

may be used for cleansing dairy utensils and so forth, and might affect the population in Wellington. When you remember that for a population of seven thousand men the military allowance is 5 gallons of water per man, and that means 35,000 gallons of polluted water going away, which is a big quantity to get rid of.

80. *Mr. Ferguson.*] That military allowance of 5 gallons includes baths and other facilities?—Five to 10 gallons is the minimum—not less than 5 gallons. If they supply more than 10 gallons for soldiers in a camp it is an excessive quantity, and results in the camp being wet about the ablution-benches. The one thing is always to keep a camp dry. In regard to the question of the hutments, I condemned the original scheme of hutments as absurd, impossible, and impracticable because, as it was put in the Press at the time, it was proposed to concentrate the whole 4,500 men into $4\frac{1}{2}$ acres.

81. *The Chairman.*] You say that these hutments are an absolute departure from what is laid down by the military authorities upon the subject?—Yes.

82. And therefore it should lie on those who are responsible for them to justify the departure?—Yes. Four thousand five hundred men at 50 square feet each for sleeping purposes alone will occupy over 5 acres, which is simply for the flooring without any room for intervals or streets. Therefore it is impossible to cram 4,500 men, who occupy $5\frac{1}{4}$ acres for sleeping-accommodation only, into $4\frac{1}{2}$ acres. At 60 ft. floor-space the sleeping-accommodation alone would be $6\frac{1}{2}$ acres, and you must double that for intervals. That is trying to squeeze 13 acres into $4\frac{1}{2}$, which, of course, is absurd, impossible, and impracticable.

83. Why do you refer to $4\frac{1}{2}$ acres?—That is the statement made in the Press of the original proposals of the Minister of Defence.

84. We have it that the present area occupied by the present hutments is about 23 acres, and when completed and all the huts up, 31 acres?—About half of what it should be.

85. Even now?—Yes, even now. It does not allow for 60 square feet of floor-space, and separate dining-rooms, and proper intervals, and so forth.

86. There is one matter you did not touch upon which Mr. Bates directed out attention to, and that is the question of sleeping on the floor, and of galvanized iron being the outer covering of the building. According to him those two facts, plus the amount of draught let in, would make the hutments very improper habitations?—Yes. I quite agree with everything Mr. Bates said on the subject. The question of hutments is described very nicely by Knox in his work, at page 11: "Hut barracks are used in some stations, being cheap and healthy. In war they are better than tents for winter quarters. When used for a permanency the sides are usually built of brick. Döcker huts, as used by the German Army, have proved satisfactory for our troops in this country. These huts are portable, being built in sections, having a wooden or iron framework, covered with felt, lined with canvas, ventilated by windows, cross-louvres, and ridge ventilators, and, as a rule, they should not accommodate more than twenty-four men. The ground for a hut should be cleared, levelled, and drained, and the huts arranged *en échelon*, each being raised above the ground to a sufficient height to allow a man to crawl under to clean out dead cats, rats, and tins that may collect there, or else this space between the floor-level and the ground should be wired in with strong galvanized open-meshed netting. Warming is best carried out by open grates. As open fireplaces necessitate brick chimney-stacks, sometimes stoves are used in their place in temporary huts to save expense."

87. Can you understand how hutments to accommodate fifty men in this way were approved?—I cannot understand that. I condemned them before they were attempted to be built.

88. I understand that the hutments proposed by Dr. Purdy were not approved?—So I have heard; and I am very pleased to hear that he suggested they should be in echelon.

89. Of course, these were submitted to Dr. Frengley, to an architect, and to an engineer. Do you suggest that it would be necessary, before approving of these, that some one with a knowledge of military requirements should have been present?—That is a special matter that should have been submitted to the Director of Medical Services for his approval, and he should have had control of the plan.

90. Your view is that this was not so much a matter for mechanical approval as a matter to which the experience of military medical authorities should have been brought?—Yes.

MONDAY, 26TH JULY, 1915.

Sergeant MAGNUS BADGER further examined. (No. 28.)

1. *The Chairman.*] What is the point regarding which you first wished to speak?—When I first went on duty I was stationed at the kiosk hospital. What I found there was a very congested state of affairs: men were sleeping on the floors on mattresses.

2. *Dr. Martin.*] What was the date?—The 28th June. Though that was taking place, Sister Brandon, the nurse in charge, said that that would not last twenty-four hours, as every effort was being made in Wellington to secure beds and stretchers, and that they were expected on the following day. The next day a large consignment of stretchers and beds arrived. Colonel Valentine came to me the next day—I think it was the 29th—and said, "Do not allow any military etiquette to stand in the road, but come to me if you have anything to say regarding necessary improvements." I made several suggestions to him there and then. One was that the beds should be numbered. He said, "We shall have that done at once"; but we found it impossible owing to the very large rush of patients the next day—over a hundred—which necessitated beds being placed between other beds. There were as many as a hundred men coming in