

Their estimate for the electrification of this section of line, including the equipment of tracks to Addington to allow locomotives to run to repair-shops, is £203,000.

The net capital outlay, after deducting credit for steam-locomotives, is £190,800, which is £74,200 less than the estimated cost of the duplication of the tunnel (£265,000).

It is to be noted also that duplication would not remove the smoke nuisance, which has been the principal cause of the public complaint.

The annual saving in working-costs due to electrification, according to Messrs. Merz and McLellan's report, would be £4,200—equivalent to a return of 2·2 per cent. on the net capital outlay.

As pointed out by Messrs. Merz and McLellan, the return on capital is small, and it is evident that, apart from the question of the tunnel, electrification in this area would not be financially justifiable even with the increased service that would be possible with an electrified railway.

I appointed Messrs. F. T. M. Kissel, of the Public Works Department, and R. P. Sims, of the Railway Department, both electrical engineers, to go into Messrs. Merz and McLellan's report thoroughly in so far as the Lyttelton-Christchurch Section was concerned. Their conclusion was that the Government would not be justified in deciding to electrify the section on the information supplied in the report.

As a result of their investigation the following views were expressed :—

- (1.) That there is no doubt that the atmospheric conditions throughout the tunnel are extremely uncomfortable both for passengers and crew.
- (2.) That they are of the opinion that duplication of the tunnel will not satisfactorily deal with the situation.
- (3.) That the present tunnel is ample to deal with the present traffic and a very considerable increase in addition:
- (4.) That with electrical operation traffic could be still further increased.
- (5.) That the need for a second tunnel from a traffic point of view is not warranted.
- (6.) That from a railway economic point of view electrification is not justified, yet from a broader or national point of view it may be fully justified.
- (7.) That, compared with the duplication of the tunnel, electrification of the section means an annual saving of £5,804 and the removal of the discomfort of passengers.

On the 12th March last I convened a conference at Christchurch consisting of members of the Canterbury Chamber of Commerce and other business representatives, local members of Parliament, and others. The conference was called for the purpose of discussing three alternatives in so far as the Lyttelton Tunnel was concerned—namely, (1) Duplication ; (2) electrification ; (3) Diesel electric engines.

All the data at my disposal were placed before the conference, and after a general discussion it was agreed that electrification of the tunnel was the most desirable of the three proposals.

Since the conference was held arrangements have been made for a committee of experts, consisting of Messrs. F. T. M. Kissel, Chief Electrical Engineer, Public Works Department ; J. E. L. Cull, Designing Engineer, Public Works Department ; A. S. Wansbrough, Designing Engineer, and G. W. Wyles, Assistant Signal and Electrical Engineer, both of the Railway Department, to be set up for the purpose of reporting on a scheme for the electrification of the tunnel, covering also a general scheme in respect to electrification, and the method by which the work should be carried out. Definite recommendations have been made by the committee, and the matter is under the consideration of the Government at the moment.

The committee's report is appended hereto.