

1949
NEW ZEALAND

FIRE BRIGADES OF THE DOMINION

(REPORT ON THE) BY THE INSPECTOR OF FIRE BRIGADES

Presented to Both Houses of the General Assembly by Command of His Excellency

The INSPECTOR OF FIRE BRIGADES to the Hon. the MINISTER OF INTERNAL AFFAIRS.

Office of the Inspector of Fire Brigades,
Wellington, 30th September, 1949.

SIR,—

I have the honour to submit the thirty-seventh annual report on the working of the Fire Brigades Act, 1926, for the year ended 31st March, 1949.

ADMINISTRATION

No new Fire Boards were created during the year, and the number in operation remains at sixty.

DOMINION FIRE WASTE

The insured fire loss for 1947, the latest year for which the national figures have been prepared, was £1,599,822. This is a very large increase over the loss for the previous year (£764,392), but the figure includes approximately £500,000 in respect of the wool-store fire at Rongotai, Wellington, in 1946, referred to in my 1947 report, and also a proportion of the loss at Ballantyne's fire at Christchurch, referred to last year. The total fire wastage for the year—estimated in the usual way by adding an eighth to the insured loss—is £1,799,800. This is an all-time record for New Zealand, the highest loss previously experienced being £1,636,119 in 1928.

Owing to the new legislation this will be the last year in which this report will be presented in its present form. A brief review of the existing method of preparing fire-loss statistics is therefore justified. The national loss figures are based on returns made to the Government Statistician by the insurance companies of fire-loss payments actually made during the year. In some cases where salvage of damaged material is involved, or where the fire occurs late in the year, the insurance payments may be made in the following or even a later year. This is particularly the case with respect to the large fires which are responsible for the major part of the national fire losses. The result is that the national returns, while they are the most accurate figures available, if taken over a period, are not strictly so (as in the case of the year under review) in respect of any particular year.

The returns of losses in fire districts attached annually to these reports are probably slightly less accurate than the corresponding national figures. This is, firstly, because they are in some cases prepared before the insurance payments are made, and the estimate of the brigade officer is probably not so accurate as that of the insurance adjuster. In the second place they include a figure for uninsured loss which is usually based on the owner's estimate. In very few cases have the owners of residential property accurate schedules of contents on which such an estimate can be based, and stock records in commercial buildings are often destroyed or are unreliable. It must also be noted that the returns have reference only to the fires attended by the brigades. There are, in addition, a considerable number of small fires, mostly involving damage of less than a £100 value, which are extinguished without calling the brigade. The insurance companies pay out on these fires, and the loss is therefore included in the national returns.

The recording of fire losses in fire districts is of definite value despite its comparative inaccuracy. The fire districts include most of the urban property, and this will be even more the case when the new legislation comes into force. The returns are available much earlier than the national figures, and since they cover a large percentage of the property at risk in New Zealand they serve to confirm or modify the trends indicated by the national returns. They also give some positive indication of the value of the fire protection service in any individual district and tend to encourage the brigades in their work and to justify the expenditure on the fire service by the local authorities.

Reference has been made in these reports during recent years to the sharp rise which has occurred in the national fire losses, and to the increase in the number of fires attended by the brigades. These trends are clearly shown in the following table, which covers the period since the First World War. Attention is directed to the remarkable similarity between the fire experience of the peak-loss period 1926-1931 and the years immediately following the Second World War. There is the same sudden increase in the number of fires within two years, and the concurrent heavy increase in the loss figures. It seems not unlikely that the reason for both increases is an economic one. The view is widely held that the most important economic influence on loss by fire is that arising from the fact that in times of falling prices it sometimes pays to have a fire in insured property. This may result, apart from the possibilities of incendiarism, in lesser care with respect to fire on the part of owners and those responsible for the control of property. It is possible, however, to make the deduction from the facts set out in the table that there is an even more important fire-loss factor arising from economic conditions such as unsettlement due to the war, monetary inflation, or a general state of prosperity, which should be given some consideration.

Table I—Number of Fires and Total Fire Loss in Fire Districts, 1918-49

	Number of Fire Districts.	Number of Fires.	Total Fire Loss. £		Number of Fire Districts.	Number of Fires.	Total Fire Loss. £
1918-19	.. 31	416	151,158	1934-35	.. 53	753	173,172
1919-20	.. 35	480	137,772	1935-36	.. 54	765	181,296
1920-21	.. 35	540	394,704	1936-37	.. 55	812	199,592
1921-22	.. 35	531	183,619	1937-38	.. 55	859	170,167
1922-23	.. 38	589	238,313	1938-39	.. 55	905	441,489
1923-24	.. 40	741	358,024	1939-40	.. 55	892	280,278
1924-25	.. 43	828	306,114	1940-41	.. 55	849	228,929
1925-26	.. 46	898	352,638	1941-42	.. 56	792	466,589
1926-27 (9 months))	48	1,291	516,366	1942-43	.. 58	903	309,128
1927-28	.. 49	1,044	498,671	1943-44	.. 59	902	334,600
1928-29	.. 50	1,350	710,596	1944-45	.. 60	1,391	548,354
1929-30	.. 51	1,351	410,217	1945-46	.. 60	1,807	876,127
1930-31	.. 55	1,333	548,729	1946-47	.. 60	1,648	1,201,508
1931-32	.. 55	862	373,820	1947-48	.. 60	1,940	992,207
1932-33	.. 53	737	201,736	1948-49	.. 60	1,973	541,643
1933-34	.. 54	705	245,195				

The economic conditions immediately following the two world wars differed materially. In 1919 the New Zealand market was flooded with imported goods ordered but not delivered during the war, and the minor depression of the early "20s" followed. If the commonly held theory that bad times are a major contributing factor in fire loss is correct, it would be reasonable to expect an increase in both the number of fires and the amount of loss in the years immediately following the war. This is not shown in either the national or the fire district figures. It was during the comparatively prosperous period 1926 to 1931 that both the number and severity of fires increased, and both figures dropped sharply when the full impact of the world depression was felt in 1931.

On the other hand, the Second World War has been immediately followed by a period of rising prices, full employment, and shortage of goods and accommodation. Replacement of either goods or buildings destroyed by fire is difficult, and there is every financial inducement to the employer, owner, or person in control to take extreme safeguards against fire. In fact, both the number of fires and the average losses have more than doubled. Experience shows that the actual fire-loss figures for any year is determined mainly by the number and severity of large fires. In these reports the dividing-line between the two classes has been taken at £5,000, which represents a fire which has reached a stage difficult to control, and in which the fire is liable to involve the whole or major part of the building and contents. The following table contains an analysis of the losses for three normal low-loss years representative of the period 1931 to 1941, contrasted with the figures for the last three years.

Table II—Comparison of Fire Statistics in Fire Districts, 1938-41 and 1946-49

	1938-39.	1939-40.	1940-41.	1946-47.	1947-48.	1948-49.
Number of large fires (loss £5,000 or more)	13	14	6	19	18	14
Loss in large fires ..	£302,150	£173,882	£103,485	£1,006,630	£748,096	£315,101
Number of small fires (loss less than £5,000)	892	878	843	1,629	1,922	1,959
Loss in small fires ..	£129,339	£106,356	£139,204	£194,878	£244,111	£226,542
Average loss per fire in small fires	£145	£121	£165	£119	£127	£116

The importance of these figures is to show that while the large-fire loss has varied from £100,000 to £1,000,000, the small-fire loss is relatively constant in the two periods. In round figures, the number of small fires and the loss in these fires has doubled in the high-loss period of the last three years. Most fires are due to carelessness of one sort or another. The basis on which the returns have been made in fire districts is not sufficiently accurate and they cover too short a period to warrant a positive deduction being made from them. The figures in these two tables do, however, contain the hint that twice as many fires involve carelessness by twice as many persons. It must also be noted that twice as many fires in trade and industry is likely to result in an increased number of large fires, and an increased national fire wastage which only good fortune will retain within economic limits.

FIRE-PREVENTION

The indications from the world-depression period are that the knowledge that there is not another job around the corner does tend to make people careful to prevent the fire which will throw them out of work. We hope to overcome our post-war economic

difficulties without forcing or even permitting a major trade recession. Excessive fire loss is a national wastage which must of necessity depreciate the economic position of any country. Our present rate of loss is undoubtedly excessive, and if not checked will become a factor seriously affecting our economy. The carelessness of the rank-and-file employee in trade and industry is the cause of most of the rank-and-file fires, as well as of the conflagrations which boost the fire-loss returns. If they are not to learn the hard way, some effort must be made to bring home to both employer and employee the seriousness of the present position. The Fire Services Bill now before Parliament requires the Fire Service Council to encourage, supervise, and carry out fire-prevention activities. The facts set out above indicate that this should not be one of its less important functions.

THE LOSS OF LIFE IN FIRES

The number of deaths resulting from fires during the year under review was seven—five in residence fires and two in apartment houses.

LARGE FIRES

The following table gives details of the fires occurring in fire districts during the year where the loss exceeded £5,000.

Table III—Fires with Loss Exceeding £5,000

Fire District.	Day and Date.	Time.	Occupation of Premises in Which Fire Occurred.	Cause of Fire.	Loss.
Auckland ..	Saturday, 15/1/49 ..	1.37 a.m.	Educational Centre ..	Unknown ..	£ 25,801
" ..	Friday, 21/1/49 ..	2.34 a.m.	Brick and tile store and drying-shed ..	" ..	19,200
" ..	Sunday, 20/2/49 ..	11.45 a.m.	Apartment house ..	" ..	8,000
Christchurch ..	Thursday, 24/2/49 ..	6.31 p.m.	Cabinetmaking-factory ..	" ..	16,983
Dunedin ..	Monday, 14/3/49 ..	10.33 a.m.	Rope and twine manufacturers' bulk store ..	" ..	34,233
" ..	Wednesday, 6/10/48 ..	2.40 a.m.	Clothing factory, restaurant, and shops ..	Burning embers from heating furnace ..	8,986
" ..	Friday, 12/11/48 ..	1.00 a.m.	Theatre, factory, offices, and wool-store ..	Unknown ..	14,545
Feilding ..	Wednesday, 12/5/48 ..	2.25 a.m.	Flourmill and grain and fertilizer store ..	" ..	8,015
Greymouth ..	Saturday, 26/6/48 ..	1.59 a.m.	Brewery bottle-store ..	" ..	8,450
Lower Hutt ..	Monday, 24/5/48 ..	11.22 p.m.	Woollen-felt mill ..	Suspected spark from wool-teasing machine ..	47,611
Nelson ..	Monday, 7/6/48 ..	12.30 a.m.	Tobacco-factory ..	Overheating of electric blower ..	5,435
Timaru ..	Monday, 2/8/48 ..	3.33 a.m.	Engineers' merchants and wine and spirits store ..	Unknown ..	9,520
Wellington ..	Saturday, 16/10/48 ..	1.04 a.m.	Tobacco-factory and clothing-factory ..	Not established—possibly radiation from gas-heater set on wooden floor ..	20,872
" ..	Saturday, 30/10/48 ..	10.08 p.m.	Wool-store ..	Unknown ..	87,450
					£315,101

NEW LEGISLATION

A further redraft of the Fire Services Bill was made during the year after consideration by the Government of the report of the Royal Commission on the Ballantyne fire at Christchurch. The recommendation of the Commission that the Fire Service should be

administered by three Commissioners has not been adopted. The Bill retains the existing principle for administration of the local service by the local authority, but provides for general control of the whole service by a Fire Service Council of seven members. The office of Inspector of Fire Brigades will be discontinued. He will be replaced on the administration side by the Fire Service Council, and on the technical side by a chief officer who will be responsible to the Council and will have extended powers with respect to technical matters. The explanatory memorandum attached to the Bill on presentation to Parliament, which sets out the principal provisions, is attached as a Schedule to this report.

INSPECTION

• It has not been possible to carry out any routine inspection duties during the year, and the inspection work has been confined to special visits made in connection with the purchase of land, plant and equipment, and the erection of new buildings by Fire Boards, the distribution of Government plant and equipment, and the general development of the emergency organizations.

Attached (Table IV) are statistical returns covering the year under review.

I have, &c.,

R. GIRLING-BUTCHER,

Inspector of Fire Brigades.

SCHEDULE

EXPLANATORY MEMORANDUM ATTACHED TO THE FIRE SERVICES BILL

1. This Bill consolidates all the existing legislation affecting fire brigades. It has three main purposes—to improve the standard of training and co-ordination of the fire service, especially in connection with its operation at serious fires; to improve the financial provision made for the small-town fire brigades; and to provide an emergency service which will function for rural fire-protection in peacetime and form the nucleus for the fire defence of the country in the event of war. The principal changes in the existing legislation are set out below.

Fire Service Council

2. The Bill sets up a Central Authority (*clause 3*) to be known as the Fire Service Council, which will be in general control of the fire service and responsible for its efficiency. The Council will consist (*clause 4*) of seven members, four nominated to represent the contributors of revenue, two the employers and employees in the larger centres, and one the volunteer brigades. The duties of this Council (*clause 8*) include the carrying out of experimental and research work into fire-service methods and equipment, the publication of technical information, the inspection of brigades, and the establishment of training courses for both officers and men. It may require any Urban Fire Authority to improve the efficiency of its service (*clause 11*) and the Authority must comply unless it can establish to a Magistrate or by arbitration that the requisition is in the circumstances unreasonable. The Council may delegate its functions (*clause 13*). This will enable provision to be made for some measure of regional control if this is considered desirable. The staff of the Council is to be provided from the Public Service (*clause 15*). The existing Inspector of Fire Brigades will be replaced by a Chief Officer (*clause 16*), who will have extended powers and be in more direct control of the technical side of the fire service.

Districts

3. The districts in which brigades operate are classified into united urban fire districts, urban fire districts, and secondary urban fire districts. The two first mentioned consist of the existing united fire districts and fire districts controlled by Fire Boards, the ³³names set out in the *Third* Schedule, and other urban areas in which the water supply is approved and ³⁴adequate to provide a good standard of

protection. No fire district will be created in future unless the water supply is so approved (*clauses 10 and 18*). Urban areas in which there is no reticulated water supply or where the water supply is below the approved standard are to be classed as secondary urban fire districts. The Bill varies the basis of contribution of revenue (*clause 53*) for these districts and limits the expenditure in view of the smaller size of the towns and the lesser standard of protection possible.

Urban Fire Authorities

4. The existing legislation under which fire brigades are established and maintained is repealed (*clause 87*) and all fire brigades will come under the Bill. The existing system of local administration of brigades is retained. The controlling local authorities are designated Urban Fire Authorities (*clause 22*) to distinguish them from the corresponding Rural Fire Authorities set up under the Forest and Rural Fires Act, 1947. The existing Fire Boards are to be retained but, except where united urban fire districts are constituted, no more Fire Boards will be set up. Instead of this the territorial local authority will be established as the Urban Fire Authority. It will set up in each district a Committee to control the fire brigade or brigades, which will be financed as set out below. In urban fire districts this Committee will have the same membership as a Fire Board (*clause 23 (3)*) and will exercise most of the powers of the Authority (*clause 22 (3)*). In secondary urban fire districts a similar Committee is to be set up containing a representative of the brigade, but it will have only such powers as are delegated by the local authority (*clause 23 (4)*). The duties prescribed for these Authorities (*clause 32*) extend the existing provisions of the Fire Brigades Act, 1926. All Urban Fire Authorities are required to conform with the scheme of fire defence and rural fire protection provided for in *clause 9* of the Bill.

Volunteer and Industrial Fire Brigades

5. Provision is made (*clauses 41 to 43*) for the registration of all volunteer and industrial brigades. The purpose of this so far as the volunteer brigades are concerned is to ensure that when the members of the brigade are not individually employed (*clause 40*) the agreement of service and the brigade rules and regulations will ensure the operation of the brigade under proper conditions of discipline and efficiency. It is contemplated that industrial brigades will in future function to some extent under the rural fire protection and emergency scheme. It is therefore proposed that they shall be registered and their conditions of service approved on the same basis as the volunteer brigades. *Clause 40 (6)* restricts the operation of the Industrial Conciliation and Arbitration Act, 1945, in its application to volunteer fire brigades.

Financial Provisions

6. The Bill increases considerably the Government contribution to the cost of the urban fire services. It provides that the expenditure in fire districts shall be contributed (*clauses 50 to 53*) in the proportions, Government 10 per cent., underwriters 50 per cent., local authorities 40 per cent. (The respective contributions payable under the Fire Brigades Act, 1926, for the current year are 1·2 per cent., 49·4 per cent., and 49·4 per cent.) In secondary fire districts the local authority is required to pay at least half the costs. This is in recognition of the fact that a water supply adequate for fire protection has not been provided. A subsidy at the rate of pound for pound (*clause 53 (3)*) is payable by the Government and the underwriters, who contribute in the proportions of 1 6th and 5 6ths respectively (*clauses 50 (1) (a)* and *51 (1) (b)*). The amount of the subsidy is limited to £150, except in special cases where a direction is given by the Minister. The local authorities pay no contribution to the costs of the Fire Services Council. These are divided between the Government and the underwriters. Provision is made that the cost of special fire protection required for property of the Crown (such as Devonport Naval Base and Trentham Camp, and certain of the forestry areas) shall be paid from the funds of the Fire Service Council.

Fire Defence and Rural Fire Protection

7. The Fire Service Council is required (*clause 9*) to prepare and administer a scheme for fire defence, rural fire protection, and reinforcement between brigades at large fires. It may provide equipment for this purpose or, in the case of the larger Urban Fire Authorities, may require the latter to make provision in accordance with the scheme. Regulations are to be made (*clause 84*) for the registration of both residential and commercial buildings in rural areas, and the Council will provide for the protection of these by fire brigades located in the vicinity and for the payment to the Urban Fire Authorities of the registration fee. The costs of the actual fire protection will be borne by the territorial local authority of the rural and provision will be made for co-ordination with the activities of the Rural Fire Authorities established under the Forest and Rural Fires Act, 1947.

Table IV—Miscellaneous Statistics for Fire Districts

Fire District.	Population as at 31st March, 1949.	Rateable Capital Value, 1st April, 1948.	Insurance Company's Premium Income for Year Ended 31st March, 1948.	Number of Fire Calls.	Fires Involving Loss of Property.	Insurances on Property Involved in Fires.	Insured Fire Buildings and Contents.	Uninsured Fire Loss: Buildings and Contents.	Total Fire Loss.	Estimated Expenditure Authorized for Year Ending 31st March, 1950.
	£	£	£			£	£	£	£	£
Auckland Metro-politan	253,310	88,898,877	151,105	1,471	170	3,615,191	73,722	24,116	97,838	99,094
Balclutha	2,350	515,090	2,884	25	2	1,200	50	100	150	660
Cambridge	2,830	1,136,010	5,104	13	4	7,850	62	..	62	1,004
Carterton	2,050	572,006	1,181	17	5	5,066	740	..	740	950
Christchurch	126,600	36,099,222	187,475	1,155	285	1,594,732	38,296	2,288	40,584	52,400
Danvirke	4,620	1,537,651	8,284	12	4	9,000	1,600	..	1,600	1,032
Dunedin Metro-politan	2,550	883,025	4,793	3	1	..	..	40	40	730
Dunedin Metro-politan	84,420	28,048,913	131,378	1,000	217	2,561,982	75,091	2,699	77,790	43,200
Eltham	1,960	446,790	2,563	6	1	500	1	..	1	484
Feilding	5,420	1,498,761	8,572	10	2	72,220	6,590	1,500	8,090	870
Foxton	1,860	577,746	3,625	18	5	16,600	224	..	224	377
Gisborne	16,500	4,846,871	33,305	41	13	46,360	1,613	103	1,716	4,350
Greytown	9,010	1,943,045	13,070	22	14	20,075	11,234	3,230	14,464	1,375
Hamilton	28,800	9,808,696	39,861	146	32	47,035	3,950	943	4,893	12,000
Hastings	17,050	4,871,092	27,522	58	25	30,160	3,690	620	4,310	3,790
Hawera	5,270	1,644,476	11,320	40	11	3,600	468	106	374	3,020
Hikurangi	1,070	130,800	960	8	1	960	960	..	960	154
Hokitika	2,920	539,965	5,215	3	3	1,600	242	..	242	862
Invercargill	26,300	7,826,375	42,188	289	72	626,444	9,777	811	10,587	18,192
Kaipoi	1,970	400,325	3,431	8	4	3,400	1,409	80	1,489	638
Kaitangata	1,370	224,475	1,223	7	3	2,050	41	..	41	435
Lawrence	580	59,561	787	4	..	..	..	..	..	220
Levin	3,850	1,551,790	7,631	15	5	6,775	1,437	..	1,437	563
Lower Hutt	40,900	12,541,367	58,833	242	47	130,435	52,793	964	53,757	12,176
Masterton	10,700	2,907,283	17,138	79	25	101,152	301	6	307	5,110
Milton	1,560	304,905	3,173	13	3	500	450	335	785	455
Morrinsville	2,430	691,052	5,827	5	2	150	5	..	5	580
Napier	19,500	8,810,440	43,500	111	47	116,725	2,569	57	2,626	8,300
Nelson	14,750	3,684,474	27,503	111	25	81,863	11,045	1,818	12,863	5,243
New Plymouth	21,000	6,252,828	30,744	130	78	12,045	876	1,168	2,044	8,200
North Shore	31,270	9,368,933	38,165	90	29	125,097	6,734	344	7,078	11,500
Oamaru	8,170	3,234,825	12,677	..	..	..	..	..	..	1,875
Ohakune	1,510	151,776	1,589	9	4	1,800	65	..	65	438
Opoitiki	1,780	634,765	3,583	9	2	..	..	..	..	859
Otaki	2,290	404,492	3,297	6	2	1,300	100	130	230	400
Pahiatua	1,860	518,881	4,947	9	2	50	22	143	165	550
Palmerton North	28,900	8,850,734	49,923	159	47	101,719	3,262	296	3,558	15,600
Patea United	1,700	386,876	5,738	10	4	4,075	340	7	347	1,050
Petone	11,650	3,663,470	28,265	37	24	17,350	2,678	460	3,138	6,475
Port Chalmers	2,640	411,892	3,655	2	1	850	20	..	20	450
Pukekohe	3,720	1,159,731	5,467	8	3	2,100	1,968	1,050	3,018	950
Rotorua	9,330	3,370,206	15,206	83	14	73,415	2,448	3,165	5,613	4,042
Stratford	4,130	1,565,453	7,083	12	7	2,380	187	142	329	1,707
Taihape	2,330	716,170	5,090	17	3	5,290	2,019	..	2,019	596
Taurarunui	2,920	999,280	5,149	7	2	3,700	7	..	7	1,050
Tauranga	5,900	1,930,657	10,749	22	6	43,940	1,320	60	1,380	1,759
Te Aroha	2,620	849,067	6,280	14	7	3,600	662	860	1,522	547
Te Awamutu	3,390	1,184,105	6,937	17	1	100	5	25	30	696
Tinaru	20,300	5,812,885	27,570	126	29	61,701	18,486	590	19,076	10,050
Upper Hutt	6,730	2,476,175	7,485	87	22	10,590	1,142	992	2,134	2,000
Waihi	3,850	355,321	6,034	27	5	19,309	1,577	15	592	810
Waipukurau	2,280	549,525	4,346	9	1	850	55	..	55	658
Wairoa	3,120	804,380	4,475	11	4	3,200	2,280	280	2,560	604
Waitara	2,670	613,737	6,740	6	3	..	..	975	975	392
Wanganui	25,700	9,162,653	45,637	246	64	177,095	6,580	1,082	7,662	16,800
Westport	136,980	51,179,299	278,703	1,524	251	2,031,986	130,363	6,082	136,445	81,000
Whakatane	5,160	978,338	6,632	15	4	7,010	797	..	797	1,042
Whangarei	3,210	746,556	5,435	10	4	2,800	45	52	97	814
Woodville	10,700	4,853,695	17,424	37	19	22,404	3,695	323	4,018	2,104
Woodville	1,180	221,576	2,396	5	3	475	21	..	21	536
Totals	1,061,520	346,409,364	1,809,872	7,676	1,973	11,839,847	485,023	58,057	543,080	454,320
Protected areas outside fire districts—Christchurch	28	28	193,589	26,591	629	27,220	..

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