

Dr. Knight,
Continued.

General Government, would not be materially lessened by alienating a part of them in exchange for public works, and if no funds for the formation of the works can otherwise be obtained, the General Government should make a moderate reserve of the Waste Lands for such undertakings, provided that economy and good management are secured by the appointment of a skilful engineer, and provided also, that the General Government, before acceding to a recommendation of the Provincial Council that land be reserved for the contemplated railways, takes care that laws are passed to raise, by local taxation, the necessary permanent revenues for meeting the estimated annual cost of maintaining them. I have already drawn the attention of the Government to the little which has been done in Southland in the way of local taxation, and urged the necessity of making it one of the conditions of the proposed undertaking, that due provision should be made by permanent laws for securing the maintenance of public works. The present revenues of the Province are inadequate for the purpose. The alienation of the Waste Lands will materially lessen the revenues derived from the pastoral rents; and I have already warned the Government that no portion of these rents can, in my opinion, be used for any other purpose than for defraying the interest and sinking fund on the Southland debt.

Mr. Patterson, C.E.

Mr. Patterson, C.E., called in and examined.

29th August, 1867.

27. *Mr. Hankinson.*] I understand that the contract price is to be fixed at the rate of one acre for every one pound's worth of work done. Do you consider that a contractor, who only consents to take land as payment with a view to converting it into cash as speedily as possible, would take the contract on such terms?—I may state that when I was in Invercargill, a contractor was willing to undertake it in those terms, if the work were begun immediately.

28. *Mr. Wood.*] Suppose a tramway to be formed of the same gauge as the Bluff and Invercargill Railway, could the goods carriages be conveyed along the railway, and so save reloading?—Obviously, if the lines were connected.

29. What would be the probable cost per mile over the same country, namely, Invercargill to Mataura, of an iron horse tramway suitable for passengers and goods traffic?—Assuming the tramway to be made available for use in connection with the Bluff Harbour and Invercargill Railway, using horses instead of engines, I think such a tramway would cost between £2,000 to £3,000 per mile.

30. Would the working expenses and wear and tear on a tramway of the above kind be much less than a railway, and if so, in what proportion?—I think they would be much greater.

31. In a Province like Southland, would it be practicable to run a tramway along the main road, and so save the cost of fencing and paying compensation for land?—It would be practicable, but I think the tramway would be very liable to injury if unfenced.

32. If it were deemed advisable to construct ten sidings at convenient situations along such tramway, what would be the probable cost?—It would cost about as much per yard as the main tramway. They might be made for about £100 each if short.

33. *Mr. McNeill.*] Is the expense of wear and tear of a road greater or less per mile than that of a railway, supposing the road to be formed with a superstructure of gravel, and the railroad to be such as you propose should be made being at a cost say of £7,000 per mile?—If by "wear and tear" is meant maintenance of the railway works, and, on the other hand, of the road works, the cost of maintaining a railway would be less than that of a road in about the proportion of two to one.

34. Are you of opinion, from actual observation, that the rocks in the neighbourhood of the Mataura Falls, near the proposed terminus of the railway, are absolutely unsuitable for the purpose of metalling a road?—I cannot say that they are.

35. *Mr. Wood.*] Do you think that they are suitable for metal?—I am unable to answer that question.

36. *The Chairman.*] On the Winton line as proposed, what would be the probable annual cost of working the line per mile?—If properly finished, and with moderate traffic, and worked in connection with Bluff Harbour and Invercargill Railway, about £300 per mile.

FRIDAY, 30TH AUGUST, 1867.

PRESENT :

Mr. Murison,
Mr. McNeill,

Mr. Wood,
Mr. Hankinson,

Major Heaphy, V.C., in the Chair.

Mr. Weaver, C.E., called in and examined.

Mr. Weaver, C.E.

30th August, 1867.

37. *The Chairman.*] What is your profession, and do you at present hold any official appointment in the Colony?—I am a Civil Engineer, of English education; at present Chief Engineer of Auckland, and have had some experience in the construction of railways.

38. Can you give any idea as to the wear and tear of a railroad as compared with that of a road?—The maintenance of a road for light traffic would be less than that of a railroad; if the traffic were heavy it would be the reverse.

39. What is the cost of making a common road for light traffic?—It would cost from £1,200 to £2,000 per mile, if metalled to a width not exceeding twelve feet, according to the cost of materials and the character of the country.

40. Is gravel available as metal for a road on which the traffic is light?—It is.

41. *Mr. Wood.*] Suppose it were contemplated to construct a railway of a 3 feet 6 inch gauge, with iron rails, suitable for light engines and carriages; what do you think would be the average cost per mile—the country being of a slightly undulating character, with no engineering difficulties, and no bridges required except for small creeks, abundance of black-pine and totara to be had for the cutting