# REPORTS BY THE ENGINEER-IN-CHIEF.

## No. 1.

#### GENERAL REPORT.

Mr. CARRUTHERS to the Hon. J. D. ORMOND.

SIR,-

Public Works Office, Wellington, 30th June, 1872.

During the last Session of Parliament, an agreement having been entered into with Messrs. John Brogden and Sons for the construction of works, no time was lost in making the necessary working surveys and preparing plans of structures. As the work done last year consisted only of trial lines, sufficient to give a rough estimate of the cost of the lines, but far from sufficient to enable a

contractor to tender, this has been a work requiring time.

It is a not uncommon plan to let a contract on similar surveys, but whenever this is done the contractor puts on a price to cover risk, which it would have been bad policy in the Government to pay. I feel sure that not less than £500 a mile would have been lost by adopting this policy, and it is out of question that this saving on the cost has well paid for the delay.

The works which Messrs. Brogden have tendered for, and for which their tenders have been

_	, ale .—			Miles.	Construction.		Maintenance.
	Newmarket to Mercer			39.07	 £166,724		£2,200
	Napier to Puki Puki			18.13	 50,807		860
	Wellington to Hutt			8.00	 28,616	• • • •	400
	Picton to Blenheim			17.10	 $75,\!534$		1,000
	Dunedin to Clutha (Taio	eri Sect	ion)	34.55	 142,000		1,835
	Invercargill to Mataura		• • • •	39.56	 86,697		$2,\!135$
	Total			156.61	 £550,378	•••	£8,430

When account is taken of the contingencies of rise in cost (due more to the scarcity of skilled sub-contractors, iron masters, founders, mechanics, and others, than to any actual rise in the price of labour) which takes place even in England and other thickly peopled countries, on the beginning of large public works, I am of opinion that the work would not be done by small contractors cheaper, on the whole, than Messrs. Brogden have contracted to do it, while the risk to the Government is of course much reduced, or altogether done away with, by having a firm with a reputation to lose, to undertake the work.

Besides the above lines, works and surveys were in progress elsewhere, which will be examined detail.

#### Kawa Kawa Railway.

This line is intended to facilitate the transport of coal from the mines to deep water. Working surveys have been prepared and the line staked out on the ground, by Mr. Lowe, so that work might shortly be begun. Since last year, however, the mines have been flooded, and until the Company have settled to put down machinery for pumping them out, it would be premature to begin the construction of the railway.

### Kaipara Railway.

This work was begun by the Provincial Government of Auckland. The contract for its construction was let to Mr. Edgar, and the first sod turned on 31st August, 1871. In January, 1872, the work was taken over by the General Government.

Nearly one-half of the work in New Zealand has been done. Unfortunately the present state of the iron market at home is such that light rails can hardly be bought at any price, and tenders could not be got for the rails. This will cause some delay in the completion of the contract. The works are under the charge of Mr. Harding.

### Kaipara and Riverhead Railway.

Trial surveys from Auckland to the Riverhead terminus of the Kaipara Railway have been made by Mr. J. J. O'Neill, with the view of bringing the line to Auckland. The country is rough, and a railway will be expensive. Estimates have not yet been prepared.

# Auckland and Mercer Railway, and Onehunga Branch.

This work was begun some years ago by the Provincial Government of Auckland, but abandoned after a good deal of work had been done.

Pending the preparation of plans and sections of the whole line, work was begun in January, 1872, between Auckland and Newmarket, under a contract with Messrs. John Brogden and Sons, and has been actively carried on. The tunnel at Newmarket has been pierced with a driftway, a waggon road laid through, and a locomotive engine has been put upon the rails to lead earthwork from the cuttings to the reclamation of the station ground.