Two towers on this section have been threatened by slips. In one case another tower was built about 50 ft. to one side of the present tower and the lines transferred to it, removing the present tower. In the other case it has been decided that measures can be taken to prevent further slipping. A small area of land round the tower will be taken, and will be planted with willows, &c., to hold the ground together.

Woodville–Mangamaire Section.—This section being in series with the Bunnythorpe Woodville section, interruptions on this line were practically the same as on that section. One additional interruption—only momentary—was the result of the linesman at Woodville opening the Woodville–Mangamaire oil-switch by mistake for the Woodville–Dannevirke switch when testing relays.

On this section a groyne was built in a creek near the Ballance Dairy Factory to obviate danger to a pole through erosion of the bank.

Mangamaire–Masterton Section.—Interruptions on this section, which is in series with the preceding one, were the same as for the Woodville–Mangamaire section.

On this section the earth-wire has been removed from the Mount Bruce tower section, and also from the towers at the Waingawa River crossing. A test of the earths on these towers after removal of the earth-wire showed very high resistances in some instances, so special earths were constructed to reduce them.

Woodville Dannevirke Section.—As this line is in series with the Bunnythorpe–Woodville line, interruptions were practically the same as on that line. Two additional interruptions on this line were due to broken jumpers, these being jumpers from which the steel core had been removed where this core and the aluminium were clamped separately. The jumpers on this section are now being replaced by others containing a steel core clamped to the cable outside the strain clamps. Weights according to the revised schedule are being put on as opportunity offers, and the line generally being put into good order by clearances of cables from cross-arms, cross-arm stays, &c., under conditions of extreme wind-pressure, being lengthened by shortening insulator strings, &c.

This section is, without doubt, the worst section for wind in the whole Mangahao system. Construction must therefore be of the most solid description, and clearances must be greater than would be necessary in most parts of the country. The service that has been obtained during the last half-year, in which many severe gales have been experienced, would show that most of the troubles have been overcome, and that very few interruptions due to the lines themselves should be experienced in the future.

Dannevirke–Waipukurau Section.—This section has for the greater part of the year been operating at 11,000 volts, but has now been changed over to operation at 110,000 volts. As this line is in series with the Woodville–Dannevirke line, all interruptions to that section were experienced here also. In addition interruptions were caused by swinging earth-wire on this particular section, and by damage done to a temporary switch due to faults on the Power Board system. Two further interruptions were due to fault on new work at Napier bringing out the Dannevirke line switch.

The earth-wire has been removed from all long spans, and a considerable amount of maintenance work carried out. A groyne was built on the Makaretu River, and extensive willow-planting done on this river and on the Tukituki River.

Waipukurau–Napier Section.—This section was livened up at 11,000 volts in January last, power being supplied to dry out transformers, &c., and on the 20th March it was livened up at 110,000 volts, but no power was supplied to Hawke's Bay Power Board till the 8th April, 1927, so that the line cannot be considered to have been in service during the year under review.

Before this line was put in service the whole line was gone over, weights hung, earth-wire removed, and poles straightened and re-rammed where necessary. Telephone huts were also wired up and put in service.

Transmission-lines: 11,000 v. Lines.

Power-house–Shannon Section.—Apart from prearranged shut-downs, the interruptions totalled eighteen minutes. One of two minutes, was caused by water dripping through a louvre in the power-house, causing a flashover on the trifurcating-box on this feeder, but no damage was caused thereby. The louvre has been protected from similar occurrences in future. One interruption, of two minutes, was caused by an operator at the power-house accidentally opening the switch. The remaining ten, of fourteen minutes duration, were due to the overload relay opening the switch at the power-house, probably owing to faults on the Horowhenua Power Board lines.

This section is maintained by the Horowhenua Power Board, so that no maintenance work has been done by the Department.

Khandallah–Hutt Valley Power Board Section.—Supply is taken by the Hutt Valley Power Board over two feeders, Nos. 1 and 2. On this section sap-testing on poles has been done, and poles re-rammed and straightened where necessary.

No. 1 feeder: Apart from prearranged shut-downs there were seventeen interruptions on this line, totalling 3 hours 3 minutes. Four were due to troubles on main power-house–Khandallah transmission-line, and totalled 13 minutes; three, totalling 7 minutes, were due to the Khandallah operators opening switches during service to prevent voltage reaching too high values on Power Board feeders; one, of 4 minutes, was due to a surge caused by Wellington City Council's substation tripping out; the cause of one, of 1 minute duration, was not ascertained; and the remaining eight were due to troubles on Hutt Valley Power Board's own feeders.

No. 2 feeder: Apart from prearranged shut-downs there were twenty-four interruptions on this line, totalling 2 hours 56 minutes. Of these, seventeen were due to causes as outlined above for No. 1 feeder. Of the other five, one, of 5 minutes, was due to the power being cut off by Wellington City Council, who were feeding back to Khandallah in order to synchronize again with Mangahao