

1943.
NEW ZEALAND.

COMMISSION UPON FIRE AT SEACLIFF

(REPORT OF).

Presented to both Houses of the General Assembly by Command of His Excellency.

To His Excellency Sir Cyril Louis Norton Newall, Marshal of Our Royal Air Force, Knight Grand Cross of Our Most Honourable Order of the Bath, Member of Our Order of Merit, Knight Grand Cross of Our Most Distinguished Order of St. Michael and St. George, Commander of Our Most Excellent Order of the British Empire, on whom has been conferred the Albert Medal of the First Class, Governor-General and Commander-in-Chief of the Dominion of New Zealand.

MAY IT PLEASE YOUR EXCELLENCY.

Whereas by Warrant dated 23rd December, 1942, under your hand and sealed with the public seal of the Dominion of New Zealand we, the undersigned, were appointed a Commission to inquire into the circumstances attending the fire which occurred upon the night between 8th and 9th days of December, 1942, at the Seacliff Mental Hospital, whereby the portion of the building known as Ward 5 was completely burnt and thirty-seven patients lost their lives, and in particular to inquire into and report upon the following matters:—

- (1) Was the building known as Ward 5 of the Seacliff Mental Hospital or any part thereof dangerous in respect of fire hazards having regard to the number of persons accommodated therein?
- (2) If so, did such danger exist by reason of any defect in design, construction, material, equipment, or furnishing of the building or for some other reason; and, if so, for what reason?
- (3) Was the fire-alarm system adequate, regularly and sufficiently maintained, inspected, and tested and in proper order at the time of the fire?
- (4) Was the fire brigade of the institution efficiently trained and effectively used on the night of the fire?
- (5) Were the fire-fighting appliances of the institution adequate in respect of hydrants, lengths of hose, and any other necessary appliances and adequate in respect of water-pressure, and in other respects, and were the appliances regularly and sufficiently maintained, inspected, and tested and in proper order at the time of the fire?
- (6) Was the supervision of patients by the staff of the institution at all times of the day and night and in all respects adequate?
- (7) Was there on the part of any member of the staff a dereliction of duty that contributed to the deaths of the patients or any of the patients?
- (8) How did the fire originate and spread, or probably originate and spread?
- (9) Are there any practicable steps that should be taken to reduce the fire hazards of the institution and similar institutions so as to avert the risk of occurrence of fire, risk of spread of fire, and risk of loss of life ensuing therefrom?

And generally upon such other matters arising thereout as came to our notice in the course of our inquiries which we consider should be investigated in connection therewith and upon any matters affecting the premises which we consider should be brought to the attention of the Government:

And whereas by the said Warrant we were required to report to Your Excellency in writing under our hands and seals not later than the 1st day of March, 1943 (which date was later extended to the 15th day of March, 1943), our findings and opinions on the matters aforesaid, together with such recommendations as we should think fit to make in respect thereof.

Now we, the undersigned, respectfully submit for Your Excellency's consideration the following report of our proceedings and of the opinions we have formed in respect to the several matters and things we were directed to inquire into:—

As the matter was one directly involving the public interest, the police readily acceded to the request of the Commission that evidence of witnesses of assistance to the Commission should be obtained by the police and placed before the Commission. The Commission discussed fully with the police on different occasions prior to the hearing the evidence the Commission desired placed before it, and in particular the expert evidence that should be called.

The Mental Hospitals Department was notified of the dates on which the Commission proposed holding sittings. Similar notification was given to the relatives of all the patients who had lost their lives. The Commission took the opportunity, prior to the hearing, of inspecting the site of the fire and the buildings comprising Seacliff Mental Hospital. Miss Tomlinson carried out a personal inspection of the routine adopted for supervision by nurses of the female patients, particularly during the night. Mr. Laidlaw made a thorough inspection of the fire-alarm system and the fire-fighting appliances.

At this stage it may be convenient to mention that the Commission did not inspect the Orokonui Home, which forms part of Seacliff Mental Hospital, but which is situated at Waitati, a distance of about six miles, and the discussion as to buildings and fire-fighting appliances, &c., apply only to the mental hospital situated at Seacliff and not to the subsidiary buildings at Waitati, nor to the buildings at Puketeraki.

The Commission opened its sittings at the Courthouse at Dunedin on Friday, 15th January, 1943, at 11 a.m., and continued on Monday, the 18th, and Tuesday, the 19th January, and Thursday, 21st January. The hearing was then adjourned to 22nd February, 1943, when further evidence was taken and the sittings concluded. The proceedings were open to the public, and the press was present on each day of sitting. On the opening of the Commission the Chairman stated that the Commission desired to have all material evidence placed before it. Chief Detective Holmes appeared on behalf of the Police Department, Mr. F. B. Adams for the Mental Hospitals Department, Mr. I. L. Turnbull for the Public Service Association, and Mr. Rutherford for the Vigilant Automatic Fire Alarm Co., Ltd. Mr. McLean and Miss Watkins acted as official stenographers to the Commission throughout. In all twenty-six witnesses were examined, and a copy of the evidence is attached to this report. A large number of photographs of Seacliff Mental Hospital were taken by the official police photographer. These and other exhibits are not attached, but have been retained by the Commission. They are available and can be forwarded if required.

We deal with the matters submitted in the order of reference. In referring to "Ward 5" it is understood that we refer only to the wooden building which was wholly destroyed by fire and not to the brick building which was connected by a stairway with the wooden building. The brick building is officially known as part of Ward 2:—

(1) *Was the building known as Ward 5 of the Seacliff Mental Hospital or any part thereof dangerous in respect of fire hazards having regard to the number of persons accommodated therein?*

We are of the very definite opinion that, irrespective of the number of patients accommodated therein, Ward 5 was dangerous in respect of fire hazard.

(2) *If so, did such danger exist by reason of any defect in design, construction, material, equipment, or furnishing of the building or for some other reason; and, if so, for what reason?*

We are of the opinion that danger in respect of fire hazard was due to the original design of building, which did not make proper provision for protection from fire. The ward was a two-storied wooden building and was wholly constructed of wood. The wooden floors were waxed. Also, as stated by Mr. Mandeno, "the space above the ceiling and the rafters was uninterrupted from end to end, and that once the fire obtained a hold it would very rapidly sweep through the full length of the building." Sleeping-accommodation consisted of ten single rooms on the ground floor and a dormitory of twenty beds and nine single rooms on the first floor. The windows of all rooms were shuttered and opened with a key from the inside, and all patients in single rooms and the dormitory were locked in at night. There were no fireplaces in the ward, which was heated by steam pipes.

We find it difficult to think the design of such a building, even in 1908, would have been approved by a competent architect. The evidence before the Commission was that it was designed by the then Superintendent of the Seacliff Mental Hospital (the late Sir Truby King). The danger owing to the faulty design was in our opinion greatly increased by the fact that no automatic fire-alarm was installed. There was a manual fire-alarm, but, as referred to later, this could not be operated except by a nurse. Obviously also the danger was further increased by the fact that no nurse was in Ward 5 continuously; it was visited hourly.

(3) *Was the fire-alarm system adequate, regularly and sufficiently maintained, inspected, and tested and in proper order at the time of the fire?*

The main fire-alarm system installed at Seacliff Mental Hospital is an electrical system depending wholly on manual manipulation. It is a push-bell system. In all wards to operate push-bell a shutter must first be unlocked. Each nurse has a key to open any alarm shutter in female wards, and each male attendant one to open any in male

wards. We are of the opinion that no such fire-alarm system can be considered adequate, as clearly proved by the fire on the night of 8th December, which gained alarming proportions before being detected by the nurse for the time being in charge of the ward or any other nurse or attendant in the vicinity of Ward 5. When the alarm was given the system functioned well and must have been in good order. The evidence showed that the system was regularly inspected and tested. We think that any system electrically controlled should be under the charge of a person with thorough electrical knowledge and that, so long as the present system be retained, a method be adopted of an automatic record of inspection and testing. We deal with the question of fire-alarms generally more fully hereafter under clause (9) of reference. Some of the workshops have an automatic fire-alarm which is connected with the main system. This portion of the installation is adequate and satisfactory.

(4) Was the fire brigade of the institution sufficiently trained and effectively used on the night of the fire?

The fire brigade, on the evidence before us, appears to have been efficiently trained by the officer in charge (Mr. Driscoll) in the use of all equipment that was available. All witnesses agreed that it was effectively used on the night of the fire. In our opinion, the brigade carried out its onerous duties with great efficiency after the outbreak of fire was discovered and is entitled to great praise for the manner in which the fire was restricted to Ward 5 and was prevented from spreading to the adjoining wooden wards on the northern side, which were in grave danger. This was evident from the blistering and charring plainly visible. In this connection we desire to express our opinion that all members of the staff, from the Medical Superintendent down, displayed coolness, resource, and excellent organization in evacuating to places of safety all patients in wards in dangerous areas.

(5) Were the fire-fighting appliances of the institution adequate in respect of hydrants, length of hose, and any other necessary appliances and adequate in respect of water-pressure and in other respects, and were the appliances regularly and sufficiently maintained, inspected, and tested and in proper order at the time of the fire?

In order to combat the fire which occurred, in our opinion the fire-fighting appliances were adequate in respect of hydrants, length of hose, and first-aid appliances. The water-pressure was not, in our opinion, sufficient. The appliances were regularly and sufficiently maintained, inspected, and tested and were in efficient working-order at the time of the fire. Our finding in this connection is subject to modification that in our opinion the fire-fighting appliances, particularly in respect of length of hose, size of nozzle, and lowness of water-pressure, are not sufficient to combat a major fire liable to occur, and this aspect of the matter is dealt with more fully in our remarks in connection with clause (9) (*infra*). We also there refer to improvements in maintenance and care of branch pipes and general supply pipes, &c.

(6) Was the supervision of patients by the staff of the institution at all times of the day and night and in all respects adequate?

This matter has caused us great concern. At the present time Seacliff Mental Hospital, in common with all other mental hospitals, is experiencing a great shortage of staff, and in our opinion the hospital staff is inadequate in numbers to provide the requisite supervision of all patients at all times. We think that the arrangements made by the administrative staff for the supervision of patients during the day is adequate, but do not think that the number of nurses available can provide adequate supervision in all wards by night.

With special reference to Ward 5, it is unfortunate that probably owing to the shortage of staff a nurse was not on duty in this ward at all times during the night. It was attached for inspection purposes to brick building (part of Ward 2). The nurse in charge of latter ward made a round of Ward 5 hourly. Every two hours a round of all wards was made by Charge Nurse. An hourly visit does not appear to us sufficient to provide opportunity to adequately supervise all patients at night in a two-storied ward containing thirty-nine patients.

(7) Was there on the part of any member of the staff a dereliction of duty that contributed to the deaths of the patients or any of the patients?

There is no evidence before us of any such dereliction of duty.

(8) How did the fire originate and spread or probably originate and spread?

Before attempting to answer this question we think it proper to refer to the evidence of witnesses who had been in Ward 5 or had passed it between 8 p.m. and the time fire was discovered. The evidence of Sub-Matron Little, Matron on duty, was that, accompanied by Nurses Baldwin and Ward, she visited Ward 5 shortly after 8 p.m. All the patients, thirty-nine in number, were then in bed and there was nothing unusual in the ward. Nurse Blythe commenced duty at 7.40 p.m. attached to Ward 5, and was present in Ward 5 during Sub-Matron Little's inspection. She was relieved about 8.30 p.m. by Nurse Boyd for forty minutes and went to the nurses' home during that period. Nurse Boyd stated that while on relief she commenced observation round of Ward 5 at about 8.50 p.m. Her inspection took about five minutes. Nurse Boyd and Matron McLaren were recalled regarding length of time it would take to make inspection, and the Matron was of the opinion that inspection could not be carried out in five minutes. The time taken by Nurse Boyd can be taken as an approximation. On this inspection everything

appeared to be in order. At 9.20 p.m. Nurse Blythe stated she came back to brick building to resume duty. On her way she passed through Ward 5 on the ground floor. She looked into the single rooms on the ground floor. She saw nobody about and no signs of fire. Nurse Ward on being relieved went to Ward 1, passing outside the east side of Ward 5. Between 9.30 p.m. and 9.40 p.m. Mrs. Blackmore, clerk in the office at Mental Hospital, accompanied by Miss Rowlands, typiste, both of whom resided at the nurses' home, passed Ward 5 on their way from Seacliff township to the nurses' home. They both agree that they heard and saw nothing unusual about the ward. Mrs. Blackmore was of the opinion it was not more than ten minutes from the time she passed the building that she heard the fire-alarm. The alarm of fire was given, so far as we can determine, between 9.50 and 9.55 p.m. by attendant Henderson, who was unable to give exact time. The time alarm sounded was not electrically recorded. During that evening a very high southerly wind was blowing. It may be noted that this witness had passed Ward 5 some time after 9 p.m. and saw no sign of fire. He saw the fire from residential block known as "The Ranch," which is about 70 yards south-west of Ward 5 on the hill. He ran down to sound the alarm situate outside the Assistant Medical Officer's quarters, which is south of and not far from the brick building (part of Ward 2). He then went at once to the fire-station and took the reel and hoses out and ran them along to the hydrant at the corner between Ward 5 and the brick building. In a short time Mr. Driscoll, Captain of the Fire Brigade, arrived on the scene with other men and took charge. When he arrived building was a mass of flames. He described how he rescued one patient in east side of ward by ripping grating off and taking her out through the window, which was open. On his arrival he stated there was absolutely no chance of saving the building. Dr. Brown, the Medical Superintendent, received alarm at 9.55 p.m. at his residence. He hurried to scene and found Ward 5 a mass of flames. He considered it impossible then to enter the building. Two patients were saved from the building—one on the upstairs and one on ground floor. Both were privileged patients whose windows were not shuttered. There was no evidence of any unusual noise by the patients in Ward 5 prior to the discovery of the fire.

From the foregoing it is clear the fire was when first discovered of such magnitude and its spread so rapid that we have found it impossible to determine in which part of the building it originated. The opinion we have formed is that it originated inside the building, probably on the first floor towards the northern end. The building was completely burned to the ground, and no expert was able to assist us in definitely stating where the fire originated.

In dealing with the possible—we cannot say probable—cause of the fire we come into the realm of conjecture. The possible causes placed before us were—

- (i) Sparking from electrical equipment or from defective radio;
- (ii) Action of rats;
- (iii) Action of patients—smoking or secreting matches;
- (iv) Sparks from the boilerhouse chimney;
- (v) Ignition of timber from steam-pipes;
- (vi) Spontaneous combustion.

We have carefully considered all the evidence given in respect of each possible cause. We think the last three causes—Nos. (iv), (v), and (vi)—may be eliminated. A number of witnesses were of the opinion that fire was caused by some fault in the electric-wiring system. The suggestions put forward to account for the fault were that it was caused in some way by the slipping nature of the soil on which the building stood. The evidence in this connection was neither very illuminating nor impressive. Mr. Young, electrical engineer to the Dunedin City Corporation, was of the very definite opinion that the fire was not caused by fault in electric system. While admitting possibility fire was electrically caused, it is not shown to our satisfaction that it was. We have not referred in any detail to the possibility of fire having been caused by the radio set installed in the building. The evidence given was that the set was not functioning at 2.30 p.m. of the afternoon of fire and that it was then disconnected by pulling the plug out of the wall and was not again connected.

The action of rats affords a possible explanation of fire, but there is no evidence.

The possibility that fire was due to the action of a patient cannot be disregarded. There is, however, no evidence which would justify us in coming to the conclusion that it was so caused.

The possibility of any unauthorized person having obtained access to the building need not, we think, be considered.

Considering all the possible factors, we are unable to offer any opinion as to the origin of the fire which can be of any value. We must leave the matter entirely open.

(9) Are there any practicable steps that should be taken to reduce the fire hazards of the institution and similar institutions so as to avoid the risk of occurrence of fire, risk of spread of fire, and risk of loss of life ensuing therefrom?

In considering practicable steps for the reduction of fire hazards in mental hospitals we are of the opinion that there are certain matters of general application. Most mental hospitals in New Zealand were constructed many years ago and were designed and built according to plans not in accordance with modern ideas. The present view as given by all expert witnesses is that wards should be of one story and built on the villa system. Apart from the obvious advantages in other respects, one need hardly stress the advantage of such construction in reducing fire hazards.

If possible, in our opinion, all new wards or buildings adjacent thereto should be constructed of fire-resisting material and also be spaced to provide adequate fire-breaks to prevent as far as possible spread of fire.

Where it is necessary to lock patients in rooms by doors and window shutters it should be possible to install in each room an emergency exit opening from the outside.

The existing fire escapes should be carefully examined and approved by the Public Works Department or other competent authorities. We suggest that the Superintendent of the Metropolitan Fire Brigade nearest to each institution be asked to assist in such examination.

We are of the very definite opinion that no manual system of fire-alarm control is or can be adequate and that modern automatic alarm-recording system (electrically controlled), preferably automatic sprinkler system, should be installed throughout Seacliff and similar institutions. So far as practicable fire-alarm-recording equipment and brigade appliances should be housed in one building.

We have considered whether any further practicable steps could be taken at Seacliff Mental Hospital to reduce fire hazard. We are of the opinion—

- (a) The length of hose available is inadequate and should be increased:
- (b) The nozzles should be replaced with modern nozzles of all diameters:
- (c) All branch pipes should be reconditioned owing to their inner condition having deteriorated, due possibly to lack of expert knowledge in maintenance:
- (d) The present water-supply is insufficient to combat a major fire. The available maximum number of gallons per minute and pressure obtained during tests should be increased. Six hundred gallons per minute is the maximum output at what is generally regarded as a low pressure. Reserves of water at 600 gallons per minute would last about four hours (allowing for inflow during that period). Provision should be made for increased flow by increased reservoir capacity and by a thorough overhaul of the reticulation system. We appreciate that owing to the existing nature of the hillside it is extremely difficult to install reservoirs capable of conserving adequate supplies of water.

We have not had the opportunity of inspecting any hospital other than Seacliff, and the following remarks, though of general application to all mental hospitals, apply particularly to Seacliff Mental Hospital in view of its isolated position and the nature of buildings:—

- (a) That a suitable employee attached to the maintenance staff (not a nursing attendant) should be appointed in charge of the fire brigade at the institution. His duty being to control the brigade, organize and supervise all duties, including instruction to female staff in operation of hose, reels, bucket pumps, extinguishers, and to be responsible for the maintenance of all equipment and appliances. He should be attached for fourteen days each year to the nearest city fire brigade to undergo training and receive experience in modern fire-fighting:
- (b) That a sufficient number of the male staff should be available at all times to man at least two deliveries and to turn out in not more than two minutes from time of alarm as a first crew:
- (c) That a trailer pump capable of boosting at high pressure water from water-main or water from static supplies should be provided. Also that brigade be equipped with modern rescue equipment in the form of gas-masks and self-contained oxygen-breathing sets.

The above recommendations (a), (b), and (c) are made on the advice of Mr. Laidlaw, whose experience in the matter the other members of the Commission must rely on.

We make the following general observations regarding matters which have come to our notice during the course of our inquiries:—

We think we would fail in our duties if we omitted some reference to the state of the buildings. In our opinion some are unsuitable according to modern ideas. Ward D, in particular, should be pulled down or remodelled. The main building was erected in 1883 and, owing to the creeping nature of the soil, maintenance of same has always been costly, difficult, and unsatisfactory. A Commission held a lengthy sittings in 1888, and the evidence given before it shows that the question of possibility of evacuation was even at that time considered. Since then the main building has been repaired as urgently required and fresh buildings—the later ones of modern design—have been added as the necessity for extra accommodation arose. No doubt the extremely heavy cost of transferring the institution to another and more suitable site has each time the matter was considered been looked upon as an insuperable obstacle.

The present buildings as a whole are unsuitable for the staff to carry out its duties in the best interests of the patients. The Medical Superintendent, Medical Officers, Matron, and all members of the staff labour under great disadvantages and will continue to do so until the institution is remodelled. It is difficult to see how this can be carried out on the present site. We do not think there should be any extension of the present buildings until the whole question is fully investigated by experts and a final decision made by the proper authorities.

We may also be permitted to refer to the question of nursing staff in mental hospitals. We were greatly impressed by the difficulties under which the administrative staff of Seacliff and other mental hospitals labour owing to the shortage of nursing staff. We appreciate that the nature of the occupation does not make a great appeal to many girls desirous of taking up nursing as a profession. As a temporary measure we suggest that it might be of assistance to institute a campaign to bring back during the war period nurses who have had experience in mental hospitals and may be willing to assist. We may further suggest that the status of nurses in mental hospitals be improved to attract young women seeking employment with an assured future. To determine the best method of effecting this object a committee could be set up consisting of members of the mental hospital administrative staff, male and female, with nominated members of the Registered Nurses' Association, to investigate present conditions and make recommendations to the Director-General of Mental Hospitals. Since we decided to make this suggestion we have listened with interest to the urgent appeal made by Dr. Gray, Director-General, through the broadcasting-stations, to women to assist the Mental Hospital Department during the war period.

In concluding our report we desire to express our appreciation of the facilities afforded us in obtaining information by Dr. Gray, Director-General of Mental Hospitals; Dr. Brown, the Medical Superintendent at Seacliff; and Mrs. McLaren, Matron; and members of the staff. We also desire to express our thanks to the police and the expert witnesses.

Given under our hands and seals at Dunedin, this 5th day of March, 1943.

[L.S.]	H. W. BUNDLE, Chairman.	
[L.S.]	JESSIE A. TOMLINSON	} Members of Commission.
[L.S.]	F. C. LAIDLAW	

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