

1875.

NEW ZEALAND.

# RAKAIKA BRIDGE COMMISSION,

(REPORT OF THE).

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

Rakaika Bridge Commission, Christchurch, 30th April, 1875.

To His Excellency the Most Noble Marquis of Normanby, Governor of New Zealand,  
&c., &c., &c.

WE, the Commissioners appointed the 2nd day of February, 1875, under your Excellency's hand and the seal of this colony, to inquire into certain matters connected with the Rakaika Bridge, as set forth in the Commission, beg to report,—

That the first contract for the construction of the Rakaika Bridge received the approval of the late Mr. T. Patterson, Consulting Engineer, and Mr. G. Thornton, Provincial Engineer, and was subsequently made on the 7th October, 1869, between the Superintendent of the Province of Canterbury and Mr. William White, contractor.

The second contract, for the conversion of the bridge (during the progress of the first contract) to a combined road and railway bridge, was entered into by the Superintendent of Canterbury with Mr. William White on the 29th August, 1871. The plans were approved by the Acting Engineer-in-Chief, Mr. Blackett, and the Provincial Engineer, Mr. Thornton, on behalf of their respective Governments. Under the second contract, the first was to remain in force, and a clause was inserted providing for the General Government taking over the contract, which, however, was never acted upon. This contract in its main features provides for additional piles, railway girders, transverse joists 9 x 4 on edge, and longitudinal planking.

Mr. W. B. Bray is named as the General Government Engineer, and Mr. George Thornton (to whom the supervision of the works was intrusted) as Provincial Engineer.

The powers of the General Government Engineer were not defined, but, as it was contemplated that the General Government would repay the cost of the bridge to the Provincial Government, the Engineer of the former would have some control: he could dissent from or assent to any alterations.

Mr. Locke (since deceased) was appointed by the Superintendent of Canterbury clerk of works under the contract.

Mr. Bray retired from the service of the General Government in May, 1872, and was succeeded by Mr. T. S. Tancred. In September, 1872, Mr. Tancred suggested alterations in the design—viz., to lay 18-ft. 10 x 5 joists on their flat instead of 9 x 4 on edge, and to floor the bridge between the rails with timber four inches thick to receive asphalte as a protection to the structure against fire.

Plan No. 4, which embodies this idea, does not materially alter the original plan No. 2, for the combined bridge, but was never carried out.

It was prepared in Mr. Thornton's office by Mr. D. G. Ward, under instructions from Mr. Tancred. This plan was signed by Mr. Tancred and Mr. Thornton, and forwarded to the Engineer-in-Chief, Mr. J. Carruthers, for his approval, which was signified in due course, on the 29th October, 1872, to Mr. Tancred, by telegram; and on the 31st October the latter offers Mr. White, and he accepts, a contract to lay the permanent way.

No further instructions appear to have been forwarded by the Engineer-in-Chief in this matter, and no intimation in any form was given of the confirmation of the plan to the Provincial Engineer or the contractor, although both were aware that such a plan as No. 4 was contemplated.

Mr. Tancred left office on the 5th November, 1872, without explaining to his successor, Mr. C. Y. O'Connor, the position of the works on the bridge, or that No. 4 plan had been approved. The latter never saw the plan.

Mr. Locke, clerk of works, was invalided about this date, 4th November, 1872, and none other was appointed for four months, during which period the whole of the superstructure was completed in a mode entirely at variance with the contract designs, Mr. Thornton having been content to accept Mr. White's word as to the mode in which the bridge was to be constructed.

Plan No. 3, drawn after completion of the bridge by Mr. J. G. Warner, shows it as built, and has not received the sanction of any of the Engineers excepting as far as asphaltting is concerned. It differs radically from either No. 2 or No. 4 plan, by the omission of the joists 9 x 4 or 10 x 5, and placing all the planking transversely, and by the asphaltting of the whole of the bridge.

Mr. White says Mr. Tancred authorized this plan, but Mr. Tancred denies it, and there is no other evidence. He authorized the use of Oregon sleepers, but left office before the decking was commenced.