finally, the construction of forestry accommodation adhered to standard designs and regulations for the use of buildings were listed as Departmental circulars. Camp rules were outlined in military style. (See Figures 3, 4 and 5)

**FIGURE 3: PLAN OF
SIX MAN
BARRACKS AND
GALLEY**

**(Forestry
Department
amended
standard 6 man
barracks and
galley, 1949)**



SIDE ELEVATION

FORESTRY DEPARTMENT
AMENDED

STANDARD

6 MAN BARRACKS GALLEY

Scale: 1/2" = 1'

FIGURE 4:
BARRACKS,
GALLEY AND
BATHROOM
CONSTRUCTION

(Circular No 1105
Sub-department
of Forestry,
Brisbane, 16
February 1950
Reference
217/10/5)

CIRCULAR NO. 1105.

FOREST DEPT 22 FEB 1950 - YASER Ref. -	SUB-DEPARTMENT OF FORESTRY, BRISBANE. 16th February, 1950. 47/3/3 Gen. 217/4. 217/5.
--	---

BARRACKS, GALLEY AND BATHROOM CONSTRUCTION.

In order to bring about greater uniformity in the layout of barracks, camps, galleys, bathrooms, etc., it is desired that careful consideration be given to the general layout of buildings, keeping in mind convenience and comfort of occupants generally.

The following is submitted as a guide for District Officers to put into operation wherever practicable.

1. Barracks to be built in groups not closer than 30 feet apart.
2. Bathrooms to be constructed in convenient positions as close as possible to barracks.
3. Rear door to be put in rear of dining room. (This was not provided for in original plan.)
4. Standard galley to be erected adjacent to rear door of dining room, with a distance of not more than nine (9) feet between wall of barracks and entrance into galley.
5. Covered way, consisting of lean to structure, covered with 10 ft. roof from back door to roof of galley to be provided when iron is available.
6. Wash tubs to be erected under covering preferably close to galley where general layout permits.
7. Lavatories with urinals to be erected in convenient positions approximately 25 yards from buildings. These should be erected in bays of 2-3 or 4, as desired for convenience.
8. Wherever possible, gravel should be placed in front of doors of barracks and galleys for tidiness in wet weather.

For the information of officers, the matter of camp and galley formation has been taken up with the State Insurance Office who advise that distances between main barrack buildings should not be less than 30 feet. Galleys are considered safe at 9 feet from buildings, provided they are of standard design with stone, brick or clay fireplaces and that walls are of iron.

Married men's camps should not be spaced closer than 40 feet. Stove recesses enclosed with galvanised iron and attached to tents are acceptable, but on no consideration are open fires to be allowed in such recesses or within 20 feet of tents.

**FIGURE 5: CAMP
RULES**

(Forestry
Department File
217 General,
Reference
WWR/VBC
Yarraman 3 July
1959)

CAMP RULES

So that a proper standard of camp hygiene, with the benefits arising from such may be maintained, it is essential that all personnel in camps observe the following camp rules:-

1. Tidiness.-- The land around each camp unit, as indicated by the Overseer, is to be kept in a tidy condition by the occupants in their own time.
2. Sanitation.-- Use only the conveniences provided, and use them decently and cleanly; use deodorants provided; close closet lids after use; report to the Overseer any warped lids or other defects making closets not fly proof; report to the Overseer any nuisance you observe.
3. Water Supply.-- Keep receptacles scrupulously clean and free from pollution. Also have a thought for others - do not waste water. For use on garden plots, save bath and wash-hand water.
4. Camp Refuse.-- Garbage of all kinds must be placed in garbage tins and kept closely covered with tight lids - where earth pits are provided for garbage, the garbage deposited must be covered with a layer of earth. Inflammable garbage must be burnt at least once a week. Where garbage bins are in use, they should be emptied at least once per week into pits and treated as per above. The bins should also be washed, scrubbed clean, and sunned as soon as emptied.

Dish water should be dispersed and not thrown continually in one place.

5. Tents and Huts.-- Occupants are to sweep floors daily and scrub them out once per week in their own time. Tables are to be scrubbed at least once per week also in the occupants' own time. Brushes and brooms will be provided for this purpose on request.

Tent ropes are to be kept properly adjusted, flies should always be rigged so as to give best protection to tents, and neither stretchers nor furniture, etc., should press against tent or fly because of resultant injury to the fabric.

6. Laundry Copper to be emptied and cleaned immediately after use.
7. Shower Room.-- If suffering from tinea do not use showers.

APPENDIX 10: NOTES ON TIMBER AND BUILDING PRACTICES IN QUEENSLAND

The following is based on:

Catherine Hawthorne, Queensland timbers. A report on the specific types of Queensland timbers and a history of their influence on the architecture of Queensland,

B.Architecture, The University of Queensland, 1984;

Peter Taylor, *Growing up : forestry in Queensland*. Allen & Unwin, Brisbane, 1994; and

Don Watson, 'Clearing the scrubs of South-East Queensland', in *Australia's ever changing forests*. eds K.J. Frawley & N. Semple, Department of Geography and Oceanography, Defence Force Academy, Canberra, 1988, pp. 365-392.

Period	Building practices
1830s-1850s	Vernacular buildings consisted of pitsawn timber or hardwood slabs, roofed with wooden shingles
1856	Galvanised iron introduced to Brisbane
1859	No building regulations on separation. After fires, parts of Brisbane designated 'first class', requiring buildings to be constructed of non-combustible material. The courts held that corrugated iron sheeting of timber framing complied, so the effects of this designation were minimal
1860s	Stud-framed timber buildings common, as in southern states
1865	George Suter designed buildings with external framing and internal sheeting only. This recalled European half-timbering and was reinforced where the hardwood framing was dark in colour and the softwood cladding light. He designed buildings for the Queensland Board of Education and the Church of England and his influence is important.
1870s	Stump base introduced. Stumps were cut from various hardwoods (ironbark, blue gum, turpentine, tallow-wood) and barked. As a measure against termites they were treated with tar or creosote or a mixture of oil and lampblack. Pine was susceptible to termites and pine flooring needed to be kept away from the ground.
1885	Undue Subdivision of Land Prevention Act (1885) - speculators moved to building small timber dwellings on 16 perch allotments
1900	Dressed, rebated and weathered softwood cladding was replaced by rough-sawn, feather-edged hardwood boards as softwood supplies became scarce and more expensive.
1902	Local Authorities Act gave local governments the power to regulate building.
1900s	Yellow-wood popular for furnishings (it is oily and easy to turn) - it is featured in the wall panels and furniture of the Brisbane Parlaiment House. Crow's Ash popular for dancefloors because of its slippery, oily nature.
1894-1918	Architect Robin Dods used Queensland timbers exclusively
WW1	The first plywood mills operated, using hoop and bunya.
post WW1	Tongue and groove pine linings of houses gave way to plywood, fibreboard, asbestos cement and plaster as timber shortages and increased prices affected building.
1920	Forest Products Showroom opened in Brisbane

1921	Forest Products Bureau opened. Research into alternative timbers. Walnut, not milled because of its abrasive quality, was found to be readily made into plywood.
1920s,1930s	Plywood and veneer popular in internal lining and furniture. Various timbers used for plywood including hoop and satinay (this was the strongest plywood ever manufactured in Queensland). Logs and stumps exported to America and Europe for plywood and veneer manufacture. Veneers of rainforest timbers (walnut, maple, blackbean) popular and widely used in private and public buildings. Queensland maple veneers used in numerous buildings in London (e.g. National Society of Operative Printers and Assistants). Plywood used as internal door panels and veneers used to cover cheaper woods
By 1930	Over 80% of Australia's plywoods and veneers being produced in Queensland.
1927	Marketing drive by Forestry led to an American market for Queensland maple. Even stumps were exported for production of plywoods and veneers.
pre-war	Silky Oak stained to provide a cheap alternative to the darker, but scarce and expensive cedar and maple.
1945	Fibro-cement an alternative to timber
post-war	External hardwood cladding being replaced by sheet materials or brickwork veneer.
1960s	Expanding use of cypress pine internally. Cypress is less resistant to termites and less suitable for external use.
1970s	First imports of Western Red Cedar for use as a cheap timber cladding.
19702,80s	Developments in structural plywoods and laminates.
1971	First particle board factory opened in Brisbane
1975	Particle board factory opened in Gympie, when the Toolara/Tuan plantations came into production
1981	CSR bought the Gympie particle board factory and it is now the leading manufacturer of particle board in Australia. New developments involve the production of medium density particle board from plantations thinnings. A log is converted to pulp, which is then 'fluffed up' and coated with glue and compressed. The material is more expensive but can be edge moulded and has a greater range of uses.

APPENDIX 11: ANNUAL REPORTS OF THE DEPARTMENT OF FORESTRY

SUMMARY OF STATISTICS AND SIGNIFICANT EVENTS

From 1900, the reports were written by the Director of Forests. Between 1926 and 1930 the report was written by the Provisional Forestry Board. From 1960, the reports were written by the Conservator of Forests. From 1989, the reports have been written by the Director of the Queensland Forest Service (DPI).

DATE & DIRECTOR	IMPORTANT EVENTS AND STATISTICS
1907 (MacMahon)	<ul style="list-style-type: none"> • 4 districts
1909 (MacMahon)	<ul style="list-style-type: none"> • Declines in revenue in Atherton, Bundaberg, Ingham, but increases at Gympie, Nanango and Brisbane
1911 (Jolly)	<ul style="list-style-type: none"> • 9,900 acres (4006 hectares) declared state forest at Kenilworth • “Afforestation...is the branch of the work which appeals very strongly to the popular mind in Australia...it must not be allowed to overshadow the more important question of the conservative treatment of our natural forests.”
1913 (Jolly)	<ul style="list-style-type: none"> • 10,000 acres (4046 hectares) gazetted in Bundaberg area and 2,790 acres (1,129 hectares) in Brisbane district • 2 survey camps and one forestry camp • Forest inspectors at Brisbane, Ipswich, Gympie, Nanango • Ranger and two cadets involved in improvement felling on Fraser Island - nursery • Need for experimental station at Brooloo
1914 (Jolly)	<ul style="list-style-type: none"> • Opening of the rail line to Nanango, Cooyar and Yarraman increases the value of timber in the district • Tops sold along Yarraman line
1915 (Jolly)	<ul style="list-style-type: none"> • 70% of total timber revenue from districts of Brisbane, Ipswich, Gympie and Nanango • Most hardwood logs from private lands • Fraser Island - ranger's cottage and permanent station begun
1917 (Jolly)	<ul style="list-style-type: none"> • Residential officers appointed at Brooloo, Yandina, Bunya, Benarkin, Goodnight Scrub • Problems with cedar experimental plot at Brooloo • Boat bought for Fraser Island
1918 (Swain)	<ul style="list-style-type: none"> • Hoop pine seedlings transplanted from the scrub to nursery beds at Imbil - 70% success rate
1920/1 (Swain)	<ul style="list-style-type: none"> • Four sawmills acquired • 120 acres (48.5 hectares) of plantations established • 20 houses and huts built for forest staff • 29 new roads built - 40.5 miles • “The Brooloo State Forest practically supports two townships, whilst it contributes to the prosperity of Gympie itself.” (p.6)
1922 (Swain)	<ul style="list-style-type: none"> • Drought and fires • Weatherhead planting tube
1923 (Swain)	<ul style="list-style-type: none"> • Taungya system on wallum land

1926 (Swain)	<ul style="list-style-type: none"> • Logging tramline and wharf on Fraser Island bought • Yarraman band sawmill and timberyard purchased • Arboreta at Imbil, Benarkin • Maize grown before hoop pine planted - at Benarkin, Nanango, Bunya • Brooloo SF - grass paddock for bullocks • Moore and Yarraman “Utterly dependent upon timber” (p.16) • Imbil, Yarraman and Benarkin - Forestry controls logging, milling and silviculture
1939 (Grenning)	<ul style="list-style-type: none"> • 632 men transferred from the cities and settled in work in forest and national park areas of the State - a further 300 added later
1941 (Grenning)	<ul style="list-style-type: none"> • 142 school plots in existence • Building included 6 toolsheds, 2 garages, 1 office, 4 wells, 2 bunk-huts and 8 fires sheds
1948 (Grenning)	<ul style="list-style-type: none"> • 19 barracks built and 12 under construction • 228 school plots • 446 displaced people employed in reforestation • Timber shortages lead to unprecedented number of requests (over 1,200) concerning the use of timber species not previously employed in building
1950/1 (Grenning)	<ul style="list-style-type: none"> • “The time is approaching when consideration must be given to regulating the management of private forests in the public interest”
1951/2 (Grenning)	<ul style="list-style-type: none"> • 28 nurseries • 1,200 men accommodated in barracks • 4 cottages and 47 barracks completed in the year and 37 barracks under construction • Amamoor described as “the nerve centre of the forest”
1952/3 (Grenning)	<ul style="list-style-type: none"> • 29 nurseries, including a new one at Rocklea, Brisbane • Prescribed burning of coastal hardwoods
1953/4 (Grenning)	<ul style="list-style-type: none"> • 88% of logs milled in the state come from 12% of the state (i.e. Maryborough, Moreton and the Darling Downs Divisions) • Post-war boom building boom leads to increased hardwood cut
1954/5 (Grenning)	<ul style="list-style-type: none"> • Bulk store with nursery and workshop at Department’s Depot at Salisbury, Brisbane
1955/6 (Grenning)	<ul style="list-style-type: none"> • The first year when planting exceeded 6,000 acres (2428 hectares)
1956/7 (Grenning)	<ul style="list-style-type: none"> • Mill logs in the past 5 years - 48% private land; 33% State Forests and 19% from other Crown Lands • Cypress pine cut for the past 5 years - 50% private land; 24% State Forests; 26% from other Crown Lands
1957/8 (Grenning)	<ul style="list-style-type: none"> • 11 silvicultural staff now employed • aircraft to distribute herbicide 245T • 14 married quarters and 15 prefabricated huts built, and a new office and cottage at Beerburrum • Roads into virgin forest no longer to be built by Forestry, but by Department of Main Roads • Over the past 10 years, Forestry constructed 780 miles of roads
1958/9 (Grenning)	<ul style="list-style-type: none"> • 247 1/4 miles of walking tracks constructed in National Parks
1959/60 (Trist -	<ul style="list-style-type: none"> • 13 University trained staff employed in North Queensland (4), Mary

Acting)	Valley (1), Beerwah (4), Brisbane Valley (1), Dalby (1) and Head Office, Brisbane (15)
1960/1 (Grenning)	<ul style="list-style-type: none"> • Around 490,000 visitors went to National Parks and Scenic areas in south Queensland during the year • Sawmill numbers included - 665 general, 14 case, 54 sleeper, 69 resaw and dressing
1961/2 (Grenning)	<ul style="list-style-type: none"> • 9,000 miles of roads and firebreaks to maintain regularly • 11 survey camps involved in assessment, inventory and freeholding surveys • 375 salaried staff employed
1962/3 (Grenning)	<ul style="list-style-type: none"> • 80% of the year's cut was hoop pine
1963/4 (Trist)	<ul style="list-style-type: none"> • 1 million acres (404,694 hectares) of National Parks reached • Cut of plantation hoop pine exceeded native hoop pine • Barakula fire tower • Tree breeding officer appointed at Imbil • 4,567 Christmas trees sold
1964/5 (Trist)	<ul style="list-style-type: none"> • First self-guiding track opened at Maijala National Park, Mt Glorious • Fire tower under construction at Barkula and another at Sunday Creek and Brooyar
1965/6 (Trist)	<ul style="list-style-type: none"> • Diploma in Wood Technology course began at Eagle Farm Technical College with 30 students • 4,841 acres cleared for plantations • 24 nurseries in operation • National Parks to be selected in order to maximise biodiversity representation
1966/7 (Trist)	<ul style="list-style-type: none"> • Commonwealth Act allowing for subsidisation of softwood planting by the states • 1,332 men engaged in reforestation work • 1,248,000 acres (505,058 hectares) of Simpson Desert declared National Park • Aerial reconnaissance begun as a means of increasing the rate of assessment of timber resources of leasehold land being transferred to freehold - 4,000,000 acres (1,618,777 hectares) added to the backlog of such work during the year
1967/8 (Trist)	<ul style="list-style-type: none"> • First three-legged fire tower built • Fauna survey of Lamington National Park complete • Plantation timber cut double that for native hoop and bunya pine • First interstate conference on National Parks held at Mt Kosciuszko
1968/9 (Trist)	<ul style="list-style-type: none"> • Amalgamation of sawmills allowed under certain conditions and within defined zones • 12,002 acres (4,857 hectares) planted, mostly in the south east at Tuan-Toolara and Beerwah-Beerburum
1969/70 (Haley)	<ul style="list-style-type: none"> • Particle board plants to be built at Gympie and Brisbane to utilise pulpwood from Tuan -Toolara softwood plantations • 16 mills closed as part of amalgamation process • One officer now involved almost exclusively with habitat protection • New Mt Tibrogargan nursery to replace Beerwah and Beerburum

	nurseries
1970/71 (Haley)	<ul style="list-style-type: none"> • Purchase of 28 acres (11 hectares) north of Gympie for a training, research and administration centre • 60 inch bandsaw installed at experimental sawmill at Rocklea
1971/72 (Haley)	<ul style="list-style-type: none"> • Woodland Particle board factory opened at Sunshine - it will use waste from mills • 120 mills have amalgamated • 15,650 acres (6,333 hectares) of softwood plantings - partly using funds for the unemployed • Northern section of Fraser Island declared a National Park • Idea of multiple use of State Forests
1972/73 (Haley)	<ul style="list-style-type: none"> • Opening of Bunyaville State Forest Recreation Area • 16,878 acres (6,863 hectares) of planting to bring the area of plantations to 205,556 acres (83,187 hectares) • Reductions in softwood planting as a result of a new Softwood Agreements Act
1973/74 (Haley)	<ul style="list-style-type: none"> • Funds made available to employ Aborigines in treatment work on State Forests at Atherton, Maryborough and Rockhampton • New softwood mills to utilise plantation timbers built at Passchendaele, Melawondi, Maryborough, Builyan and another particle board factory at Monkland (Gympie) • New offices built at Toolara and Yarraman
1974/75 (Bryan)	<ul style="list-style-type: none"> • Independent National Parks and Wildlife Service established
1975/76 (Bryan)	<ul style="list-style-type: none"> • A new Divisional structure for Head Office approved • 17 nurseries in operation and over 8 million plants raised • 79 kms of new logging roads constructed • Prescribed burning within exotic pine plantations well established
1976/7 (Bryan)	<ul style="list-style-type: none"> • Aerial prescribed burning in native forests - helicopters trialled • Staff included 631 salaried and 1,334 wages staff
1977/8 (Bryan)	<ul style="list-style-type: none"> • 6,620 hectares of conifer planting - the second highest ever • Gympie complex completed • Policy adopted of salvaging epiphytic plants (for sale to nurseries) when an area is cleared for plantations
1978/9 (Bryan)	<ul style="list-style-type: none"> • New premises opened in Brisbane at Mineral House • Conifer planting at Beerburrum to be phased down because of a shortage of land • New plantings at Wongi State Forests north of Maryborough
1979/80 (Bryan)	<ul style="list-style-type: none"> • Objectives outlined for the first time • Continuing decline in productivity of private forests is of concern • Mill allocations in some areas of the south east reduced due to insufficient resources • Office and laboratory accommodation completed adjacent to Training Centre at Gympie
1981/2 (Smart)	<ul style="list-style-type: none"> • 6,311 hectares of new plantations established • Broad area burning of young exotic pine plantations replaced restricted buffer strip burning • 105,684 hectares of native forests were aerially ignited during winter

	<ul style="list-style-type: none"> • Fauna study planned for the Conondales in order to study the impact of logging on native fauna
1982/3 (Smart)	<ul style="list-style-type: none"> • 4,830 hectares of softwood planting - the lowest in 5 years • For the first time, four women were included in the third intake of students entering the Gympie Training Centre • New organisational structure - three divisions of Forest Management, Technical Services and Administration
1983/4 (Smart)	<ul style="list-style-type: none"> • New office opened at Jimna • Woodworks Museum opened at Gympie • “A major concern for the forest and forest-based industries is the continuing attrition of the forest estate resource through conversion of commercial forest to other land use”
1984/5 (Smart)	<ul style="list-style-type: none"> • Work underway on Technical Services building at Indooroopilly, Brisbane • Computer-aided drafting introduced into the Survey and Mapping section
1985/6 (Kelly)	<ul style="list-style-type: none"> • Wilco Pty Ltd opened a new high technology sawmill at Caboolture, with the capacity to process 130,000 cubic metres of plantation pine per annum
1986/7 (Kelly)	<ul style="list-style-type: none"> • ACI Australia Ltd began the construction of a medium density fibreboard plant at Gympie that will utilise up to 300,000 cubic metres of thinnings from Tuan-Toolara plantations per annum
1987/8 (Ryan)	<ul style="list-style-type: none"> • Office, display and interpretive centre planned for Eurong, Fraser Island - boardwalk and composting toilet installed at Eli Creek • Seedling packaging and cold storage building built at Toolara to handle 260,000 exotic pine seedlings
1988/9 (Ryan)	<ul style="list-style-type: none"> • Decrease in rainforest timber removals as a result of the World Heritage listing of the wet tropics of North Queensland • Boral purchased 9 hardwood sawmills throughout southern and central Queensland, with a total of over 40% of the State’s Crown hardwood allocation • CSR Softwoods (Qld) purchased two softwood sawmills at Caboolture and Benarkin • ‘User-pays’ camping system introduced in State Forests
1989/90 (Ryan)	<ul style="list-style-type: none"> • Restructuring of the Department of Primary Industries - Queensland Forest Service incorporated in restructured department
1991/2 (Ryan)	<ul style="list-style-type: none"> • Primary Industries Corporation Bill will remove title of Conservator
1994/5 (Johnson)	<ul style="list-style-type: none"> • Creation of DPI Forestry (commercial activities) and DPI Resource Management (custodial role of Crown forest estate) • Major fires in Beerburum Forest District • Logging of Crown rainforests in Queensland ceased with end of operations in Mackay-Proserpine region
1995/6 (Bacon)	<ul style="list-style-type: none"> • Over 3.5 million tree seedlings planted, including replanting of 1,000 hectares of burnt plantation at Beerburum • Construction of a mechanised nursery at Beerburum • Forest Industries Development division established to support private forestry

APPENDIX 12: FORESTRY STAFF NUMBERS (FIGURES FROM ANNUAL REPORTS)

Year	Salaried	Wages
1906	5	0
1917	24	11
1924	86	175
1932/3	100	255
1939	192	1,718
1950/1	308	2,157
1955/6	312	1,985
1960/1	365	1,865
1965/6	434	1,693
1970	509	1,776
1975	632	1,739
1975/6	643	1,413
1979/80	632	1,192
1985/6	645	1,143

APPENDIX 13: NUMBER OF SAWMILL LICENCES (FIGURES FROM ANNUAL REPORTS)

Year	Number of sawmills operating
1937	600
1947	500
1950/1	1,163
1955/6	1,101
1960/1	835
1965/6	609
1970	497
1975	435
1975/6	433
1979/80	378
1985/6	350

APPENDIX 14: VOLUME OF LOGS MILLED FROM QUEENSLAND FORESTS FROM 1936/7 TO 1968/9 - BY SPECIES (MILLION CUBIC FEET TRUE NET)

(after A.R. Trist & J.J. Reilly, Forest resources, Queensland, Company Management Conference, 10 -12 November 1969. Submission to the Senate Inquiry into 'All aspects of Australia's Forestry and forest product industries', n.d. - note that volumes shown include logs for sawn timber, plywood and veneer, pulp and sleepers)

Year to 30th June	Hoop and bunya pine	Kauri pine	Cypress pine	Forest hard-woods	Scrub hard-woods	Cabinet woods	Misc. species	Plantations timbers	Total
1937	13.0	.8	1.3	10.4	-	2.1	1.1	-	28.7
1940	15.9	1.3	1.6	12.0	-	2.4	1.6	-	34.8
1945	11.3	.8	1.3	12.0	.6	1.6	2.8	.1	30.5
1950	5.9	.5	4.0	22.0	1.2	2.5	6.1	.9	43.1
1955	5.1	.6	5.8	25.6	1.0	2.8	5.3	1.5	47.7
1960	3.8	.3	5.8	26.2	1.9	2.6	5.2	2.9	48.7
1965	2.9	.2	5.9	21.6	1.7	2.4	4.7	4.4	43.8
1966	2.8	.2	5.3	22.4	2.0	.25	4.8	4.3	44.3
1967	2.5	.2	5.2	21.9	1.9	2.1	4.3	4.4	39.5
1968	2.3	.2	6.0	21.1	1.9	2.2	4.6	4.8	43.1
1969	2.6	.2	5.7	22.6	1.8	2.2	4.8	5.2	45.1

REFERENCES

UNPUBLISHED MATERIAL

PAMPHLETS, REPORTS and THESES

- Blake, Thom, Queensland cultural heritage context study - draft, Cultural Heritage Branch, Dept of Environment, 1996.
- Brown, Elaine, Nineteenth century Cooloola: a history of human contact and environmental change, M.A. thesis, The University of Queensland, 1995.
- Brown, Elaine, William Pettigrew 1825-1906, A pamphlett prepared for the Timber Information Centre, n.d.
- Clark, Judy, Australia's plantations: industry, employment, environment, A report to the State Conservation Councils, Environment Victoria, 1995.
- Commission of Inquiry into the conservation, management and use of Fraser Island and the Great Sandy Region, Initial discussion paper, June 1990.
- Curtis, H.S., Reserves and recreation, in Caring for Queensland, papers presented at a symposium organised by The Australian Conservation Foundation, held at The University of Queensland, St Lucia, Brisbane, 14-15 October, 1967.
- Dargavel, John, Goddard, Jane and Caton, Sonia, 'Allocating forest resources in Queensland: guide to legislation, regulation and administrative practice', Centre for Resource and Environmental Studies Working Paper 1987/1, Australian National University, Fisher, Rod & Johnston, W. Ross, Historical heritage essay, in South East Queensland 2001 region. Cultural heritage places study: A study commissioned by the Queensland Department of Environment and Heritage, Uniquet, The University of Queensland, 1995.
- Forest and Timber Inquiry. Legislation affecting public and private forests. Resource Assessment Commission. Consultancy series No FTC92/20. Canberra, Australian Capital Territory, 1992.
- Frawley, Kevin J., Historical survey of Australian logging technology and forest cutting practices, consultant report to the Australian Heritage Commission, June, 1990.
- Frawley, Kevin, A history of forest and land management in Queensland, with particular reference to the North Queensland rainforest. A report to the Rainforest Conservation Society of Queensland, PhD thesis, Geography Department of the University of N.S.W., Duntroon, A.C.T., 1983.
- Hawthorne, Catherine, Queensland timbers. A report on the specific types of Queensland timbers and a history of their influence on the architecture of Queensland, B.Architecture, The University of Queensland, 1984.

J.R. Huth, 'Raising hoop pine (*Araucaria cunninghamii*) seedling stock in containers - a historical overview', Forest Research Station, Gympie, n.d.

Kerr, John, Forest industry heritage places study: sawmills and tramways, South East Queensland, Department of Environment, 1998.

Kowald, Margaret, Historical overview of the South East Queensland biogeographic region with particular reference to forested area, Cultural Heritage Branch, Department of Environment, Brisbane, 1996.

Land Warfare Centre, Kokoda Barracks, Canungra, Unit Brief, n.d.

Powell, Judith, Travel routes, forest towns and settlements, Queensland CRA/RFA Steering Committee, Queensland Government and Commonwealth of Australia, 1998.

Queensland Conservation Council - information pamphlet, n.d.

QUEENSLAND STATE ARCHIVES

LAN/AK 23 (Batch 36) correspondence between Maryborough Land Agents and Wilson Hart Pty Ltd concerning timber licences and tramway on Fraser Island (19-4-1911)

LAN/AK 80 (Batch 173) correspondence concerning Brooloo State Forest (1908-1915)

LAN/AK 71 (Batch 241) correspondence concerning applications to establish woodpulp facilities (1909-1910)

DPI (FORESTRY) LIBRARY, BRISBANE

Annual Reports of the Director of Forests, Queensland for the years 1907 - 1995/6.

Coyne, J.H., M.L.A., Minister for Lands, Queensland, Forestry in Queensland, a paper read before the Interstate Forestry Conference, Hobart, 21st April, 1920.

Crane, A.H., The hoop and bunya pine resources of Queensland: regulation and its history, n.d.

E.H.F.S.: Being a selection from the papers left by E.H.F. Swain on his death on 3rd July, 1970, arranged and edited by his daughter Mrs Nancy Foote assisted by an officer and a retired officer of the N.S.W. Forestry Commission, 1971.

Foote, Nancy, The Story of E.H.F. Swain - 17 years to 87 years, November, 1979.

Forest Management in Queensland, Forestry report 1984.

Johnson, G.T. & Holzworth, P.V., Conondale Range Management Plan, n.d.,

Kelly, J.J., Queensland Forest Service and Industry Policies, AUSTIS, 1985.

Minister's Minority Report on the Parliamentary subcommittee on Forestry, n.d.

Some notes on forestry in Queensland with particulars as to work achieved during the five year period 1949/50 to 1953/4 prepared for the Minister for Lands and Irrigation, the Hon T.A. Foley, M.L.A., 17 August 1954.

Statement prepared by the Director of Forests, Queensland for the Empire Forestry Conference, South Africa, 1935.

Statement prepared by the Queensland Forest Service for the Empire Forestry Conference, England, 1947: Empire, Forests and the War.

Statement prepared by the Queensland Forest Service for the British Commonwealth Forestry Conference, 1952.

Swain, E.H.F., Financing of forestry, a paper read before the Interstate Forestry Conference at Hobart on 22 April 1920.

Swain, E.H., Timbergetting and settlement , 1931.

Trist, A.R.. & Reilly, J.J., Forest resources, Queensland, Company Management Conference, 10 -12 November 1969. Submission to the Senate Inquiry into all aspects of Australia's forestry and forest product industries n.d.

Working Plan for State Forest Reserve 3, Fraser Island, for the period 1925/6 - 1929/30.

FORESTRY ARCHIVES, SALISBURY, BRISBANE

Crown Log Timber Marketing Procedure in Queensland paper prepared for the 1952 E.S.T.I.S. Conference. (93/38)

A policy of reservation, 1922, including memos from District forester J.M. Fraser and Deputy forester W.R. Petrie, 1922. (70 GEN)

History of the Department of Forestry. (1/33)

History of Surveying, Department of Forestry, 1900-1966, 14 April 1967. (156/4)

Letter from the Minister for Lands to M.H. Simon, President of Conference, Eastern States Timber Industry Stabilisation Conference, 24 October 1945. (70 GEN)

Some notes on the early history of National Parks in Queensland, 26 July 1969. 1A:NR. (1/33)

The government policy of reforestation, 26 July 1949. (244 GEN)

Trist, A.R., The Romance of Red Cedar. (1/33)

ORAL INTERVIEWS

Stan Tutt, interviewed by J. Powell 31 July 1997. Tape held by Queensland Department of Environment.

PUBLISHED MATERIAL

Bolton, Geoffrey. *Spoils and spoilers. A history of Australians shaping their environment*. Allen & Unwin, Sydney, 1992.

Carron, L.T. *A history of forestry in Australia*. Australian National University Press, Canberra, 1985.

Cryle, Mark. 'Introduction' in Constance Campbell Petrie's *Tom Petrie's reminiscences of early Queensland*, University of Queensland Press, St Lucia, 1992, pp. xvii-xlvi.

Dargavel, John ed. *Sawing. selling and sons*. Centre For Resource & Environmental Studies, Australian National University, Canberra, 1988.

Dargavel, John. 'Convicts & commercial cutters' in *Sawing. selling and sons*. ed. John Dargavel. Centre for Resource and Environmental Studies, Australian National University, Canberra, 1988, pp. 3-8.

Dargavel, John. 'Constructing Australia's forests in the image of capital', in *Australian environmental history*. ed. Stephen Dovers, Oxford University Press, Oxford, 1994, pp. 80-98.

Dargavel, John. *Fashioning Australia's forests*. Oxford University Press, Oxford, 1995.

Dargavel, John ed. *The coming of age. Forest age and heritage values*. Commonwealth of Australia, 1997.

Dargavel, John. 'The coming of forest age: introduction', in *The coming of age. Forest age and heritage values*. ed. John Dargavel, Commonwealth of Australia, 1997, pp. 1-6.

Dargavel, John & Boutland, Annie. 'Establishing Australian sawmilling', in *Sawing. selling and sons*. ed. John Dargavel, Centre for Resource and Environmental Studies, Australian National University, Canberra, 1988, pp. 37-42.

Dargavel, John & Boutland, Annie. 'Timber firms in the twentieth century', in *Sawing. selling and sons*. ed. John Dargavel, Centre For Resource and Environmental Studies, Australian National University, Canberra, 1988, pp. 69-74.

Dargavel, John & Feary, Sue eds. *Australia's ever-changing forests II*. Centre For Resource and Environmental Studies, The Australian National University, Canberra, 1993.

Dargavel, John & Moloney, Damien. 'Assessing Queensland's forests', in *The coming of age. Forest age and heritage values*. ed. John Dargavel, Commonwealth of Australia, 1997, pp. 29-44.

- Dornan, Dimity & Cryle, Denis. *The Petrie family: building colonial Brisbane*. University of Queensland Press, St Lucia, 1992.
- Dovers, Stephen. 'Australian environmental history: introduction, review and principles', in *Australian Environmental History*. ed. Stephen Dovers, Oxford University Press, Oxford, 1994, pp. 2-19.
- Dovers, Stephen ed. *Australian environmental history*. Oxford University Press, Oxford, 1994.
- Etherington D.W. 'Duboisia' in Coolabunia Centenary Committee *Coolabunia from the beginning 1883-1983* n.d.
- Fitzgerald, Ross. *A history of Queensland from 1915 to the 1980s*. University of Queensland Press, St Lucia, 1984.
- Frawley, Kevin. 'Review paper: the forest record in Australian local and regional history', in *Australia's ever changing forests*. eds. K.J. Frawley & N. Semple, Department of Geography and Oceanography, Defence Force Academy, Canberra, 1988, pp. 303-332.
- Frawley, Kevin & Semple, N. eds. *Australia's ever changing forests*. Department of Geography and Oceanography, Defence Force Academy, Canberra, 1988.
- Frawley, Kevin J. 'Logging technology and forest cutting practices', in *Australia's ever-changing forests II*. eds John Dargavel & Sue Feary, Centre For Resource and Environmental Studies, The Australian National University, Canberra, 1993, pp. 143-163.
- Frawley, Kevin. 'Evolving visions: environmental management and nature conservation in Australia', in *Australian environmental history*. ed. Stephen Dovers, Oxford University Press, Oxford, 1994, pp. 55-78.
- Grenning, V. 'The co-operation of the state with the timber industry', *Australian Timber Journal*, 4 ii, 1938, pp. 579-581.
- Harrison, Jennifer. 'An Irish horticulturalist in Queensland: the Philip MacMahon story', *Journal of the Royal Historical Society of Queensland*, Volume 16, No.1, February 1996, pp. 31-37.
- Johnston, W. Ross. 'Hyne & Sons', in *Sawing. selling and sons*. ed. John Dargavel, Centre For Resource and Environmental Studies Canberra, Australian National University, Canberra, 1988, pp. 139-144.
- Johnston, W. Ross & Zerner, Margaret (comp.). *A guide to the history of Queensland and Brisbane: a bibliographic survey of selected resources in Queensland history*. Library Board of Queensland, Brisbane, 1985.
- Kerr, John. 'The Calooli Creek and Thannae railway: Queensland's first private railway and first Queensland-built locomotive'. *Queensland Heritage*, Vol. 2, No. 3, November 1970, pp. 14-20.
- Kerr, Ruth S., *Confidence and tradition: a history of Esk Shire*, Council of the Shire of Esk, 1988.

- Kesby, Julie A. & Frawley, Kevin. 'The forest record in Australian local and regional history. An annotated bibliography', *Monograph Series 5*, Department of Geography & Oceanography, University College, The University of New South Wales, Australian Defence Force Academy, Canberra, 1989.
- Lewis, Kieran, 'Silent sentinels', *Between the Leaves*, Summer, 1997.
- Mackenzie-Smith, John. *Brisbane's forgotten founder. Sir Evan Mackenzie of Kilcoy, 1816-1883*. Brisbane History Group Studies No 1, 1992.
- MacMahon, Philip. *The merchantable timbers of Queensland (Australia) with special reference to their uses for railway sleepers, railway carriage and wagon building, and engineering*. Brisbane, Government Printer, 1905 (John Oxley Library).
- McKay, Judith (comp.). *Brilliant careers: women collectors and illustrators in Queensland*. Queensland Museum, Brisbane, 1997.
- Meyer, Athol. *The foresters*. Institute of Foresters of Australia Inc., n.p., 1985.
- Morris, Deidre. 'Mueller, Baron Sir Ferdinand Jakob Heinrich Von 1825 - 1896', in *Australian dictionary of biography, Volume 5 1851-1890 K-Q*. ed. Douglas Pike, Melbourne University Press, 1974 & 1984, pp. 306-308.
- Noonan, Tyrone. 'Forestry remembers', *Between The Leaves*, Spring, 1995. pp. 14-17.
- Oliver, John. 'The role of natural hazards and other environmental challenges in the development of Queensland'. in *Queensland through history: a collection of papers presented at a Queensland Day symposium, 6 June*. ed. Peter Griggs, 1988. *Queensland Geographical Journal*, 4th Series, Volume 3, 1988, pp. 1-19.
- Papadakis, Elim. *Politics and the environment: the Australian experience*, Allen & Unwin. Sydney, 1993.
- Petrie, Constance Campbell. *Tom Petrie's reminiscences of early Queensland*. University of Queensland Press, St Lucia, 1992 (first published 1904).
- Petrie Rollo. *Early Days on Fraser Island 1913-1922*. Go Bush Safaris, Gladesville, N.S.W., 1995.
- Pettigrew W. *The habit and peculiarities of some of our timbers*. Government Printer, Brisbane.
- Powell, J.M. *An historical geography of modern Australia: the restive fringe*. Cambridge University Press, Cambridge, 1988.
- Pyne, Stephen. *Burning bush: a fire history of Australia*. Allen & Unwin, Sydney, 1991
- Queensland Year Book*. Queensland Government Statistician's Office, Brisbane, 1985.
- G.J. Roberts. ed. *The Conondale Range: the case for a National Park*. A Queensland Conservation Council Publication, Brisbane, 1977.

- Roberts, Greg. 'Trees policy pruned back', *The Bulletin*, May 9, 1995, pp. 26-27.
- Rolls, Eric. 'More a new planet than a new continent', in *Australian environmental history*. ed. Stephen Dovers, Oxford University Press, Oxford, 1994, pp. 22-36.
- Sinclair, John. *Fraser Island and Cooloola*. Weldon Publishing, 1990.
- Stocks, S.N. *Cradled in the ranges: a history of Blackbutt, Benarkin, Taromeo and surrounding districts*. Blackbutt-Benarkin Bicentenary Committee, Cranbrook Press, Toowoomba, 1988.
- Symons, Pat & Sim. *Bush heritage: an introduction to the history of plant and animal use by Aboriginal people and colonists in the Brisbane and Sunshine Coast areas*. 2nd edn. Pat and Sim Symons, Nambour, 1996.
- Taylor, Peter. *Growing up: forestry in Queensland*. Allen & Unwin, Brisbane, 1994.
- 'The introduction of special timber licences in Queensland', *Queensland Heritage*, Vol 1, No 10, 1969, pp. 24-26.
- Thorpe, Bill. *Colonial Queensland: perspectives on a frontier society*. University of Queensland Press, St Lucia, 1996.
- Tutt, Stan. 'The days of the scent mills', *Sunshine Coast Sunday*, 29 September 1996, p. 37.
- Tutt Stan. 'Memories of Corkwood days', *Sunshine Coast Sunday*, 20 October 1996, p. 28.
- Vader, John. *Red Cedar: the tree of Australia's history*. Reed Books, Frenchs Forrest, N.S.W. 1987.
- Watson, Don. 'Clearing the scrubs of South-East Queensland', in *Australia's ever changing forests*. eds K.J. Frawley & N. Semple, Department of Geography and Oceanography, Defence Force Academy, Canberra, 1988, pp. 365-392.
- Young, Ann R. M. *Environmental change in Australia since 1788*. Oxford University Press, Oxford, 1996.

GLOSSARY

- Bandsaw** A sawing machine in which the blade is an endless loop of steel with saw teeth cut in its edge.
- Board** A long piece of sawn timber, 20 to 40 mm thick and 75 mm or more wide.
- Bench** or sawbench The machine used to cut small logs, saw flitches or resaw lumber into required dimensions. Equipped with a circular saw, commonly fed by hand.
- Broad axe** An axe with a wide blade especially made for hewing timber by cutting along the grain of the wood.
- Butt** Base of a tree or the lower end of a log.
- Buzzer** Common name for a planing machine.
- Cant or flitch** A heavy piece of timber cut from a log in the first cuts through a breaking-down saw. Usually with only two faces sawn.
- Cant hook** A hand tool with a long handle used for moving or turning logs.
- Crosscut saw** A saw designed for cutting across the grain, especially a large saw usually with a handle at both ends for use by two people.
- Cubic metre (m³)** Cubic metre is a true volume measure. One cubic metre = 338 super feet hoppus.
- Direct sales** Sale of lots of timber after cutting and hauling from forest e.g. in railway yards. In Queensland often described as sales 'on trucks'.
- Docking saw** A saw used to trim the ends of pieces of timber, usually to a given length.
- Dressed timber** Timber planed on one or more surfaces, usually four. Includes partly moulded timbers such as tongued and grooved flooring, or weatherboards.
- Felloe** Outer piece of a wheel, attached by spokes.
- Flitch** Slice of timber taken from a tree trunk.
- Gang saw** A sawing machine in which several sawblades are set parallel to each other. A frame saw.
- Gantry crane** A crane mounted on a frame that can straddle logs or timber to be lifted, often movable on fixed lines.
- Girth** Diameter of tree. In Australia, as in Europe, measured at a fixed height of 1.3 metres (4 ft. 3 ins) from the ground level. Ground level is defined as ground at tree base for level ground and higher side on slopes.
- Green timber** Freshly cut timber with a high moisture content.
- Hardwood** Wood from broad leaved trees such as eucalypts. It is often, but not necessarily, hard.
- Hewn timber** Timber finished by broad axe or adze; the ends are generally sawn. Commonly used for piles, beams and railway sleepers.
- Jinker** A trailer consisting of two sets of wheels on which logs are loaded for haulage.
- Kerf** The width cut by a saw.
- Kiln drying** Drying timber with heated air circulated in a closed chamber. The temperature and humidity of the circulated air are controlled.
- Lath** A piece of sawn or split timber, 5 to 10 mm thick and 25 to 30 mm wide, usually used for supporting tiles on a roof or plaster on a wall.
- Logging arch** A set of large wheels 2-3 metres in diameter between which the front of a log can be raised off the ground to make snigging easier.
- Maul** A large hammer commonly made of wood used with wedges for splitting timber.
- Piles** Long wooden poles - often squared - driven into the seabed as part of wharf construction, or into the ground to provide foundations for a structure.
- Pitsawing** A method of sawing logs manually whereby the log is placed on a frame over a pit and sawn lengthwise by two people using a log pitsaw, one standing on top of the log, one (the 'underdog') in the pit beneath.

Regrowth An immature stand regenerated after cutting, fire etc. Commonly refers to stands under 60-100 years of age.

Rip To cut timber along the length of the grain, particularly boards.

Rough sawn Timber as it comes off the saw - not dressed.

Royalty Originally referred to a fixed level of payment for timber in the forest e.g. 2 shillings per 100 s.f. Now has the same meaning as 'stumpage'.

Seasoning Drying lumber either in the open air or in a drying kiln.

Scantling Timber sawn to cross sections mostly 150 mm by 100 mm. Generally used for the construction of house frames or shipbuilding.

Shingle A piece of wood split (or sometimes sawn) so that one end is thinner than the other. Commonly about 600 mm long by 100 mm broad. Used for covering buildings and especially roofs. Shingle easily caught alight and were banned in Australian cities once corrugated iron became readily available.

Sleeper A strong piece of timber laid on the ground to support the rails of a railway line. Commonly 125 mm thick, 225 to 250 mm wide and 300 to 500 mm wider than the rail gauge.

Snig To haul logs along the ground, sometimes with the front end lifted on a skid pan.

Softwood Wood from conifers such as pines. It is often, though not necessarily, soft.

Spar Pole used as mast or yard of a ship.

Stand A specific area of sufficiently uniform trees as to be distinguishable in a forest for general management and logging purposes - usually between 5 and 100 hectares.

Stumpage A kind of royalty calculated by taking a 'key market' mill door value for logs and subtracting from that amount extraction and transport costs to arrive at the value of the standing tree. A 'key market' is usually an urban centre where logs are milled. Under this system, logs of similar accessibility and of the same species and size class close to market would carry higher royalties or stumpage than those at greater distance.

Stump sales Sale of standing timber in the forest. Purchaser has to arrange cutting and removal.

Super feet (s.f.) One superficial (super) foot refers to a solid of wood one foot (30.5 cms) by one foot (30.5 cms) by one inch (25.4 mm). In Queensland, New South Wales and Victoria, Hoppus super feet has generally been used for log measure though the prefix 'Hoppus' is generally omitted. Hoppus measure understates the true volume by 22% e.g. 100 s.f. true volume = 78 s.f. hoppus; 100 s.f. hoppus = 127 s.f. true volume. A complete explanation of the basis for hoppus measure is given by Syd Curtis:

The hoppus volume of a log is obtained by multiplying the quarter-girth squared by the length. Logs generally taper; they are wider at one end than the other. A reasonable approach to estimating the average girth of a log is to measure the girth mid-way along its length. If one then imagines that centre-girth, which is roughly circular, pulled into the shape of a square, then the area of the square is of course the length of one side squared. And of course that area multiplied by the length of the log gives the volume. In other words, quarter-girth squared by length - something easily calculated using simple arithmetic without involving the mathematical constant pi.⁴²²

Thinning Cutting a selection of trees from an immature stand to improve its growth, hygiene or total yield.

Tongued and grooved Boards on which one edge is moulded into a tongue and the other into a groove. When laid side by side, the tongue fits into the groove of the adjacent board. Used for flooring and for lining boards.

Tram A light, often temporary railway, sometimes with wooden rails.

Weatherboard Exterior covering of timber houses specially designed to exclude rain. Usually fastened horizontally. The simplest weatherboards are rough sawn and of rectangular cross section. Feathered weatherboards are of tapered cross-section and are often rough sawn.

⁴²² H.S. (Syd) Curtis, personal communication, 1998.

Dressed weatherboards have various profiles which usually interlock to provide a rainproof surface.

ABBREVIATIONS

CRA	Comprehensive Regional Assessment
DNR	Department of Natural Resources
DPI	Department of Primary Industries
RFA	Regional Forest Assessment
ft.	feet
ha.	hectare
ins	inches
s.f.	super feet

CONVERSIONS

LENGTH

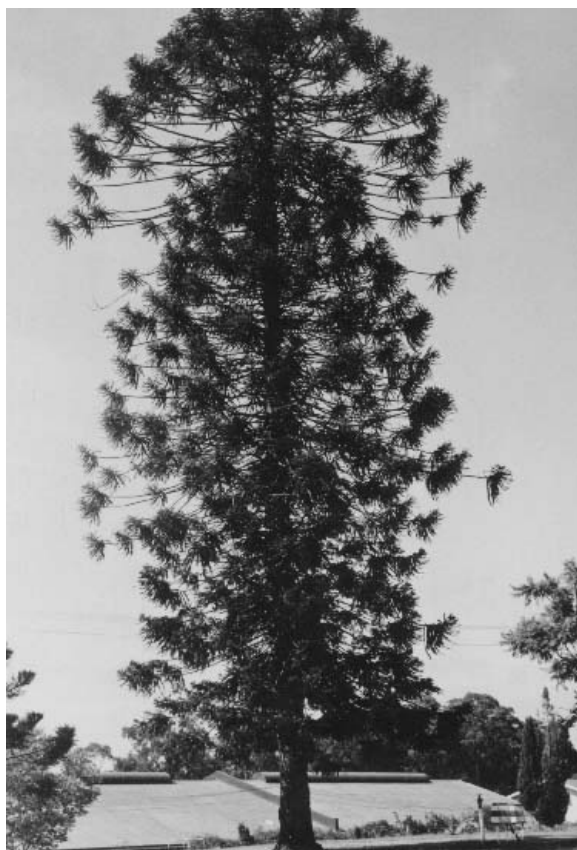
IMPERIAL		METRIC	
12 inches	= 1 foot	=	
3 feet	= 1 yard	=	91.44 centimetres
1,760 yards	= 1 mile	=	1.61 kilometres
1 inch	=	=	25.4 millimetres
39.37 inches	=	=	1 metre

AREA

IMPERIAL		METRIC	
4,840 yards	= 1 acre	=	0.405 hectares (ha)
640 acres	= 1 square mile	=	2.6 square kilometres
2.47 acres	=	=	1 hectare



Red Cedar.
(*DPI Forestry Library 1815 H*)



Bunya Pine.
(*DIP Forestry Library H 4570*)



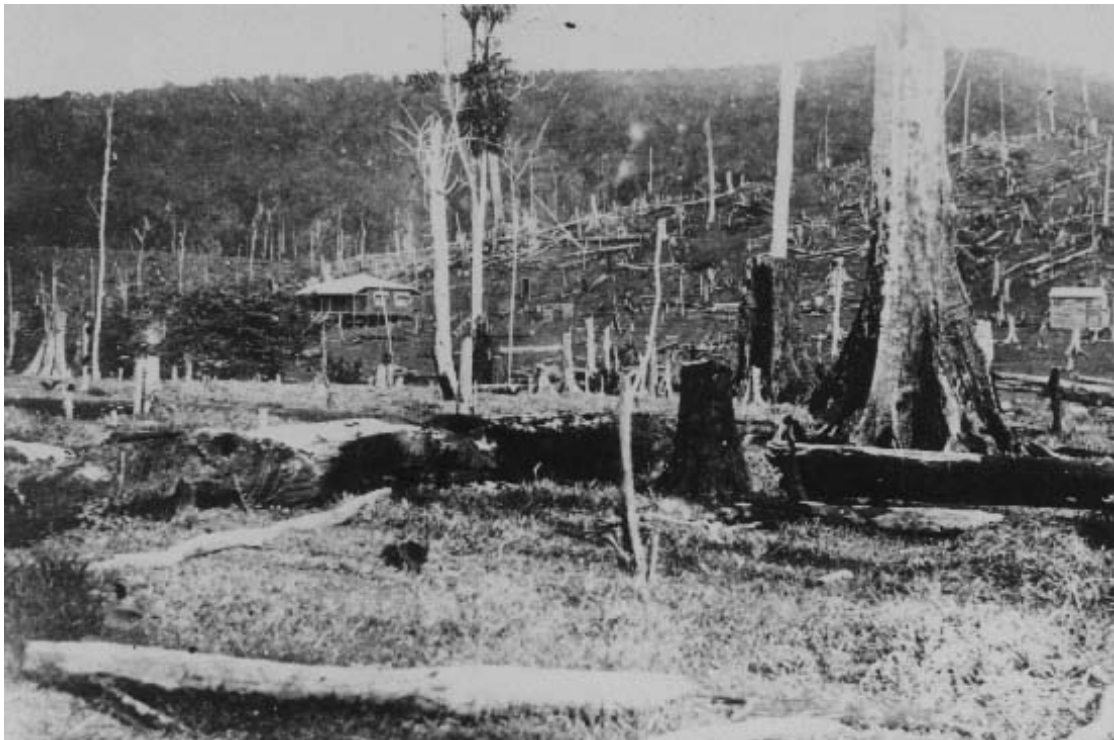
Rafting timber (unknown location).

(DPI Forestry Library)



Pitsawing (unknown location).

(DPI Forestry Library)



Clearing for settlement and dairying.

(DPI Forestry Library G1 & G2)



Logging on Fraser Island, 1908.

(DPI Forestry Library H 4940)



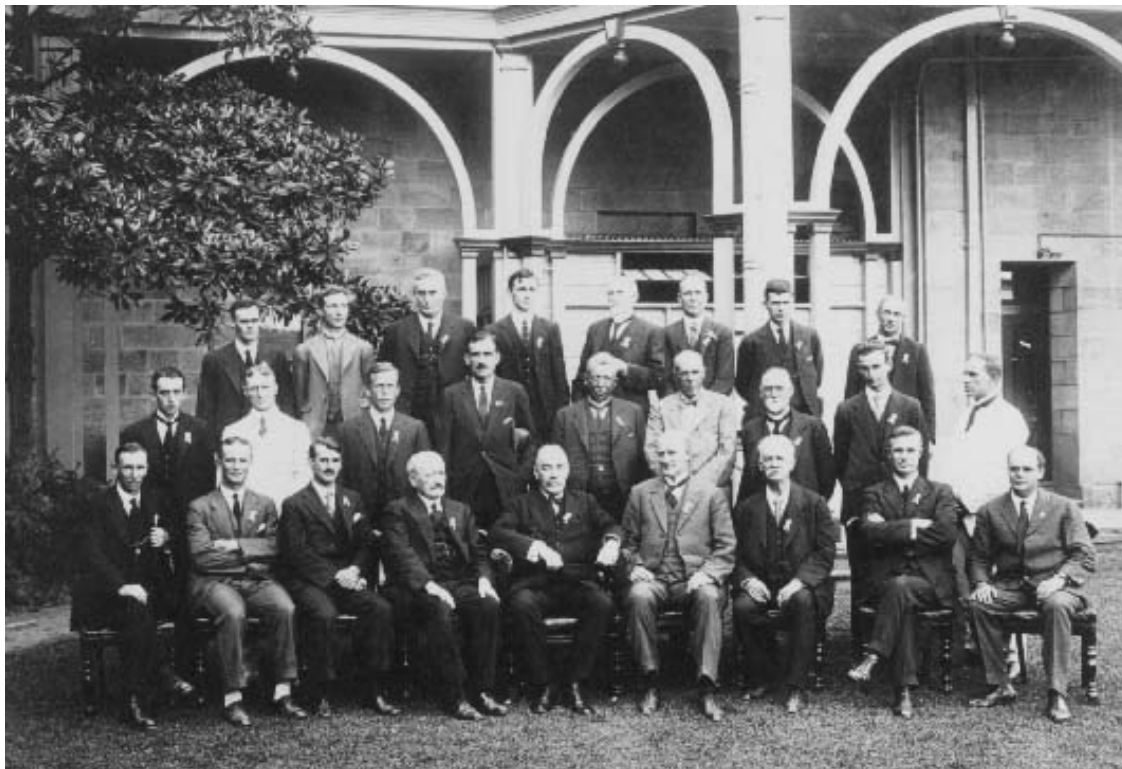
Log raft, Fraser Island, no date.

(John Oxley Library)



Fred and Dick Caplick, Eumundi, 1915

(DPI Forestry Library H 4938)



Australian Forestry Conference delegates, 1922.

(Back Row (L to R): J.M. Fraser, M.H. Simon, W.R. Petrie, C.J. Trist, H. Tryon, L.S. Twine, J.R. Dawson, F.J.C. Twine

Middle Row (L to R): S.L. Kessell, ?, L.H. Weatherhead, ?, R. Dalrymple-Hay, W. Gill, C.R. Patterson, ?

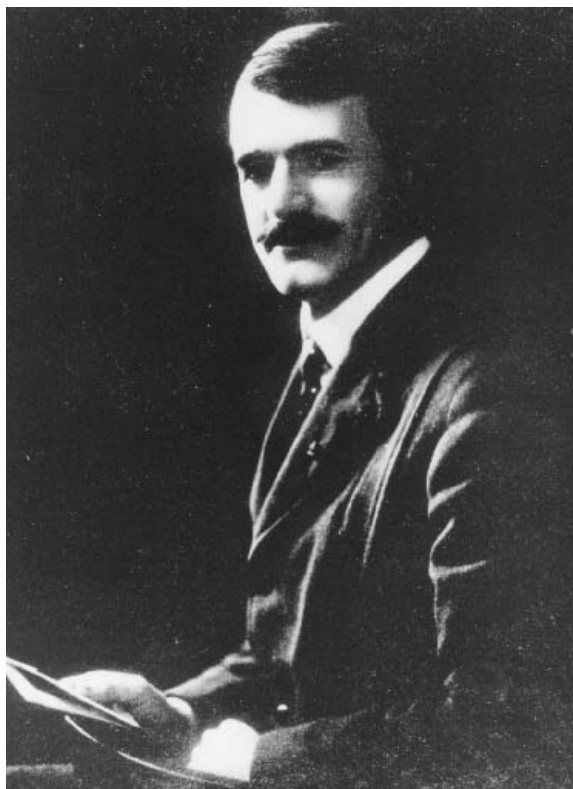
Front Row (L to R): ?, E.H.F. Swain, J.H. Coyne, Sir Matthew Nathan, ?, R.I. Scott, A.G. Melville, W. Adams)

(DPI Forestry Library)



1922 Visitors' Plantation, Imbil (photo taken 1939).

(DPI Forestry Library 25 H)



E.H.F. Swain, Director of Forests 1918-1932.
(*DPI Forestry Library*)



V. Grenning, Director of Forests 1932-1963.
(*DPI Forestry Library*)



Butter boxes made from veneers, Hancock and Gore Ltd., South Brisbane, 1922.

(DPI Forestry Library, Plate 291)



Taungya with bananas, Compartment 1, Zacharia Creek, State Forest Reserve 435, 1928.

(DPI Forestry Library Plate 94)



Piles (*Syncarpia* spp.) at Brisbane wharf for shipment to United Kingdom for rebuilding of the Falmouth Docks, 1931.

(DPI Forestry Library Plate 207)



Ironbark for telegraph poles, R343 Conondale, 1939.

(DPI Forestry Library 316 H)



Unemployed relief gang, Brooloo, 1932.

(DPI Forestry Library 335)



Firewood mill, Strathpine, 1939.

(DPI Forestry Library)



Display of fancy veneers, Brisbane Royal Agricultural Show, 1935.
(DPI Forestry Library Plate 418)



Queensland Forest Showroom, George St., Brisbane, 1939.
(DPI Forestry Library H 2682)



Apiary on treated area, R 108, Bribie, 1939.

(DPI Forestry Library 45 H)



Grazing on State Forest, Derrier Logging Area, Brooloo, 1939.

(DPI Forestry Library 270 H)



Sleeper cutter, Cooyar Valley, 1939.

(DPI Forestry Library)



Rail yards, Goomeri, 1940.

(DPI Forestry Library 393 H)



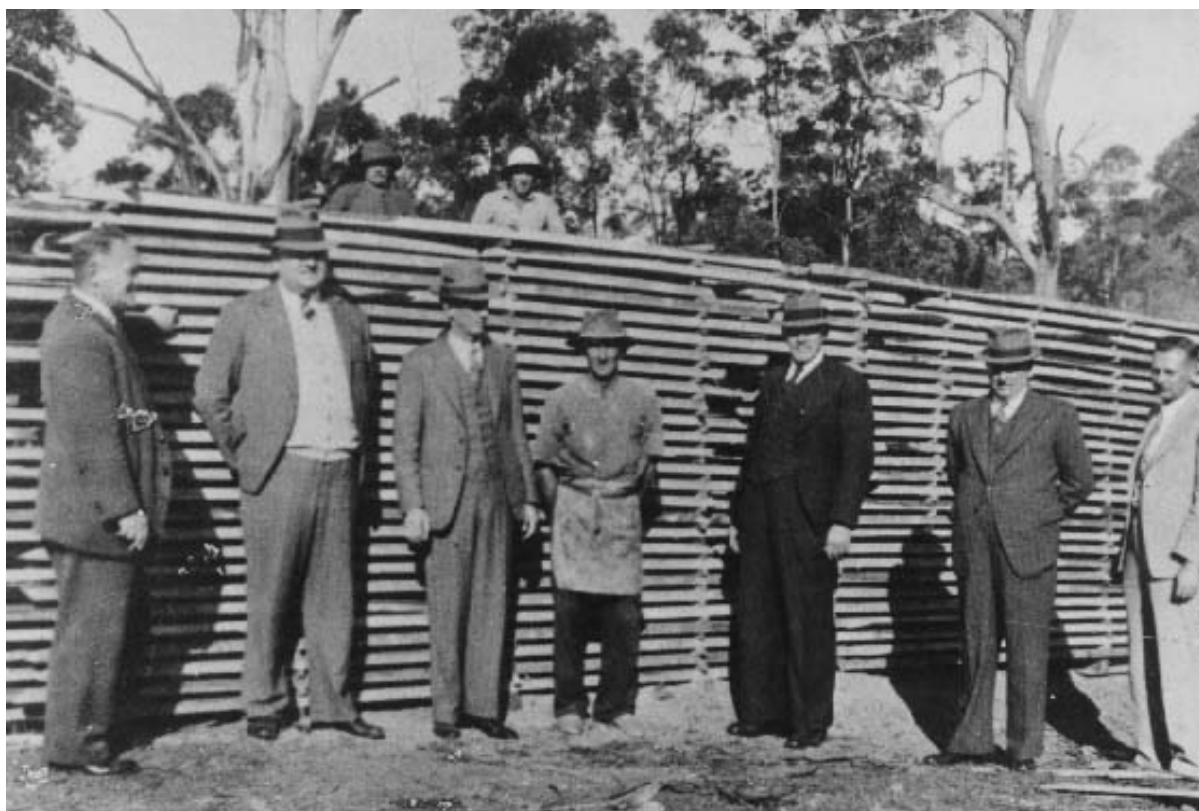
Charcoal display, Brisbane Exhibition, 1940.

(DPI Forestry Library 692 H)



Producer gas apparatus attached to Departmental car, 1941.

(DPI Forestry Library 650 H)



First milling of plantation pine in Queensland, Lawson's Mill, Beerwah (no date).
 L to R: V. Grenning (Director), E.J. Riordan, M.L.A., C.T. Lawson (mill owner), E.J. Walsh, Minister
 for Lands, T.G. Hope, Acting Secretary Chief Secretary's Department, A.R. Twick, Silviculturalist.
(DPI Forestry Library T 307)



Hut of plantation thinnings, R589 Beerwah, 1946.

(DPI Forestry Library 865 H)



Stirling's Crossing camp, Derrier Logging Area, Imbil, 29 June 1949.

(DPI Forestry Library H 1169)



Balts' camp, Derrier Logging Area, Imbil, 29 June 1949.

(DPI Forestry Library Plate 94)



Standard married man's rig, Beerburrum, 23 September 1960.

(DPI Forestry Library H 2766)



Residence (Epps' house), Fraser Island, 1940.

(DPI Forestry Library 459 H)



Married quarters, Jimna, 1959.

(DPI Forestry Library H 2558)



Hot and cold shower system.

(DPI Forestry Library H 2572)



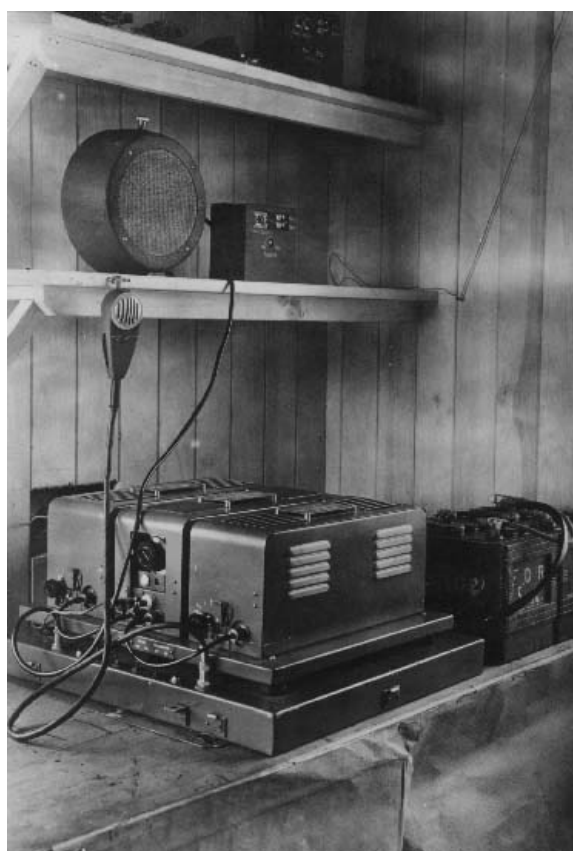
Old fire lookout (blackbutt tree),
Fraser Island (photo taken 1960).
(*DPI Forestry Library H 2682*)

Wild Horse Mountain Lookout,
R64 Beerwah, 1952.
(*DPI Forestry Library 1650 H*)



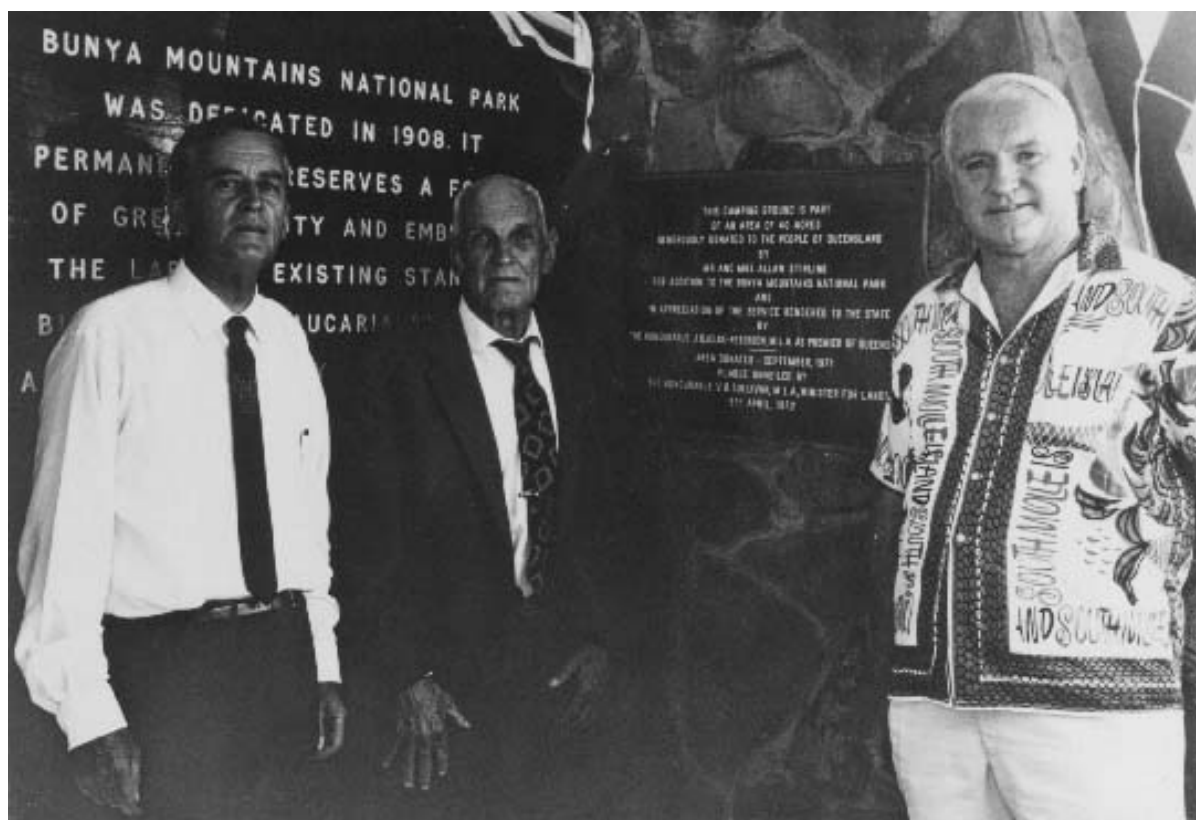
Official opening of 'Smokey Bear' fire indicator, Yarraman
by Hon. H. Richter, M.L.A., 1970.

(DPI Forestry Library H 4545)



Radio protection, Yarraman, no date.

(DPI Forestry Library 1291 H)



Official opening of the Bunya Mountains camping area by premier J. Bjelke-Petersen, 1971.
(DPI Forestry Library H 4577A)



Forestry carpenter preparing forest signs, May 1972.

(DPI Forestry Library H 4591)