

62. *Hon. Mr. Fraser.*] You mean that you did not think the wages would be so high?—That has affected the whole thing. On the basis of the wages paid at the time £500,000 was a good price. But the output of the men and the wages basis are both different now.

63. Is the wage higher and the output less, or is the output higher and the wage less?—The wage is higher and the output is less.

64. *Mr. Okey.*] Could you give us an idea what Mr. McLean's contract works out at per yard?—The excavation runs out at about £37 5s. per lineal yard, and the lining at about £23 10s. per lineal yard. In that cost of excavation, engineering is included.

65. Can you give us any idea of the difficulty there is at Otira with labour?—I have not personally been at Otira Tunnel to look after the contract. I have been there, but I have not been looking after the contract.

66. Do you find with this class of work that the tendency is for the cost to increase?—There is no doubt about it that the cost is increasing. The figures that I have given you will show that the tendency is for it to increase. I do not think the men work as hard as they used to, for one thing.

67. Do you think a system of bonuses would encourage the men in any way?—That is a matter I should not care to express an opinion about. I think the fairest way is to let a contract. I believe in a contract for a big job like this.

68. As against co-operative labour?—I would prefer a straight-out contract.

69. *Mr. Reed.*] The Government estimate for the work was made in New Zealand, was it not?—Yes, in the Wellington office.

70. The officers making that estimate would have no experience to go on so far as New Zealand is concerned?—I do not understand you.

71. You said that the longest other tunnel in New Zealand was under a mile in length, and this is five miles?—Yes, except the Lyttelton Tunnel, which is a mile and three-quarters.

72. To get information sufficient to make an estimate, they would have to get statistics regarding works outside New Zealand?—Yes; they would get their information about long tunnels from other works.

73. The New Zealand experience would not qualify them to make an estimate for a tunnel of this size?—I would not say that exactly. They would get considerable help from studying statistics regarding other long tunnels in other countries.

74. Are there tunnels in other countries five miles long with a single line?—There are tunnels up to nine miles long.

75. But with single lines?—Oh, no. I do not think you will get any tunnel longer than five miles with only a single line. I do not know of any.

76. Do you think a serious error might have crept in in getting information regarding a double-line tunnel of that length and compiling an estimate for a single-line tunnel?—I think any trained engineer would be able to satisfy his mind on that point.

77. Do you think it is easier to work a two-line tunnel than a single-line tunnel, proportionately with the amount of spoil to be removed?—Oh, yes; the larger the tunnel the easier it is to carry the spoil out—up to a certain size, of course.

78. Are you satisfied with the estimate of £500,000 that was made originally by the Department?—Yes, I am.

79. *The Chairman.*] Under the conditions at that time?—I believe it was a fair estimate at that time.

80. *Mr. Reed.*] Are you of opinion that, had matters remained as they were at that time, that work could have been completed for £500,000?—We all thought so, and I have seen no reason to doubt it since.

81. Do you agree with Mr. McLean in his statement that it is going to cost £750,000 to complete that contract?—Well, he has got figures for it, so I do not know that I can dispute it.

82. Do you think there has been a change in the conditions of labour sufficient to warrant a difference of half as much again on the original estimate? £500,000 was the Department's estimate, and the contractors' experience shows that it will cost £750,000?—That is a very big thing to answer in a broad way like that. I do not think I can answer it.

83. Are you satisfied that the original estimate was a correct estimate, and that no error could have crept in in compiling it?—There was no error in the quantities of the stuff to come out, and the length it had to be run, and all that.

84. That, of course, could easily be ascertained, but how about the estimate of the practical working?—I am sure that the gentleman who made the estimate, Mr. P. Hay, used his best judgment. He was as thorough a man as ever stepped in New Zealand.

85. You do not think, then, that there could have been confusion between a one-line tunnel and a two-line tunnel in the minds of the Department and the contractors when this contract was entered into?—No, because all the tunnels in New Zealand are single-line tunnels. We have had some difficulties even with the mile-long tunnels that we have put through in New Zealand, and Mr. Hay was well acquainted with all the difficulties, because he was just on forty years in the service; he had been through the whole Public Works Department of New Zealand from the start, and knew all the circumstances and the difficulties experienced.

86. You must see that the length of the tunnel must greatly increase the difficulties with a single-line tunnel?—I said so at the start.

87. *Right Hon. Sir J. G. Ward.*] Do any of the tunnels concerning which you have given evidence compare, especially as to the nature of the material, with the Otira Tunnel, and, if so, which?—The Midland Railway tunnels are in similar country. We have one in the Manawatu