

1948
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, 26th October, 1948.

SIR,—

I have the honour to submit the thirty-sixth annual report on the working of the Fire Brigades Act, 1926, for the year ending 31st March, 1948.

ADMINISTRATION

The North Shore Fire Board was created during the year following an investigation by the Local Government Commission into the fire-protection conditions in the urban area on the northern side of Auckland Harbour. The district consists of the Boroughs of Devonport, Takapuna, Northcote, and Birkenhead, together with a small portion of Waitemata County. Birkenhead was previously a fire district, so that the number of districts in existence remains at sixty.

DOMINION FIRE WASTE

The insured fire loss for 1946, the latest year for which national figures have been prepared, was £764,392, an increase of £125,030 over the previous year. The national loss estimated in the usual way by adding one-eighth to the insured loss was £859,941. This figure confirms the indication given in my last report that we were entering a high fire-loss cycle. The fire loss for the year 1947-48 of £992,207 in fire districts shown in the attached statistical table has only been exceeded once—last year—in the forty-one years covered by these reports.

LOSS IN LARGE FIRES

The major part of the fire loss for the year is as usual caused by large fires. The following table shows the losses in fires in which the loss exceeded £5,000.

Table 1.—Fires with Loss exceeding £5,000

Locality.	Day and Date.	Time.	Occupation of Premises in which Fire occurred.	Cause of Fire.	Loss.
Auckland ..	Thursday, 7/8/47 ..	1.0 a.m.	Engineers	Oil in contact with hot furnace	£ 37,000
" ..	Sunday, 14/12/47 ..	9.18 p.m.	Confectionery-manufacturers	Unknown	10,100
" ..	Monday, 15/3/48 ..	5.31 p.m.	"	"	168,500
Christchurch ..	Thursday, 21/8/47 ..	7.12 p.m.	Motor-body builders' factory	"	11,619
" ..	Saturday, 20/9/47 ..	11.10 a.m.	Electrical warehouse	Spark from furnace ..	28,365
" ..	Tuesday, 18/11/47 ..	3.46 p.m.	Departmental store ..	Unknown	317,640
Dannevirke ..	Tuesday, 20/6/48 ..	6.9 a.m.	Shops and offices ..	"	17,000
Dunedin ..	Friday, 20/6/47 ..	12.5 p.m.	Picture-theatre	Stage curtain in contact with electric lamp	5,389
Greymouth ..	Friday, 18/7/47 ..	5.55 a.m.	Municipal buildings ..	Unknown	19,040
Hamilton ..	Tuesday, 18/11/47 ..	5.9 p.m.	Shops and offices	"	8,424
Invercargill ..	Wednesday, 10/12/47	10.7 p.m.	Store, warehouse, shops, and offices	"	43,418
Pahiatua ..	Wednesday, 29/10/47	12.45 a.m.	Shops and flats	"	23,143
Palmerston N.	Friday, 9/1/48 ..	9.5 a.m.	Felmongery and wool-store ..	"	7,000
Petone ..	Thursday, 21/8/47 ..	12.40 p.m.	Motor-body builders' factory	"	5,829
Wellington ..	Friday, 31/10/47 ..	5.30 a.m.	Radio-factory	"	21,439
" ..	Tuesday, 11/11/47 ..	3.33 a.m.	Slipper and shoe factory ..	Not established (possibly lighted cigarette in clothing in men's locker-room)	5,000
" ..	Friday, 14/11/47 ..	5.59 p.m.	Furniture-factory	Not established (possibly spark from flocking-machine in contact with teased flock)	10,100
" ..	Thursday, 20/11/47 ..	2 a.m.	Printing-works	Not established (supposed printers' ink in contact with cotton waste in locker)	9,090
				Total	748,096

FIRE-PREVENTION

Attention must again be directed to the serious increase in both the number of fire calls and of fires involving loss of property shown in the attached statistics. The average figures for the past three years are fire calls 7,517, property fires 1,798, as compared with the average of the three years' preceding the war of 4,064 calls and 859 property fires. This increase is too large to be accounted for by the increase of urban population. It is evident that, if the high fire-loss cycle is to be checked, some fire-prevention activity on the lines recommended in my last report must be undertaken. It is worthy of comment here that if this fire-prevention work is to be effective the publicity must reach the business man, the office and factory worker, the householder, and the school-children. Experience has shown that organization on a national basis is necessary, but the effort must be in the main a local one in each centre.

LOSS OF LIFE IN FIRES

In addition to the forty-one lives lost in Ballantyne's fire, referred to below, four other persons were burned to death in a fire at the Franz Josef Glacier Hotel in July, 1947. Throughout the year there were also fifteen isolated cases of death resulting directly from fire. Two of these involved shock from burns, and thirteen were caused by fires in dwellings. The fatalities included two infants, and in one case particular attention was drawn by the Coroner to the danger of leaving young children alone in a building.

CHRISTCHURCH FIRE DISASTER

The heaviest loss of life by fire in New Zealand history, and one of the most serious property losses, occurred in the departmental store of Messrs. J. Ballantyne and Co., Ltd., in Christchurch, at about 3.30 p.m. on 18th November, 1947. In all, forty-one lives were lost and the fire-insurance pay-out was £317,640. The circumstances of the fire and the reasons for the loss of life were investigated by a Royal Commission in an inquiry lasting more than six months. A very full report has been issued, but a brief description will be of interest to those to whom the report is not available.

The premises consisted of seven adjoining brick buildings mainly of three or four stories, with wooden interior construction. They had been converted for store purposes

by cutting large openings between the buildings on the ground and first floors. Smaller openings had also been made between the cellars under three of the buildings. Stairways and lifts were unprotected, and only two of the lateral openings (on ground floor) were protected by substandard fire doors; soft-board linings were used extensively throughout the premises. The sales area was confined to the ground and first floors, and the upper floors were used for office, factory, and staff cafeteria purposes. There was no automatic alarm or sprinkler system, and the only first-aid fire-protection consisted of some sixty chemical fire-extinguishers distributed through the premises.

The fire started in the cellar in the building at the south end of the block. It had free air-supply through the cellars under two adjoining buildings and free discharge of products of combustion through an open stairway to ground and first floor and, through cellar and ground floor, to the lift and stairway in the adjoining building. Lateral travel was temporarily blocked by fire-doors on the ground floor of the adjoining building and by a temporary soft-board screen covering an opening on first floor of building in which fire started. There was no access from first to second floor of this building. These factors resulted in a rapid development of the fire, but the extent of this was not evident either in the more distant buildings or in the street owing to a large proportion of the heat and smoke being diverted to a light-well at the back of the building by the temporary closing of the first-floor opening.

The call to the fire brigade was delayed for at least ten minutes owing to a misunderstanding. When the brigade did arrive the smoke conditions inside the building on fire were bad, and about ten minutes were spent in an unsuccessful attempt at entry to the cellar. The fire then flashed through to the first floor and spread laterally through that floor with extreme rapidity, cutting off from escape the persons still on the upper floors of the two adjoining buildings along the same street frontage. In a very few minutes the buildings were alight from end to end and on all floors. An emergency call was put in, and with an excellent response of city and suburban units, and by good work in the later stages, the fire was substantially confined to five of the seven buildings.

RECOMMENDATION OF THE ROYAL COMMISSION

The report of the Royal Commission condemns as inadequate the existing regulations and by-laws governing means of egress from buildings as applying in Christchurch. It recommends that the model code of by-laws prepared by the Standards Institute with respect to building construction, means of egress, and fire-prevention should be amended in certain respects and made of universal application throughout New Zealand to both new and existing buildings. It recognizes that the full provisions of the codes cannot be applied to many existing buildings, but recommends that certain principles such as protection of lateral and vertical openings, limitation of floor areas, and fire loading and restriction of hazardous occupancies, should be applied wherever practicable. It recommends that the administering authority should have power to require in default of full compliance such protective devices as first-aid fire-fighting appliances, and thermostatic alarms or sprinkler systems. It has also suggested that the by-laws should be drawn so as to require the owner of an existing building to supply immediately, in form to be determined, a report on the building, indicating its relative fire hazard and deficiencies in means of egress.

The Commission finds that the work of the brigade was seriously defective in the early stages of the fire. It expresses the opinion that there is serious lack of organization, leadership, and command, and that the officers failed to appreciate their responsibilities. It contends that this failure is due not so much to the deficiencies of the individual officers as to inherent weakness of the existing system of wholly decentralized control of brigades. It commented that there is no system of officer training or of classification for inter-brigade promotion, and that promotion is normally based on service only and from within the local brigade. The Commission recommended that the existing system of local control be scrapped and that the whole fire service be controlled by three paid Commissioners having a knowledge of the subject, of whom one should be thoroughly experienced in fire-fighting.

Attached (Table 2) are statistical returns covering the year under review.

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R. GIRLING-BUTCHER,

Inspector of Fire Brigades.

Table 2.—Miscellaneous Statistics for Fire Districts

Fire District.	Population as at 31st March, 1948.	Rateable Capital Value, 31st March, 1947.	Insurance Company's Premium Income for Year ended 31st December, 1947.	Number of Fire Calls.	Fires Involving Loss of Property.	Insurances on Property Involved in Fires.	Insured Fire Loss: Buildings and Contents.	Uninsured Fire Loss: Buildings and Contents.	Total Fire Loss.	Authorized Expenditure for Year ending 31st March, 1949.
Auckland Metro-politan	245,830	£ 83,179,550	£ 402,348	1,721	395	£ 4,792,169	£ 180,578	£ 89,916	£ 270,494	£ 95,624
Balclutha	2,330	410,115	2,393	*	*	*	*	*	*	740
Birkenhead†	4,140	844,911	..	17	4	750	78	285	363	..
Cambridge	2,760	813,605	4,602	8	13	5,371	70	70	140	1,125
Carterton	2,010	553,571	5,805	17	9	5,220	2,490	70	2,560	890
Christchurch	123,900	35,248,952	166,696	984	327	2,550,020	382,386	2,618	385,004	45,040
Dannevirke	4,550	1,507,249	7,352	12	1	17,000	13,600	4,000	17,000	1,092
Dargaville	2,500	713,447	4,362	9	5	5,950	1,434	32	1,466	741
Dunedin Metro-politan	83,340	27,643,698	119,788	1,051	198	699,095	30,148	4,610	34,758	38,100
Eltham	1,950	428,320	2,301	15	5	5,400	1,155	..	1,155	548
Feilding	5,280	1,433,836	7,659	20	4	9,300	157	..	157	910
Foxton	1,820	347,977	2,647	36	5	17,663	1,651	..	1,651	395
Gisborne	16,150	4,620,083	30,842	47	14	21,510	2,339	281	2,620	3,482
Greymouth	8,880	1,882,705	10,728	25	17	31,090	17,197	3,560	20,757	1,375
Hamilton	24,500	9,768,246	35,608	222	43	54,734	11,836	1,832	13,668	11,000
Hastings	16,450	4,690,202	26,322	49	20	207,174	1,197	..	4,197	3,675
Hawera	5,160	1,618,571	10,236	53	13	24,165	271	28	299	2,402
Hikurangi	1,060	128,430	990	3	..	..	..	..	..	450
Hokitika	2,890	534,835	4,552	8	7	2,250	775	465	1,240	815
Invercargill	25,800	7,566,735	37,157	293	76	778,412	50,803	910	51,713	17,042
Kaipoi	1,900	382,925	3,122	4	2	450	165	80	245	708
Kaitangata	1,370	153,360	1,126	10	1	550	4	..	4	450
Lawrence	580	59,543	645	4	..	..	..	..	..	220
Levin	3,660	1,428,380	6,854	9	1	..	..	25	25	536
Lower Hutt	38,500	11,320,705	50,587	401	59	283,487	4,894	1,693	6,587	10,248
Masterton	10,400	2,901,186	15,900	101	29	69,113	5,628	505	6,133	4,929
Milton	1,540	296,340	2,827	11	3	2,665	426	10	436	565
Morrinsville	2,380	663,847	4,679	12	4	1,127	87	..	87	580
Napier	18,900	5,332,172	39,087	112	43	143,765	3,866	3,354	7,220	7,816
Nelson	14,400	3,682,424	25,205	90	33	84,250	2,798	3	2,801	4,685
New Plymouth	20,400	6,251,288	27,405	132	34	114,925	8,200	2,195	10,395	6,900
North Shore‡	..	..	33,890	..	..	..	..	..	..	11,200
Oamaru	7,950	2,168,099	11,177	43	6	13,227	582	650	1,232	1,875
Ohakune	1,490	136,469	1,701	9	4	3,885	200	..	200	467
Opoitiki	1,720	611,815	3,619	16	2	600	10	..	10	716
Otaki	2,250	382,679	3,174	10	3	7,345	3,950	175	4,125	440
Pahiatua	1,850	495,639	4,104	18	5	41,407	14,384	9,711	24,095	550
Palmerston North	27,900	8,682,804	44,490	230	70	199,920	8,349	1,986	10,335	15,400
Patea United	1,660	386,876	4,812	16	3	143,950	3,346	125	3,471	1,050
Petone	11,600	3,558,613	23,711	55	35	820,860	15,034	1,510	16,544	5,565
Port Chalmers	2,690	407,649	2,515	10	6	20,930	1,050	..	1,050	450
Pukekohe	3,610	1,109,181	4,646	15	1	..	..	150	150	950
Rotorua	9,050	3,331,036	13,867	58	9	74,820	1,758	40	1,798	3,566
Stratford	4,080	1,109,381	6,478	16	10	8,475	1,782	..	1,782	826
Taihape	2,290	454,591	4,247	18	..	..	..	..	..	635
Taumarunui	2,850	692,251	4,494	10	4	900	..	740	760	1,050
Taunanga	5,750	1,901,302	9,941	26	9	22,190	2,772	..	2,772	905
Te Aroha	2,570	484,092	5,338	7	3	12,000	10	..	10	493
Te Awamutu	3,300	1,144,575	5,601	31	5	9,155	65	320	385	732
Timaru	19,850	5,647,750	23,450	120	29	16,515	3,298	43	3,341	7,100
Upper Hutt	6,220	1,294,784	6,352	97	5	2,410	84	25	109	2,785
Waihi	3,920	355,241	4,857	32	4	23,030	93	..	93	625
Waipukurau	2,220	546,831	4,297	25	7	5,150	900	150	1,050	670
Wairoa	3,070	768,025	4,611	11	4	2,265	697	200	897	735
Waitara	2,540	597,015	4,960	12	3	..	..	55	55	321
Wanganui	25,400	8,939,778	46,815	299	47	123,030	2,808	565	3,373	17,900
Wellington	134,610	50,896,494	248,690	1,655	300	3,183,245	63,972	4,961	68,933	73,250
Westport	5,050	899,488	6,388	14	5	35,010	50	..	50	1,151
Whakatane	3,080	719,651	4,398	15	3	400	96	220	316	960
Whangarei	10,350	4,843,600	14,621	23	8	4,673	1,816	350	2,166	2,100
Woodville	1,170	221,836	2,228	2	..	..	..	..	..	332
Totals	1,005,420	319,458,653	1,617,297	8,369	1,940	1,470,001	853,689	138,518	992,207	417,937
Protected areas outside fire districts—Christchurch	..	..	..	28	28	230,537	2,880	230	3,110	..

* Returns not received.

† Forms part of North Shore Fire Board from 1st April, 1944

‡ Constituted 1st April, 1943.

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