

Forests NSW

SF 781 FI



3.1 F  
4

1927.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

# REPORT

OF

## ROYAL COMMISSION OF INQUIRY

ON

# BUSH FIRES

IN THE

## STATE OF NEW SOUTH WALES.

---

*Ordered by the Legislative Assembly to be printed, 15 November, 1927.*

---



SYDNEY: ALFRED JAMES KENT, GOVERNMENT PRINTER.

1927.

1927.

LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

---

# REPORT

OF

ROYAL COMMISSION OF INQUIRY



# BUSH FIRES

IN THE

STATE OF NEW SOUTH WALES.

---

*Ordered by the Legislative Assembly to be printed, 15 November, 1927.*

---



SYDNEY: ALFRED JAMES KENT, GOVERNMENT PRINTER. |

1927.

**COMMISSIONERS.**

JOHN BOYD CRAMSIE, Esq. ... .. Chairman.  
NORMAN WILLIAM JOLLY, Esq. ... .. }  
FRANK JACKSON, Esq. ... .. } Members.

GEORGE H. JONES,  
Secretary.

---

**TERMS OF THE REFERENCE.**

- (a) The causes, or probable causes, of the recent fires in the country districts of New South Wales;
- (b) Means which could be adopted to prevent the occurrence of and to suppress or deal with similar fires; and
- (c) What, if any, Amendments should be made in the Statutes relating to the matters aforesaid.



## COMMISSION.

GEORGE THE FIFTH, by the Grace of God, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India.

To our Trusty and Well-Beloved

JOHN BOYD CRAMSIE, Esquire (Chairman of the Metropolitan Meat Industry Board), Chairman;  
NORMAN WILLIAM JOLLY, Esquire (Forestry Commissioner);  
FRANK JACKSON, Esquire (Chief Officer of the Fire Brigades Board of the State of New South Wales).

GREETING:—

WHEREAS it is desirable that the matters hereinafter referred to should be inquired into and reported upon: Now know ye, that we, reposing great trust and confidence in your integrity, learning and ability, do, with the advice of the Executive Council of Our said State, hereby authorise and appoint you to inquire into and report upon the following matters, namely:—

- (a) The causes, or probable causes, of the recent fires in the country districts of New South Wales.
- (b) Means which could be adopted to prevent the occurrence of and to suppress or deal with similar fires; and
- (c) What, if any, Amendments should be made in the Statutes and relating to the matters aforesaid;

AND we do, by these presents, give and grant you full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and other documents as you may deem expedient and to visit and inspect the same at the offices or places where the same or any of them may be deposited and to inquire of the premises by all lawful ways and means: And Our further will and pleasure is that you do, within the space of one month from the date of this Our Commission, certify to Us, in the Office of Our Premier, at Sydney, in Our said State, what you shall find touching the premises: And we do hereby command all Government Officers and other persons whomsoever within Our said State, that they be assistant to you in the execution of these presents: And we do appoint you, the said John Boyd Cramsie, Esquire, to be Chairman of this Our Commission: And we do hereby declare that the Royal Commissions Act, 1923, with the exception of Division 2 of Part 2 thereof, shall apply to and with respect to this inquiry.

In Testimony Whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said State to be hereunto affixed.

Witness Our trusty and Well-beloved Sir DUDLEY RAWSON STRATFORD DE CHAIR, Admiral in Our Royal Navy, Knight Commander of Our Most Honorable Order of the Bath, Member of Our Royal Victorian Order, Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney, in Our said State this eighteenth day of January, in the year of Our Lord One thousand Nine hundred and Twenty-seven, and in the Seventeenth year of Our Reign.

(Sgd.) D. R. S. DE CHAIR,  
Governor.

By His Excellency's Command.  
(Sgd.) J. T. LANG.

Entered on Record by me in the REGISTER OF PATENTS No. 42, page 72, this Nineteenth day of January, One thousand nine hundred and twenty-seven.

For the Colonial Secretary and Registrar of Records,  
(Sgd.) E. B. HARKNESS,  
Under Secretary.

NOTE.—The term within the Commission was to furnish its Report was extended:—

- First, on the 23rd February for a period of two months until 17th April, 1927.
- Second, on the 12th April for a period of one month until 17th May, 1927.

## CHAPTERS OF THE REPORT.

- (a) The causes, or probable causes, of the recent fires in the country districts of New South Wales; pp. 9-12.
- (b) Suggested means which could be adopted to prevent the occurrence of and to suppress or deal with similar fires; pp. 13-15
- (c) What, if any, amendments should be made in the Statutes relating to the matters aforesaid. pp. 15-16

# ROYAL COMMISSION OF INQUIRY ON BUSH FIRES.

## REPORT.

To His Excellency, Sir DUDLEY RAWSON STRATFORD DE CHAIR, Admiral in the Royal Navy, Knight Commander of the Most Honorable Order of the Bath, Member of the Royal Victoria Order, Governor of the State of New South Wales and its Dependencies :—

MAY IT PLEASE YOUR EXCELLENCY,

The subjects as to which we have been appointed as a Commission to inquire and report to Your Excellency are:—

- (a) The causes, or probable causes, of the recent fires in the country districts of New South Wales;
- (b) Means which could be adopted to prevent the occurrence of and to suppress or deal with similar fires; and,
- (c) What, if any, Amendments should be made in the Statutes relating to the matters aforesaid.

The time originally allowed for the completion of the work was one month from the 18th January last, and that was extended from time to time at the request of the Commission to the 17th May, 1927.

At the sittings of the Commission in public, Mr. W. E. Tayler appeared for the Agricultural Bureau, Mr. W. C. Cambridge for the Farmers and Settlers' Association, Mr. P. Grant for the Primary Producers' Union, and Mr. J. W. Allen for the Graziers' Association, all of this State; Mr. F. W. Bretnall, Assistant Solicitor for New South Wales Railways, represented the Railway Commissioners. During the course of the inquiry, the Commission had placed before them suggestions as to the best procedure to be adopted in order to minimise the risk of and danger from Bush Fires, and the schedule hereto shows a number of recommendations made by the various associations connected with rural interests.

Taking first, the recommendations of the Farmers and Settlers' Association, a comparison has been made of these when considered in relation to those made by the Graziers' Association and the Agricultural Bureau. The recommendations of the Farmers and Settlers' Association are shown hereunder and are supported by the Graziers' Association of New South Wales where so indicated.

In the same way, the Agricultural Bureau are in agreement with the recommendations made by the Farmers and Settlers' Associations of this State in certain of the suggestions of the latter body as shown hereunder :—

Suggestions made for the Control of Bush Fires by— Mr. W. C. Cambridge on behalf of the Farmers and Settlers' Association.	Graziers' Association.	Agricultural Bureau.
1. Each Shire to be subdivided into Bush Fire Districts.	Approved of Shires having control when residents have not established Brigades.	Approved legislation to be passed to give Shires necessary power.
2. Each district to elect a Bush Fire Committee.	Approved.	Approved.
3. Each Bush Fire Committee to elect a captain.	There should be a Captain and Lieutenants.	Approved Captains and Officers to be appointed.
(a) To organise Voluntary Bush Fire Brigades within their respective districts.	Approved.	Shire Councils shall take a vote of all ratepayers as to whether they approve of Bush Fire areas being formed.
(b) To recommend to Shire Councils the purchase of fire carts and necessary equipment for fire fighting.	Brigades should provide their own equipment. Shires to do so where Brigades have not been established.	Favours establishment of a Board to control collection of the tax and supervision of expenditure.
(c) To authorise the engagement of fire fighters where advisable.	Disapprove of specially paid men.	All labour voluntary.
(d) To arrange for uniform water facilities where possible by having large taps attached to elevated tanks, suitable approaches made to dams for filling carts and convenient gates to approach same.	To be left to the discretion of the Committees.	Rules to be left to the discretion of the Committees subject to approval of the Board.

Suggestions made for the Control of Bush Fires by—  
Mr. W. C. Cambridge on behalf of the Farmers  
and Settlers' Association,—*continued.*

Graziers' Association.

Agricultural Bureau.

- |   |  |   |
|---|--|---|
| (e) To link up fallow paddocks and natural fire breaks by ploughing or burning breaks through private or public property, roads, &c.  | Approved.  | Rules to be drawn up.   |
| (f) To burn at least 33 feet where there is risk of fire on the outside of the railway fence in conjunction with the railway employees in addition to the railway authorities burning within their boundaries.                  | Generally approved where necessary.  | Rules to be drawn up.   |
| (g) To burn camping areas at suitable water and camping reserves.   | Generally approved where necessary.  | Shire Councils to set out the fire-places and brigades to keep them clean.  |
| (h) To arrange with settlers who live on hills or have a clear view and are connected by telephone to act as "lock-outs" and communicate with fire brigades in case of fire.  | Generally approved where necessary.  | To be incorporated in the rules.  |
| 4. Each Shire to be empowered to raise funds by means of a small Shire Rate for the purpose of meeting expenses incurred in the equipping and upkeep of Bush Fire Brigades in conjunction with the Bush Fire Committees.        | Approved where Voluntary Brigades neglect to form Committees and only for areas where such neglect occurs. | Suggested Shire Rate: Insurance Companies, one-third; Government, one-third; Landholders and Occupiers, one-sixth; Shire Council, one-sixth.                          |
| 5. Control of use of tractor engines in dangerous places and the provision of portable fire extinguishers on chaff cutters, tractors, threshers and other travelling plants where risk of fire exists.                          | Approved.  | Approved.   |
| 6. Where possible build stone or brick fire-places for the use of travellers, teamsters, and drovers on the camping area that are mostly used, where there is a risk of fire.   | Approved.  | See (g), re keeping fire-places clean.  |
| 7. The Shire Councils to collect subsidy from the Government and the Insurance Companies on all moneys expended in connection with the equipment and all expenses incurred in maintaining and operating the Bush Fire Brigades. | Disapproved.   | Approved in principle except so far as the question of the custody of the amount collected, which, in the opinion of Mr. Tayler, should be in the hands of the Board. |
| 8. Control or prohibit sale or use of wax matches, phosphorus or other dangerous inflammable chemicals.   | Approved.  | Approved.   |

The Primary Producers' Union represent largely producers in coastal districts, where they consider the danger from bush fires is not so pronounced, and where the smaller size of the holdings affords more adequate means of fire protection.

The Union passed the following resolution:—

That, if an Act be passed for the suppression of bush fires, the operation of the Act be not extended to rural areas, unless the shire councils apply for the extension of the operation of the Act.

This is in connection with the imposition of any special rate.

In order, however, to assist in any action to minimise the risk of damage from bush fires in a general way and without recourse to legislation, the Union recommends:—

1. That all smoking compartments in railway carriages be fitted with receptacles for the purpose of depositing cigar, cigarette butts, and waste tobacco; and further, that it be made an offence under the by-laws of the Railway Commissioners to throw any of these articles mentioned out of the carriage window.
2. Where possible, railway engines should only be raked out when the train is stationary near a railway platform.
3. That spark arresters be fitted to all engines running in country districts.
4. That a substantial reward be offered for evidence leading to conviction of persons wilfully firing timber, and further, that a substantial fine be recommended in such cases.
5. In timbered areas, that fire breaks be burnt along the tops of the ridges. This should frequently prevent serious fires from spreading.

Further resolutions passed at various meetings of members of branches of the Primary Producers' Union are:—

- (a) That the Act dealing with careless use of fire be so amended that the ganger or foreman be made responsible regarding the safety of camp fires where gangs are employed.
- (b) That the Railway Commissioners be liable under the Act for causing fire.
- (c) That legislation be passed to enable a sufferer from a bush fire to sue the person on whose property the fire starts.
- (d) That in the event of water being available, a clearing of 1 chain be made from the forest, and a pumping plant be erected sufficiently strong for a force of water to be driven through a small pipe with a tap here and there for the attachment of the hose.
- (e) That a covering of some kind be placed before the funnel of railway engines to prevent sparks from flying which no doubt cause a number of fires.
- (f) That the Executive oppose any taxation to provide funds to establish fire brigades for use in connection with bush fires in coastal districts.
- (g) That landholders should burn a break around their property, when danger of fire getting out of control is not likely; say in early spring or as soon after as possible.

Suggestions made for the Control of Bush Fires by—  
Mr. W. C. Cambridge on behalf of the Farmers  
and Settlers' Association.—*continued.*

Graziers' Association.

Agricultural Bureau.

- |   |  |   |
|---|--|---|
| (e) To link up fallow paddocks and natural fire breaks by ploughing or burning breaks through private or public property, roads, &c.  | Approved.  | Rules to be drawn up.   |
| (f) To burn at least 33 feet where there is risk of fire on the outside of the railway fence in conjunction with the railway employees in addition to the railway authorities burning within their boundaries.                  | Generally approved where necessary.  | Rules to be drawn up.   |
| (g) To burn camping areas at suitable water and camping reserves.   | Generally approved where necessary.  | Shire Councils to set out the fire-places and brigades to keep them clean.  |
| (h) To arrange with settlers who live on hills or have a clear view and are connected by telephone to act as "look-outs" and communicate with fire brigades in case of fire.  | Generally approved where necessary.  | To be incorporated in the rules.  |
| 4. Each Shire to be empowered to raise funds by means of a small Shire Rate for the purpose of meeting expenses incurred in the equipping and upkeep of Bush Fire Brigades in conjunction with the Bush Fire Committees.        | Approved where Voluntary Brigades neglect to form Committees and only for areas where such neglect occurs. | Suggested Shire Rate: Insurance Companies, one-third; Government, one-third; Landholders and Occupiers, one-sixth; Shire Council, one-sixth.                          |
| 5. Control of use of tractor engines in dangerous places and the provision of portable fire extinguishers on chaff cutters, tractors, threshers and other travelling plants where risk of fire exists.                          | Approved.  | Approved.   |
| 6. Where possible build stone or brick fire-places for the use of travellers, teamsters, and drovers on the camping area that are mostly used, where there is a risk of fire.   | Approved.  | See (g), re keeping fire-places clean.  |
| 7. The Shire Councils to collect subsidy from the Government and the Insurance Companies on all moneys expended in connection with the equipment and all expenses incurred in maintaining and operating the Bush Fire Brigades. | Disapproved.   | Approved in principle except so far as the question of the custody of the amount collected, which, in the opinion of Mr. Tayler, should be in the hands of the Board. |
| 8. Control or prohibit sale or use of wax matches, phosphorus or other dangerous inflammable chemicals.   | Approved.  | Approved.   |

The Primary Producers' Union represent largely producers in coastal districts, where they consider the danger from bush fires is not so pronounced, and where the smaller size of the holdings affords more adequate means of fire protection.

The Union passed the following resolution:—

That, if an Act be passed for the suppression of bush fires, the operation of the Act be not extended to rural areas, unless the shire councils apply for the extension of the operation of the Act.

This is in connection with the imposition of any special rate.

In order, however, to assist in any action to minimise the risk of damage from bush fires in a general way and without recourse to legislation, the Union recommends:—

1. That all smoking compartments in railway carriages be fitted with receptacles for the purpose of depositing cigar, cigarette butts, and waste tobacco; and further, that it be made an offence under the by-laws of the Railway Commissioners to throw any of these articles mentioned out of the carriage window.
2. Where possible, railway engines should only be raked out when the train is stationary near a railway platform.
3. That spark arresters be fitted to all engines running in country districts.
4. That a substantial reward be offered for evidence leading to conviction of persons wilfully firing timber, and further, that a substantial fine be recommended in such cases.
5. In timbered areas, that fire breaks be burnt along the tops of the ridges. This should frequently prevent serious fires from spreading.

Further resolutions passed at various meetings of members of branches of the Primary Producers' Union are:—

- (a) That the Act dealing with careless use of fire be so amended that the ganger or foreman be made responsible regarding the safety of camp fires where gangs are employed.
- (b) That the Railway Commissioners be liable under the Act for causing fire.
- (c) That legislation be passed to enable a sufferer from a bush fire to sue the person on whose property the fire starts.
- (d) That in the event of water being available, a clearing of 1 chain be made from the forest, and a pumping plant be erected sufficiently strong for a force of water to be driven through a small pipe with a tap here and there for the attachment of the hose.
- (e) That a covering of some kind be placed before the funnel of railway engines to prevent sparks from flying which no doubt cause a number of fires.
- (f) That the Executive oppose any taxation to provide funds to establish fire brigades for use in connection with bush fires in coastal districts.
- (g) That landholders should burn a break around their property, when danger of fire getting out of control is not likely; say in early spring or as soon after as possible.



It will, therefore, be seen that there is a majority vote of three associations dealing with rural interests agreeing in the main principles and differing only in detail—*i.e.*, all are of the opinion that Bush Fire Brigades should be formed and committees appointed to immediately control them.

On the other hand, the Primary Producers' Union is not so definite, and, while not denying the need for legislation in some districts, consider that any such legislation should only apply where shire councils specifically ask for its extension to their particular area.

There are further recommendations made by the Agricultural Bureau, with which both the Farmers and Settlers' Association and the Graziers' Association agree in principle, namely:—

1. Prohibition of the sale and use of any but safety matches within the State.
2. The Crown, the Railway Commissioners and their respective employees to be included amongst those who may be prosecuted under the Careless Use of Fire Act.
3. That the Railway Commissioners be made responsible for losses occasioned by fires, when such fires have been proved to be caused by the railway engines or by the carelessness of railway employees.
4. That the provisions of the Careless Use of Fire Act be strictly enforced.
5. That manufacturers of farm tractors be compelled to adopt a more efficient protective exhaust for use when working in the harvest field.
6. That all persons using farm tractors working in the harvest field be compelled to equip the tractors with an efficient chemical fire extinguisher.
7. That, in all parts of the State, where practicable, Bush Fire Brigades be formed in convenient sized areas, according to settlement and class of country.

#### (A) The causes, or probable causes, of the recent fires in the country districts of New South Wales.

The Commission took exhaustive evidence from fifty-six witnesses during the course of the inquiry, thirty-five of whom are now actually engaged in grazing or farming pursuits, the balance being representatives of associations of rural interests and of the Railway and Forestry Services. The evidence was almost unanimous that the principal causes of bush fires may be ascribed to:—

##### 1. USE OF WAX MATCHES.

Mr. M. Kilpatrick, M.L.A., evidence, page 198, says:—

In my view it is the greatest menace we have at present in New South Wales . . . their use in the country should be prohibited altogether.

Q. Then you would prohibit their purchase and use in country centres?—A. Yes, I would be very strong on that point.

The Hon. N. W. Kater, M.L.C., evidence, page 213, said in reply to a question:—

Q. Would you favour partial or total prohibition of wax matches in country districts?—A. I would favour total prohibition of them.

Mr. H. V. C. Thorby, M.L.A., evidence, page 296, said in reply to a question:—

We would like to see by some special Act that it would be made an offence to carry wax matches outside the Metropolitan area; then anybody found in possession of wax matches would be subject to a penalty for carrying them.

One could repeat this class of evidence from that of many witnesses before the Commission, and it is overwhelming in its gravity as a cause of bush fires.

##### 2. CARELESSNESS.

The evidence given before this Commission so far as carelessness is concerned, has, perhaps, impressed us more than any other feature of our inquiry. Witnesses from all over the State, including Forestry officers, have given instances of carelessness which it is difficult to credit when property and lives are jeopardised by such acts.

Mr. A. Bragg, Cootamundra, evidence, page 225, says:—

The biggest fire we had in Cootamundra district this year, in which I got badly scorched myself and lost about £4,000 worth of property, sheep, haystacks, and about 8 miles of fencing, was caused through a cigarette butt being thrown down in front of a stable door. . . . I might say it was a very windy day. They saw some horse dung smouldering and put an old piece of iron over the top of it. As soon as they lifted the iron the wind scattered the burning horse dung and so I lost about £4,000 worth of property and nearly 300 tons of hay.



Mr. A. W. Beach, Oakview, Brungle, evidence, page 500, said :—

I have myself had occasion to stop some travellers since Christmas from lighting a fire alongside a log. I said to them, "Look at the country around; this is the cause of fires." They said, "Oh, you mind your own business!"

Mr. R. H. W. Hawker, President of the Liverpool Plains Shire Council, evidence, page 487, said :—

I have actually seen fires alight between two wheat paddocks caused by the carelessness of our own employees when going to work and leaving their fires alight.

### 3. LOCOMOTIVES.

The associations represented before the Commission, namely, the Bureau of Agriculture, the Farmers and Settlers' Association, Graziers' Association, and the Primary Producers' Union are unanimous in their evidence that many fires are caused by locomotives, either through defective spark arresters or ash trays. So insistent were witnesses in this evidence, that the Commissioners deemed it advisable to call evidence from the Railway Department in order to present first-hand information as to the method adopted to prevent fires being caused by such means. The Commission heard evidence from Mr. G. King, Chief Inspector of Permanent Way, Metropolitan Division; Mr. H. Young, Principal Designing Engineer; and Mr. W. Meham, Locomotive Superintendent, New South Wales Railways. Their evidence showed that the Department is fully alive to the great importance of doing everything possible to minimise the risk of bush fires caused by locomotives, and it seems to the Commission, that, provided the instructions issued by the Department to its officers are carried out faithfully, the percentage of fires from this cause would be very small indeed. The return furnished of instructions issued and work done (*Exhibits 32, 33, 34 and 35*) are very clear and indicate that so far as the Department is concerned the responsibility is fully understood; but, in order that any great system might operate successfully, co-operation is essential, and your Commissioners invite attention to the following extract from Mr. King's evidence, page 450 :—

Q. As to the notices to adjoining owners, have you found in your experience that adjoining land-holders are ready to provide breaks and co-operate with the staffs when burning off?—A. It has been my experience that fully 50 per cent. of them meet the Department very reasonably in giving assistance, but the remaining 50 per cent. turn a deaf ear.

The Commission believes that the Railway Department is prepared to allow the ganger in charge of any particular section to attend a meeting of any proposed local Bush Fire Committee on one afternoon each month. The General Secretary of the Graziers' Association tendered as an exhibit (A. 10) blue prints of special spark arresters and other fittings on engines, used in various railway services in different parts of the world, including those in use in the Argentine, Canada and the United States. These were handed to the representative of the Railway Commissioners, and after careful examination Mr. Young, Principal Designing Engineer, stated all of these special fittings were known to him and he considered the locomotives in use on the New South Wales Railways were equally well fitted.

Mr. H. Young in his evidence, page 422, said :—

We have not been impressed with the inefficiency of our existing equipment. We have no report to show that our spark arresters and our smoke boxes are not effective. We have of course the usual human difficulty—the personal equation comes into it—where men have failed to make a proper fitting.

We were much interested in the evidence of Mr. Young in regard to the dropping of ashes on the railway sleepers. On page 426, the witness, in reply to a question asked, said :—

If, for instance, they drop the ashes they should not drop them unless they used a water sprinkler on such ashes. When you have a water sprinkler it is true that in most country you may drop the ashes if you drench them properly.

We admit the difficulty experienced by the Department in providing bigger ash-trays in engines with low boilers, but we consider that the practice of dropping ashes on the permanent way is conducive to bush fires, inasmuch as Mr. Young, in his evidence, referring to sleepers being on fire, said :—

That ash-pans may be full of ashes and the driver may have omitted to drench them with water and some may get away.

Mr. W. Mecham, Locomotive Superintendent, Railway Department, said, in reply to a question, evidence, page 432 :—

Q. What is the position with regard to the maintenance to which you attend?—A. Generally speaking the maintenance is satisfactory, but I regret to say that we have occasionally officers who do not perhaps look after the position as well as they might. As a matter of fact, we had to deal with an officer last year for neglect.

Again on page 433 :—

Q. Do you consider now that the dangers are getting so great and these bush fires have recently been so serious, that more stringent measures will be taken?—A. Yes, that is absolutely necessary and it is quite certain that more stringent measures will be taken, and they have been taken, as a matter of fact, during the past summer. They will continue to be in operation probably during the winter months in order to get things right for the next summer. I think we have now improved our spark arresters, and so far as the smoke-box is concerned, I do not think there will be any trouble. As far as the ash-pan is concerned, I am afraid we shall always have a difficulty there; the only way we can expect to improve it is by continually hammering at it and providing the best means that we can to assist the engine-men in getting their engines along to time and keeping the trouble down . . . then the percentage of ash which you experience with our Western coal would of course fill up the pans and that is the dangerous time.

We cannot, however, but draw attention to the danger which appears to exist from using Western coal with old type locomotives having only a small carrying capacity in the ash-tray. This coal is known to produce a greater percentage of ash than the Newcastle coal.

In dealing with a large body of men scattered throughout the country, and attending to duties of such diverse nature, we understand the difficulty with which the Commissioners have to contend, and feel that their constant desire is to improve existing conditions and to continually raise the present standard of efficiency in the various Departments. Other causes of bush fires, of which the Commission had ample evidence, were as follows :—

4. Tractors and harvesters.
5. Lighted cigarettes and tobacco.
6. Lightning.
7. Over insurance.
8. Malicious acts.
9. Glass lying in the fields.
10. Use of stick phosphorus.

It will be seen, therefore, that out of ten causes enumerated, the majority must be associated with carelessness before any danger ensues. The outstanding lesson to be drawn from this inquiry is that the problem of dealing with bush fires would not be a problem at all if all people would only exercise care, and not even care which would impose any undue hardship, but ordinary thought which every one should take in their every-day actions. Still, we find oft-repeated evidence of people who will leave fires unattended, not properly extinguish them when finished with, throw lighted matches down without even a glance to see if the match remains alight or not, burn off and leave the fire unattended, take defective harvesters into fields of hay—in fact, do any of these acts that a moment's thought would tell them at once it is wrong to do. This carelessness is so profound that it is doubtful whether some, even if they did consider the results of their actions, would realise there was any danger. The pre-eminent duty which devolves on the State lies, therefore, in the direction of educating people to a sense of the certain danger which follows their neglect.

Mr. W. C. Cambridge, Secretary of the Farmers and Settlers' Association evidence, page 258, says :—

I consider that the educational side of this matter must not be overlooked, and it should be possible, through the agency of the Department of Education, to arrange that lessons dealing with the use and misuse of fires more particularly from a rural fires control standpoint, should be given regularly, or the same object might be achieved by publishing suitable articles in the School Magazines, particularly during the summer months.

Q. That is through the country schools?—A. Yes, the Department of Education issued a monthly magazine containing short articles and lessons, and that magazine is practically the reader in the schools. I think perhaps that would be a good means of educating the rising generation.

Mr. W. Mecham, Locomotive Superintendent, Railway Department, said, in reply to a question, evidence, page 432 :—

Q. What is the position with regard to the maintenance to which you attend?—A. Generally speaking the maintenance is satisfactory, but I regret to say that we have occasionally officers who do not perhaps look after the position as well as they might. As a matter of fact, we had to deal with an officer last year for neglect.

Again on page 433 :—

Q. Do you consider now that the dangers are getting so great and these bush fires have recently been so serious, that more stringent measures will be taken?—A. Yes, that is absolutely necessary and it is quite certain that more stringent measures will be taken, and they have been taken, as a matter of fact, during the past summer. They will continue to be in operation probably during the winter months in order to get things right for the next summer. I think we have now improved our spark arresters, and so far as the smoke-box is concerned, I do not think there will be any trouble. As far as the ash-pan is concerned, I am afraid we shall always have a difficulty there; the only way we can expect to improve it is by continually hammering at it and providing the best means that we can to assist the engine-men in getting their engines along to time and keeping the trouble down . . . then the percentage of ash which you experience with our Western coal would of course fill up the pans and that is the dangerous time.

We cannot, however, but draw attention to the danger which appears to exist from using Western coal with old type locomotives having only a small carrying capacity in the ash-tray. This coal is known to produce a greater percentage of ash than the Newcastle coal.

In dealing with a large body of men scattered throughout the country, and attending to duties of such diverse nature, we understand the difficulty with which the Commissioners have to contend, and feel that their constant desire is to improve existing conditions and to continually raise the present standard of efficiency in the various Departments. Other causes of bush fires, of which the Commission had ample evidence, were as follows :—

4. Tractors and harvesters.
5. Lighted cigarettes and tobacco.
6. Lightning.
7. Over insurance.
8. Malicious acts.
9. Glass lying in the fields.
10. Use of stick phosphorus.

It will be seen, therefore, that out of ten causes enumerated, the majority must be associated with carelessness before any danger ensues. The outstanding lesson to be drawn from this inquiry is that the problem of dealing with bush fires would not be a problem at all if all people would only exercise care, and not even care which would impose any undue hardship, but ordinary thought which every one should take in their every-day actions. Still, we find oft-repeated evidence of people who will leave fires unattended, not properly extinguish them when finished with, throw lighted matches down without even a glance to see if the match remains alight or not, burn off and leave the fire unattended, take defective harvesters into fields of hay—in fact, do any of these acts that a moment's thought would tell them at once it is wrong to do. This carelessness is so profound that it is doubtful whether some, even if they did consider the results of their actions, would realise there was any danger. The pre-eminent duty which devolves on the State lies, therefore, in the direction of educating people to a sense of the certain danger which follows their neglect.

Mr. W. C. Cambridge, Secretary of the Farmers and Settlers' Association evidence, page 258, says :—

I consider that the educational side of this matter must not be overlooked, and it should be possible, through the agency of the Department of Education, to arrange that lessons dealing with the use and misuse of fires more particularly from a rural fires control standpoint, should be given regularly, or the same object might be achieved by publishing suitable articles in the School Magazines, particularly during the summer months.

Q. That is through the country schools?—A. Yes, the Department of Education issued a monthly magazine containing short articles and lessons, and that magazine is practically the reader in the schools. I think perhaps that would be a good means of educating the rising generation.

## 4. TRACTORS AND HARVESTERS.

Ample evidence was given of the danger of causing bush fires from defective motor tractors and harvesters. Mr. John Clatworthy, of Beechmore, Goonumbla, near Parkes, in his evidence on page 77, said :—

With regard to tractors, I think the onus of equipping with a safe exhaust should be on the manufacturer of the tractor, and a further onus on the farmer or individual to exercise every care in the use of the tractor.

Again, on page 80, Mr. Clatworthy said in answer to a question :—

Q. Do you think that men using tractors in a wheatfield, who interfere with the exhaust, should come under the provisions of the Careless Use of Fire Act ?—A. Yes, certainly.

Mr. J. R. Postlethwaite, Nelungaloo, Parkes, in his evidence, page 130, said in answer to a question :—

Q. Do you think it should be made compulsory for tractors to be fitted in such a way that no danger of their setting fire either by contact with exhaust or emission of sparks should occur ?—A. Yes, everyone should be compelled to use efficient motor tractors.

Mr. W. C. Cambridge, General Secretary, Farmers and Settlers' Association, in his evidence, page 258, said in answer to a question :—

Q. Would you be agreeable to it being made compulsory that every tractor that goes into the country should be properly fitted with regard to its exhaust ?—A. Yes.

## 5. OVER INSURANCE.

The Commission views this phase of its investigations with some anxiety, because no matter how well intentioned any safeguards might be, there may be some persons, actuated by a desire for financial self-preservation, and unwilling to face the prospect of a personal loss, notwithstanding the enormous risk which they must know their actions may bring upon their neighbours and the State, who will, acting under such unworthy impulse, fire their crops which do not appear to them likely to give the necessary promise when reaped, of returning the amount for which they are insured.

The Commission cannot shut their eyes to the unpleasant truth that in all communities such men may possibly exist. They, therefore, went carefully into this matter, and secured evidence of Mr. E. M. Haythorpe, chairman of the Fire Underwriters' Association of New South Wales, who stated that the business of insurance of crops is mostly conducted under the supervision of inspectors, who are salaried officers of the companies.

On page 506 Mr. Haythorpe said :—

There are agents of course who send in their proposals direct to the companies without there being any inspection by our inspectors; but in practice, I think that most companies who accept proposals from agents do so with a complete faith in that particular agent.

On page 509, Mr. Haythorpe said in reply to a question :—

Q. You say in most cases the crop is inspected by either one of the paid officers or by the agent ?—  
Yes.

Later on, in reply to Mr. Commissioner Jackson :—

Q. From your evidence I understand that a number of sub-agents go round from farm to farm asking the people if they want to insure their crop ?—A. Yes.

Q. And it would appear that there is a lot of competition among these agents ?—A. Yes, there is.

In reply to Mr. Tayler's question, page 521 :—

Q. When an agent sends in a proposal, does he state he has inspected the crop ? Mr. Haythorpe answered :—We ask on the proposals if he has inspected it and whether he has satisfied himself the particulars are correct, then he certifies on the same form the acreage and the estimated yield.

Mr. Tayler then stated that he had insured his own crops for fifteen years and never had an agent to inspect same.

The position which faces your Commissioners therefore, is to find some more complete method of making the preliminary investigations before the policy is issued. There seems to be little doubt that in many instances crops are insured without inspection prior thereto.

**(B) Suggested means which could be adopted to prevent the occurrence of and to suppress or deal with similar fires.**

**1. USE OF WAX MATCHES.**

That the Careless Use of Fire Act, 1912, be amended to prohibit the sale, distribution or use of wax matches in the Central or Western Divisions of the State, under a penalty of £10 for the first, £20 for the second, and £50 for the third offence.

**2. CARELESSNESS.**

Great hope, as Mr. Cambridge has indicated, lies in the future generation. There are many people to-day who will not change their present methods, but it should be possible to secure good results from the education of the children of the State, who, under proper guidance, should be taught to regard with great earnestness the danger from carelessness as a cause of bush fires.

Your Commissioners submit recommendations for amending legislation to meet present-day conditions, but we feel that in addition much good can be achieved by extensive publicity through warning notices, posters, and regular articles in school magazines, together with special lessons by teachers in all schools at regular intervals, especially during the summer months, to awaken an interest in the minds of all to the great importance of care in the use of fire.

The Commission has not had the time to make a complete study of the form these posters should take, but are of the opinion that this work could be properly controlled by a supervisory and controlling Board hereafter referred to.

Publicity methods have been amply demonstrated, so far as effective service is concerned, in America, and, as an example, the following rules are quoted from Bulletin No. 395, issued by the College of Agriculture Experiment Station, Berkeley, California, on "Fire Protection for Grain Fields."

1. Keep your machinery in repair, well lubricated, and provided with an air clarifier and a good arrester. Hot boxes and hot carbon cause 30 per cent. of grain fires.
2. Always have at hand on the harvester at least two good chemical fire extinguishers. They keep little fires from "growing hot."
3. Don't smoke in the fields. Tobacco may be satisfying, but it's hot.
4. Break up big fields by cutting hay strips at intervals while grain is green. These give a chance to fight and confine fires to a small area.
5. Plough several furrows round your grain fields as a fire-break. Your neighbours may not be as careful as you are.
6. Help organise your community, and instal fire-fighting equipment at convenient points. Get ready now. After a fire starts it's too late.

Canada uses publicity methods on a systematic and extensive scale, viz. :—  
Newspapers periodically publish figures showing damage done in the previous years' fires.

Street notices warn departing holiday makers.

Trains have permanent notices in the carriages.

As an example of this system the following notice may be quoted :—

The only wild animal you need fear in the forests of Canada is the fire wolf. Don't feed it. The fire wolf starves when you put out your camp fire, when you extinguish lighted tobacco, when you leave no sign of smoke behind you.

The Government must regard this question as one of primary importance, not only on account of the immense loss from bush fires to the individual primary producer, but also as a trustee of extensive forest areas. Fire protection is the first step in forest conservation.

Your Commissioners cannot too strongly stress the wisdom of publicity such as is indicated in the examples referred to. When well prepared and properly distributed they impress every one as to the importance of fire protection and indicate that the State is alive to its responsibilities in the matter.

**3. LOCOMOTIVES.**

It is recommended that no ashes from locomotives' ash-trays should be deliberately deposited on the railway line, except at specially prepared places at or near a railway platform, such specially prepared places to be sufficiently numerous

to suit the requirements of all locomotives. Further, that the Railway Commissioners be requested, where possible, not to use the "P" class engines or any engine not properly fitted with the latest spark arrester appliances in the pastoral and farming districts of the State during such periods as there is a danger of the occurrence of serious bush fires.

#### 4. MOTOR TRACTORS.

It is recommended that Bush Fire Committees be empowered to call upon the owner of any defective tractor, or one not properly equipped with suitable chemical fire extinguisher, as approved by the Metropolitan Fire Brigades Board, to remedy the defect, and in the event of non-compliance, the matter to be reported to the Bush Fires Control Board for action to be taken through the Police Department.

#### 5. OVER INSURANCE.

The Commission has recommended a clause for inclusion in the "Careless Use of Fire Act," requiring every proposal to insure crops against loss by fire to be endorsed by two responsible persons, certifying that the crop is likely to return the value for which the policy is being taken out, otherwise the risk be not accepted by the insurance companies.

#### 6. CONTINUOUS TELEPHONE SERVICE IN BUSH FIRE DISTRICTS.

The Pastoralists' Union of Southern Riverina, together with other witnesses before the Commission, brought under notice the difficulty station owners have in getting telephone communication with one another when fighting bush fires, by reason of telephone offices in some instances being closed at week-ends. It is suggested, in order to get over this difficulty at such country telephone offices which are closed from Saturday at midday until the following Monday, a connection be made where possible to the local store or other building as can be arranged. This would of course only be necessary during the few dangerous months in the summer.

#### 7. THROWING LIGHTED CIGARETTES, ETC., FROM TRAIN WINDOWS.

The Primary Producers' Union suggest that all smoking compartments in railway carriages be fitted with receptacles for the purpose of depositing therein cigar and cigarette butts and waste tobacco, and further, that it be made an offence under railway by-laws to throw such out of the railway carriage windows.

Your Commissioners are of the opinion that there is an element of danger in the thoughtless throwing away, in the manner indicated, lighted cigarettes, cigars and tobacco, and if the dropping of live coals or ashes on the railway lines, as evidenced before this Commission, is considered a menace by so many practical men throughout the country, it cannot be denied that lighted cigarettes, &c., can be, if thrown amongst dry grass adjoining railway lines, also a source of danger, and your Commissioners are therefore of the opinion that the Railway Commissioners should give effect to the recommendation of the Primary Producers' Union.

#### 8. CAMPING PLACES.

It is recommended that the Commissioner of Police be requested to pay special attention to the supervision of camping places where fires are likely to be lighted by campers, travellers, &c., in the country districts in which the danger of bush fires exist, in accordance with section 3 of the Careless Use of Fire Act.

Further, it is recommended that Forestry Officers, Conditional Purchase Inspectors, Government Surveyors, Fisheries, Agricultural and Stock Inspectors be appointed Fire Wardens, and that they be given authority to assist in the administration of the Careless Use of Fire Act, particularly in so far as the prevention of bush fires is concerned.

#### 9. VOLUNTARY BUSH FIRE BRIGADES.

It is recommended that Voluntary Bush Fire Brigades be formed in country towns, and that, where formed, a request be made to the Metropolitan Fire Brigades Board for the officers attached thereto to assist in the formation and training of such voluntary brigades.

There are a number of other recommendations which have been made to the Commission and which it is claimed will, if put into operation, act as a preventive against bush fires, which your Commission have noted, and suggest that action be

taken by regulation as may be deemed necessary in regard to them by the Supervisory Board, if appointed. We, however, are of the opinion that the help of the National Roads and Motorists' Association, together with that of the Migration Department of this State would be very helpful in propaganda work for the purpose of educating our own people, and in the case of the Migration Department, especially in regard to those coming from abroad.

**(C) What, if any, amendments should be made in the Statutes relating to the matters aforesaid.**

Throughout the inquiry it was noticeable that witnesses were of the opinion that the Careless Use of Fire Act, 1912, lacked adequate administration, and, while admitting that the provisions existing were fairly wide, they emphasised the importance of the issues involved required an extension of its powers.

Your Commissioners are in accord with this view, and propose hereunder certain amendments to the Act, which it is hoped will, if put into operation, be the means of bringing about a better and more ordered condition in regard to the prevention of bush fires.

We have not lost sight of the fact that provision already exists in the Local Government Act, No. 41, under which shire councils at present have the power to establish Bush Fire Brigades, *vide* section 494; but it seems little advantage has been taken of this power, as in very few instances throughout the State have these brigades been established with any degree of success or on regulated and systematic lines. The value of such organisations where formed, however, has been fully demonstrated to your Commissioners, and their successful working, under a central Supervisory Board, could, we think, be looked to with confidence. We are loth to superimpose any legislation more than already exists, but, in order that the schemes we propose hereunder can be carried out, it will be necessary that the power already vested in the shire councils under the section beforementioned should be more readily availed of by those bodies and every encouragement given to landholders who desire to take advantage of that power.

We therefore recommend :—

- (1) The establishment of a Board, to be called "The Bush Fires Control Board," which shall operate in conjunction with the shire councils in connection with the prevention of bush fires and control of bush-fire organisations.
- (2) The Board shall consist of a Chairman and four other members, one member to be nominated each by the Graziers', Farmers and Settlers' and Agricultural Bureau Associations, one by the Fire Underwriters' Association, and one by the Government.
- (3) The Minister to have power to make regulations for the purpose of all proceedings of the Board, including the summoning and attendance of members, and the enforcement of orders of the Board.
- (4) Each member of the Board to act in an honorary capacity.
- (5) Each Shire Council shall divide the lands within their respective shires into suitable areas for the formation of Bush Fire Brigades as requested.
- (6) Any number of persons, wishing to form a Bush Fire Brigade, may, by a majority vote of the ratepayers in the particular area, requisition the Shire Council to proclaim such area a Bush Fire Brigade area, and the Council may then impose, with the concurrence of a majority of such ratepayers, a special levy for the purpose of equipping such brigades and carrying out its necessary functions.
- (7) The subsidy of such Fire Brigade organisations by the insurance companies and the Government to be given favourable consideration, from a proportion of which the expenses of the Central Administration might be met.
- (8) The Board may, at any time, require the Bush Fire Committees to report on the condition of their fire-fighting equipment, and on any other matter, which, in their opinion, will tend to greater efficiency in their operations.



## OTHER SUGGESTED AMENDMENTS OF THE ACT.

- (a) That burning off by "occupiers" on any lands be regulated by permit or by regulation.
- (b) To provide that any person desirous of insuring his crops against fire shall first submit his proposal to two responsible persons for their endorsement that, in their opinion, the crop is likely to produce the value for which the insurer proposes to take out the policy, and that, in the event of such endorsement not being obtained, the risk be not accepted.
- (c) To prohibit the preparation of baits for the destruction of rabbits and other noxious animals in which stick phosphorus is used at the time of mixing on any farm, pastoral or grazing area.
- (d) To prohibit persons taking into a harvest field or through any grass or bush lands any motor, tractor, harvester, &c., which is not supplied with an approved fire extinguisher or without the exhaust being properly fitted and protected, under a penalty not exceeding £50.
- (e) To prohibit persons throwing lighted cigarettes, cigars and tobacco among any straw, stubble, grass or herbage during the months of September to March in any Bush Fire area, under a penalty not exceeding £10.

## DUTIES OF BUSH FIRE BRIGADES.

- (1) To elect necessary officers.
- (2) To recommend to shire councils the purchase of fire carts and necessary equipment for fire fighting.
- (3) To arrange for uniform water facilities, where possible, by having large taps attached to elevated tanks, suitable approaches made to dams for filling carts, and convenient gates to approach same.
- (4) To link up fallow paddocks and natural fire breaks by ploughing or burning breaks through private or public property, roads, &c.
- (5) To burn, where necessary, at least 33 feet where there is a risk of fire, on the outside of the railway fence, in conjunction with the railway employees.
- (6) To burn camping areas at suitable water and camping reserves.
- (7) To arrange with settlers who live on hills or have a clear view, and are connected by telephone, to act as "look-outs" and to communicate with the brigade in the case of fire.
- (8) Where possible to build stone or brick fireplaces for the use of travellers, teamsters, and drovers on the camping areas that are mostly used and where there is a risk of fire.

And any other duties which the Board might consider from time to time should be attended to by them.

We regret that the shire councils have not taken more advantage of the provisions already existing in the Local Government Act vesting them with powers in regard to the formation of Bush Fire Brigades within their respective boundaries, and it is hoped the recent calamitous fires throughout the country will stress the necessity on their part of taking full advantage in the future of such authority.

Your Commissioners cannot close their Report without an expression of appreciation to the Graziers' Association, the Primary Producers' Union, the Farmers and Settlers' Association, the Agricultural Bureau, and to the Railway Commissioners of New South Wales for their co-operation and valued assistance which has enabled the Commission to carry out their task.

Your Commissioners desire further to tender their grateful thanks for the excellent work performed by the Secretary to the Commission, Mr. G. H. Jones, who has made their duty an extremely easy and pleasant one.

We have the honor to be,

Your Excellency's most obedient servants,

(Sgd.) JOHN B. CRAMSIE,  
N. W. JOLLY,  
FRANK JACKSON;

No. 1 Richmond Terrace, Domain,  
14th May, 1927.

