



NEW ZEALAND
GOVERNMENT GAZETTE,
(PROVINCE OF NELSON.)

Published by Authority.

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By His Honor's command,

ALFRED GREENFIELD, Provincial Secretary.

VOL. XV.

NELSON, WEDNESDAY, JUNE 19, 1867.

No. 22.

Superintendent's Office,
Nelson, 17th June, 1867.

THE SUPERINTENDENT directs the publication of the following Report for general information.

ALFRED GREENFIELD,
Provincial Secretary.

PROVINCIAL ENGINEER.

REPORT ON PUBLIC WORKS EXECUTED
DURING THE PAST YEAR.

Provincial Engineer's Office,
Nelson, May 29th, 1867.

To the Provincial Secretary,
Nelson.

SIR,—For the information of His Honor the Superintendent, I beg to forward my Annual Report on the Public Works executed, or being executed in the several Districts of the Province during the past Year. I shall commence with—

NELSON AND ITS VICINITY.

NELSON.

Government Buildings.—A contract has been entered into for the painting, with two coats, and sanding the whole of the Government Buildings and the Court House.

Some delay has taken place in commencing this work, from the fact that, owing to certain parts of the buildings not being watertight under heavy driving rain, I was anxious to have such alterations or additions made as would remedy this defect, and I hope that what has been done and is now in hand for this purpose will be successful, though I doubt that the most exposed parts of the towers and the front of the buildings will ever be thoroughly tight. I find, also, on examination, that some of the outer mouldings are decayed, having been made of white pine, designedly as it would appear, and it has been found necessary to replace them with wood of a more durable character. I have also found it necessary to improve the means of ventilating the Provincial Hall by having two outside ventilators of Venetian work fixed in the back gables, with inner doors attached to them to regulate the ventilation, also to raise the height of several of the chimneys, as they smoked so much, and to erect a new flagstaff in another and more suitable position. On the com-

pletion of the painting the roof will require a thorough re-examination, as in many places the slates are loose and damaged.

Court-house.—The accommodation afforded by the Court-house and the offices attached to it, is found to be quite inadequate, particularly as respects the latter, and it has been proposed in order to obtain more accommodation to remove the cells of the lock-up and devote the room thus gained to the formation of additional offices; also to build a new Police Station on a portion of the Reserve at the old Depot: say the N.W. angle, in close proximity to the Court-house. This proposal, I think, merits a careful consideration. The office-keeper's house, store-room, fodder-room, fuel-shed, and stable, for which money was voted last year, have been completed, and are now in occupation and use. A portion of the Old Depot Reserve has been fenced off by a boarded fence six feet high, and the old kitchen altered and converted into a store-room and workshop. This, besides being useful as a general store for tools, &c., will be useful for the reception of the Waterworks plant, part of which has been deposited there.

Gaol.—The proposed addition to Nelson gaol (a vote for which was passed in the last short session of Council) has been contracted for, and the work will be proceeded with at once. It has long been found to be necessary, and will be the means of securing better discipline amongst the inmates, and better convenience generally to the gaolers and wardens. The addition consists of a turnkey's room, kitchen, two dark cells, and women's day room on the ground floor, and seven cells on the upper floor, three of which for women will be connected only with the women's room.

Wharf.—I have been unable to carry out the improvements in connection with the wharf which were proposed, consisting of an extension of the platform for the storage of goods, &c. Being desirous of introducing some better and more durable kind of wood for the construction of such works, I ordered a quantity of blue gum from Tasmania, a portion of which only has arrived, viz., the piles; the sawn timber has not yet come to hand, but is expected in a short time. I have carefully examined the wharf at low water, and find that many of the piles have suffered much from the attacks of marine worms and other causes, so much so, as to necessitate some repairs being carried out. I propose that these repairs shall consist simply of the driving of additional new piles in place of or alongside of those most decayed, and bolting them securely to the top-plates, &c., without interfering with the cross-ties and the bracing, much of which is very much worm-eaten. The renewal of this latter would involve too much expense, and I think that the additional new piles will make the wharf yet last many years longer. Soundings and measurements were taken of that portion of the harbor between the Albion Wharf and Akersten's Wharf, with the view of letting the whole of the frontage (reserving enough for a boat-landing) in one piece, in order that another large deep water wharf might be erected. After a careful examination, however, of the ground, the facilities afforded by the place were not found to be sufficient to induce anyone to take a lease of the ground under the usual conditions—mainly owing to the presence of the buoy-rock, and the want of sufficient room with deep water.

New Hospital.—I have much pleasure in reporting that the plans for this work have been matured and completed; that one contract for a considerable portion of the works in connection with the foundations has been executed; and that another contract for the erection of the building has been entered into—the building to be completed in twelve months. The

contract does not include internal fittings, or furniture, or the laying out and ornamentation of the grounds and walks.

Lunatic Asylum and Buildings for the Poor.—It has been found necessary to make some small additions and alterations to these buildings to increase their efficiency, which it will not be necessary to describe in detail. Some further alterations, I believe, will also be required of small extent.

Swimming Bath.—A portion of the eel-pond has been cleared out, and devoted to the forming of a swimming bath. The general plan of this was furnished by Mr Barraclough, subject to my approval, and care was taken to have all the woodwork strong and of a durable character, with the view of maintaining at a small cost so very useful an institution.

Bridges over the Maitai.—Of these, Bridge-street bridge was damaged at the western approach during a heavy flood which carried away a portion of it. This has been replaced with an addition, and the bridge is longer than before, giving more waterway. I trust that the new work will withstand the effect of future floods. Collingwood bridge has been thoroughly overhauled. A few pieces added to the trusses to stiffen them rendered necessary by the shrinking of the timbers, and the whole well screwed up. Hardy-street bridge has needed very little more than a few stakes driven in the bank at the west end, to arrest the scouring action which had commenced to destroy the bank. Much inconvenience is said to be felt by the public from the want of Nile-street bridge which has not been restored since its partial destruction by a flood.

Post Office.—The roof of the post-office has been altered by the removal of the large sky-lights, which were always leaky, and the alteration has been effectual in making the roof tight. Some smaller alterations were also made inside, found to be necessary after the establishment of the telegraph department in the same building.

Boat Landing.—The boat-landing has been erected on a piece of land reserved for the purpose below the Albion Wharf. Care has been taken to build it in a substantial manner, and as durable as possible. It has been found necessary to extend the lower end of it beyond the original design, as occasionally during very low spring tides a long reach of flat muddy bottom is laid dry. In connection with this work 100 feet of road has been made good to its full width of one chain, and well gravelled, being a great improvement to this part of the Haven road.

Pelorus Road.—This road has been repaired and improved during the past year, the Heringa-bridge also, the floor of which was beginning to decay has been looked to, and again made safe for travellers. The dray road at the Nelson end has been extended further up the Maitai, so as to reach the bush, thus affording another source for supplying the town with firewood, &c. The whole length of the road from Nelson to the Heringa has also been cleared of all trees that could in any way injure the telegraph wires by falling upon them.

Nelson Waterworks.—Two vessels, the Fairy Belle and the Malay, have arrived in Nelson, each containing a portion of the plant for the Waterworks; the remainder is expected in the Donna Anita and the Vesta. That portion which has come to hand has arrived in good order and with very little breakage. Messrs Ransome and Sims have been very prompt in executing this order, which was sent to them in May, 1866, and the two first shipments arrived here in March, 1867. Until the arrival of the Donna Anita the laying down of the pipes cannot be commenced. I have, however, commenced such other works connected with the Waterworks as can at

once be proceeded with—viz., a dray road up Brook-street Valley to the site of the Reservoir, along which the pipes, &c., will be carted and laid; and the Reservoir at the head of the Valley, on which the contractors are now at work. I hope to be able in a short time to commence with the dam, for the completion of which, however, we shall have to wait for the arrival of the Donna Anita, with some pipes, &c., ordered for this work.

Swinging Apparatus.—I received orders some time since to proceed with the erection of a Swinging Apparatus in the Harbor for the correction of ships' compasses. I have not yet, however, obtained the whole of the necessary information as to soundings and the character of the bottom of the harbor on the site chosen. As soon as this has been acquired the work shall be proceeded with.

Gravel Sifting Machine.—A sketch plan and a description of this machine were sent to England as soon as possible after the necessary amount of money was voted for it: and we have now advices that it has been shipped in the Donna Anita, and may be expected here shortly. It had been tried in London and gave satisfaction.

COUNTRY DISTRICTS.

WAIMEAS.

Pigeon Valley Road.—This road, leading from Wai-iti Valley to Stanley Brook, has been improved by felling the timber along the ridge or hilly portion of it, for a width of 40 feet, and a length of about 1½ miles. The lower portion also, in Pigeon Valley, has been improved for cart traffic. Application has been made by some of the settlers interested for further improvements in this way, to a moderate amount.

Eve's Valley Road, Waimea West.—A sum of money was voted last year for the improvement of this road, which has been laid out to great advantage, and was liberally supplemented by some of the residents in the neighborhood. The repairs were much needed, as this is the main road into the Dove Dale district, over which there is now a considerable amount of traffic.

Dove Dale Road.—From Eve's Valley to Cuckoo Point has been widened, and made into a dray road, a distance of about ten miles through the bush. The completion of this work has rendered Dove Dale now easily accessible, and has given much satisfaction to the settlers therein.

Wairoa Bridge.—This structure has been thoroughly overhauled and repaired. The shrinking of the timber forming the arches, and the consequent slackening of all the joints and bolts, led to a considerable amount of warping and distortion of the framing. The whole has been readjusted by taking the arches to pieces and refitting all the pieces of timber of which they are composed, adding, at the same time, some additional bracing to ensure their retaining their proper shape. An idea prevailed with many that the distortion of the arches proceeded from the piers having sunk on one side, and that the structure was falling; this, however, was not the case, the piers are in exactly the same position and level as when erected. I am glad also to be able to state that the timber forming the arches was all found to be in a sound state, and that no evidence of decay was visible.

Waimea Bridge.—Plans have been forwarded to England for the necessary iron work for this bridge, which has been designed so as to be available for any of the proposed sites in the Waimea river. I propose to have the timber for the bridge ordered and cut during the winter, as being the most favorable time for felling, so as to have it in readiness and partly seasoned when the iron work shall arrive. The determination of the site will demand a most careful

consideration; the choice appears to lie between two, one on the line of the Appleby Road, past Gledhills, and one on the line passing through Sir David Munro's land, and joining the main road near the Horse and Jockey Inn. Beyond the adaptation of the bridge to the traffic of the main road between Nelson and Motueka, the surrounding districts, Waimea West in particular, will look forward to be specially benefited greatly by its erection. Of the two sites proposed, the upper will of course suit the convenience of the Waimea West settlers the best, being so much nearer to them, and although either site would suit the main road, I should prefer the lower, to which also on engineering grounds I should not hesitate to give the preference, for the reason adduced in a special report on this subject made by me a short time ago.

Wai-iti Foot Bridge.—For the execution of this work I have never received any instructions, and I am not aware at what point on the Wai-iti it was proposed to erect it. I suppose, however, on the line of the main south road.

Spooner's Range Road.—This is one of the roads for which the sum of £400 was voted, under the head of roads between the Wai-iti, Motueka Valley, &c., &c. After considerable difficulty in deciding which would be the best line of dray road into Motueka Valley from the Wai-iti, I selected this line. A good side cutting has been made over the ranges and into Norris's Gully, a tributary of the Motueka. It is a very considerable improvement on the old line of road, and with some further expenditure may be made into a very passable dray road. A party of men are now at work on it.

I may take this opportunity of suggesting that it would be well if the use of the old fashioned drag or lock-chain could be done away with or prohibited on all drays using these country roads. It is grievous to see a new and well made side cutting completely cut to pieces by the passage of a few drays, the wheels of which are locked in descending the hills. I believe the use of the screw brake on these drays would save the province some hundreds of pounds every year.

MAIN SOUTH ROAD.

Main South Road.—Portions of this road between the Wai-iti and the turn off to the Lakes, which most required it, have been well and substantially repaired during the past year, that part of it in the Big Bush has been well metalled and drained, and in Kerr's Valley new side cuttings have been made and metalled, and other parts ditched, raised, and metalled. A considerable amount of work has also been done at the head of the Wai-iti, and in Ray's Valley, so that the road generally may now be said to be in very fair order.

Beyond the Top House the road has been repaired and improved at several points, some old narrow bridges taken out and new ones put in of a more substantial character. The cuttings through the Wairau Gorge, and on to Tarndale, have been cleaned out and repaired in a substantial manner. That portion of the Main South Road from the Clarence to the Hanmer Plains, has fallen into a state of disrepair, and demands attention. The Amuri Road Board has undertaken to repair it in a proper manner. Several settlers on the Clarence, Upper and Lower, are very anxious that in improving the road from the head of Jollie's Pass, to the Hanmer Plains, we should lay it off as a dray road: I believe this could be done, and if so I should recommend it as a desirable and useful work.

It is evident that we must have a new line of road selected between these two points, and the difference between a good horse road and a narrow dray road would not be very considerable.

MOUTERE AND MOTUEKA.

Moutere.—From Upper Moutere (near Bensmann's), the further portion of a dray road into Dove Dale has been completed, altogether about eight miles long, striking the road down the Dove about a mile above Cuckoo Point. This road is considered as a great boon by the settlers located along it, both on the Moutere and Dove Dale side of the dividing range.

Moutere Bridge.—This has been well tarred and painted, and is in a good state of repair.

Motueka.—The road from here to the Wai-wero, and beyond to the Orinoco, has been improved, and made useful for cart traffic. A cart road has been opened up the Orinoco Valley, branching from the above road about 2½ miles, giving access to all the land already settled upon. This is a promising district, and much improvement has been effected in it of late in the way of clearing and fencing.

The pound at Motueka has been repaired and gravelled, a piece of work which was much needed. The jetty has been thoroughly repaired, in fact nearly the whole of the work has been renewed, in a most substantial manner. This will now be a good opportunity for handing the jetty over to the care of the Road Board, and of introducing a bill into Council empowering the Board to levy rates for the use of it.

RIWAKA.

Riwaka.—A substantial foot-bridge has been erected here, and a right-of-way acquired to it on each side; the district has long felt the want of such a bridge, which will be a great convenience.

The pound has also been thoroughly repaired, and new approaches made to it.

The foot-bridge proposed to have been built over an overflow of the Motueka river, at Edelsten's, has not been erected. It was supposed that the members of the Road Board, from their local knowledge of the site and its requirements, would furnish some information as to the best kind of bridge to be erected, and they were invited to consider the subject. A plan and specification of a bridge intended to be adapted to this site was also forwarded for their approval. Having only a few days ago received their answer, I have not yet taken steps to have the bridge erected. The amount voted will, I believe, be too little for the purpose.

TAKAKA.

Takaka.—In this district the following works have been executed, viz., road over ranges to Riwaka. This has been thoroughly repaired from end to end. The young bush has been cut down, having grown so much on each side of the track as to impede the thoroughfare; the drains have been repaired and the cuttings cleaned out; from some of the latter it was found necessary to remove, by blasting, several large rocks, which, by the wear and tear of the road and the action of the weather had become exposed, so as to be dangerous.

On the East Takaka bridle road several slips have occurred, and have been removed, also several large fallen trees which had completely blocked up the road. On the East Takaka dray road several contracts have been completed (a few are still in hand) for those works previously left unfinished, and which were necessary to open the road for cart traffic from Clifton to the junction of the road with the bridle track mentioned above. The works have principally consisted of bridges, cuttings, and ditching, and forming along the softer parts of the road.

Cross Road, from East to West Takaka roads, joining the latter at the junction of the Waitapu and Motupipi Roads. The felling and clearing of the

bush on this line, about two and a-half miles, has been let in three contracts, two of which are completed and the third nearly so: some cuttings, &c., will be required to complete this work, specifications for which are now being prepared.

Branch Road, joining East and West Takaka roads about four and a-half miles above the latter has been completed, after a long delay, by embanking, across the swampy part of it with logs, stones, and gravel.

Cross Road, Clifton to Motupipi. The necessary steps have been taken (after considerable delay owing to difference of opinion as to the best line to be chosen) to procure a Magistrates' order for opening this road. It connects the Clifton district with Motupipi by a branch road from the East Takaka road, about one and a-quarter miles from Clifton, thence across the Motupipi river to the Main Trunk road, crossing the latter, and proceeding thence to the landing-place at Motupipi wharf. This road will require some expenditure to make it available for cart traffic.

Waitapu.—A Magistrates' order has been obtained for an extension of the Waitapu road through private land to Waitapu wharf, and the road thence over the Takaka mud-flat has been more officiously marked out by an additional number of beacons.

Proposed New Road.—On my last visit to Takaka I was requested to examine a line of road which would avoid the crossing of the dangerous ford on the Waingaro River, by diverging from the West Takaka road just above that river, through Messrs. Dixon and Bromley's land, crossing the Takaka at an excellent shallow, permanent ford, and thence nearly in a straight line to a point about midway on the cross road leading to the Waitapu and Motupipi junction.

The opening of this line would render travelling in the district much more certain and safe during freshes than by the present road. I have reported on it especially, giving plan and estimate of cost, with other particulars.

Court House and Lock-up.—I examined several proposed sites for this building, and finally chose one near the junction of the Waitapu and Motupipi roads, as being in a central position and easily accessible. The land belongs to Mr. Ross, who will sell a piece sufficient for the purpose. The great difficulty is to find a suitable central site that shall be clear of floods, and easily accessible from the surrounding neighbourhood. A plan and specification for this work has been prepared, and it will shortly be advertized for tender.

COLLINGWOOD.

Collingwood.—The sum voted for repairing the bridle track from here to Takaka was divided and placed in the hands of the two Road Boards for disbursement, as was also the sum voted for the Heaphy-road, placed at the disposal of the Collingwood Road Board.

Stale River Bridge.—The sum asked for and voted for the repairs of this bridge, will, I think, be found inadequate. The expense, however, may be reduced by repairing it merely as a foot-bridge, and obliging horses and cattle to use the ford, which is a good one.

AMURI.

Amuri.—The several contracts for forming a dray track up the Waiau-ua River from the Hammer Plain have been completed, the payment for the work being made in land. A horse road has been laid off as a continuation of this to Lake Sumner and the Upper Hurunui; a specification for the work has been prepared, and the work put in hand.

Waiau-ua Bridge.—This bridge has been thoroughly overhauled, all the bolts and nuts have been well screwed up, which operation was rendered necessary by the shrinkage of the timber, and the whole of the structure has been well tarred.

Glen Allen Gully Bridge has also been examined, screwed up, and tarred all over.

Court House and Lockup.—This building, for which plans and specifications were prepared here and sent to the Amuri for tender, has been completed at a cost rather beyond the sum voted for the purpose.

WEST COAST.

Grey District.—Without going into small details, I shall give a short enumeration of the works which have been executed or improved during the past year, viz. :—

Completion of dray road from Cobden to the sea-beach.

Formation of a dray road around the Rocky Gorge from Cobden to Coal Creek.

Construction of a substantial cart bridge across Coal Creek.

Completion of horse road from Cobden to Twelve-Mile, by making side cuttings in rocks, metalising soft portions of road, &c., &c.

Improvement of horse road thence to the Little Grey, about twenty miles.

Completion of horse road up the Little Grey, and over the saddle into the Inangahua, about twenty miles.

Several branch roads to the various diggings have also been cut or improved for horse traffic; amongst others, to Moonlight's, six miles; to Duffer's Gully, five miles; to Red Jack's, nine miles, &c., &c.

Road by the Ahaura to Amuri.—This road is one which, from its importance for the purpose of driving cattle and sheep, deserves consideration. Although it has been used continually since the commencement of the Grey diggings, it has never been in a substantial state of repair; in fact it was only opened as a preliminary sort of track, and was never really finished as a road. As at present laid out, the portion of it in the Upper Ahaura is liable to constant damage from floods, and nearly every fresh party going through is obliged here and there to cut new lines through the bush to get the stock along. I should recommend that a considerable outlay be made on this road, with a view to make it permanently useful. The line should be well examined and altered where necessary to improve it previous to any work being done.

Horse road from Grey to Buller.—The journey, from the Grey to the Buller has now been for some time practicable on horseback, a distance of about seventy miles. This work is one of the greatest improvements yet effected in connection with the opening of the south-west gold-fields. It is, however, far from being yet, what may be considered in a proper state for constant traffic, and a good deal of metalling will be required in several places to render it permanently useful during the winter. Steps are now being taken to have these parts of the road finished without delay.

It has been proposed to open a road from Brighton inland to the Little Grey, the object being, besides opening up the country, to supply the latter district with goods cheaper than by sending them up the Grey. The country has not been yet thoroughly explored, but the proposal is worthy of attention.

Buller District.—In this district parties of men have been engaged in making a horse track up the Inangahua river to join that from the Little Grey.

This work is completed, and is in length about twenty-one miles.

Also, in completing and improving the horse road from the Inangahua down the Buller to the port. I hope to have several material alterations made in this road for the better, in avoiding some of the steepest portions of the road, and substituting others of a more level character. It will be remembered that, when this road was made, the upper portion of it was formed only as a walking track, and all expensive cuttings were avoided as much as possible. Another party is now engaged on that part of the road between the Inangahua and the Lyell, formed originally as a walking track; and above the Lyell, from that river to the Maruia, another party is engaged in making a substantial horse road. We have succeeded in getting a line nearly level round the Rocks to Eight-mile Creek, above the Lyell, the real distance being about six miles and three-quarters, instead of climbing over the ridge and crossing Manuka Flat. This is an immense improvement, as the old line was excessively steep and tedious on both sides. From Eight-mile Creek to the Maruia, we are now improving the road for horses, and putting in bridges and fords along the old walking track.

I have had some examination of the Buller made above the Lyell, with the view of establishing on it a horse-ferry, or of building a bridge—the latter will be preferable; and now that the road is nearly finished, I propose to make a more minute examination of the locality, and proceed with the work as quickly as possible.

At present an ordinary ferry is kept a little below the Lyell, and a ferry house has been built in connection with it on the South bank.

Court-house and Lock-up.—A new court-house and lock-up has been built at Westport, but the accommodation afforded by them will not be sufficient in view of the increasing population of this district. Plans for extending the amount of accommodation for police purposes have been submitted by the Commissioner, and it will without doubt be necessary to have them carried out without delay.

Wharf.—It is also apparent that we must very shortly provide extensive wharf accommodation in the Buller, which, however, must be done on some comprehensive plan, after a careful examination of the banks and channel of the river. A new flag-staff and signal-station has been erected at this port.

Plans have been prepared, in anticipation of the want of a new Custom-house at Westport; at present, one of the old Government buildings is used for the purpose.

Upper Buller.—A good cart-bridge has been built over the Upper Buller, a little below the "Slips," in connection with the South Buller road; this has long been needed, as the Buller is at many times dangerous to cross, either for horses or foot-passengers for several days or even weeks together. The road beyond is also being improved, and the cart-road has been extended up the Howard to within a short distance of the Howard stores. From the turn-off in the Big Bush to the Little Lake, the dray road has been well improved and repaired, the culverts and bridges made good, and all the soft parts well metalled and drained. I should have stated amongst the probable and almost immediate wants of Westport, the clearing of at least a portion of the streets of the town, in order to give access to the freehold sections. It will also be necessary to make ample provision for the opening of many new roads to the diggings, which we may consider as certain to be discovered before long in and around

the Buller district. The same remark will apply to other portions of the gold-fields, and as it is impossible to give a list in detail of such works, it will be necessary as heretofore to vote the probable amount required in a lump sum.

In another report I have forwarded, for the infor-

mation of his Honour the Superintendent, the probable amounts that will be required for the various public works in the Province for the ensuing year.

I have, &c.,

JOHN BLACKETT,
Provincial Engineer.