

waterfront roads. At the higher level we mention there would appear to be little difficulty in connecting the second bridge with the proposed underground railway-station near the Town Hall. Such a connection might be of interest if the railway system were to be extended to the North Shore, though this possibility may be regarded as remote in view of the probability of a trolley-bus system serving the North Shore area more efficiently than a railway.

On the northern side we propose that the approach descend to the foreshore as planned by the 1929 Commission, but that instead of diverging east to O'Neill's Point, Bayswater, it should continue along the foreshore to the head of Shoal Bay (Napier Avenue), thus leading almost directly to the existing centre of population of Takapuna and the future centre of gravity of the entire North Shore population. Birkenhead and Northcote residents would make use of existing roads and streets, but these are not considered suitable to carry the additional strain of the expected volume of high-speed traffic proceeding to and from other parts of the North Shore area.

By forming a branch of this approach to Barry's Landing and by continuing the approach southward to Devonport, a future high-speed by-pass of the existing highway can be created, though we do not regard this work as a necessary part of the initial programme, and recommend it only as a second-stage development, to be constructed as and when warranted. Some points in favour of the future road system envisaged by us are :—

(a) Should a tunnel be constructed in the future, the by-pass would connect the most likely site for the northern portal with the future centre of gravity of the North Shore population. We have referred elsewhere to this circumstance in our discussion of the possibility of a tunnel being constructed from Parnell to Devonport.

(b) The relatively small areas of the upper reaches of Shoal and Ngataringa Bays cut off by the approach highway do not involve any bridging, or at most one very small structure, and thus the 1,700 ft. or 2,000 ft. involved in the proposal of the 1929 Commission can be avoided. If drained by means of culverts with flood-gates, these areas could be reclaimed at small cost and would become of considerable value. This, however, is a long-term matter, and can be arranged between the Harbour Board and the respective local bodies concerned; but we commend it as one that should not be overlooked as being worthy of consideration at the appropriate time or times. The conversion of these mangrove mud-flats into pasture lands could be achieved in a period of six or seven years after completion of the approach roads, which would serve as the principal stop-banks for excluding tidal waters. Thereafter, as and when the demand arose, portions of these areas contiguous to roads could be set aside and developed as industrial or recreational sites. Whatever the final purpose might be, the reclamation of these unsightly areas would be of benefit to the boroughs concerned.

(c) Waterfront roads in these locations, connected by short laterals to a limited number of feeders on one side only, would by-pass built-up areas and permit relatively high speeds for traffic destined for the closely populated areas of Takapuna and the more distant areas to the north.

(d) As well as the elimination of bridging, the road system that we have planned makes possible substantial reductions in the quantities of earth-work required and of the rock necessary for protection against wave action. An obvious disadvantage of the route we propose is that it entails greater travelling distance for residents of Devonport, of the order of $1\frac{1}{2}$ miles. However, in view of the