The main point disclosed by this table is that over 75 per cent. of the bridges on the rural roads of this country are timber bridges with a probable average life of from twenty-five to thirty years.

The Main Highways Board have compiled a very valuable bridge register for all bridges on main highways, and a summary of this register gives the following results :—

TABLE B.—BRIDGES OVER 25 FT. IN LENGTH ON MAIN HIGHWAYS.

Type of Construction.	Length, in Feet.	Percentage of Total Length.
Concrete or stone	27,700	11·8
Concrete, steel, and timber combination	61,448	26·0
Timber, including New Zealand timber and Australian hardwood	146,553	62·2
Totals	235,701	100·0

An investigation of the register in relation to the timber bridges gave the results set out hereunder :—

TABLE C.—AGE OF TIMBER BRIDGES ON MAIN HIGHWAYS.

Age of Bridges.	Length, in Feet.	Percentage of Total.
Under 10 years	20,517	14
10 years to 20 years	32,242	22
20 years to 30 years	41,035	28
30 years to 40 years	33,707	23
40 years to 50 years	14,655	10
Over 50 years	4,397	3
Totals	146,553	100

The Main Highways Board have a definite programme for the replacement of defective and obsolete bridges, and it is therefore proposed to investigate the position of the bridges on rural roads other than main highways.

The total length of timber bridges over 25 ft. in length on all rural roads, including main highways, is 377,767 ft., while the main highways account for 146,553 ft., leaving a balance of 231,214 ft. on rural roads other than main highways.

In the absence of any reliable data concerning the age of timber bridges on rural roads other than main highways, it is assumed that the ages of these timber bridges would be comparable with those on the main highways, and on this assumption the following table shows the position :—

TABLE D.—AGE OF TIMBER BRIDGES ON RURAL ROADS OTHER THAN MAIN HIGHWAYS.

Age of Bridges.	Length, in Feet.	Percentage of Total.
Under 10 years	32,370	14
10 years to 20 years	50,867	22
20 years to 30 years	64,740	28
30 years to 40 years	53,179	23
40 years to 50 years	23,122	10
Over 50 years	6,936	3
Totals	231,214	100

This table indicates that 64 per cent., or 147,977 ft., of the timber bridges on the rural roads other than main highways were built over twenty years ago, while 36 per cent., or 83,237 ft., are over the age of thirty years.

In view of the vital importance of bridges to land transport, it appears essential that a definite bridge-renewal programme similar to that being carried out by the Main Highways Board should be put in hand with the object of replacing within the next ten years 147,977 ft. of bridging on the rural roads other than main highways.

To replace these timber bridges with concrete would cost approximately £15 per foot, and the total sum to be provided would be approximately £2,250,000.

By adopting concrete for replacement, all materials, with the exception of reinforcing-steel, would be available within New Zealand.