flood-waters have on the northern side overflowed its banks above the traffic-bridge, covering valuable agricultural land, and, finding its way into the Township of Paeroa, has left deposits of silt and slimes.

Floods opposite Paeroa.

On the southern side the river also overflows above the traffic-bridge, spreads over a wide extent of country, and in the March flood there was extensive damage done to the ballasting of the railway-lines to Waihi and Te Aroha. The flood-water finally runs across country, and finds relief by flowing into the Upper Waihou for some distance above the Junction.

Floods below Paeroa.

In addition, the floods top the banks in all low places in the Ohinemuri between Paeroa and the Junction, and also back up the natural creeks and artificial drains, with the result that there has been laid on the fertile river-bank lands deposits varying in thickness from a thin film up to several feet of sands, and these deposits extend over a considerable area, and over more or less of the whole flooded area there is a coating of fine mining slimes.

Tailings carried to sea.

No doubt, in addition to the material deposited upon the riverine lands, there have been large quantities of sands and of slimes, especially during the recent March flood, swept down the river and out to sea.

Slimes carried in suspension.

The evidence tends to prove that slimes will not deposit to any serious extent in any current where the velocity does not fall below half a foot per second, or, say, one-third of a mile per hour. As in normal conditions the velocity of the Ohinemuri and Lower Waihou exceeds that speed, it appears to be tolerably certain that the finely ground slimes are now, and have been for some years past, carried out to sea. The evidence on this point is confirmed by the Commissioners' own observations on the material in suspension in the river-waters, and by the absence to any serious extent of deposits of slimes, except in spots where, through the existence of willows or from other reasons, comparatively slack water exists.

Harm caused by slimes.—Damage to cattle.

The substitution of the finely ground slimes for the coarse sands has brought with it the evil that now the flood-waters are heavily charged with a fine muddy material, which is washed over the whole area of the lands flooded, and is deposited on, and clings like a white wash to, the grasses and vegetation; whereas when the grinding was of a coarser character the tailings were deposited to a much greater thickness, but over a more limited area of land, being dropped as soon as the flood-waters lost the velocity needed to carry the heavy sands forward, which they did shortly after topping the river-banks. The farmers find that the fine slimes adhere to the leaves; that if the flood is followed by sunshine the grasses wither rapidly; and that, even if the flood is followed by rains, the slimes are not fully washed off the vegetation. The result has been that following each flood in recent years the cattle refuse to eat the pasturage, and if compelled to do so the cows in milk rapidly fall off and go dry, resulting in a considerable reduction in the dairy returns; and in some cases the farmers have been left without pasturage for their cattle, and have after floods had to sell their stock at a loss. Young cattle, it was alleged, lost their lives through eating slime-covered grass.

Cyanides present in rivers.

Though the settlers have been deprived of the use of the Ohinemuri and Lower Waihou for watering their stock, owing to their silt-laden condition, and although there appeared at times to be a faint chemical smell in the river-water, the Commissioners do not think that the farmers have suffered to any serious extent by the presence of cyanides or other poisonous material in the rivers, except so far that no fish are now found in the Ohinemuri or in the upper reaches of the Lower Waihou.