

VICTORIA.

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THIRD PROGRESS REPORT

OF THE

ROYAL COMMISSION ON STATE FORESTS AND  
TIMBER RESERVES.

THE REDGUM FORESTS OF BARMAH AND GUNBOWER:

THEIR RESOURCES, MANAGEMENT, AND CONTROL.

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PRESENTED TO BOTH HOUSES OF PARLIAMENT BY HIS EXCELLENCY'S COMMAND.

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# BARMAH AND GUNBOWER FORESTS.

## PROGRESS REPORT.

To His Excellency the Right Honorable THOMAS, BARON BRASSEY, Knight  
Commander of the Most Honorable Order of the Bath; Governor and  
Commander-in-Chief in and over the Colony of Victoria and its  
Dependencies, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY :

We, the members of the Royal Commission appointed to investigate the general question of forestry and forest control and management in Victoria, have the honour to present the following Progress Report :—

### *Introduction.*

Redgum has for a long period been recognised as one of the finest and most durable of Australian hardwoods, and in this colony it is used for a greater variety of purposes than any other indigenous timber. On account of the density of the wood, and the tough and inlocked character of the grain, it is largely employed in positions where it is liable to contact with water and damp ground, and hence is used for railway sleepers, bridge and culvert construction, wharf and jetty work, foundations of wooden buildings, and fencing posts. It is also used in large quantities for street paving blocks, girders, and for slabbing shafts in quartz mining, and yields the finest quality of charcoal for blacksmiths' purposes.

Of the two varieties of this tree, the forest redgum (*E. tereticornis*) is chiefly confined to Gippsland and the coastal district of New South Wales, while the flooded or common variety (*E. rostrata*) is widely distributed, being found along the streams and water-courses, and alluvial flats generally, of Western and Southern New South Wales, Victoria, and South Australia. In this colony, most of the river lands (with the exception of narrow strips reserved as water frontages) have been disposed of by the Crown, and the only extensive reserves of the timber now left for State and private requirements are the Murray district forests of Barmah and Gunbower, which, with the redgum land in the Victoria Valley (Grampians Range), embrace an area of about 150,000 acres.

The county of Tangil, in Gippsland, which once contained extensive tracts of the finest forest redgum, now affords only small supplies, no care having been taken to retain the Crown rights to the best timber lands. Coongulmerang, the last remaining reserve there, which contained about 13,600 acres of valuable young timber of this kind, was withdrawn from the forest area in the year 1894, and surrendered to the axe of the selector.

### BARMAH FOREST.

#### *Area and Boundaries.*

This forest, commonly known as the Barmah and Yielima Reserves, contains an area of 105,600 acres, and extends eastward along the Murray River flats from the neighbourhood of Barmah township to the junction of the Ovens River with the Murray. The forest is broadest at its western end, north of the parishes of Barmah, Picola, and Yielima, and gradually shrinks to a narrow strip of land as the eastern boundary is approached. The southern boundary is very irregular, being determined by the limits of private lands now under occupation, which have been alienated from time to time by successive Governments.

### Timber Supplies.

The dominant tree in the forest is the flooded variety of redgum (*E. rostrata*). It grows in broad belts along the bank of the river, and on its flood courses and swamps. On the strong clay of these lands, subject annually to extensive inundations, the trees stand close together, and attain a large size, while on the ridges they are more scattered and interspersed with patches of grey and yellow box. These ridges, or sand-hills, which divide and mark the course of the flood waters, are a peculiar feature of the Murray flats. The box growing on them is usually of a stunted and inferior character, but at times belts of fairly good timber of this kind are seen, showing what forest growth the land is capable of producing under favorable circumstances.

For many years the reserve has furnished to timber getters enormous quantities of redgum, the logs being either floated down the stream by means of barges to the large mills established at Echuca, or sawn up in the forest by small portable mills licensed at various places. The area bearing mature timber has been cut over several times during the past sixteen years, and large trees are now becoming more difficult to get, the mill employes having to go several miles back from the river. It is the opinion of the local forester that if the existing demand for railway sleepers continues, and the present general output is maintained, the forest will not yield more than five years' supply. Until 1892 timber getters were admitted to the forest under the fixed licence system, but in that year attention was drawn to the fact that, while this colony was granting the right to cut redgum at nominal fees, the Government of New South Wales was obtaining from its reserves on the northern bank of the Murray a substantial royalty of 12s. 6d. per 1,000 superficial feet. In one instance brought under our notice in the course of evidence, a saw-mill company established at Echuca obtained 1,600 logs from the Yielima portion of the forest on payment of £31, while the same number of logs, if obtained from the Riverina forests, would have been subject to a royalty of £700. The lax conditions and low licence-fees in force naturally gave rise to excessive timber cutting on the Victorian side of the river, and, in order to remedy this condition of affairs, the Government of the day decided to abolish the fixed licence system in the northern redgum forests, establishing in its stead a moderate royalty charge of 5s. per 1,000 superficial feet. Since that time the receipts from timber cutting have gradually increased, until last year the sum of £620 was obtained from this source.

During our inspection of the forest we noticed large belts of saplings which are greatly retarded in growth by being too close together. We are informed by the local forester that an area of about 50,000 acres bears young timber of this class. A tract of about 15,000 acres was thinned out several years ago under the direction of the Conservator, with good effect to the growth of the trees, but owing to the thick undergrowth which has arisen between the stems it now requires a second improvement felling. We recommend that this necessary work be taken in hand as early as possible, as the season from March to June, when the river is low, is the most favorable period for thinning out and cleaning up the forest. The growth of redgum under favorable conditions, when the saplings are upwards of 10 feet apart, and the land on which it stands is regularly flooded, is rapid, the increase in girth being often  $1\frac{1}{2}$  to 2 inches per annum.

In the practical working of this forest it would be a great advantage if, like the Gunbower Reserve, it were surveyed, and subdivided into blocks of about 1,000 acres. At present it is difficult to define the limits of saw-millers' or other timber getters' areas, or to accurately mark the sites of saw-mills. During our inspections we have been much hampered by the want of forest working plans showing these particulars, as well as the situation and limits of the various classes of timber growing in the reserves. We, therefore, recommend that a complete survey of the forest be taken in hand at an early date, and that such survey shall be the basis for a proper detailed working plan of the reserve.

### Management.

The forest is under the supervision of one forester, who is stationed near Barmah township, on the western side of the reserve. His principal duties are to patrol the reserve from end to end (a distance of about 70 miles), measure logs for the saw-mills and assess royalty thereon, and supervise the sleeper hewers who are at work along the course of the River Goulburn.

All timber cutting is carried on under the royalty system, the following being the charges in force :—

	Rate.
	s. d.
<i>Redgum.</i>	
Saw-mill timber, per 1,000 super. feet ... ..	5 0
Piles, first 25 feet ... ..	15 0
(Each additional foot, 6d.)	
Fencing posts, per 100 ... ..	5 0
Fencing rails, per 100 ... ..	8 0
Telegraph poles, up to 25 feet ... ..	2 6
(Each additional foot, 1d.)	
Scaffold poles, up to 20 feet ... ..	1 6
(Each additional foot, $\frac{1}{2}$ d.)	
Deadwood, one or two horse load ... ..	1 0
Deadwood, four-horse load ... ..	2 0

The revenue obtained in 1898 from all sources in connexion with the forest, and small reserves opened for sleeper hewing in its neighbourhood, was as follows:—

Sawn timber ... ..	£468
Railway sleepers ... ..	102
Fencing material ... ..	6
Mill sites ... ..	51
Residence sites ... ..	1
Grazing in State forest ... ..	150
Grazing in Timber reserve ... ..	58
Grazing on Barmah Island ... ..	45
Total ... ..	£881

In the working of the reserves an area of about 45,000 acres lying between the Murray and an anabranch called Tullah Creek is classed as a State forest, the tract southward of the creek being a timber reserve. This arbitrary division has given rise to several rates for saw-mill sites, ranging from £6 to £16 per annum, although the class of timber cut is practically the same; while, as regards grazing, the receipts obtained from this source in the "State forest" are credited to the Forest Branch, and those obtained from the "Timber reserve" to the general land revenue. There is no reason to perpetuate this absurd distinction; and, in order that the whole area may be classified as a State forest, and the receipts from all forest produce credited thereto, we recommend its permanent reservation, under section 10 of the *Land Act* 1890, subject to the excision of certain areas along the present southern boundary which are described hereafter.

As regards the fees payable for mill sites in reserves subject to royalty, we consider that a uniform rate should be charged. The present fee for sites in redgum "State forests," Ten shillings per month, or Six pounds per annum, is a fair charge, and is the rate in force in New South Wales. We recommend, therefore, that it be adopted as the sole charge for mill sites in all redgum reserves under royalty, from the 1st of July next.

During our visit to Barmah district a deputation representing some 50 hewers waited on us at Picola, and stated that, having cut out the small redgum reserves near the junction of the Murray and Goulburn, they had been compelled to suspend work for several weeks, and were unable to complete their contracts with the Railway Department for the supply of sleepers. Having ascertained that the narrow river flats reserved on the west bank of the Goulburn had been stripped of milling timber, we had no hesitation in recommending that these lands should be thrown open to the hewers, and after some delay this course has now been taken.

In the main forest there are large numbers of old and hollow redgum trees, rejected by the saw-millers, which are suitable for conversion into railway sleepers. As these trees are long past maturity, and their retention serves no good purpose, we recommend that they be marked for cutting, and utilized by the hewers as soon as they have cut out the Goulburn reserves. As regards the supervision of hewing, however, it is absolutely essential that a foreman should be appointed without delay to assist the forester in the discharge of his duties. It is false economy to intrust the oversight of this extensive forest to one man, and at the same time to require him to travel fifteen or twenty miles to superintend the operations of hewing parties in detached reserves.

The area of stunted and hollow box timber growing on the sand ridges between the flood courses is estimated at 8,000 acres. The ridges being the only high ground available in the flood season for mill sites and for the refuge of cattle cannot be alienated, but we consider that their grazing value can be greatly improved by destroying all trees useless for timber, at the same time retaining a sufficient number for seed purposes. By fencing off from the cattle the most suitable areas for natural reproduction of grey box, and sowing broadcast strips of sugar gum, this comparatively useless portion of the reserve can gradually be brought under forest cover again.

#### *Grazing Rights.*

The grazing rights of the area between the River Murray and Tullah Creek, comprising 45,000 acres, are at present leased from the Crown by a local committee, on behalf of the settlers in the neighbourhood, for the sum of £150 per annum. From 1,000 to 1,200 head of cattle are usually depastured on this land in the winter, and about 2,000 head in the summer season. The half-yearly grazing fee is fixed at 3s. per head for cattle, and 4s. for working bullocks and horses, and the committee, in addition to the Crown rent, pay a herdsman £130 per annum, and defray the cost of the half-yearly musters. They have, it is said, expended the surplus revenue obtained, in erecting fences in different parts of the reserves.

Such a method of farming out the grazing rights is not a desirable one, as the State does not receive as much revenue from this source as it ought to obtain; while the control of grazing is taken away from the forester, who should be responsible for the disposal of all forest produce under strict regulations. The present system of letting grazing rights in State forests and timber reserves discloses many anomalies, but we refrain from making a special recommendation in this case, as we deem it advisable to deal with the whole question in our general report.

#### *Construction of Levee or Flood Embankment.*

Among the public works submitted to Parliament last year for approval was a project for the construction of a levee from Ulupna to Picola, at an estimated cost of £8,000. The object of the levee, as described in the schedule of works, was to restrain the Murray overflow, render available for wheat-growing extensive areas now subject to periodic inundation, and enhance the value of about 10,000 acres of Crown land. During the debate on the vote in the Legislative Assembly, it was pointed out that the only available Crown lands along the proposed route of the levee formed part of the Barmah Forest reserves, and while the expenditure was approved of by the Legislative Assembly, the Government promised to refer as a special inquiry to this Commission the question whether any lands should be withdrawn from the reserves for agricultural settlement. The eastern part of the embankment—a continuation of a levee already made from Cobram to Tocumwal—was commenced shortly afterwards, and before we were able to visit the district, the western part of the forest, which we had to inspect, being flooded in many places. Having already taken evidence in the forest in regard to the management of the reserves and timber cutting generally, we decided to limit our investigation, as far as possible, to the route adopted for the embankment, and its effect on the value of the forest reserves. We accordingly proceeded to the district in January last, and made a careful inspection, taking evidence also at the townships of Barmah and Picola. In periods of high flood the waters of the Murray spread far out over the settled country south of the forest, between the Ovens and Goulburn Rivers. The area of land which will be benefited by the construction of this levee is estimated at from 100,000 to 150,000 acres. Although the embankment will, it has been stated in evidence, considerably enhance the value of these private lands, probably to the extent of £1 to £1 10s. an acre, it appears that no steps were taken by the Public Works Department to obtain the consent of the owners to contribute to the cost of the work, so that the whole expense of a costly undertaking designed to benefit a large number of farmers, as well as to make valuable redgum land available for settlement, will fall on the Treasury. We found that the route chosen by the Public Works engineers cut deeply into the heart of the redgum area in the parishes of Picola and Barmah, and that if the embankment were constructed on the line proposed it would shut out the annual inundations of the river from a valuable tract of this timber, and thus greatly retard

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its growth. The intention of the engineers in adopting this line was, it is said, to take advantage of the course of several sand ridges, and thus reduce the cost of the work, while at the same time the tract of land to the south of the bank, covered with excellent timber in various stages of growth, would have been deprived of the floodings by which this river gum is so greatly nourished. We at once decided that it would be most unwise to allow a considerable tract of redgum forest, the area of which in the colony is already very limited, to be sacrificed in this way, and on our return made arrangements for the Inspector-General of Public Works and the Inspector of Forests to personally examine the ground and divert the course of the levee as far as possible towards the south-western boundary of the reserve, in order that the best belts of redgum timber might be preserved. This examination has been made, and a new survey on the line suggested by us is now in progress. Before the western part of the levee, in the parishes of Picola and Barmah, is commenced, however, we consider that the plan showing the route finally adopted by the Public Works Department should be submitted for our approval.

#### *Disposal of Forest Land southward of Levee.*

The portion of the timber reserve southward of the levee, taking the route recommended by us, is sparsely covered with redgum, and, as it will be outside the inundated area, it will be useless to retain it as part of the forest. We, therefore, recommend that the southern boundary of the reserve be fixed at a distance of 1 chain on the southern side of the levee, by which means the embankment will throughout the greater part of its course be within the forest area; and that the land southward of this limit be thrown open for settlement, subject to the following conditions:—All useful trees which can be converted into sleepers, fencing posts, piles, &c., on this surrendered area to be marked by the forester, and disposed of at royalty rates. Taking the latest estimates, as the land comprised in it (about 13,000 acres) will be made available for settlement at a cost of about £17,000 to the State, we consider it should be classified as reclaimed land, subdivided into blocks not exceeding 100 acres, and opened for selection at the rate of £3 per acre. We have had evidence from local farmers, intimately acquainted with the value of the land contiguous to the forest for agriculture, that this reclaimed area will be worth from £2 10s. to £3 an acre. On the eastern fringe of the forest, a land-holder has offered to purchase from the Government a block of similar land southward of the Cobram-Tocumwal levee at the higher price. Taking all the circumstances into consideration, we think that the rate of purchase money recommended by us may fairly be charged by the State in parting with these improved Crown lands.

#### GUNBOWER FOREST.

##### *Area and Boundaries.*

This forest, which contains an area of 53,000 acres, lies to the north-west of Echuca, and extends for a distance of about 70 miles along the Murray, from the eastern outlet of Gunbower Creek to Koondrook. To the north-west of Koondrook is a small block of 5,800 acres, known as the Murrabit Timber Reserve; and, between the Turrumberry pre-emptive right and the river, a third area of 1,200 acres; or 60,000 acres in all, of which the main forest only is permanently reserved. Originally, Gunbower Island, as it is called, was one of the finest natural sites in the colony for a State forest, its northern boundary being the River Murray, while the wide ana-branch known as Gunbower Creek, which leaves the river on the eastern verge of the forest, and rejoins it at the township of Koondrook, formed its southern boundary. In 1893-4, when the forest was a temporary reserve only, the Government of the day decided to permit settlement along the northern bank of Gunbower Creek, and a total area of 15,050 acres was excised, and made available for settlement in small allotments of 30 to 80 acres.

##### *Timber Supplies.*

The timber is of a similar character to that found in Barmah Forest, redgum being the principal tree, in various stages of growth. The best redgum has been culled out for many years, and the local saw-millers can now obtain larger supplies of mature logs on the New South Wales side of the river. Only one mill is at present established in the forest, its new site being on the river, about 12 miles east of Koondrook, but there are two others outside the reserve, one at the eastern and one at the western end.

Taking the distribution of the timber generally, useful grey box, fit for railway sleepers, is found in the eastern part of the forest; stunted or swamp box, in small irregular belts, towards the southern boundary; valuable box saplings and trees approaching maturity in a wide belt towards the centre; and redgum throughout the remainder of the area.

In the western part of the forest, extending from the central belt of box to within a few miles of Koondrook, and stretching northward to the river, is an area of about 15,000 acres of valuable redgum sapling timber, which at the time of our visit presented the appearance of a thick jungle, owing to the young trees being too close together, and thus retarding each other's growth. An area of 9,500 acres of young redgum to the east of this belt was thinned out some years ago, but a second clearing of the undergrowth which has sprung up between the stems is now much needed. On our return to Melbourne we pointed out to the Government that thinning-out operations should be resumed in these redgum reserves, and, on our recommendation, parties of men are now employed at Gunbower. In addition to the main forest, the Murrabit Reserve, beyond Koondrook, contains a dense growth of young saplings which require to be similarly dealt with. We think it well to state here that but little improvement can be made in the forest by thinning out isolated belts of young timber in the Murray reserves at long intervals, and then allowing a thick undergrowth to spring up among the felled stems. What we have in view to quicken the growth of the young trees is a systematic course of improvement fellings throughout both Barmah and Gunbower, and the clearing up of the felled saplings and waste until the forests are brought into a condition of something like order. To enable the Conservator to effect this necessary work there must be a liberal expenditure of public money until the thinning out is properly completed.

Between the eastern end of the forest and the boundary of Cohuna parish there is an area of about 12,000 acres of grey and yellow box and 8,000 acres of redgum. The latter area contains a considerable number of trees which have been rejected by the saw-millers, while in the box region, in addition to irregular patches of inferior timber, are belts of useful trees, which will furnish a large supply of sleepers. We recommend that hewers be permitted to cut, in this part of the forest, all old and hollow trees suitable for the material they require, and that, in order to secure proper supervision of their operations, an assistant to the forester be appointed.

With regard to the sand hills and bare spaces (about 2,000 acres) which are found at intervals, chiefly in the southern part of the reserve, the best method of bringing them under forest cover will be to fence them in as opportunity offers, and plant them with broadcast sowings of sugar gum. This tree, a native of the Flinders Range in South Australia, is of a hardy habit, and one of the quickest in growth of all eucalypts. It furnishes an excellent timber for sleepers, bridge and jetty work, props, and telegraph poles. It has for some years been successfully grown for shelter purposes in the northern districts of this colony, and in the climate and soil of Gunbower should flourish exceedingly well.

As to the areas which contain patches of inferior or stunted box, it is generally admitted that by destroying the useless trees, and retaining the best for seed purposes, an improved growth is obtained by natural regeneration, which produces good timber if the young seedlings are fenced in and protected from the ravages of sheep and cattle. In illustration of this fact, and its recognition in the Gunbower district, we have the testimony of Mr. E. Argyle, a grazier who has lived for a long period in the vicinity of the forest, and who states that over twenty years ago he knew portions which were very thinly timbered, but which, since the land has been under stricter supervision, have become gradually covered with a close growth of box and redgum.

#### *Management.*

The reserve is in charge of one forester, who is stationed at Tintarra, on a bend of the river, about 9 miles from the nearest postal township, and at a considerable distance from the settlement along Gunbower Creek and the bridges which give access to timber getters from the south. Owing to the length of the reserve (about 70 miles), the forester has a large area of ground to get over in order to properly carry out his duties, and this travelling is unduly increased by the remoteness of his present station from any central position where he can transact his business with timber getters, and supervise the fringe of the forest, on which settlement is established. The forest is effectively protected to the north by the river; it is on the

southern boundary that depredations of timber are likely to occur, and this boundary is virtually unprotected at present. After examination of various sites, we have decided to recommend the early removal of the forester's quarters from Tintarra to Dalton's Bridge, 8 miles southward, on Gunbower Creek. This bridge gives access to the forest from a considerable area of the farming district on Macorna Plains, and, as regards the southern boundary, is in a fairly central position. The nearest townships on the plains, Wee-wee-rup and Cohuna, are  $3\frac{1}{2}$  and 4 miles distant respectively.

At Tintarra, in addition to the buildings allotted to the forester, an unwise experiment has been made in establishing a nursery, ostensibly to supply trees for the mallee and the northern plains. At the time of our visit we learned that the raising of seedlings of suitable forest trees had for some time been discontinued, the nurseryman merely acting as caretaker, and, with the exception of a small plot of tamarisk plants, there was no pretence of the land being devoted to its proper use. If, as we have already pointed out, this site is unsuitable for the forester's quarters, it is still more unsuitable for the purpose of a distributing nursery. Far from any railway line, and on the northern fringe of the forest, a more inconvenient situation could scarcely be found. Moreover, in June and July, when the young plants require to be distributed, the site is, owing to the flooded condition of the forest, usually cut off from all vehicular communication with the settled districts on the south. Nevertheless, a considerable amount of public money has been spent in erecting quarters, stables, and men's huts, on a river wharf, and in laying out and preparing the various seed plots. We regard this nursery as useless in its present position, and as there is an area of about 100 acres containing several classes of fairly good soil near Dalton's Bridge, we recommend that a new site be chosen there, and that the work of raising forest and shelter trees suitable to the northern district, such as sugar gum, tallow-wood, silky oak, and pepper be resumed.

The royalty rates for redgum timber at Gunbower are the same as those in force at Barmah, with the exception of firewood, which is sold at 6d. per cord. Gunbower, however, differs from the Eastern forest, in having large supplies of excellent box timber, which is disposed of at the following rates:—

					Rate.	
					s.	d.
Milling timber, per 1,000 super. feet	...	...	...	...	4	0
Piles, up to 25 feet, each	...	...	...	...	7	0
(Each additional foot, 2d.)						
Scaffold poles, up to 20 feet, each	...	...	...	...	1	0
(Each additional foot, $\frac{1}{2}$ d.)						
Posts, per 100	...	...	...	...	4	0
Rails, per 100	...	...	...	...	6	0
Deadwood, per cord	...	...	...	...	0	6
Rough deadwood—						
One-horse load	...	...	...	...	1	0
Two-horse load	...	...	...	...	1	3
Four-horse load	...	...	...	...	1	6

The revenue obtained from the State forest for the year ending 30th June, 1898, was as follows:—

Royalty on redgum	...	...	...	...	£250
Royalty on box	...	...	...	...	105
Receipts from grazing	...	...	...	...	212
Total	...	...	...	...	£567

#### *Proposed Alienation of Box Timber Land.*

The proposal made by a number of witnesses, who are chiefly land-holders in the neighbourhood of the forest, to further reduce the area of this valuable reserve by throwing open for settlement a tract of from 4,000 to 7,000 acres in the eastern portion, between the head of Gunbower Creek and Cohuna, does not, on mature consideration, commend itself to us. It is true that portions of this area are thinly covered with stunted grey and yellow box; but they are so interspersed with timber of a useful kind—redgum, or mature and young box—that it would be almost impossible to excise along the south-eastern fringe an unbroken strip containing even the minimum area suggested without sacrificing good belts, and thus greatly injuring the forest. Another proposition made, that oblong strips, alternating with reserved belts of timber, should be demarcated from the southern boundary to the vicinity of the river, we cannot entertain for a moment. Such a plan would



virtually cut off these small eastern reserves from the main forest, would admit settlement into the heart of the timber, and materially affect the proper control and working of the whole area. It must be remembered that over 15,000 acres have already been excised, and settlement allowed along part of the northern bank of Gunbower Creek, the State thus giving up all the advantages of a natural forest boundary. Even if we could, regardless of other public considerations, see our way to agree to the excision of three or four thousand acres, there is no certainty that this concession would satisfy the settlers in the district or prevent future agitation for a further surrender of valuable forest land. In our opinion, the arguments against excision far outweigh those in support of it. We regard grey box as one of the most useful trees which the colony produces, and the eastern portion of Gunbower Reserve, which bears this timber, is a valuable adjunct to the redgum forest. There are on this area a very large number of trees suitable for railway sleepers, and it is estimated that hewers could, at the present time, obtain from fifty to sixty thousand from it. In addition to prop and pile timber now obtainable, it furnishes the best quality of fencing posts and firewood, and we are informed that a tract of from 100,000 to 150,000 acres of the denuded agricultural plains southward of Gunbower Creek is dependent on it for supplies of fencing material alone. The retention of the box lands will obviously lessen the demands of the district on the redgum areas for this purpose, and enable the latter timber to be conserved for more important uses.

As to the parts which, it is admitted, bear inferior timber, or are almost treeless, our proposals for re-forestation of the indigenous grey box and plantations of South Australian sugar gum will effectually remove this drawback and enhance the value of the reserve.

On the other hand, were we able to consent to further alienation for purposes of close settlement, the blocks, to be in keeping with the holdings excised in 1894, would be in small allotments of, say, 30 to 80 acres. With few exceptions, the settlement on these holdings is not of a kind to encourage the belief that much additional land would be brought under cultivation. The improvements are in many cases not of a satisfactory character, a comparatively small area is regularly put under crop, and a considerable number of the allotments have been taken up under section 49 of the Act, which dispenses with the condition of residence. Among the "improvements" effected may be included the ring-barking of tracts of valuable grey box, which, in the opinion of the Inspector of Forests, would have furnished 50,000 to 60,000 sleepers for the State railways, as well as large quantities of fencing material. As regards the portion of forest land which was originally allotted to village settlers, we understand that about 1,200 acres (abandoned or forfeited blocks) have recently been made available for occupation under the agricultural sections of the *Land Act* 1890. All the information at our disposal warrants us in expressing the opinion that settlement generally in this part of the northern district has not proved the success which was anticipated when the State permitted so considerable an area of valuable forest land to be alienated.

To sum up the whole question, the forest is already protected from alienation by the fact of its having been made a permanent reserve on the recommendation of the present Minister of Lands in 1896, and its area can now be diminished only by a special Act of Parliament. After traversing its whole length from the eastern to the western boundary, and—in the course of evidence taken at Echuca, Gunbower, Cohuna, and Koondrook—after hearing the views of settlers, saw-millers, and timber getters generally, we record our opinion that the forest is of the first importance to the State; that the retention of the whole area as a source of timber supply for public and private requirements is necessary; and that the present permanent reservation of 53,000 acres should be maintained.

#### *Protection of Adjacent Redgum Reserves.*

In order to protect from alienation the small redgum timber reserves in the neighbourhood of the main forest, we recommend the permanent reservation, under section 10 of the *Land Act* 1890, of the following blocks, which will increase the total area to 60,000 acres:—

Murrabit Reserve, north-west of Koondrook	...	Acres. 5,800
Reserve adjoining Turrumberry pre-emptive right	...	1,200
		<hr/> 7,000

## SUMMARY OF RECOMMENDATIONS

The recommendations made in this Report are as follows:—

*Barmah Forest.*

1. The thinning out of young timber on an area estimated at 50,000 acres.
2. The survey of the forest into blocks of about 1,000 acres, as the basis for preparation of a proper working plan.
3. The permanent reservation of the whole forest area between the River Murray and
  - (1) a line running parallel to, and at a distance of 1 chain south of, the route of the flood embankment from Barmah to Ulupna;
  - (2) a line at a like distance south of the levee already made between Ulupna and Cobram wherever the route of the embankment being on Crown land permits of this being done;
  - (3) the existing southern boundary of the forest land from the eastern end of the Cobram levee to the junction of the River Ovens.
4. The adoption of a uniform charge of Ten shillings per month, or Six pounds per annum, for all sites of mills cutting redgum under royalty.
5. The utilization of old and hollow trees in the forest for railway sleepers, and the admission of hewers for this purpose.
6. The early appointment of an assistant to the forester.
7. The destruction of useless stunted and hollow box trees on the sand ridges, and the gradual re-afforestation of these areas by natural reproduction of grey box and plantations of sugar gum.
8. The early submission of a plan showing the new route proposed for the flood embankment in the parishes of Barmah and Picola to the Commission for final approval.
9. The disposal of all useful timber outside the new forest boundary at royalty rates before alienation of the land.
10. The classification of the Crown land outside the said boundary as a reclaimed area, its subdivision into allotments not exceeding 100 acres, and its disposal by selection at the rate of £3 per acre.

*Gunbower Forest.*

11. The thinning out of redgum saplings on (a) an area of 15,000 acres between Tintarra and Koondrook; (b) an area of 9,500 acres near Tintarra (second improvement felling); (c) Murrabit timber reserve.
12. The utilization of old and hollow grey box and redgum in the eastern part of the forest (about 20,000 acres) for sleepers, and entry of hewers for the purpose.
13. The appointment of an assistant to the forester to supervise hewing.
14. The re-afforestation of inferior box lands by natural reproduction, and plantations of sugar gum.
15. The early removal of the forester's quarters from Tintarra to Dalton's Bridge, on Gunbower Creek.
16. The removal of the nursery from Tintarra to a new site near Dalton's Bridge.
17. The retention of the present permanent reserve of 53,000 acres for forest purposes.
18. The permanent reservation of Murrabit and Turrumberry timber reserves (7,000 acres).

*Conclusion.*

In conclusion, we feel it our duty to point out that the forests of Barmah and Gunbower have not received the care and protection which should have been bestowed upon so valuable a State property. No private owner of extensive areas of redgum would for a moment deal with such an estate in the manner in which these important reserves have been managed and worked in the past.

Owing to the excessive cutting which has taken place in them for a long period, the district saw-millers are to a large extent now dependent for logs on the fine redgum forests of New South Wales, on the northern bank of the Murray, whose present large supplies of excellent timber are due to strict conservation and the maintenance of high royalty rates.

We are convinced that, under a system of strict supervision and control, and by adopting our general recommendations, these valuable forests can, at a reasonable annual expenditure, be restored to a more profitable timber-yielding condition; but, unless this course be taken, we fear that both Barmah and Gunbower reserves will further rapidly deteriorate as a source of timber supply, thus causing serious loss to the whole community.

A. L. TUCKER, President.

ALF. S. BAILES.

THOS. BAKER.

J. BALFOUR BURTON.

DAVID HAM.

DAVID KERR.

A. R. OUTTRIM.

CHARLES SARGEANT.

G. J. TURNER.

Parliament House, Melbourne,  
15th March, 1899.