

1916.
NEW ZEALAND.

FIRE BRIGADES OF THE DOMINION

(REPORT ON THE), BY THE INSPECTOR OF FIRE BRIGADES, FOR THE YEAR ENDED
30TH JUNE, 1916.

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.

SIR,—

Office of Inspector of Fire Brigades, Wellington, 7th July, 1916.

Herewith I have the honour to lay before you my eighth annual report for the year ended the 30th June, 1916, relative to the working of the Fire Brigades Act, and including matters in connection therewith.

During the past year Maori Hill ceased to be an independent fire district, that borough having amalgamated with the City of Dunedin, and the proclaimed fire districts now are—Auckland, Christchurch, Dannevirke, Dunedin, Feilding, Gisborne, Greymouth, Hamilton, Hastings, Hawera, Hokitika, Lawrence, Masterton, Milton, New Plymouth, Oamaru, Ohakune, Palmerston North, Petone, Rotorua, Tauranga, Timaru, Whangarei, and Woolston.

I have officially inspected the twenty-nine brigades, with their stations and equipment, at present working under the control of Fire Boards, as follows:—

Auckland—8th and 9th November, 1915; 7th and 9th May, 1916.

Christchurch—24th November, 1915; 23rd May, 1916.

Dannevirke—11th February, 1916.

Dunedin—25th and 27th September, 1915; 28th March, 1916.

Maori Hill—24th September, 1915; 27th March, 1916.

Dunedin South—24th March, 1916.

Caversham—24th March, 1916.

Roslyn—27th March, 1916.

Mornington—28th March, 1916.

Feilding—25th October, 1915; 12th June, 1916.

Gisborne—11th March, 1916.

Greymouth—25th February, 1916.

Hamilton—5th October, 1915; 17th April, 1916.

Hastings—9th December, 1915.

Hawera—6th September, 1915; 24th January, 1916.

Hokitika—28th February, 1916.

Lawrence—23rd September, 1915.

Masterton—2nd December, 1915; 1st June, 1916.

Milton—22nd September, 1915; 23rd March, 1916.

New Plymouth—7th September, 1915; 25th January, 1916.

Fitzroy—7th September, 1915.

Oamaru—21st September, 1915; 2nd March, 1916.

Ohakune—11th May, 1915.

Palmerston North—26th October, 1915; 13th June, 1916.

Petone—18th May, 1916.

Rotorua—8th October, 1915; 14th April, 1916.

Tauranga—7th October, 1915; 12th April, 1916.

Timaru—23rd November, 1915; 29th March, 1916.

Whangarei—4th November, 1915; 4th May, 1916.

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In addition to the statutory inspections, in accordance with requests received from local and other bodies visits were paid for special purposes as follows:—

- Trentham Military Camp—31st August, 1915: Organization of a fire-protection system.
- Timaru—28th September, 1915: Inspection and testing of manual engine.
- Hamilton—11th October, 1915: Attendance at special Board meeting.
- Woolston—25th November, 1915: Attendance at Board meeting, organization of brigade, &c.
- Featherston Military Camp—2nd December, 1915: Organization of a fire-protection system.
- Trentham Military Camp—30th December, 1915: Inspection of fire equipment.
- Opotiki—13th January, 1916: Inspection and report upon efficiency of the borough water-supply.
- Hamilton—17th January, 1916: Inspection of new site for station, &c.
- Featherston Military Camp—2nd February, 1916: Inspection as to efficiency of fire equipment.
- Westport—20th to 24th February: Attendance at the United Fire Brigades Conference, and delivery of an address to the delegates.
- Featherston Camp—5th April, 1916: Inspection of fire equipment, &c.
- Featherston Camp—2nd June, 1916: Inspection of fire equipment, &c.
- Featherston Camp—23rd June, 1916: Testing of manual engines, new chemical engine, &c.

In all fifty-eight personal visits were made, and, as usual, instruction and addresses were given at the conclusion of inspection drills. Advice has been given to local bodies and others in relation to water-supply schemes, fire risks and protection, purchase of fire plant, &c. Imported machinery has been tested, specifications drawn up, and supervision exercised over the manufacture of plant and appliances in the Dominion.

Following upon an invitation received from the executive officers of the United Fire Brigades Association I attended their annual conference held at Westport in February last, and delivered an address on various fire matters, more particularly dealing with the danger to firemen whilst working at fires from both high- and low-potential electric wires. It is to be regretted the Conference took the retrograde step they did when, notwithstanding strong opposition from all the more experienced brigade officers then present, they adopted the motion "that the pattern of hydrant (standpipe) used at the Wanganui demonstration be adopted for all future demonstrations," for the pattern referred to is the most faulty in design and defective in construction of any standpipe I have ever seen in use for practical fire-brigade work, and the said action is all the more surprising in face of the excellent results obtained with the pattern of standpipe used at the 1915 demonstration.

The principal improvements effected or in course of being carried out are as follows:—

Stations.—Gisborne: A new central station erected and occupied in February last. The building is constructed in brick, two stories in height, and contains an engine-house (41 ft. by 34 ft.), one set of married quarters, three bedrooms accommodating six single men, social hall, board and watch rooms, &c., and all necessary conveniences.

Auckland: A new district station has been erected in Remuera. The building is of one story, constructed of brick, and provides accommodation for single men only. A section with a dwelling thereon was purchased in Manukau Road, and the building altered in a suitable manner to serve as a substation for the Parnell district.

Christchurch: A new district station has been erected at St. Albans, and was occupied in May last. The building is of two stories, in brick, and contains engine-house, one set married quarters, social hall, two bedrooms accommodating five single men, and all necessary conveniences.

Motor Appliances.—Christchurch: The new 40 h.p. combined hose, ladder, and turbine-pump machine was received and put into commission in February last.

Woolston: A second-hand 40 h.p. commercial chassis has been purchased, and a suitable body built thereon locally; it is also fitted with a chemical engine having two 30-gallon cylinders.

Petone: A new 25 h.p. commercial chassis has been purchased, and a suitable body for use as a hose-tender is to be built locally.

Fire-alarms.—Hawera: A street fire-alarm system having three circuits and fourteen boxes has been installed.

New motor appliances are on order as follows: Masterton—A 60 h.p. combined hose, ladder, and reciprocating-pump machine; Whangarei—a 50 h.p. combined hose, ladder, and first-aid pump machine; Hamilton—a 65 h.p. combined hose, ladder, and turbine-pump machine; New Plymouth—a 65 h.p. combined hose, ladder, turbine and first-aid pump machine. The first two-mentioned machines have been on order for over two years, and the last two for over eighteen months. War exigencies have delayed delivery, and up to the present no definite information has been received as to when delivery may be expected.

A very large number of firemen have enlisted, and the difficulty of obtaining suitable men is more or less general throughout the brigades in the Dominion, and has become a very serious matter in some towns.

A matter which I consider it necessary to comment upon is the management of costly brigade motor machines. After acquiring a motor appliance generally some local chauffeur is appointed driver and "motor expert" to the brigade, and having considerable spare time on his hands in most cases turns his attention to electrical inventions with their corresponding experiments with the result, as has happened in more than one case coming under my observation, the machine under his care suffers in consequence. In the particular case I have in view the "expert" has

made a more or less crude electrical attachment to a very expensive machine that, amongst other things, is acting in a manner detrimental to the life of the engine, and at the same time effecting no advantage in any shape or form. Although this was pointed out to the Chairman and other members of the Board, as well as to the Superintendent, no steps were taken to remedy the matter. In the above comment I do not refer to any of the principal centres, where the professional Superintendents assume entire responsibility for the practical working of their brigades, and do not allow any "tinkering"—the word is used advisedly—with their motor machines.

Following are detailed reports dealing with each fire district.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

AUCKLAND.

Two inspections of the Auckland Fire Brigade, its stations and equipment, have been made—viz., 8th and 9th November, 1915, and 7th and 9th May, 1916. On both occasions the equipment was found in good order and condition, and the turnouts and drill was carried out smartly and in an efficient manner. In connection with the second inspection the following letter was forwarded to the Secretary of the Board:—

SIR,—

18th May, 1916.

On the 9th instant, in company with the Superintendent, an inspection was made of your Board's several fire-stations, and in each case both stations and equipment proved to be in good order and condition. The section and dwelling in Manukau Road, now in occupation as the station for the Parnell district, has been converted to its purpose in a suitable and efficient manner.

An inspection was made of the station in Remuera Road now in course of erection, but in this case, in purchasing only 40 ft. instead of the whole section frontage of 66 ft., your Board, in my opinion, has not displayed sufficient foresight in regard to the future requirements of this rapidly growing district. In respect to the building itself for many years it has been a generally recognized principle of fire-brigade administration that in all residential sub or district stations, for cogent reasons, married quarters shall be provided and a married man placed in charge, and it is to be regretted that this was not done.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

The question of a conversion of the present street fire-alarm system, or of replacing it within the city proper with a new and more reliable installation, is at present occupying the attention of the Board, as is also the question of a new site and station to serve the Ponsonby, Grey Lynn, and Arch Hill districts.

CHRISTCHURCH.

Two inspections of the Christchurch Brigade, its stations and equipment, have been made—viz., 24th November, 1915, and 23rd May, 1916. At both inspections the stations and equipment were found in good order; the turnout and succeeding drills were performed smartly and in an efficient manner. During the course of the second inspection the new 40 h.p. combined hose and turbine-pump motor machine was tested with satisfactory results. Later the same evening an alarm was given from the Choral Hall street fire-alarm box, when two motor machines were in attendance one minute and fifty-four seconds after the alarm was given. A third machine was in attendance two minutes later, a very creditable performance.

The St. Albans district station, which has practically been entirely rebuilt, was formally opened on the 24th May last. The building contains an engine-house, set of married quarters, social hall, two bedrooms accommodating five single men, and all necessary conveniences.

The next major matter requiring the attention of the Board is the provision of an 85 ft. electrically manipulated ladder.

DANNEVIRKE.

An inspection of the Dannevirke Brigade and its equipment was made on the 11th February last. The result of the inspection is covered in the following report forwarded to the Secretary of the Fire Board:—

SIR,—

15th February, 1916.

Following upon my inspection of the Dannevirke Brigade and its equipment on the 11th instant, I beg to submit the following report for the consideration of your Board.

At the inspection muster there were present the Superintendent, Deputy, and sixteen firemen; these, with two on leave, accounting for the full strength of the brigade. Various drills were performed that, taking into consideration the number of newly enrolled men, were carried out in a satisfactory manner. The quantity of hose on hand is too limited, but I understand an order for another 500 ft. has already been placed. The station and appliances are in good order.

A test was made of the efficiency of the fire-streams available from the mains in the block from Miller Street along west to Edinburgh Street, and the experiments showed that the 3 in. mains there laid must be in a bad state of corrosion, and they should be replaced by pipes not less than 4 in. in diameter; also I would direct attention to the necessity of laying fire mains in the following streets—Maine, Madrid, and Manila; also a continuation of the main along Barraud Street south from Denmark Street as along the north end of Christian Street.

I would again point out the necessity for providing some better means of transport for the men and appliances. Of the value of motor transport in fire-brigade work no better illustration can be afforded than what occurred on the occasion of the fire in the ten-roomed house in Stanley Street on the morning of the 11th instant, when a motor-car passing the station just as the alarm was received was used to convey the men and appliances to the fire, thus enabling the men to arrive at the scene in fit physical condition and at least seven minutes earlier than would have been the case had it been necessary to drag the reel by hand; and there can be no question that the seven minutes meant all the difference between severe damage or even a total loss and the good "save" it undoubtedly was.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

DUNEDIN.

Inspections of the Dunedin Central and its auxiliary brigades, together with their stations and equipment, have been made as follows:—

City section of the brigade on the 27th September, when there were present at the inspection muster the Superintendent, Deputy, fifteen permanent and six auxiliary firemen. The turnout was carried out smartly, and the various drills performed in a satisfactory manner, in particular the newly acquired 85 ft. electric ladder working well.

The Dunedin South section was inspected on the 24th March, when there were present the Captain, Lieutenant, and nine firemen; these, with four on leave, accounting for the full strength. Here, as usual, the required drill was carried out satisfactorily, and the station and equipment found in good order. Later the same evening the Caversham section was inspected: present, Captain, Lieutenant, and eight firemen; these, with two on leave, accounting for the full strength. Here the equipment was not entirely in good order, and the same remark applies to the station building.

Maori Hill section, inspected 27th March; present, seven firemen. Further reference to this inspection is contained in a letter published below.

Roslyn: Inspected 27th March; present, Captain, Lieutenant, and seven firemen out of a total strength of seventeen. The station and appliances were in good order.

Mornington: Inspected 28th March; present, Captain, Lieutenant, and seven firemen; these, with three on active service and two on leave, accounting for fourteen out of a total strength of fifteen. The required drill was carried out smartly, and the station and equipment were in good order. A second inspection of the city section was made on the 28th March; present, Superintendent, Deputy, fifteen permanent and five auxiliary firemen. Following is a report forwarded to the Secretary of the Board:—

SIR,—

1st May, 1916.

Following upon my inspection of the Dunedin Fire Brigade and its equipment in March last, I have to report that at the inspection muster of the Maori Hill section there were present only seven firemen; these, with two on duty at Woodhaugh, one on leave, and two absent, representing the full strength of the section, twelve all told, at the time. It will be noted there was no officer present, and as a result thereof there was considerable confusion in carrying out the simple drill movements ordered, and I recommend an additional officer be appointed—some one residing on the hill portion of the district; also, an effort should be made to increase the membership of the section.

When I was in Dunedin there was some fear of a shortage in the city water-supply, and that again brings up the necessity of providing a pumping unit so that in case of a fire along the harbour front or on board ship sea-water may be utilized. At present practically the only supply available is provided by a 4 in. main, which would in case of a fire of any magnitude be of very little use, particularly as fires on board ships very often require the use of a million or more gallons of water to extinguish them.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

Within the last twelve months the adjoining borough of Maori Hill and the suburb of Anderson's Bay have amalgamated with the city, consequently increasing the Dunedin Fire District to that extent.

A new 30 h.p. commercial chassis has been purchased and a body built thereon suitable to the use of the machine for the lighter work of the brigade.

I understand tenders have been called for the erection of a substation on the section in Cargill Road purchased some years ago to serve the South Dunedin, Caversham, and St. Clair portions of the district. Apparently a definite move has at last been made in the urgent matter of providing more adequate protection for the outer areas of the fire district. The erection of the station in question will enable the old wooden sheds at present doing duty as fire-stations to be dispensed with, and should also effect a much more efficient working of the brigade within the portions mentioned, with corresponding results therefrom.

FEILDING.

An inspection of the Feilding Brigade and its equipment was made on the 25th October, when there were present at the inspection muster the Superintendent, Deputy, and ten firemen; these, with two on duty and four on leave, accounting for eighteen out of a full strength of twenty then on the roll. The horse hose-cart was turned out smartly, and the various drills carried out in a satisfactory manner.

The Manchester Street bell has been removed from its original position to a site on the corner of Camden and Manchester Streets, and a test ring was made the same evening with satisfactory results.

Some of the gear carried on the hose-cart was found to be faulty, but has since been rectified.

A second inspection was made on the 12th June, when there were present at the inspection the Superintendent, Deputy, and sixteen firemen; these, with one on duty and one on leave, representing the full strength (twenty) then on the roll. The horse hose-cart turned out smartly, and various hose and reel drills were carried out.

The station and equipment are in good order and condition.

GISBORNE.

An inspection of the Gisborne Brigade and its equipment was made on the 11th March, and following is a report in that connection forwarded to the Secretary of the Board:—

SIR,—

16th March, 1916.

An inspection of the Gisborne Fire Brigade and its equipment was made on the 11th and 12th instant, and the following is a report thereon for the consideration of your Board.

At the inspection muster on the 11th instant there were present the Superintendent, Deputy, thirteen firemen, and three messengers; these, with three on leave, accounting for the full strength of the brigade. The motor hose and chemical machine was turned out smartly, and a number of various drills performed in a fairly satisfactory manner.

An inspection of the new station proved it to be well designed for its purpose and suited to local requirements, but the following minor matters require attention. An electric press-button marked "Fire-alarm" and lighted up at night should be fixed outside the watchroom-door, connected to a drop-shutter relay inside the watchroom, and leading thence to an 8 in. sharp-toned electric vibratory bell fixed on the wall inside the engine-house somewhere above the door leading into the watchroom. The barricades around the sliding-poles in the social hall are dangerously low, and to prevent accident a bar or rod should be fixed on and, say, about 12 in. above the top level of the present barricades. The roadway immediately in front of the engine-house doors is very soft, and particularly after rain may be the cause of sticking up the heavy motor when leaving the station, which would be at the time, of course, moving slowly and on the turn, and at least a section of the road directly in front of the station should be formed so as to provide a good hard surface for the motor to get away.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The building, which was occupied in February last, contains engine-house (41 ft. by 34 ft.), set of married quarters, three bedrooms accommodating six single men, board, watch, and other necessary rooms and conveniences.

GREYMOUTH.

An inspection of the Greymouth Brigade, its stations and equipment, was made on the 25th February, and in that connection the following is a report sent to the Secretary of the Board:—

SIR,—

3rd March, 1916.

An inspection of the Greymouth Fire Brigade, its stations and equipment, was made on the 25th and 26th ultimo, and I beg to submit the following report in that connection.

At the inspection muster there were present the Superintendent and sixteen firemen; these, with two on leave, accounting for nineteen out of a total strength of twenty then on the roll—a satisfactory attendance.

The steam fire-engine was taken to the wharf end for the purpose of ascertaining, now that the permanent suction-pipes fixed under the wharf along Mawhera Quay are out of order, whether it could be depended upon to work from the deck of the wharf at any state of the tide, but after a thorough trial it was found that the engine would not draw water with a then perpendicular suction lift of 19 ft. 7 in. The suction-hose was tested as well as it was possible under the then circumstances, and appeared to be airtight and in good order, but a more complete test is requisite; the pump also requires inspection and testing, which I understand has not been done for a number of years, and probably that is where the fault lies; in any case, both engine and pump require a thorough overhaul, and the whole equipment put in a state of efficient working-order. In view of your local conditions the work in question should be carried out at the earliest possible moment.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The stations and equipment are in good order, with the exception of the ladder-carriage at the central station, the wheels of which are in such a condition that a collapse may be looked for at any moment when running it to a fire. Another hand-drawn hose-reel has been purchased. The Blaketown district is still practically without any adequate means of fire-protection.

HAMILTON.

Two inspections of the Hamilton Brigade and its equipment have been made, on the 5th October and the 17th April. A special visit was paid on the 11th October for the purpose of attending a Board meeting and consulting with the members upon various matters.

The following reports, forwarded to the Secretary of the Board, cover both inspections :—

SIR,—

15th October, 1915.

After meeting the Chairman of the Board and yourself upon my arrival in Hamilton at 8.30 p.m. on the 5th instant, for reasons then discussed I did not proceed with my intention of calling out the brigade by means of giving a false alarm of fire. A visit was paid to the fire-station, as also again on the following morning, and a verbal report then made to the Chairman to the effect that the plant at the station was not in proper working-order and was altogether in a disgraceful condition. A reference to my earlier reports will show that I have found it necessary to make similar and other adverse comments upon previous occasions. For these and a number of other reasons seriously affecting the competent work of the brigade, as discussed at the meeting with your Board held on the 11th instant, I consider the efficiency and future usefulness of the brigade decidedly calls for other arrangements in the control of the brigade.

As notes were taken at the meeting of the various recommendations made in respect to the new site, station, bell, &c., it is not necessary to repeat them here, but it will be remembered that upon making inquiries it was discovered that in place of the brigade being in possession of 2,000 ft. of good hose, as reported to me as late as the 30th June last, only some 1,000 ft. of serviceable hose is available—a quite inadequate supply—and I have to recommend that, pending the indefinite time of arrival of that ordered from England, your Board should at once obtain locally 500 ft. of new hose.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

SIR,—

1st May, 1916.

An inspection of the Hamilton Brigade and its equipment was made on the 17th ultimo, when there were present at the inspection muster the Superintendent, Deputy, eight firemen, and one messenger; these, with two on leave and one absent, accounted for the full strength then on the roll, eight short of the authorized number.

The difficulty of obtaining suitable men is now general throughout the brigades in New Zealand, and in your case an effort should be made to secure the services of some of the younger married business men who, whilst for private reasons do not enlist yet are willing to help in other ways, will for the continuance of the war assist the brigade at fires, and to that end are prepared to undergo a short course of drill to fit themselves for that purpose.

Certain hose and hydrant drills were carried out, but it was apparent the men required more drill and instruction.

The plant and appliances were in good order, and a considerable improvement is apparent throughout when compared with any of my previous visits of inspection.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

Progress is at last being made in the providing of some adequate fire-equipment for the protection of the borough, a suitable site at very reasonable cost has been purchased, and the plans for a new central fire-brigade station approved of. No definite information has yet been received as to when delivery may be expected of the 65 h.p. combined hose, ladder, and turbine-pump motor machine that has now been on order for some eighteen months.

HASTINGS.

An inspection of the Hastings Fire Brigade and of the Fire Police Corps and their equipment was made on the 9th December last. The following report, forwarded to the Secretary of the Board, covers the inspection :—

SIR,—

17th December, 1915.

An inspection of the Hastings Fire Brigade and Fire Police Corps, with their equipments, was made on the 9th instant, and following is a report in that connection for the consideration of your Board.

At the inspection muster there were present of the brigade—Superintendent, Deputy, and fourteen firemen; these, with four on theatre duty and two on leave, accounted for the full present strength of the brigade. Of the fire police there were present—Captain, two Lieutenants, and one constable, with five reported on leave, or a muster of four out of a total strength of fifteen on the roll. Various drills were performed by the brigade, including working the manual, all carried out in a satisfactory manner.

In respect to the new motor hose and chemical engine, as pointed out, in the first place the wheel-base is too short, but otherwise the body has been designed and built and the chemical cylinder with its fittings mounted all in a very practical and creditable manner, and with due care in working the machine should prove suitable for its purpose.

Prior to 1914 I found it necessary upon frequent occasions to adversely criticize the fire police in various matters affecting their efficiency. A change was made about that time and a better state of efficiency was apparent, but lately the older conditions again appear to prevail, and for the year ending the 30th June last the average attendance of members at calls throughout the year is far below that of any other body working under Fire Board jurisdiction, and, as will be seen above, out of a total of fifteen members only four attended the inspection muster; and I have to recommend to your Board that they should follow the same procedure as already adopted in several other places under like circumstances—that is, the fire police be disbanded as a body, and, say, six of the most suitable members of the disbanded corps be enrolled in the brigade, with special fire-police duties assigned to them, and thus increasing the authorized strength of the brigade from twenty-six to thirty-two all told. This proposed alteration, if adopted, will be found more efficient and economic in its results than is the present system of working.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

HAWERA.

Two inspections of the Hawera Brigade and its equipment have been made, on the 6th September, 1915, and the 24th January, 1916. At the first inspection muster there were present the Superintendent, Deputy, and seventeen firemen; these, with two on leave, accounted for the full strength of the brigade then on the roll. At the second inspection there were present the Superintendent, Deputy, thirteen firemen, and two messengers; these, with one on leave, accounting for eighteen out of twenty then on the roll. At both inspection drills the required practical work was carried out in a satisfactory manner, and, in fact, for some time past this brigade has given evidence of a considerable improvement in all-round efficiency.

The plant and appliances are maintained in good order and condition.

An ordinary touring motor-car has been hired for the time being at a very reasonable cost: it is housed at the central station, and utilized for carrying to fires a certain number of men, together with hose and other plant. The scheme is working very well, and will answer until such time as it is possible to purchase a properly constructed motor fire-appliance.

A street fire-alarm system has been installed, but at the time of my last visit was not entirely satisfactory; in any case the Superintendent requires more assistance than he had at that time to enable him to carry out the testing, &c., in a reliable manner.

HOKITIKA.

An inspection of the Hokitika Brigade, its station and equipment, was made on the 28th February, 1916. At the inspection muster there were present the Superintendent, Deputy, and fifteen firemen; these, with six on leave, accounted for twenty-three out of twenty-eight then on the roll.

The engine was taken to the wharf and got to work. The way in which steam is got up and the pressure maintained in this very old type of fire-engine is very creditable to and shows more than usual ability on the part of those responsible for working it. The various drills were carried out in a satisfactory and efficient manner, and the different stations, with their equipment, are maintained in good order and condition.

LAWRENCE.

An inspection of the Lawrence Brigade and its equipment was made on the 23rd September, when there were present at the inspection muster the Superintendent, Deputy, and eight firemen; these, with one on leave, representing the then full strength of the brigade.

Various drills, wet and dry, were carried out in a satisfactory manner, and the station and equipment are maintained in good order and condition.

An improvement has been effected in the water-supply reticulation: a new 9 in. main has been laid along Irvine Street to Ross Place, and the old 4 in. and 3 in. mains have been lifted therefrom and laid up along Carlisle and Annan Streets.

MASTERTON.

Two inspections of the Masterton Brigade and its equipment have been made—viz., 2nd December, 1915, and 1st June, 1916. At the first inspection muster there were present the Superintendent, Deputy, and twenty-seven firemen; these, with two on leave, representing the then total strength of the brigade. Certain contest and manual drills were carried out in a satisfactory manner.

At the second muster there were present the Superintendent and twenty-seven firemen; these, with four on leave, accounting for thirty-two out of thirty-three then on the roll. A turnout of the steam fire-engine was carried out smartly, and certain hose-reel drills performed in an efficient manner.

The station and equipment are maintained in good order and condition, and the fire-alarm system has given satisfaction throughout the year.

A very considerable improvement has been effected in the water-pressure. A reading of the gauge at 3 p.m. on the 1st June showed a pressure of 92 lb.; again at 8 p.m. on the same date the gauge registered 93 lb.; and I was informed that for some time past the pressure has averaged 85 lb., and, in fact, had not been below 75 lb. for at least the last four months.

MILTON.

Two inspections of the Milton Brigade and its equipment have been made—viz., 22nd September, 1915, and 23rd March, 1916. At the first inspection muster there were present the Superintendent, Deputy, eleven firemen, and one messenger; these, with three on leave, representing the full strength of the brigade.

The recently acquired manual rotary pump, which has a stated discharging capacity under pressure of 50 gallons per minute, was taken out and worked in a satisfactory manner, and it is suited to local conditions, but the carriage appeared to me to be light in construction for the weight it has to carry.

The station and equipment are maintained in good order.

The following report, forwarded to the Secretary of the Board, covers the second inspection:—

SIR,—

7th April, 1916.

At the inspection muster of the Milton Fire Brigade held on the 23rd ultimo there were present the Superintendent, Deputy, and five firemen; these, with one on leave and three new members (not then actually enrolled), constitute the full strength of the brigade at the present time. The numerical weakness of the brigade is due to six of its members having enlisted, but an effort should be made to increase the membership.

The chemical engine was taken out and one of the cylinders discharged. A slight creepage from one of the cylinder screwdown covers had taken place, and care must be exercised in this matter, as any such creepage has the effect of weakening the charge.

Both axle-arms of the manual-pump carriage are bent. The axle in its present shape is too small in its cross-section; also, the wheels are too light in construction for the purpose, and they should be replaced. 200 ft. of new hose is required, making 500 ft. in all.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

NEW PLYMOUTH.

Two inspections of the New Plymouth Brigade, including the Fitzroy section, with their stations and equipment, have been made—viz., 7th September, 1915, and 25th January, 1916.

The following report, forwarded to the Secretary of the Board, covers the first inspection:—

SIR,—

15th September, 1915.

An inspection of the New Plymouth Brigade, together with the Fitzroy section thereof, was held at 8 p.m. on the 7th instant. There were present at the inspection muster: Central section—Superintendent, Deputy, and eighteen firemen; these, with two on duty and two on leave, accounting for the total strength then on the roll. Fitzroy section—Captain, Lieutenant, and eleven firemen; these, with four on leave, representing the full strength of the section. The attendance in both cases was satisfactory, and the station and plant is maintained in good order.

Various drills were carried out, but not in a satisfactory manner; in fact, the drill efficiency of the central section of the brigade is not on a par with what it has been in the past. This would be a serious matter at any time, but is particularly so now in view of the modern equipment, such as motors, fire-alarms, &c., with which the brigade is now being provided, and it calls for a high efficiency on the part of the personnel of the brigade if results commensurate with the expenditure are to be obtained. During the drills in question considerable confusion and excitement was manifest, but no doubt some of the fault was due to there being a number of newly enrolled and inexperienced men who have had to be taken on to replace those experienced firemen who have enlisted for active service. In any case the men require more drill and instruction, and under the present condition of things drill once a month is not sufficient. I have to further suggest that, instead of the Superintendent conducting the drill himself, that work should be left in the hands of the Deputy and other officers, the Superintendent in this matter confining himself to criticizing and correcting the work of his officers, and which, generally speaking, should be done in private.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

At the second inspection there were present, of the central section, the Superintendent, Deputy, and fourteen firemen; these, with one absent on duty, accounting for seventeen out of a total strength of eighteen. Of the Fitzroy section there were present the Captain, Lieutenant, and ten firemen; these, with three on leave, accounting for fifteen out of a total strength of sixteen.

Various drills, wet and dry, were performed in a satisfactory manner, the two sections of the brigade working together much better than upon the occasion of my previous inspection, and altogether there was a manifest improvement in carrying out the required work.

The building known as the Eastern Fire-station has been removed from its original position and re-erected on the new site in Fitzroy. The building has been renovated, and is now well suited to the requirements of the Fitzroy district.

All the stations and equipment are maintained in good order.

OHAKUNE.

A visit was paid to Ohakune on the 11th May last for the purpose of inspecting the brigade and its equipment, but at the inspection muster called for the same evening only three men put in an appearance, and I was informed that six members comprised the total strength of the brigade. The equipment consists of an old, weatherbeaten, dilapidated open shed housing an old manual fire-engine with about 400 ft. of good hose; also, they possess a few buckets and a couple of hand chemical extinguishers. Added to the above I found the question of Fire Board *versus* Borough Council control was not then definitely settled; and, in fact, fire-protection matters in Ohakune appeared to be more or less in a state of chaos.

OAMARU.

Two inspections of the Oamaru Brigade and its equipment have been made—viz., 21st September, 1915, and 2nd March, 1916. The following report, forwarded to the Secretary of the Board, covers the first inspection:—

SIR,—

18th October, 1915.

An inspection of the Oamaru Fire Brigade and its equipment was made on the 21st ultimo, and following is my report in that connection.

There were present at the inspection muster the Superintendent, Deputy, and eighteen firemen, these representing the full, lately increased, strength of the brigade. A turnout of the horse hose-and-ladder car was performed smartly, and various drills carried out in a satisfactory manner. A couple of lengths of the new hose recently purchased was tested with satisfactory results. The brigade should be provided with half a dozen canvas buckets.

I observe that a fire-hydrant has been fixed on the 3 in. main in the street off Thames Street leading to the Crown Roller Flour-mills, but I observe also that the hydrant has been placed only half-way along the street, instead of at or about the position as pointed out during my visit to Oamaru in November, 1913. My recommendation was made with a particular view to the better protection of the mills, and no other interests or risks are better served by the placing of the hydrant in its present position, whereas had it been fixed in the position recommended it would have been at least 150 ft. nearer to the object in view, with a corresponding greater efficiency in the fire-jets.

In my opinion the system of hydrant-indicators adopted for Thames Street is not a suitable one as at present carried out, and, if it is intended to continue that system in place of painting small squares on the kerb-edge, white tiles at least 10 in. in width with a bend of 6 in. deep should be let into the kerb.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

At the second inspection muster there were present the Superintendent, Deputy, and fourteen firemen; these, with four on leave, representing the full strength of the brigade.

The turnout of the horse hose-cart was performed smartly; the subsequent drills were not carried out in an altogether satisfactory manner, but considerable allowance must be made on account of the large number of new members, due first to the increase of membership from sixteen to twenty, and secondly to the number of enlistments—I believe seven in all—and I have no doubt that at my next inspection I shall find this brigade is again approaching its usual satisfactory state of efficiency.

PALMERSTON NORTH.

Two inspections of the Palmerston North Brigade and its equipment have been made—viz., 26th October, 1915, and 13th June, 1916. At the first inspection muster there were present the Superintendent, Deputy, and twenty-one firemen; these, with two on duty and one on leave, representing the full strength of the brigade. At the second inspection there were present the Superintendent and sixteen firemen; these, with one on duty and four on leave, accounting for twenty-two out of a strength of twenty-four on the roll. At both inspections various drills, motor-ladder, rescue, and hose (both wet and dry) were carried out smartly and in a very efficient manner. The station and equipment are maintained in good order and condition.

Tenders were called and one was selected for the installation of a street fire-alarm system, but it was found that the tenderer could not proceed with the contract, and for various reasons the matter is in abeyance for the time being.

PETONE.

An inspection of the Petone Brigade and its equipment was made on the 18th May last, when there were present at the inspection muster the Superintendent, Deputy, and sixteen firemen, these accounting for eighteen out of a total strength of twenty. The turnout of the horse-drawn hose-and-ladder cart was unsatisfactory owing to the horse balking and delaying the start. Various drills, both wet and dry, were carried out in a satisfactory manner, and the station and equipment is maintained in good order and condition.

A new 30 h.p. commercial chassis has been purchased. It is intended to build a suitable body thereon and utilize it as a hose-and-ladder tender.

ROTORUA.

Two inspections of the Rotorua Brigade and its equipment have been made—viz., 8th October, 1915, and 14th April, 1916. At the first inspection muster there were present the Superintendent, Deputy, and seventeen firemen, these representing the full strength of the brigade. Various drills, both wet and dry, were carried out in a satisfactory manner.

The following report, forwarded to the Secretary of the Board, covers the second inspection :—

SIR,—

1st May, 1916.

An inspection of the Rotorua Brigade and its equipment was made on the 14th ultimo, when there were present at the inspection muster the Superintendent, Deputy, and fourteen firemen; these, with one on leave, representing the total strength then on the roll, two short of the authorized number.

The motor hose-and-ladder tender was turned out smartly, but the subsequent running of the motor was not satisfactory, as on three separate runs it took two to four minutes before the car would travel at all on its top speed—apparently, however, a matter of adjusting the new carburettor.

Various hose-and-ladder drills were carried out smartly and in a satisfactory manner, and the appliances are in good order and condition.

The fire-alarm telephone notice-boards require repainting and relettering, and to make them last they should be finished off with a couple of coats of good varnish.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The new set of coupling-ladders is working very satisfactorily. 1,100 ft. of new hose has been purchased. Some new sections of water-mains have been added to the reticulation in different localities, but the whole question of the supply of water—pressure and extensions more than volume—for fire-extinction purposes is in a very unsatisfactory state.

TAURANGA.

Two inspections of the Tauranga Brigade and its equipment have been made—viz., 7th October, 1915, and 12th April, 1916. At the first inspection there were present the Superintendent, Deputy, and nine firemen, or eleven out of a total strength of nineteen, including two away on active service, then on the roll. Upon this occasion, on account of the heavy rain and muddy state of the roads, only a very short practical drill was carried out.

The following report, forwarded to the Secretary of the Board, covers the second inspection :—

SIR,—

28th April, 1916.

An inspection of the Tauranga Brigade and its equipment was made on the 12th instant, when there were present at the inspection muster the Superintendent, Deputy, and nine firemen; these, with one on leave, representing the full strength then on the roll, or six less than the authorized membership.

The difficulty of obtaining suitable men is now general throughout the brigades in New Zealand, and in your case an effort should be made to secure the services of some of the younger married business men who, whilst for private reasons they do not enlist yet are willing to help in other ways, will for the continuance of the war assist the brigade in case of fires, and to that end will undergo a short course of drill to fit themselves for the purpose.

Certain hose-reel drill was carried out, but whilst the men are willing and energetic enough they require more drill and instruction.

The uniforms are in a dilapidated condition; however, I understand it is intended to provide a new supply shortly.

I notice the brigade have not yet been supplied with hand-pumps. Some fire-ladders are required, and I recommend that three 10 ft. 6 in. coupling-ladders, similar to those in use in Rotorua, be purchased.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

This is one of the brigades whose numerical strength has been seriously affected owing to the enlistment of its members and the absence of suitable men to fill their places, but I understand that a number of business men have signified their intention of assisting the brigade, as suggested in the above report.

A small hose-reel house and an iron skeleton bell-tower have been erected on a site in Quarter Acres to serve that portion of the fire district.

TIMARU.

Two inspections of the Timaru Brigade and its equipment have been made—viz., 23rd November, 1915, and 29th March, 1916. At the first inspection muster there were present the Superintendent, Deputy, and twenty firemen; these, with one on leave, representing the full strength (twenty-three) then on the roll. Various drills with the 60 ft. extension ladder, also hose drill, wet and dry, were carried out in a smart and efficient manner.

The motor turbine pump was taken to the wharf and got to work there. With a suction lift of 15 ft. 6 in. water was shown at the nozzle through 100 ft. of hose in seventeen seconds; with

one $1\frac{1}{2}$ in. nozzle a pressure of 160 lb. was registered, with two 1 in. nozzles 115 lb., and with one $1\frac{1}{2}$ in. nozzle 135 lb.—a satisfactory record.

The following report, forwarded to the Secretary of the Board, covers the second inspection :—

SIR,—

8th April, 1916.

An inspection of the Timaru Brigade and its equipment was held on the 29th ultimo, when there were present at the inspection muster the Superintendent, Deputy, and fourteen firemen; these, with two on leave, accounting for the then full strength of the brigade.

The motor was turned out smartly, and the subsequent ladder and hose drill carried out in a satisfactory manner. The station and equipment is maintained in good order. A matter that requires rectifying in relation to the routine working of the motor was explained to the Chairman and Superintendent at the time of my visit.

An examination of the water-supply as set out in the recently completed plan clearly shows that the fire-main reticulation throughout the borough is on the whole in a very unsatisfactory condition. The following is a tentative list of new mains, extensions, &c., that are required, and this, while covering in all a large portion of the town, refers only to such parts thereof that are already more or less built upon: New mains in Belfield and Creek Streets; continuation of main along White Street to Selwyn Street; continuation of main along Andrews Street to Quarry Street; in the Highfield and Craighead district a number of new mains are required, also the dead ends require picking up and bringing into circuit; circuit laid from Wai-iti Road along Ranfurly and Onslow Streets to Rathmore Street; dead end, Oxford Street West, connected up to main in Church Street West; new main, Cameron and Jackson Streets; new main, Gibson and York Streets from Arthur to Church Streets; on harbour front a main required along Fraser Street connected up to Hayes Street. All that district south of the Girls' High School requires a number of new mains, and the dead ends, of which I counted ten, bringing into circuit. New main to complete circuit from 4 in. south of hospital to 4 in. corner of cemetery. A number of $2\frac{1}{2}$ in. mains now down should be replaced by pipes not less than 4 in. in diameter, also there are a number of 3 in. mains that should be replaced by larger pipes.

Some of the suggested improvements are of an urgent character as affecting the more congested parts, with greater value of the property at stake, but the whole matter should receive the Borough Council's early attention.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The station and equipment are maintained in good order. The authorized strength of the brigade has been increased to twenty-five, but some difficulty is being experienced in maintaining the strength, principally owing to the number of enlistments.

WHANGAREI.

An inspection of the Whangarei Brigade and its equipment was made on the 4th November, 1915. The following report, forwarded to the Secretary of the Board, covers the inspection :—

SIR,—

15th November, 1915.

An inspection of the Whangarei Fire Brigade and its equipment was made on the 4th instant, and following is my report in that connection.

Upon my arrival in Whangarei on the morning of the date mentioned I visited the main station and found the running plant was not in the efficient condition in which it should be maintained; also, the station was in a most untidy state with, amongst other things, coils of hose, new and old, lying about the damp engine-room floor. Later in the day, in company with the Superintendent and Deputy, a second visit was paid to the station and the conditions pointed out to the two officers in question.

At the inspection muster the same evening there was present the Superintendent, Deputy, and sixteen firemen; these, with one on leave and one on duty, representing the full strength of the brigade—a satisfactory attendance. Various hose drills were carried out, as also was some practice with the newly acquired 50 ft. Pretoria extension-ladder, &c. As pointed out at the time, the men require more instruction and practice in certain drills, and the shank of the single-head standpipe should be lengthened to 22 in. between collars.

The method at present in vogue for keeping the station and appliances in order is not working in a satisfactory manner, and some other system should be adopted whereby the station and plant will be maintained in a condition more in accordance with ordinary fire-brigade custom; also, I consider it was an injudicious action on the part of your Board in authorizing the reduction in the size of the engine-room, which was quite small enough in the first place, and now is altogether too confined for its purpose.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

Upon making a second inspection of the station and its equipment on the 4th May I found everything in good order, and in that respect showing considerable improvement upon previous conditions.

A 50 ft. double wood-trussed extension-ladder of the sliding-carriage type was received from the English manufacturers in August last. The ladder forms part of the equipment of a 50 h.p. combination motor appliance that has now been on order for over two years, but no definite information has been received as to when delivery of the machine itself may be expected.

An electric bell-ringing apparatus is now being fitted to the main firebell, by which the bell may be rung from several different points in the town at the same time by means of what is known as the "remote switch-control"—the stopping, starting, and locality signalling is entirely controlled from the central fire-station—a very suitable apparatus for certain local conditions, and I have recommended its installation in several other towns.

WOOLSTON.

A visit was paid to Woolston on the 25th November, 1915, for the purpose of attending a Board meeting in connection with the organization of a system of fire protection for the borough, and in that relation various reports and specifications have been submitted to the Board.

At the time of my second visit in May last, although the brigade had been formed, they were waiting the reception of necessary appliances, uniforms, &c., then on the point of delivery, and they were not really on active service, therefore no official inspection was held.

A suitable site for a central fire-station on the corner of Regent Street and Hargood Road has been acquired at a very reasonable cost.

Pending the obtaining of a properly constructed and equipped motor combination appliance from England, a second-hand 40 h.p. commercial motor chassis has been purchased, and a suitable body is being built thereon. It is also being fitted with a chemical first-aid outfit having two 30-gallon cylinders, and in company with the Chairman of the Board I inspected the machine, then nearly completed; also, an inspection was made of the plans for a central station. Subject to a very slight alteration I consider they are well suited to the local requirements, and, as recommended, the "remote switch-control" system of bell-ringing should be installed.

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