

which are now comparatively dry. A lagoon formerly of some small extent in Sections 49 and 50 is now practically empty, and the large lagoon in Sections 62 and 63 has almost entirely disappeared. It is expected that when the dredge again reaches this lagoon, after taking up more fall, it will totally disappear. A new drain was cut from the eastern end of the lagoon in Sections 49 and 50 to the junction of the western drain and Kopeopeo outfall. With the lowering of the water in the lagoon and surrounding country this drain became dry, but No. 3 dredge will shortly be enlarging the drain into an outfall. All the drains in this district have been periodically cleaned out, and in many cases have also been deepened. The Te Rahu—Mangaroa outfall and Whakaire drains have also been thoroughly cleaned, and deposited silt has been thrown out, giving a much better fall than previously.

WESTERN DISTRICT.

The most important new work in this district was the deepening of the Omehu and the Omehu adjunct drains from their junction with the Omehu dredge-cut southwards. The proposed Omehu deviation is now in course of construction, and, although a hard belt of country kept back dredge No. 4 for a time, it is now proceeding very satisfactorily. The central drain through Sections 143, 139, 138, and 132A, Matata Parish, has been deviated at the angle on the northern boundary of Section 139, and runs by a more direct route to the Tarawera western drain. On this side of the swamp also all existing drains have been thoroughly cleaned out periodically. The large drains on the southern end of the swamp are causing a good deal of trouble on account of the sandy nature of the soil, but they are being considerably enlarged and a good deal of fall taken up, which has benefited the surrounding country to a very great extent. The Awaitei drain was also cleaned out and deepened.

PRIESTMAN DREDGES.

During the year dredge No. 3 completed the excavation of the Kopeopeo outfall deviation to the Rangitaiki outlet, and deepened it on the return journey. 110 chains were covered on the way to the Rangitaiki outlet, and 85 chains on the way back, a total of 114,050 cubic yards of spoil being excavated at a cost of £2,402 19s., averaging 5·05d. per cubic yard.

Dredge No. 4 proceeded with the Omehu outfall drain, but struck very hard dredging country and a great amount of timber during a greater part of the year. A total of 102,825 cubic yards of spoil was excavated at cost of £2,542 18s. 10d., averaging 5·93d. per cubic yard.

The following table shows the total amount excavated, with the cost per cubic yard, for the past seven years:—

	Cubic Yards.	Cost per Cubic Yard.
1912-13	31,486	4·12d.
1913-14	272,370	3·07d.
1914-15	268,760	3·48d.
1915-16	224,740	4·54d.
1916-17	261,751	4·36d.
1917-18	320,614	3·72d.
1918-19	229,659	5·70d.

The cost per cubic yard for this year is rather high, but this is accounted for by the great increase in costs of coal, freights, repairs, material, and wages, and the depth of dredging.

KOPEOPEO OUTFALL DEVIATION.

During the period Priestman No. 3 continued the Kopeopeo outfall deviation to the Rangitaiki outlet, a distance of 100 chains, and then, after a complete overhaul of machinery, started back up the cut, deepening it considerably *en route*. A hard bank of pumice and sand was encountered early on the return journey, and but slow progress was made, but on working clear of this bank the dredge pushed on at a good rate, and by the end of the period had covered 85 chains.

OMEHU OUTFALL.

Priestman No. 4 did not make such marked progress during the period as did Priestman No. 3, for difficult country was encountered practically throughout the year. A large quantity of sand was removed from the Omehu which on coming out of the chutes was inclined to run back into the cut, so extra work was entailed. Added to this, heavy timber was met with in the bottom of the cut, necessitating the free use of explosives to break and dislodge the stumps and logs of considerable size. Owing to the height of the banks on this cut it was found necessary to have the old spoil-banks removed by means of wheel scoops. About the middle of the period a dam had to be constructed behind the dredge to allow of better working.

ROADS.

As no finality was reached in the arrangement between the Whakatane County Council and the owners of land to be taken for Rangitaiki River East Bank Road, bounding Section 86, work on this portion was delayed until the latter end of the period, when side drains were cut and the road-line cleared of willows ready for formation. Two portions of the Western Drain Road—viz., from southern boundary of Section 84 to the main Whakatane—Te Teko Road, and from the northern boundary of Section 78 to the northern boundary of Section 76—were constructed. From the Western Drain Road at its northern extremity McLean's Road runs in an easterly direction, and this also has been formed up to the eastern drain where it joins Luxton's Road. From the junction of McLean's Road and the Western Drain Road, Feist's Road runs off to the west along the northern boundary of Section 75, and formation of this is now nearing completion. Altogether a total of four miles and a half of road have been wholly formed, which total does not include work carried out on the Railway Service Road (or, more properly speaking, the Main East Coast Road).