

original and verified. Besides the copies of those letters quoted that were not included in the exhibits, Mr. Blow handed in the following papers: Schedule of works, Makarau contract, Helensville Northwards Railway; voucher for payment of contract, with certificate attached, exhibits 11 to 19 inclusive.

*Mr. Blow*: That is all the written evidence I propose to put in on the question of slips, but I just want to emphasize this: that the department contends that the slips are distinctly not due to steepness of slope; and we point to the admission of the contractors in their letter of 12th February, 1896, agreeing with that view. And further we contend that they distinctly were due to want of proper precautions being taken in the matter of drainage. And, as I said before, the author of the specifications was more than usually precise in this matter, because he defined the particular slips that would be paid for and the particular slips that would not be paid for, and we say emphatically that these slips come under the latter head.

Now I will deal with the question of the tunnel. As regards the tunnel there is nothing whatever in the specification guaranteeing the nature of the strata that the tunnel would pass through. We have heard a good deal about a boring that was put down, but no boring is mentioned anywhere in the specification from start to finish, and no boring is shown on the contract-plans anywhere from cover to cover. The reason for this was obvious. The department was quite well aware that the boring was put down on a wrong line, but members of the Committee will know that in making surveys for such important works as railways the survey is gone over two or three times. The first survey we make is called a trial survey, and on that line we do not put in any accurate curves, we simply put in tangents—run straight lines from point to point—and when we have discovered what is really the best line for the railway we make a much more precise and detailed survey showing the level of the whole of the ground along the contract. This boring was put in on the trial line, and in case it might mislead the contractors no mention of it was made in the specifications or anywhere else. The contractors were left to their own resources. They could examine the ground, and come to their own conclusions as to what the nature of the material would probably turn out to be. The department itself was doubtful about the matter. This is shown both by the drawings and the specifications. [Referring to a set of the drawings.] In drawing No. 4, attached to the contract documents, two alternative forms of lining are shown. The first form is the ordinary lining with an ordinary foundation. This form of lining is only adapted to firm ground, where the soil will stand the pressure that comes upon it. When the excavation of this tunnel was commenced the ground was found to be thoroughly hard—so hard that it could not even be broken with a pick; it had to be blasted out. And that form of lining was adopted, the foundation being considered to be amply strong enough to stand the strain. As they got further into the tunnel, and the nature of the strata changed, it was found that the work still required blasting out, but the material was of such a nature that it slacked on exposure to the air and moisture. And shortly after the lining of a portion of this part of the tunnel had been completed according to this first section (Section A) it was discovered that the footings were gathering inwards, and measures had to be adopted to prevent this. We then resorted practically to the other form of lining shown on the drawing (Section B), which provides an invert beneath the side-walls, making the lining a complete ring, so that gathering inwards was quite impossible unless the whole lining was crushed in like the shell of an egg. I mention this point now to show that the Government were doubtful what the nature of the strata would be. If we had been certain what it would be there would, of course, have been no necessity to put in that alternative. But we were doubtful whether it would be hard or soft, and therefore we showed two alternative linings that might be required, to be used in the discretion of the Engineer.

2. *Mr. R. McKenzie*.] Who signed those plans? That has never been altered for thirty years?—That was signed by John Blackett, Engineer-in-Chief. Mr. Blair was Engineer-in-Chief at the time, and that drawing is signed by his immediate predecessor.

*Mr. Graham*: Mr. John Blackett has been dead these six years. His son has been dead some time.

*Mr. Blow* (continuing): As further evidence that the department was doubtful as to the nature of the strata, I refer to a portion of clause 13 of the specification. [He then read paragraph 7.] These words show that the department as a matter of fact was not aware whether the tunnel would require to be lined or not—that is to say, whether the tunnel would turn out to be in hard ground or soft. I would like to say a word in reference to some remarks that have been made to the Committee on the subject of boring. The Committee will perhaps recollect that one of the contractor's witnesses—Mr. James Stewart, of Auckland—stated it was his practice to put down borings, but when he put them down he took no responsibility whatever; and if the nature of the strata turned out different from what the borings indicated, he said he took no responsibility, and the contractor was not entitled to any extra payment. Here we do not mislead the contractors by giving them any information at all, and surely, therefore, our case is better than that of Mr. Stewart. We say that we leave you to discover the nature of the ground, and all the contingencies that arise during the progress of the work are yours. If any other view than that were taken we should have to put in a clause in the specification saying that if the ground turned out more favourable than was expected an allowance would have to be made by the contractors in favour of the Government. It has often turned out to be the case that the ground has proved more favourable than expected, and contractors have made thousands of pounds by it; and if a contractor should once in a while suffer a loss on a contract through the ground turning out less favourable than was anticipated it is not right that he should come to this Committee and ask them to refund that loss. Contracting in this way is reduced to a farce.

*Mr. Wright*: It appears to me, Mr. Chairman, Mr. Blow is making a general defence. Is he going to call any witnesses?—because in that case, I contend, he should call his witnesses first and make his general defence afterwards.

*Mr. Morrison*: I think he is quite right and going on in the proper order.