

Programme of Work for Coming Period.

Wairua River.—Before the flood period arrives No. 14 Bucyrus will return to the long spillway around the D-B diversion to work as a shovel, and it is anticipated the spillway will be completed within six months. When the spillway is completed the large slip at the mouth of D-B diversion will be removed, and the machine will concentrate on the removal of the bars and shallows in the river, working up-stream and lowering the water-level in successive steps. No. 14 will move up-stream gradually in carrying out this work.

The removal of bars and shallows and the bringing of the river to an even width from Lewis's Bridge down-stream will be carried out by the Priestman, which is at present engaged on this work. By this means, and by working up-stream, as mentioned above, it is hoped to have a number of the obstructions removed by the end of the next period.

After No. 13 Bucyrus has completed the Mangawhero Stream improvements it will return to No. 9 diversion of the river and commence excavation at that point. The site is now being cleared and stocked with coal.

When No. 12 Bucyrus has excavated the Okarika diversion as far as possible before the coming of winter, it will be shifted to No. 10 diversion of the river in order to commence excavating there.

Okarika Diversion.—No. 12 Bucyrus is to excavate some distance farther, and before the advent of winter will proceed to No. 10 diversion of the river. The hand-drain contract will be completed in April or May. This drain will be deepened and possibly enlarged next summer, as the peat will have subsided considerably by then.

Mangahuru Diversion.—This will be completed during the coming period. There is a considerable amount of scrub at the lower end of the location, and a contract has been let for the clearing of same.

Mangawhero Diversion.—This work will be completed up through the township by No. 13 Bucyrus within about four months, and should absolutely eliminate all danger of flooding there.

Otonga Outlet.—The main outlet drain will be proceeded with, and contracts will shortly be let for its completion by hand-work. Next summer the portion of the outlet through the peat country can be deepened as required.

Waiotu Stream. Detailed surveys of the Waiotu Stream from Hukerenui down to the junction with the Whakapara Stream will shortly be made, as this will be a suitable work for No. 26 dredge after it has completed the Mangahuru diversion.

Excavating Machinery.

No. 12 Bucyrus.—This machine, equipped as a drag-line with a 41 ft. jib and a 1 cub. yd. bucket, has been working on the Okarika diversion except when laid up on account of floods. This machine is in good running-order, though the boiler will require retubing at an early date.

No. 13 Bucyrus.—This machine has been engaged on drag-line work all the period, using a 50 ft. boom and a $\frac{3}{4}$ cub. yd. bucket. The boiler was completely retubed, and the machine is now in good running-order. Most of the year was spent on No. 6 diversion.

No. 14 Bucyrus.—Until October this machine was working as a shovel in the long spillway round D-B cut, but since then it has been equipped as a drag-line with 50 ft. jib and a 1 cub. yd. bucket excavating clay and blasted rock from the bars in the river. The machine has been kept in good order.

No. 3 Priestman.—Early in the period, whilst proceeding down the river from the Ngararatunua Canal, the pontoon struck and was holed by a hidden snag, and she sank in fairly deep water. In July arrangements were made with the Auckland Harbour Board for the loan of their diver, who was engaged on the salvage operations for some three weeks, and on the 6th August the dredge was refloated. Since then she has been proceeding down-stream, removing bars, shallows, &c.

No. 26 Dipper Dredge.—This dredge has been engaged on the Mangahuru and Mangawhero diversions, and has excavated 156,492 cubic yards for the period. At the middle of March the Diesel engine was removed, and the engine from No. 25 dredge, which has been overhauled, was installed. Some difficulty was experienced in putting the substituted engine in running-order, otherwise the plant has been kept in good order.

Drilling and Compressor Plant.—One compressor was transferred to the Rangitaiki works during the period. The remaining six compressors and the drilling plant have been in fairly constant use in the spillway, rock bars, and at the shops.

Locomotives and Rolling-stock.—These were in use for the first half of the period until No. 14 was converted to a drag-line for the removal of rock bars, &c. Another locomotive will shortly be transferred from Hauraki Plains, as the haul will be long when shovel-work is recommenced, and a third locomotive will speed up the output. The plant is all in good order.

Motor Truck and Cars.—There are at present on the works one Thorneycroft 2-ton lorry, one Ford 30 cwt. lorry, two Ford touring-cars. The Thorneycroft lorry will shortly be transferred to Hauraki Plains. The Overland car was sold to a local settler.

Workshops.—These have been kept busy all through the period. A large variety and amount of repair work has been done here, and many machine parts have been made in the shops. On account of the heavy nature of the work on which the machines are engaged the repair work is heavy, and buckets continually require repairs. Drill-steel sharpening is a large item in the work, and a considerable amount of bridge ironwork was made during the latter part of the period.

It is anticipated that with the completion of the long spillway next summer the workshops and most of the camp will be shifted up to the swamp near Apotu, where a site has already been selected.