

Long trucks and buses when operated on the many narrow tortuous highways of New Zealand are very destructive to the verges of the carriage-way by virtue of the length of the vehicles. It will be appreciated that long buses and trucks take up more road space on sharp curves than on straights, and therefore these vehicles, in negotiating the curves, tend to travel with wheels on one side running right at or over the edge of the pavement. This causes rutting along the verges of metalled roads and rapid breaking away of the edges of the bituminous pavement on sealed roads.

Wide vehicles also cause excessive damage along the verges of the pavements, but in this case it is on the straight sections of road, where speeds are highest, that most damage results. The large passenger-buses are more destructive in this direction than the wide goods-trucks, for the reason that buses operate at higher speeds. A vehicle being operated at high speed has a strong tendency to swing away from passing vehicles, and on 16 ft., 18 ft., and even 20 ft. sealed surfaces, vehicles which are the full 8 ft. wide overrun the shoulders. It is at the junction of the shoulders and the pavement where the road is weakest, and thus these wide vehicles are the cause of serious verge damage.

While the longer and wider trucks and buses have created problems which call for more costly construction and greater expenditure on maintenance, it is the increase in the numbers and weights of heavy vehicles which is causing the most serious amount of damage on the highways, roads, and bridges of New Zealand. Not only are the highways called upon to carry a greater volume of trucks and buses at the upper limit of legal loading, but also excessive overloads are all too common, and in some areas may be said to be almost normal practice. The Crown, at present is not bound by heavy traffic regulations, but in justice to other operators it would seem very desirable that the regulation should be made to apply to all operators. Fortunately the Railway's Department's road vehicles, which now operate from one end of the Dominion to the other, with but a few exceptions do substantially adhere to the loading regulations and road classifications, but this position cannot be expected to remain where other commercial vehicles operating in the same area are allowed to continue the enjoyment of the benefits of overloading.

The Board's concern with the disastrous effects of overloading has been very real, and considerable investigations have been carried out in an endeavour to determine a reasonable and practical balance between modern heavy traffic demands and the country's capabilities. Desirable limits for axle loads, the relationship of load distribution and axle spacing, and upper limits for tire pressures were determined. At the instigation of the Board there has been full discussion of the problem, and with the co-operation of the interested parties a compromise solution, in so far as highways are concerned, has been recommended to the Transport Department for the gazetting of new loading regulations. If and when these are brought into force, importers of vehicles, operators, and road designing and constructing authorities will have clear issues on which to base their respective policies, while our existing highways will have some measure of protection.

The traditional sealing carpets of New Zealand will have to be abandoned in favour of wider and thicker and consequently much more costly bituminous surfacing if 8-ton to 9-ton axle loadings are to be imposed upon the roads designed for 5-ton to 6-ton axle loads. Until the roads can be so strengthened, despite excessive maintenance, continual potholing and surface failures with ultimate break-up will become the order of the day. Even if £60,000,000 could be made available to strengthen the existing sealed highways, to say nothing of the additional work required on the much greater mileage of gravel-surfaced highways, it would not be physically possible to complete such work within the next few years. Such strengthening could only be completed under a long-term policy.