

transmit to the Government its opinions thereon. We consider that a panel constituted as follows would ensure adequate local representation and would enable the Government to be fully informed on the local implications of the different aspects of the project :—

- (i) An Engineer of the Ministry of Works, as Chairman.
- (ii) The Engineer-Superintendent of the Auckland Harbour Board.
- (iii) The Auckland City Engineer.
- (iv) The Engineer-Manager of the Auckland Transport Board.
- (v) The Professor of Engineering of Auckland University College.

Membership of such a body will not in any way conflict with the duty that each individual member owes to the Council or body for which he normally acts in his official capacity, and the members will have the advantage of being able to consider, as a body, all metropolitan aspects of the project. We have in mind the analogy of the functions of District Highways Councils and their relation to the Main Highways Board.

The inclusion of the Professor of Engineering at the Auckland University College is strongly recommended because of the educational value of the work to local engineering students, who, we think, should be given every facility for studying the practical problems of construction. The more advanced students should be afforded every opportunity of participating in the actual work as part of their practical training for a degree. Furthermore, the fullest use should be made of the Engineering Laboratory for the testing of materials during the course of the work.

(10) JUSTIFICATION FOR TOLLS

In an earlier section of this report we recommended the institution of a system of toll charges as being the most practical and most equitable means of financing the cost of the bridge and its approaches, inasmuch as such a system would ensure that the cost would be met by all who derived indirect or direct benefit therefrom. We were influenced in making this recommendation by the fact that in other parts of the world bridges and tunnels serving metropolitan traffic more conveniently than ferries are almost universally financed by means of toll charges. Australia provides several examples, and the United States of America provides still more. In view of the existence of this world-wide practice, we are able to make a clear distinction between the financing of ordinary State and main highway construction, including the erection of bridges necessary to carry highways over rivers, and the financing of the construction of special facilities, such as costly bridges or tunnels over or under large navigable waterways, intended principally to provide more conveniently for the requirement of metropolitan traffic. In the one case the necessity is largely physical, in the other it is largely economic and is induced principally by the growth of metropolitan traffic. Nevertheless, we have in another section of this report stressed the national value of a harbour bridge, and have accordingly recommended that the Government should recognize this aspect by providing financial aid to the extent and in the manner we have suggested. While we are of the opinion that tolls on highways are in general undesirable, we can find no sound reason against the financing by this means of the construction of special facilities of the nature of an Auckland Harbour bridge.

REVIEW

We have, we think, considered the project from every angle, and now propose to supply answers in advance to certain questions which may be anticipated concerning the justification for undertaking so expensive and extensive a work.

Firstly, how does the project compare with others, for example, the Sydney bridge and its approaches?

We answer this by stating that, although the population of Sydney is roughly five times that of Auckland, the respective outlays are estimated to be in about the same ratio, regard being had to the conditions prevailing at the time the Sydney bridge was